Form 3160-3
(June 2015)

Carlsbad Field Office
OCD Hobbs
HOBBS OCD
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FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

F/P

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMNM115426

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.
DR IRELAND FEDERAL
123H (322263)

2. Name of Operator
MATADOR PRODUCTION COMPANY (228937)

9. API Well No.
30-025-45518

3a. Address
5400 LBJ Freeway, Suite 1500 Dallas TX 75240

3b. Phone No. *(include area code)*
(972)371-5200

10. Field and Pool, or Exploratory (2200)
BONE SPRING / ANTELOPE RIDGE; BS

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SESE / 570 FSL / 1249 FEL / LAT 32.2844372 / LONG -103.4022274
At proposed prod. zone NWNE / 240 FNL / 1650 FEL / LAT 32.2967119 / LONG -103.4035392

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 19 / T23S / R35E / NMP

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

12. County or Parish
LEA

13. State
NM

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
570 feet	279.45	160.09
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**
30 feet	10500 feet / 15273 feet	FED: NMB001079
21. Elevations (Show whether DF, KDB, RT, GL, etc.)	**22. Approximate date work will start***	**23. Estimated duration**
3387 feet	12/01/2018	25 days

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
(Electronic Submission)	Lara Thompson / Ph: (505)254-1115	03/30/2018
Title		
Assistant Project Manager		
Approved by *(Signature)*	**Name *(Printed/Typed)***	**Date**
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	09/10/2018
Title	**Office**	
Assistant Field Manager Lands & Minerals	CARLSBAD	

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.

GCP Rec 01/23/19

KB 01/24/19

APPROVED WITH CONDITIONS

Approval Date: 09/10/2018

Double sided

(Continued on page 2)

*(Instructions on page 2)

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM I: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the wen, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionany drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.

ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

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Additional Operator Remarks

Location of Well

1. SHL: SESE / 570 FSL / 1249 FEL / TWSP: 23S / RANGE: 35E / SECTION: 19 / LAT: 32.2844372 / LONG: -103.4022274 (TVD: 0 feet, MD: 0 feet)
   PPP: SWSE / 330 FSL / 1650 FEL / TWSP: 23S / RANGE: 35E / SECTION: 19 / LAT: 32.2837705 / LONG: -103.403523 (TVD: 10500 feet, MD: 10853 feet)
   BHL: NWNE / 240 FNL / 1650 FEL / TWSP: 23S / RANGE: 35E / SECTION: 19 / LAT: 32.2967119 / LONG: -103.4035392 (TVD: 10500 feet, MD: 15273 feet)

BLM Point of Contact

Name: Judith Yeager
Title: Legal Instruments Examiner
Phone: 5752345936
Email: jyeager@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

PECOS DISTRICT DRILLING
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**Matador Production Company**
LEASE NO.:	**NMNM-115426**
WELL NAME & NO.:	**Dr. Ireland Federal 123H**
SURFACE HOLE FOOTAGE:	**0570' FSL & 1249' FEL**
BOTTOM HOLE FOOTAGE	**0240' FNL & 1650' FEL**
LOCATION:	**Section 19, T. 23 S., R 35 E., NMPM**
COUNTY:	**County, New Mexico**

Submit sundry to add "COM" to the name.

Submit NMOCD Gas Capture Plan Via sundry notice

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all such owners and will make those signatures available to the BLM immediately upon request.
- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. When the Communitization Agreement number is known, it shall also be on the sign.

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)

☐ **Lea County**

Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 3933612

1. **Although there are no measured amounts of Hydrogen Sulfide reported, it is always a potential hazard. 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.

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 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.

Capitan Reef
Possible water flows in the Salado.
Possible lost circulation in the Red Beds, Rustler, Yates, Capitan Reef and Delaware.
Abnormal pressures may be encountered when penetrating the 3rd Bone Spring Sandstone and all subsequent formations.

1. The **13-3/8** inch surface casing shall be set at approximately **1420** 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.

Special Capitan Reef requirements:

If lost circulation (50% or greater) occurs below the Base of the Salt, the operator shall do the following:

- **Switch to fresh water mud to protect the Capitan Reef and use fresh water mud until setting the intermediate casing. The appropriate BLM office is to be notified for a PET to witness the switch to fresh water.**

- **Daily drilling reports from the Base of the Salt to the setting of the intermediate casing are to be submitted to the BLM CFO engineering staff via e-mail by 0800 hours each morning. Any lost circulation encountered is to be recorded on these drilling reports. The daily drilling report should show mud volume per shift/tour. Failure to submit these reports will result in an Incidence of Non-Compliance being issued for failure to comply with the Conditions of Approval. If not already planned, the operator shall run a caliper survey for the intermediate well bore and submit to the appropriate BLM office.**

Intermediate casing shall be kept fluid filled while running into hole to meet BLM minimum collapse requirements.

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. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Capitan Reef.**

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

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 **5-1/2** inch production casing is:

   ☐ Cement should tie-back at least 200 feet into previous casing string and at least **50 feet above the Capitan Reef**. Operator shall provide method of verification.

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. 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 53.

2. 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).

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be psi.

4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be psi. **5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**

If multibowl options is utilized:

5. **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 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.**

6. The appropriate BLM office shall be notified a minimum of 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).

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

    b. 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.

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

d. 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.**

e. 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 082318

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Matador Production Company
LEASE NO.:	NMNM115426
WELL NAME & NO.:	Dr Ireland Federal 123H
SURFACE HOLE FOOTAGE:	570'/S & 1249'/E
BOTTOM HOLE FOOTAGE	240'/N & 1650'/E
LOCATION:	Section 19, T.23 S., R.35 E., NMPM
COUNTY:	Lea County, New Mexico

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.

Approval Date: 09/10/2018

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. 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, Sundry Notices and Reports on Wells, 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.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered 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.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. 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.

V. SPECIAL REQUIREMENT(S)

- The entirety of the well pads would be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pads. Topsoil should not be used to construct the berm. No water flow from the uphill side(s) of the pads should be allowed to enter the well pads. The berm should be maintained through the life of the wells and after interim reclamation has been completed.
- Any water erosion that may occur due to the construction of the well pads or facilities during the life of the project would be quickly corrected and proper measures would be taken to prevent future erosion.

Measures to minimize or eliminate impacts to wildlife are described in COAs (BLM 1997:Appendix 2)
for closed loop systems. Special mitigation includes the following:

- For portions of the project being constructed during the nesting season (March 1–August 31), the operator could conduct pre-construction nest surveys up to 2 weeks prior of vegetation removal and avoidance buffers around any occupied nest could be established (distances to be specified by the BLM) to ensure compliance with the MBTA.
- Similarly, unoccupied raptor nests would be removed by Matador, in consultation with a biologist, outside the breeding season. The BLM may require pre-construction surveys of potential burrowing owl burrows to identify occupied colonies and establish avoidance buffer, (distance to be specified by the BLM) until the young have fledged. The BLM may require a biological monitor during construction near occupied burrows. To lessen the likelihood of burrow occupation, Matador would work with a biologist to collapse suitable burrows outside the migratory bird breeding season (March–August).
- NMDGF trenching guidelines (NMDGF 2003) would be followed in order to prevent accidental Texas horned lizard mortality caused by entrapment.
- The operator would instruct personnel working on the construction of the project to avoid intentionally harassing all animals.

Livestock Watering Requirement
Structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, will be avoided by moving the proposed action.

Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

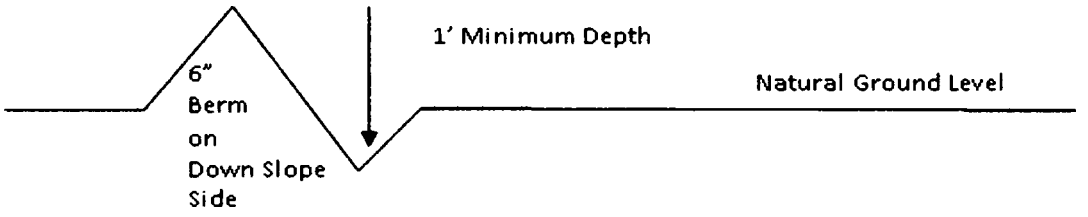
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

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2. Construct road
3. Redistribute topsoil
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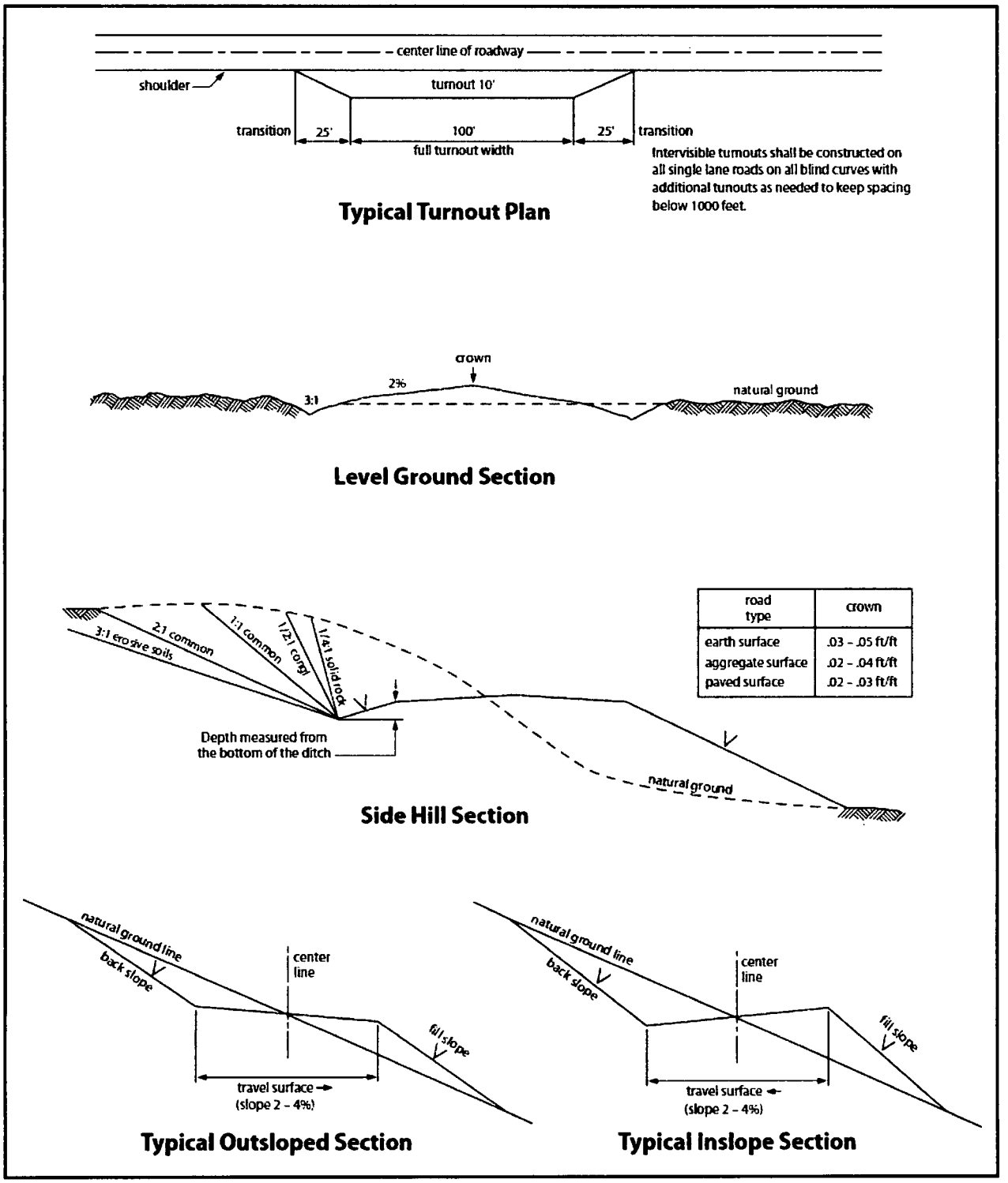

Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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A. WELL STRUCTURES & FACILITIES

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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, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. 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 revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory

revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

Seed Mixture 1 for Loamy Sites

Holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed shall be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall be tagged in accordance with State law(s) and available for inspection by the Authorized Officer.

Seed shall be planted using a drill equipped with a depth regulator to ensure proper depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area (small/heavier seeds have a tendency to drop the bottom of the drill and are planted first). Holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre shall be doubled. The seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	lb/acre
Plains lovegrass (Eragrostis intermedia)	0.5
Sand dropseed (Sporobolus cryptandrus)	1.0
Sideoats grama (Bouteloua curtipendula)	5.0
Plains bristlegrass (Setaria macrostachya)	2.0

*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Matador Production Company
LEASE NO.:	NMNM115426
WELL NAME & NO.:	Dr Ireland Federal 123H
SURFACE HOLE FOOTAGE:	570'/S & 1249'/E
BOTTOM HOLE FOOTAGE	240'/N & 1650'/E
LOCATION:	Section 19, T.23 S., R.35 E., NMPM
COUNTY:	Lea County, New Mexico

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.

Approval Date: 09/10/2018

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. 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, Sundry Notices and Reports on Wells, 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.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered 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.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. 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.

V. SPECIAL REQUIREMENT(S)

- The entirety of the well pads would be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pads. Topsoil should not be used to construct the berm. No water flow from the uphill side(s) of the pads should be allowed to enter the well pads. The berm should be maintained through the life of the wells and after interim reclamation has been completed.
- Any water erosion that may occur due to the construction of the well pads or facilities during the life of the project would be quickly corrected and proper measures would be taken to prevent future erosion.

Measures to minimize or eliminate impacts to wildlife are described in COAs (BLM 1997:Appendix 2)
for closed loop systems. Special mitigation includes the following:

- For portions of the project being constructed during the nesting season (March 1–August 31), the operator could conduct pre-construction nest surveys up to 2 weeks prior of vegetation removal and avoidance buffers around any occupied nest could be established (distances to be specified by the BLM) to ensure compliance with the MBTA.
- Similarly, unoccupied raptor nests would be removed by Matador, in consultation with a biologist, outside the breeding season. The BLM may require pre-construction surveys of potential burrowing owl burrows to identify occupied colonies and establish avoidance buffer, (distance to be specified by the BLM) until the young have fledged. The BLM may require a biological monitor during construction near occupied burrows. To lessen the likelihood of burrow occupation, Matador would work with a biologist to collapse suitable burrows outside the migratory bird breeding season (March–August).
- NMDGF trenching guidelines (NMDGF 2003) would be followed in order to prevent accidental Texas horned lizard mortality caused by entrapment.
- The operator would instruct personnel working on the construction of the project to avoid intentionally harassing all animals.

Livestock Watering Requirement
Structures that provide water to livestock, such as windmills, pipelines, drinking troughs, and earthen reservoirs, will be avoided by moving the proposed action.

Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

Exclosure Fencing
The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing
Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching
Ditching shall be required on both sides of the road.

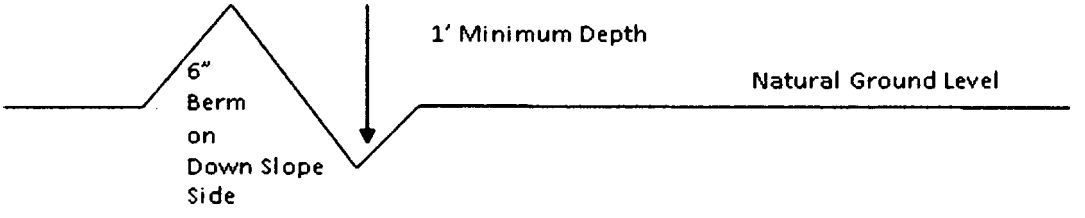
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



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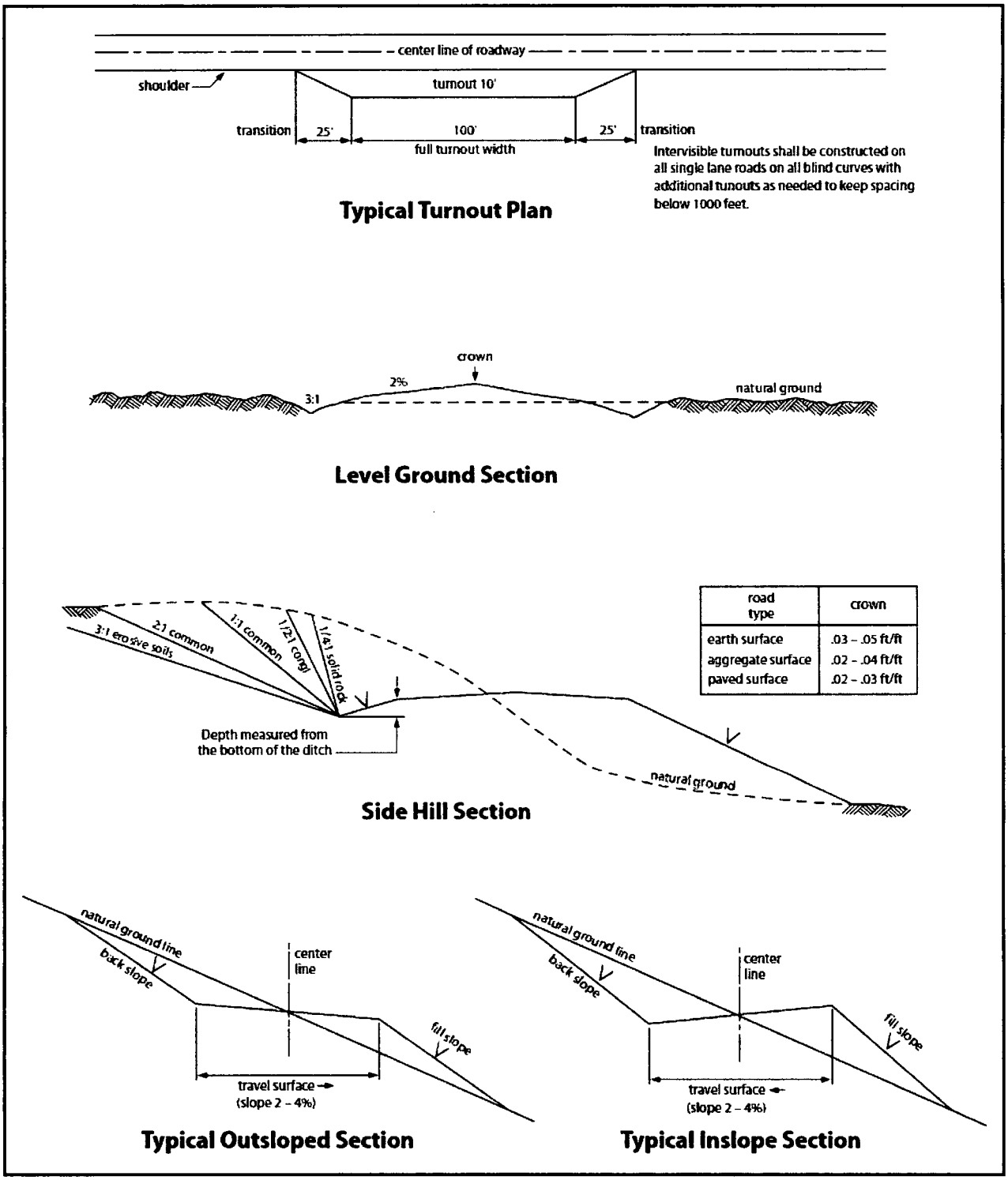

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*Pounds of pure live seed:

Pounds of seed **x** percent purity **x** percent germination = pounds pure live seed

AFMSS

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

Operator Certification Data Report

09/10/2018

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Lara Thompson **Signed on:** 04/23/2018

Title: Assistant Project Manager

Street Address: 5647 Jefferson Street NE

City: Albuquerque **State:** NM **Zip:** 87109

Phone: (505)254-1115

Email address: Lara.Thompson@swca.com

Field Representative

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

AFMSS

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

Application Data Report

09/10/2018

APD ID: 10400028456 **Submission Date:** 03/30/2018

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: DR IRELAND FEDERAL **Well Number:** 123H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400028456 **Tie to previous NOS?** **Submission Date:** 03/30/2018

BLM Office: CARLSBAD **User:** Lara Thompson **Title:** Assistant Project Manager

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMNM115426 **Lease Acres:** 279.45

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? NO **Federal or Indian agreement:**

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? YES **APD Operator:** MATADOR PRODUCTION COMPANY

Operator letter of designation:

Operator Info

Operator Organization Name: MATADOR PRODUCTION COMPANY

Operator Address: 5400 LBJ Freeway, Suite 1500 **Zip:** 75240

Operator PO Box:

Operator City: Dallas **State:** TX

Operator Phone: (972)371-5200

Operator Internet Address: amonroe@matadorresources.com

Section 2 - Well Information

Well in Master Development Plan? NO **Mater Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: DR IRELAND FEDERAL **Well Number:** 123H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** BONE SPRING POOL IN THE ANTELOPE RIDGE-BS NORTH

Is the proposed well in an area containing other mineral resources? NATURAL GAS,OIL

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: DR IRELAND FEDERAL **Well Number:** 123H

Describe other minerals:

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** NO **New surface disturbance?**

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** DR IRELAND FEDERAL **Number:** 4

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: APPRAISAL

Describe sub-type:

Distance to town: **Distance to nearest well:** 30 FT **Distance to lease line:** 570 FT

Reservoir well spacing assigned acres Measurement: 160.09 Acres

Well plat: BO_DR_IRELAND_FED_COM_SLOT_3_SURFACE_PAD_SITE_REV1_S_20180313102854.PDF

CD_DR_IRELAND_FED_COM_SLOT_3_SURFACE_PAD_PRO_REV1_S_20180315115905.PDF

1Mile_Radius_Map_20180315115940.docx

DrIrelandFederal123H_signed_PoolCode_20180628105628.pdf

Well work start Date: 12/01/2018 **Duration:** 25 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number:

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	570	FSL	1249	FEL	23S	35E	19	Aliquot SESE	32.2844372	-103.4022274	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 115426	3387	0	0
KOP Leg #1	570	FSL	1249	FEL	23S	35E	19	Aliquot SESE	32.2844372	-103.4022274	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 115426	2387	10000	10000

Operator Name: MATADOR PRODUCTION COMPANY

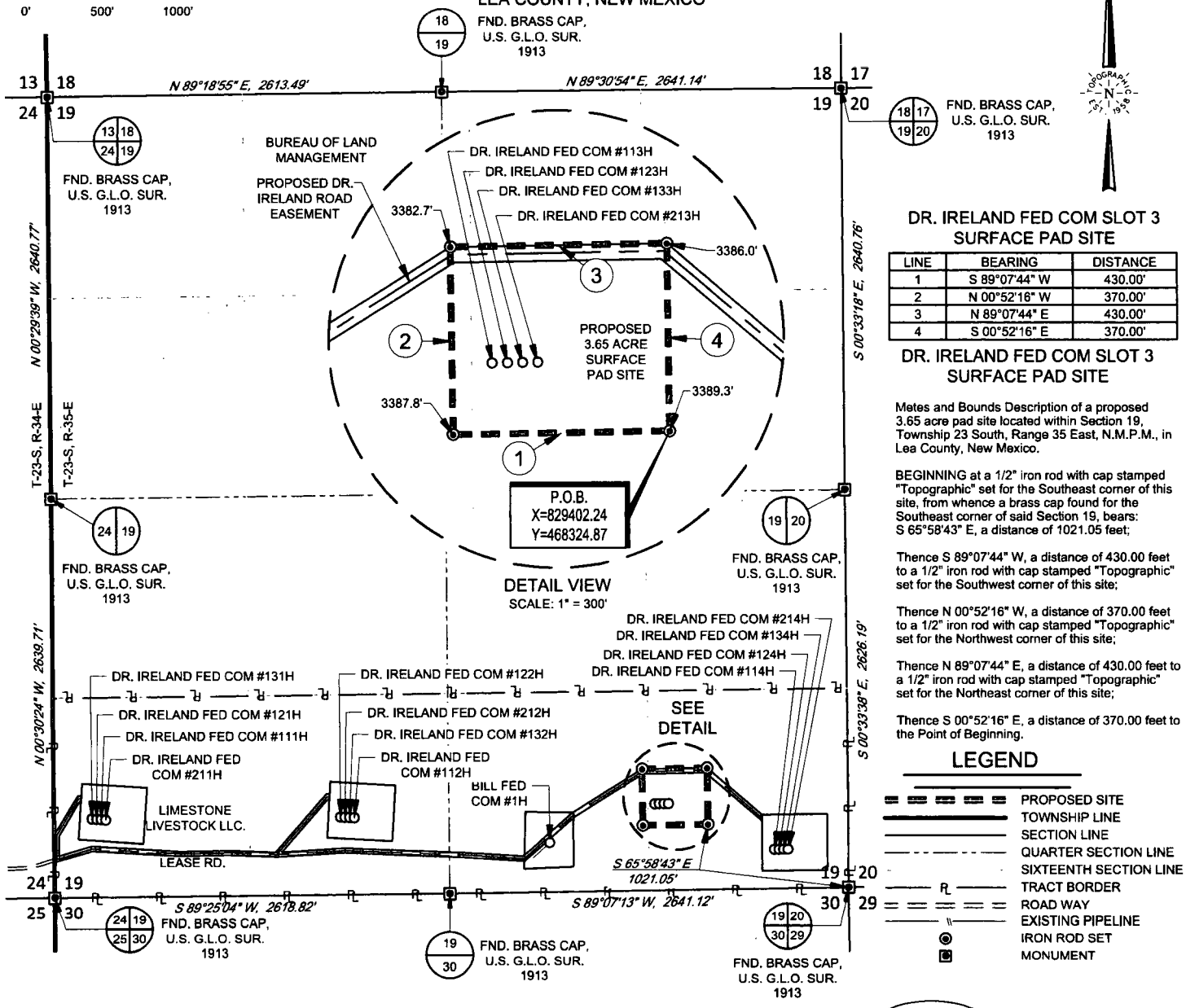
Well Name: DR IRELAND FEDERAL **Well Number:** 123H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
PPP Leg #1	330	FSL	1650	FEL	23S	35E	19	Aliquot SWSE	32.2837705	-103.403523	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 115426	-7113	10853	10500
EXIT Leg #1	330	FNL	1650	FEL	23S	35E	19	Aliquot NWNE	32.2964645	-103.4035389	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 113422	-7113	15183	10500
BHL Leg #1	240	FNL	1650	FEL	23S	35E	19	Aliquot NWNE	32.2967119	-103.4035392	LEA	NEW MEXICO	NEW MEXICO	F	NMNM 113422	-7113	15273	10500

SCALE: 1" = 1000'

0' 500' 1000'

SECTION 19, TOWNSHIP 23-S, RANGE 35-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



DR. IRELAND FED COM SLOT 3 SURFACE PAD SITE

LINE	BEARING	DISTANCE
1	S 89°07'44" W	430.00'
2	N 00°52'16" W	370.00'
3	N 89°07'44" E	430.00'
4	S 00°52'16" E	370.00'

DR. IRELAND FED COM SLOT 3 SURFACE PAD SITE

Metes and Bounds Description of a proposed 3.65 acre pad site located within Section 19, Township 23 South, Range 35 East, N.M.P.M., in Lea County, New Mexico.

BEGINNING at a 1/2" iron rod with cap stamped "Topographic" set for the Southeast corner of this site, from whence a brass cap found for the Southeast corner of said Section 19, bears: S 65°58'43" E, a distance of 1021.05 feet;

Thence S 89°07'44" W, a distance of 430.00 feet to a 1/2" iron rod with cap stamped "Topographic" set for the Southwest corner of this site;

Thence N 00°52'16" W, a distance of 370.00 feet to a 1/2" iron rod with cap stamped "Topographic" set for the Northwest corner of this site;

Thence N 89°07'44" E, a distance of 430.00 feet to a 1/2" iron rod with cap stamped "Topographic" set for the Northeast corner of this site;

Thence S 00°52'16" E, a distance of 370.00 feet to the Point of Beginning.

LEGEND

- PROPOSED SITE
- TOWNSHIP LINE
- SECTION LINE
- QUARTER SECTION LINE
- SIXTEENTH SECTION LINE
- TRACT BORDER
- ROAD WAY
- EXISTING PIPELINE
- IRON ROD SET
- MONUMENT

STAN W. LLOYD NEW MEXICO 19642 PROFESSIONAL SURVEYOR

Matador PRODUCTION COMPANY

TOPOGRAPHIC LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

Stan W. Lloyd, P.S. No. 19642
OCTOBER 23, 2017

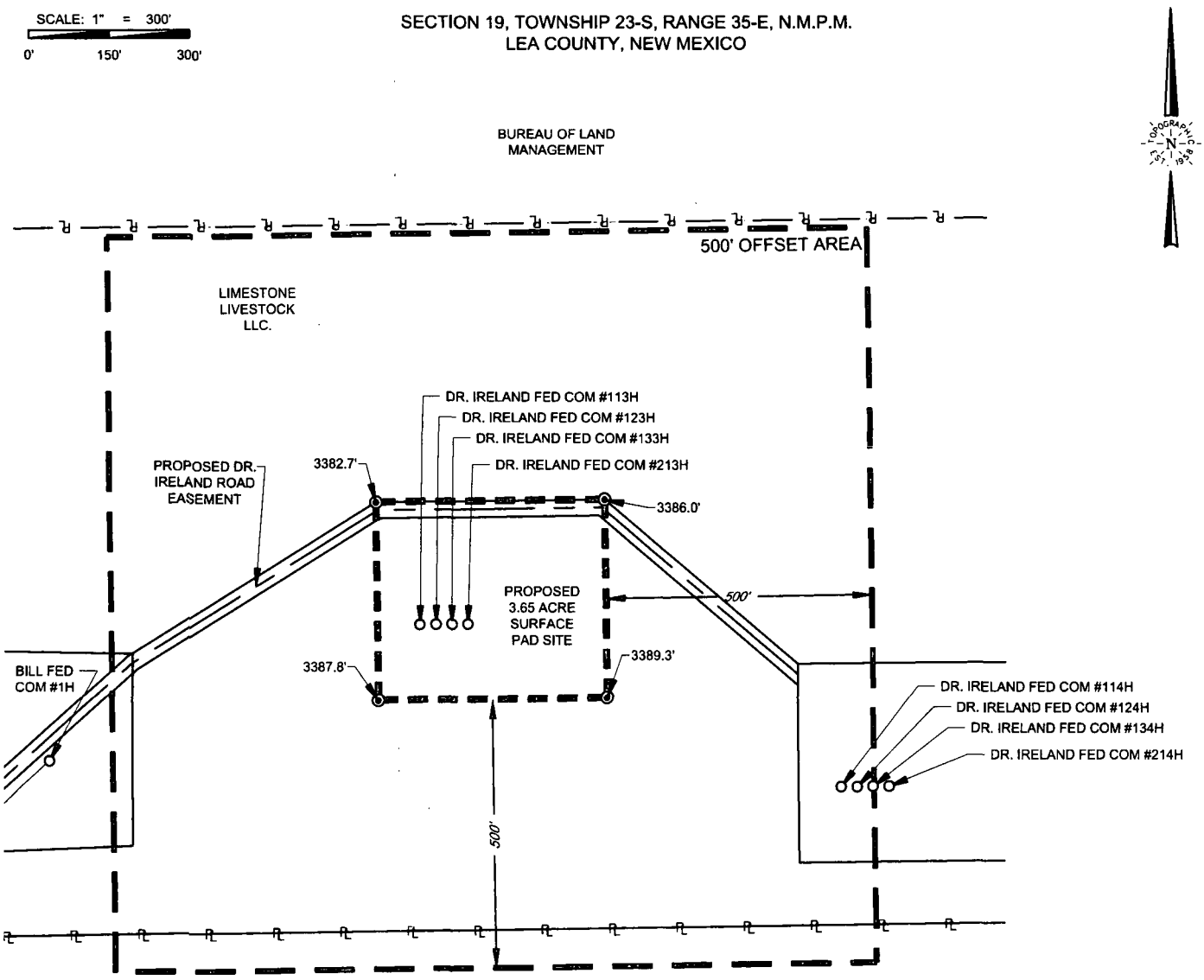
DR. IRELAND FED COM SLOT 3 SURFACE PAD SITE	REVISION:	
	MML	10/23/17
DATE: 09/12/17		
FILE: BO_DR_IRELAND_FED_COM_SLOT_3_SURFACE_PAD_SITE_REV1		
DRAWN BY: MML		
SHEET: 1 OF 2		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1983.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR PRODUCTION COMPANY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. P.O.B. = POINT OF BEGINNING

SCALE: 1" = 300'

0' 150' 300'

SECTION 19, TOWNSHIP 23-S, RANGE 35-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEGEND

- SECTION LINE
- QUARTER SECTION LINE
- SIXTEENTH SECTION LINE
- PROPOSED SITE
- 500' PROXIMITY
- TRACT BORDER
- PROPOSED ROAD
- IRON ROD SET

STAN W. LLOYD
NEW MEXICO
19642
PROFESSIONAL SURVEYOR

Stan W. Lloyd

Stan W. Lloyd, P.S. No. 19642
OCTOBER 23, 2017

Matador PRODUCTION COMPANY

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

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DR. IRELAND FED COM SLOT 3 SURFACE PAD SITE PROXIMITY	REVISION:	
	MML	10/23/17
DATE: 09/12/17		
FILE: BO DR IRELAND FED COM SLOT 3 SURFACE PAD SITE REV1		
DRAWN BY: MML		
SHEET : 2 OF 2		

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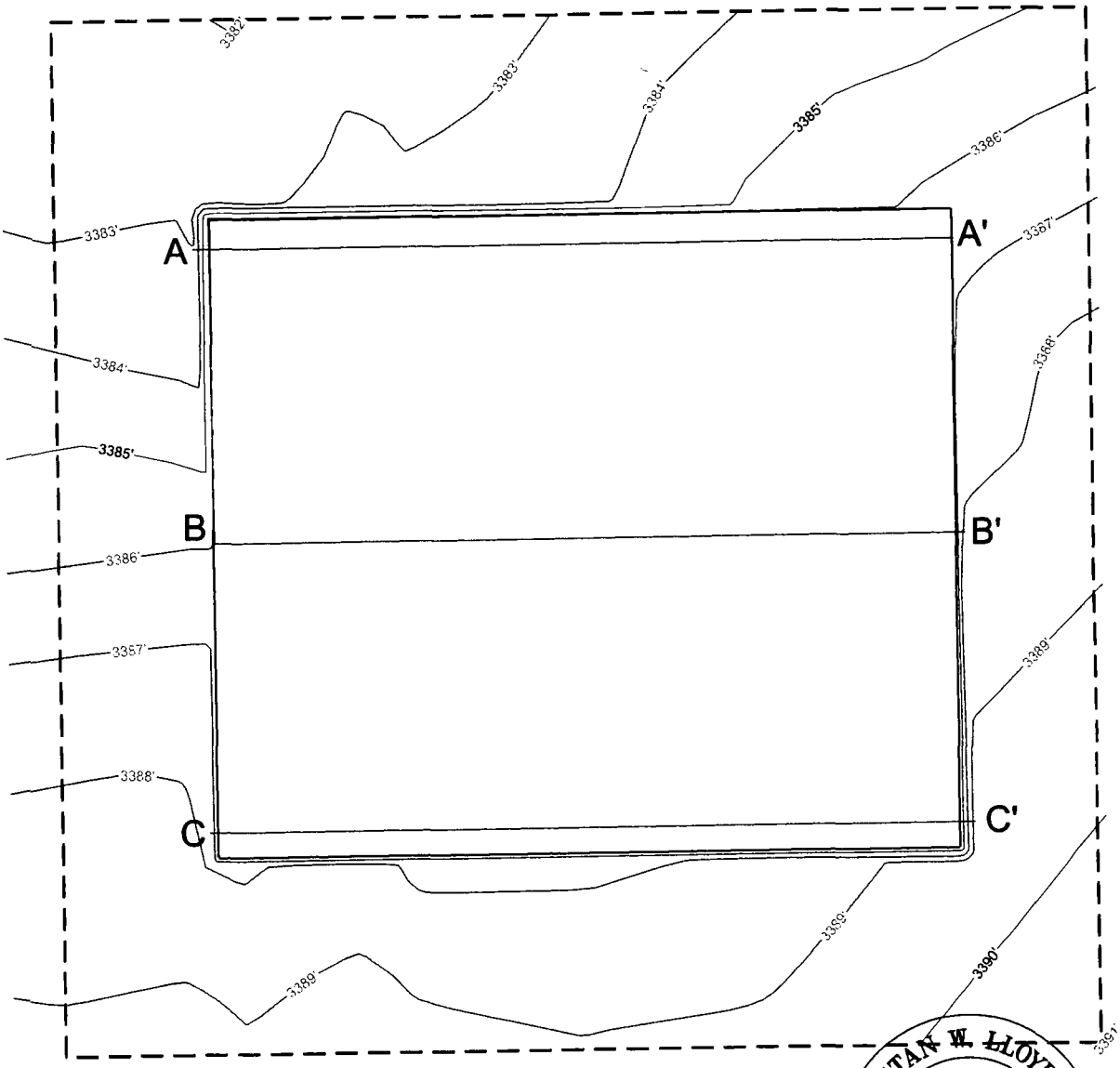
EXHIBIT "A"

SCALE: 1" = 100'
0' 50' 100'

SECTION 19, TOWNSHIP 23-S, RANGE 35-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



STAN W. LLOYD
NEW MEXICO
19642
PROFESSIONAL SURVEYOR

Stan W. Lloyd

Stan W. Lloyd, P.S. No. 19642
OCTOBER 24, 2017
Field note description of even date accompanies this plat.

Matador PRODUCTION COMPANY

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

DR. IRELAND FED COM SLOT 3 SURFACE PAD SITE PROFILE	REVISION:	
	MML	10/24/17
DATE: 09/14/17		
FILE: CD_DR_IRELAND_FED_COM_SLOT_3_SURFACE_PAD_PRO_REV1		
DRAWN BY: MML		
SHEET: 1 OF 2		

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S:\SURVEY\MATADOR_RESOURCES\DR_IRELAND_FED_COM_SLOT_3_SURFACE_PAD_SITE\FINAL_PRODUCTS\CD_DR_IRELAND_FED_COM_SLOT_3_SURFACE_PAD_PRO_REV1.DWG 10/30/2017 4:22:33 PM ccaston

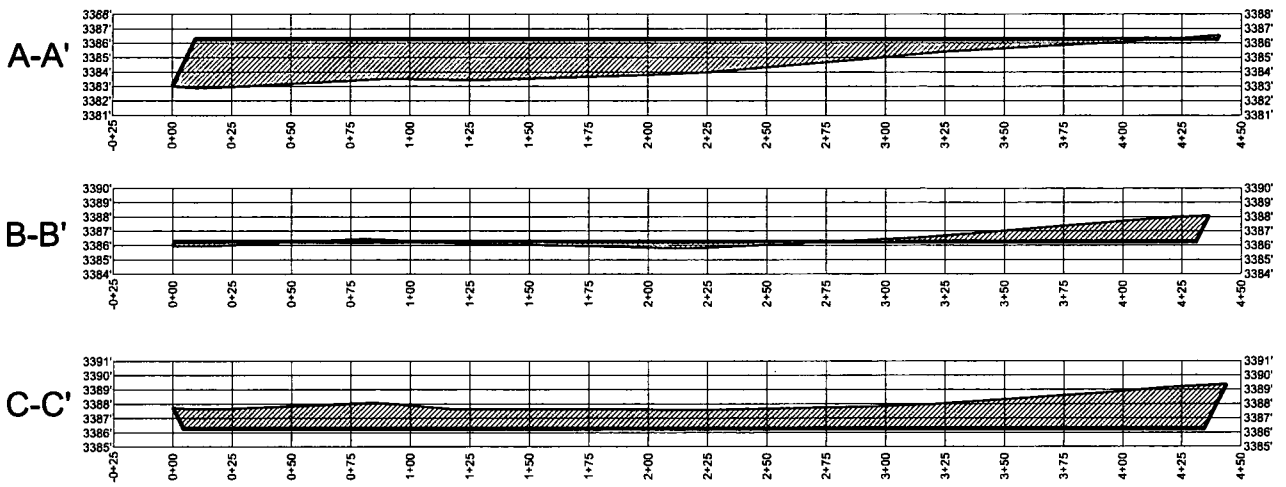
TOP OF PAD ELEVATION: 3386.2710
CUT SLOPE: 33.33% 3.000:1 18.43°
FILL SLOPE: 33.33% 3.000:1 18.43°
BALANCE TOLERANCE (C.Y.): 0.00
CUT SWELL FACTOR: 1.00
FILL SHRINK FACTOR: 1.00

PAD EARTHWORK VOLUMES
CUT : 96,803.9 C.F., 3,585.33 C.Y.
FILL: 96,803.9 C.F., 3,585.33 C.Y.
AREA: 168152.1 SQ.FT., 3.860 ACRES

EXHIBIT "A"

SECTION 19, TOWNSHIP 23-S, RANGE 35-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

Matador PRODUCTION COMPANY



Horizontal Scale = 1:60
Vertical Scale = 1:5

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TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

DR. IRELAND FED COM SLOT 3 SURFACE PAD SITE PROFILE	REVISION:	
	MML	10/24/17
DATE: 09/14/17		
FILE: C:\DR IRELAND FED COM SLOT 3 SURFACE PAD PRO REV1		
DRAWN BY: MML		
SHEET: 2 OF 2		

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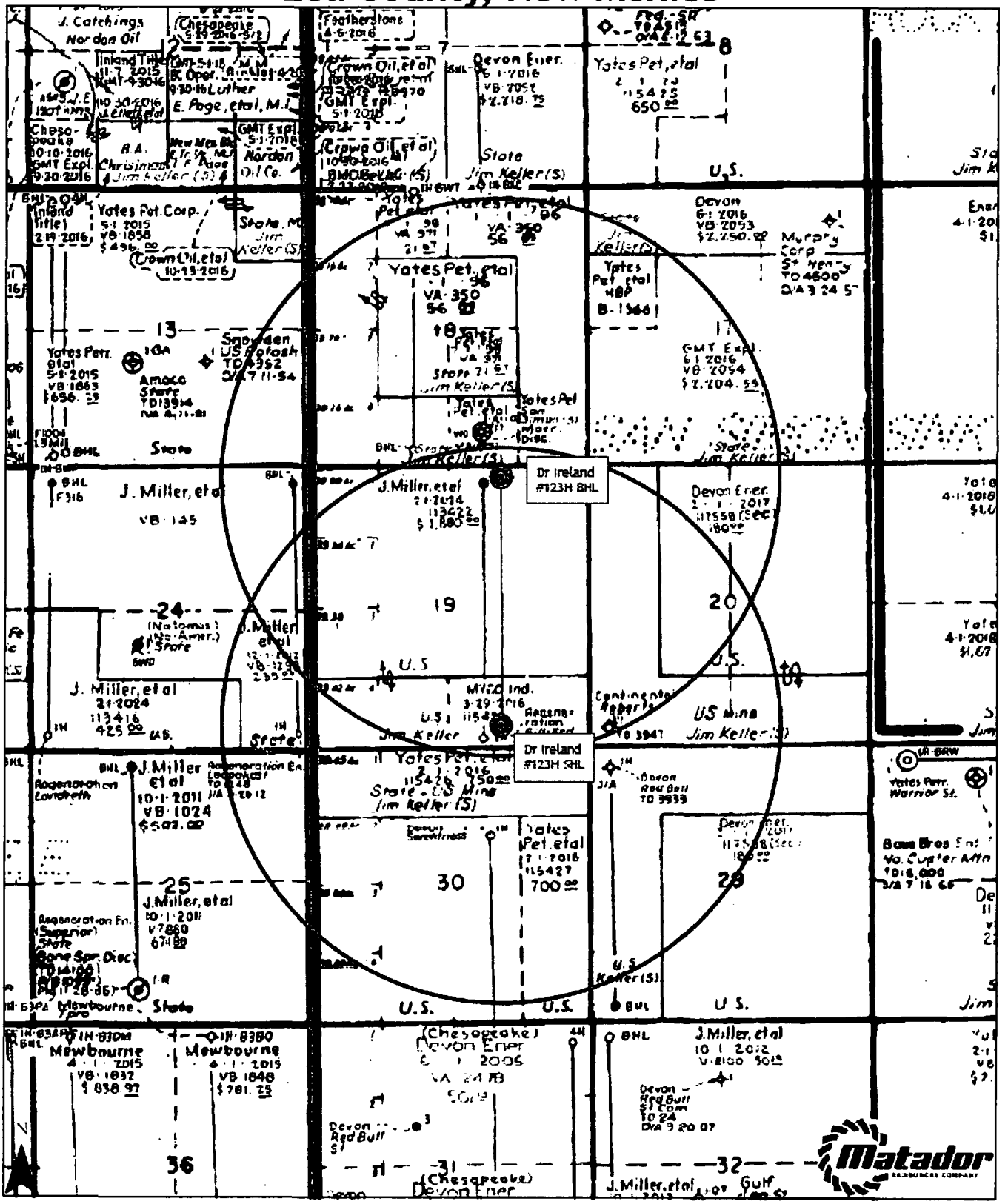
STAN W. LLOYD
NEW MEXICO
19642
PROFESSIONAL SURVEYOR

Stan W. Lloyd

Stan W. Lloyd, P.S. No. 19642
OCTOBER 24, 2017
Field note description of even date accompanies this plat.

S:\SURVEY\MATADOR_RESOURCES\DR_IRELAND_FED_COM_SLOT_3_SURFACE_PAD_SITE\FINAL_PRODUCTS\CD_DR_IRELAND_FED_COM_SLOT_3_SURFACE_PAD_PRO_REV1.DWG 10/30/2017 4:22:33 PM ccasion

Lea County, New Mexico



Projection: NAD_1927_StatePlane_New_Mexico_East_FIPS_3001 (feet)

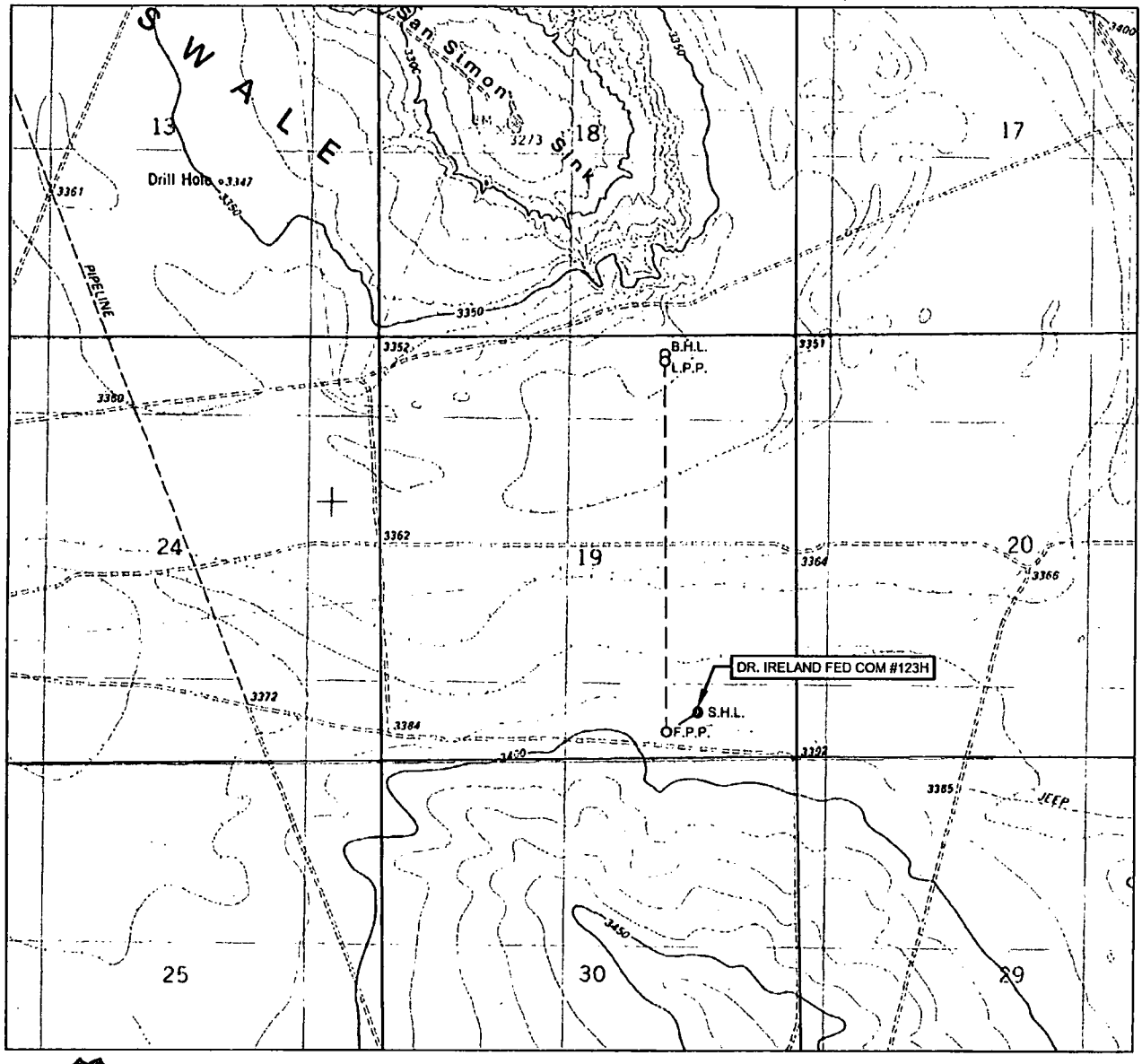
1 inch = 2,500 feet

Feet

0 2,500 5,000 10,000

Map Prepared by: AGreen
Date: December 13, 2017
Filename: DrIreMapRadius_Plat
Sources: IHS Energy; Midland Map Company; Environmental Systems Research Institute (ESRI);

LOCATION & ELEVATION VERIFICATION MAP



Matador PRODUCTION COMPANY

LEASE NAME & WELL NO.: DR. IRELAND FED COM #123H

SECTION 19 TWP 23-S RGE 35-E SURVEY N.M.P.M.
COUNTY LEA STATE NM ELEVATION 3387'
DESCRIPTION 570' FSL & 1249' FEL

LATITUDE N 32.2844372 LONGITUDE W 103.4022274

-N-

SCALE: 1" = 2000'
0' 1000' 2000'

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1983, U.S. SURVEY FEET.

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
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2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
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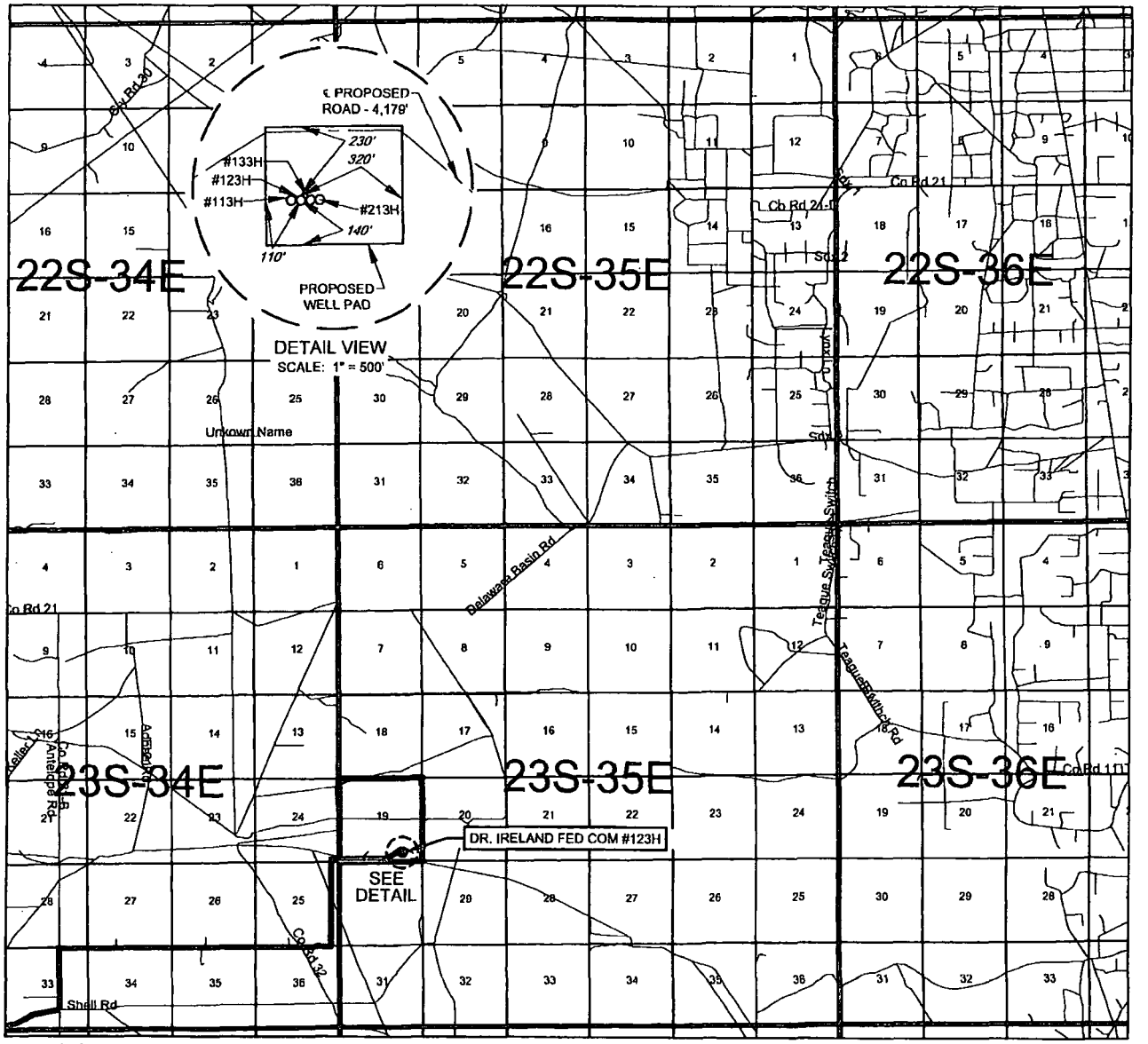
VICINITY MAP



Matador PRODUCTION COMPANY

LEASE NAME & WELL NO.: DR. IRELAND FED COM #123H

SECTION 19 TWP 23-S RGE 35-E SURVEY N.M.P.M.
COUNTY LEA STATE NM
DESCRIPTION 570' FSL & 1249' FEL

DISTANCE & DIRECTION

FROM INT. OF NM-18 & NM-128, GO WEST ON NM-128 ±20.6 MILES, THENCE NORTH (RIGHT) ON DELAWARE BASIN RD. ±3.0 MILES, THENCE EAST (RIGHT) ON COUNTRY RD. 21-B/J-21/SHELL RD. ±2.3 MILES, THENCE NORTH (LEFT) ON ANTELOPE RD. 0.7 MILES, THENCE WEST (RIGHT) ON LEASE RD. ±3.2 MILES, THENCE NORTH (LEFT) ON LEASE RD. ±1.0 MILE, THENCE EAST (RIGHT) ON A PROPOSED RD. ±0.8 MILES TO A POINT ±200 FEET NORTH OF THIS LOCATION.

-N-

SCALE: 1" = 10000'

0' 5000' 10000'

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

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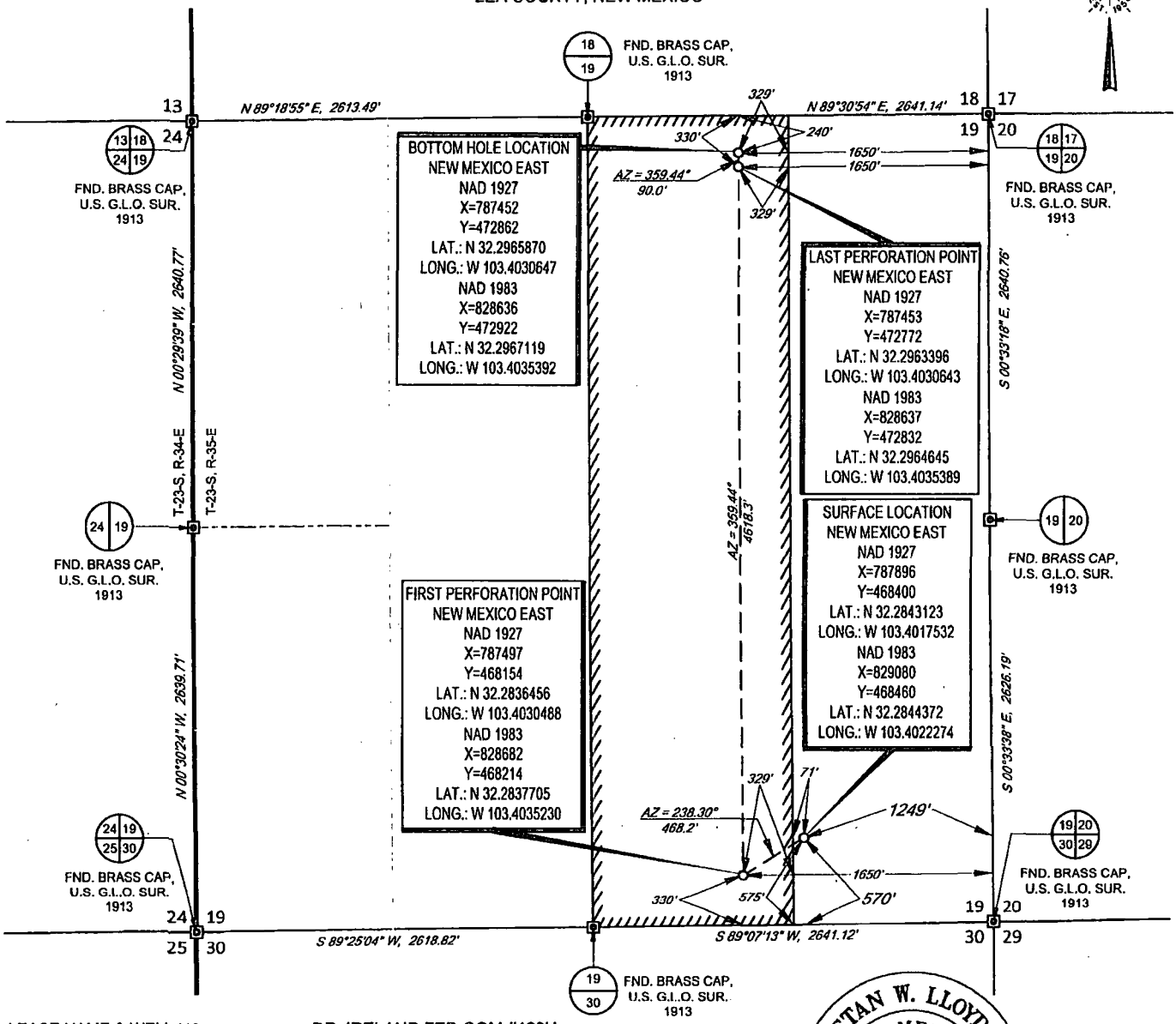
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

SCALE: 1" = 1000'

0' 500' 1000'

Matador PRODUCTION COMPANY

SECTION 19, TOWNSHIP 23-S, RANGE 35-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: DR. IRELAND FED COM #123H

SECTION 19 TWP 23-S RGE 35-E SURVEY N.M.P.M.

COUNTY LEA STATE NM

DESCRIPTION 570' FSL & 1249' FEL

DISTANCE & DIRECTION

FROM INT. OF NM-18 & NM-128, GO WEST ON NM-128 ±20.6 MILES, THENCE NORTH (RIGHT) ON DELAWARE BASIN RD. ±3.0 MILES, THENCE EAST (RIGHT) ON COUNTRY RD. 21-B/J-21/SHELL RD. ±2.3 MILES, THENCE NORTH (LEFT) ON ANTELOPE RD. 0.7 MILES, THENCE WEST (RIGHT) ON LEASE RD. ±3.2 MILES, THENCE NORTH (LEFT) ON LEASE RD. ±1.0 MILE, THENCE EAST (RIGHT) ON A PROPOSED RD. ±0.8 MILES TO A POINT ±200 FEET NORTH OF THIS LOCATION.

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1983, U.S. SURVEY FEET

THIS EASEMENT/SERVITUDE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

AS OF THE DATE OF SURVEY, ALL ABOVE GROUND APPURTENANCES WITHIN 300' OF THE STAKED LOCATION ARE SHOWN HEREON.

STAN W. LLOYD NEW MEXICO 19642 PROFESSIONAL SURVEYOR

Stan W. Lloyd

Stan W. Lloyd, P.S. No. 19642

OCTOBER 25, 2017

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 197 • FT. WORTH, TEXAS 76140
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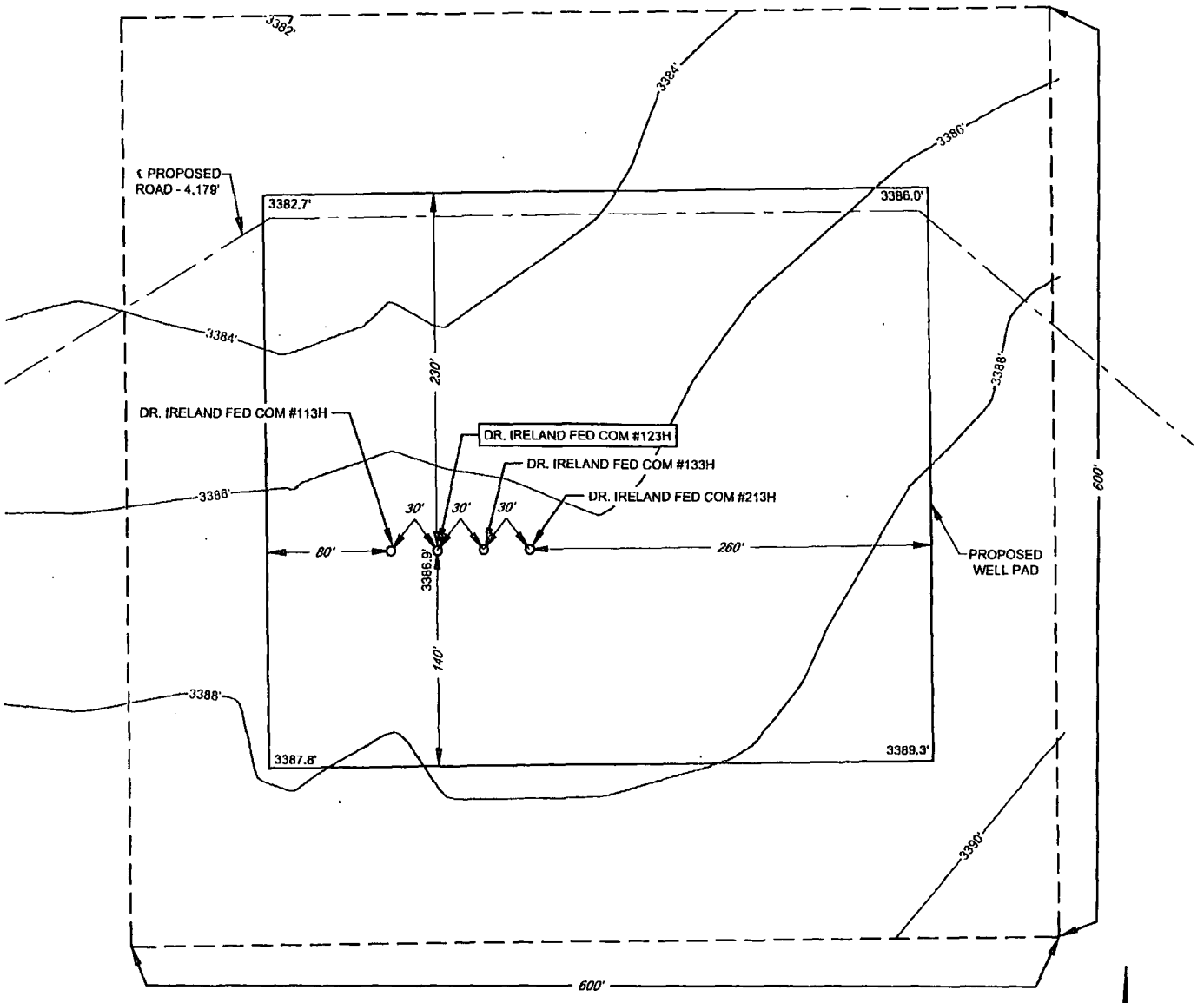
S:\SURVEY\MATADOR_RESOURCES\DR_IRELAND_FED_COM_123H\FINAL_PRODUCTS\LO_DR_IRELAND_FED_COM_123H_REV1.DWG 10/30/2017 2:31:00 PM ccaston

SECTION 19, TOWNSHIP 23-S, RANGE 35-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



SCALE: 1" = 100'
0' 50' 100'

LEASE NAME & WELL NO.: DR. IRELAND FED COM #123H

#123H LATITUDE N 32.2844372 #123H LONGITUDE W 103.4022274

N

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1983, U.S. SURVEY FEET

THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY, AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

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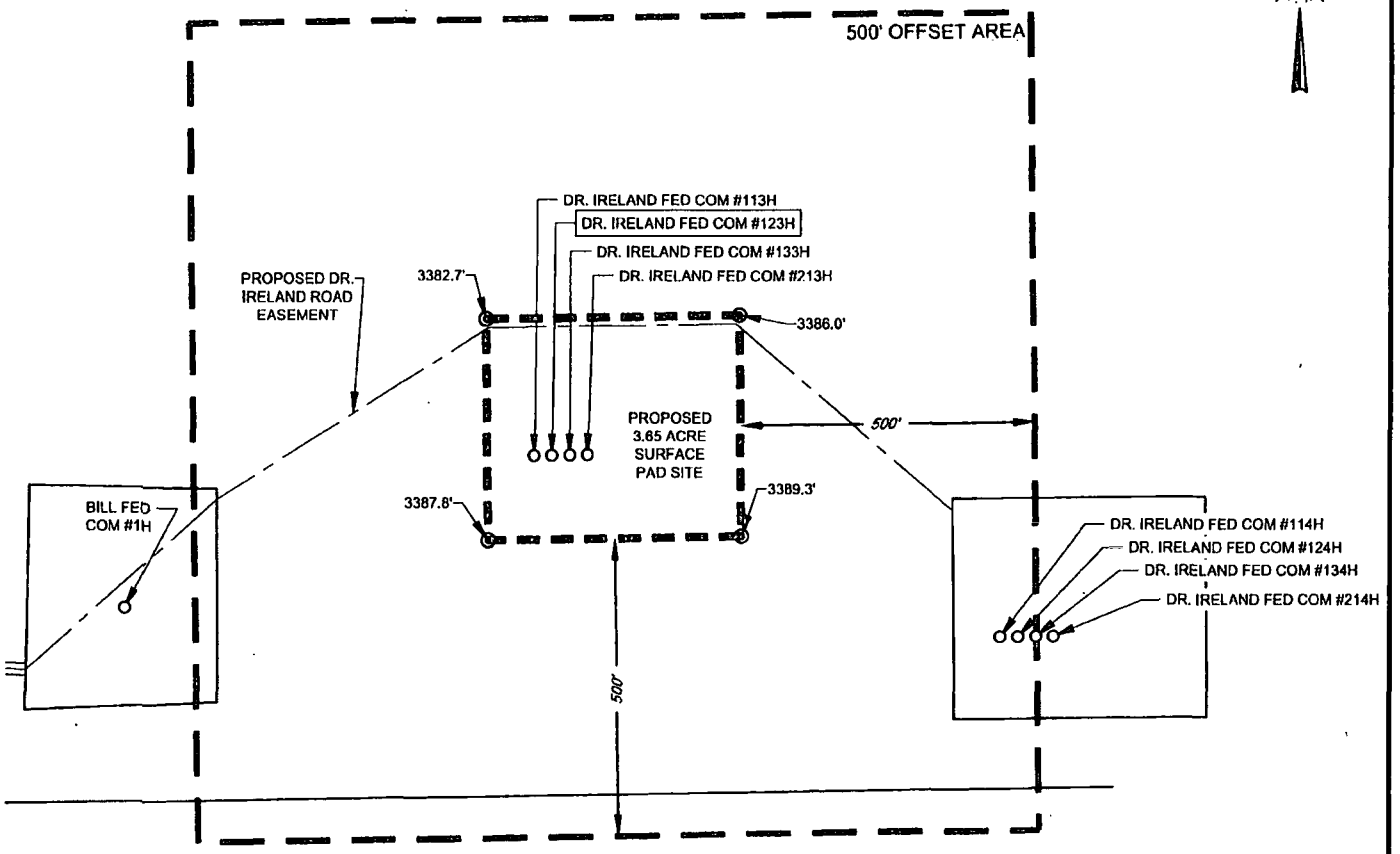
WWW.TOPOGRAPHIC.COM

ORIGINAL DOCUMENT SIZE: 8.5" X 11" S:\SURVEY\MATADOR_RESOURCES\DR_IRELAND_FED_COM_123H\FINAL_PRODUCTS\LO_DR_IRELAND_FED_COM_123H_REV1.DWG 10/30/2017 2:31:01 PM ccaston

SCALE: 1" = 300'

0' 150' 300'

SECTION 19, TOWNSHIP 23-S, RANGE 35-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEGEND

- SECTION LINE
- PROPOSED SITE
- 500' PROXIMITY
- PROPOSED ROAD
- IRON ROD SET

STAN W. LLOYD
NEW MEXICO
19642
PROFESSIONAL SURVEYOR

Stan W. Lloyd

Stan W. Lloyd, P.S. No. 19642
OCTOBER 25, 2017

Matador PRODUCTION COMPANY

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DR. IRELAND FED COM #123H PROXIMITY	REVISION:	
	MML	10/25/17
DATE: 09/12/17		
FILE: LO_DR_IRELAND_FED_COM_123H_REV1		
DRAWN BY: MML		
SHEET: 7 OF 7		

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1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1983.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR PRODUCTION COMPANY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.

S:\SURVEY\MATADOR_RESOURCES\DR_IRELAND_FED_COM_123H\FINAL_PRODUCTS\LO_DR_IRELAND_FED_COM_123H_REV1.DWG 10/30/2017 2:31:01 PM ccaston

APD ID: 10400028456 **Submission Date:** 03/30/2018

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: DR IRELAND FEDERAL **Well Number:** 123H

Well Type: OIL WELL **Well Work Type:** Drill

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	RUSTLER	3387	1396	1396		USEABLE WATER	No
2	SALADO	1616	1771	1771		NONE	No
3	BASE OF SALT	-656	4043	4043		NONE	No
4	BELL CANYON	-2155	5542	5542		NATURAL GAS,OIL	No
5	BRUSHY CANYON	-4105	7492	7492		NATURAL GAS,OIL	No
6	BONE SPRING LIME	-5414	8801	8801		NATURAL GAS,OIL	No
7	BONE SPRING 1ST	-6135	9522	9522		NATURAL GAS,OIL	No
8	BONE SPRING 2ND	-6601	9988	9988		NATURAL GAS,OIL	No
9	BONE SPRING 3RD	-7333	10720	10720		NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 2M **Rating Depth:** 15000

Equipment: See Exhibit E-1. A BOP consisting of 3 rams with 2 pipe rams, 1 blind ram and one annular preventer. The BOP will be utilized below surface casing to TD. See attachments for BOP and choke manifold diagrams. Also present will be an accumulator that meets the requirements of Onshore Order #2 for the pressure rating of the BOP stack. A rotating head will also be installed as needed. BOP will be inspected and operated as recommended in Onshore Order #2. A Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position. A third party company will test the BOPs.
Requesting Variance? YES

Variance request: The operator requests a variance to have the option of running a speed head for setting the intermediate strings. In the case of running a speed head with landing mandrel for 9-5/8" casing, a minimum of a 3M BOPE system will be installed after surface casing is set. Matador Resources requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached (see Exhibit E-2). The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used.
Testing Procedure: After setting surface casing and before drilling below the surface casing shoe, a minimum of a 2M BOPE system will be installed and tested to 250 psi low and 2000 psi high with the annular being tested to 250 psi low and 1000 psi high. After setting intermediate casing, a minimum of a 3M system will be installed and tested to 250 psi low and

3000 psi high with the annular being tested to 250 psi low and 2500 psi high.

Choke Diagram Attachment:

Choke_Manifold_20180315121450.pdf

BOP Diagram Attachment:

BOP_297_001_20180315121500.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	850	0	850			850	J-55	54.5	OTHER - BTC	1.125	1.125	BUOY	1.8	BUOY	1.8
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	5400	0	5400			5400	J-55	40	OTHER - BTC	1.125	1.125	BUOY	1.8	BUOY	1.8
3	PRODUCTION	8.75	5.5	NEW	NON API	N	4400	15273	4400	10500			10873	P-110	20	OTHER - BTC/TXP	1.125	1.125	BUOY	1.8	BUOY	1.8

Casing Attachments

Casing ID: 1 **String Type:** SURFACE

Inspection Document:

Spec Document:

TenarisHydril_TenarisXP_BTC_5.500_20_20180213122618.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLM_Casing_Design_Assumptions_3_string_20180213123000.pdf

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: DR IRELAND FEDERAL **Well Number:** 123H

Casing Attachments

Casing ID: 2 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLM_Casing_Design_Assumptions_3_string_20180213122944.pdf

Casing ID: 3 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

TenarisHydril_TenarisXP_BTC_5.500_20_20180306142420.pdf

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLM_Casing_Design_Assumptions_3_string_20180213122951.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
SURFACE	Lead		0	850	210	1.82	12.8	382	100	Class C	Bentonite + 2% CaCL2 + 3% NaCl + LCM
SURFACE	Tail		0	850	720	1.38	14.8	994	100	Class C	5% NaCl + LCM
INTERMEDIATE	Lead		0	5400	1170	2.13	12.6	2492	100	Class C	Bentonite + 1% CaCL2 + 8% NaCl + LCM
INTERMEDIATE	Tail		0	5400	620	1.38	14.8	856	100	Class C	5% NaCl + LCM
PRODUCTION	Lead		4400	15273	660	2.35	11.5	1551	35	TXI	Fluid Loss + Dispersant + Retarder + LCM

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: DR IRELAND FEDERAL **Well Number:** 123H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Tail		4400	15273	1500	1.39	13.2	2085	35	TXI	Fluid Loss + Dispersant + Retarder + LCM

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: See Exhibit E-1. A BOP consisting of 3 rams with 2 pipe rams, 1 blind ram and one annular preventer. The BOP will be utilized below surface casing to TD. See attachments for BOP and choke manifold diagrams. Also present will be an accumulator that meets the requirements of Onshore Order #2 for the pressure rating of the BOP stack. A rotating head will also be installed as needed. BOP will be inspected and operated as recommended in Onshore Order #2. A Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position. A third party company will test the BOPs.

Describe the mud monitoring system utilized: The Mud Monitoring System is an electronic Pason system satisfying requirements of Onshore Order 1. Mud Logging Program: 2 man unit from 5400 – TD.

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	850	SPUD MUD	8.3	8.3							
0	5400	SALT SATURATED	10	10							
4400	15273	OTHER : FW/ Cut Brine	9	9							

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: DR IRELAND FEDERAL **Well Number:** 123H

Section 6 - Test, Logging, Coring

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

See page 3 of Drilling Plan attached in Other Facets, Section 8.

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

CBL,GR,MUDLOG

Coring operation description for the well:

No DSTs or cores are planned at this time.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5000 **Anticipated Surface Pressure:** 2690

Anticipated Bottom Hole Temperature(F): 140

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Matador_Hydrogen_Sulfide_Drilling_Leslie__024_20180315122100.docx

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Dr._Ireland_Fed_Com__123H___Well_Plan_v1_20180315122114.pdf

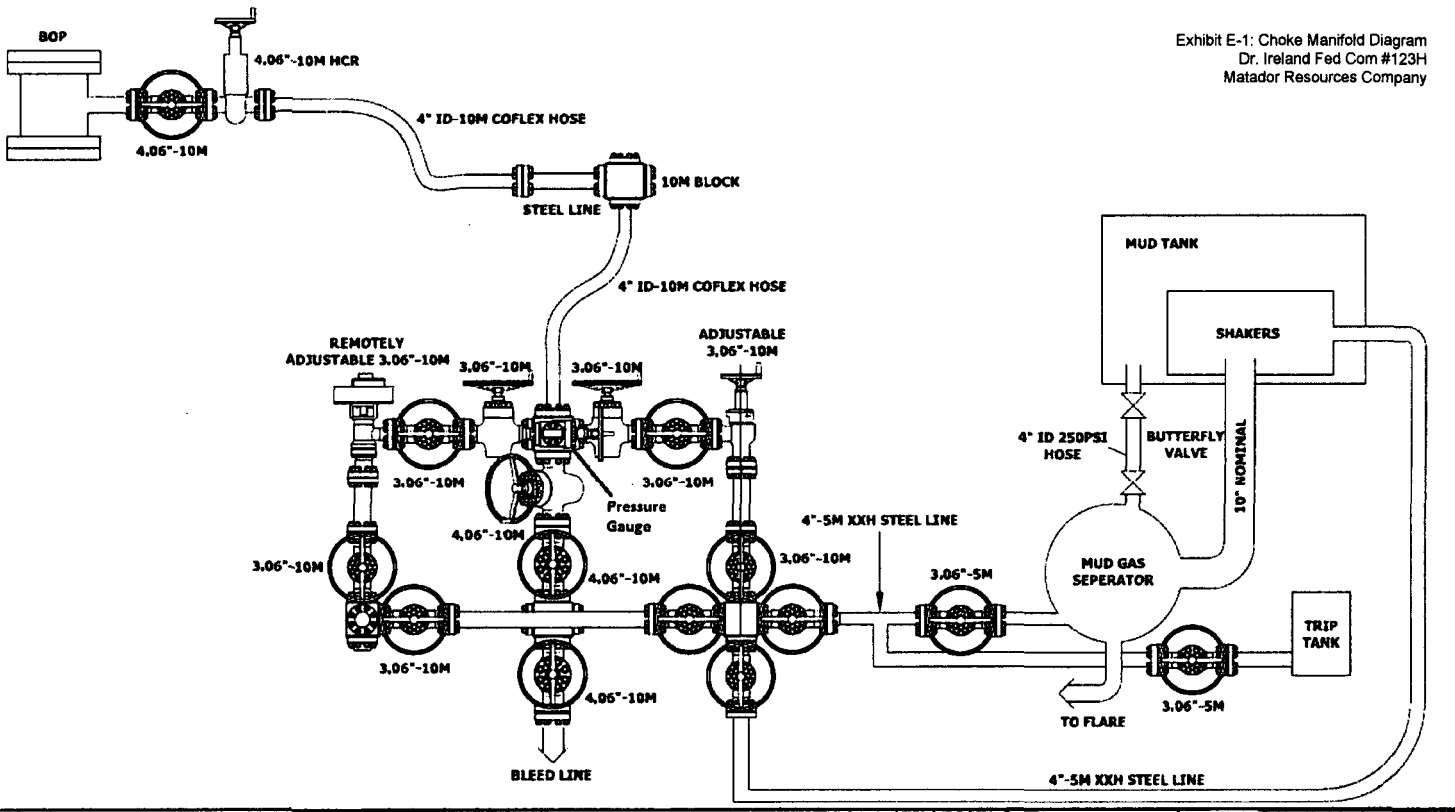
Other proposed operations facets description:

Other proposed operations facets attachment:

Dr._Ireland_Fed_Com__123H___Geoprog_v1_20180315122401.pdf
297Co_Flex_Certs__Dr._Ireland_Fed_Com__123H_20180315122415.pdf
Dr._Ireland_Fed_Com__123H_MTDR_Drlg_Plan_20180315122428.docx
Close_Loop_System_20180315122439.docx
3_string_Speed_Head_20180315122455.pdf

Other Variance attachment:

Exhibit E-1: Choke Manifold Diagram
Dr. Ireland Fed Com #123H
Matador Resources Company



WELDING NOTE & TOLERANCES UNLESS OTHERWISE SPECIFIED.

REV	DATE	DESCRIPTION	DRWN BY	CHK BY	APVD BY
02	6-3-16	ISSUED FOR INFORMATION	CP	CDL	
01	5-5-15	ISSUED FOR INFORMATION	CDL		

PATTERSON-UTI DRILLING COMPANY LLC

CHOKE MANIFOLD

10M CHOKE ARRANGEMENT
RIG 297

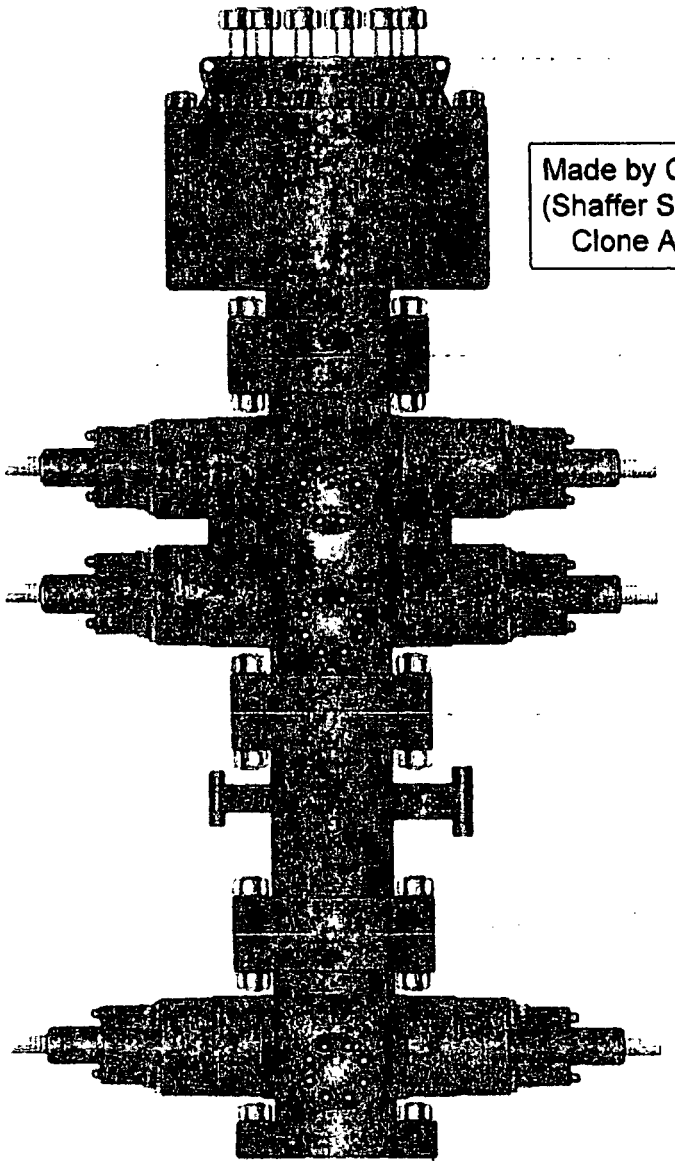
DWG NO. R0297-D.001.LAY.09

SHT 1 OF 1 | REV 02

Exhibit E-1: BOP
Dr. Ireland Fed Com #123H
Matador Resources Company

PATTERSON-UTI
Well Control

RIG 297



Made by Cameron
(Shaffer Spherical)
Clone Annular

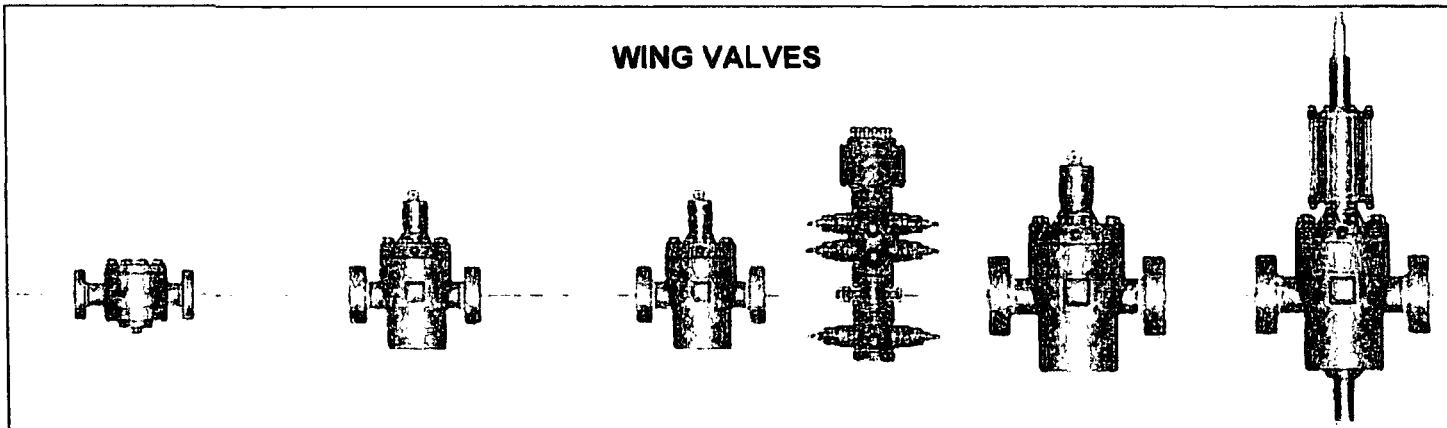
PATTERSON-UTI # PS2-628
STYLE: New Shaffer Spherical
BORE 13 5/8" **PRESSURE** 5,000
HEIGHT: 48 ½" **WEIGHT:** 13,800 lbs

PATTERSON-UTI # PC2-128
STYLE: New Cameron Type U
BORE 13 5/8" **PRESSURE** 10,000
RAMS: TOP 5" Pipe BTM Blinds
HEIGHT: 66 5/8" **WEIGHT:** 24,000 lbs

Length 40" **Outlets** 4" 10M
DSA 4" 10M x 2" 10M

PATTERSON-UTI # PC2-228
STYLE: New Cameron Type U
BORE 13 5/8" **PRESSURE** 10,000
RAMS: 5" Pipe
HEIGHT: 41 5/8" **WEIGHT:** 13,000 lbs

WING VALVES



2" Check Valve | 2" Manual Valve | 2" Manual Valve | 4" Manual Valve | 4" Hydraulic Valve

For the latest performance data, always visit our website: www.tenaris.com

February 02 2017

Tenaris

Size: 5.500 in.
Wall: 0.361 in.
Weight: 20.00 lbs/ft
Grade: P110-IC
Min. Wall Thickness: 87.5 %

Connection: TenarisXP® BTC
Casing/Tubing: CAS
Coupling Option: REGULAR

PIPE BODY DATA

GEOMETRY

Nominal OD	**5.500** in.	Nominal Weight	**20.00** lbs/ft	Standard Drift Diameter	**4.653** in.
Nominal ID	**4.778** in.	Wall Thickness	**0.361** in.	Special Drift Diameter	**N/A**
Plain End Weight	**19.83** lbs/ft				

PERFORMANCE

Body Yield Strength	**641** x 1000 lbs	Internal Yield	**12630** psi	SMYS	**110000** psi
Collapse	**12100** psi				

TENARISXP® BTC CONNECTION DATA

GEOMETRY

Connection OD	**6.100** in.	Coupling Length	**9.450** in.	Connection ID	**4.766** in.
Critical Section Area	**5.828** sq. in.	Threads per in.	**5.00**	Make-Up Loss	**4.204** in.

PERFORMANCE

Tension Efficiency	**100** %	Joint Yield Strength	**641** x 1000 lbs	Internal Pressure Capacity(1)	**12630** psi
Structural Compression Efficiency	**100** %	Structural Compression Strength	**641** x 1000 lbs	Structural Bending(2)	**92** °/100 ft
External Pressure Capacity	**12100** psi				

ESTIMATED MAKE-UP TORQUES(3)

Minimum	**11270** ft-lbs	Optimum	**12520** ft-lbs	Maximum	**13770** ft-lbs

OPERATIONAL LIMIT TORQUES

Operating Torque	**21500** ft-lbs	Yield Torque	**23900** ft-lbs		

BLANKING DIMENSIONS

Blanking Dimensions

(1) Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per

section 10.3 API 5C3 / ISO 10400 - 2007.

(2) Structural rating, pure bending to yield (i.e no other loads applied)

(3) Torque values calculated for API Modified thread compounds with Friction Factor=1. For other thread compounds please contact us at licensees@oilfield.tenaris.com. Torque values may be further reviewed.

For additional information, please contact us at contact-tenarishydril@tenaris.com

For the latest performance data, always visit our website: www.tenaris.com

February 02 2017

Tenaris

Size: 5.500 in.
Wall: 0.361 in.
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PIPE BODY DATA

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Nominal ID	**4.778** in.	Wall Thickness	**0.361** in.	Special Drift Diameter	**N/A**
Plain End Weight	**19.83** lbs/ft				

PERFORMANCE

Body Yield Strength	**641** x 1000 lbs	Internal Yield	**12630** psi	SMYS	**110000** psi
Collapse	**12100** psi				

TENARISXP® BTC CONNECTION DATA

GEOMETRY

Connection OD	**6.100** in.	Coupling Length	**9.450** in.	Connection ID	**4.766** in.
Critical Section Area	**5.828** sq. in.	Threads per in.	**5.00**	Make-Up Loss	**4.204** in.

PERFORMANCE

Tension Efficiency	**100** %	Joint Yield Strength	**641** x 1000 lbs	Internal Pressure Capacity(1)	**12630** psi
Structural Compression Efficiency	**100** %	Structural Compression Strength	**641** x 1000 lbs	Structural Bending(2)	**92** °/100 ft
External Pressure Capacity	**12100** psi				

ESTIMATED MAKE-UP TORQUES(3)

Minimum	**11270** ft-lbs	Optimum	**12520** ft-lbs	Maximum	**13770** ft-lbs

OPERATIONAL LIMIT TORQUES

Operating Torque	**21500** ft-lbs	Yield Torque	**23900** ft-lbs		

BLANKING DIMENSIONS

Blanking Dimensions

(1) Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per

section 10.3 API 5C3 / ISO 10400 - 2007.

(2) Structural rating, pure bending to yield (i.e no other loads applied)

(3) Torque values calculated for API Modified thread compounds with Friction Factor=1. For other thread compounds please contact us at licensees@oilfield.tenaris.com. Torque values may be further reviewed.

For additional information, please contact us at contact-tenarishydril@tenaris.com

Casing Design Criteria and Load Case Assumptions

Surface Casing

Collapse: DF_C=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.43 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.52 psi/ft).

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.43 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (8.3 ppg).

Intermediate #2 Casing

Collapse: DF_C=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.47 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft) which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

Production Casing

Collapse: DF_C=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (9.0 ppg).

Casing Design Criteria and Load Case Assumptions

Surface Casing

Collapse: DF_C=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.43 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.52 psi/ft).

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.43 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (8.3 ppg).

Intermediate #2 Casing

Collapse: DF_C=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.47 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft) which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

Production Casing

Collapse: DF_C=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (9.0 ppg).

Casing Design Criteria and Load Case Assumptions

Surface Casing

Collapse: DF_C=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.43 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.52 psi/ft).

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.43 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (8.3 ppg).

Intermediate #2 Casing

Collapse: DF_C=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.47 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft) which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

Production Casing

Collapse: DF_C=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

- Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (9.0 ppg).

Hydrogen Sulfide Drilling

Operations Plan

Matador Resources

1 H2S safety instructions to the following:

- Characteristics of H2S
- Physical effects and hazards
- Principal and operation of H2S detectors, warning system and briefing areas
- Evacuation procedures, routes and first aid
- Proper use of safety equipment & life support systems
- Essential personnel meeting medical evaluation criteria will receive additional training on the proper use of 30min pressure demand air packs

2 H2S Detection and Alarm Systems:

- H2S sensor/detectors to be located on the drilling rig floor, in the base of the sub structure / cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may be placed as deemed necessary
- An audio alarm system will be installed on the derrick floor and in the doghouse

3 Windsocks and / Wind Streamers:

- Windsocks at mud pit area should be high enough to be visible
- Windsock on the rig floor and / top of doghouse should be high enough to be visible

4 Condition Flags and Signs:

- Warning sign on access road to location
- Flags to be displayed on sign at entrance to location
    - Green Flag – Normal Safe Operation Condition
    - Yellow Flag – Potential Pressure and Danger
    - Red Flag – Danger (H2S present in dangerous concentrations) Only H2S trained personnel admitted on location

5 Well Control Equipment:

- See Exhibit E-1

6 Communication:

- While working under masks chalkboards will be used for communications

- Hand signals will be used where chalk board is inappropriate
- Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.

7 Drilling Stem Testing:

- No DST cores are planned at this time

8 Drilling contractor supervisor will be required to be familiar with the effects H2S has on tubulars good and other mechanical equipment

9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary

11 Emergency Contacts

- See exhibit E-6

Company: Matador Resources
Site: Dr. Ireland Fed Com
Well: #123H
Project: Lea County, New Mexico (NAD 27)
Rig: Patterson 297

MS Directional

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	KOP, 1.00°/100' Build
1499.88	5.00	209.77	1499.24	-16.92	-10.82	-18.81	21.79	Begin 5.00° Tangent
8017.60	5.00	209.77	7992.17	-511.89	-292.79	-509.00	589.71	Begin 1.50°/100' Drop
8350.85	0.00	0.00	8325.00	-524.50	-300.00	-521.54	604.24	Begin Vertical Hold
9952.89	0.00	0.00	9927.04	-524.50	-300.00	-521.54	604.24	Begin 10.00°/100' Build
10652.69	90.00	352.20	10500.00	43.16	-377.76	46.85	1177.19	Begin 90.00° Lateral, Begin 2.00°/100' Turn
11214.70	90.00	359.44	10500.00	403.77	-404.13	407.70	1539.01	Hold 359.44° Azm
15273.08	90.00	359.44	10500.00	4461.95	-444.05	4466.07	6597.38	PBHL

Azimuths to Grid North
True North: -0.50°
Magnetic North: 6.39°

Magnetic Field
Strength: 47979.4nT
Dip Angle: 60.12°
Date: 1/11/2018
Model: BGGM2017

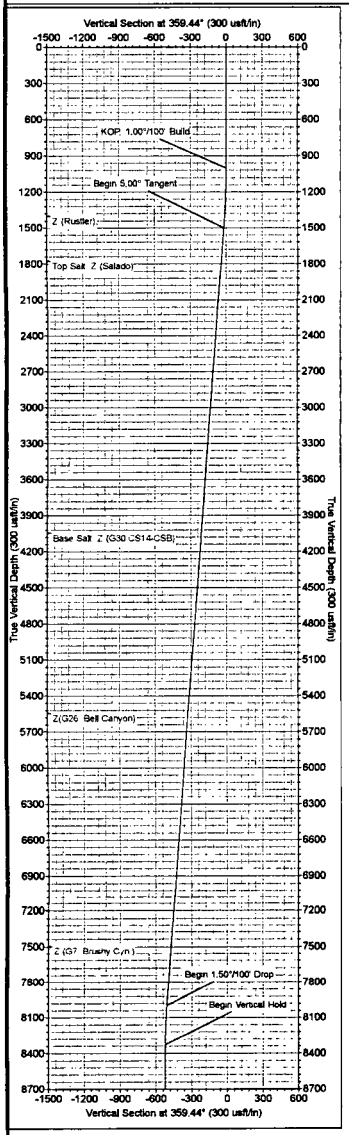
WELL DETAILS: #123H

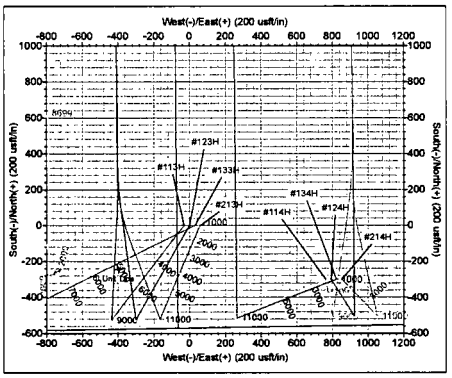
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	468400.24	787885.75	32° 17' 3.524 N	103° 24' 6.311 W

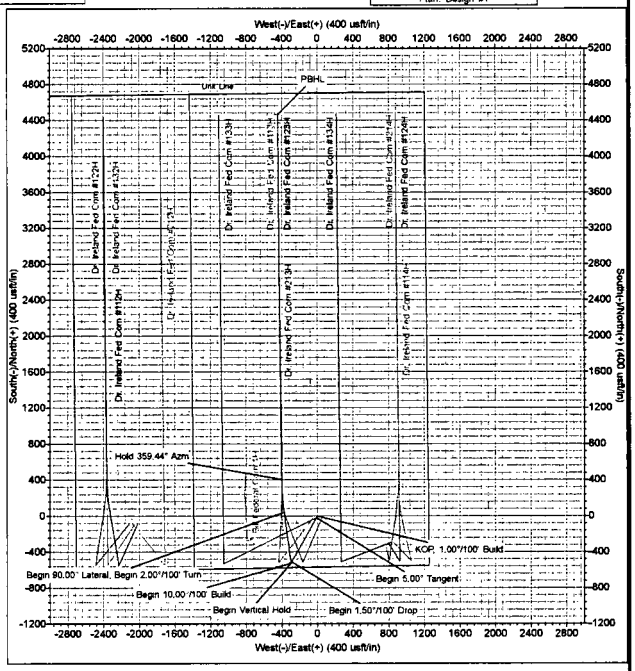
3387.00

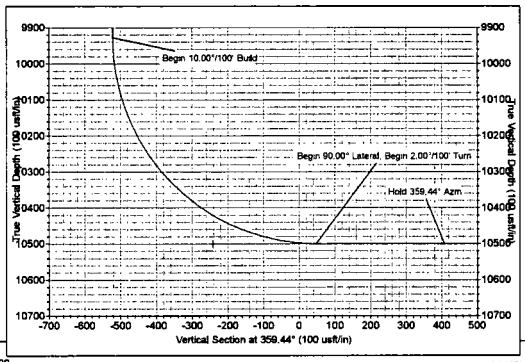
US State Plane 1927 (Exact solution)
New Mexico East 3001

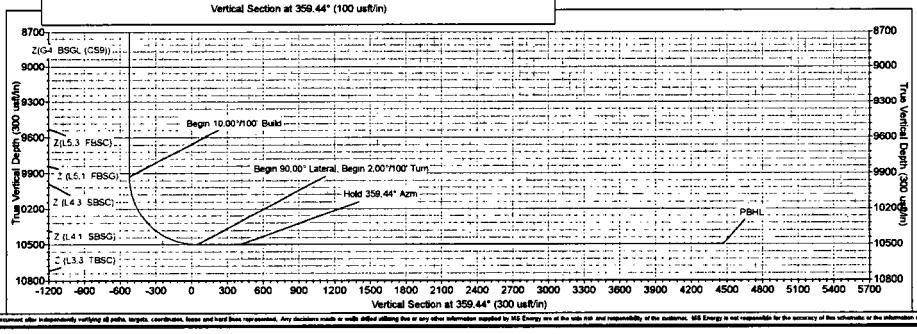
Created By: HLH
Date: 14:47, January 24 2018
Plan: Design #1











Matador Resources

Lea County, New Mexico (NAD 27)
Dr. Ireland Fed Com
#123H

Wellbore #1

Plan: Design #1

Standard Planning Report

24 January, 2018

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well #123H
Company:	Matador Resources	**TVD Reference:**	RKB=29' @ 3416.00usft (Patterson 297)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	RKB=29' @ 3416.00usft (Patterson 297)
Site:	Dr. Ireland Fed Com	**North Reference:**	Grid
Well:	#123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Lea County, New Mexico (NAD 27)		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Well	#123H					
Well Position	**+N/-S**	468,400.24 usft	**Northing:**	468,400.24 usft	**Latitude:**	32° 17' 3.524 N
	+E/-W	787,895.75 usft	**Easting:**	787,895.75 usft	**Longitude:**	103° 24' 6.311 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,387.00 usft

Wellbore	Wellbore #1				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	BGGM2017	1/11/2018	6.89	60.12	47,979

Design	Design #1				
Audit Notes:					
Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.00	0.00	0.00	359.44	

Plan Survey Tool Program **Date** 1/24/2018

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	15,272.99	Design #1 (Wellbore #1)	MWD OWSG MWD - Standard	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,499.88	5.00	209.77	1,499.24	-18.92	-10.82	1.00	1.00	0.00	209.77	
8,017.60	5.00	209.77	7,992.17	-511.89	-292.79	0.00	0.00	0.00	0.00	
8,350.85	0.00	0.00	8,325.00	-524.50	-300.00	1.50	-1.50	0.00	180.00	
9,952.89	0.00	0.00	9,927.04	-524.50	-300.00	0.00	0.00	0.00	0.00	
10,852.89	90.00	352.20	10,500.00	43.16	-377.76	10.00	10.00	0.00	352.20	
11,214.70	90.00	359.44	10,500.00	403.77	-404.13	2.00	0.00	2.00	90.00	
15,273.08	90.00	359.44	10,500.00	4,461.95	-444.05	0.00	0.00	0.00	0.00	PBHL - Dr. Ireland F

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well #123H
Company:	Matador Resources	**TVD Reference:**	RKB=29' @ 3416.00usft (Patterson 297)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	RKB=29' @ 3416.00usft (Patterson 297)
Site:	Dr. Ireland Fed Com	**North Reference:**	Grid
Well:	#123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 1.00°/100' Build									
1,100.00	1.00	209.77	1,099.99	-0.76	-0.43	-0.75	1.00	1.00	0.00
1,200.00	2.00	209.77	1,199.96	-3.03	-1.73	-3.01	1.00	1.00	0.00
1,300.00	3.00	209.77	1,299.86	-6.82	-3.90	-6.78	1.00	1.00	0.00
1,400.00	4.00	209.77	1,399.68	-12.12	-6.93	-12.05	1.00	1.00	0.00
1,499.88	5.00	209.77	1,499.24	-18.92	-10.82	-18.81	1.00	1.00	0.00
Begin 5.00° Tangent									
1,600.00	5.00	209.77	1,598.99	-26.49	-15.15	-26.34	0.00	0.00	0.00
1,700.00	5.00	209.77	1,698.60	-34.05	-19.48	-33.86	0.00	0.00	0.00
1,800.00	5.00	209.77	1,798.22	-41.62	-23.80	-41.38	0.00	0.00	0.00
1,900.00	5.00	209.77	1,897.84	-49.18	-28.13	-48.90	0.00	0.00	0.00
2,000.00	5.00	209.77	1,997.46	-56.74	-32.46	-56.42	0.00	0.00	0.00
2,100.00	5.00	209.77	2,097.08	-64.31	-36.78	-63.94	0.00	0.00	0.00
2,200.00	5.00	209.77	2,196.70	-71.87	-41.11	-71.47	0.00	0.00	0.00
2,300.00	5.00	209.77	2,296.32	-79.43	-45.43	-78.99	0.00	0.00	0.00
2,400.00	5.00	209.77	2,395.94	-87.00	-49.76	-86.51	0.00	0.00	0.00
2,500.00	5.00	209.77	2,495.56	-94.56	-54.09	-94.03	0.00	0.00	0.00
2,600.00	5.00	209.77	2,595.18	-102.13	-58.41	-101.55	0.00	0.00	0.00
2,700.00	5.00	209.77	2,694.80	-109.69	-62.74	-109.07	0.00	0.00	0.00
2,800.00	5.00	209.77	2,794.42	-117.25	-67.07	-116.59	0.00	0.00	0.00
2,900.00	5.00	209.77	2,894.04	-124.82	-71.39	-124.11	0.00	0.00	0.00
3,000.00	5.00	209.77	2,993.66	-132.38	-75.72	-131.63	0.00	0.00	0.00
3,100.00	5.00	209.77	3,093.28	-139.94	-80.04	-139.15	0.00	0.00	0.00
3,200.00	5.00	209.77	3,192.90	-147.51	-84.37	-146.67	0.00	0.00	0.00
3,300.00	5.00	209.77	3,292.52	-155.07	-88.70	-154.20	0.00	0.00	0.00
3,400.00	5.00	209.77	3,392.14	-162.63	-93.02	-161.72	0.00	0.00	0.00
3,500.00	5.00	209.77	3,491.76	-170.20	-97.35	-169.24	0.00	0.00	0.00
3,600.00	5.00	209.77	3,591.38	-177.76	-101.67	-176.76	0.00	0.00	0.00
3,700.00	5.00	209.77	3,691.00	-185.32	-106.00	-184.28	0.00	0.00	0.00
3,800.00	5.00	209.77	3,790.62	-192.89	-110.33	-191.80	0.00	0.00	0.00
3,900.00	5.00	209.77	3,890.24	-200.45	-114.65	-199.32	0.00	0.00	0.00
4,000.00	5.00	209.77	3,989.86	-208.02	-118.98	-206.84	0.00	0.00	0.00
4,100.00	5.00	209.77	4,089.48	-215.58	-123.31	-214.36	0.00	0.00	0.00
4,200.00	5.00	209.77	4,189.10	-223.14	-127.63	-221.88	0.00	0.00	0.00
4,300.00	5.00	209.77	4,288.72	-230.71	-131.96	-229.41	0.00	0.00	0.00
4,400.00	5.00	209.77	4,388.34	-238.27	-136.28	-236.93	0.00	0.00	0.00
4,500.00	5.00	209.77	4,487.96	-245.83	-140.61	-244.45	0.00	0.00	0.00
4,600.00	5.00	209.77	4,587.58	-253.40	-144.94	-251.97	0.00	0.00	0.00
4,700.00	5.00	209.77	4,687.19	-260.96	-149.26	-259.49	0.00	0.00	0.00
4,800.00	5.00	209.77	4,786.81	-268.52	-153.59	-267.01	0.00	0.00	0.00
4,900.00	5.00	209.77	4,886.43	-276.09	-157.91	-274.53	0.00	0.00	0.00
5,000.00	5.00	209.77	4,986.05	-283.65	-162.24	-282.05	0.00	0.00	0.00
5,100.00	5.00	209.77	5,085.67	-291.21	-166.57	-289.57	0.00	0.00	0.00

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well #123H
Company:	Matador Resources	**TVD Reference:**	RKB=29' @ 3416.00usft (Patterson 297)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	RKB=29' @ 3416.00usft (Patterson 297)
Site:	Dr. Ireland Fed Com	**North Reference:**	Grid
Well:	#123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.00	5.00	209.77	5,185.29	-298.78	-170.89	-297.09	0.00	0.00	0.00
5,300.00	5.00	209.77	5,284.91	-306.34	-175.22	-304.61	0.00	0.00	0.00
5,400.00	5.00	209.77	5,384.53	-313.91	-179.55	-312.14	0.00	0.00	0.00
5,500.00	5.00	209.77	5,484.15	-321.47	-183.87	-319.66	0.00	0.00	0.00
5,600.00	5.00	209.77	5,583.77	-329.03	-188.20	-327.18	0.00	0.00	0.00
5,700.00	5.00	209.77	5,683.39	-336.60	-192.52	-334.70	0.00	0.00	0.00
5,800.00	5.00	209.77	5,783.01	-344.16	-196.85	-342.22	0.00	0.00	0.00
5,900.00	5.00	209.77	5,882.63	-351.72	-201.18	-349.74	0.00	0.00	0.00
6,000.00	5.00	209.77	5,982.25	-359.29	-205.50	-357.26	0.00	0.00	0.00
6,100.00	5.00	209.77	6,081.87	-366.85	-209.83	-364.78	0.00	0.00	0.00
6,200.00	5.00	209.77	6,181.49	-374.41	-214.15	-372.30	0.00	0.00	0.00
6,300.00	5.00	209.77	6,281.11	-381.98	-218.48	-379.82	0.00	0.00	0.00
6,400.00	5.00	209.77	6,380.73	-389.54	-222.81	-387.34	0.00	0.00	0.00
6,500.00	5.00	209.77	6,480.35	-397.10	-227.13	-394.87	0.00	0.00	0.00
6,600.00	5.00	209.77	6,579.97	-404.67	-231.46	-402.39	0.00	0.00	0.00
6,700.00	5.00	209.77	6,679.59	-412.23	-235.79	-409.91	0.00	0.00	0.00
6,800.00	5.00	209.77	6,779.21	-419.80	-240.11	-417.43	0.00	0.00	0.00
6,900.00	5.00	209.77	6,878.83	-427.36	-244.44	-424.95	0.00	0.00	0.00
7,000.00	5.00	209.77	6,978.45	-434.92	-248.76	-432.47	0.00	0.00	0.00
7,100.00	5.00	209.77	7,078.07	-442.49	-253.09	-439.99	0.00	0.00	0.00
7,200.00	5.00	209.77	7,177.69	-450.05	-257.42	-447.51	0.00	0.00	0.00
7,300.00	5.00	209.77	7,277.31	-457.61	-261.74	-455.03	0.00	0.00	0.00
7,400.00	5.00	209.77	7,376.93	-465.18	-266.07	-462.55	0.00	0.00	0.00
7,500.00	5.00	209.77	7,476.55	-472.74	-270.39	-470.08	0.00	0.00	0.00
7,600.00	5.00	209.77	7,576.17	-480.30	-274.72	-477.60	0.00	0.00	0.00
7,700.00	5.00	209.77	7,675.78	-487.87	-279.05	-485.12	0.00	0.00	0.00
7,800.00	5.00	209.77	7,775.40	-495.43	-283.37	-492.64	0.00	0.00	0.00
7,900.00	5.00	209.77	7,875.02	-502.99	-287.70	-500.16	0.00	0.00	0.00
8,000.00	5.00	209.77	7,974.64	-510.56	-292.03	-507.68	0.00	0.00	0.00
8,017.60	5.00	209.77	7,992.17	-511.89	-292.79	-509.00	0.00	0.00	0.00
Begin 1.50°/100' Drop									
8,100.00	3.76	209.77	8,074.33	-517.35	-295.91	-514.44	1.50	-1.50	0.00
8,200.00	2.26	209.77	8,174.19	-521.91	-298.52	-518.97	1.50	-1.50	0.00
8,300.00	0.76	209.77	8,274.16	-524.21	-299.83	-521.25	1.50	-1.50	0.00
8,350.85	0.00	0.00	8,325.00	-524.50	-300.00	-521.54	1.50	-1.50	0.00
Begin Vertical Hold									
8,400.00	0.00	0.00	8,374.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
8,500.00	0.00	0.00	8,474.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
8,600.00	0.00	0.00	8,574.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
8,700.00	0.00	0.00	8,674.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
8,800.00	0.00	0.00	8,774.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
8,900.00	0.00	0.00	8,874.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
9,000.00	0.00	0.00	8,974.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
9,100.00	0.00	0.00	9,074.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
9,200.00	0.00	0.00	9,174.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
9,300.00	0.00	0.00	9,274.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
9,400.00	0.00	0.00	9,374.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
9,500.00	0.00	0.00	9,474.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
9,600.00	0.00	0.00	9,574.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
9,700.00	0.00	0.00	9,674.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
9,800.00	0.00	0.00	9,774.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
9,900.00	0.00	0.00	9,874.15	-524.50	-300.00	-521.54	0.00	0.00	0.00
9,952.89	0.00	0.00	9,927.04	-524.50	-300.00	-521.54	0.00	0.00	0.00

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well #123H
Company:	Matador Resources	**TVD Reference:**	RKB=29' @ 3416.00usft (Patterson 297)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	RKB=29' @ 3416.00usft (Patterson 297)
Site:	Dr. Ireland Fed Com	**North Reference:**	Grid
Well:	#123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Begin 10.00°/100' Build									
10,000.00	4.71	352.20	9,974.10	-522.58	-300.26	-519.62	10.00	10.00	0.00
10,050.00	9.71	352.20	10,023.69	-516.37	-301.11	-513.40	10.00	10.00	0.00
10,100.00	14.71	352.20	10,072.54	-505.89	-302.55	-502.91	10.00	10.00	0.00
10,150.00	19.71	352.20	10,120.29	-491.24	-304.56	-488.24	10.00	10.00	0.00
10,200.00	24.71	352.20	10,166.56	-472.52	-307.12	-469.49	10.00	10.00	0.00
10,250.00	29.71	352.20	10,211.02	-449.87	-310.22	-446.82	10.00	10.00	0.00
10,300.00	34.71	352.20	10,253.31	-423.47	-313.84	-420.39	10.00	10.00	0.00
10,350.00	39.71	352.20	10,293.11	-393.53	-317.94	-390.40	10.00	10.00	0.00
10,400.00	44.71	352.20	10,330.14	-360.25	-322.50	-357.08	10.00	10.00	0.00
10,450.00	49.71	352.20	10,364.09	-323.91	-327.48	-320.70	10.00	10.00	0.00
10,500.00	54.71	352.20	10,394.72	-284.78	-332.84	-281.51	10.00	10.00	0.00
10,550.00	59.71	352.20	10,421.79	-243.14	-338.54	-239.82	10.00	10.00	0.00
10,600.00	64.71	352.20	10,445.09	-199.33	-344.54	-195.96	10.00	10.00	0.00
10,650.00	69.71	352.20	10,464.45	-153.68	-350.80	-150.24	10.00	10.00	0.00
10,700.00	74.71	352.20	10,479.72	-106.52	-357.26	-103.03	10.00	10.00	0.00
10,750.00	79.71	352.20	10,490.79	-58.23	-363.87	-54.67	10.00	10.00	0.00
10,800.00	84.71	352.20	10,497.56	-9.17	-370.59	-5.54	10.00	10.00	0.00
10,852.89	90.00	352.20	10,500.00	43.16	-377.76	46.85	10.00	10.00	0.00
Begin 90.00° Lateral; Begin 2.00°/100' Turn									
10,900.00	90.00	353.14	10,500.00	89.89	-383.77	93.63	2.00	0.00	2.00
11,000.00	90.00	355.14	10,500.00	189.36	-393.97	193.20	2.00	0.00	2.00
11,100.00	90.00	357.14	10,500.00	289.13	-400.70	293.03	2.00	0.00	2.00
11,200.00	90.00	359.14	10,500.00	389.07	-403.94	393.00	2.00	0.00	2.00
11,214.70	90.00	359.44	10,500.00	403.77	-404.13	407.70	2.00	0.00	2.00
Hold 359.44° Azm									
11,300.00	90.00	359.44	10,500.00	489.06	-404.97	493.00	0.00	0.00	0.00
11,400.00	90.00	359.44	10,500.00	589.06	-405.95	593.00	0.00	0.00	0.00
11,500.00	90.00	359.44	10,500.00	689.05	-406.93	693.00	0.00	0.00	0.00
11,600.00	90.00	359.44	10,500.00	789.05	-407.92	793.00	0.00	0.00	0.00
11,700.00	90.00	359.44	10,500.00	889.04	-408.90	893.00	0.00	0.00	0.00
11,800.00	90.00	359.44	10,500.00	989.04	-409.88	993.00	0.00	0.00	0.00
11,900.00	90.00	359.44	10,500.00	1,089.03	-410.87	1,093.00	0.00	0.00	0.00
12,000.00	90.00	359.44	10,500.00	1,189.03	-411.85	1,193.00	0.00	0.00	0.00
12,100.00	90.00	359.44	10,500.00	1,289.02	-412.83	1,293.00	0.00	0.00	0.00
12,200.00	90.00	359.44	10,500.00	1,389.02	-413.82	1,393.00	0.00	0.00	0.00
12,300.00	90.00	359.44	10,500.00	1,489.02	-414.80	1,493.00	0.00	0.00	0.00
12,400.00	90.00	359.44	10,500.00	1,589.01	-415.79	1,593.00	0.00	0.00	0.00
12,500.00	90.00	359.44	10,500.00	1,689.01	-416.77	1,693.00	0.00	0.00	0.00
12,600.00	90.00	359.44	10,500.00	1,789.00	-417.75	1,793.00	0.00	0.00	0.00
12,700.00	90.00	359.44	10,500.00	1,889.00	-418.74	1,893.00	0.00	0.00	0.00
12,800.00	90.00	359.44	10,500.00	1,988.99	-419.72	1,993.00	0.00	0.00	0.00
12,900.00	90.00	359.44	10,500.00	2,088.99	-420.70	2,093.00	0.00	0.00	0.00
13,000.00	90.00	359.44	10,500.00	2,188.98	-421.69	2,193.00	0.00	0.00	0.00
13,100.00	90.00	359.44	10,500.00	2,288.98	-422.67	2,293.00	0.00	0.00	0.00
13,200.00	90.00	359.44	10,500.00	2,388.97	-423.66	2,393.00	0.00	0.00	0.00
13,300.00	90.00	359.44	10,500.00	2,488.97	-424.64	2,493.00	0.00	0.00	0.00
13,400.00	90.00	359.44	10,500.00	2,588.96	-425.62	2,593.00	0.00	0.00	0.00
13,500.00	90.00	359.44	10,500.00	2,688.96	-426.61	2,693.00	0.00	0.00	0.00
13,600.00	90.00	359.44	10,500.00	2,788.95	-427.59	2,793.00	0.00	0.00	0.00
13,700.00	90.00	359.44	10,500.00	2,888.95	-428.57	2,893.00	0.00	0.00	0.00
13,800.00	90.00	359.44	10,500.00	2,988.94	-429.56	2,993.00	0.00	0.00	0.00
13,900.00	90.00	359.44	10,500.00	3,088.94	-430.54	3,093.00	0.00	0.00	0.00

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well #123H
Company:	Matador Resources	**TVD Reference:**	RKB=29' @ 3416.00usft (Patterson 297)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	RKB=29' @ 3416.00usft (Patterson 297)
Site:	Dr. Ireland Fed Com	**North Reference:**	Grid
Well:	#123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,000.00	90.00	359.44	10,500.00	3,188.93	-431.53	3,193.00	0.00	0.00	0.00
14,100.00	90.00	359.44	10,500.00	3,288.93	-432.51	3,293.00	0.00	0.00	0.00
14,200.00	90.00	359.44	10,500.00	3,388.92	-433.49	3,393.00	0.00	0.00	0.00
14,300.00	90.00	359.44	10,500.00	3,488.92	-434.48	3,493.00	0.00	0.00	0.00
14,400.00	90.00	359.44	10,500.00	3,588.91	-435.46	3,593.00	0.00	0.00	0.00
14,500.00	90.00	359.44	10,500.00	3,688.91	-436.44	3,693.00	0.00	0.00	0.00
14,600.00	90.00	359.44	10,500.00	3,788.90	-437.43	3,793.00	0.00	0.00	0.00
14,700.00	90.00	359.44	10,500.00	3,888.90	-438.41	3,893.00	0.00	0.00	0.00
14,800.00	90.00	359.44	10,500.00	3,988.89	-439.40	3,993.00	0.00	0.00	0.00
14,900.00	90.00	359.44	10,500.00	4,088.89	-440.38	4,093.00	0.00	0.00	0.00
15,000.00	90.00	359.44	10,500.00	4,188.88	-441.36	4,193.00	0.00	0.00	0.00
15,100.00	90.00	359.44	10,500.00	4,288.88	-442.35	4,293.00	0.00	0.00	0.00
15,200.00	90.00	359.44	10,500.00	4,388.87	-443.33	4,393.00	0.00	0.00	0.00
15,273.08	90.00	359.44	10,500.00	4,461.95	-444.05	4,466.07	0.00	0.00	0.00
PBHL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL - Dr. Ireland Fe - plan hits target center - Point	0.00	0.00	10,500.00	4,461.95	-444.05	472,862.19	787,451.70	32° 17' 47.713 N	103° 24' 11.033 W
Last Perforation - Dr. I - plan misses target center by 0.01usft at 15183.08usft MD (10500.00 TVD, 4371.95 N, -443.16 E) - Point	0.00	0.00	10,500.00	4,371.95	-443.17	472,772.19	787,452.58	32° 17' 46.823 N	103° 24' 11.032 W
First Perforation - Dr. - plan misses target center by 89.24usft at 10591.14usft MD (10441.24 TVD, -207.24 N, -343.46 E) - Point	0.00	0.00	10,500.00	-246.01	-398.31	468,154.22	787,497.44	32° 17' 1.124 N	103° 24' 10.976 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
850.00	850.00	13 3/8"	13-3/8	17-1/2
5,400.00	5,384.53	9 5/8"	9-5/8	12-1/4
15,273.08	10,500.00	5 1/2"	5-1/2	6

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well #123H
Company:	Matador Resources	**TVD Reference:**	RKB=29' @ 3416.00usft (Patterson 297)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	RKB=29' @ 3416.00usft (Patterson 297)
Site:	Dr. Ireland Fed Com	**North Reference:**	Grid
Well:	#123H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Formations

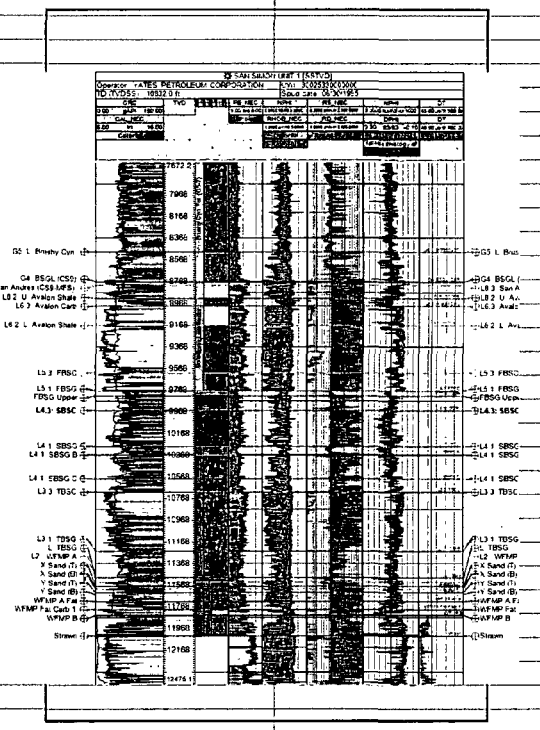
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,396.99	1,396.67	Z (Rustler)		0.00	359.44
1,772.77	1,771.10	Top Salt: Z (Salado)		0.00	359.44
4,054.12	4,043.77	Base Salt: Z (G30:CS14-CSB)		0.00	359.44
5,558.83	5,542.76	Z(G26: Bell Canyon)		0.00	359.44
7,516.23	7,492.71	Z (G7: Brushy Cyn.)		0.00	359.44
8,827.17	8,801.32	Z(G4: BSGL (CS9))		0.00	359.44
9,548.52	9,522.67	Z(L5.3: FBSC)		0.00	359.44
9,866.67	9,840.82	Z (L5.1: FBSG)		0.00	359.44
10,014.71	9,988.74	Z (L4.3: SBSC)		0.00	359.44
10,482.55	10,384.42	Z (L4.1: SBSG)		0.00	359.44

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,000.00	1,000.00	0.00	0.00	KOP, 1.00°/100' Build
1,499.88	1,499.24	-18.92	-10.82	Begin 5.00° Tangent
8,017.60	7,992.17	-511.89	-292.79	Begin 1.50°/100' Drop
8,350.85	8,325.00	-524.50	-300.00	Begin Vertical Hold
9,952.89	9,927.04	-524.50	-300.00	Begin 10.00°/100' Build
10,852.89	10,500.00	43.16	-377.76	Begin 90.00° Lateral; Begin 2.00°/100' Turn
11,214.70	10,500.00	403.77	-404.13	Hold 359.44° Azm
15,273.08	10,500.00	4,461.95	-444.05	PBHL

MATADOR PRODUCTION Co. FEDERAL APD WELL PROGNOSIS

General					
	Operator	MRC			
	Lease	Dr. Ireland			
	Well Name	Dr. Ireland Fed Com #123H			
	PTD (MT + ΔTVD from SHL - BHL)	14966	Permit Depth (TVD)		
	Formation at TD	SBSG			
Location					
	SHL	X/Y	787896	468400	
		Lat/Long			
	PP/FTP	X/Y	787497	468154	
		Lat/Long			
	BHL	X/Y	787452	472862	
		Lat/Long			
				VS AZM	180.55
				VS	4466.04
Rig/KB		29			
Elevation - GL	3387				
Elevation - KB	3416				
Prognosis			Example Type Log -->		
Formation Name	SSTVD*	TVD	Bearing/Hazards		
Z (Rustler)	2019.33	1396	Water/Salt/Washout		
Top Salt: Z (Salado)	1644.9	1771	Salt/Washout		
Base Salt: Z (G30:CS14-CSB)	-627.77	4043	Barren		
Z(G26: Bell Canyon)	-2126.76	5542	Hydrocarbon/Loss Circ		
Z (G7: Brushy Cyn.)	-4076.71	7492	Hydrocarbon/Loss Circ		
Z(G4: BSGL (CS9))	-5385.32	8801	Hydrocarbon		
Z(L5.3: FBSC)	-6106.67	9522	Hydrocarbon		
Z (L5.1: FBSG)	-6424.82	9840	Hydrocarbon		
Z (L4.3: SBSC)	-6572.74	9988	Hydrocarbon		
Z (L4.1: SBSG)	-6968.42	10384	Hydrocarbon		
Z (L3.3: TBSC)	-7304.91	10720	Hydrocarbon		
Z (L3.1: TBSG)	-7967.44	11383	Hydrocarbon		
Z (L2: WFMP A)	-8237.84	11653	Hydrocarbon		
Z (X Sand (T))	-8252.01	11668	Hydrocarbon		
Z (X Sand (B))	-8289.22	11705	Hydrocarbon		
Z (Y Sand (T))	-8344.26	11760	Hydrocarbon		
Z (Y Sand (B))	-8361.57	11777	Hydrocarbon		
Z (WFMP A Fat)	-8417.74	11833	Hydrocarbon		
	* values derived from Petrel Surfaces				
Preliminary Targeting					
Formation Name	SBSG				
Top Target	10485		Target Reference Surface	SBSG	
Mid Target (@ 0 VS)	10500		Mid Target (below ref. surface)	120	
Bottom Target	10515		Target Window (+/- MT)	15	
Reservoir Characteristics			Geoplat		
	Rock Type	Sand			
	Gross Thickness	30			
	Est. res. Temp				
	Est. res. pressure				
Well Design					
1st intermediate casing	4000				
2nd intermediate casing	60-70 degrees				
Evaluation					
Mud logs	Yes				
MWD logs	Yes				
Prepared by:	Dan Brugioni		Date:	12/11/2017	ver. 1
Approved by:			Date:		



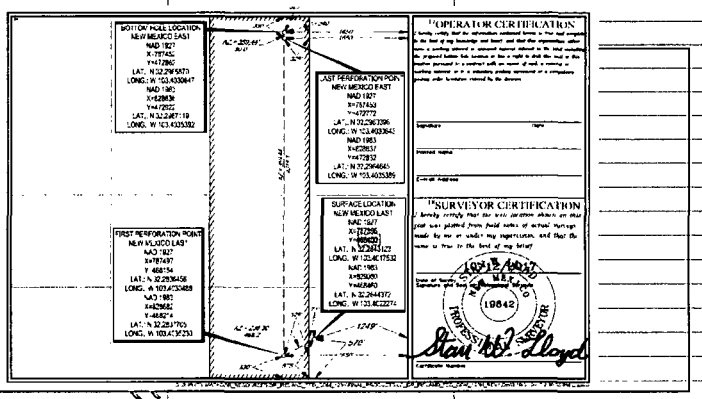


Exhibit E-2: Co-Flex Certifications
Dr. Ireland Fed Com #123H
Matador Resources Company

Midwest Hose & Specialty, Inc.

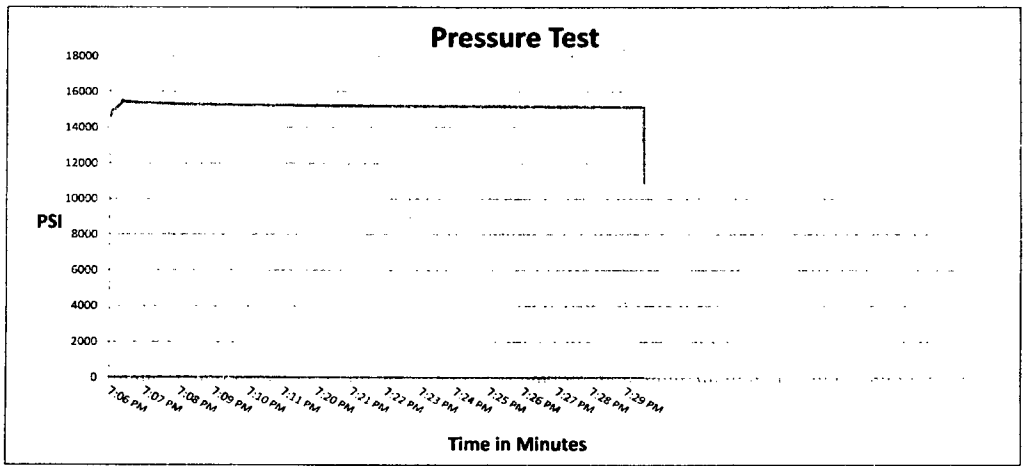
Internal Hydrostatic Test Graph

December 8, 2014

Customer: Patterson

Pick Ticket #: 284918

Hose Specifications		Verification	
Hose Type	**Length**	**Type of Fitting**	**Coupling Method**
Ck	10'	4-1/16 10K	Swage
I.D.	**O.D.**	**Die Size**	**Final O.D.**
3"	4.79"	5.37"	5.37"
Working Pressure	**Burst Pressure**	**Hose Serial #**	**Hose Assembly Serial #**
10000 PSI	Standard Safety Multiplier Applies	10490	284918-2



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	15 2/4 Minutes		15732 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Tyler Hill

Approved By: Ryan Adams

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill
MWH Sales Representative	AMY WHITE	Certification	API 7K
Date Assembled	12/8/2014	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	236404	Hose Lot # and Date Code	10490-01/13
Customer Purchase Order #	260471	Hose I.D. (Inches)	3"
Assembly Serial # (Pick Ticket #)	287918-2	Hose O.D. (Inches)	5.30"
Hose Assembly Length	10'	Armor (yes/no)	YES

Fittings			
End A		End B	
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB
Stem (Heat #)	91996	Stem (Heat #)	91996
Ferrule (Part and Revision #)	RF3.0	Ferrule (Part and Revision #)	RF3.0
Ferrule (Heat #)	37DA5631	Ferrule (Heat #)	37DA5631
Connection (Part #)	4 1/16 10K	Connection (Part #)	4 1/16 10K
Connection (Heat #)		Connection (Heat #)	
Dies Used	5.37	Dies Used	5.37

Hydrostatic Test Requirements		
Test Pressure (psi)	15,000	***Hose assembly was tested with ambient water temperature.***
Test Pressure Hold Time (minutes)	15 1/2	

Date Tested	Tested By	Approved By
12/8/2014		

Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **PATTERSON B&E**	*Customer P.O.#* **260471**
Sales Order # **236404**	*Date Assembled:* **12/8/2014**

Specifications

Hose Assembly Type:	**Choke & Kill**		
Assembly Serial #	**287918-2**	*Hose Lot # and Date Code*	**10490-01/13**
Hose Working Pressure (psi)	**10000**	*Test Pressure (psi)*	**15000**

We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.

Supplier:
Midwest Hose & Specialty, Inc.
3312 S I-35 Service Rd
Oklahoma City, OK 73129

Comments:

Approved By	***Date***
	12/9/2014

Exhibit E-2: Co-Flex Certifications
Dr. Ireland Fed Com #123H
Matador Resources Company

Midwest Hose & Specialty, Inc.

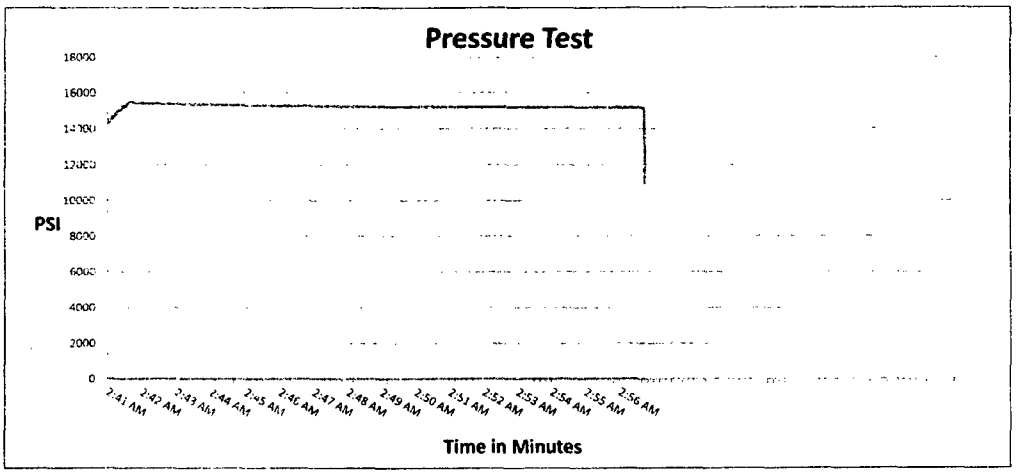
Internal Hydrostatic Test Graph

December 9, 2014

Customer: Patterson

Pick Ticket #: 284918

Hose Specifications		Verification	
Hose Type	**Length**	**Type of Fitting**	**Coupling Method**
Ck	20'	4-1/16 10K	Swage
I.D.	**O.D.**	**Die Size**	**Final O.D.**
3"	4.77"	5.37"	5.40"
Working Pressure	**Burst Pressure**	**Hose Serial #**	**Hose Assembly Serial #**
10000 PSI	Standard Safety Multiplier Applies	10490	284918-1



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	15 2/4 Minutes		15893 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: *Tyler Hill*

Approved By: *Ryan Adams*

Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill
MWH Sales Representative	AMY WHITE	Certification	API 7K
Date Assembled	12/8/2014	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	236404	Hose Lot # and Date Code	10490-01/13
Customer Purchase Order #	260471	Hose I.D. (Inches)	3"
Assembly Serial # (Pick Ticket #)	287918-1	Hose O.D. (Inches)	5.30"
Hose Assembly Length	20'	Armor (yes/no)	YES

Fittings			
End A		End B	
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB
Stem (Heat #)	A141420	Stem (Heat #)	A141420
Ferrule (Part and Revision #)	RF3.0	Ferrule (Part and Revision #)	RF3.0
Ferrule (Heat #)	37DA5631	Ferrule (Heat #)	37DA5631
Connection (Part #)	4 1/16 10K	Connection (Part #)	4 1/16 10K
Connection (Heat #)	V3579	Connection (Heat #)	V3579
Dies Used	5.37	Dies Used	5.37

Hydrostatic Test Requirements		
Test Pressure (psi)	15,000	***Hose assembly was tested with ambient water temperature.***
Test Pressure Hold Time (minutes)	15 1/2	

Date Tested	Tested By	Approved By
12/9/2014		

Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **PATTERSON B&E**	*Customer P.O.#* **260471**
Sales Order # **236404**	*Date Assembled:* **12/8/2014**

Specifications

Hose Assembly Type:	**Choke & Kill**		
Assembly Serial #	**287918-1**	*Hose Lot # and Date Code*	**10490-01/13**
Hose Working Pressure (psi)	**10000**	*Test Pressure (psi)*	**15000**

We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.

Supplier:
Midwest Hose & Specialty, Inc.
3312 S I-35 Service Rd
Oklahoma City, OK 73129

Comments:

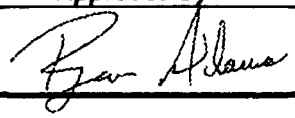
Approved By	***Date***
	**12/9/2014**

Exhibit E-2: Co-Flex Certifications
Dr. Ireland Fed Com #123H
Matador Resources Company

Midwest Hose & Specialty, Inc.

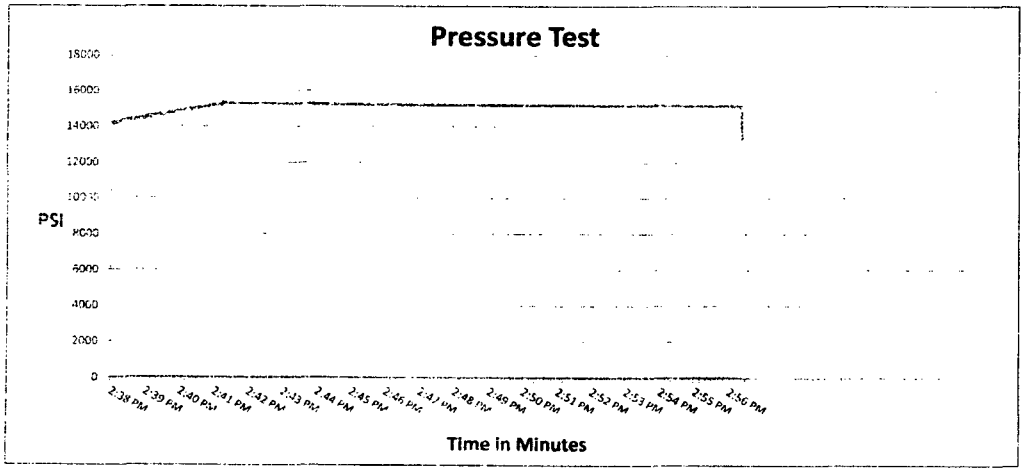
Internal Hydrostatic Test Graph

December 9, 2014

Customer: Patterson

Pick Ticket #: 284918

Hose Specifications		Verification	
Hose Type	**Length**	**Type of Fitting**	**Coupling Method**
Mud	70'	4 1/16 10K	Swage
I.D.	**O.D.**	**Die Size**	**Final O.D.**
3"	4.79"	5.37"	5.37"
Working Pressure	**Burst Pressure**	**Hose Serial #**	**Hose Assembly Serial #**
10000 PSI	Standard Safety Multiplier Applies	10490	284918-3



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	16 3/4 Minutes		15410 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: *Tyler Hill*

Approved By: *Ryan Adams*

Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Certificate

General Information		Hose Specifications	
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill
MWH Sales Representative	AMY WHITE	Certification	API 7K
Date Assembled	12/8/2014	Hose Grade	MUD
Location Assembled	OKC	Hose Working Pressure	10000
Sales Order #	236404	Hose Lot # and Date Code	10490-01/13
Customer Purchase Order #	260471	Hose I.D. (Inches)	3"
Assembly Serial # (Pick Ticket #)	287918-3	Hose O.D. (Inches)	5.23"
Hose Assembly Length	70'	Armor (yes/no)	YES

Fittings			
End A		End B	
Stem (Part and Revision #)	R3.0X64WB	Stem (Part and Revision #)	R3.0X64WB
Stem (Heat #)	A141420	Stem (Heat #)	A141420
Ferrule (Part and Revision #)	RF3.0	Ferrule (Part and Revision #)	RF3.0
Ferrule (Heat #)	37DA5631	Ferrule (Heat #)	37DA5631
Connection (Part #)	4 1/16 10K	Connection (Part #)	4 1/16 10K
Connection (Heat #)		Connection (Heat #)	
Dies Used	5.37	Dies Used	5.37

Hydrostatic Test Requirements		
Test Pressure (psi)	15,000	Hose assembly was tested with ambient water temperature.
Test Pressure Hold Time (minutes)	16 3/4	

Date Tested	Tested By	Approved By
12/9/2014		

Midwest Hose
& Specialty, Inc.

Certificate of Conformity

Customer: **PATTERSON B&E**	*Customer P.O.#* **260471**
Sales Order # **236404**	*Date Assembled:* **12/8/2014**

Specifications

Hose Assembly Type:	**Choke & Kill**		
Assembly Serial #	**287918-3**	*Hose Lot # and Date Code*	**10490-01/13**
Hose Working Pressure (psi)	**10000**	*Test Pressure (psi)*	**15000**

We hereby certify that the above material supplied for the referenced purchase order to be true according to the requirements of the purchase order and current industry standards.

Supplier:
Midwest Hose & Specialty, Inc.
3312 S I-35 Service Rd
Oklahoma City, OK 73129

Comments:

Approved By	***Date***
	12/9/2014

Drilling Operations Plan
Dr. Ireland Fed Com #123H
Matador Resources Company
Sec. 19, 23S, 35E
Lea County, NM

Surface Location: 570' FSL & 1249' FEL, Sec. 19
Bottom Hole Location: 240' FNL & 1650' FEL, Sec. 19
Elevation Above Sea Level: 3387'

Geologic Name of Surface Formation: Second Bone Spring

Type of Well: Horizontal well, No Pilot Hole, Drilled with conventional rotary tools

Proposed Drilling Depth: 15,273' MD / 10,500' TVD

Estimated Tops of Geological Markers w/ Mineral Bearing Formation:

Formation Name	Est Top	Bearing
Rustler	1396	Water
Salado	1771	Barren
Base of Salt	4043	Barren
Bell Canyon	5542	Hydrocarbon
Brushy Canyon	7492	Hydrocarbon
Bone Spring Lime	8801	Hydrocarbon
First Bone Spring Carb	9522	Hydrocarbon
First Bone Spring Sand	9840	Hydrocarbon
Second Bone Spring Carb	9988	Hydrocarbon
Second Bone Spring Sand	10384	Hydrocarbon
Third Bone Spring Carb	10720	Hydrocarbon

OSE Ground Water Estimated Depth: 280'

Casing Program

Name	Hole Size	Casing Size	Wt/Grade	Thread Collar	Setting Depth	Top Cement
Surface	17-1/2"	13-3/8" (new)	54.5# J-55	BTC	850	Surface
Intermediate	12-1/4"	9-5/8" (new)	40# J-55	BTC	5400	Surface
Production	8-3/4"	5-1/2" (new)	20# P-110	BTC/TXP	15273	4400

Drilling Operations Plan
Dr. Ireland Fed Com #123H
Matador Resources Company
Sec. 19, 23S, 35E
Lea County, NM

Minimum Safety Factors: Burst: 1.125 Collapse: 1.125 Tension 1.8

Cementing Program

Name	Type	Sacks	Yield	Weight	Blend
Surface	Lead	210	1.82	12.8	Class C + Bentonite + 2% CaCL2 + 3% NaCl + LCM
	Tail	720	1.38	14.8	Class C + 5% NaCl + LCM
TOC = 0'		100% Excess			Centralizers per Onshore Order 2.III.B.1f
Intermediate	Lead	1170	2.13	12.6	Class C + Bentonite + 1% CaCL2 + 8% NaCl + LCM
	Tail	620	1.38	14.8	Class C + 5% NaCl + LCM
TOC = 0'		100% Excess			2 on btm jt, 1 on 2nd jt, 1 every 4th jt to surface
Production	Lead	660	2.35	11.5	TXI + Fluid Loss + Dispersant + Retarder + LCM
	Tail	1500	1.39	13.2	TXI + Fluid Loss + Dispersant + Retarder + LCM
TOC = 4400'		35% Excess			2 on btm jt, 1 on 2nd jt, 1 every other jt to top of tail cement (500' above TOC)

Pressure Control Equipment:

See Exhibit E-1. A BOP consisting of 3 rams with 2 pipe rams, 1 blind ram and one annular preventer. The BOP will be utilized below surface casing to TD. See attachments for BOP and choke manifold diagrams. Also present will be an accumulator that meets the requirements of Onshore Order #2 for the pressure rating of the BOP stack. A rotating head will also be installed as needed. BOP will be inspected and operated as recommended in Onshore Order #2. A Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position. A third party company will test the BOPs.

After setting surface casing and before drilling below the surface casing shoe, a minimum of a 2M BOPE system will be installed and tested to 250 psi low and 2000 psi high with the annular being tested to 250 psi low and 1000 psi high. After setting intermediate casing, a minimum of a 5M system will be installed and tested to 250 psi low and 5000 psi high with the annular being tested to 250 psi low and 2500 psi high.

The operator requests a variance to have the option of running a speed head for setting the intermediate strings. In the case of running a speed head with landing mandrel for 9-5/8" casing, a minimum of a 5M BOPE system will be installed after surface casing is set. BOP test pressures will be 250 psi low and 5000 psi high with the annular being tested to 250 psi low and 2500 psi high before drilling below surface shoe. A diagram of the speed head is attached.

Drilling Operations Plan
Dr. Ireland Fed Com #123H
Matador Resources Company
Sec. 19, 23S, 35E
Lea County, NM

Matador Resources requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached (see Exhibit E-2). The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used.

Proposed Mud System:

Name	Hole Size	Mud Weight	Visc	Fluid Loss	Type Mud
Surface	17-1/2"	8.30	28	NC	FW Spud Mud
Intermediate	12-1/4"	10.00	30-32	NC	Brine Water
Production	8-3/4"	9.00	30-32	NC	FW/Cut Brine

All necessary mud products for weight addition and fluid loss control will be on location at all times. Mud program subject to change due to hole conditions.

The Mud Monitoring System is an electronic Pason system satisfying requirements of Onshore Order 1.

Testing, Logging & Coring Program:

- Mud Logging Program: 2 man unit from 5400 – TD
- Electric Logging Program: No electric logs are planned at this time. GR will be collected through the MWD tools from Inter. Csg to TD
- No DSTs or cores are planned at this time
- CBL w/ CCL from as far as gravity will let it fall to TOC

Potential Hazards:

No abnormal pressures or temperatures are expected. In accordance with Onshore Order 6, Matador does not anticipate that there will be enough H_2S from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of an "H_2S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H_2S safety package on all wells, attached is an "H_2S Drilling Operations Plan". Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used

Estimated BHP: 5000
Estimated BHT: 140°

Construction and Drilling:

Drilling Operations Plan
Dr. Ireland Fed Com #123H
Matador Resources Company
Sec. 19, 23S, 35E
Lea County, NM

Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved. Drilling expected to take 25 days. If production casing is run an additional 30 days will be required to complete and construct surface facilities

Closed-Loop System

Operating and Maintenance Plan:

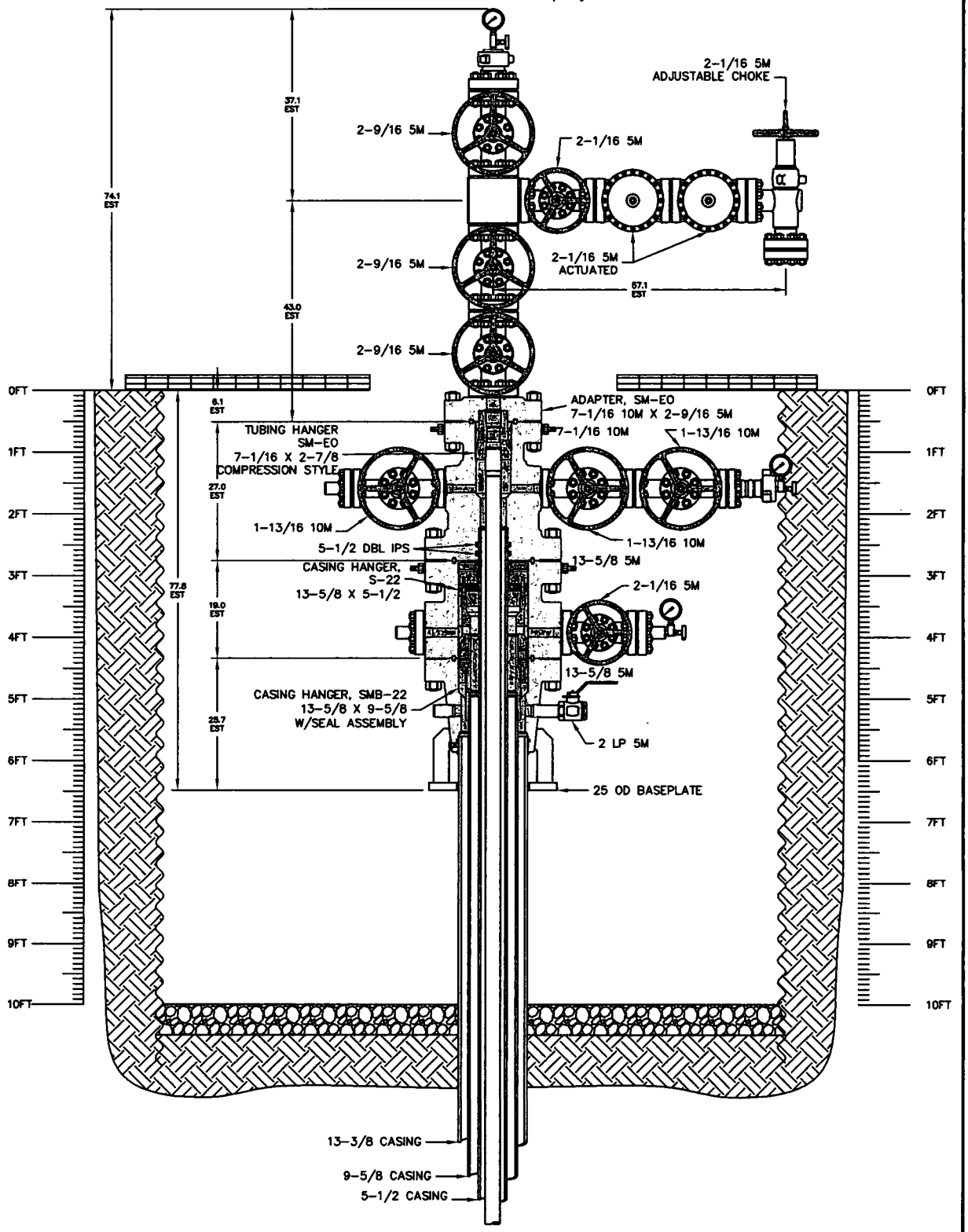
During drilling operations, third party service companies will utilize solids control equipment to remove cuttings from the drilling fluids and collect it in haul-off bins. Equipment will be closely monitored at all times while drilling by the derrick man and the service company employees.

Closure Plan:

During drilling operations, third party service companies will haul off drill solids and fluids to an approved disposal facility. At the end of the well, all closed loop equipment will be removed from the location.

Exhibit E-7: Wellhead
Dr. Ireland Fed Com #123H
Matador Resources Company

MATADOR
MQ-436



NOTE:
DIMENSIONS SHOWN ON THIS DRAWING ARE ESTIMATES ONLY AND CAN VARY SIGNIFICANTLY DEPENDING ON RAW MATERIAL LENGTHS. NO GUARANTEE OF STACKUP HEIGHT IS IMPLIED. DIMENSIONS SHOWN SHOULD BE CONSIDERED FOR REFERENCE PURPOSES ONLY.

WEIR

5,000 PSI WELLHEAD & TREE ASSEMBLY
13-3/8 X 9-5/8 X 5-1/2 X 2-7/8

DRAWN BY: RPL	SCALE 1:10	DATE 23SEP16	REV
CHECKED BY:	DRAWING NO. P-21629		
APPROVED BY:			

APD ID: 10400028456 **Submission Date:** 03/30/2018

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: DR IRELAND FEDERAL **Well Number:** 123H

Well Type: OIL WELL **Well Work Type:** Drill

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_34_S_20180214143930.PDF
EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_33_S_20180214143929.PDF
EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_36_S_20180214143932.PDF
EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_24_S_20180214143927.PDF
EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_25_S_20180214143928.PDF
EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_19_S_20180214155448.PDF
EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_35_S_20180214143930.PDF

Existing Road Purpose: ACCESS,FLUID TRANSPORT **Row(s) Exist?** NO

ROW ID(s)

ID:

Do the existing roads need to be improved? YES

Existing Road Improvement Description: Caliche cap

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Project_Area_APD_Layout_20180226_20180226113622.jpg

New road type: LOCAL

Length: 1395 Feet **Width (ft.):** 30

Max slope (%): 0 **Max grade (%):** 1

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 14

New road access erosion control: Crowned and ditched

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

Access surfacing type: OTHER

Access topsoil source: ONSITE

Access surfacing type description: Caliche

Access onsite topsoil source depth: 6

Offsite topsoil source description:

Onsite topsoil removal process: Grader

Access other construction information:

Access miscellaneous information:

Number of access turnouts: **Access turnout map:**

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: No drainages present

Road Drainage Control Structures (DCS) description: Ditches on either side of road

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Additional Attachment(s):

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Existing_Well_Map_Slot_3_20180315123105.JPG

Existing Wells description:

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: DR IRELAND FEDERAL **Well Number:** 123H

Production Facilities map:

Location_Layout_20180315143559.pdf

44924p01_Facility_Layout_S3_20180329_20180329162806.jpg

Section 5 - Location and Types of Water Supply

Water Source Table

Water source use type: DUST CONTROL, INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE CASING

Water source type: RECYCLED

Describe type:

Source longitude:

Source latitude:

Source datum:

Water source permit type: PRIVATE CONTRACT

Source land ownership: PRIVATE

Water source transport method: TRUCKING

Source transportation land ownership: PRIVATE

Water source volume (barrels): 180000

Source volume (acre-feet): 23.200758

Source volume (gal): 7560000

Water source and transportation map:

Dr._Ireland_Water_Information_20180213161731.jpg

Water source comments:

New water well? NO

New Water Well Info

Well latitude: **Well Longitude:** **Well datum:**

Well target aquifer:

Est. depth to top of aquifer(ft): **Est thickness of aquifer:**

Aquifer comments:

Aquifer documentation:

Well depth (ft): **Well casing type:**

Well casing outside diameter (in.): **Well casing inside diameter (in.):**

New water well casing? **Used casing source:**

Drilling method: **Drill material:**

Grout material: **Grout depth:**

Casing length (ft.): **Casing top depth (ft.):**

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: DR IRELAND FEDERAL **Well Number:** 123H

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Construction Materials description: Caliche from BLM approved source.

Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drill cuttings, mud, salts, and other chemicals

Amount of waste: 2000 barrels

Waste disposal frequency : Daily

Safe containment description: Steel tanks

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL FACILITY **Disposal location ownership:** PRIVATE

Disposal type description:

Disposal location description: Halfway, NM

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) **Reserve pit width (ft.)**

Reserve pit depth (ft.) **Reserve pit volume (cu. yd.)**

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? NO

Description of cuttings location

Cuttings area length (ft.) **Cuttings area width (ft.)**

Cuttings area depth (ft.) **Cuttings area volume (cu. yd.)**

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Location_Layout_20180315143723.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance **Multiple Well Pad Name:** DR IRELAND FEDERAL

Multiple Well Pad Number: 4

Recontouring attachment:

Drainage/Erosion control construction: Crowned and ditched

Drainage/Erosion control reclamation: Harrowed on the contour

Well pad proposed disturbance (acres): 5.72	**Well pad interim reclamation (acres):** 1.58	**Well pad long term disturbance (acres):** 4.14
Road proposed disturbance (acres): 0	**Road interim reclamation (acres):** 0	**Road long term disturbance (acres):** 0
Powerline proposed disturbance (acres): 0	**Powerline interim reclamation (acres):** 0	**Powerline long term disturbance (acres):** 0
Pipeline proposed disturbance (acres): 0	**Pipeline interim reclamation (acres):** 0	**Pipeline long term disturbance (acres):** 0
Other proposed disturbance (acres): 0	**Other interim reclamation (acres):** 0	**Other long term disturbance (acres):** 0
Total proposed disturbance: 5.72	**Total interim reclamation:** 1.58	**Total long term disturbance:** 4.14

Disturbance Comments:

Reconstruction method: Interim reclamation will be completed within 6 months of completing the last well on the pad. Disturbed areas will be contoured to match pre-construction grades. Once the last well is plugged, then the rest of the pad

will be similarly reclaimed within 6 months of plugging.

Topsoil redistribution: Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with the surface owner's requirements.
Soil treatment: None planned.

Existing Vegetation at the well pad:

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road:

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline:

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances:

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre: **Proposed seeding season:**

Seed Summary	
Seed Type	**Pounds/Acre**

Total pounds/Acre:

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: **Last Name:**

Phone: **Email:**

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: To BLM standards

Weed treatment plan attachment:

Monitoring plan description: To BLM standards

Monitoring plan attachment:

Success standards: To BLM satisfaction

Pit closure description: No pit

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: WELL PAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: EXISTING ACCESS ROAD

Describe:

Surface Owner: PRIVATE OWNERSHIP,STATE GOVERNMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office: CARLSBAD, NM

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Disturbance type: NEW ACCESS ROAD

Describe:

Surface Owner: PRIVATE OWNERSHIP

Other surface owner description:

BIA Local Office:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: DR IRELAND FEDERAL **Well Number:** 123H

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Section 12 - Other Information

Right of Way needed? NO **Use APD as ROW?**

ROW Type(s):

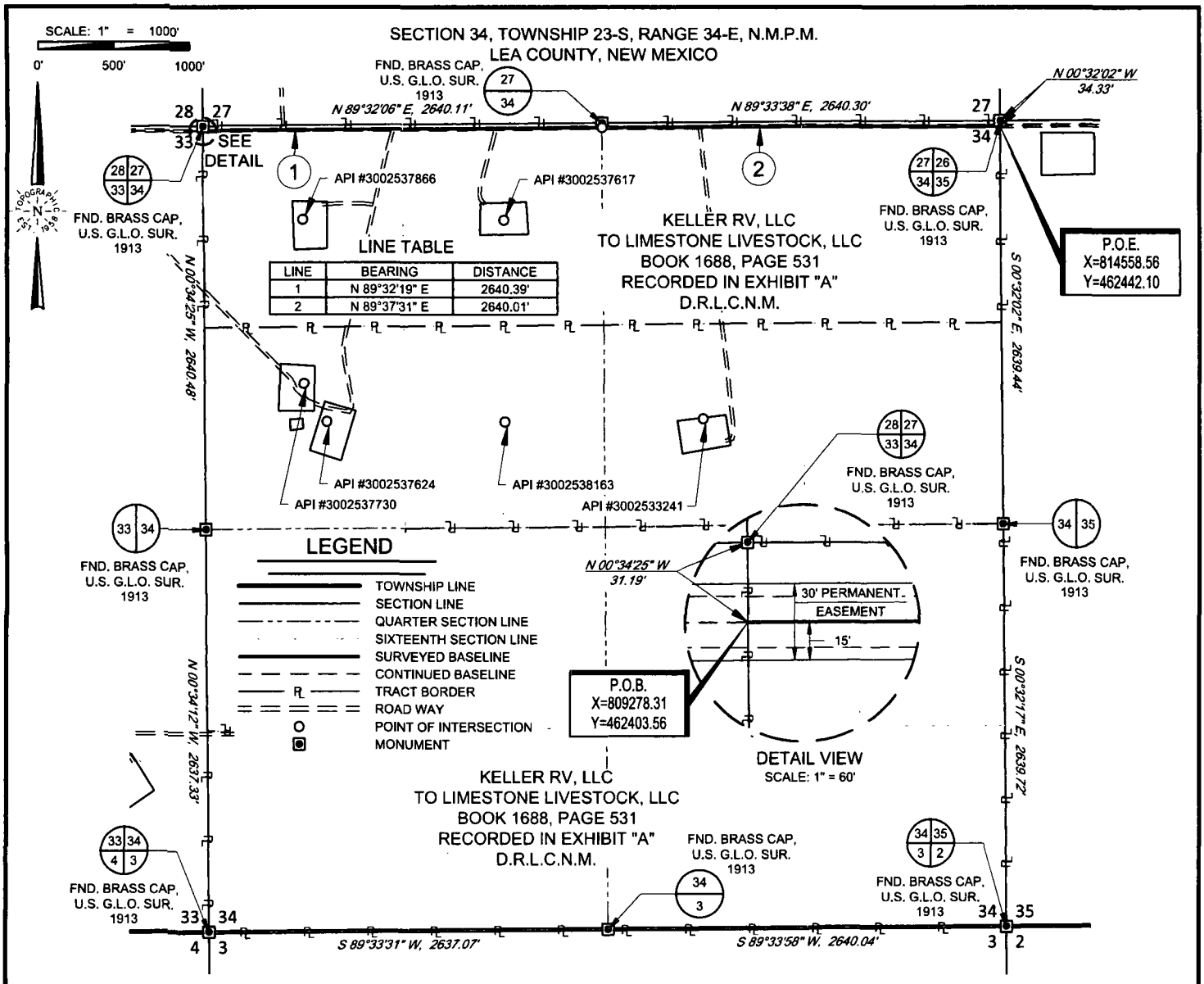
ROW Applications

SUPO Additional Information:

Use a previously conducted onsite? YES

Previous Onsite information: Onsite conducted for four slots and water tank with Vance Wolf on 10/5/2017.

Other SUPO Attachment



DR. IRELAND FED COM
ROAD EASEMENT

Being a proposed road easement being 30 feet in width, 15 feet left and right of the above platted centerline total line footage containing 5280.40 feet or 320.02 rods, containing 3.64 acres more or less.

MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

Matador PRODUCTION COMPANY

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
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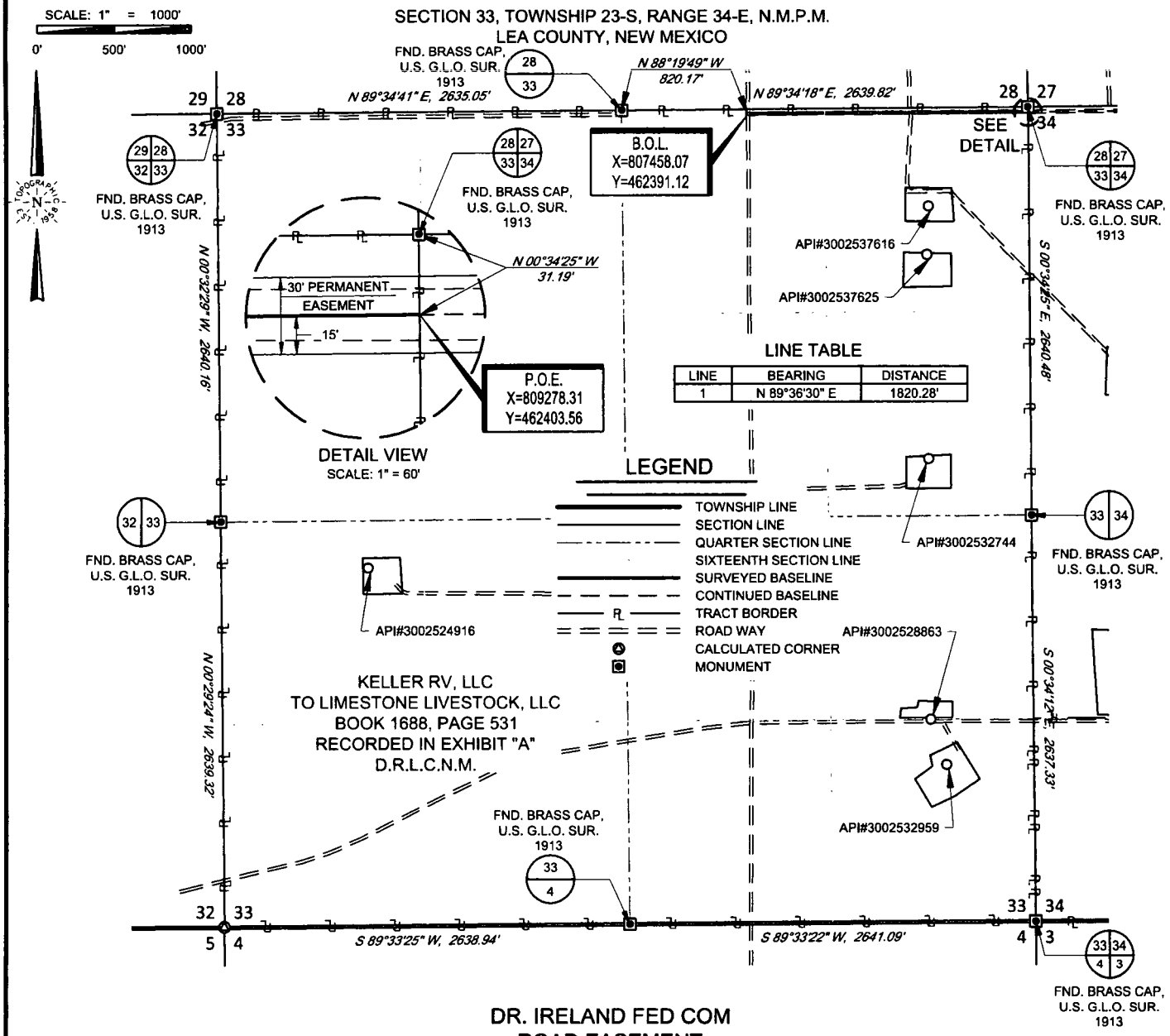
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

Michael Blake Brown, P.S. No. 18329
NOVEMBER 30, 2017

DR. IRELAND FED COM ROAD EASEMENT	REVISION: INT	DATE
DATE: 11/30/17		
FILE: EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_34		
DRAWN BY: EAH		
SHEET: 1 OF 1		

NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1983.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR PRODUCTION COMPANY. ONLY UTILITIES/EASEMENTS THAT WERE VISIBLE ON THE DATE OF THIS SURVEY, WITHIN/ADJOINING THIS EASEMENT, HAVE BEEN LOCATED AS SHOWN HEREON OF WHICH I HAVE KNOWLEDGE. THIS CERTIFICATION IS LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE, AND MADE FOR THIS TRANSACTION ONLY.
4. P.O.B./B.O.L. = POINT OF BEGINNING/BEGINNING OF LINE
6. P.O.E./E.O.L. = POINT OF EXIT/END OF LINE
7. D.R.L.C.N.M. = DEED RECORDS LEA COUNTY, NEW MEXICO

S:\SURVEY\MATADOR_RESOURCES\DR_IRELAND_FED_COM_ROAD_EASEMENT\FINAL_PRODUCTS\EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_34.DWG 12/1/2017 3:56:37 PM ccaston



DR. IRELAND FED COM
ROAD EASEMENT

Being a proposed road easement being 30 feet in width, 15 feet left and right of the above platted centerline total line footage containing 1820.28 feet or 110.32 rods, containing 1.25 acres more or less.

MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

Michael Blake Brown, P.S. No. 18329
NOVEMBER 30, 2017

Matador PRODUCTION COMPANY

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7548
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
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DR. IRELAND FED COM ROAD EASEMENT	REVISION:	
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DATE: 11/30/17		
FILE: EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_33		
DRAWN BY: EAH		
SHEET: 1 OF 1		

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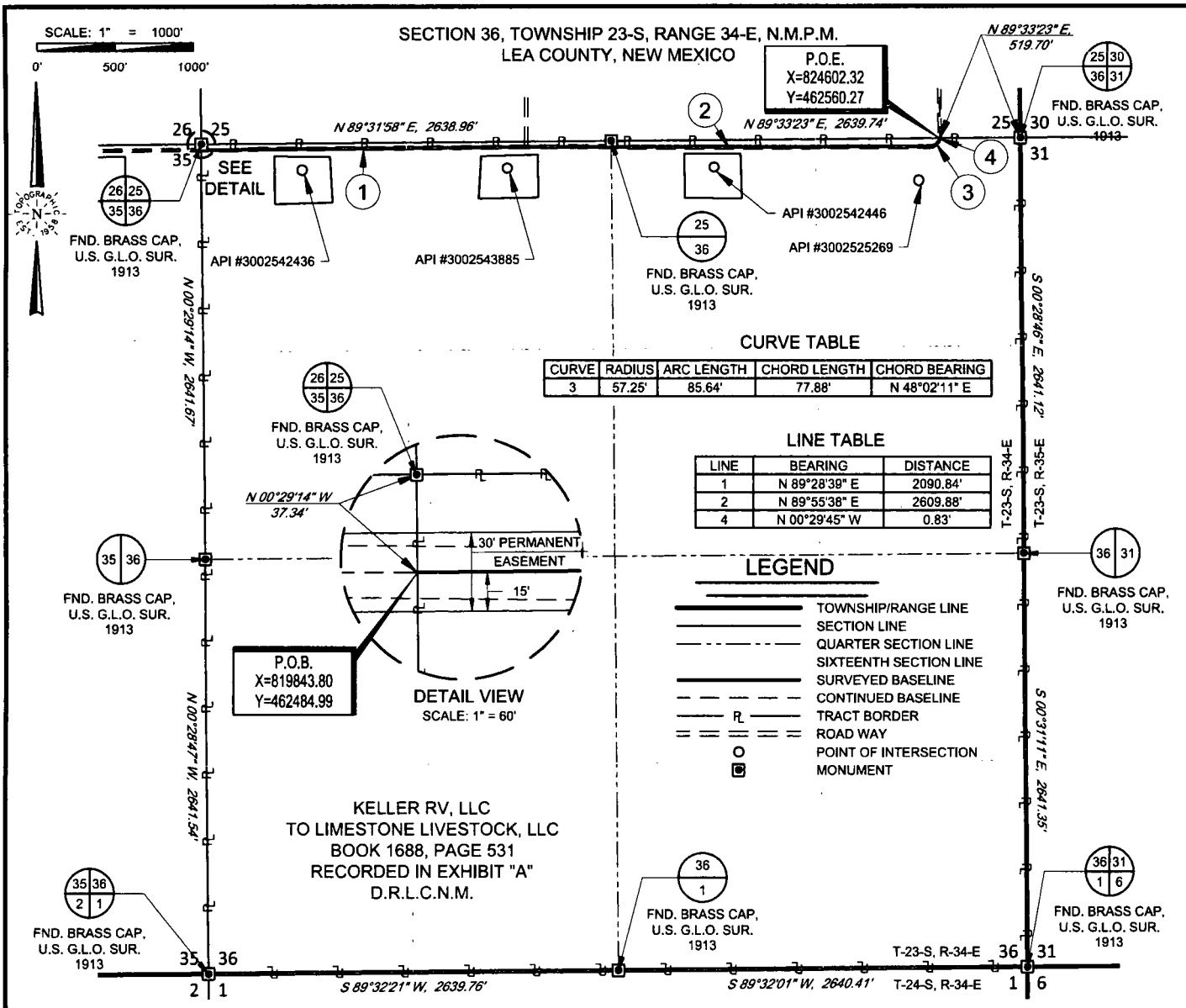
5. P.O.E./E.O.L. = POINT OF EXIT/END OF LINE
6. D.R.L.C.N.M. = DEED RECORDS LEA COUNTY. NEW MEXICO



DR. IRELAND FED COM ROAD EASEMENT

Being a proposed road easement being 30 feet in width, 15 feet left and right of the above platted centerline total line footage containing 4787.19 feet or 290.13 rods, containing 3.30 acres more or less.

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NOVEMBER 30, 2017

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DATE: 11/30/17		
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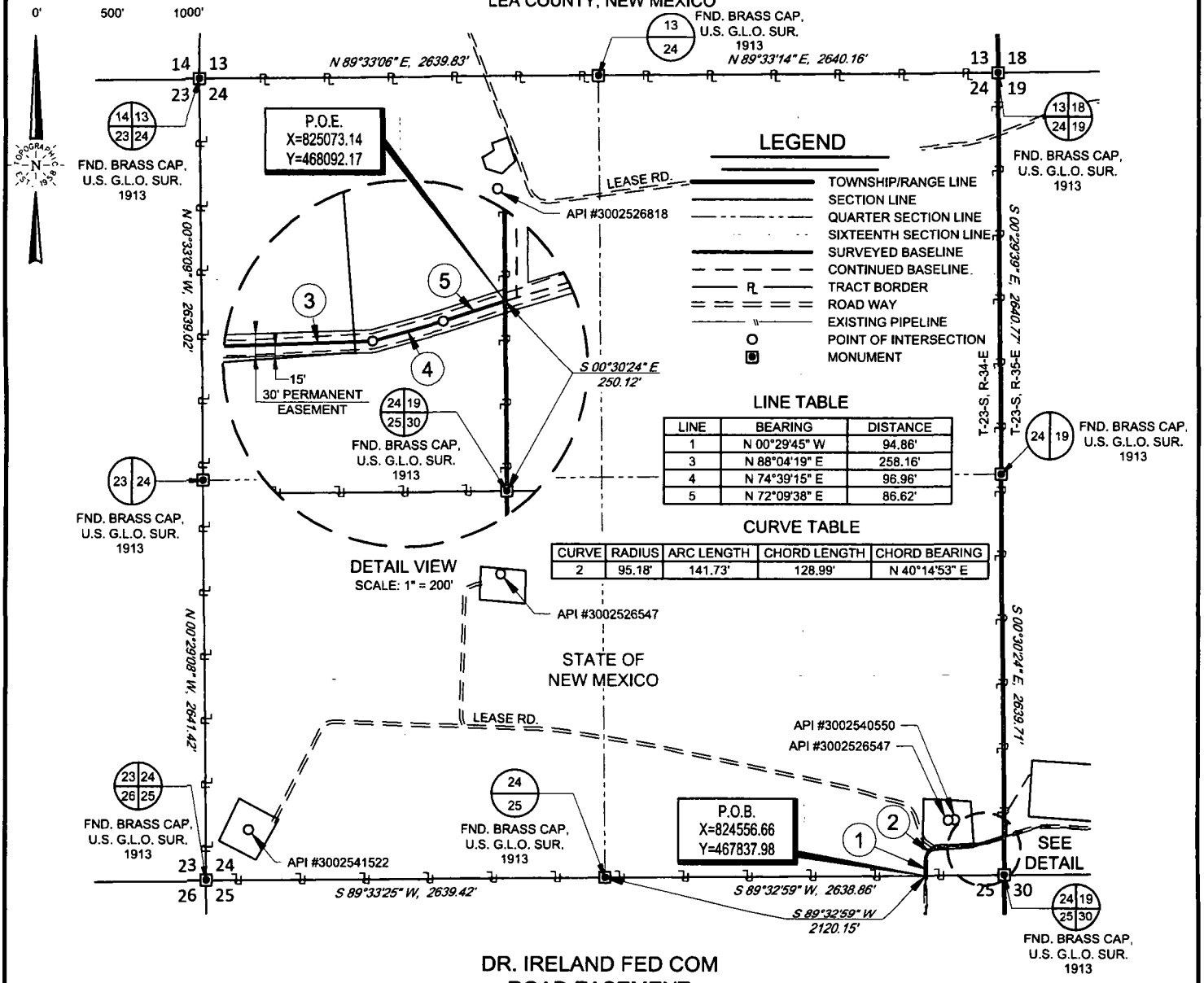
5. P.O.E./E.O.L. = POINT OF EXIT/END OF LINE
6. D.R.L..C.N.M. = DEED RECORDS LEA COUNTY, NEW MEXICO

SCALE: 1" = 1000'

0' 500' 1000'

SECTION 24, TOWNSHIP 23-S, RANGE 34-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LEGEND

- TOWNSHIP/RANGE LINE
- SECTION LINE
- QUARTER SECTION LINE
- SIXTEENTH SECTION LINE
- SURVEYED BASELINE
- CONTINUED BASELINE
- TRACT BORDER
- ROAD WAY
- EXISTING PIPELINE
- POINT OF INTERSECTION
- MONUMENT

LINE TABLE

LINE	BEARING	DISTANCE
1	N 00°29'45" W	94.86'
3	N 88°04'19" E	258.16'
4	N 74°39'15" E	96.96'
5	N 72°09'38" E	86.62'

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	CHORD LENGTH	CHORD BEARING
2	95.18'	141.73'	128.99'	N 40°14'53" E

DR. IRELAND FED COM ROAD EASEMENT

Being a proposed road easement being 30 feet in width, 15 feet left and right of the above platted centerline total line footage containing 678.33 feet or 41.11 rods, containing 0.47 acres more or less, being allocated by quarter quarters as follows:

SW/4 SW/4 - 678.33 feet or 41.11 rods, containing 0.47 acres

MICHAEL B. BROWN
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Michael Blake Brown, P.S. No. 18329
NOVEMBER 30, 2017

DR. IRELAND FED COM ROAD EASEMENT	REVISION:	
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DATE: 11/30/17		
FILE: EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_24		
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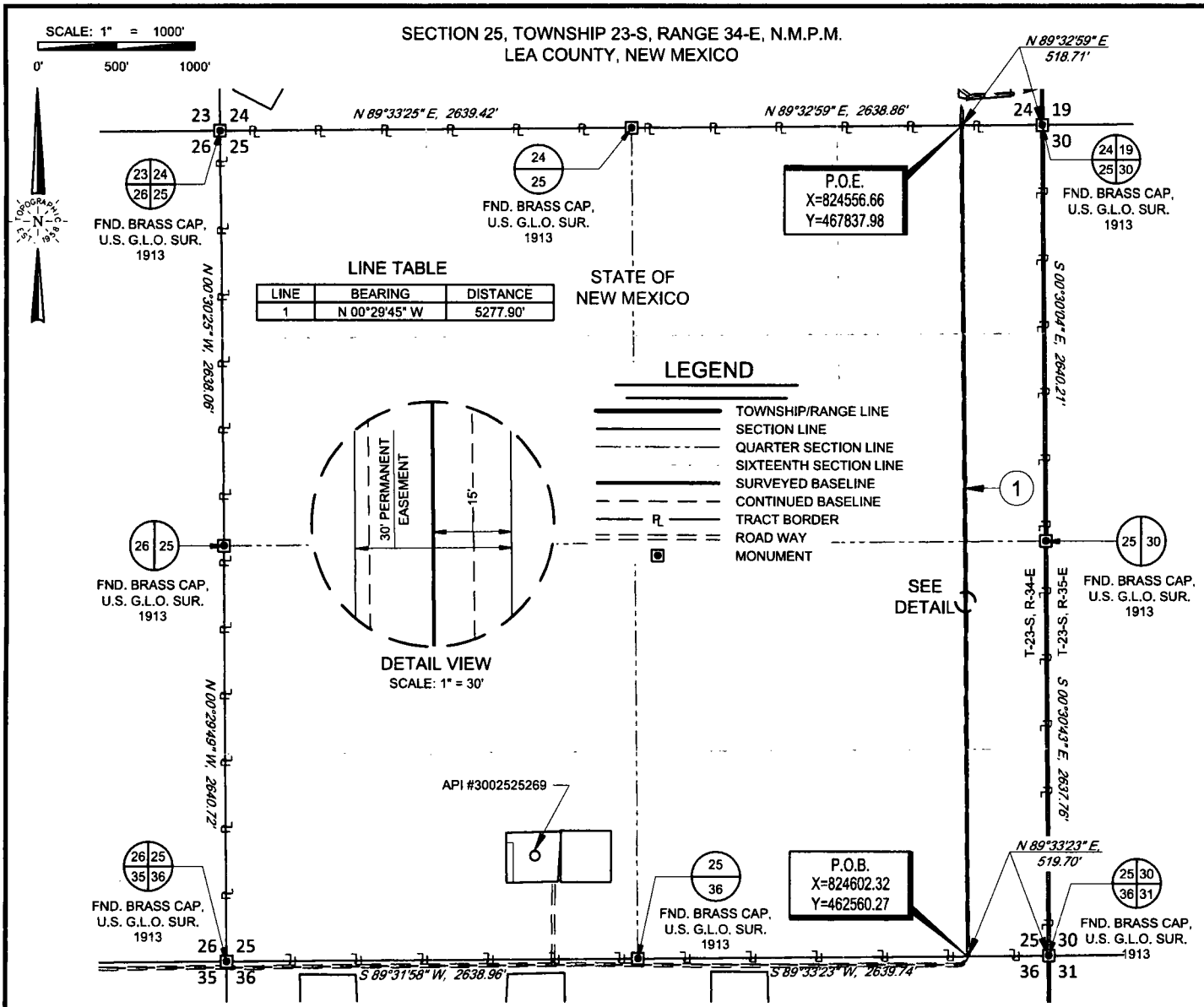

DR. IRELAND FED COM ROAD EASEMENT

Being a proposed road easement being 30 feet in width, 15 feet left and right of the above platted centerline total line footage containing 5277.90 feet or 319.88 rods, containing 3.64 acres more or less, being allocated by quarter quarters as follows:

NE/4 NE/4 - 1318.97 feet or 79.94 rods, containing 0.91 acres
SE/4 NE/4 - 1318.97 feet or 79.94 rods, containing 0.91 acres
NE/4 SE/4 - 1319.98 feet or 80.00 rods, containing 0.91 acres
SE/4 SE/4 - 1319.98 feet or 80.00 rods, containing 0.91 acres

MICHAEL B. BROWN
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NOVEMBER 30, 2017

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FILE: EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_25		
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SHEET: 1 OF 1		

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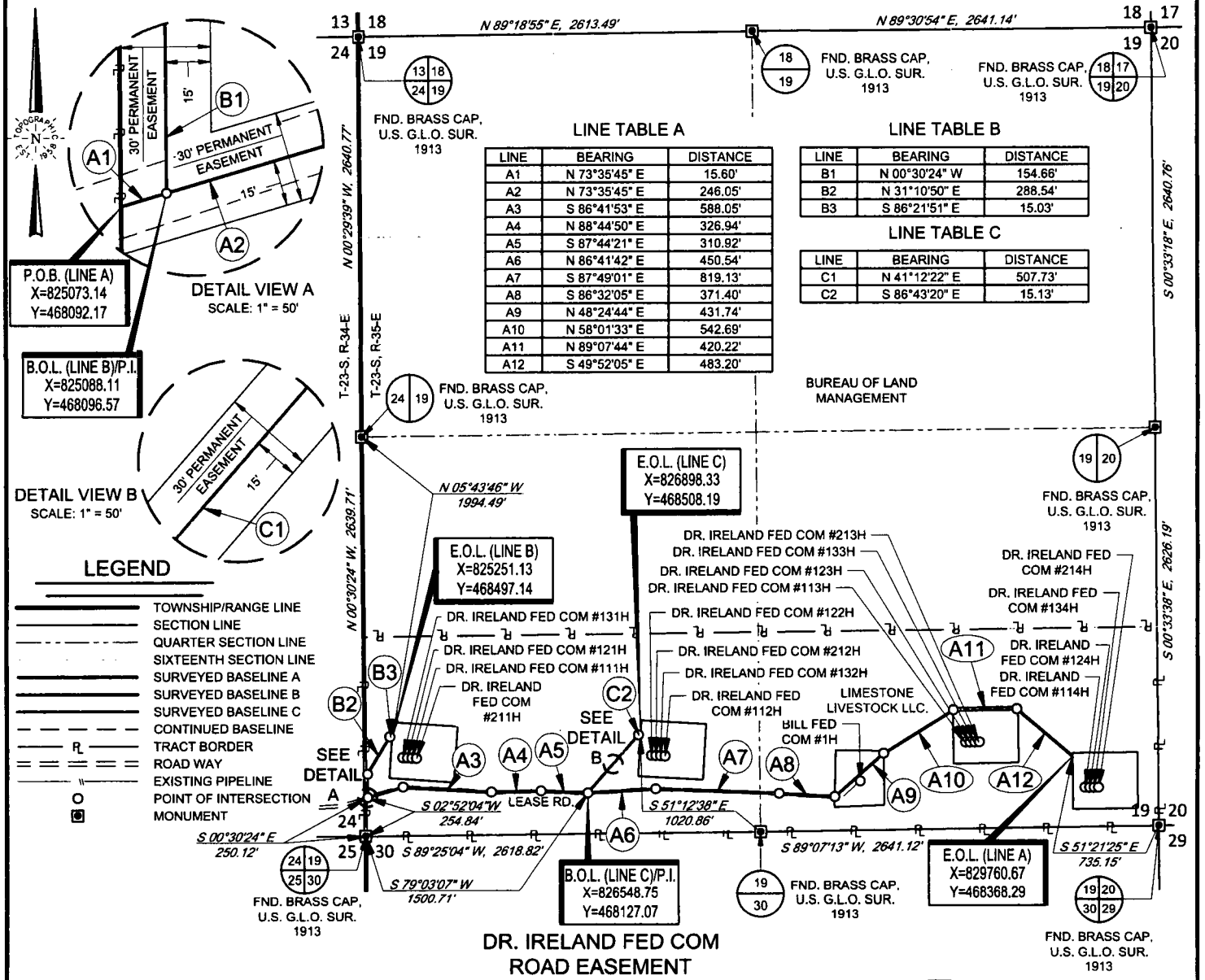
SCALE: 1" = 1000'

0' 500' 1000'

SECTION 19, TOWNSHIP 23-S, RANGE 35-E, N.M.P.M.
LEA COUNTY, NEW MEXICO



LINE TABLE A

LINE	BEARING	DISTANCE
A1	N 73°35'45" E	15.60'
A2	N 73°35'45" E	246.05'
A3	S 86°41'53" E	588.05'
A4	N 88°44'50" E	326.94'
A5	S 87°44'21" E	310.92'
A6	N 86°41'42" E	450.54'
A7	S 87°49'01" E	819.13'
A8	S 86°32'05" E	371.40'
A9	N 48°24'44" E	431.74'
A10	N 58°01'33" E	542.69'
A11	N 89°07'44" E	420.22'
A12	S 49°52'05" E	483.20'

LINE TABLE B

LINE	BEARING	DISTANCE
B1	N 00°30'24" W	154.66'
B2	N 31°10'50" E	288.54'
B3	S 86°21'51" E	15.03'

LINE TABLE C

LINE	BEARING	DISTANCE
C1	N 41°12'22" E	507.73'
C2	S 86°43'20" E	15.13'

LEGEND

- TOWNSHIP/RANGE LINE
- SECTION LINE
- QUARTER SECTION LINE
- SIXTEENTH SECTION LINE
- SURVEYED BASELINE A
- SURVEYED BASELINE B
- SURVEYED BASELINE C
- CONTINUED BASELINE
- TRACT BORDER
- ROAD WAY
- EXISTING PIPELINE
- POINT OF INTERSECTION
- MONUMENT

DR. IRELAND FED COM ROAD EASEMENT

Being a proposed road easement being 30 feet in width, 15 feet left and right of the above platted centerline total line footage containing 5987.57 feet or 362.88 rods, containing 4.12 acres more or less.

MICHAEL B. BROWN
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NOVEMBER 30, 2017

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SHEET: 1 OF 1		

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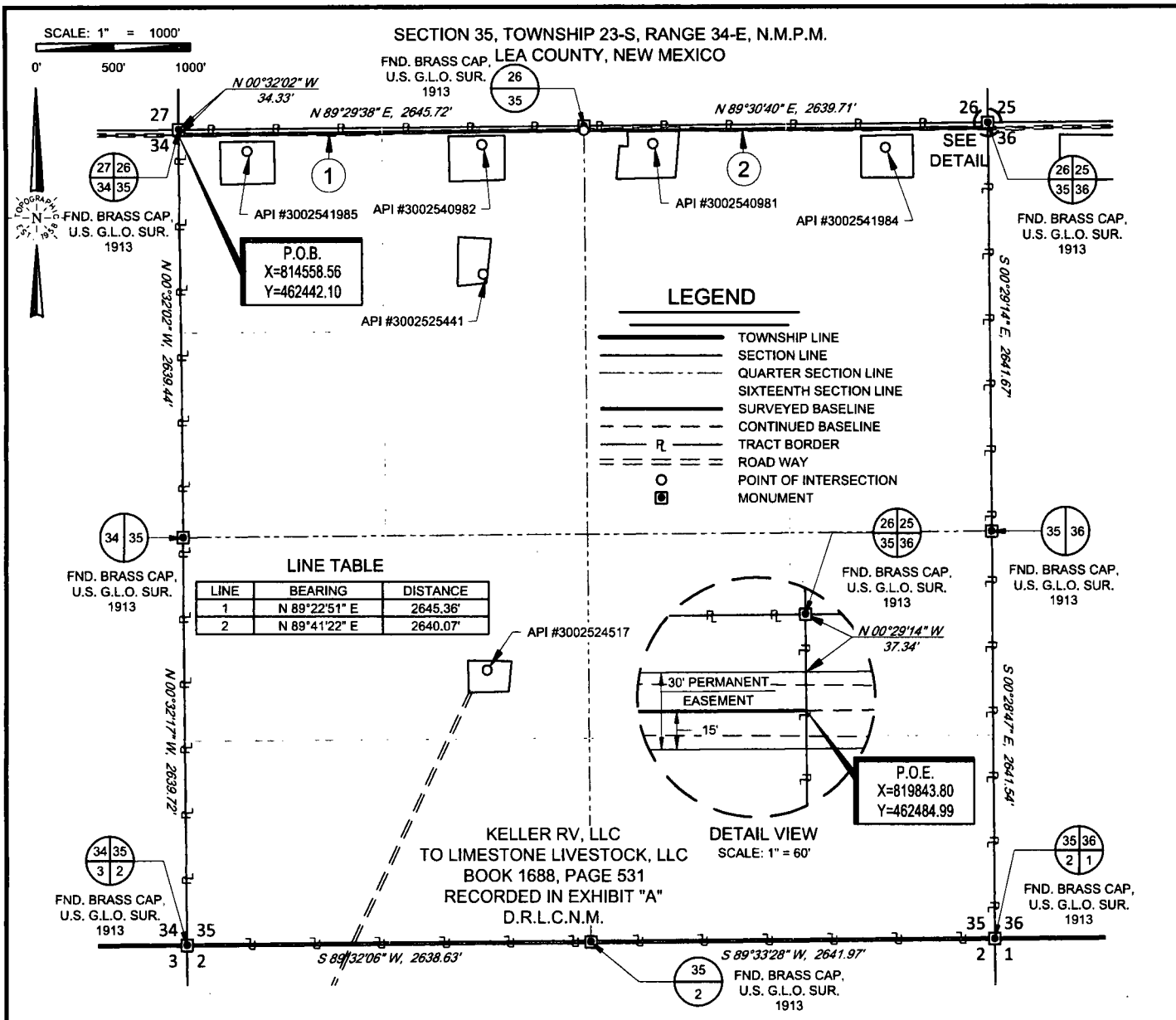
6. P.I. = POINT OF INTERSECTION



DR. IRELAND FED COM ROAD EASEMENT

Being a proposed road easement being 30 feet in width, 15 feet left and right of the above platted centerline total line footage containing 5285.43 feet or 320.33 rods, containing 3.64 acres more or less.

MICHAEL B. BROWN NEW MEXICO 18329 PROFESSIONAL SURVEYOR

Michael Blake Brown, P.S. No. 18329
NOVEMBER 30, 2017

Matador PRODUCTION COMPANY

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DATE: 11/30/17		
FILE: EP_DR_IRELAND_FED_COM_ROAD_EASEMENT_35		
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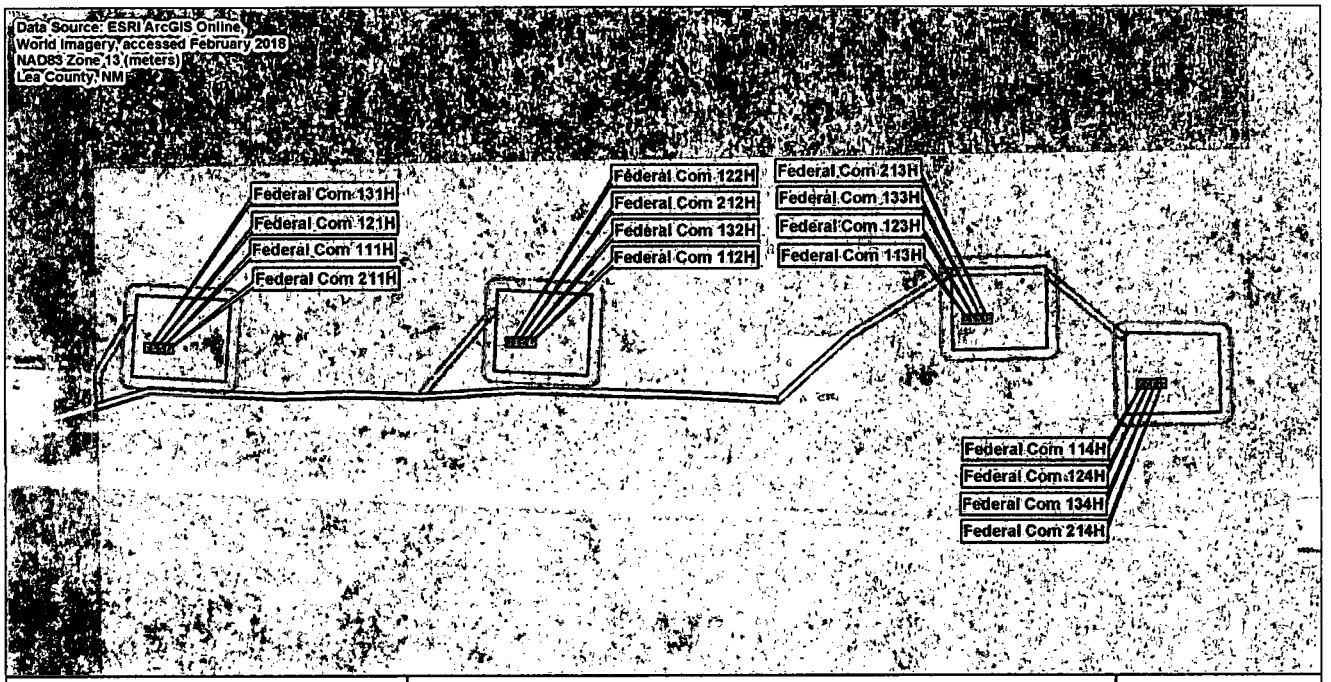


Project Area
Dr. Ireland Oil Wells Project

0 Feet 1,000
0 Meters 300

N
1:8,000

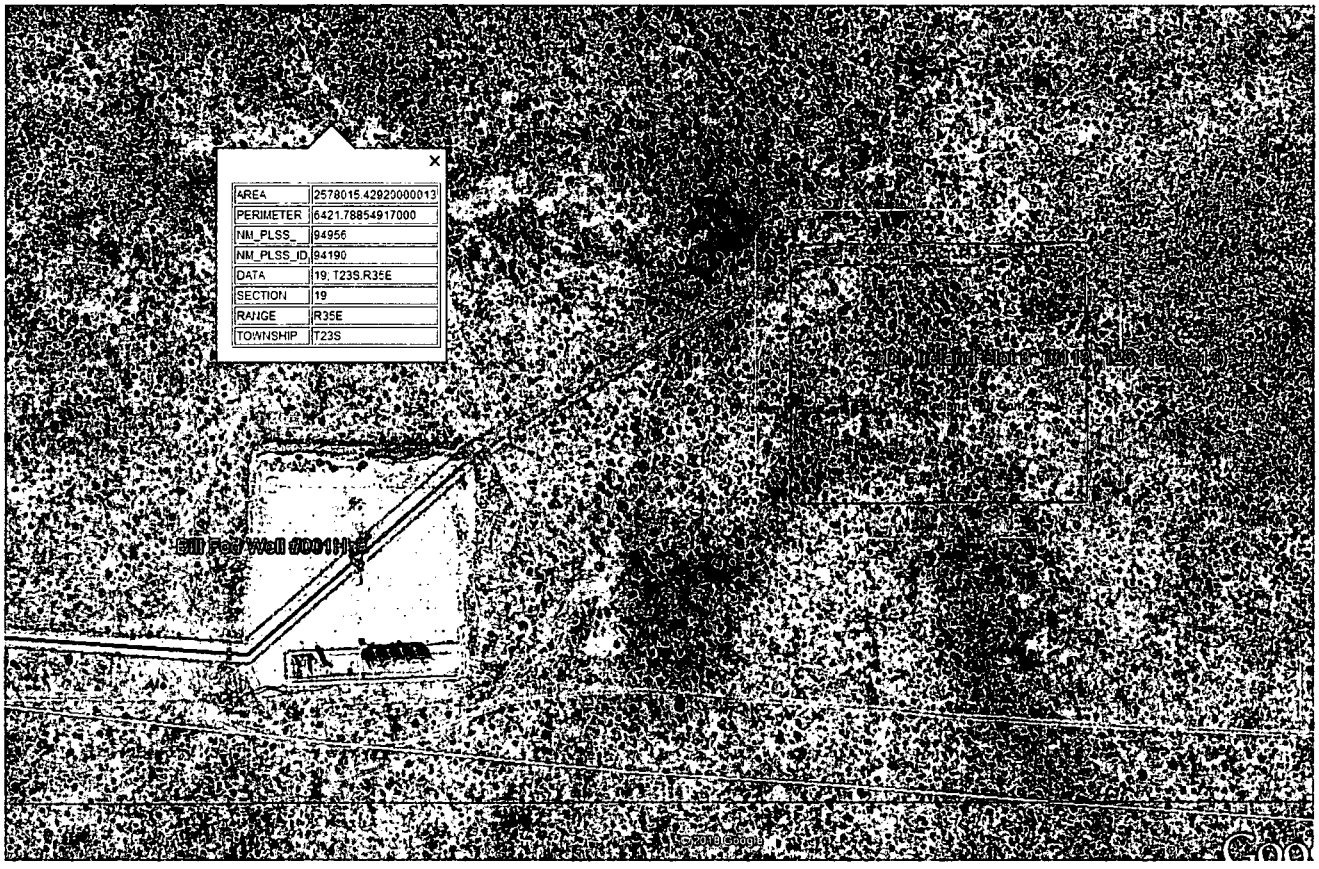
Project No. 44824.01
File: Project_Area_APD_Layout
Map Created: 2/15/2018
Map Updated: 2/26/2018

SWCA ENVIRONMENTAL CONSULTANTS

Proposed Project Infrastructure
- Wellhead
- Well Pad
- Temporary Construction Zone
- New Access Road
- Exisitng Lease Road

Land Ownership
- BLM
- Private
- State

New Mexico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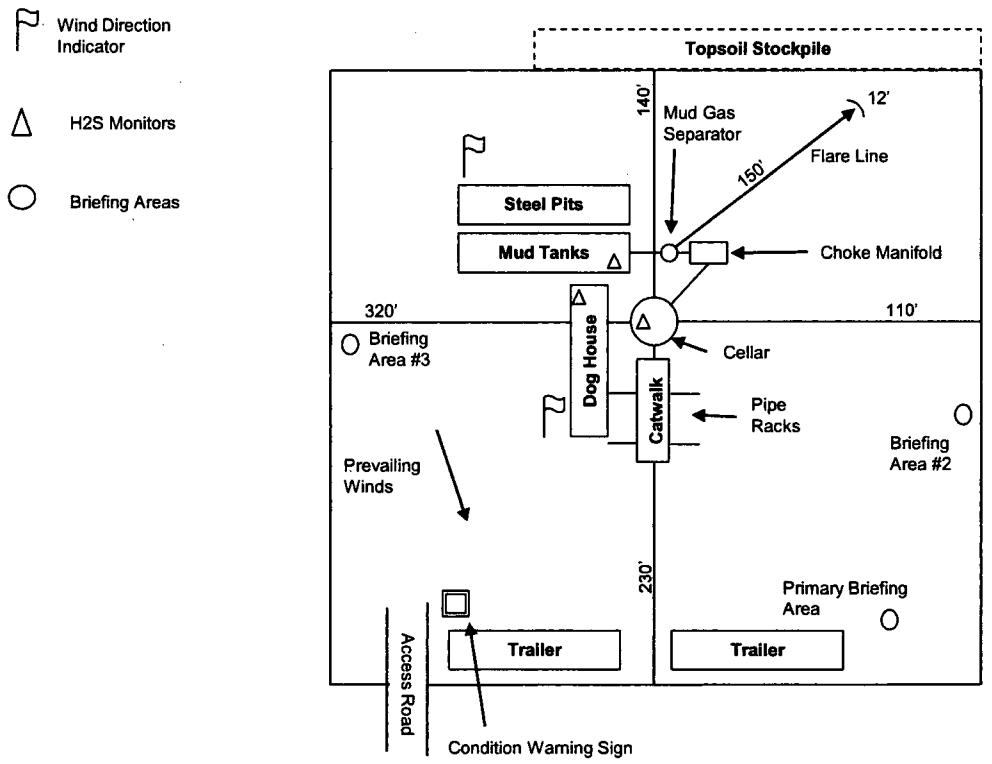
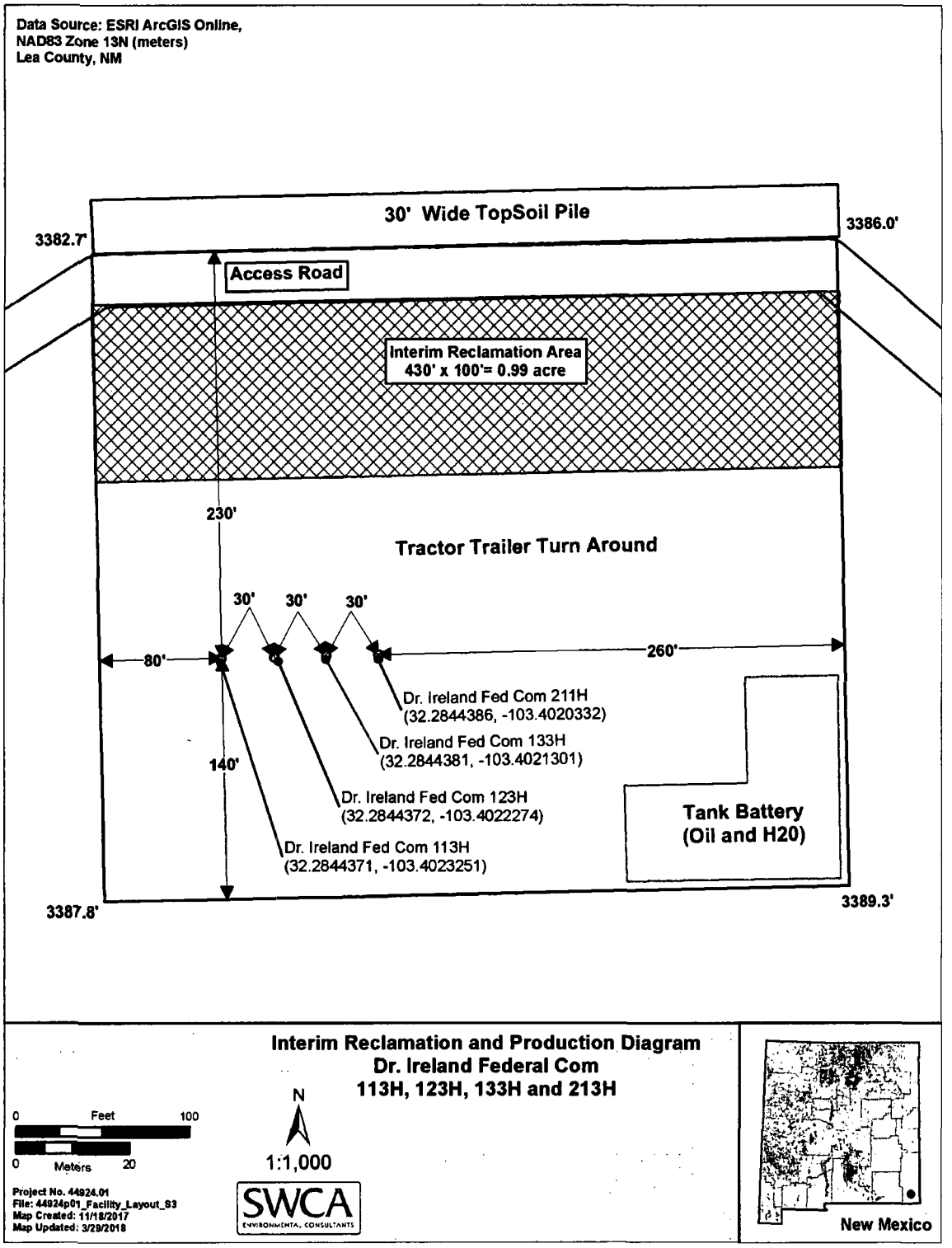
PERIMETER 6421.78854917000
NM_PLSS_ 94956
NM_PLSS_ID 94190
DATA 19, T23S,R35E
SECTION 19
RANGE R35E
TOWNSHIP T23S
Bill Fed Well #001H
© 2010 Google

Rig Diagram

Exhibit E-3: Rig Diagram
Dr. Ireland Fed Com #123H
Matador Resources Company
19-23S-35E
SHL 570' FSL & 1249' FEL
BHL 240' FNL & 1650' FEL
Lea County, NM




Data Source: ESRI ArcGIS Online,
NAD83 Zone 13N (meters)
Lea County, NM
30' Wide TopSoil Pile
3382.7'
3386.0'
Access Road
Interim Reclamation Area
430' x 100'= 0.99 acre
230'
Tractor Trailer Turn Around
30'
30'
30'
80'
260'
Dr. Ireland Fed Com 211H
(32.2844386, -103.4020332)
Dr. Ireland Fed Com 133H
(32.2844381, -103.4021301)
140'
Dr. Ireland Fed Com 123H
(32.2844372, -103.4022274)
Dr. Ireland Fed Com 113H
(32.2844371, -103.4023251)
Tank Battery
(Oil and H20)
3387.8'
3389.3'
Interim Reclamation and Production Diagram
Dr. Ireland Federal Com
113H, 123H, 133H and 213H
N
0 Feet 100
0 Meters 20
1:1,000
Project No. 44924.01
File: 44924p01_Facility_Layout_83
Map Created: 11/18/2017
Map Updated: 3/29/2018
SWCA
ENVIRONMENTAL CONSULTANTS
New Mexico


Dr. Ireland Water Details
Matador Owned Regeneration Frac Pond (State Land)
Legend
BLM
Feature 1
Feature 2
Feature 3
ST
Dr. Ireland Section
Florence State E 2021 Pad
Matador Regeneration Frac Pond
Google Earth

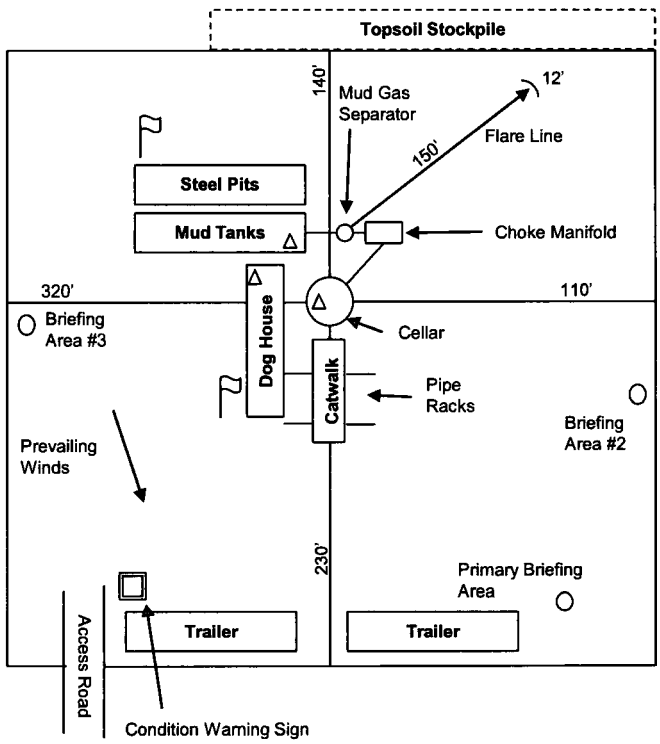
Rig Diagram

Exhibit E-3: Rig Diagram
Dr. Ireland Fed Com #123H
Matador Resources Company
19-23S-35E
SHL 570' FSL & 1249' FEL
BHL 240' FNL & 1650' FEL
Lea County, NM

Wind Direction Indicator

H2S Monitors

Briefing Areas



Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

Lined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

Injection well number: **Injection well name:**

Assigned injection well API number? **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

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

Bond Info Data Report

09/10/2018

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB001079

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment:

Flowback Strategy

After the fracture treatment/completion operations (flowback), the well(s) will be produced to temporary production tanks and the gas will be flared or vented. During flowback, the fluids and sand content will be monitored. ~~When~~ If the produced fluids contain minimal sand, then the wells will be turned to production facilities. The gGas sales should start as soon as the wells starts flowing through the production facilities, unless there are operational issues on the midstream ~~Longwood Midstream Delaware, LLC's~~ system at that time. Based on current information, it is Matador's belief the system ~~can~~ will be able to take theis gas upon completion of the well~~(s)~~.

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Safety requirements during cleanout operations ~~from the use of underbalanced air cleanout systems~~ may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Operating a generator will only utilize a ~~Only a~~ portion of the produced gas and~~is consumed operating the generator~~ the~~,~~ remainder of gas would still need ~~will~~ to be flared.
  - Power Company has to be willing to purchase gas back and if they are willing they require a 5 year commitment to supply the agreed upon amount of power back to them. With gas decline rates and unpredictability of markets it is impossible to agree to such long term demands. If the demands are not met then operator is burdened with penalty for not delivering.
- Compressed Natural Gas – On lease
  - ~~Gas flared would be minimal.~~ Compressed Natural Gas is likely to~~but might~~ be uneconomical to operate when the gas volume declines.
- NGL Removal – On lease
  - NGL Removal requires a p~~P~~lants and is~~are~~ expensive on such a small scale rendering it uneconomic and still requires residue gas to~~is~~ be~~still~~ flared~~, and uneconomical to operate when gas volume declines~~.

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