NM OIL CONSERVATION
ARTESIA DISTRICT
JAN 03 2018
RECEIVED

Form 3160-3
(March 2012)

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☑ DRILL ☐ REENTER	5. Lease Serial No. NMNM117115
1b. Type of Well: ☐ Oil Well ☑ Gas Well ☐ Other ☐ Single Zone ☑ Multiple Zone	6. If Indian, Allotee or Tribe Name
	7. If Unit or CA Agreement, Name and No.
	8. Lease Name and Well No. WARREN FED COM 221H 317076
2. Name of Operator MATADOR PRODUCTION COMPANY 228937	9. API Well No. 30-015-44617
3a. Address 5400 LBJ Freeway, Suite 1500 Dallas TX 752· / 3b. Phone No. *(include area code)* (972)371-5200	10. Field and Pool, or Exploratory PURPLE SAGE / WOLFCAMP, (GAS) 98220
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface NWNW / 170 FNL / 740 FWL / LAT 32.2829425 / LONG -104.1500421; At proposed prod. zone SWSW / 240 FSL / 330 FWL / LAT 32.2693192 / LONG -104.1513651	11. Sec., T. R. M. or Blk. and Survey or Area SEC 25 / T23S / R27E / NMP
14. Distance in miles and direction from nearest town or post office* 3 miles	12. County or Parish EDDY / 13. State NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 170 feet	16. No. of acres in lease 640	17. Spacing Unit dedicated to this well 320
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 30 feet	19. Proposed Depth 10300 feet / 15147 feet	20. BLM/BIA Bond No. on file FED: NMB001079
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3133 feet	22. Approximate date work will start* 06/01/2017	23. Estimated duration 90 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

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 required by the BLM.

25. Signature (Electronic Submission)	Name *(Printed/Typed)* Brian Wood / Ph: (505)466-8120	Date 03/31/2017
Title President		
Approved by *(Signature)* (Electronic Submission)	Name *(Printed/Typed)* Cody Layton / Ph: (575)234-5959	Date 12/21/2017
Title Supervisor Multiple Resources	Office 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.

(Continued on page 2)

*(Instructions on page 2)

APPROVED WITH CONDITIONS
Approval Date: 12/21/2017

JC 1-5-18

RWP 1-5-18

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 1: 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 well, 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 directionally 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.

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 well 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 will 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 collects this information to allow 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 Collection 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: NWNW / 170 FNL / 740 FWL / TWSP: 23S / RANGE: 27E / SECTION: 25 / LAT: 32.2829425 / LONG: -104.1500421 (TVD: 0 feet, MD: 0 feet)
   PPP: NWSW / 2640 FNL / 535 FWL / TWSP: 23S / RANGE: 27E / SECTION: 25 / LAT: 32.276034 / LONG: -104.15137 (TVD: 10300 feet, MD: 12747 feet)
   BHL: SWSW / 240 FSL / 330 FWL / TWSP: 23S / RANGE: 27E / SECTION: 25 / LAT: 32.2693192 / LONG: -104.1513651 (TVD: 10300 feet, MD: 15147 feet)

BLM Point of Contact

Name: Tenille Ortiz

Title: Legal Instruments Examiner

Phone: 5752342224

Email: tortiz@blm.gov

Approval Date: 12/21/2017

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 OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MATADOR PRODUCTION CO.
LEASE NO.:	NMNM117115
WELL NAME & NO.:	221H – WARREN FED COM
SURFACE HOLE FOOTAGE:	170'/N & 740'/W
BOTTOM HOLE FOOTAGE	240'/S & 330'/W
LOCATION:	Section 25 T.23 S., R.27 E., NMPM
COUNTY:	Eddy County, New Mexico

Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	○ Low	◉ Medium	○ High
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	
Other	☐4 String Area	☐Capitan Reef	☐WIPP

A. Hydrogen Sulfide

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

B. CASING

1. The **13 3/8** inch surface casing shall be set at approximately **475** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

    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 will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours

after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

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

2. The minimum required fill of cement behind the **9 5/8** inch first 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 cave/karst.**

❖ In **Medium Cave/Karst Areas** if cement does not circulate to surface on the first two casing strings, the cement on the 3rd casing string must come to surface.

3. The minimum required fill of cement behind the **7** inch second intermediate casing is:

   - Cement should tie-back at least **200** feet into previous casing string. Operator shall provide method of verification. **Excess calculates to 23% - additional cement might be required.**

4. The minimum required fill of cement behind the **4 1/2** inch production casing is:

   - Cement should tie-back at least **200** feet into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).

2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

3.

Option 1:

i. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9 5/8** inch first intermediate casing shoe shall be **3000 (3M)** psi.

ii. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **7** inch second intermediate casing shoe shall be **5000 (5M)** psi.

Option 2:

i. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the first intermediate casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9 5/8** inch first intermediate casing shoe shall be **5000 (5M)** psi.

a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.

b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.

c. Manufacturer representative shall install the test plug for the initial BOP test.

d. After the 9 5/8" casing has been landed and cemented, the operator will then lift up the BOP to install the "C-section of the wellhead. Therefore, per Onshore Oil and Gas Order No. 2, the entire BOP/BOPE shall be tested prior to drilling out the second intermediate casing shoe.

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.

D. SPECIAL REQUIREMENT(S)

Waste Minimization Plan (WMP)

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

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.

MHH 12092017

GENERAL 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)

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

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

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. 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.

   a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).
   b. When the operator proposes to set surface casing with Spudder Rig
      - Notify the BLM when moving in and removing the Spudder Rig.
      - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
      - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. 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 are located, this does not include the dog house or stairway area.

3. 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.

A. CASING

1. 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.

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

3. 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.

4. 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.

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

6. On that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. 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.

8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: 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.

3. 5M or higher 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.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

    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.

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

    a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after

installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, 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. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. 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.

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

f. 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.

g. 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.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the Wolfcamp formation, and shall be used until production casing is run and cemented.

D. 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.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

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

Submit Original
to Appropriate
District Office

GAS CAPTURE PLAN

X Original
☐ Amended

Operator & OGRID No.: Matador Production Company (228937)
Date: 12/12/17
Reason for Amendment:

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: A C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule 19.15.18.12.A

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Warren Federal No. 201H	30-015-#####	UL-O Sec 25 T23S R27E	###' FNL & #,###' FWL	+/- 1,500	~21 days	Flare ~21 days on flowback before turn into TB. Time est. depends on sales connect and well cleanup.
Warren Federal No. 205H	30-015-#####	UL-O Sec 25 T23S R27E	###' FNL & #,###' FWL	+/- 1,500	~21 days	Flare ~21 days on flowback before turn into TB. Time est. depends on sales connect and well cleanup.
Warren Federal No. 221H	30-015-#####	UL-O Sec 25 T23S R27E	###' FNL & #,###' FWL	+/- 7,500	~21 days	Flare ~21 days on flowback before turn into TB. Time est. depends on sales connect and well cleanup.
Warren Federal No. 225H	30-015-#####	UL-O Sec 25 T23S R27E	###' FNL & #,###' FWL	+/- 7,500	~21 days	Flare ~21 days on flowback before turn into TB. Time est. depends on sales connect and well cleanup.
Warren Federal No. 121H	30-015-#####	UL-O Sec 25 T23S R27E	###' FNL & #,###' FWL	+/- 1,000	~21 days	Flare ~21 days on flowback before turn into TB. Time est. depends on sales connect and well cleanup.

Gathering System and Pipeline Notification

The well will be connected to a production facility after flowback operations are complete so long as the gas transporter system is in place. The gas produced from the production facility is connected to Longwood RB Pipeline, LLC's low/high pressure gathering system located in Eddy County, New Mexico. It required ~2,000' of pipeline to connect the facility to the low/high pressure gathering system. Matador Production Company periodically provides a drilling, completion and

Approval Date: 12/21/2017

estimated first production date for wells that are scheduled to be drilled in the foreseeable future to Longwood RB Pipeline, LLC. If changes occur that will affect the drilling and completion schedule, Matador Production Company will notify Longwood RB Pipeline, LLC. Additionally, the gas produced from the well will be processed at a processing plant further downstream and, although unanticipated, any issues with downstream facilities could cause flaring at the wellhead. The actual flow of the gas will be based on compression operating parameters and gathering system pressures measured when the well starts producing.

Flowback Strategy

After the fracture treatment/completion operations (flowback), the well 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. If the produced fluids contain minimal sand, then the well will be turned to production facilities. The gas sales should start as soon as the well starts flowing through the production facilities, unless there are operational issues on the midstream system at that time. Based on current information, it is Matador's belief the system will be able to take the gas upon completion of the well.

Safety requirements during cleanout operations 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 portion of the produced gas and the remainder of gas would still need 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
    - Compressed Natural Gas is likely to be uneconomic to operate when the gas volume declines.
- NGL Removal – On lease
    - NGL Removal requires a plant and is expensive on such a small scale rendering it uneconomic and still requires residue gas to be flared.

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	MATADOR PRODUCTION CO.
LEASE NO.:	NMNM117115
WELL NAME & NO.:	221H – WARREN FED COM
SURFACE HOLE FOOTAGE:	170'/N & 740'/W
BOTTOM HOLE FOOTAGE	240'/S & 330'/W
LOCATION:	Section 25 T.23 S., R.27 E., NMPM
COUNTY:	Eddy 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.

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)

Cave and Karst

** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Construction:
In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

No Blasting:
No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:
The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

Tank Battery Liners and Berms:
Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

Leak Detection System:

A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:
Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:
Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:
Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:
ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Abandonment Cementing:
Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:
Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

Watershed

- The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the

well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.

- Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion.

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.

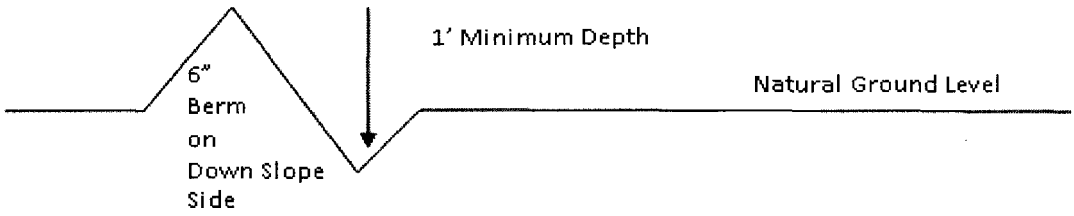
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: $\frac{400'}{4\%} + 100' = 200'$ lead-off ditch interval

Cattle guards

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

Fence Requirement

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

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

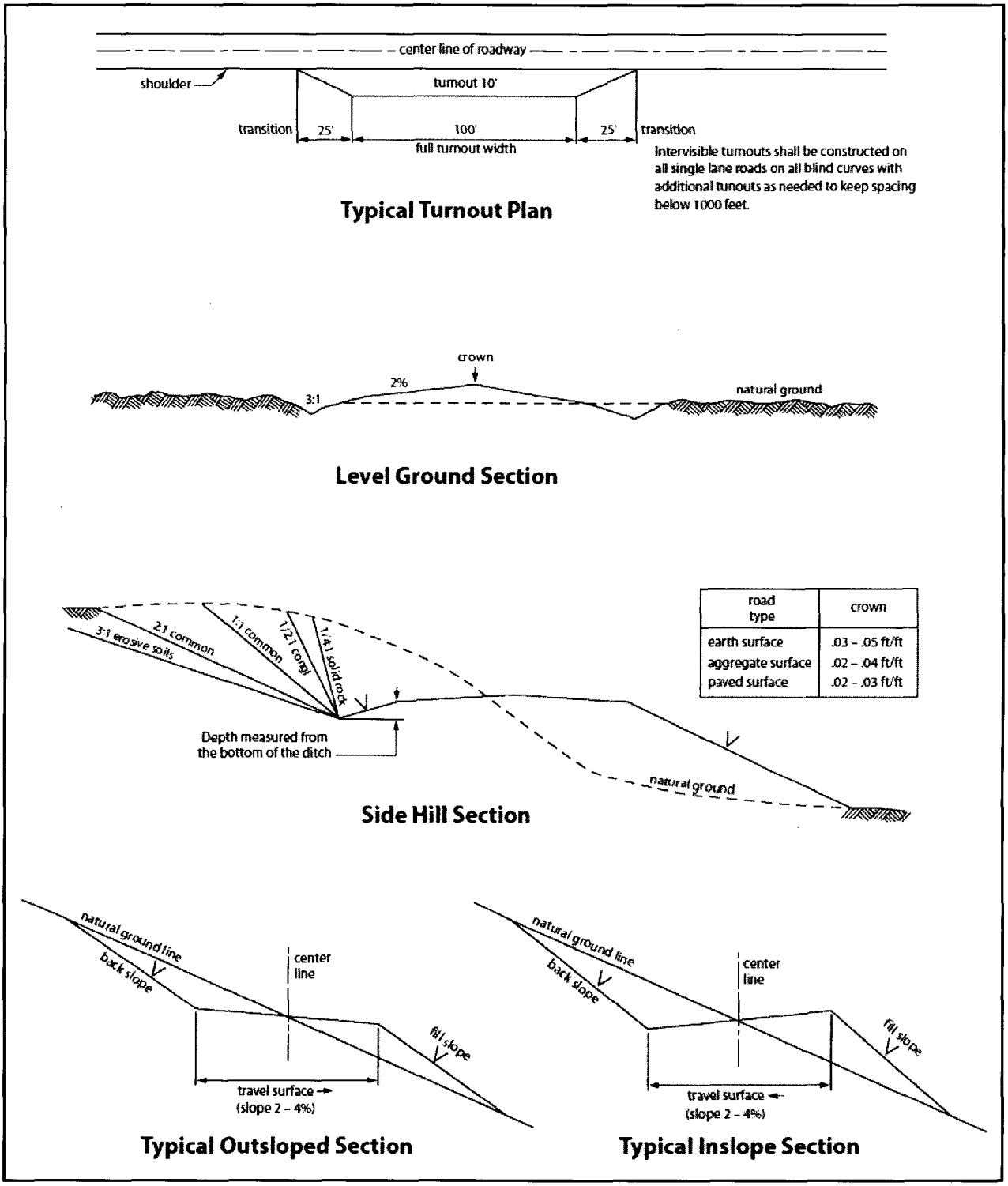


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VI. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities
Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)
Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening
The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

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

Containment Structures

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

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).

B. PIPELINES

BURIED PIPELINE STIPULATIONS

A copy of the application (Grant, APD, or Sundry Notice) and attachments, including conditions of approval, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C.6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of

the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of **36** inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be **30** feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)

- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed **30** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

9. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

(X) seed mixture 1	( ) seed mixture 3
( ) seed mixture 2	( ) seed mixture 4
( ) seed mixture 2/LPC	( ) Aplomado Falcon Mixture

13. All above-ground structures not subject to safety requirements shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

14. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. All signs and information thereon will be posted in a permanent, conspicuous manner, and will be maintained in a legible condition for the life of the pipeline.

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder 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 will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. 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 associated roads, 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.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches [that are not otherwise fenced, screened, or netted] to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching

deterrence shall be placed on all vertical poles that extend past the cross arms.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder 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 will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:
- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

VII. 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).

VIII. 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

AFMSS

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

Operator Certification Data Report

12/21/2017

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: Brian Wood **Signed on:** 03/31/2017

Title: President

Street Address: 37 Verano Loop

City: Santa Fe **State:** NM **Zip:** 87508

Phone: (505)466-8120

Email address: afmss@permitswest.com

Field Representative

Representative Name:

Street Address:

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

Phone:

Email address:

APD ID: 10400012800 **Submission Date:** 03/31/2017

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400012800 **Tie to previous NOS?** **Submission Date:** 03/31/2017

BLM Office: CARLSBAD **User:** Brian Wood **Title:** President

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

Lease number: NMNM117115 **Lease Acres:** 640

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

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

Agreement number:

Agreement name:

Keep application confidential? NO

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

Operator letter of designation: Warren_205H_Operator_Designation_03-30-2017.pdf

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: WARREN FED COM **Well Number:** 221H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** PURPLE SAGE **Pool Name:** WOLFCAMP, (GAS)

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

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

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:** WARREN SLOT **Number:** 1

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

Well Work Type: Drill

Well Type: CONVENTIONAL GAS WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 3 Miles **Distance to nearest well:** 30 FT **Distance to lease line:** 170 FT

Reservoir well spacing assigned acres Measurement: 320 Acres

Well plat: Warren_221H__Plat_03-30-2017.pdf

Well work start Date: 06/01/2017 **Duration:** 90 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: 18329

	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	170	FNL	740	FWL	23S	27E	25	Aliquot NWNW	32.2829425	-104.1500421	EDDY	NEW MEXICO	NEW MEXICO	F	FEE	3133	0	0
KOP Leg #1	170	FNL	740	FWL	23S	27E	25	Aliquot NWNW	32.2829425	-104.1500421	EDDY	NEW MEXICO	NEW MEXICO	F	FEE	2333	800	800
PPP Leg #1	2640	FNL	535	FWL	23S	27E	25	Aliquot NWSW	32.276034	-104.15137	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 117115	-7167	12747	10300

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

	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
EXIT Leg #1	240	FSL	330	FWL	23S	27E	25	Aliquot SWSW	32.2693192	-104.1513651	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 117115	-7167	15147	10300
BHL Leg #1	240	FSL	330	FWL	23S	27E	25	Aliquot SWSW	32.2693192	-104.1513651	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 117115	-7167	15147	10300

6. CORES, TESTS, & LOGS

No core or drill stem test is planned.

A 2-person mud-logging program will be used from ≈5600' to TD.

No electric logs are planned at this time. GR will be collected through the MWD tools from intermediate casing to TD. CBL with CCL will be run as far as gravity will let it fall to TOC.

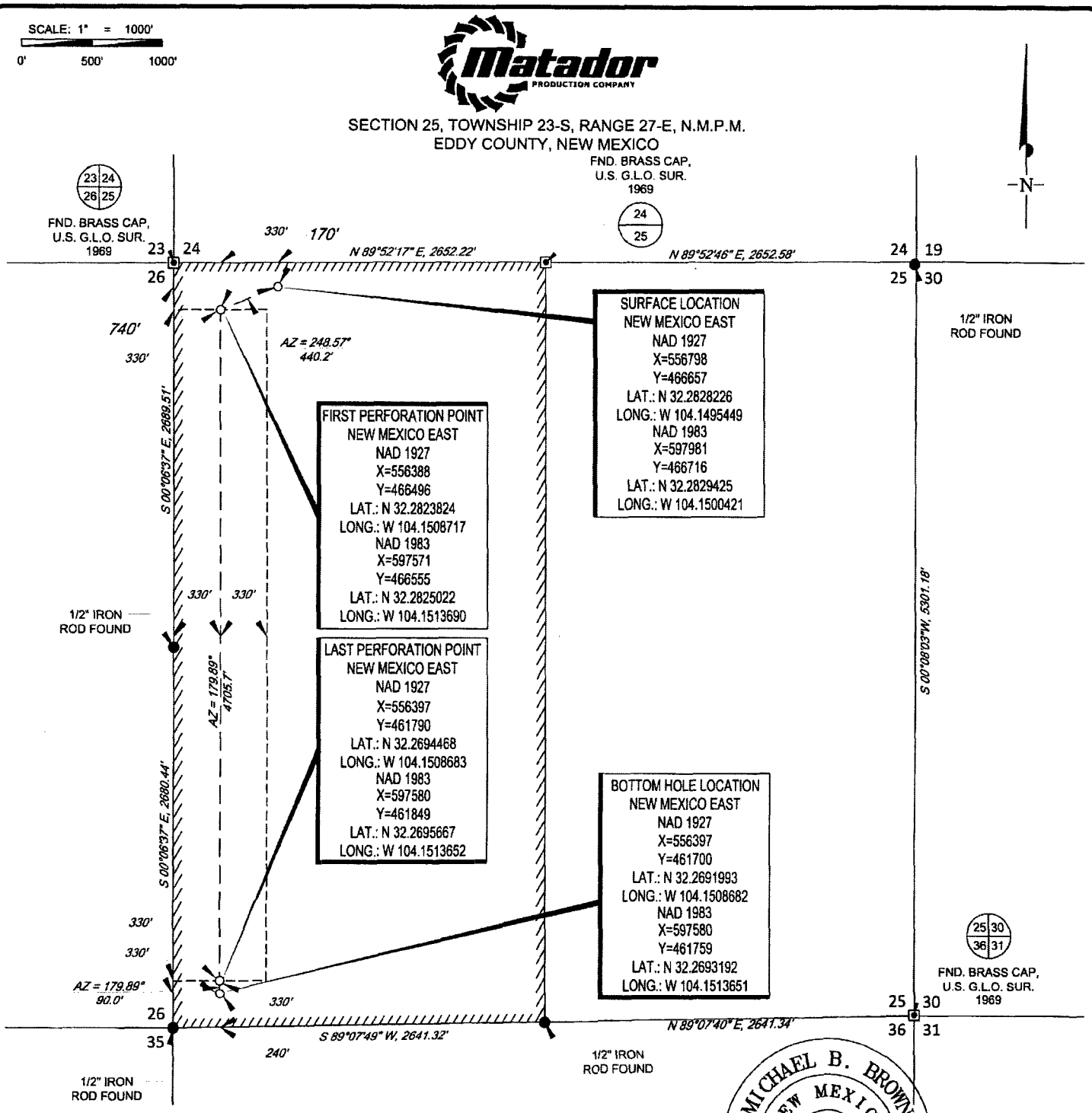
7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈6700 psi. Expected bottom hole temperature is ≈160° F.

Matador does not anticipate that there will be enough H_2S from surface to the Bone Spring to meet BLM's minimum requirements for submitting an "H_2S Drilling Operation Plan" or "Public Protection Plan" for drilling and completing this well. Since Matador has an H_2S safety package on all wells, an "H_2S Drilling Operations Plan" is attached. Adequate flare lines will be installed off the mud/gas separator where gas will be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

8. OTHER INFORMATION

Anticipated spud date is upon approval. It is expected it will take ≈3 months to drill and complete the well. Matador Production Company owns the majority working interest in this well. Per its discussions with its potential partners, Matador will be named operator upon execution of the final Operating Agreements signed by the partners or the issuance of a pooling order by the State.



LEASE NAME & WELL NO.: WARREN FED #221H

SECTION 25 TWP 23-S RGE 27-E SURVEY N.M.P.M.

COUNTY EDDY STATE NM

DESCRIPTION 170' FNL & 740' FWL

DISTANCE & DIRECTION

FROM INT. OF US-285. & W. CEDAR ST., GO SOUTH ON US-285/SOUTH 8TH ST ±1.0 MILES, THENCE SOUTHWEST (RIGHT) ON HIGBY HOLE RD. ±0.4 MILES, THENCE WEST (RIGHT) ON BOUNDS RD. ±2.9 MILES TO A POINT ±1900 FEET SOUTH OF THE 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 1927, 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.

Michael Blake Brown, P.S. No. 18329
DECEMBER 6, 2016

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

APD ID: 10400012800 **Submission Date:** 03/31/2017

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	---	3133	0	0	OTHER : Quaternary (Caliche)	USEABLE WATER	No
2	SALADO	2633	500	500	SALT	OTHER : Salt	No
3	CASTILE	2374	759	759	ANHYDRITE	NONE	No
4	LAMAR	790	2343	2347	LIMESTONE	NONE	No
5	BELL CANYON	725	2408	2412	SANDSTONE	NONE	No
6	CHERRY CANYON	-26	3159	3168	SANDSTONE	NATURAL GAS,OIL	No
7	BRUSHY CANYON	-1203	4336	4357	SANDSTONE	NATURAL GAS,OIL	No
8	BONE SPRING LIME	-2695	5828	5850	LIMESTONE	NATURAL GAS,OIL	No
9	BONE SPRING 1ST	-3364	6497	6620	OTHER : Carbonate	NATURAL GAS,OIL	No
10	BONE SPRING 1ST	-3734	6867	6890	SANDSTONE	NATURAL GAS,OIL	No
11	BONE SPRING 2ND	-3936	7069	7092	OTHER : Carbonate	NATURAL GAS,OIL	No
12	BONE SPRING 2ND	-4382	7515	7538	SANDSTONE	NATURAL GAS,OIL	Yes
13	BONE SPRING 3RD	-4533	7666	7689	OTHER : CARBONATE	NATURAL GAS,OIL	No
14	BONE SPRING 3RD	-5720	8853	8876	SANDSTONE	NATURAL GAS,OIL	No
15	WOLFCAMP	-6084	9217	9240	LIMESTONE	NATURAL GAS,OIL	No
16	WOLFCAMP	-6093	9226	9249	OTHER : X SAND TOP	NATURAL GAS,OIL	No
17	WOLFCAMP	-6127	9260	9283	OTHER : X SAND BASE	NATURAL GAS,OIL	No
18	WOLFCAMP	-6171	9304	9327	OTHER : Y SAND TOP	NATURAL GAS,OIL	Yes

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
19	WOLFCAMP	-6212	9345	9368	OTHER : Y SAND BASE	NATURAL GAS,OIL	Yes
20	WOLFCAMP	-6249	9382	9405	OTHER : Z SAND TOP	NATURAL GAS,OIL	No
21	WOLFCAMP	-6341	9474	9497	OTHER : Z SAND BASE	NATURAL GAS,OIL	No
22	WOLFCAMP	-6344	9477	9500	OTHER : A FAT CARBONATE	NATURAL GAS,OIL	No
23	WOLFCAMP	-6457	9590	9613	OTHER : B CARBONATE TOP	NATURAL GAS,OIL	Yes
24	WOLFCAMP	-7159	10292	10600	OTHER : B CARBONATE BASE	NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 10000

Equipment: A 5K BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram, and 1 annular preventer will be installed. The BOP will be used below surface casing to TD. See attached BOP and choke manifold diagrams. An accumulator complying with Onshore Order 2 requirements for the BOP stack pressure rating will be present. Rotating head will be installed as needed.

Requesting Variance? YES

Variance request: Matador requests a variance to use a speed head. Matador 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. The hose is not required by the manufacturer to be anchored. If the specific hose is not available, then one of equal or higher rating will be used.

Testing Procedure: A third party company will test the BOPs. After surface casing is set and the BOP is nippled up, then the BOP pressure tests will be made to 250 psi low and 2000 psi high. Intermediate 1 pressure tests will be made to 250 psi low and 3000 psi high. Intermediate 2 pressure tests will be made to 250 psi low and 5000 psi high. Annular preventer will be tested to 250 psi low and 1000 psi high on the surface casing, and 250 psi low and 2500 psi high on the intermediate 1 and 2 casing. In the case of running a speed head with landing mandrel for 9.625" and 7" casing, after surface casing is set, BOP test pressures will be 250 psi low and 3000 psi high. Wellhead seals will be tested to 5000 psi once the 9.625" casing has been landed and cemented. BOP will then be lifted to install the C-section of the wellhead. BOP will then be nippled back up and pressure tests made to 250 psi low and 5000 psi high and the annular will be tested to 250 psi low and 2500 psi high.

Choke Diagram Attachment:

Warren_221H_Choke_03-30-2017.pdf

BOP Diagram Attachment:

Warren_221H_BOP_03-30-2017.pdf

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

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	475	0	475	-7167	-7642	475	J-55	54.5	OTHER - BTC	1.125	1.125	DRY	1.8	DRY	1.8
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	2450	0	2446	-7167	-9613	2450	J-55	40	OTHER - BTC	1.125	1.125	DRY	1.8	DRY	1.8
3	INTERMEDIATE	8.75	7.0	NEW	API	N	0	10544	0	10285	-7167	-17452	10544	P-110	29	OTHER - BTC	1.125	1.125	DRY	1.8	DRY	1.8
4	PRODUCTION	6.125	4.5	NEW	API	N	0	15147	0	10300	-7167	-17467	15147	P-110	13.5	OTHER - BTC/TXP	1.125	1.125	DRY	1.8	DRY	1.8

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Warren_205H_Casings_Assumption_Worksheet_03-30-2017.pdf

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Warren_205H_Casings_Assumption_Worksheet_03-30-2017.pdf

Casing ID: 3 **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Warren_205H_Casings_Assumption_Worksheet_03-30-2017.pdf

Casing ID: 4 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Warren_205H_Casings_Assumption_Worksheet_03-30-2017.pdf

Section 4 - Cement

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	475	100	1.82	12.8	182	100	CLASS C	BENTONITE + 2% CACL2 + 3% NACL +LCM
SURFACE	Tail		0	475	350	1.38	14.8	483	100	CLASS C	5% NaCl + LCM
INTERMEDIATE	Lead		0	2450	510	2.13	12.6	1086	100	CLASS C	BENTONITE + 1% CACL2 + 8% NACL + LCM
INTERMEDIATE	Tail		0	2450	270	1.38	14.8	372	100	CLASS C	5% NaCl + LCM
INTERMEDIATE	Lead		1400	10544	600	2.36	11.5	1416	35	TXI	FLUID LOSS + DISPERSANT + RETARDER + LCM
INTERMEDIATE	Tail		1400	10544	320	1.38	13.2	441	35	TXI	+ FLUID LOSS + DISPERSANT + RETARDER + LCM
PRODUCTION	Lead		10000	15147	550	1.17	15.8	643	25	CLASS H	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: All necessary mud products (barite, bentonite, LCM) for weight addition and fluid loss control will be on location at all times.

Describe the mud monitoring system utilized: An electronic Pason mud monitoring system complying with Onshore Order 1 will be used.

Circulating Medium Table

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

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
10544	15147	OIL-BASED MUD	12.5	12.5							
0	475	OTHER : FRESH WATER SPUD	8.3	8.3							
2450	10544	OTHER : FRESH WATER AND CUT BRINE	9	9							
475	2450	OTHER : BRINE WATER	10	10							

Section 6 - Test, Logging, Coring

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

No core or drill stem test is planned.

A 2-person mud-logging program will be used from 5600' to TD.

No electric logs are planned at this time. GR will be collected through the MWD tools from intermediate casing to TD. CBL with CCL will be run as far as gravity will let it fall to TOC.

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

CBL,GR,OTH

Other log type(s):

CCL

Coring operation description for the well:

NO CORING OPERATION

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7500 **Anticipated Surface Pressure:** 5234

Anticipated Bottom Hole Temperature(F): 170

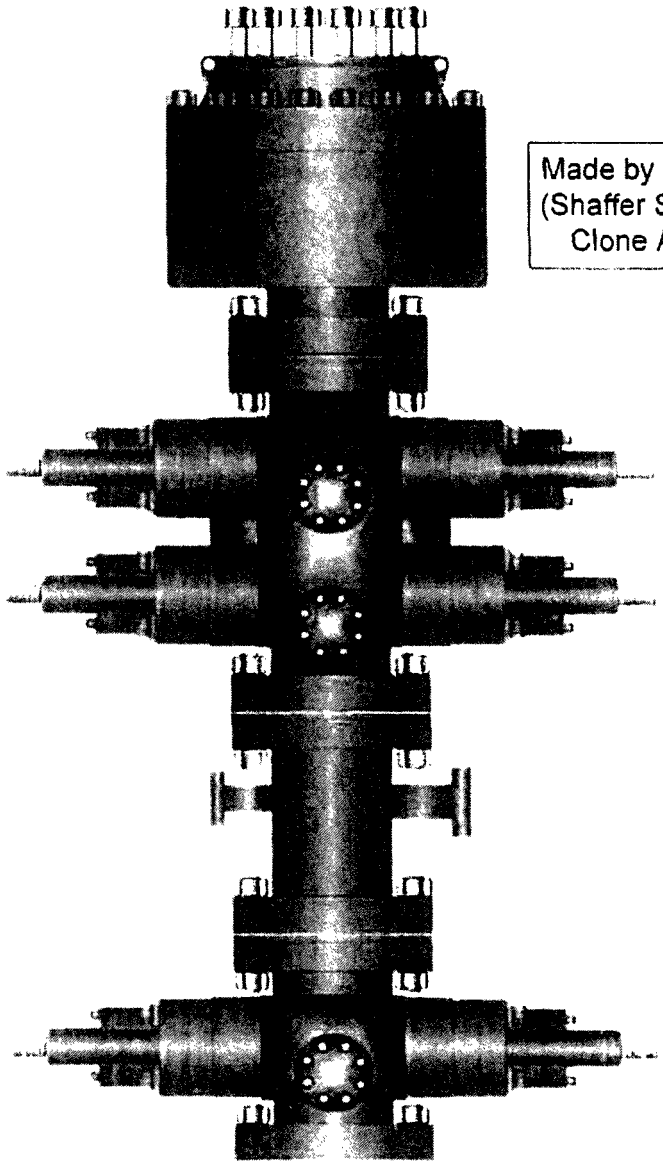
Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

PATTERSON-UTI
Well Control

RIG: 297



Made by Cameron
(Shaffer Spherical)
Clone Annular

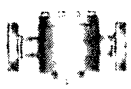
PATTERSON-UTI # PS2-628
STYLE: New Shaffer Spherical
BORE 13 5/8" **PRESSURE** 5,000
HEIGHT: 48 ½" **WEIGHT:** 13,800 lbs

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

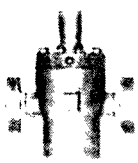
PATTERSON-UTI # PC2-228
STYLE: New Cameron Type U
BORE 13 5/8" **PRESSURE** 10,000
RAMS: 5" Pipe
HEIGHT: 41 5/8" **WEIGHT:** 13,000 lbs

WING VALVES

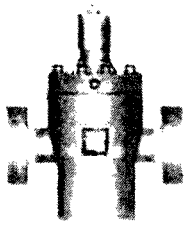


2" Check Valve

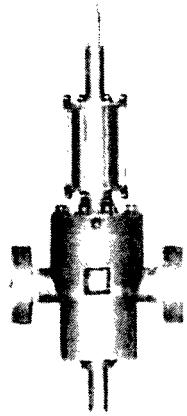
2" Manual Valve



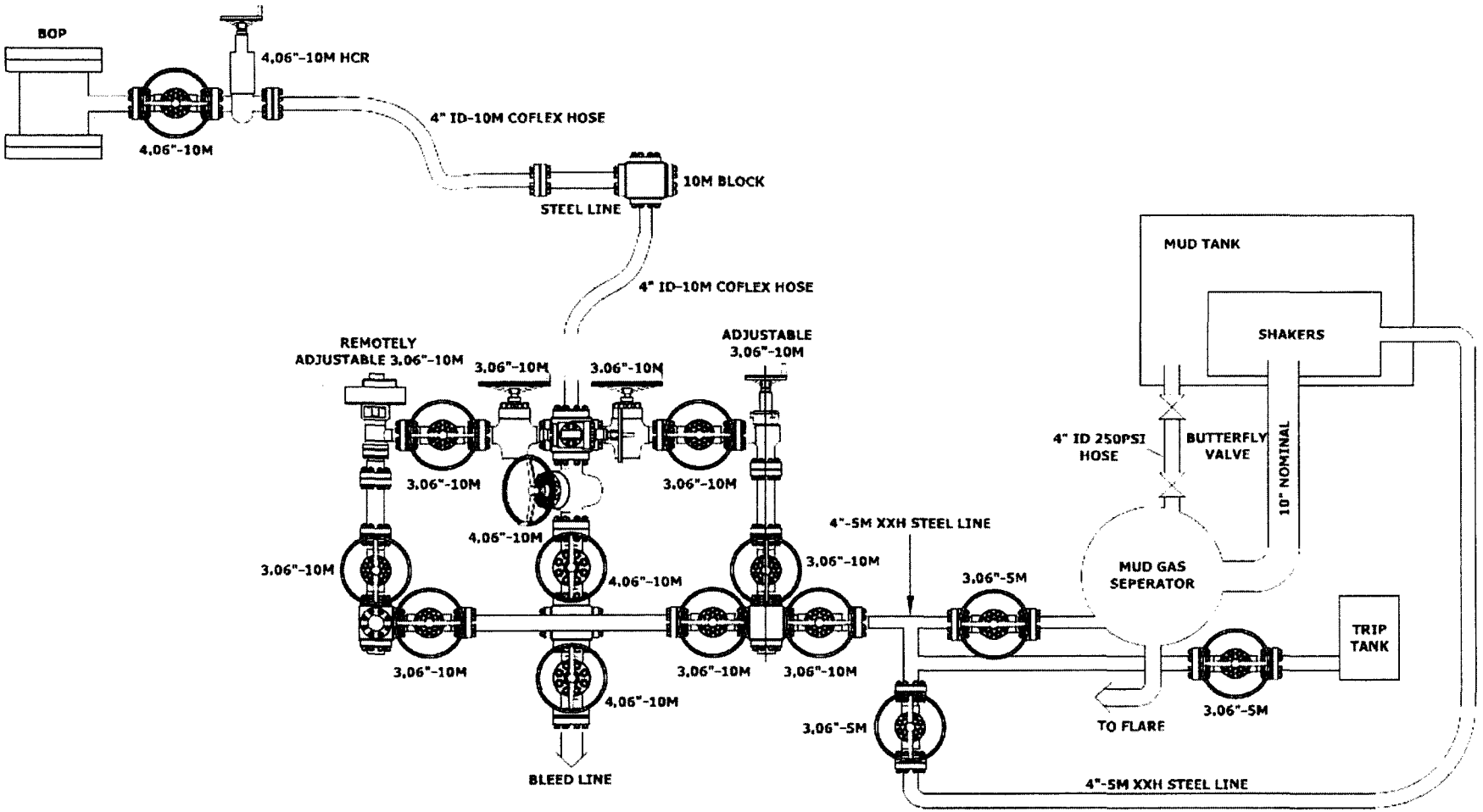
2" Manual Valve



4" Manual Valve



4" Hydraulic Valve



22	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
REV.	DATE	DESCRIPTION	DRAWN BY	CHK'D BY	APPROVED ENG.

PATTERSON-UTI
DRILLING COMPANY LLC

CHOKE MANIFOLD

10M CHOKE ARRANGEMENT
RIG 297

R0297-D.001.LAY.09

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**

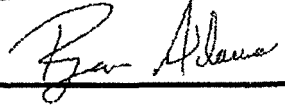
Specifications

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**

Midwest Hose & Specialty, Inc.

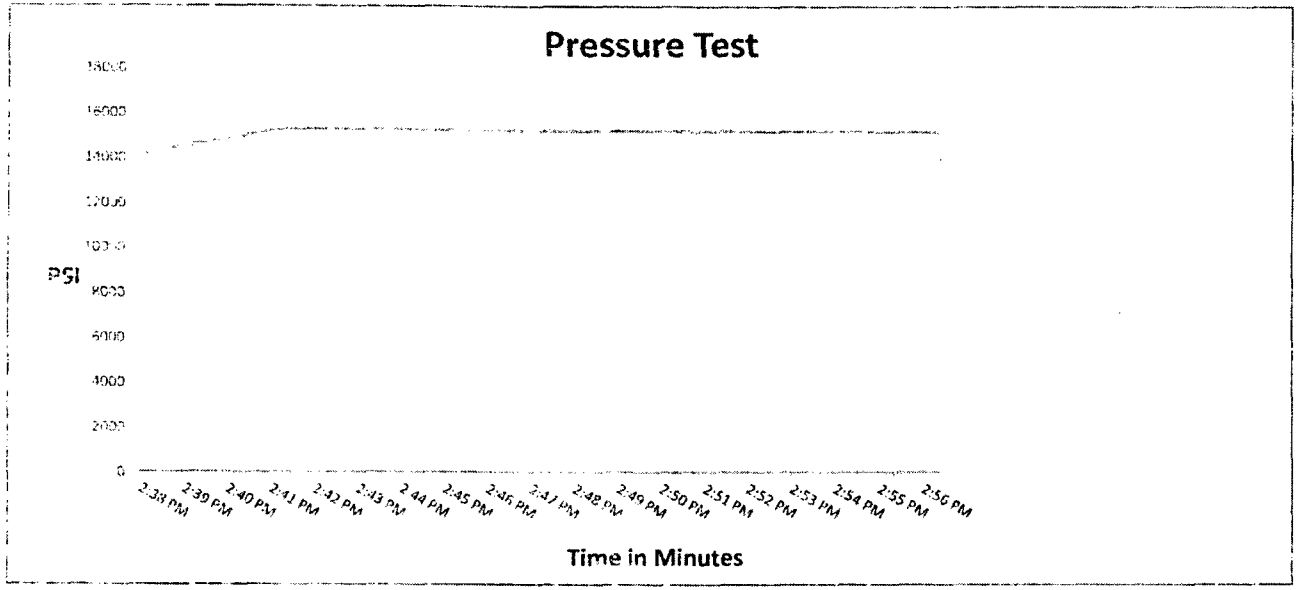
Internal Hydrostatic Test Graph

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

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).

Intermediate #2 Casing

Collapse: DF_C=1.125

- Partial 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. Internal force equal to gas gradient over half of setting depth and mud gradient with which the next hole section will be run below that (0.65 psi/ft).

- 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: 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 (0.47 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 100 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.65 psi/ft). External force will be 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.
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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).

Production Casing

Collapse: DF_c=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.65 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 (0.65 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 (0.65 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 (0.65 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 (12.5 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).

Intermediate #2 Casing

Collapse: DF_C=1.125

- Partial 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. Internal force equal to gas gradient over half of setting depth and mud gradient with which the next hole section will be run below that (0.65 psi/ft).

- 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: 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 (0.47 psi/ft), which is a more conservative backup force than pore pressure.
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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).

Production Casing

Collapse: DF_c=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.65 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 (0.65 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 (0.65 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 (0.65 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 (12.5 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.
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- 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).

Intermediate #2 Casing

Collapse: DF_C=1.125

- Partial 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. Internal force equal to gas gradient over half of setting depth and mud gradient with which the next hole section will be run below that (0.65 psi/ft).

- 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

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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).

Production Casing

Collapse: DF_C=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.65 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 (0.65 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 (0.65 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 (0.65 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 (12.5 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 30-minute 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 APD

6 Communications:

- While working under masks, chalkboards will be used for communications.
- Hand signals will be used where chalkboard is inappropriate.
- Two-way radio will be used to communicate off location in case 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 DSTs or cores are planned at this time

8 Drilling contractor supervisor will 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 next page

H2S Contingency Plan Emergency Contacts
Matador Production Company
Warren Fed Com 25-23s-27e wells, Eddy County, NM

Company Office			
Matador Production Company	(972)-371-5200		
Key Personnel			
Name	**Title**	**Office**	**Mobile**
Billy Goodwin	Vice President Drilling	972-371-5210	817-522-2928
Gary Martin	Drilling Superintendent		601-669-1774
Dee Smith	Drilling Superintendent	972-371-5447	972-822-1010
Aaron Byrd	Drilling Engineer	972-371-5267	214-507-2333
	Construction Superintendent		
	Construction Superintendent		

Artesia	
Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283
Carlsbad	
Ambulance	911
State Police	575-885-3137
Loving City Police	575-745-3511
Sheriff's Office	575-887-7551
Malaga Fire Department	575-745-2317
Local Emergency Planning Committee	575-885-3581
Santa Fe	
New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
New Mexico Emergency Response Commission (Santa Fe) 24 hrs	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635
National	
Carlsbad BLM	575-234-5972
National Emergency Response Center (Washington, D.C.)	800-424-8802
Medical	
Flight for Life- 4000 24th St.; Lubbock, TX	806-743-9911
Aerocare- R3, Box 49F; Lubbock, TX	806-747-8923
Med Flight Air Amb- 2301 Yale Blvd S.E., D3; Albuquerque, NM	505-842-4433
SB Air Med Service- 2505 Clark Carr Loop S.E.; Albuquerque, NM	505-842-4949

Other		
Boots & Coots IWC	800-256-9688	or 281-931-8884
Cudd Pressure Control	432-699-0139	or 432-563-3356
Halliburton	575-746-2757	
B.J. Services	575-746-3569	

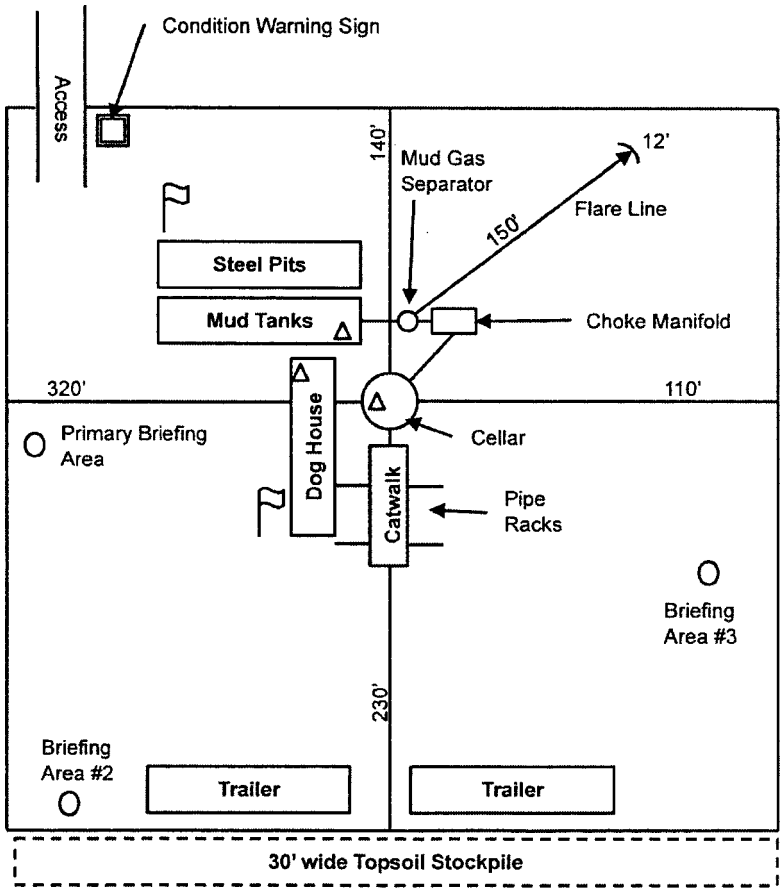
H2S Rig Diagram

Warren Fed Com 205H
SHL 170' FNL & 800' FWL
25-23S-27E Eddy County, NM

Wind Direction Indicator

H2S Monitors

Briefing Areas



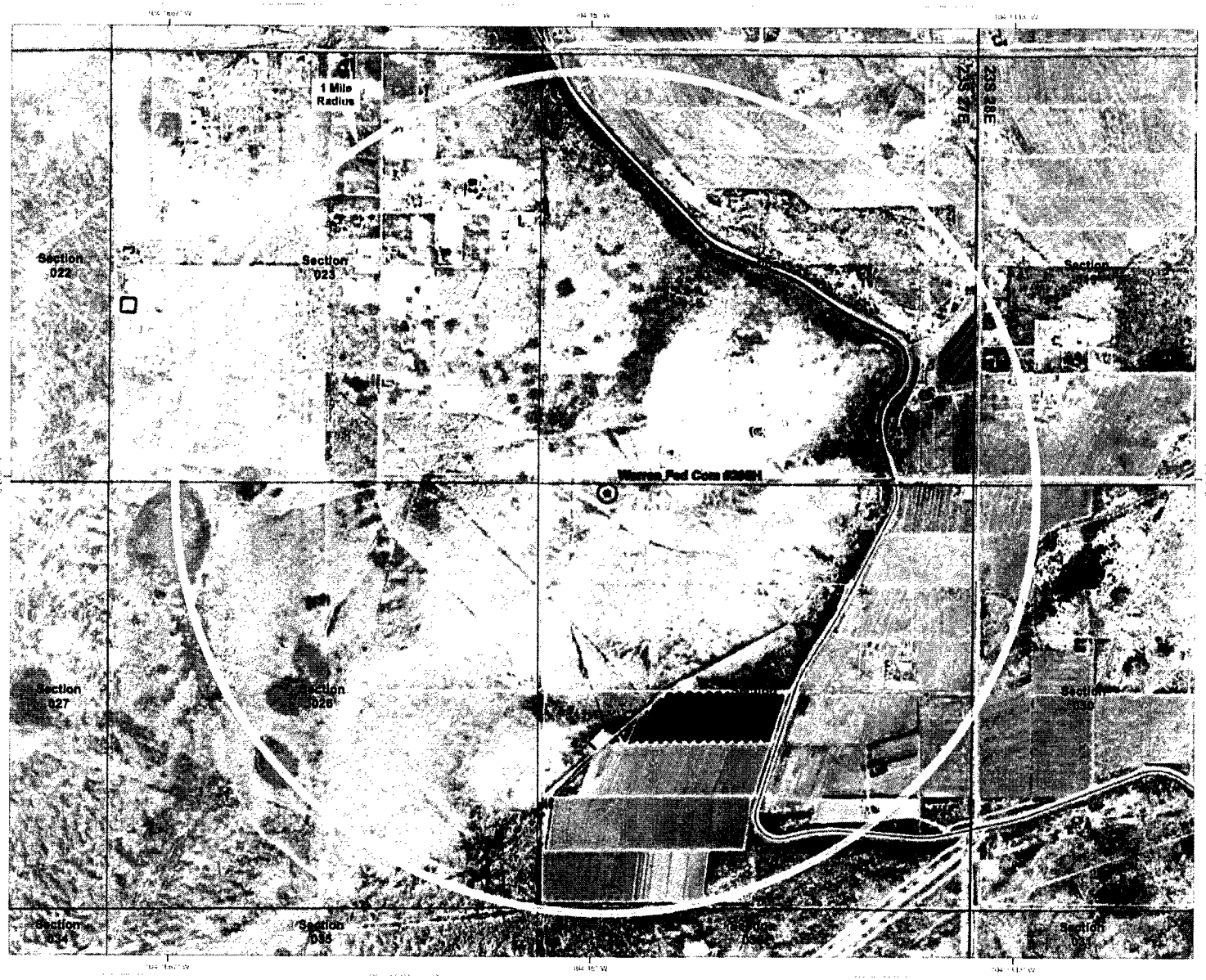
North

Prevailing Wind Out of the South

Matador Production Company

Warren Fed Com #205H
H_2S Contingency Plan:
1 Mile Radius Map

Section 25, Township 23S, Range 27E
Eddy County, New Mexico



Surface Hole Location

1:13,500
0 0.125 0.25 0.5
Miles

N

NAD 1927 New Mexico State Plane East
FIPS 3001 Feet

PERMITS WEST

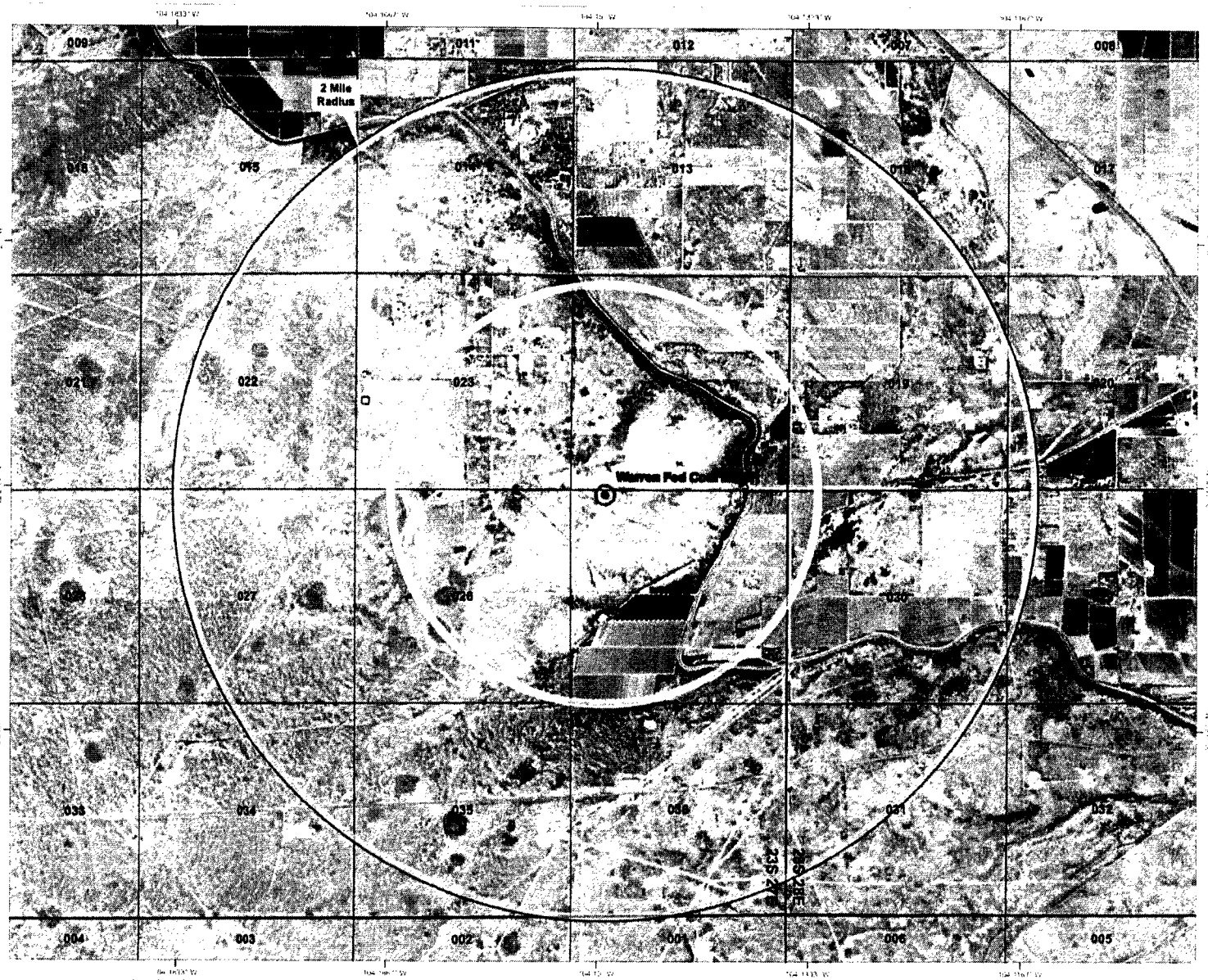
Prepared by Permits West, Inc., February 7, 2017
for Matador Production Company

Area of Detail

Matador Production Company

Warren Fed Com #205H
H_2S Contingency Plan:
2 Mile Radius Map

Section 25, Township 23S, Range 27E
Eddy County, New Mexico



Surface Hole Location

1:27,000

0 0.25 0.5 1

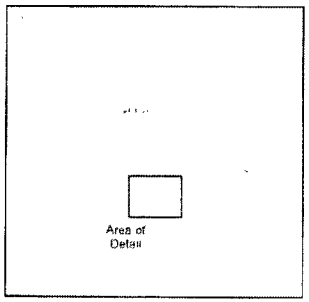
Miles

N

NAD 1927 New Mexico State Plane East
FIPS 3001 Feet

PERMITS WEST

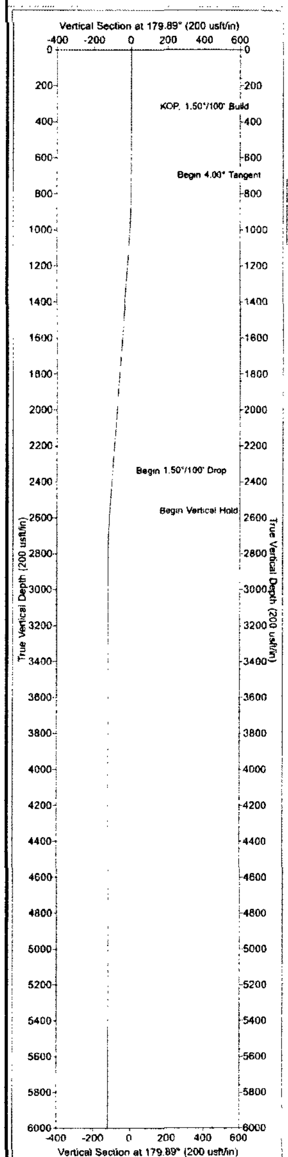
Prepared by Permits West, Inc., February 7, 2017
for Matador Production Company

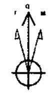


Matador

MS Energy Services
WWW.MSENERGYSERVICES.COM

Company: Matador Resources
Site: Warren 25-23S-27E RB Fed COM
Well: #205H
Project: Eddy County, New Mexico (NAD 27)
Rig: Patterson 297





Azimuths to Grid North
True North: -0.10°
Magnetic North: 7.23°

Magnetic Field
Strength: 48049.3snT
Dip Angle: 60.03°
Date: 12/19/2016
Model: BGGM2016

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

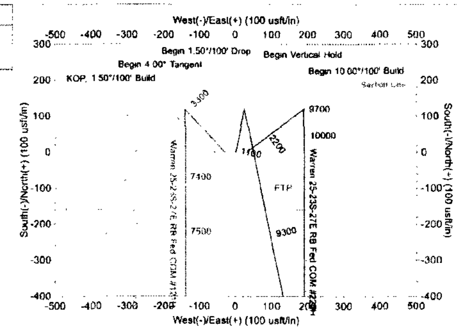
Created By: HLH
Date: 15:38, December 21 2016
Plan: Design #3

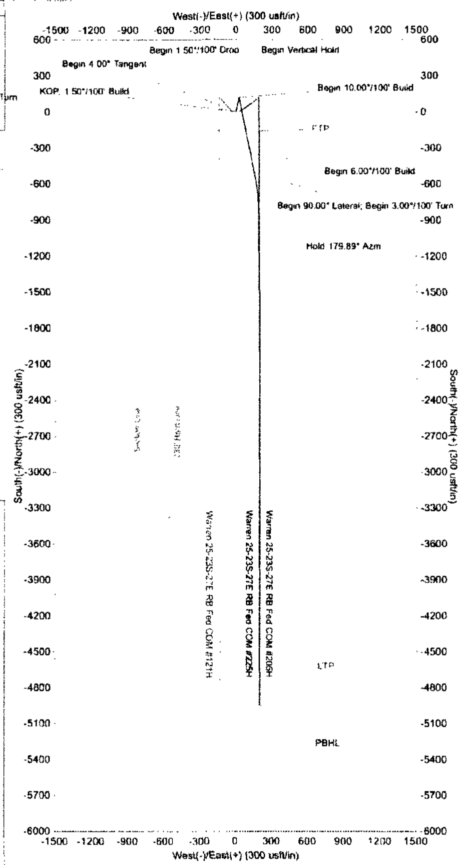
WELL DETAILS #205H

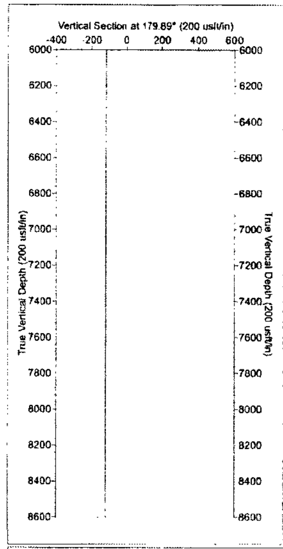
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
			3133.00		
0.00	0.00	466656.92	556857.96	32° 18' 58.161 N	104° 8' 57.662 W

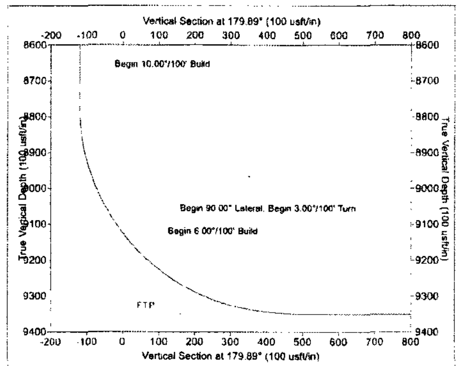
ANNOTATIONS

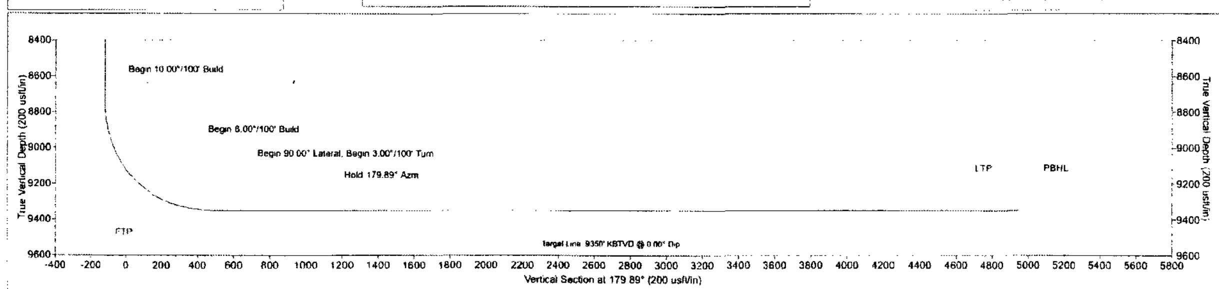
MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	KOP, 1.50°/100' Build
1066.93	4.00	11.59	1066.72	9.13	1.87	-9.13	9.32	Begin 4.00° Tangent
2557.14	4.00	11.59	2553.28	111.07	22.77	-111.02	113.38	Begin 1.50°/100' Drop
2824.07	0.00	0.00	2820.00	120.20	24.64	-120.15	122.70	Begin Vertical Hold
8775.31	0.00	0.00	8771.24	120.20	24.64	-120.15	122.70	Begin 10.00°/100' Build
9575.31	80.00	168.45	9335.49	-343.68	119.44	343.90	596.17	Begin 6.00°/100' Build
9741.98	90.00	168.45	9350.00	-506.14	152.64	506.43	761.99	Begin 90.00° Lateral; Begin 3.00°/100' Turn
10123.34	90.00	179.89	9350.00	-884.90	191.31	885.27	1143.35	Hold 179.89° Azm
14185.37	90.00	179.89	9350.00	-4946.92	199.04	4947.29	5205.38	PBHL











Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well #205H
Company:	Matador Resources	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Project:	Eddy County, New Mexico (NAD 27)	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site:	Warren 25-23S-27E RB Fed COM	**North Reference:**	Grid
Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

Project	Eddy 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	#205H				
Well Position	**+N/-S**	466,656.92 usft	**Northing:**	466,656.92 usft	**Latitude:**	32° 16' 58.161 N
	+E/-W	556,857.96 usft	**Easting:**	556,857.96 usft	**Longitude:**	104° 8' 57.662 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,133.00 usft

Wellbore Wellbore #1

Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	BGGM2016	12/19/2016	7.33	60.03	48,049

Design Design #3

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	179.89

Plan Survey Tool Program **Date** 12/21/2016

	Depth From (usft)	**Depth To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Remarks**
1	0.00	14,184.52	Design #3 (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	
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,066.93	4.00	11.59	1,066.72	9.13	1.87	1.50	1.50	0.00	11.59	
2,557.14	4.00	11.59	2,553.28	111.07	22.77	0.00	0.00	0.00	0.00	
2,824.07	0.00	0.00	2,820.00	120.20	24.64	1.50	-1.50	0.00	180.00	VP - Warren 25-23
8,775.31	0.00	0.00	8,771.24	120.20	24.64	0.00	0.00	0.00	0.00	
9,575.31	80.00	168.45	9,335.49	-343.68	119.44	10.00	10.00	0.00	168.45	
9,741.98	90.00	168.45	9,350.00	-506.14	152.64	6.00	6.00	0.00	0.00	
10,123.34	90.00	179.89	9,350.00	-884.90	191.31	3.00	0.00	3.00	90.00	
14,185.37	90.00	179.89	9,350.00	-4,946.92	199.04	0.00	0.00	0.00	0.00	PBHL - Warren 25-

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well #205H
Company:	Matador Resources	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Project:	Eddy County, New Mexico (NAD 27)	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site:	Warren 25-23S-27E RB Fed COM	**North Reference:**	Grid
Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

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
KOP, 1.50°/100' Build									
900.00	1.50	11.59	899.99	1.28	0.26	-1.28	1.50	1.50	0.00
1,000.00	3.00	11.59	999.91	5.13	1.05	-5.13	1.50	1.50	0.00
1,066.93	4.00	11.59	1,066.72	9.13	1.87	-9.13	1.50	1.50	0.00
Begin 4.00° Tangent									
1,100.00	4.00	11.59	1,099.70	11.40	2.34	-11.39	0.00	0.00	0.00
1,200.00	4.00	11.59	1,199.46	18.24	3.74	-18.23	0.00	0.00	0.00
1,300.00	4.00	11.59	1,299.21	25.08	5.14	-25.07	0.00	0.00	0.00
1,400.00	4.00	11.59	1,398.97	31.92	6.54	-31.90	0.00	0.00	0.00
1,500.00	4.00	11.59	1,498.73	38.76	7.95	-38.74	0.00	0.00	0.00
1,600.00	4.00	11.59	1,598.48	45.60	9.35	-45.58	0.00	0.00	0.00
1,700.00	4.00	11.59	1,698.24	52.44	10.75	-52.42	0.00	0.00	0.00
1,800.00	4.00	11.59	1,797.99	59.28	12.15	-59.25	0.00	0.00	0.00
1,900.00	4.00	11.59	1,897.75	66.12	13.56	-66.09	0.00	0.00	0.00
2,000.00	4.00	11.59	1,997.51	72.96	14.96	-72.93	0.00	0.00	0.00
2,100.00	4.00	11.59	2,097.26	79.80	16.36	-79.77	0.00	0.00	0.00
2,200.00	4.00	11.59	2,197.02	86.64	17.76	-86.60	0.00	0.00	0.00
2,300.00	4.00	11.59	2,296.77	93.48	19.16	-93.44	0.00	0.00	0.00
2,400.00	4.00	11.59	2,396.53	100.32	20.57	-100.28	0.00	0.00	0.00
2,500.00	4.00	11.59	2,496.28	107.16	21.97	-107.12	0.00	0.00	0.00
2,557.14	4.00	11.59	2,553.28	111.07	22.77	-111.02	0.00	0.00	0.00
Begin 1.50°/100' Drop									
2,600.00	3.36	11.59	2,596.06	113.77	23.32	-113.72	1.50	-1.50	0.00
2,700.00	1.86	11.59	2,695.95	118.23	24.24	-118.18	1.50	-1.50	0.00
2,800.00	0.36	11.59	2,795.93	120.13	24.63	-120.08	1.50	-1.50	0.00
2,824.07	0.00	0.00	2,820.00	120.20	24.64	-120.15	1.50	-1.50	0.00
Begin Vertical Hold									
2,900.00	0.00	0.00	2,895.93	120.20	24.64	-120.15	0.00	0.00	0.00
3,000.00	0.00	0.00	2,995.93	120.20	24.64	-120.15	0.00	0.00	0.00
3,100.00	0.00	0.00	3,095.93	120.20	24.64	-120.15	0.00	0.00	0.00
3,200.00	0.00	0.00	3,195.93	120.20	24.64	-120.15	0.00	0.00	0.00
3,300.00	0.00	0.00	3,295.93	120.20	24.64	-120.15	0.00	0.00	0.00
3,400.00	0.00	0.00	3,395.93	120.20	24.64	-120.15	0.00	0.00	0.00
3,500.00	0.00	0.00	3,495.93	120.20	24.64	-120.15	0.00	0.00	0.00
3,600.00	0.00	0.00	3,595.93	120.20	24.64	-120.15	0.00	0.00	0.00
3,700.00	0.00	0.00	3,695.93	120.20	24.64	-120.15	0.00	0.00	0.00
3,800.00	0.00	0.00	3,795.93	120.20	24.64	-120.15	0.00	0.00	0.00
3,900.00	0.00	0.00	3,895.93	120.20	24.64	-120.15	0.00	0.00	0.00
4,000.00	0.00	0.00	3,995.93	120.20	24.64	-120.15	0.00	0.00	0.00
4,100.00	0.00	0.00	4,095.93	120.20	24.64	-120.15	0.00	0.00	0.00
4,200.00	0.00	0.00	4,195.93	120.20	24.64	-120.15	0.00	0.00	0.00
4,300.00	0.00	0.00	4,295.93	120.20	24.64	-120.15	0.00	0.00	0.00
4,400.00	0.00	0.00	4,395.93	120.20	24.64	-120.15	0.00	0.00	0.00
4,500.00	0.00	0.00	4,495.93	120.20	24.64	-120.15	0.00	0.00	0.00
4,600.00	0.00	0.00	4,595.93	120.20	24.64	-120.15	0.00	0.00	0.00

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well #205H
Company:	Matador Resources	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Project:	Eddy County, New Mexico (NAD 27)	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site:	Warren 25-23S-27E RB Fed COM	**North Reference:**	Grid
Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

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)
4,700.00	0.00	0.00	4,695.93	120.20	24.64	-120.15	0.00	0.00	0.00
4,800.00	0.00	0.00	4,795.93	120.20	24.64	-120.15	0.00	0.00	0.00
4,900.00	0.00	0.00	4,895.93	120.20	24.64	-120.15	0.00	0.00	0.00
5,000.00	0.00	0.00	4,995.93	120.20	24.64	-120.15	0.00	0.00	0.00
5,100.00	0.00	0.00	5,095.93	120.20	24.64	-120.15	0.00	0.00	0.00
5,200.00	0.00	0.00	5,195.93	120.20	24.64	-120.15	0.00	0.00	0.00
5,300.00	0.00	0.00	5,295.93	120.20	24.64	-120.15	0.00	0.00	0.00
5,400.00	0.00	0.00	5,395.93	120.20	24.64	-120.15	0.00	0.00	0.00
5,500.00	0.00	0.00	5,495.93	120.20	24.64	-120.15	0.00	0.00	0.00
5,600.00	0.00	0.00	5,595.93	120.20	24.64	-120.15	0.00	0.00	0.00
5,700.00	0.00	0.00	5,695.93	120.20	24.64	-120.15	0.00	0.00	0.00
5,800.00	0.00	0.00	5,795.93	120.20	24.64	-120.15	0.00	0.00	0.00
5,900.00	0.00	0.00	5,895.93	120.20	24.64	-120.15	0.00	0.00	0.00
6,000.00	0.00	0.00	5,995.93	120.20	24.64	-120.15	0.00	0.00	0.00
6,100.00	0.00	0.00	6,095.93	120.20	24.64	-120.15	0.00	0.00	0.00
6,200.00	0.00	0.00	6,195.93	120.20	24.64	-120.15	0.00	0.00	0.00
6,300.00	0.00	0.00	6,295.93	120.20	24.64	-120.15	0.00	0.00	0.00
6,400.00	0.00	0.00	6,395.93	120.20	24.64	-120.15	0.00	0.00	0.00
6,500.00	0.00	0.00	6,495.93	120.20	24.64	-120.15	0.00	0.00	0.00
6,600.00	0.00	0.00	6,595.93	120.20	24.64	-120.15	0.00	0.00	0.00
6,700.00	0.00	0.00	6,695.93	120.20	24.64	-120.15	0.00	0.00	0.00
6,800.00	0.00	0.00	6,795.93	120.20	24.64	-120.15	0.00	0.00	0.00
6,900.00	0.00	0.00	6,895.93	120.20	24.64	-120.15	0.00	0.00	0.00
7,000.00	0.00	0.00	6,995.93	120.20	24.64	-120.15	0.00	0.00	0.00
7,100.00	0.00	0.00	7,095.93	120.20	24.64	-120.15	0.00	0.00	0.00
7,200.00	0.00	0.00	7,195.93	120.20	24.64	-120.15	0.00	0.00	0.00
7,300.00	0.00	0.00	7,295.93	120.20	24.64	-120.15	0.00	0.00	0.00
7,400.00	0.00	0.00	7,395.93	120.20	24.64	-120.15	0.00	0.00	0.00
7,500.00	0.00	0.00	7,495.93	120.20	24.64	-120.15	0.00	0.00	0.00
7,600.00	0.00	0.00	7,595.93	120.20	24.64	-120.15	0.00	0.00	0.00
7,700.00	0.00	0.00	7,695.93	120.20	24.64	-120.15	0.00	0.00	0.00
7,800.00	0.00	0.00	7,795.93	120.20	24.64	-120.15	0.00	0.00	0.00
7,900.00	0.00	0.00	7,895.93	120.20	24.64	-120.15	0.00	0.00	0.00
8,000.00	0.00	0.00	7,995.93	120.20	24.64	-120.15	0.00	0.00	0.00
8,100.00	0.00	0.00	8,095.93	120.20	24.64	-120.15	0.00	0.00	0.00
8,200.00	0.00	0.00	8,195.93	120.20	24.64	-120.15	0.00	0.00	0.00
8,300.00	0.00	0.00	8,295.93	120.20	24.64	-120.15	0.00	0.00	0.00
8,400.00	0.00	0.00	8,395.93	120.20	24.64	-120.15	0.00	0.00	0.00
8,500.00	0.00	0.00	8,495.93	120.20	24.64	-120.15	0.00	0.00	0.00
8,600.00	0.00	0.00	8,595.93	120.20	24.64	-120.15	0.00	0.00	0.00
8,700.00	0.00	0.00	8,695.93	120.20	24.64	-120.15	0.00	0.00	0.00
8,775.31	0.00	0.00	8,771.24	120.20	24.64	-120.15	0.00	0.00	0.00
Begin 10.00°/100' Build									
8,800.00	2.47	168.45	8,795.92	119.68	24.75	-119.63	10.00	10.00	0.00
8,850.00	7.47	168.45	8,845.72	115.44	25.62	-115.39	10.00	10.00	0.00
8,900.00	12.47	168.45	8,894.95	106.96	27.35	-106.91	10.00	10.00	0.00
8,950.00	17.47	168.45	8,943.23	94.31	29.93	-94.25	10.00	10.00	0.00
9,000.00	22.47	168.45	8,990.21	77.59	33.35	-77.52	10.00	10.00	0.00
9,050.00	27.47	168.45	9,035.53	56.92	37.58	-56.84	10.00	10.00	0.00
9,100.00	32.47	168.45	9,078.83	32.45	42.58	-32.37	10.00	10.00	0.00
9,150.00	37.47	168.45	9,119.79	4.39	48.31	-4.29	10.00	10.00	0.00
9,200.00	42.47	168.45	9,158.09	-27.07	54.74	27.18	10.00	10.00	0.00
9,250.00	47.47	168.45	9,193.46	-61.68	61.81	61.80	10.00	10.00	0.00

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well #205H
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Project:	Eddy County, New Mexico (NAD 27)	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site:	Warren 25-23S-27E RB Fed COM	**North Reference:**	Grid
Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

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)
9,300.00	52.47	168.45	9,225.61	-99.18	69.48	99.31	10.00	10.00	0.00
9,350.00	57.47	168.45	9,254.30	-139.28	77.67	139.43	10.00	10.00	0.00
9,400.00	62.47	168.45	9,279.32	-181.68	86.34	181.84	10.00	10.00	0.00
9,450.00	67.47	168.45	9,300.46	-226.05	95.40	226.23	10.00	10.00	0.00
9,500.00	72.47	168.45	9,317.59	-272.06	104.81	272.26	10.00	10.00	0.00
9,550.00	77.47	168.45	9,330.55	-319.36	114.47	319.58	10.00	10.00	0.00
9,575.31	80.00	168.45	9,335.49	-343.68	119.44	343.90	10.00	10.00	0.00
Begin 6.00°/100' Build									
9,600.00	81.48	168.45	9,339.47	-367.55	124.32	367.79	6.00	6.00	0.00
9,650.00	84.48	168.45	9,345.57	-416.16	134.26	416.42	6.00	6.00	0.00
9,700.00	87.48	168.45	9,349.08	-465.02	144.24	465.30	6.00	6.00	0.00
9,741.98	90.00	168.45	9,350.00	-506.14	152.64	506.43	6.00	6.00	0.00
Begin 90.00° Lateral; Begin 3.00°/100' Turn									
9,800.00	90.00	170.19	9,350.00	-563.15	163.40	563.47	3.00	0.00	3.00
9,900.00	90.00	173.19	9,350.00	-662.09	177.85	662.43	3.00	0.00	3.00
10,000.00	90.00	176.19	9,350.00	-761.65	187.10	762.01	3.00	0.00	3.00
10,100.00	90.00	179.19	9,350.00	-861.56	191.13	861.93	3.00	0.00	3.00
10,123.34	90.00	179.89	9,350.00	-884.90	191.31	885.27	3.00	0.00	3.00
Hold 179.89° Azm									
10,200.00	90.00	179.89	9,350.00	-961.56	191.46	961.92	0.00	0.00	0.00
10,300.00	90.00	179.89	9,350.00	-1,061.56	191.65	1,061.92	0.00	0.00	0.00
10,400.00	90.00	179.89	9,350.00	-1,161.56	191.84	1,161.92	0.00	0.00	0.00
10,500.00	90.00	179.89	9,350.00	-1,261.56	192.03	1,261.92	0.00	0.00	0.00
10,600.00	90.00	179.89	9,350.00	-1,361.56	192.22	1,361.92	0.00	0.00	0.00
10,700.00	90.00	179.89	9,350.00	-1,461.56	192.41	1,461.92	0.00	0.00	0.00
10,800.00	90.00	179.89	9,350.00	-1,561.56	192.60	1,561.92	0.00	0.00	0.00
10,900.00	90.00	179.89	9,350.00	-1,661.56	192.79	1,661.92	0.00	0.00	0.00
11,000.00	90.00	179.89	9,350.00	-1,761.56	192.98	1,761.92	0.00	0.00	0.00
11,100.00	90.00	179.89	9,350.00	-1,861.56	193.17	1,861.92	0.00	0.00	0.00
11,200.00	90.00	179.89	9,350.00	-1,961.56	193.36	1,961.92	0.00	0.00	0.00
11,300.00	90.00	179.89	9,350.00	-2,061.56	193.55	2,061.92	0.00	0.00	0.00
11,400.00	90.00	179.89	9,350.00	-2,161.56	193.74	2,161.92	0.00	0.00	0.00
11,500.00	90.00	179.89	9,350.00	-2,261.56	193.93	2,261.92	0.00	0.00	0.00
11,600.00	90.00	179.89	9,350.00	-2,361.56	194.12	2,361.92	0.00	0.00	0.00
11,700.00	90.00	179.89	9,350.00	-2,461.56	194.31	2,461.92	0.00	0.00	0.00
11,800.00	90.00	179.89	9,350.00	-2,561.56	194.50	2,561.92	0.00	0.00	0.00
11,900.00	90.00	179.89	9,350.00	-2,661.56	194.69	2,661.92	0.00	0.00	0.00
12,000.00	90.00	179.89	9,350.00	-2,761.56	194.88	2,761.92	0.00	0.00	0.00
12,100.00	90.00	179.89	9,350.00	-2,861.56	195.07	2,861.92	0.00	0.00	0.00
12,200.00	90.00	179.89	9,350.00	-2,961.56	195.26	2,961.92	0.00	0.00	0.00
12,300.00	90.00	179.89	9,350.00	-3,061.56	195.45	3,061.92	0.00	0.00	0.00
12,400.00	90.00	179.89	9,350.00	-3,161.55	195.65	3,161.92	0.00	0.00	0.00
12,500.00	90.00	179.89	9,350.00	-3,261.55	195.84	3,261.92	0.00	0.00	0.00
12,600.00	90.00	179.89	9,350.00	-3,361.55	196.03	3,361.92	0.00	0.00	0.00
12,700.00	90.00	179.89	9,350.00	-3,461.55	196.22	3,461.92	0.00	0.00	0.00
12,800.00	90.00	179.89	9,350.00	-3,561.55	196.41	3,561.92	0.00	0.00	0.00
12,900.00	90.00	179.89	9,350.00	-3,661.55	196.60	3,661.92	0.00	0.00	0.00
13,000.00	90.00	179.89	9,350.00	-3,761.55	196.79	3,761.92	0.00	0.00	0.00
13,100.00	90.00	179.89	9,350.00	-3,861.55	196.98	3,861.92	0.00	0.00	0.00
13,200.00	90.00	179.89	9,350.00	-3,961.55	197.17	3,961.92	0.00	0.00	0.00
13,300.00	90.00	179.89	9,350.00	-4,061.55	197.36	4,061.92	0.00	0.00	0.00
13,400.00	90.00	179.89	9,350.00	-4,161.55	197.55	4,161.92	0.00	0.00	0.00
13,500.00	90.00	179.89	9,350.00	-4,261.55	197.74	4,261.92	0.00	0.00	0.00

Database:	EDM Conroe	**Local Co-ordinate Reference:**	Well #205H
Company:	Matador Resources	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Project:	Eddy County, New Mexico (NAD 27)	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site:	Warren 25-23S-27E RB Fed COM	**North Reference:**	Grid
Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #3		

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)
13,600.00	90.00	179.89	9,350.00	-4,361.55	197.93	4,361.92	0.00	0.00	0.00
13,700.00	90.00	179.89	9,350.00	-4,461.55	198.12	4,461.92	0.00	0.00	0.00
13,800.00	90.00	179.89	9,350.00	-4,561.55	198.31	4,561.92	0.00	0.00	0.00
13,900.00	90.00	179.89	9,350.00	-4,661.55	198.50	4,661.92	0.00	0.00	0.00
14,000.00	90.00	179.89	9,350.00	-4,761.55	198.69	4,761.92	0.00	0.00	0.00
14,100.00	90.00	179.89	9,350.00	-4,861.55	198.88	4,861.92	0.00	0.00	0.00
14,185.37	90.00	179.89	9,350.00	-4,946.92	199.04	4,947.29	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
VP - Warren 25-23S-2 - plan hits target center - Point	0.00	0.01	2,820.00	120.20	24.64	466,777.12	556,882.60	32° 16' 59.350 N	104° 8' 57.373 W
FTP - Warren 25-23S- - plan misses target center by 123.66usft at 9429.42usft MD (9292.24 TVD, -207.56 N, 91.63 E) - Point	0.00	0.01	9,350.00	-159.92	190.04	466,497.00	557,048.00	32° 16' 56.575 N	104° 8' 55.452 W
LTP - Warren 25-23S- - plan misses target center by 0.17usft at 14095.37usft MD (9350.00 TVD, -4856.92 N, 198.87 E) - Point	0.00	0.01	9,350.00	-4,856.92	199.04	461,800.00	557,057.00	32° 16' 10.093 N	104° 8' 55.441 W
PBHL - Warren 25-23 - plan hits target center - Point	0.00	0.01	9,350.00	-4,946.92	199.04	461,710.00	557,057.00	32° 16' 9.202 N	104° 8' 55.443 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
480.00	480.00	13 3/8"	13-3/8	17-1/2
2,450.00	2,446.41	9 5/8"	9-5/8	12-1/4
9,575.31	9,335.49	7"	7	7-1/2

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
800.00	800.00	0.00	0.00	KOP, 1.50°/100' Build
1,066.93	1,066.72	9.13	1.87	Begin 4.00° Tangent
2,557.14	2,553.28	111.07	22.77	Begin 1.50°/100' Drop
2,824.07	2,820.00	120.20	24.64	Begin Vertical Hold
8,775.31	8,771.24	120.20	24.64	Begin 10.00°/100' Build
9,575.31	9,335.49	-343.68	119.44	Begin 6.00°/100' Build
9,741.98	9,350.00	-506.14	152.64	Begin 90.00° Lateral; Begin 3.00°/100' Turn
10,123.34	9,350.00	-884.90	191.31	Hold 179.89° Azm
14,185.37	9,350.00	-4,946.92	199.04	PBHL

Matador Resources

Eddy County, New Mexico (NAD 27)
Warren 25-23S-27E RB Fed COM
#205H

Wellbore #1
Design #3

Anticollision Report

21 December, 2016

MS Energy Services
WWW.MSENERGYSERVICES.COM

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Reference	Design #3		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD + Stations Interval 100.00usft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00 u	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 12/21/2016

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	14,184.52	Design #3 (Wellbore #1)	MWD	OWSG MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Warren 25-23S-27E RB Fed COM						
#121H - Wellbore #1 - Design #3	800.00	800.00	30.04	24.77	5.697	CC, ES
#121H - Wellbore #1 - Design #3	7,100.00	7,099.73	165.46	115.09	3.285	SF
#201H - Wellbore #1 - Design #3	800.00	800.00	60.04	54.77	11.386	CC, ES
#201H - Wellbore #1 - Design #3	14,185.37	14,195.23	660.02	483.30	3.735	SF
#203H - Wellbore #1 - Design #1	14,000.83	9,543.70	1,984.45	1,863.21	16.367	CC
#203H - Wellbore #1 - Design #1	14,100.00	9,456.80	1,984.80	1,862.57	16.238	ES
#203H - Wellbore #1 - Design #1	14,185.37	9,389.25	1,985.98	1,863.01	16.150	SF
#206H - Wellbore #1 - Design #1	13,925.76	9,634.98	1,322.65	1,202.09	10.971	CC
#206H - Wellbore #1 - Design #1	14,100.00	9,475.25	1,323.54	1,201.35	10.831	ES
#206H - Wellbore #1 - Design #1	14,185.37	9,406.48	1,325.42	1,202.54	10.787	SF
#221H - Wellbore #1 - Design #3	800.00	800.00	90.03	84.76	17.074	CC, ES
#221H - Wellbore #1 - Design #3	8,900.00	8,917.59	497.85	434.76	7.890	SF
#225H - Wellbore #1 - Design #3	800.00	800.00	29.95	24.68	5.680	CC, ES
#225H - Wellbore #1 - Design #3	9,000.00	9,003.01	162.09	98.31	2.541	SF

Offset Design Warren 25-23S-27E RB Fed COM - #121H - Wellbore #1 - Design #3 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-90.11	-0.06	-30.04	30.04				
100.00	100.00	100.00	100.00	0.13	0.13	-90.11	-0.06	-30.04	30.04	29.78	0.25	118.025	
200.00	200.00	200.00	200.00	0.49	0.49	-90.11	-0.06	-30.04	30.04	29.07	0.97	30.922	
300.00	300.00	300.00	300.00	0.84	0.84	-90.11	-0.06	-30.04	30.04	28.35	1.69	17.791	
400.00	400.00	400.00	400.00	1.20	1.20	-90.11	-0.06	-30.04	30.04	27.63	2.41	12.488	
500.00	500.00	500.00	500.00	1.56	1.56	-90.11	-0.06	-30.04	30.04	26.92	3.12	9.621	
600.00	600.00	600.00	600.00	1.92	1.92	-90.11	-0.06	-30.04	30.04	26.20	3.84	7.824	
700.00	700.00	700.00	700.00	2.28	2.28	-90.11	-0.06	-30.04	30.04	25.48	4.56	6.593	
800.00	800.00	800.00	800.00	2.64	2.64	-90.11	-0.06	-30.04	30.04	24.77	5.27	5.697	CC, ES
900.00	899.99	899.46	899.45	2.99	2.99	-90.71	0.89	-30.92	31.19	25.20	5.98	5.211	
1,000.00	999.91	998.83	998.74	3.35	3.35	-92.28	3.75	-33.54	34.64	27.95	6.69	5.175	
1,066.93	1,066.72	1,068.52	1,065.03	3.60	3.59	-93.63	6.72	-36.27	38.26	31.08	7.18	5.328	
1,100.00	1,099.70	1,101.75	1,097.95	3.71	3.71	-94.25	8.41	-37.83	40.32	32.90	7.42	5.435	
1,200.00	1,199.46	1,198.04	1,197.51	4.07	4.06	-95.79	13.54	-42.55	46.57	38.44	8.12	5.732	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #121H - Wellbore #1 - Design #3

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,300.00	1,299.21	1,302.16	1,297.06	4.44	4.44	-96.97	18.67	-47.27	52.84	43.98	8.86	5.963	
1,400.00	1,398.97	1,402.36	1,396.61	4.80	4.80	-97.90	23.79	-51.98	59.14	49.55	9.59	6.168	
1,500.00	1,498.73	1,502.56	1,496.17	5.17	5.17	-98.65	28.92	-56.70	65.44	55.13	10.32	6.344	
1,600.00	1,598.48	1,602.77	1,595.72	5.53	5.54	-99.27	34.05	-61.42	71.76	60.71	11.05	6.496	
1,700.00	1,698.24	1,702.97	1,695.28	5.90	5.91	-99.79	39.17	-66.14	78.08	66.30	11.78	6.630	
1,800.00	1,797.99	1,803.17	1,794.83	6.27	6.28	-100.23	44.30	-70.86	84.41	71.90	12.51	6.747	
1,900.00	1,897.75	1,903.37	1,894.39	6.64	6.65	-100.61	49.43	-75.57	90.74	77.50	13.24	6.851	
2,000.00	1,997.51	2,003.58	1,993.94	7.01	7.02	-100.94	54.55	-80.29	97.08	83.10	13.98	6.945	
2,100.00	2,097.26	2,103.78	2,093.49	7.38	7.39	-101.23	59.68	-85.01	103.41	88.70	14.71	7.029	
2,200.00	2,197.02	2,203.98	2,193.05	7.75	7.76	-101.48	64.81	-89.73	109.75	94.31	15.45	7.104	
2,300.00	2,296.77	2,304.18	2,292.60	8.12	8.13	-101.71	69.93	-94.44	116.10	99.91	16.19	7.173	
2,400.00	2,396.53	2,404.38	2,392.16	8.49	8.50	-101.91	75.06	-99.16	122.44	105.52	16.92	7.236	
2,500.00	2,496.28	2,504.59	2,491.71	8.86	8.88	-102.10	80.19	-103.88	128.79	111.13	17.66	7.293	
2,557.14	2,553.28	2,552.44	2,548.59	9.07	9.05	-102.19	83.12	-106.57	132.41	114.37	18.05	7.338	
2,600.00	2,596.06	2,604.78	2,591.27	9.23	9.25	-102.17	85.32	-108.60	135.04	116.64	18.40	7.341	
2,700.00	2,695.95	2,704.95	2,690.86	9.59	9.62	-101.42	90.44	-113.32	140.42	121.30	19.13	7.342	
2,800.00	2,795.93	2,805.13	2,790.43	9.95	9.99	-99.77	95.57	-118.03	144.86	125.02	19.85	7.298	
2,824.07	2,820.00	2,818.88	2,814.39	10.04	10.04	-99.24	96.81	-119.17	145.81	125.83	19.98	7.297	
2,900.00	2,895.93	2,905.38	2,889.95	10.30	10.37	-97.54	100.70	-122.75	148.80	128.23	20.57	7.235	
3,000.00	2,995.93	3,005.62	2,989.46	10.65	10.74	-95.40	105.82	-127.47	152.92	131.64	21.28	7.186	
3,100.00	3,095.93	3,094.14	3,088.97	11.01	11.07	-93.38	110.95	-132.18	157.25	135.30	21.95	7.163	
3,200.00	3,195.93	3,195.62	3,190.24	11.36	11.44	-91.57	115.79	-136.64	161.44	138.76	22.68	7.119	
3,300.00	3,295.93	3,298.45	3,292.99	11.71	11.82	-90.48	118.83	-139.43	164.11	140.71	23.40	7.012	
3,400.00	3,395.93	3,401.43	3,395.96	12.07	12.18	-90.13	119.83	-140.36	165.00	140.88	24.12	6.841	
3,407.08	3,403.01	3,408.72	3,403.25	12.09	12.21	-90.13	119.82	-140.35	164.99	140.82	24.17	6.826	
3,500.00	3,495.93	3,501.40	3,495.93	12.42	12.53	-90.13	119.83	-140.36	165.00	140.18	24.82	6.647	
3,600.00	3,595.93	3,601.40	3,595.93	12.77	12.88	-90.13	119.83	-140.36	165.00	139.47	25.53	6.463	
3,700.00	3,695.93	3,701.40	3,695.93	13.13	13.23	-90.13	119.83	-140.36	165.00	138.77	26.23	6.289	
3,800.00	3,795.93	3,801.40	3,795.93	13.48	13.58	-90.13	119.83	-140.36	165.00	138.06	26.94	6.125	
3,900.00	3,895.93	3,901.40	3,895.93	13.84	13.93	-90.13	119.83	-140.36	165.00	137.35	27.65	5.968	
4,000.00	3,995.93	4,001.41	3,995.93	14.19	14.28	-90.13	119.83	-140.36	165.00	136.65	28.35	5.819	
4,100.00	4,095.93	4,101.41	4,095.93	14.55	14.63	-90.13	119.83	-140.36	165.00	135.94	29.06	5.677	
4,200.00	4,195.93	4,201.41	4,195.93	14.90	14.98	-90.13	119.83	-140.36	165.00	135.23	29.77	5.542	
4,300.00	4,295.93	4,301.41	4,295.93	15.26	15.33	-90.13	119.83	-140.36	165.00	134.52	30.48	5.413	
4,400.00	4,395.93	4,401.41	4,395.93	15.61	15.68	-90.13	119.83	-140.36	165.00	133.81	31.19	5.290	
4,500.00	4,495.93	4,501.41	4,495.93	15.97	16.04	-90.13	119.83	-140.36	165.00	133.10	31.90	5.173	
4,600.00	4,595.93	4,601.41	4,595.93	16.32	16.39	-90.13	119.83	-140.36	165.00	132.39	32.61	5.060	
4,700.00	4,695.93	4,701.41	4,695.93	16.68	16.74	-90.13	119.83	-140.36	165.00	131.68	33.32	4.952	
4,800.00	4,795.93	4,801.41	4,795.93	17.03	17.10	-90.13	119.83	-140.36	165.00	130.97	34.03	4.849	
4,900.00	4,895.93	4,901.41	4,895.93	17.39	17.45	-90.13	119.83	-140.36	165.00	130.26	34.74	4.750	
5,000.00	4,995.93	5,001.41	4,995.93	17.75	17.80	-90.13	119.83	-140.36	165.00	129.55	35.45	4.655	
5,100.00	5,095.93	5,101.41	5,095.93	18.10	18.16	-90.13	119.83	-140.36	165.00	128.84	36.16	4.563	
5,200.00	5,195.93	5,201.41	5,195.93	18.46	18.51	-90.13	119.83	-140.36	165.00	128.13	36.87	4.475	
5,300.00	5,295.93	5,301.41	5,295.93	18.82	18.86	-90.13	119.83	-140.36	165.00	127.42	37.58	4.390	
5,400.00	5,395.93	5,401.41	5,395.93	19.17	19.22	-90.13	119.83	-140.36	165.00	126.71	38.30	4.309	
5,500.00	5,495.93	5,501.41	5,495.93	19.53	19.57	-90.13	119.83	-140.36	165.00	125.99	39.01	4.230	
5,600.00	5,595.93	5,601.41	5,595.93	19.89	19.93	-90.13	119.83	-140.36	165.00	125.28	39.72	4.154	
5,700.00	5,695.93	5,701.41	5,695.93	20.24	20.28	-90.13	119.83	-140.36	165.00	124.57	40.43	4.081	
5,800.00	5,795.93	5,801.41	5,795.93	20.60	20.64	-90.13	119.83	-140.36	165.00	123.86	41.14	4.010	
5,900.00	5,895.93	5,901.41	5,895.93	20.96	20.99	-90.13	119.83	-140.36	165.00	123.14	41.86	3.942	
6,000.00	5,995.93	6,001.41	5,995.93	21.31	21.35	-90.13	119.83	-140.36	165.00	122.43	42.57	3.876	
6,100.00	6,095.93	6,101.41	6,095.93	21.67	21.70	-90.13	119.83	-140.36	165.00	121.72	43.28	3.812	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #121H - Wellbore #1 - Design #3 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,200.00	6,195.93	6,201.41	6,195.93	22.03	22.06	-90.13	119.83	-140.36	165.00	121.01	43.99	3.750	
6,300.00	6,295.93	6,301.41	6,295.93	22.38	22.41	-90.13	119.83	-140.36	165.00	120.29	44.71	3.691	
6,400.00	6,395.93	6,401.41	6,395.93	22.74	22.77	-90.13	119.83	-140.36	165.00	119.58	45.42	3.633	
6,500.00	6,495.93	6,501.41	6,495.93	23.10	23.12	-90.13	119.83	-140.36	165.00	118.87	46.13	3.576	
6,600.00	6,595.93	6,601.41	6,595.93	23.45	23.48	-90.13	119.83	-140.36	165.00	118.15	46.85	3.522	
6,700.00	6,695.93	6,701.41	6,695.93	23.81	23.84	-90.13	119.83	-140.36	165.00	117.44	47.56	3.469	
6,800.00	6,795.93	6,801.41	6,795.93	24.17	24.19	-90.13	119.83	-140.36	165.00	116.72	48.28	3.418	
6,900.00	6,895.93	6,901.41	6,895.93	24.53	24.55	-90.13	119.83	-140.36	165.00	116.01	48.99	3.368	
6,912.52	6,908.45	6,913.92	6,908.45	24.57	24.59	-90.13	119.83	-140.36	165.00	115.92	49.08	3.362	
7,000.00	6,995.93	7,001.40	6,995.92	24.88	24.90	-90.24	119.52	-140.36	165.00	115.30	49.70	3.320	
7,000.03	6,995.96	7,001.42	6,995.94	24.88	24.90	-90.24	119.52	-140.36	165.00	115.30	49.70	3.320	
7,100.00	7,095.93	7,099.73	7,093.44	25.24	25.21	-94.27	107.88	-140.33	165.46	115.09	50.36	3.285	SF
7,200.00	7,195.93	7,191.58	7,181.50	25.60	25.47	-103.00	82.11	-140.29	169.89	119.03	50.86	3.341	
7,300.00	7,295.93	7,273.48	7,255.66	25.96	25.68	-113.79	47.53	-140.22	184.62	134.03	50.59	3.649	
7,400.00	7,395.93	7,344.19	7,315.17	26.31	25.85	-123.91	9.42	-140.15	214.36	165.31	49.05	4.370	
7,500.00	7,495.93	7,404.14	7,361.63	26.67	25.97	-132.06	-28.42	-140.08	259.34	212.73	46.61	5.564	
7,600.00	7,595.93	7,450.00	7,394.36	27.03	26.08	-137.66	-60.53	-140.02	316.88	273.22	43.66	7.258	
7,700.00	7,695.93	7,500.00	7,426.98	27.39	26.22	-143.02	-98.40	-139.95	383.68	341.91	41.77	9.186	
7,800.00	7,795.93	7,532.69	7,446.48	27.74	26.32	-146.10	-124.63	-139.90	457.31	417.77	39.54	11.567	
7,900.00	7,895.93	7,563.04	7,463.21	28.10	26.42	-148.66	-149.95	-139.86	535.99	498.13	37.86	14.156	
8,000.00	7,995.93	7,588.98	7,476.44	28.46	26.50	-150.65	-172.26	-139.82	618.43	581.93	36.50	16.945	
8,100.00	8,095.93	7,611.33	7,487.01	28.82	26.57	-152.22	-191.95	-139.78	703.74	668.33	35.41	19.874	
8,200.00	8,195.93	7,630.73	7,495.56	29.17	26.64	-153.49	-209.36	-139.75	791.30	756.76	34.54	22.909	
8,300.00	8,295.93	7,650.00	7,503.46	29.53	26.71	-154.66	-226.94	-139.71	880.64	846.71	33.93	25.957	
8,400.00	8,395.93	7,650.00	7,503.46	29.89	26.71	-154.66	-226.94	-139.71	971.60	938.63	32.97	29.467	
8,500.00	8,495.93	7,675.82	7,513.12	30.25	26.80	-156.12	-250.88	-139.67	1,063.30	1,030.41	32.90	32.323	
8,600.00	8,595.93	7,700.00	7,521.17	30.60	26.89	-157.36	-273.68	-139.63	1,156.38	1,123.53	32.86	35.194	
8,700.00	8,695.93	7,700.00	7,521.17	30.96	26.89	-157.36	-273.68	-139.63	1,249.87	1,217.49	32.38	38.595	
8,775.31	8,771.24	7,700.00	7,521.17	31.23	26.89	-157.36	-273.68	-139.63	1,320.91	1,288.79	32.12	41.128	
8,800.00	8,795.92	7,700.00	7,521.17	31.31	26.89	-157.32	-273.68	-139.63	1,344.15	1,312.11	32.03	41.959	
8,850.00	8,845.72	7,700.00	7,521.17	31.47	26.89	-156.99	-273.68	-139.63	1,390.37	1,358.53	31.85	43.661	
8,900.00	8,894.95	7,719.81	7,527.05	31.62	26.97	-157.32	-292.60	-139.59	1,434.80	1,402.84	31.96	44.895	
8,950.00	8,943.23	7,727.02	7,529.03	31.77	27.00	-156.71	-299.53	-139.58	1,477.78	1,445.95	31.83	46.430	
9,000.00	8,990.21	7,750.00	7,534.74	31.91	27.09	-156.59	-321.79	-139.54	1,519.14	1,487.22	31.92	47.600	
9,050.00	9,035.53	7,750.00	7,534.74	32.05	27.09	-154.93	-321.79	-139.54	1,557.93	1,526.29	31.63	49.250	
9,100.00	9,078.83	7,750.00	7,534.74	32.18	27.09	-152.79	-321.79	-139.54	1,594.63	1,563.27	31.36	50.853	
9,150.00	9,119.79	7,750.00	7,534.74	32.31	27.09	-150.06	-321.79	-139.54	1,629.12	1,598.03	31.10	52.389	
9,200.00	9,158.09	7,772.08	7,539.39	32.44	27.18	-148.45	-343.37	-139.50	1,660.72	1,629.61	31.10	53.392	
9,250.00	9,193.46	7,782.45	7,541.28	32.58	27.22	-145.41	-353.57	-139.48	1,689.79	1,658.82	30.98	54.552	
9,300.00	9,225.61	7,800.00	7,544.07	32.72	27.30	-142.44	-370.89	-139.45	1,716.12	1,685.19	30.93	55.484	
9,350.00	9,254.30	7,800.00	7,544.07	32.86	27.30	-136.85	-370.89	-139.45	1,739.45	1,708.71	30.74	56.594	
9,400.00	9,279.32	7,800.00	7,544.07	33.01	27.30	-129.96	-370.89	-139.45	1,760.08	1,729.49	30.59	57.541	
9,450.00	9,300.46	7,826.81	7,547.29	33.17	27.42	-126.14	-397.50	-139.40	1,777.11	1,746.44	30.67	57.936	
9,500.00	9,317.59	7,850.00	7,549.08	33.34	27.52	-121.32	-420.62	-139.35	1,791.45	1,760.71	30.75	58.264	
9,550.00	9,330.55	7,850.00	7,549.08	33.52	27.52	-111.75	-420.62	-139.35	1,802.31	1,771.60	30.71	58.679	
9,575.31	9,335.49	7,850.00	7,549.08	33.62	27.52	-106.56	-420.62	-139.35	1,806.70	1,775.98	30.72	58.807	
9,600.00	9,339.47	7,861.89	7,549.63	33.71	27.57	-103.84	-432.50	-139.33	1,810.32	1,779.52	30.80	58.780	
9,650.00	9,345.57	7,882.52	7,550.00	33.91	27.67	-97.70	-453.13	-139.29	1,816.67	1,785.71	30.96	58.682	
9,700.00	9,349.08	7,905.06	7,550.00	34.13	27.78	-90.11	-465.55	-139.27	1,821.28	1,790.13	31.15	58.465	
9,741.98	9,350.00	7,936.07	7,550.00	34.32	27.94	-90.11	-506.68	-139.20	1,823.51	1,792.12	31.38	58.104	
9,800.00	9,350.00	8,006.89	7,550.00	34.61	28.32	-90.11	-563.71	-139.09	1,825.24	1,793.45	31.79	57.417	
9,900.00	9,350.00	8,107.93	7,550.00	35.15	28.94	-90.11	-662.68	-138.91	1,827.66	1,795.19	32.47	56.283	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #121H - Wellbore #1 - Design #3 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,000.00	9,350.00	8,208.35	7,550.00	35.75	29.64	-90.11	-762.26	-138.72	1,829.25	1,796.07	33.19	55.121	
10,100.00	9,350.00	8,308.44	7,550.00	36.40	30.41	-90.11	-862.17	-138.54	1,829.94	1,796.02	33.92	53.949	
10,123.34	9,350.00	8,314.91	7,550.00	36.56	30.46	-90.11	-885.51	-138.49	1,829.97	1,795.94	34.02	53.786	
10,200.00	9,350.00	8,408.44	7,550.00	37.10	31.25	-90.11	-962.17	-138.35	1,829.97	1,795.29	34.68	52.765	
10,300.00	9,350.00	8,508.44	7,550.00	37.86	32.15	-90.11	-1,062.17	-138.17	1,829.97	1,794.47	35.50	51.545	
10,400.00	9,350.00	8,608.44	7,550.00	38.68	33.11	-90.11	-1,162.17	-137.98	1,829.97	1,793.59	36.38	50.302	
10,500.00	9,350.00	8,708.44	7,550.00	39.54	34.12	-90.11	-1,262.17	-137.80	1,829.97	1,792.66	37.31	49.048	
10,600.00	9,350.00	8,808.44	7,550.00	40.46	35.19	-90.11	-1,362.17	-137.61	1,829.97	1,791.68	38.29	47.795	
10,700.00	9,350.00	8,908.44	7,550.00	41.42	36.29	-90.11	-1,462.17	-137.42	1,829.97	1,790.66	39.31	46.550	
10,800.00	9,350.00	9,008.44	7,550.00	42.43	37.44	-90.11	-1,562.17	-137.24	1,829.97	1,789.60	40.38	45.323	
10,900.00	9,350.00	9,108.44	7,550.00	43.48	38.63	-90.11	-1,662.17	-137.05	1,829.97	1,788.49	41.48	44.117	
11,000.00	9,350.00	9,208.44	7,550.00	44.56	39.85	-90.11	-1,762.17	-136.87	1,829.97	1,787.36	42.62	42.939	
11,100.00	9,350.00	9,308.44	7,550.00	45.68	41.10	-90.11	-1,862.17	-136.68	1,829.97	1,786.19	43.79	41.790	
11,200.00	9,350.00	9,408.44	7,550.00	46.83	42.37	-90.11	-1,962.17	-136.50	1,829.98	1,784.99	44.99	40.675	
11,300.00	9,350.00	9,508.44	7,550.00	48.00	43.68	-90.11	-2,062.17	-136.31	1,829.98	1,783.76	46.22	39.594	
11,400.00	9,350.00	9,608.44	7,550.00	49.21	45.00	-90.11	-2,162.17	-136.13	1,829.98	1,782.50	47.47	38.548	
11,500.00	9,350.00	9,708.44	7,550.00	50.44	46.35	-90.11	-2,262.17	-135.94	1,829.98	1,781.23	48.75	37.537	
11,600.00	9,350.00	9,808.44	7,550.00	51.70	47.72	-90.11	-2,362.17	-135.76	1,829.98	1,779.93	50.05	36.562	
11,700.00	9,350.00	9,908.44	7,550.00	52.98	49.10	-90.11	-2,462.17	-135.57	1,829.98	1,778.61	51.37	35.623	
11,800.00	9,350.00	10,008.44	7,550.00	54.28	50.50	-90.11	-2,562.17	-135.39	1,829.98	1,777.27	52.71	34.719	
11,900.00	9,350.00	10,108.44	7,550.00	55.59	51.92	-90.11	-2,662.17	-135.20	1,829.98	1,775.92	54.06	33.848	
12,000.00	9,350.00	10,208.44	7,550.00	56.93	53.35	-90.11	-2,762.17	-135.02	1,829.98	1,774.55	55.44	33.010	
12,100.00	9,350.00	10,308.44	7,550.00	58.28	54.79	-90.11	-2,862.17	-134.83	1,829.98	1,773.16	56.82	32.205	
12,200.00	9,350.00	10,408.44	7,550.00	59.65	56.24	-90.11	-2,962.17	-134.65	1,829.98	1,771.76	58.22	31.430	
12,300.00	9,350.00	10,508.44	7,550.00	61.03	57.71	-90.11	-3,062.17	-134.46	1,829.99	1,770.35	59.64	30.685	
12,400.00	9,350.00	10,608.44	7,550.00	62.43	59.19	-90.11	-3,162.17	-134.27	1,829.99	1,768.92	61.06	29.969	
12,500.00	9,350.00	10,708.44	7,550.00	63.83	60.67	-90.11	-3,262.17	-134.09	1,829.99	1,767.49	62.50	29.280	
12,600.00	9,350.00	10,808.44	7,550.00	65.25	62.16	-90.11	-3,362.17	-133.90	1,829.99	1,766.04	63.95	28.618	
12,700.00	9,350.00	10,908.44	7,550.00	66.68	63.67	-90.11	-3,462.17	-133.72	1,829.99	1,764.59	65.40	27.980	
12,800.00	9,350.00	11,008.44	7,550.00	68.12	65.17	-90.11	-3,562.17	-133.53	1,829.99	1,763.12	66.87	27.367	
12,900.00	9,350.00	11,108.44	7,550.00	69.57	66.69	-90.11	-3,662.17	-133.35	1,829.99	1,761.65	68.34	26.776	
13,000.00	9,350.00	11,208.44	7,550.00	71.03	68.21	-90.11	-3,762.17	-133.16	1,829.99	1,760.17	69.83	26.208	
13,100.00	9,350.00	11,308.44	7,550.00	72.50	69.74	-90.11	-3,862.17	-132.98	1,829.99	1,758.68	71.32	25.660	
13,200.00	9,350.00	11,408.44	7,550.00	73.98	71.28	-90.11	-3,962.17	-132.79	1,829.99	1,757.18	72.81	25.133	
13,300.00	9,350.00	11,508.44	7,550.00	75.46	72.82	-90.11	-4,062.16	-132.61	1,829.99	1,755.68	74.32	24.624	
13,400.00	9,350.00	11,608.44	7,550.00	76.95	74.36	-90.11	-4,162.16	-132.42	1,829.99	1,754.17	75.83	24.134	
13,500.00	9,350.00	11,708.44	7,550.00	78.45	75.91	-90.11	-4,262.16	-132.24	1,830.00	1,752.65	77.34	23.661	
13,600.00	9,350.00	11,808.44	7,550.00	79.95	77.47	-90.11	-4,362.16	-132.05	1,830.00	1,751.13	78.86	23.205	
13,700.00	9,350.00	11,908.44	7,550.00	81.46	79.02	-90.11	-4,462.16	-131.87	1,830.00	1,749.61	80.39	22.764	
13,800.00	9,350.00	12,008.44	7,550.00	82.98	80.59	-90.11	-4,562.16	-131.68	1,830.00	1,748.08	81.92	22.338	
13,900.00	9,350.00	12,108.44	7,550.00	84.50	82.15	-90.11	-4,662.16	-131.49	1,830.00	1,746.54	83.46	21.927	
14,000.00	9,350.00	12,208.44	7,550.00	86.02	83.72	-90.11	-4,762.16	-131.31	1,830.00	1,745.00	85.00	21.530	
14,100.00	9,350.00	12,291.56	7,550.00	87.55	85.03	-90.11	-4,862.16	-131.12	1,830.00	1,743.59	86.41	21.178	
14,185.37	9,350.00	12,376.93	7,550.00	88.71	86.37	-90.11	-4,947.53	-130.97	1,830.00	1,742.56	87.44	20.928	

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #201H - Wellbore #1 - Design #3 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-90.10	-0.10	-60.04	60.04				
100.00	100.00	100.00	100.00	0.13	0.13	-90.10	-0.10	-60.04	60.04	59.79	0.25	235.904	
200.00	200.00	200.00	200.00	0.49	0.49	-90.10	-0.10	-60.04	60.04	59.07	0.97	61.805	
300.00	300.00	300.00	300.00	0.84	0.84	-90.10	-0.10	-60.04	60.04	58.35	1.69	35.561	
400.00	400.00	400.00	400.00	1.20	1.20	-90.10	-0.10	-60.04	60.04	57.64	2.41	24.962	
500.00	500.00	500.00	500.00	1.56	1.56	-90.10	-0.10	-60.04	60.04	56.92	3.12	19.230	
600.00	600.00	600.00	600.00	1.92	1.92	-90.10	-0.10	-60.04	60.04	56.20	3.84	15.639	
700.00	700.00	700.00	700.00	2.28	2.28	-90.10	-0.10	-60.04	60.04	55.48	4.56	13.178	
800.00	800.00	800.00	800.00	2.64	2.64	-90.10	-0.10	-60.04	60.04	54.77	5.27	11.386	CC, ES
900.00	899.99	898.58	898.57	2.99	2.99	-90.77	0.45	-61.18	61.47	55.49	5.98	10.281	
1,000.00	999.91	997.02	996.93	3.35	3.33	-92.62	2.12	-64.61	65.79	59.12	6.68	9.851	
1,066.93	1,066.72	1,062.75	1,062.54	3.60	3.57	-94.31	3.85	-68.16	70.36	63.21	7.15	9.844	
1,100.00	1,099.70	1,104.37	1,095.34	3.71	3.71	-95.15	4.86	-70.22	72.98	65.57	7.41	9.845	
1,200.00	1,199.46	1,204.74	1,194.73	4.07	4.07	-97.34	7.90	-76.47	81.01	72.88	8.13	9.965	
1,300.00	1,299.21	1,294.90	1,294.12	4.44	4.40	-99.13	10.95	-82.72	89.13	80.32	8.81	10.114	
1,400.00	1,398.97	1,405.47	1,393.52	4.80	4.80	-100.63	13.99	-88.96	97.33	87.76	9.57	10.168	
1,500.00	1,498.73	1,505.84	1,492.91	5.17	5.17	-101.89	17.04	-95.21	105.58	95.28	10.30	10.254	
1,600.00	1,598.48	1,606.20	1,592.30	5.53	5.54	-102.97	20.08	-101.46	113.87	102.85	11.02	10.331	
1,700.00	1,698.24	1,706.57	1,691.69	5.90	5.91	-103.90	23.13	-107.71	122.20	110.45	11.75	10.400	
1,800.00	1,797.99	1,806.93	1,791.08	6.27	6.28	-104.71	26.17	-113.95	130.56	118.08	12.48	10.462	
1,900.00	1,897.75	1,907.30	1,890.47	6.64	6.65	-105.42	29.22	-120.20	138.94	125.73	13.21	10.519	
2,000.00	1,997.51	2,007.67	1,989.86	7.01	7.02	-106.05	32.26	-126.45	147.34	133.40	13.94	10.570	
2,100.00	2,097.26	2,091.97	2,089.25	7.38	7.33	-106.62	35.31	-132.70	155.76	141.15	14.61	10.659	
2,200.00	2,197.02	2,208.40	2,188.65	7.75	7.76	-107.13	38.35	-138.94	164.19	148.79	15.40	10.659	
2,300.00	2,296.77	2,308.76	2,288.04	8.12	8.13	-107.58	41.40	-145.19	172.63	156.50	16.14	10.699	
2,400.00	2,396.53	2,409.13	2,387.43	8.49	8.51	-108.00	44.44	-151.44	181.08	164.21	16.87	10.735	
2,500.00	2,496.28	2,490.51	2,486.82	8.86	8.81	-108.37	47.49	-157.69	189.54	172.01	17.53	10.811	
2,557.14	2,553.28	2,545.77	2,541.93	9.07	9.02	-108.54	49.30	-161.40	194.58	176.64	17.94	10.847	
2,600.00	2,596.06	2,586.93	2,582.93	9.23	9.17	-108.50	50.87	-164.62	198.62	180.38	18.24	10.889	
2,700.00	2,695.95	2,682.71	2,678.19	9.59	9.54	-107.65	55.27	-173.65	208.42	189.49	18.93	11.007	
2,800.00	2,795.93	2,778.45	2,773.11	9.95	9.91	-105.84	60.71	-184.81	218.90	199.28	19.62	11.157	
2,824.07	2,820.00	2,802.29	2,796.72	10.04	10.01	-105.28	62.16	-187.79	221.45	201.66	19.79	11.189	
2,900.00	2,895.93	2,877.48	2,871.18	10.30	10.31	-103.55	66.75	-197.21	229.54	209.20	20.33	11.288	
3,000.00	2,995.93	2,976.51	2,969.24	10.65	10.70	-101.44	72.79	-209.60	240.48	219.43	21.05	11.425	
3,100.00	3,095.93	3,075.53	3,067.30	11.01	11.10	-99.52	78.83	-222.00	251.72	229.96	21.76	11.566	
3,200.00	3,195.93	3,174.56	3,165.36	11.36	11.50	-97.77	84.87	-234.39	263.21	240.74	22.48	11.710	
3,300.00	3,295.93	3,273.58	3,263.42	11.71	11.90	-96.16	90.92	-246.79	274.94	251.74	23.19	11.855	
3,400.00	3,395.93	3,372.61	3,361.48	12.07	12.30	-94.68	96.96	-259.18	286.85	262.95	23.91	11.999	
3,500.00	3,495.93	3,471.63	3,459.54	12.42	12.70	-93.32	103.00	-271.58	298.94	274.32	24.62	12.142	
3,600.00	3,595.93	3,570.12	3,565.18	12.77	13.12	-92.10	108.88	-283.65	310.03	284.63	25.40	12.204	
3,700.00	3,695.93	3,685.48	3,672.01	13.13	13.54	-91.21	113.50	-293.13	318.75	292.57	26.18	12.175	
3,800.00	3,795.93	3,793.35	3,779.61	13.48	13.94	-90.60	116.82	-299.94	325.01	298.07	26.94	12.064	
3,900.00	3,895.93	3,901.56	3,887.72	13.84	14.34	-90.24	118.81	-304.03	328.78	301.09	27.69	11.875	
4,000.00	3,995.93	4,009.94	3,996.09	14.19	14.71	-90.13	119.46	-305.36	330.00	301.59	28.41	11.615	
4,013.04	4,008.97	4,024.07	4,010.22	14.24	14.76	-90.13	119.45	-305.33	329.97	301.47	28.50	11.576	
4,100.00	4,095.93	4,109.78	4,095.93	14.55	15.05	-90.13	119.46	-305.36	330.00	300.89	29.11	11.335	
4,200.00	4,195.93	4,209.78	4,195.93	14.90	15.39	-90.13	119.46	-305.36	330.00	300.19	29.81	11.069	
4,300.00	4,295.93	4,309.78	4,295.93	15.26	15.72	-90.13	119.46	-305.36	330.00	299.48	30.52	10.814	
4,400.00	4,395.93	4,409.78	4,395.93	15.61	16.07	-90.13	119.46	-305.36	330.00	298.78	31.22	10.570	
4,500.00	4,495.93	4,509.78	4,495.93	15.97	16.41	-90.13	119.46	-305.36	330.00	298.08	31.92	10.337	
4,600.00	4,595.93	4,609.78	4,595.93	16.32	16.75	-90.13	119.46	-305.36	330.00	297.37	32.63	10.114	
4,700.00	4,695.93	4,709.78	4,695.93	16.68	17.09	-90.13	119.46	-305.36	330.00	296.67	33.33	9.900	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #201H - Wellbore #1 - Design #3 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,800.00	4,795.93	4,809.78	4,795.93	17.03	17.43	-90.13	119.46	-305.36	330.00	295.96	34.04	9.695	
4,900.00	4,895.93	4,909.78	4,895.93	17.39	17.78	-90.13	119.46	-305.36	330.00	295.26	34.74	9.498	
5,000.00	4,995.93	5,009.78	4,995.93	17.75	18.12	-90.13	119.46	-305.36	330.00	294.55	35.45	9.309	
5,100.00	5,095.93	5,109.78	5,095.93	18.10	18.47	-90.13	119.46	-305.36	330.00	293.84	36.16	9.127	
5,200.00	5,195.93	5,209.78	5,195.93	18.46	18.81	-90.13	119.46	-305.36	330.00	293.14	36.86	8.952	
5,300.00	5,295.93	5,309.78	5,295.93	18.82	19.16	-90.13	119.46	-305.36	330.00	292.43	37.57	8.783	
5,400.00	5,395.93	5,409.78	5,395.93	19.17	19.50	-90.13	119.46	-305.36	330.00	291.72	38.28	8.621	
5,500.00	5,495.93	5,509.78	5,495.93	19.53	19.85	-90.13	119.46	-305.36	330.00	291.01	38.99	8.464	
5,600.00	5,595.93	5,609.78	5,595.93	19.89	20.20	-90.13	119.46	-305.36	330.00	290.30	39.70	8.313	
5,700.00	5,695.93	5,709.78	5,695.93	20.24	20.55	-90.13	119.46	-305.36	330.00	289.59	40.41	8.167	
5,800.00	5,795.93	5,809.78	5,795.93	20.60	20.89	-90.13	119.46	-305.36	330.00	288.89	41.11	8.026	
5,900.00	5,895.93	5,909.78	5,895.93	20.96	21.24	-90.13	119.46	-305.36	330.00	288.18	41.82	7.890	
6,000.00	5,995.93	6,009.78	5,995.93	21.31	21.59	-90.13	119.46	-305.36	330.00	287.47	42.53	7.759	
6,100.00	6,095.93	6,109.78	6,095.93	21.67	21.94	-90.13	119.46	-305.36	330.00	286.76	43.24	7.631	
6,200.00	6,195.93	6,209.78	6,195.93	22.03	22.29	-90.13	119.46	-305.36	330.00	286.05	43.95	7.508	
6,300.00	6,295.93	6,309.78	6,295.93	22.38	22.64	-90.13	119.46	-305.36	330.00	285.34	44.66	7.389	
6,400.00	6,395.93	6,409.78	6,395.93	22.74	22.99	-90.13	119.46	-305.36	330.00	284.63	45.37	7.273	
6,500.00	6,495.93	6,509.78	6,495.93	23.10	23.34	-90.13	119.46	-305.36	330.00	283.92	46.08	7.161	
6,600.00	6,595.93	6,609.78	6,595.93	23.45	23.69	-90.13	119.46	-305.36	330.00	283.20	46.80	7.052	
6,700.00	6,695.93	6,709.78	6,695.93	23.81	24.04	-90.13	119.46	-305.36	330.00	282.49	47.51	6.946	
6,800.00	6,795.93	6,809.78	6,795.93	24.17	24.39	-90.13	119.46	-305.36	330.00	281.78	48.22	6.844	
6,900.00	6,895.93	6,909.78	6,895.93	24.53	24.74	-90.13	119.46	-305.36	330.00	281.07	48.93	6.744	
7,000.00	6,995.93	7,009.78	6,995.93	24.88	25.09	-90.13	119.46	-305.36	330.00	280.36	49.64	6.648	
7,100.00	7,095.93	7,109.78	7,095.93	25.24	25.44	-90.13	119.46	-305.36	330.00	279.65	50.35	6.554	
7,200.00	7,195.93	7,209.78	7,195.93	25.60	25.80	-90.13	119.46	-305.36	330.00	278.94	51.06	6.462	
7,300.00	7,295.93	7,309.78	7,295.93	25.96	26.15	-90.13	119.46	-305.36	330.00	278.22	51.78	6.374	
7,400.00	7,395.93	7,409.78	7,395.93	26.31	26.50	-90.13	119.46	-305.36	330.00	277.51	52.49	6.287	
7,500.00	7,495.93	7,509.78	7,495.93	26.67	26.85	-90.13	119.46	-305.36	330.00	276.80	53.20	6.203	
7,600.00	7,595.93	7,609.78	7,595.93	27.03	27.20	-90.13	119.46	-305.36	330.00	276.09	53.91	6.121	
7,700.00	7,695.93	7,709.78	7,695.93	27.39	27.56	-90.13	119.46	-305.36	330.00	275.37	54.63	6.041	
7,800.00	7,795.93	7,809.78	7,795.93	27.74	27.91	-90.13	119.46	-305.36	330.00	274.66	55.34	5.963	
7,900.00	7,895.93	7,909.78	7,895.93	28.10	28.26	-90.13	119.46	-305.36	330.00	273.95	56.05	5.887	
8,000.00	7,995.93	8,009.78	7,995.93	28.46	28.61	-90.13	119.46	-305.36	330.00	273.24	56.76	5.814	
8,100.00	8,095.93	8,109.78	8,095.93	28.82	28.97	-90.13	119.46	-305.36	330.00	272.52	57.48	5.741	
8,200.00	8,195.93	8,209.78	8,195.93	29.17	29.32	-90.13	119.46	-305.36	330.00	271.81	58.19	5.671	
8,300.00	8,295.93	8,309.78	8,295.93	29.53	29.67	-90.13	119.46	-305.36	330.00	271.10	58.90	5.602	
8,400.00	8,395.93	8,409.78	8,395.93	29.89	30.03	-90.13	119.46	-305.36	330.00	270.38	59.62	5.535	
8,500.00	8,495.93	8,509.78	8,495.93	30.25	30.38	-90.13	119.46	-305.36	330.00	269.67	60.33	5.470	
8,600.00	8,595.93	8,609.78	8,595.93	30.60	30.73	-90.13	119.46	-305.36	330.00	268.96	61.04	5.406	
8,700.00	8,695.93	8,709.78	8,695.93	30.96	31.09	-90.13	119.46	-305.36	330.00	268.24	61.76	5.344	
8,775.31	8,771.24	8,785.09	8,771.24	31.23	31.35	-90.13	119.46	-305.36	330.00	267.71	62.29	5.297	
8,800.00	8,795.92	8,807.23	8,793.38	31.31	31.43	-90.11	119.04	-305.44	330.20	267.75	62.46	5.287	
8,850.00	8,845.72	8,852.06	8,838.05	31.47	31.57	-89.97	115.63	-306.13	331.83	269.08	62.75	5.288	
8,900.00	8,894.95	8,896.81	8,882.26	31.62	31.71	-89.68	108.82	-307.50	335.09	272.06	63.03	5.316	
8,950.00	8,943.23	8,941.47	8,925.68	31.77	31.85	-89.26	98.67	-309.54	339.96	276.67	63.29	5.372	
9,000.00	8,990.21	8,985.98	8,968.04	31.91	31.98	-88.72	85.29	-312.23	346.38	282.85	63.53	5.452	
9,050.00	9,035.53	9,030.32	9,009.05	32.05	32.11	-88.07	68.79	-315.55	354.32	290.56	63.76	5.557	
9,100.00	9,078.83	9,074.47	9,048.48	32.18	32.23	-87.33	49.33	-319.47	363.71	299.72	63.99	5.684	
9,150.00	9,119.79	9,118.43	9,086.09	32.31	32.34	-86.52	27.05	-323.96	374.48	310.26	64.21	5.832	
9,200.00	9,158.09	9,162.19	9,121.70	32.44	32.44	-85.65	2.13	-328.97	386.54	322.09	64.45	5.998	
9,250.00	9,193.46	9,205.76	9,155.12	32.58	32.55	-84.75	-25.25	-334.48	399.81	335.13	64.68	6.181	
9,300.00	9,225.61	9,249.17	9,186.21	32.72	32.64	-83.84	-54.93	-340.46	414.19	349.26	64.93	6.379	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #201H - Wellbore #1 - Design #3

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,350.00	9,254.30	9,292.45	9,214.84	32.86	32.74	-82.94	-86.74	-346.86	429.58	364.38	65.20	6.589	
9,400.00	9,279.32	9,335.65	9,240.90	33.01	32.85	-82.08	-120.50	-353.65	445.88	380.40	65.48	6.809	
9,450.00	9,300.46	9,378.82	9,264.27	33.17	32.97	-81.28	-156.08	-360.82	462.97	397.19	65.78	7.038	
9,500.00	9,317.59	9,422.05	9,284.87	33.34	33.09	-80.55	-193.33	-368.31	480.74	414.65	66.09	7.274	
9,550.00	9,330.55	9,465.42	9,302.60	33.52	33.23	-79.92	-232.11	-376.12	499.07	432.66	66.41	7.515	
9,575.31	9,335.49	9,487.45	9,310.45	33.62	33.30	-79.64	-252.30	-380.18	508.53	441.95	66.58	7.638	
9,600.00	9,339.47	9,509.04	9,317.36	33.71	33.38	-79.40	-272.35	-384.22	517.84	451.10	66.74	7.759	
9,650.00	9,345.57	9,553.19	9,329.08	33.91	33.54	-79.03	-314.06	-392.61	536.92	469.84	67.08	8.004	
9,700.00	9,349.08	9,597.95	9,337.64	34.13	33.70	-78.81	-357.12	-401.28	556.21	488.78	67.43	8.249	
9,741.98	9,350.00	9,635.97	9,342.99	34.32	33.85	-78.71	-394.03	-408.71	572.48	504.74	67.74	8.452	
9,800.00	9,350.00	9,689.26	9,347.96	34.61	34.07	-78.63	-446.04	-419.17	594.23	526.04	68.19	8.715	
9,900.00	9,350.00	9,798.77	9,350.00	35.15	34.56	-80.03	-553.45	-440.20	627.53	558.37	69.15	9.074	
10,000.00	9,350.00	9,945.15	9,350.00	35.75	35.33	-84.42	-698.45	-460.00	650.18	579.67	70.51	9.221	
10,100.00	9,350.00	10,096.65	9,350.00	36.40	36.24	-88.97	-849.66	-468.73	659.97	587.94	72.03	9.163	
10,123.34	9,350.00	10,132.32	9,350.00	36.56	36.47	-90.04	-885.33	-469.04	660.36	587.96	72.40	9.121	
10,200.00	9,350.00	10,209.86	9,350.00	37.10	37.00	-90.11	-962.87	-468.89	660.35	586.88	73.48	8.987	
10,300.00	9,350.00	10,309.86	9,350.00	37.86	37.73	-90.11	-1,062.87	-468.69	660.34	585.37	74.98	8.807	
10,400.00	9,350.00	10,409.86	9,350.00	38.68	38.51	-90.11	-1,162.87	-468.49	660.34	583.74	76.59	8.622	
10,500.00	9,350.00	10,509.86	9,350.00	39.54	39.36	-90.11	-1,262.87	-468.30	660.33	582.01	78.31	8.432	
10,600.00	9,350.00	10,609.86	9,350.00	40.46	40.25	-90.11	-1,362.87	-468.10	660.32	580.18	80.14	8.240	
10,700.00	9,350.00	10,709.86	9,350.00	41.42	41.19	-90.11	-1,462.87	-467.90	660.31	578.26	82.05	8.048	
10,800.00	9,350.00	10,809.86	9,350.00	42.43	42.17	-90.11	-1,562.87	-467.70	660.30	576.25	84.05	7.856	
10,900.00	9,350.00	10,909.86	9,350.00	43.48	43.19	-90.11	-1,662.87	-467.50	660.29	574.16	86.14	7.666	
11,000.00	9,350.00	11,009.86	9,350.00	44.56	44.25	-90.11	-1,762.87	-467.30	660.29	571.99	88.30	7.478	
11,100.00	9,350.00	11,109.86	9,350.00	45.68	45.35	-90.11	-1,862.87	-467.10	660.28	569.75	90.52	7.294	
11,200.00	9,350.00	11,209.86	9,350.00	46.83	46.48	-90.11	-1,962.87	-466.91	660.27	567.45	92.82	7.114	
11,300.00	9,350.00	11,309.86	9,350.00	48.00	47.65	-90.11	-2,062.87	-466.71	660.26	565.09	95.17	6.938	
11,400.00	9,350.00	11,409.86	9,350.00	49.21	48.84	-90.11	-2,162.87	-466.51	660.25	562.67	97.58	6.766	
11,500.00	9,350.00	11,509.86	9,350.00	50.44	50.05	-90.11	-2,262.87	-466.31	660.24	560.20	100.04	6.600	
11,600.00	9,350.00	11,609.86	9,350.00	51.70	51.29	-90.11	-2,362.87	-466.11	660.24	557.68	102.55	6.438	
11,700.00	9,350.00	11,709.86	9,350.00	52.98	52.56	-90.11	-2,462.87	-465.91	660.23	555.12	105.11	6.282	
11,800.00	9,350.00	11,809.86	9,350.00	54.28	53.84	-90.11	-2,562.87	-465.71	660.22	552.52	107.70	6.130	
11,900.00	9,350.00	11,909.86	9,350.00	55.59	55.15	-90.11	-2,662.87	-465.51	660.21	549.88	110.33	5.984	
12,000.00	9,350.00	12,009.86	9,350.00	56.93	56.47	-90.11	-2,762.87	-465.32	660.20	547.20	113.00	5.842	
12,100.00	9,350.00	12,109.86	9,350.00	58.28	57.82	-90.11	-2,862.87	-465.12	660.19	544.49	115.71	5.706	
12,200.00	9,350.00	12,209.86	9,350.00	59.65	59.17	-90.11	-2,962.87	-464.92	660.18	541.74	118.44	5.574	
12,300.00	9,350.00	12,309.86	9,350.00	61.03	60.54	-90.11	-3,062.87	-464.72	660.18	538.97	121.20	5.447	
12,400.00	9,350.00	12,409.86	9,350.00	62.43	61.93	-90.11	-3,162.87	-464.52	660.17	536.18	123.99	5.324	
12,500.00	9,350.00	12,509.86	9,350.00	63.83	63.33	-90.11	-3,262.87	-464.32	660.16	533.35	126.81	5.206	
12,600.00	9,350.00	12,609.86	9,350.00	65.25	64.74	-90.11	-3,362.87	-464.12	660.15	530.50	129.65	5.092	
12,700.00	9,350.00	12,709.86	9,350.00	66.68	66.16	-90.11	-3,462.87	-463.93	660.14	527.63	132.51	4.982	
12,800.00	9,350.00	12,809.86	9,350.00	68.12	67.60	-90.11	-3,562.87	-463.73	660.13	524.74	135.39	4.876	
12,900.00	9,350.00	12,909.86	9,350.00	69.57	69.04	-90.11	-3,662.87	-463.53	660.13	521.84	138.29	4.773	
13,000.00	9,350.00	13,009.86	9,350.00	71.03	70.49	-90.11	-3,762.87	-463.33	660.12	518.91	141.21	4.675	
13,100.00	9,350.00	13,109.86	9,350.00	72.50	71.96	-90.11	-3,862.86	-463.13	660.11	515.96	144.15	4.579	
13,200.00	9,350.00	13,209.86	9,350.00	73.98	73.43	-90.11	-3,962.86	-462.93	660.10	513.00	147.10	4.487	
13,300.00	9,350.00	13,309.86	9,350.00	75.46	74.90	-90.11	-4,062.86	-462.73	660.09	510.03	150.07	4.399	
13,400.00	9,350.00	13,409.86	9,350.00	76.95	76.39	-90.11	-4,162.86	-462.54	660.08	507.04	153.05	4.313	
13,500.00	9,350.00	13,509.86	9,350.00	78.45	77.88	-90.11	-4,262.86	-462.34	660.08	504.03	156.04	4.230	
13,600.00	9,350.00	13,609.86	9,350.00	79.95	79.38	-90.11	-4,362.86	-462.14	660.07	501.02	159.05	4.150	
13,700.00	9,350.00	13,709.86	9,350.00	81.46	80.88	-90.11	-4,462.86	-461.94	660.06	497.99	162.07	4.073	
13,800.00	9,350.00	13,809.86	9,350.00	82.98	82.39	-90.11	-4,562.86	-461.74	660.05	494.95	165.10	3.998	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #201H - Wellbore #1 - Design #3

Offset Site Error: 0.00 usft
Offset Well Error: 0.00 usft

Survey Program: 0-MWD

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,900.00	9,350.00	13,909.86	9,350.00	84.50	83.91	-90.11	-4,662.86	-461.54	660.04	491.90	168.14	3.926	
14,000.00	9,350.00	14,009.86	9,350.00	86.02	85.43	-90.11	-4,762.86	-461.34	660.03	488.84	171.19	3.856	
14,100.00	9,350.00	14,109.86	9,350.00	87.55	86.96	-90.11	-4,862.86	-461.14	660.03	485.77	174.25	3.788	
14,185.37	9,350.00	14,195.23	9,350.00	88.71	88.26	-90.11	-4,948.23	-460.98	660.02	483.30	176.72	3.735	SF

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #203H - Wellbore #1 - Design #1

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	160.75	-5,561.82	1,942.75	5,891.37				
100.00	100.00	88.00	88.00	0.13	0.11	160.75	-5,561.82	1,942.75	5,891.36	5,891.12	0.24	N/A	
200.00	200.00	188.00	188.00	0.49	0.44	160.75	-5,561.82	1,942.75	5,891.36	5,890.43	0.93	6,345.427	
300.00	300.00	288.00	288.00	0.84	0.80	160.75	-5,561.82	1,942.75	5,891.36	5,889.71	1.65	3,580.536	
400.00	400.00	388.00	388.00	1.20	1.16	160.75	-5,561.82	1,942.75	5,891.36	5,889.00	2.36	2,493.879	
500.00	500.00	488.00	488.00	1.56	1.52	160.75	-5,561.82	1,942.75	5,891.36	5,888.28	3.08	1,913.232	
600.00	600.00	588.00	588.00	1.92	1.88	160.75	-5,561.82	1,942.75	5,891.36	5,887.56	3.80	1,551.904	
700.00	700.00	688.00	688.00	2.28	2.24	160.75	-5,561.82	1,942.75	5,891.36	5,886.85	4.51	1,305.374	
800.00	800.00	788.00	788.00	2.64	2.59	160.75	-5,561.82	1,942.75	5,891.36	5,886.13	5.23	1,126.433	
900.00	899.99	1,257.46	1,256.41	2.99	4.28	160.54	-5,539.47	1,957.78	5,887.92	5,880.65	7.27	810.152	
1,000.00	999.91	1,357.21	1,355.62	3.35	4.65	160.48	-5,530.82	1,963.60	5,885.02	5,877.03	7.99	736.487	
1,066.93	1,066.72	1,424.05	1,422.09	3.60	4.90	160.45	-5,525.02	1,967.50	5,884.35	5,875.87	8.48	694.127	
1,100.00	1,099.70	1,457.07	1,454.93	3.71	5.02	160.43	-5,522.16	1,969.42	5,884.26	5,875.54	8.72	674.921	
1,200.00	1,199.46	1,556.96	1,554.27	4.07	5.40	160.38	-5,513.49	1,975.25	5,884.00	5,874.55	9.45	622.671	
1,300.00	1,299.21	1,656.84	1,653.61	4.44	5.78	160.34	-5,504.83	1,981.08	5,883.74	5,873.56	10.18	577.791	
1,400.00	1,398.97	1,756.73	1,752.95	4.80	6.16	160.29	-5,496.17	1,986.90	5,883.49	5,872.57	10.92	538.847	
1,500.00	1,498.73	1,856.61	1,852.28	5.17	6.54	160.24	-5,487.50	1,992.73	5,883.24	5,871.59	11.66	504.750	
1,600.00	1,598.48	1,956.50	1,951.62	5.53	6.92	160.20	-5,478.84	1,998.56	5,883.00	5,870.60	12.39	474.658	
1,700.00	1,698.24	2,056.38	2,050.96	5.90	7.30	160.15	-5,470.18	2,004.38	5,882.76	5,869.62	13.13	447.912	
1,800.00	1,797.99	2,156.27	2,150.30	6.27	7.69	160.10	-5,461.51	2,010.21	5,882.52	5,868.65	13.87	423.989	
1,900.00	1,897.75	2,256.15	2,249.63	6.64	8.07	160.06	-5,452.85	2,016.04	5,882.29	5,867.67	14.62	402.468	
2,000.00	1,997.51	2,356.03	2,348.97	7.01	8.46	160.01	-5,444.18	2,021.86	5,882.06	5,866.70	15.36	383.008	
2,100.00	2,097.26	2,455.92	2,448.31	7.38	8.84	159.96	-5,435.52	2,027.69	5,881.84	5,865.73	16.10	365.327	
2,200.00	2,197.02	2,555.80	2,547.65	7.75	9.23	159.92	-5,426.86	2,033.51	5,881.61	5,864.77	16.84	349.194	
2,300.00	2,296.77	2,655.69	2,646.98	8.12	9.62	159.87	-5,418.19	2,039.34	5,881.40	5,863.81	17.59	334.416	
2,400.00	2,396.53	3,002.90	2,985.04	8.49	11.02	159.53	-5,379.17	2,065.58	5,879.42	5,860.13	19.29	304.866	
2,500.00	2,496.28	3,103.54	3,082.89	8.86	11.44	159.43	-5,364.86	2,075.21	5,875.13	5,855.07	20.06	292.899	
2,557.14	2,553.28	3,153.23	3,138.80	9.07	11.65	159.37	-5,356.68	2,080.71	5,872.68	5,852.21	20.47	286.901	
2,600.00	2,596.06	3,195.80	3,180.72	9.23	11.83	159.33	-5,350.54	2,084.84	5,870.65	5,849.85	20.80	282.254	
2,700.00	2,695.95	3,305.10	3,278.32	9.59	12.30	159.22	-5,336.26	2,094.44	5,864.34	5,842.73	21.61	271.392	
2,800.00	2,795.93	3,393.68	3,375.59	9.95	12.67	159.09	-5,322.03	2,104.01	5,855.85	5,833.52	22.33	262.233	
2,824.07	2,820.00	3,417.39	3,398.95	10.04	12.78	159.06	-5,318.61	2,106.31	5,853.48	5,830.97	22.51	259.987	
2,900.00	2,895.93	3,492.17	3,472.59	10.30	13.10	158.95	-5,307.84	2,113.56	5,845.83	5,822.74	23.09	253.153	
3,000.00	2,995.93	3,609.35	3,569.57	10.65	13.60	158.81	-5,293.65	2,123.10	5,835.77	5,811.84	23.93	243.858	
3,100.00	3,095.93	3,689.13	3,666.56	11.01	13.94	158.67	-5,279.46	2,132.64	5,825.76	5,801.14	24.62	236.657	
3,200.00	3,195.93	3,787.61	3,763.54	11.36	14.37	158.54	-5,265.27	2,142.19	5,815.77	5,790.39	25.38	229.137	
3,300.00	3,295.93	3,874.65	3,849.26	11.71	14.74	158.41	-5,252.74	2,150.61	5,805.85	5,779.75	26.10	222.438	
3,400.00	3,395.93	3,927.48	3,901.39	12.07	14.97	158.34	-5,245.58	2,155.43	5,796.52	5,769.83	26.68	217.244	
3,500.00	3,495.93	3,980.55	3,953.86	12.42	15.19	158.28	-5,238.98	2,159.86	5,787.99	5,760.73	27.26	212.315	
3,600.00	3,595.93	4,033.84	4,006.65	12.77	15.41	158.22	-5,232.97	2,163.91	5,780.28	5,752.44	27.84	207.651	
3,700.00	3,695.93	4,100.00	4,072.33	13.13	15.68	158.15	-5,226.36	2,168.35	5,773.39	5,744.93	28.46	202.876	
3,800.00	3,795.93	4,140.97	4,113.06	13.48	15.84	158.12	-5,222.74	2,170.79	5,767.26	5,738.28	28.98	199.038	
3,900.00	3,895.93	4,200.00	4,171.83	13.84	16.06	158.07	-5,218.16	2,173.87	5,761.96	5,732.40	29.56	194.923	
4,000.00	3,995.93	4,248.71	4,220.39	14.19	16.25	158.04	-5,214.95	2,176.03	5,757.45	5,727.35	30.10	191.291	
4,100.00	4,095.93	14,238.69	9,320.00	14.55	95.78	94.88	-64.98	2,193.76	5,670.61	5,609.25	61.36	92.411	
4,200.00	4,195.93	14,238.69	9,320.00	14.90	95.78	94.88	-64.98	2,193.76	5,578.41	5,516.47	61.94	90.066	
4,300.00	4,295.93	14,238.69	9,320.00	15.26	95.78	94.88	-64.98	2,193.76	5,486.47	5,423.94	62.53	87.740	
4,400.00	4,395.93	14,238.69	9,320.00	15.61	95.78	94.88	-64.98	2,193.76	5,394.83	5,331.68	63.15	85.434	
4,500.00	4,495.93	14,238.69	9,320.00	15.97	95.78	94.88	-64.98	2,193.76	5,303.49	5,239.70	63.78	83.147	
4,600.00	4,595.93	14,238.69	9,320.00	16.32	95.78	94.88	-64.98	2,193.76	5,212.46	5,148.02	64.44	80.883	
4,700.00	4,695.93	14,238.69	9,320.00	16.68	95.78	94.88	-64.98	2,193.76	5,121.77	5,056.64	65.13	78.640	
4,800.00	4,795.93	14,238.69	9,320.00	17.03	95.78	94.88	-64.98	2,193.76	5,031.43	4,965.59	65.84	76.419	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #203H - Wellbore #1 - Design #1

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.00	4,895.93	14,238.69	9,320.00	17.39	95.78	94.88	-64.98	2,193.76	4,941.47	4,874.89	66.58	74.222	
5,000.00	4,995.93	14,238.69	9,320.00	17.75	95.78	94.88	-64.98	2,193.76	4,851.90	4,784.55	67.34	72.050	
5,100.00	5,095.93	14,238.69	9,320.00	18.10	95.78	94.88	-64.98	2,193.76	4,762.74	4,694.60	68.13	69.903	
5,200.00	5,195.93	14,238.69	9,320.00	18.46	95.78	94.88	-64.98	2,193.76	4,674.02	4,605.06	68.96	67.782	
5,300.00	5,295.93	14,238.69	9,320.00	18.82	95.78	94.88	-64.98	2,193.76	4,585.77	4,515.95	69.81	65.687	
5,400.00	5,395.93	14,238.69	9,320.00	19.17	95.78	94.88	-64.98	2,193.76	4,498.00	4,427.30	70.70	63.621	
5,500.00	5,495.93	14,238.69	9,320.00	19.53	95.78	94.88	-64.98	2,193.76	4,410.76	4,339.14	71.62	61.584	
5,600.00	5,595.93	14,238.69	9,320.00	19.89	95.78	94.88	-64.98	2,193.76	4,324.07	4,251.49	72.58	59.576	
5,700.00	5,695.93	14,238.69	9,320.00	20.24	95.78	94.88	-64.98	2,193.76	4,237.97	4,164.39	73.58	57.600	
5,800.00	5,795.93	14,238.69	9,320.00	20.60	95.78	94.88	-64.98	2,193.76	4,152.49	4,077.88	74.61	55.655	
5,900.00	5,895.93	14,238.69	9,320.00	20.96	95.78	94.88	-64.98	2,193.76	4,067.67	3,991.98	75.69	53.743	
6,000.00	5,995.93	14,238.69	9,320.00	21.31	95.78	94.88	-64.98	2,193.76	3,983.56	3,906.75	76.81	51.865	
6,100.00	6,095.93	14,238.69	9,320.00	21.67	95.78	94.88	-64.98	2,193.76	3,900.20	3,822.23	77.97	50.023	
6,200.00	6,195.93	14,238.69	9,320.00	22.03	95.78	94.88	-64.98	2,193.76	3,817.63	3,738.46	79.18	48.217	
6,300.00	6,295.93	14,238.69	9,320.00	22.38	95.78	94.88	-64.98	2,193.76	3,735.92	3,655.49	80.43	46.448	
6,400.00	6,395.93	14,238.69	9,320.00	22.74	95.78	94.88	-64.98	2,193.76	3,655.12	3,573.38	81.74	44.718	
6,500.00	6,495.93	14,238.69	9,320.00	23.10	95.78	94.88	-64.98	2,193.76	3,575.29	3,492.19	83.09	43.028	
6,600.00	6,595.93	14,238.69	9,320.00	23.45	95.78	94.88	-64.98	2,193.76	3,496.49	3,411.99	84.50	41.379	
6,700.00	6,695.93	14,238.69	9,320.00	23.81	95.78	94.88	-64.98	2,193.76	3,418.81	3,332.85	85.96	39.773	
6,800.00	6,795.93	14,238.69	9,320.00	24.17	95.78	94.88	-64.98	2,193.76	3,342.31	3,254.84	87.47	38.210	
6,900.00	6,895.93	14,238.69	9,320.00	24.53	95.78	94.88	-64.98	2,193.76	3,267.08	3,178.04	89.04	36.692	
7,000.00	6,995.93	14,238.69	9,320.00	24.88	95.78	94.88	-64.98	2,193.76	3,193.21	3,102.55	90.66	35.221	
7,100.00	7,095.93	14,238.69	9,320.00	25.24	95.78	94.88	-64.98	2,193.76	3,120.80	3,028.46	92.34	33.798	
7,200.00	7,195.93	14,238.69	9,320.00	25.60	95.78	94.88	-64.98	2,193.76	3,049.95	2,955.88	94.07	32.423	
7,300.00	7,295.93	14,238.69	9,320.00	25.96	95.78	94.88	-64.98	2,193.76	2,980.76	2,884.92	95.85	31.099	
7,400.00	7,395.93	14,238.69	9,320.00	26.31	95.78	94.88	-64.98	2,193.76	2,913.37	2,815.70	97.68	29.827	
7,500.00	7,495.93	14,238.69	9,320.00	26.67	95.78	94.88	-64.98	2,193.76	2,847.90	2,748.35	99.55	28.608	
7,600.00	7,595.93	14,238.69	9,320.00	27.03	95.78	94.88	-64.98	2,193.76	2,784.48	2,683.01	101.47	27.443	
7,700.00	7,695.93	14,238.69	9,320.00	27.39	95.78	94.88	-64.98	2,193.76	2,723.25	2,619.84	103.42	26.333	
7,800.00	7,795.93	14,238.69	9,320.00	27.74	95.78	94.88	-64.98	2,193.76	2,664.37	2,558.98	105.39	25.280	
7,900.00	7,895.93	14,238.69	9,320.00	28.10	95.78	94.88	-64.98	2,193.76	2,608.00	2,500.61	107.39	24.285	
8,000.00	7,995.93	14,238.69	9,320.00	28.46	95.78	94.88	-64.98	2,193.76	2,554.30	2,444.91	109.39	23.349	
8,100.00	8,095.93	14,238.69	9,320.00	28.82	95.78	94.88	-64.98	2,193.76	2,503.45	2,392.05	111.39	22.474	
8,200.00	8,195.93	14,238.69	9,320.00	29.17	95.78	94.88	-64.98	2,193.76	2,455.61	2,342.23	113.38	21.659	
8,300.00	8,295.93	14,238.69	9,320.00	29.53	95.78	94.88	-64.98	2,193.76	2,410.98	2,295.65	115.32	20.906	
8,400.00	8,395.93	14,238.69	9,320.00	29.89	95.78	94.88	-64.98	2,193.76	2,369.73	2,252.51	117.22	20.216	
8,500.00	8,495.93	14,238.69	9,320.00	30.25	95.78	94.88	-64.98	2,193.76	2,332.03	2,212.99	119.04	19.590	
8,600.00	8,595.93	14,238.69	9,320.00	30.60	95.78	94.88	-64.98	2,193.76	2,298.08	2,177.30	120.78	19.027	
8,700.00	8,695.93	14,238.69	9,320.00	30.96	95.78	94.88	-64.98	2,193.76	2,268.03	2,145.63	122.40	18.530	
8,775.31	8,771.24	14,238.69	9,320.00	31.23	95.78	94.88	-64.98	2,193.76	2,248.07	2,124.53	123.54	18.197	
8,800.00	8,795.92	14,238.69	9,320.00	31.31	95.78	94.87	-64.98	2,193.76	2,241.90	2,118.01	123.89	18.096	
8,850.00	8,845.72	14,238.69	9,320.00	31.47	95.78	94.76	-64.98	2,193.76	2,229.32	2,104.76	124.56	17.898	
8,900.00	8,894.95	14,238.69	9,320.00	31.62	95.78	94.54	-64.98	2,193.76	2,216.74	2,091.56	125.18	17.708	
8,950.00	8,943.23	14,238.69	9,320.00	31.77	95.78	94.21	-64.98	2,193.76	2,204.24	2,078.48	125.75	17.528	
9,000.00	8,990.21	14,238.69	9,320.00	31.91	95.78	93.78	-64.98	2,193.76	2,191.92	2,065.65	126.27	17.359	
9,050.00	9,035.53	14,238.69	9,320.00	32.05	95.78	93.24	-64.98	2,193.76	2,179.88	2,053.15	126.73	17.200	
9,100.00	9,078.83	14,238.69	9,320.00	32.18	95.78	92.59	-64.98	2,193.76	2,168.22	2,041.09	127.14	17.054	
9,150.00	9,119.79	14,238.69	9,320.00	32.31	95.78	91.85	-64.98	2,193.76	2,157.04	2,029.56	127.48	16.921	
9,200.00	9,158.09	14,238.69	9,320.00	32.44	95.78	91.02	-64.98	2,193.76	2,146.41	2,018.65	127.76	16.800	
9,250.00	9,193.46	14,237.00	9,320.00	32.58	95.75	90.13	-66.67	2,193.76	2,136.45	2,008.48	127.96	16.696	
9,300.00	9,225.61	14,200.48	9,320.00	32.72	95.18	90.13	-104.15	2,193.67	2,126.86	1,999.23	127.63	16.664	
9,350.00	9,254.30	14,159.44	9,320.00	32.86	94.55	90.13	-144.23	2,193.58	2,117.34	1,990.13	127.21	16.645	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #203H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,400.00	9,279.32	14,117.06	9,320.00	33.01	93.89	90.13	-186.61	2,193.48	2,107.81	1,981.06	126.74	16.630	
9,450.00	9,300.46	14,072.71	9,320.00	33.17	93.21	90.13	-230.96	2,193.37	2,098.21	1,971.97	126.24	16.621	
9,500.00	9,317.59	14,026.73	9,320.00	33.34	92.50	90.13	-276.95	2,193.27	2,088.52	1,962.80	125.71	16.614	
9,550.00	9,330.55	13,979.45	9,320.00	33.52	91.77	90.13	-324.22	2,193.16	2,078.69	1,953.53	125.16	16.608	
9,575.31	9,335.49	13,955.14	9,320.00	33.62	91.39	90.13	-348.53	2,193.10	2,073.67	1,948.79	124.88	16.606	
9,600.00	9,339.47	13,931.28	9,320.00	33.71	91.02	90.13	-372.39	2,193.04	2,068.74	1,944.14	124.60	16.603	
9,650.00	9,345.57	13,882.69	9,320.00	33.91	90.28	90.13	-420.98	2,192.93	2,058.72	1,934.68	124.05	16.596	
9,700.00	9,349.08	13,833.85	9,320.00	34.13	89.53	90.13	-469.82	2,192.81	2,048.65	1,925.15	123.50	16.588	
9,741.98	9,350.00	13,807.24	9,320.00	34.32	89.12	90.13	-510.91	2,192.72	2,040.16	1,916.89	123.28	16.550	
9,800.00	9,350.00	13,735.77	9,320.00	34.61	88.02	90.13	-567.90	2,192.59	2,029.28	1,906.83	122.45	16.572	
9,900.00	9,350.00	13,636.86	9,320.00	35.15	86.51	90.13	-666.81	2,192.35	2,014.59	1,893.14	121.46	16.587	
10,000.00	9,350.00	13,537.33	9,320.00	35.75	84.99	90.13	-766.34	2,192.12	2,005.11	1,884.58	120.53	16.636	
10,100.00	9,350.00	13,437.43	9,320.00	36.40	83.47	90.13	-866.24	2,191.89	2,000.85	1,881.19	119.66	16.722	
10,123.34	9,350.00	13,414.09	9,320.00	36.56	83.12	90.13	-889.58	2,191.83	2,000.61	1,881.15	119.46	16.747	
10,200.00	9,350.00	13,337.43	9,320.00	37.10	81.96	90.13	-966.24	2,191.65	2,000.28	1,881.44	118.84	16.832	
10,300.00	9,350.00	13,237.43	9,320.00	37.86	80.45	90.13	-1,066.24	2,191.42	1,999.86	1,881.76	118.09	16.935	
10,400.00	9,350.00	13,137.43	9,320.00	38.68	78.94	90.13	-1,166.24	2,191.19	1,999.43	1,882.02	117.41	17.030	
10,500.00	9,350.00	13,037.43	9,320.00	39.54	77.45	90.13	-1,266.24	2,190.95	1,999.01	1,882.23	116.78	17.118	
10,600.00	9,350.00	12,937.44	9,320.00	40.46	75.96	90.13	-1,366.23	2,190.72	1,998.58	1,882.37	116.21	17.198	
10,700.00	9,350.00	12,837.44	9,320.00	41.42	74.47	90.13	-1,466.23	2,190.48	1,998.16	1,882.47	115.69	17.272	
10,800.00	9,350.00	12,737.44	9,320.00	42.43	73.00	90.13	-1,566.23	2,190.25	1,997.73	1,882.51	115.22	17.338	
10,900.00	9,350.00	12,637.44	9,320.00	43.48	71.53	90.13	-1,666.23	2,190.02	1,997.31	1,882.51	114.80	17.398	
11,000.00	9,350.00	12,537.44	9,320.00	44.56	70.07	90.13	-1,766.23	2,189.78	1,996.89	1,882.46	114.43	17.451	
11,100.00	9,350.00	12,437.44	9,320.00	45.68	68.62	90.13	-1,866.23	2,189.55	1,996.46	1,882.37	114.09	17.498	
11,200.00	9,350.00	12,337.44	9,320.00	46.83	67.18	90.13	-1,966.23	2,189.31	1,996.04	1,882.24	113.80	17.539	
11,300.00	9,350.00	12,237.44	9,320.00	48.00	65.75	90.13	-2,066.23	2,189.08	1,995.61	1,882.06	113.55	17.575	
11,400.00	9,350.00	12,137.44	9,320.00	49.21	64.32	90.13	-2,166.23	2,188.85	1,995.19	1,881.85	113.34	17.604	
11,500.00	9,350.00	12,037.44	9,320.00	50.44	62.92	90.13	-2,266.22	2,188.61	1,994.77	1,881.60	113.16	17.627	
11,600.00	9,350.00	11,937.44	9,320.00	51.70	61.52	90.13	-2,366.22	2,188.38	1,994.34	1,881.32	113.02	17.646	
11,700.00	9,350.00	11,837.45	9,320.00	52.98	60.13	90.13	-2,466.22	2,188.14	1,993.92	1,881.00	112.92	17.658	
11,800.00	9,350.00	11,737.45	9,320.00	54.28	58.76	90.13	-2,566.22	2,187.91	1,993.49	1,880.65	112.85	17.666	
11,900.00	9,350.00	11,637.45	9,320.00	55.59	57.41	90.13	-2,666.22	2,187.68	1,993.07	1,880.26	112.81	17.668	
12,000.00	9,350.00	11,537.45	9,320.00	56.93	56.07	90.13	-2,766.22	2,187.44	1,992.64	1,879.84	112.81	17.664	
12,100.00	9,350.00	11,437.45	9,320.00	58.28	54.75	90.13	-2,866.22	2,187.21	1,992.22	1,879.38	112.84	17.656	
12,200.00	9,350.00	11,337.45	9,320.00	59.65	53.45	90.13	-2,966.22	2,186.97	1,991.80	1,878.90	112.90	17.642	
12,300.00	9,350.00	11,237.45	9,320.00	61.03	52.16	90.13	-3,066.21	2,186.74	1,991.37	1,878.37	113.00	17.623	
12,400.00	9,350.00	11,137.45	9,320.00	62.43	50.90	90.13	-3,166.21	2,186.51	1,990.95	1,877.82	113.13	17.599	
12,500.00	9,350.00	11,037.45	9,320.00	63.83	49.66	90.13	-3,266.21	2,186.27	1,990.52	1,877.22	113.30	17.569	
12,600.00	9,350.00	10,937.45	9,320.00	65.25	48.45	90.13	-3,366.21	2,186.04	1,990.10	1,876.59	113.51	17.533	
12,700.00	9,350.00	10,837.45	9,320.00	66.68	47.26	90.13	-3,466.21	2,185.80	1,989.67	1,875.93	113.75	17.492	
12,800.00	9,350.00	10,737.45	9,320.00	68.12	46.11	90.13	-3,566.21	2,185.57	1,989.25	1,875.22	114.03	17.445	
12,900.00	9,350.00	10,637.46	9,320.00	69.57	44.98	90.13	-3,666.21	2,185.34	1,988.83	1,874.47	114.35	17.392	
13,000.00	9,350.00	10,537.46	9,320.00	71.03	43.89	90.13	-3,766.21	2,185.10	1,988.40	1,873.68	114.72	17.333	
13,100.00	9,350.00	10,437.46	9,320.00	72.50	42.83	90.13	-3,866.21	2,184.87	1,987.98	1,872.85	115.13	17.268	
13,200.00	9,350.00	10,337.46	9,320.00	73.98	41.81	90.13	-3,966.20	2,184.63	1,987.55	1,871.97	115.58	17.196	
13,300.00	9,350.00	10,237.46	9,320.00	75.46	40.84	90.13	-4,066.20	2,184.40	1,987.13	1,871.04	116.09	17.117	
13,400.00	9,350.00	10,137.46	9,320.00	76.95	39.90	90.13	-4,166.20	2,184.17	1,986.70	1,870.06	116.65	17.032	
13,500.00	9,350.00	10,037.46	9,320.00	78.45	39.02	90.13	-4,266.20	2,183.93	1,986.28	1,869.02	117.26	16.939	
13,600.00	9,350.00	9,937.46	9,320.00	79.95	38.19	90.13	-4,366.20	2,183.70	1,985.86	1,867.93	117.93	16.839	
13,700.00	9,350.00	9,837.46	9,320.00	81.46	37.41	90.13	-4,466.20	2,183.46	1,985.43	1,866.77	118.66	16.732	
13,800.00	9,350.00	9,737.46	9,320.00	82.98	36.68	90.13	-4,566.20	2,183.23	1,985.01	1,865.56	119.45	16.618	
13,900.00	9,350.00	9,639.63	9,315.09	84.50	36.03	90.07	-4,663.86	2,183.00	1,984.64	1,864.32	120.31	16.495	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #203H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,000.00	9,350.00	9,544.46	9,300.54	86.02	35.42	89.89	-4,757.87	2,182.78	1,984.45	1,863.21	121.24	16.369	
14,000.83	9,350.00	9,543.70	9,300.38	86.03	35.42	89.89	-4,758.60	2,182.78	1,984.45	1,863.21	121.24	16.367	CC
14,100.00	9,350.00	9,456.80	9,275.06	87.55	34.89	89.43	-4,841.65	2,182.59	1,984.80	1,862.57	122.23	16.238	ES
14,185.37	9,350.00	9,389.25	9,246.87	88.71	34.50	88.73	-4,902.99	2,182.44	1,985.98	1,863.01	122.97	16.150	SF

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #206H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	161.30	-5,561.81	1,882.74	5,871.85				
100.00	100.00	88.00	88.00	0.13	0.11	161.30	-5,561.81	1,882.74	5,871.84	5,871.60	0.24	N/A	
200.00	200.00	188.00	188.00	0.49	0.44	161.30	-5,561.81	1,882.74	5,871.84	5,870.91	0.93	6,324.399	
300.00	300.00	288.00	288.00	0.84	0.80	161.30	-5,561.81	1,882.74	5,871.84	5,870.19	1.65	3,568.670	
400.00	400.00	388.00	388.00	1.20	1.16	161.30	-5,561.81	1,882.74	5,871.84	5,869.47	2.36	2,485.614	
500.00	500.00	488.00	488.00	1.56	1.52	161.30	-5,561.81	1,882.74	5,871.84	5,868.76	3.08	1,906.891	
600.00	600.00	588.00	588.00	1.92	1.88	161.30	-5,561.81	1,882.74	5,871.84	5,868.04	3.80	1,546.761	
700.00	700.00	688.00	688.00	2.28	2.24	161.30	-5,561.81	1,882.74	5,871.84	5,867.32	4.51	1,301.048	
800.00	800.00	1,332.53	1,331.07	2.64	4.56	161.46	-5,537.80	1,857.58	5,866.24	5,859.07	7.17	818.579	
900.00	899.99	1,432.04	1,430.04	2.99	4.93	161.51	-5,530.62	1,850.06	5,858.11	5,850.23	7.88	743.236	
1,000.00	999.91	1,531.63	1,529.09	3.35	5.31	161.58	-5,523.43	1,842.52	5,852.25	5,843.65	8.60	680.477	
1,066.93	1,066.72	1,598.30	1,595.39	3.60	5.56	161.63	-5,518.62	1,837.48	5,849.60	5,840.52	9.08	644.045	
1,100.00	1,099.70	1,631.23	1,628.14	3.71	5.68	161.66	-5,516.25	1,834.99	5,848.55	5,839.23	9.32	627.416	
1,200.00	1,199.46	1,730.83	1,727.19	4.07	6.06	161.74	-5,509.06	1,827.46	5,845.36	5,835.31	10.05	581.820	
1,300.00	1,299.21	1,830.43	1,826.24	4.44	6.44	161.82	-5,501.87	1,819.93	5,842.19	5,831.41	10.77	542.283	
1,400.00	1,398.97	1,930.03	1,925.30	4.80	6.82	161.90	-5,494.68	1,812.40	5,839.02	5,827.52	11.50	507.686	
1,500.00	1,498.73	2,029.62	2,024.35	5.17	7.21	161.99	-5,487.50	1,804.87	5,835.87	5,823.64	12.23	477.167	
1,600.00	1,598.48	2,129.22	2,123.40	5.53	7.59	162.07	-5,480.31	1,797.33	5,832.74	5,819.78	12.96	450.051	
1,700.00	1,698.24	2,228.82	2,222.45	5.90	7.98	162.15	-5,473.12	1,789.80	5,829.61	5,815.92	13.69	425.804	
1,800.00	1,797.99	2,328.41	2,321.50	6.27	8.36	162.24	-5,465.94	1,782.27	5,826.50	5,812.07	14.42	403.996	
1,900.00	1,897.75	2,428.01	2,420.55	6.64	8.75	162.32	-5,458.75	1,774.74	5,823.39	5,808.24	15.15	384.280	
2,000.00	1,997.51	2,527.61	2,519.60	7.01	9.13	162.40	-5,451.56	1,767.21	5,820.30	5,804.42	15.89	366.370	
2,100.00	2,097.26	2,627.20	2,618.66	7.38	9.52	162.49	-5,444.37	1,759.67	5,817.23	5,800.61	16.62	350.030	
2,200.00	2,197.02	3,082.45	3,069.09	7.75	11.37	162.83	-5,399.62	1,712.78	5,809.80	5,791.16	18.64	311.657	
2,300.00	2,296.77	3,181.33	3,166.47	8.12	11.80	162.95	-5,387.77	1,700.36	5,800.68	5,781.29	19.39	299.210	
2,400.00	2,396.53	3,280.21	3,263.85	8.49	12.22	163.07	-5,375.92	1,687.94	5,791.59	5,771.45	20.13	287.670	
2,500.00	2,496.28	3,379.10	3,361.24	8.86	12.64	163.18	-5,364.06	1,675.51	5,782.52	5,761.64	20.88	276.941	
2,557.14	2,553.28	3,435.60	3,416.88	9.07	12.89	163.25	-5,357.29	1,668.41	5,777.35	5,756.04	21.31	271.144	
2,600.00	2,596.06	3,477.98	3,458.61	9.23	13.07	163.30	-5,352.21	1,663.09	5,773.26	5,751.63	21.63	266.935	
2,700.00	2,695.95	3,576.77	3,555.91	9.59	13.50	163.41	-5,340.36	1,650.68	5,762.10	5,739.73	22.37	257.535	
2,800.00	2,795.93	3,675.41	3,653.05	9.95	13.93	163.50	-5,328.54	1,638.29	5,748.67	5,725.56	23.12	248.679	
2,824.07	2,820.00	3,700.88	3,676.40	10.04	14.04	163.52	-5,325.70	1,635.31	5,745.10	5,721.80	23.30	246.544	
2,900.00	2,895.93	3,773.90	3,750.04	10.30	14.35	163.59	-5,316.73	1,625.91	5,733.63	5,709.77	23.86	240.340	
3,000.00	2,995.93	3,872.38	3,847.02	10.65	14.78	163.68	-5,304.93	1,613.54	5,718.53	5,693.93	24.60	232.505	
3,100.00	3,095.93	3,970.86	3,944.01	11.01	15.21	163.76	-5,293.12	1,601.17	5,703.44	5,678.11	25.33	225.121	
3,200.00	3,195.93	4,069.34	4,040.99	11.36	15.64	163.85	-5,281.32	1,588.80	5,688.37	5,662.29	26.08	218.150	
3,300.00	3,295.93	4,167.82	4,137.98	11.71	16.07	163.94	-5,269.51	1,576.43	5,673.31	5,646.49	26.82	211.558	
3,400.00	3,395.93	4,266.30	4,234.96	12.07	16.51	164.03	-5,257.70	1,564.05	5,658.26	5,630.70	27.56	205.316	
3,500.00	3,495.93	4,300.00	4,268.16	12.42	16.65	164.06	-5,253.72	1,559.88	5,643.66	5,615.60	28.07	201.077	
3,600.00	3,595.93	4,358.17	4,325.58	12.77	16.90	164.10	-5,247.30	1,553.15	5,629.96	5,601.30	28.66	196.436	
3,700.00	3,695.93	4,400.00	4,366.96	13.13	17.08	164.14	-5,243.05	1,548.70	5,617.28	5,588.08	29.19	192.413	
3,800.00	3,795.93	4,445.36	4,411.90	13.48	17.27	164.17	-5,238.81	1,544.25	5,605.58	5,575.84	29.74	188.516	
3,900.00	3,895.93	4,500.00	4,466.12	13.84	17.49	164.20	-5,234.18	1,539.40	5,594.89	5,564.59	30.31	184.597	
4,000.00	3,995.93	14,253.56	9,320.00	14.19	95.95	97.11	-66.44	1,521.72	5,545.25	5,488.74	56.51	98.133	
4,100.00	4,095.93	14,253.56	9,320.00	14.55	95.95	97.11	-66.44	1,521.72	5,449.09	5,392.18	56.91	95.750	
4,200.00	4,195.93	14,253.56	9,320.00	14.90	95.95	97.11	-66.44	1,521.72	5,353.07	5,295.74	57.33	93.380	
4,300.00	4,295.93	14,253.56	9,320.00	15.26	95.95	97.11	-66.44	1,521.72	5,257.20	5,199.44	57.76	91.021	
4,400.00	4,395.93	14,253.56	9,320.00	15.61	95.95	97.11	-66.44	1,521.72	5,161.48	5,103.27	58.21	88.676	
4,500.00	4,495.93	14,253.56	9,320.00	15.97	95.95	97.11	-66.44	1,521.72	5,065.93	5,007.26	58.67	86.344	
4,600.00	4,595.93	14,253.56	9,320.00	16.32	95.95	97.11	-66.44	1,521.72	4,970.56	4,911.40	59.15	84.026	
4,700.00	4,695.93	14,253.56	9,320.00	16.68	95.95	97.11	-66.44	1,521.72	4,875.37	4,815.71	59.66	81.723	
4,800.00	4,795.93	14,253.56	9,320.00	17.03	95.95	97.11	-66.44	1,521.72	4,780.38	4,720.20	60.18	79.435	

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #206H - Wellbore #1 - Design #1

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.00	4,895.93	14,253.56	9,320.00	17.39	95.95	97.11	-66.44	1,521.72	4,685.60	4,624.87	60.72	77.163	
5,000.00	4,995.93	14,253.56	9,320.00	17.75	95.95	97.11	-66.44	1,521.72	4,591.03	4,529.74	61.29	74.907	
5,100.00	5,095.93	14,253.56	9,320.00	18.10	95.95	97.11	-66.44	1,521.72	4,496.71	4,434.83	61.88	72.668	
5,200.00	5,195.93	14,253.56	9,320.00	18.46	95.95	97.11	-66.44	1,521.72	4,402.63	4,340.14	62.50	70.447	
5,300.00	5,295.93	14,253.56	9,320.00	18.82	95.95	97.11	-66.44	1,521.72	4,308.82	4,245.69	63.14	68.245	
5,400.00	5,395.93	14,253.56	9,320.00	19.17	95.95	97.11	-66.44	1,521.72	4,215.30	4,151.49	63.81	66.061	
5,500.00	5,495.93	14,253.56	9,320.00	19.53	95.95	97.11	-66.44	1,521.72	4,122.08	4,057.57	64.51	63.898	
5,600.00	5,595.93	14,253.56	9,320.00	19.89	95.95	97.11	-66.44	1,521.72	4,029.18	3,963.94	65.24	61.756	
5,700.00	5,695.93	14,253.56	9,320.00	20.24	95.95	97.11	-66.44	1,521.72	3,936.64	3,870.62	66.01	59.635	
5,800.00	5,795.93	14,253.56	9,320.00	20.60	95.95	97.11	-66.44	1,521.72	3,844.46	3,777.65	66.82	57.538	
5,900.00	5,895.93	14,253.56	9,320.00	20.96	95.95	97.11	-66.44	1,521.72	3,752.69	3,685.03	67.66	55.464	
6,000.00	5,995.93	14,253.56	9,320.00	21.31	95.95	97.11	-66.44	1,521.72	3,661.35	3,592.80	68.55	53.414	
6,100.00	6,095.93	14,253.56	9,320.00	21.67	95.95	97.11	-66.44	1,521.72	3,570.47	3,500.99	69.48	51.391	
6,200.00	6,195.93	14,253.56	9,320.00	22.03	95.95	97.11	-66.44	1,521.72	3,480.09	3,409.64	70.45	49.395	
6,300.00	6,295.93	14,253.56	9,320.00	22.38	95.95	97.11	-66.44	1,521.72	3,390.25	3,318.77	71.48	47.428	
6,400.00	6,395.93	14,253.56	9,320.00	22.74	95.95	97.11	-66.44	1,521.72	3,301.00	3,228.43	72.57	45.490	
6,500.00	6,495.93	14,253.56	9,320.00	23.10	95.95	97.11	-66.44	1,521.72	3,212.38	3,138.67	73.71	43.583	
6,600.00	6,595.93	14,253.56	9,320.00	23.45	95.95	97.11	-66.44	1,521.72	3,124.45	3,049.54	74.91	41.710	
6,700.00	6,695.93	14,253.56	9,320.00	23.81	95.95	97.11	-66.44	1,521.72	3,037.26	2,961.08	76.18	39.870	
6,800.00	6,795.93	14,253.56	9,320.00	24.17	95.95	97.11	-66.44	1,521.72	2,950.89	2,873.37	77.52	38.067	
6,900.00	6,895.93	14,253.56	9,320.00	24.53	95.95	97.11	-66.44	1,521.72	2,865.40	2,786.47	78.93	36.303	
7,000.00	6,995.93	14,253.56	9,320.00	24.88	95.95	97.11	-66.44	1,521.72	2,780.88	2,700.46	80.42	34.578	
7,100.00	7,095.93	14,253.56	9,320.00	25.24	95.95	97.11	-66.44	1,521.72	2,697.42	2,615.42	82.00	32.895	
7,200.00	7,195.93	14,253.56	9,320.00	25.60	95.95	97.11	-66.44	1,521.72	2,615.13	2,531.46	83.66	31.257	
7,300.00	7,295.93	14,253.56	9,320.00	25.96	95.95	97.11	-66.44	1,521.72	2,534.10	2,448.68	85.42	29.666	
7,400.00	7,395.93	14,253.56	9,320.00	26.31	95.95	97.11	-66.44	1,521.72	2,454.48	2,367.20	87.27	28.124	
7,500.00	7,495.93	14,253.56	9,320.00	26.67	95.95	97.11	-66.44	1,521.72	2,376.39	2,287.17	89.23	26.634	
7,600.00	7,595.93	14,253.56	9,320.00	27.03	95.95	97.11	-66.44	1,521.72	2,300.01	2,208.73	91.28	25.198	
7,700.00	7,695.93	14,253.56	9,320.00	27.39	95.95	97.11	-66.44	1,521.72	2,225.49	2,132.06	93.43	23.819	
7,800.00	7,795.93	14,253.56	9,320.00	27.74	95.95	97.11	-66.44	1,521.72	2,153.04	2,057.35	95.69	22.500	
7,900.00	7,895.93	14,253.56	9,320.00	28.10	95.95	97.11	-66.44	1,521.72	2,082.88	1,984.84	98.04	21.245	
8,000.00	7,995.93	14,253.56	9,320.00	28.46	95.95	97.11	-66.44	1,521.72	2,015.23	1,914.75	100.49	20.055	
8,100.00	8,095.93	14,253.56	9,320.00	28.82	95.95	97.11	-66.44	1,521.72	1,950.37	1,847.36	103.01	18.934	
8,200.00	8,195.93	14,253.56	9,320.00	29.17	95.95	97.11	-66.44	1,521.72	1,888.58	1,782.98	105.60	17.885	
8,300.00	8,295.93	14,253.56	9,320.00	29.53	95.95	97.11	-66.44	1,521.72	1,830.17	1,721.95	108.23	16.911	
8,400.00	8,395.93	14,253.56	9,320.00	29.89	95.95	97.11	-66.44	1,521.72	1,775.47	1,664.61	110.87	16.014	
8,500.00	8,495.93	14,253.56	9,320.00	30.25	95.95	97.11	-66.44	1,521.72	1,724.85	1,611.36	113.49	15.198	
8,600.00	8,595.93	14,253.56	9,320.00	30.60	95.95	97.11	-66.44	1,521.72	1,678.65	1,562.61	116.05	14.465	
8,700.00	8,695.93	14,253.56	9,320.00	30.96	95.95	97.11	-66.44	1,521.72	1,637.27	1,518.78	118.49	13.817	
8,775.31	8,771.24	14,253.56	9,320.00	31.23	95.95	97.11	-66.44	1,521.72	1,609.51	1,489.29	120.23	13.387	
8,800.00	8,795.92	14,253.56	9,320.00	31.31	95.95	97.09	-66.44	1,521.72	1,600.92	1,480.15	120.77	13.256	
8,850.00	8,845.72	14,253.56	9,320.00	31.47	95.95	96.93	-66.44	1,521.72	1,583.63	1,461.80	121.83	12.999	
8,900.00	8,894.95	14,253.56	9,320.00	31.62	95.95	96.62	-66.44	1,521.72	1,566.60	1,443.75	122.85	12.752	
8,950.00	8,943.23	14,253.56	9,320.00	31.77	95.95	96.15	-66.44	1,521.72	1,549.97	1,426.16	123.81	12.519	
9,000.00	8,990.21	14,253.56	9,320.00	31.91	95.95	95.53	-66.44	1,521.72	1,533.89	1,409.18	124.71	12.300	
9,050.00	9,035.53	14,253.56	9,320.00	32.05	95.95	94.75	-66.44	1,521.72	1,518.49	1,392.95	125.54	12.096	
9,100.00	9,078.83	14,253.56	9,320.00	32.18	95.95	93.82	-66.44	1,521.72	1,503.91	1,377.62	126.29	11.908	
9,150.00	9,119.79	14,253.56	9,320.00	32.31	95.95	92.75	-66.44	1,521.72	1,490.30	1,363.34	126.96	11.738	
9,200.00	9,158.09	14,253.56	9,320.00	32.44	95.95	91.54	-66.44	1,521.72	1,477.78	1,350.24	127.54	11.587	
9,250.00	9,193.46	14,258.08	9,320.00	32.58	96.02	90.01	-61.92	1,521.72	1,466.47	1,338.36	128.11	11.447	
9,300.00	9,225.61	14,220.58	9,320.00	32.72	95.44	90.01	-99.41	1,521.72	1,456.13	1,328.32	127.82	11.392	
9,350.00	9,254.30	14,180.49	9,320.00	32.86	94.82	90.01	-139.51	1,521.71	1,446.13	1,318.70	127.43	11.349	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #206H - Wellbore #1 - Design #1

Offset Site Error: 0.00 usft

Survey Program: 0-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,400.00	9,279.32	14,138.09	9,320.00	33.01	94.16	90.01	-181.91	1,521.70	1,436.33	1,309.36	126.97	11.312	
9,450.00	9,300.46	14,106.28	9,320.00	33.17	93.67	90.01	-226.28	1,521.70	1,426.64	1,299.99	126.65	11.264	
9,500.00	9,317.59	14,047.71	9,320.00	33.34	92.76	90.01	-272.29	1,521.69	1,416.96	1,291.05	125.91	11.254	
9,550.00	9,330.55	14,000.42	9,320.00	33.52	92.03	90.01	-319.58	1,521.68	1,407.21	1,281.87	125.34	11.227	
9,575.31	9,335.49	13,976.10	9,320.00	33.62	91.66	90.01	-343.90	1,521.68	1,402.24	1,277.19	125.05	11.213	
9,600.00	9,339.47	13,952.23	9,320.00	33.71	91.29	90.01	-367.77	1,521.67	1,397.37	1,272.60	124.77	11.200	
9,650.00	9,345.57	13,903.61	9,320.00	33.91	90.54	90.01	-416.39	1,521.67	1,387.48	1,263.27	124.20	11.171	
9,700.00	9,349.08	13,854.75	9,320.00	34.13	89.79	90.01	-465.25	1,521.66	1,377.52	1,253.87	123.65	11.141	
9,741.98	9,350.00	13,813.64	9,320.00	34.32	89.16	90.01	-506.36	1,521.65	1,369.13	1,245.93	123.20	11.113	
9,800.00	9,350.00	13,756.63	9,320.00	34.61	88.29	90.01	-563.37	1,521.64	1,358.37	1,235.77	122.59	11.080	
9,900.00	9,350.00	13,657.69	9,320.00	35.15	86.77	90.01	-662.31	1,521.63	1,343.90	1,222.30	121.60	11.052	
10,000.00	9,350.00	13,558.13	9,320.00	35.75	85.26	90.01	-761.87	1,521.61	1,334.63	1,213.97	120.67	11.060	
10,100.00	9,350.00	13,458.22	9,320.00	36.40	83.74	90.01	-861.77	1,521.59	1,330.59	1,210.79	119.79	11.107	
10,123.34	9,350.00	13,434.88	9,320.00	36.56	83.38	90.01	-885.12	1,521.59	1,330.40	1,210.80	119.60	11.124	
10,200.00	9,350.00	13,358.23	9,320.00	37.10	82.22	90.01	-961.77	1,521.58	1,330.24	1,211.26	118.98	11.180	
10,300.00	9,350.00	13,258.23	9,320.00	37.86	80.71	90.01	-1,061.77	1,521.56	1,330.03	1,211.80	118.23	11.250	
10,400.00	9,350.00	13,158.23	9,320.00	38.68	79.21	90.01	-1,161.77	1,521.55	1,329.83	1,212.28	117.54	11.314	
10,500.00	9,350.00	13,058.23	9,320.00	39.54	77.72	90.01	-1,261.77	1,521.53	1,329.62	1,212.71	116.91	11.373	
10,600.00	9,350.00	12,958.23	9,320.00	40.46	76.23	90.01	-1,361.77	1,521.51	1,329.41	1,213.07	116.34	11.427	
10,700.00	9,350.00	12,858.23	9,320.00	41.42	74.74	90.01	-1,461.77	1,521.50	1,329.21	1,213.39	115.82	11.476	
10,800.00	9,350.00	12,758.23	9,320.00	42.43	73.27	90.01	-1,561.77	1,521.48	1,329.00	1,213.65	115.35	11.521	
10,900.00	9,350.00	12,658.23	9,320.00	43.48	71.80	90.01	-1,661.77	1,521.46	1,328.80	1,213.87	114.93	11.562	
11,000.00	9,350.00	12,558.23	9,320.00	44.56	70.34	90.01	-1,761.77	1,521.45	1,328.59	1,214.04	114.55	11.598	
11,100.00	9,350.00	12,458.23	9,320.00	45.68	68.89	90.01	-1,861.77	1,521.43	1,328.38	1,214.16	114.22	11.630	
11,200.00	9,350.00	12,358.23	9,320.00	46.83	67.45	90.01	-1,961.77	1,521.42	1,328.18	1,214.25	113.93	11.658	
11,300.00	9,350.00	12,258.23	9,320.00	48.00	66.02	90.01	-2,061.77	1,521.40	1,327.97	1,214.30	113.67	11.682	
11,400.00	9,350.00	12,158.23	9,320.00	49.21	64.60	90.01	-2,161.77	1,521.38	1,327.76	1,214.31	113.46	11.703	
11,500.00	9,350.00	12,058.23	9,320.00	50.44	63.19	90.01	-2,261.77	1,521.37	1,327.56	1,214.28	113.28	11.719	
11,600.00	9,350.00	11,958.23	9,320.00	51.70	61.79	90.01	-2,361.77	1,521.35	1,327.35	1,214.21	113.14	11.732	
11,700.00	9,350.00	11,858.23	9,320.00	52.98	60.41	90.01	-2,461.77	1,521.34	1,327.14	1,214.11	113.03	11.741	
11,800.00	9,350.00	11,758.23	9,320.00	54.28	59.04	90.01	-2,561.77	1,521.32	1,326.94	1,213.98	112.96	11.747	
11,900.00	9,350.00	11,658.23	9,320.00	55.59	57.68	90.01	-2,661.77	1,521.30	1,326.73	1,213.81	112.92	11.750	
12,000.00	9,350.00	11,558.23	9,320.00	56.93	56.35	90.01	-2,761.77	1,521.29	1,326.53	1,213.61	112.91	11.748	
12,100.00	9,350.00	11,458.23	9,320.00	58.28	55.03	90.01	-2,861.77	1,521.27	1,326.32	1,213.38	112.94	11.744	
12,200.00	9,350.00	11,358.23	9,320.00	59.65	53.72	90.01	-2,961.77	1,521.25	1,326.11	1,213.11	113.00	11.735	
12,300.00	9,350.00	11,258.23	9,320.00	61.03	52.44	90.01	-3,061.77	1,521.24	1,325.91	1,212.81	113.10	11.724	
12,400.00	9,350.00	11,158.23	9,320.00	62.43	51.18	90.01	-3,161.77	1,521.22	1,325.70	1,212.47	113.23	11.708	
12,500.00	9,350.00	11,058.23	9,320.00	63.83	49.94	90.01	-3,261.77	1,521.21	1,325.49	1,212.10	113.39	11.689	
12,600.00	9,350.00	10,958.23	9,320.00	65.25	48.73	90.01	-3,361.77	1,521.19	1,325.29	1,211.69	113.59	11.667	
12,700.00	9,350.00	10,858.23	9,320.00	66.68	47.54	90.01	-3,461.77	1,521.17	1,325.08	1,211.25	113.83	11.641	
12,800.00	9,350.00	10,758.23	9,320.00	68.12	46.39	90.01	-3,561.77	1,521.16	1,324.87	1,210.76	114.11	11.610	
12,900.00	9,350.00	10,658.23	9,320.00	69.57	45.26	90.01	-3,661.77	1,521.14	1,324.67	1,210.24	114.43	11.576	
13,000.00	9,350.00	10,558.23	9,320.00	71.03	44.17	90.01	-3,761.77	1,521.13	1,324.46	1,209.67	114.79	11.538	
13,100.00	9,350.00	10,458.23	9,320.00	72.50	43.11	90.01	-3,861.77	1,521.11	1,324.26	1,209.06	115.20	11.496	
13,200.00	9,350.00	10,358.23	9,320.00	73.98	42.09	90.01	-3,961.77	1,521.09	1,324.05	1,208.40	115.65	11.449	
13,300.00	9,350.00	10,258.23	9,320.00	75.46	41.11	90.01	-4,061.77	1,521.08	1,323.84	1,207.69	116.15	11.398	
13,400.00	9,350.00	10,158.23	9,320.00	76.95	40.18	90.01	-4,161.77	1,521.06	1,323.64	1,206.94	116.70	11.342	
13,500.00	9,350.00	10,058.23	9,320.00	78.45	39.30	90.01	-4,261.77	1,521.05	1,323.43	1,206.12	117.31	11.282	
13,600.00	9,350.00	9,958.23	9,320.00	79.95	38.46	90.01	-4,361.77	1,521.03	1,323.22	1,205.25	117.97	11.217	
13,700.00	9,350.00	9,858.23	9,320.00	81.46	37.68	90.01	-4,461.77	1,521.01	1,323.02	1,204.32	118.70	11.146	
13,800.00	9,350.00	9,758.23	9,320.00	82.98	36.96	90.01	-4,561.77	1,521.00	1,322.81	1,203.33	119.48	11.071	
13,900.00	9,350.00	9,660.00	9,316.42	84.50	36.30	89.93	-4,659.89	1,520.98	1,322.66	1,202.32	120.34	10.991	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #206H - Wellbore #1 - Design #1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,925.76	9,350.00	9,634.98	9,313.92	84.89	36.13	89.89	-4,684.79	1,520.98	1,322.65	1,202.09	120.56	10.971	CC
14,000.00	9,350.00	9,564.06	9,303.28	86.02	35.69	89.71	-4,754.89	1,520.97	1,322.75	1,201.51	121.24	10.910	
14,100.00	9,350.00	9,475.25	9,279.35	87.55	35.16	89.08	-4,840.32	1,520.95	1,323.54	1,201.35	122.20	10.831	ES
14,185.37	9,350.00	9,406.48	9,251.92	88.71	34.78	88.11	-4,903.34	1,520.94	1,325.42	1,202.54	122.87	10.787	SF

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #221H - Wellbore #1 - Design #3 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-90.07	-0.11	-90.03	90.03				
100.00	100.00	100.00	100.00	0.13	0.13	-90.07	-0.11	-90.03	90.03	89.78	0.25	353.743	
200.00	200.00	200.00	200.00	0.49	0.49	-90.07	-0.11	-90.03	90.03	89.06	0.97	92.678	
300.00	300.00	300.00	300.00	0.84	0.84	-90.07	-0.11	-90.03	90.03	88.34	1.69	53.324	
400.00	400.00	400.00	400.00	1.20	1.20	-90.07	-0.11	-90.03	90.03	87.63	2.41	37.430	
500.00	500.00	500.00	500.00	1.56	1.56	-90.07	-0.11	-90.03	90.03	86.91	3.12	28.836	
600.00	600.00	600.00	600.00	1.92	1.92	-90.07	-0.11	-90.03	90.03	86.19	3.84	23.451	
700.00	700.00	700.00	700.00	2.28	2.28	-90.07	-0.11	-90.03	90.03	85.48	4.56	19.761	
800.00	800.00	800.00	800.00	2.64	2.64	-90.07	-0.11	-90.03	90.03	84.76	5.27	17.074	CC, ES
900.00	899.99	897.77	897.76	2.99	2.98	-90.64	0.27	-91.23	91.52	85.55	5.97	15.318	
1,000.00	999.91	995.37	995.28	3.35	3.32	-92.23	1.39	-94.80	96.04	89.37	6.67	14.399	
1,066.93	1,066.72	1,060.51	1,060.31	3.60	3.55	-93.75	2.55	-98.51	100.80	93.66	7.13	14.129	
1,100.00	1,099.70	1,093.28	1,093.00	3.71	3.67	-94.53	3.23	-100.68	103.56	96.19	7.37	14.056	
1,200.00	1,199.46	1,207.16	1,192.32	4.07	4.08	-96.64	5.31	-107.31	112.03	103.90	8.13	13.780	
1,300.00	1,299.21	1,307.60	1,291.64	4.44	4.44	-98.45	7.39	-113.94	120.62	111.78	8.85	13.634	
1,400.00	1,398.97	1,408.03	1,390.96	4.80	4.81	-100.02	9.46	-120.57	129.33	119.76	9.57	13.516	
1,500.00	1,498.73	1,508.47	1,490.28	5.17	5.17	-101.39	11.54	-127.19	138.11	127.82	10.29	13.420	
1,600.00	1,598.48	1,608.91	1,589.60	5.53	5.54	-102.59	13.62	-133.82	146.97	135.95	11.02	13.341	
1,700.00	1,698.24	1,709.35	1,688.92	5.90	5.91	-103.66	15.69	-140.45	155.88	144.14	11.74	13.276	
1,800.00	1,797.99	1,809.78	1,788.24	6.27	6.28	-104.61	17.77	-147.07	164.84	152.37	12.47	13.220	
1,900.00	1,897.75	1,889.78	1,887.56	6.64	6.57	-105.46	19.85	-153.70	173.84	160.72	13.12	13.247	
2,000.00	1,997.51	1,989.34	1,986.88	7.01	6.94	-106.23	21.92	-160.33	182.87	169.03	13.85	13.205	
2,100.00	2,097.26	2,088.90	2,086.20	7.38	7.31	-106.93	24.00	-166.96	191.94	177.36	14.58	13.169	
2,200.00	2,197.02	2,188.46	2,185.52	7.75	7.68	-107.56	26.08	-173.58	201.03	185.73	15.30	13.137	
2,300.00	2,296.77	2,288.03	2,284.84	8.12	8.05	-108.14	28.15	-180.21	210.14	194.11	16.03	13.109	
2,400.00	2,396.53	2,387.59	2,384.16	8.49	8.42	-108.67	30.23	-186.84	219.28	202.52	16.76	13.085	
2,500.00	2,496.28	2,487.15	2,483.47	8.86	8.79	-109.16	32.31	-193.47	228.43	210.94	17.49	13.063	
2,557.14	2,553.28	2,541.98	2,538.15	9.07	8.99	-109.41	33.52	-197.33	233.86	215.97	17.89	13.072	
2,600.00	2,596.06	2,582.61	2,578.63	9.23	9.15	-109.47	34.57	-200.67	238.22	220.03	18.19	13.099	
2,700.00	2,695.95	2,677.17	2,672.68	9.59	9.51	-109.02	37.50	-210.02	248.87	230.00	18.87	13.189	
2,800.00	2,795.93	2,771.49	2,766.22	9.95	9.88	-107.79	41.11	-221.56	260.25	240.71	19.54	13.318	
2,824.07	2,820.00	2,804.67	2,789.83	10.04	10.01	-107.39	42.10	-224.72	263.04	243.30	19.75	13.320	
2,900.00	2,895.93	2,870.52	2,864.29	10.30	10.27	-106.12	45.23	-234.71	271.82	251.56	20.26	13.419	
3,000.00	2,995.93	2,969.55	2,962.35	10.65	10.67	-104.57	49.36	-247.87	283.56	262.59	20.97	13.522	
3,100.00	3,095.93	3,068.57	3,060.41	11.01	11.07	-103.15	53.48	-261.02	295.50	273.81	21.69	13.626	
3,200.00	3,195.93	3,167.60	3,158.47	11.36	11.46	-101.83	57.60	-274.18	307.60	285.20	22.40	13.732	
3,300.00	3,295.93	3,266.63	3,256.53	11.71	11.86	-100.62	61.73	-287.33	319.84	296.73	23.12	13.837	
3,400.00	3,395.93	3,365.65	3,354.60	12.07	12.27	-99.49	65.85	-300.49	332.22	308.39	23.83	13.941	
3,500.00	3,495.93	3,464.68	3,452.66	12.42	12.67	-98.45	69.97	-313.64	344.72	320.18	24.55	14.044	
3,600.00	3,595.93	3,563.70	3,550.72	12.77	13.07	-97.47	74.10	-326.80	357.32	332.06	25.26	14.145	
3,700.00	3,695.93	3,662.73	3,648.78	13.13	13.47	-96.57	78.22	-339.95	370.02	344.05	25.98	14.245	
3,800.00	3,795.93	3,761.76	3,746.84	13.48	13.88	-95.72	82.34	-353.11	382.81	356.11	26.69	14.342	
3,900.00	3,895.93	3,860.78	3,844.90	13.84	14.29	-94.93	86.47	-366.26	395.66	368.26	27.41	14.436	
4,000.00	3,995.93	3,959.81	3,942.97	14.19	14.69	-94.19	90.59	-379.42	408.59	380.47	28.12	14.528	
4,100.00	4,095.93	4,058.83	4,041.03	14.55	15.10	-93.50	94.71	-392.58	421.59	392.75	28.84	14.618	
4,200.00	4,195.93	4,157.86	4,139.09	14.90	15.51	-92.84	98.84	-405.73	434.64	405.08	29.56	14.705	
4,300.00	4,295.93	4,256.89	4,237.15	15.26	15.91	-92.23	102.96	-418.89	447.74	417.46	30.27	14.789	
4,400.00	4,395.93	4,355.91	4,335.21	15.61	16.32	-91.65	107.08	-432.04	460.89	429.90	30.99	14.872	
4,500.00	4,495.93	4,465.32	4,443.68	15.97	16.77	-91.08	111.34	-445.61	473.23	441.44	31.80	14.884	
4,600.00	4,595.93	4,578.23	4,556.01	16.32	17.21	-90.65	114.77	-456.56	482.89	450.28	32.61	14.810	
4,700.00	4,695.93	4,691.73	4,669.21	16.68	17.63	-90.35	117.22	-464.37	489.75	456.36	33.40	14.665	
4,800.00	4,795.93	4,805.61	4,782.99	17.03	18.04	-90.18	118.66	-468.98	493.79	459.63	34.16	14.456	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #221H - Wellbore #1 - Design #3 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.00	4,895.93	4,918.57	4,895.93	17.39	18.43	-90.13	119.09	-470.36	495.00	460.11	34.89	14.186	
5,000.00	4,995.93	5,018.57	4,995.93	17.75	18.76	-90.13	119.09	-470.36	495.00	459.41	35.59	13.908	
5,100.00	5,095.93	5,118.57	5,095.93	18.10	19.09	-90.13	119.09	-470.36	495.00	458.71	36.29	13.640	
5,200.00	5,195.93	5,218.57	5,195.93	18.46	19.42	-90.13	119.09	-470.36	495.00	458.01	36.99	13.382	
5,300.00	5,295.93	5,318.57	5,295.93	18.82	19.75	-90.13	119.09	-470.36	495.00	457.31	37.69	13.133	
5,400.00	5,395.93	5,418.57	5,395.93	19.17	20.09	-90.13	119.09	-470.36	495.00	456.61	38.39	12.893	
5,500.00	5,495.93	5,518.57	5,495.93	19.53	20.42	-90.13	119.09	-470.36	495.00	455.90	39.10	12.661	
5,600.00	5,595.93	5,618.57	5,595.93	19.89	20.75	-90.13	119.09	-470.36	495.00	455.20	39.80	12.438	
5,700.00	5,695.93	5,718.57	5,695.93	20.24	21.09	-90.13	119.09	-470.36	495.00	454.50	40.50	12.222	
5,800.00	5,795.93	5,818.57	5,795.93	20.60	21.43	-90.13	119.09	-470.36	495.00	453.80	41.20	12.013	
5,900.00	5,895.93	5,918.57	5,895.93	20.96	21.76	-90.13	119.09	-470.36	495.00	453.09	41.91	11.812	
6,000.00	5,995.93	6,018.57	5,995.93	21.31	22.10	-90.13	119.09	-470.36	495.00	452.39	42.61	11.616	
6,100.00	6,095.93	6,118.57	6,095.93	21.67	22.44	-90.13	119.09	-470.36	495.00	451.68	43.32	11.427	
6,200.00	6,195.93	6,218.57	6,195.93	22.03	22.78	-90.13	119.09	-470.36	495.00	450.98	44.02	11.244	
6,300.00	6,295.93	6,318.57	6,295.93	22.38	23.12	-90.13	119.09	-470.36	495.00	450.27	44.73	11.067	
6,400.00	6,395.93	6,418.57	6,395.93	22.74	23.46	-90.13	119.09	-470.36	495.00	449.57	45.43	10.895	
6,500.00	6,495.93	6,518.57	6,495.93	23.10	23.80	-90.13	119.09	-470.36	495.00	448.86	46.14	10.728	
6,600.00	6,595.93	6,618.57	6,595.93	23.45	24.14	-90.13	119.09	-470.36	495.00	448.15	46.85	10.566	
6,700.00	6,695.93	6,718.57	6,695.93	23.81	24.48	-90.13	119.09	-470.36	495.00	447.45	47.55	10.409	
6,800.00	6,795.93	6,818.57	6,795.93	24.17	24.83	-90.13	119.09	-470.36	495.00	446.74	48.26	10.257	
6,900.00	6,895.93	6,918.57	6,895.93	24.53	25.17	-90.13	119.09	-470.36	495.00	446.03	48.97	10.109	
7,000.00	6,995.93	7,018.57	6,995.93	24.88	25.51	-90.13	119.09	-470.36	495.00	445.32	49.68	9.965	
7,100.00	7,095.93	7,118.57	7,095.93	25.24	25.86	-90.13	119.09	-470.36	495.00	444.62	50.38	9.825	
7,200.00	7,195.93	7,218.57	7,195.93	25.60	26.20	-90.13	119.09	-470.36	495.00	443.91	51.09	9.688	
7,300.00	7,295.93	7,318.57	7,295.93	25.96	26.54	-90.13	119.09	-470.36	495.00	443.20	51.80	9.556	
7,400.00	7,395.93	7,418.57	7,395.93	26.31	26.89	-90.13	119.09	-470.36	495.00	442.49	52.51	9.427	
7,500.00	7,495.93	7,518.57	7,495.93	26.67	27.23	-90.13	119.09	-470.36	495.00	441.78	53.22	9.301	
7,600.00	7,595.93	7,618.57	7,595.93	27.03	27.58	-90.13	119.09	-470.36	495.00	441.07	53.93	9.179	
7,700.00	7,695.93	7,718.57	7,695.93	27.39	27.92	-90.13	119.09	-470.36	495.00	440.36	54.64	9.060	
7,800.00	7,795.93	7,818.57	7,795.93	27.74	28.27	-90.13	119.09	-470.36	495.00	439.65	55.35	8.944	
7,900.00	7,895.93	7,918.57	7,895.93	28.10	28.62	-90.13	119.09	-470.36	495.00	438.94	56.06	8.830	
8,000.00	7,995.93	8,018.57	7,995.93	28.46	28.96	-90.13	119.09	-470.36	495.00	438.23	56.77	8.720	
8,100.00	8,095.93	8,118.57	8,095.93	28.82	29.31	-90.13	119.09	-470.36	495.00	437.52	57.48	8.612	
8,200.00	8,195.93	8,218.57	8,195.93	29.17	29.66	-90.13	119.09	-470.36	495.00	436.81	58.19	8.507	
8,300.00	8,295.93	8,318.57	8,295.93	29.53	30.01	-90.13	119.09	-470.36	495.00	436.10	58.90	8.405	
8,400.00	8,395.93	8,418.57	8,395.93	29.89	30.35	-90.13	119.09	-470.36	495.00	435.39	59.61	8.304	
8,500.00	8,495.93	8,518.57	8,495.93	30.25	30.70	-90.13	119.09	-470.36	495.00	434.68	60.32	8.207	
8,600.00	8,595.93	8,618.57	8,595.93	30.60	31.05	-90.13	119.09	-470.36	495.00	433.97	61.03	8.111	
8,700.00	8,695.93	8,718.57	8,695.93	30.96	31.40	-90.13	119.09	-470.36	495.00	433.26	61.74	8.018	
8,775.31	8,771.24	8,806.12	8,771.24	31.23	31.70	-90.13	119.09	-470.36	495.00	432.68	62.32	7.943	
8,800.00	8,795.92	8,818.56	8,795.92	31.31	31.75	-90.07	119.09	-470.36	495.11	432.66	62.45	7.929	
8,850.00	8,845.72	8,868.36	8,845.72	31.47	31.92	-89.58	119.09	-470.36	495.99	433.21	62.78	7.901	
8,900.00	8,894.95	8,917.59	8,894.95	31.62	32.09	-88.60	119.09	-470.36	497.85	434.76	63.10	7.890 SF	
8,950.00	8,943.23	8,965.87	8,943.23	31.77	32.26	-87.16	119.09	-470.36	500.90	437.50	63.41	7.900	
9,000.00	8,990.21	9,012.85	8,990.21	31.91	32.43	-85.29	119.09	-470.36	505.41	441.71	63.71	7.934	
9,050.00	9,035.53	9,058.17	9,035.53	32.05	32.58	-83.02	119.09	-470.36	511.72	447.73	63.99	7.996	
9,100.00	9,078.83	9,101.47	9,078.83	32.18	32.73	-80.41	119.09	-470.36	520.20	455.92	64.27	8.094	
9,150.00	9,119.79	9,142.43	9,119.79	32.31	32.88	-77.53	119.09	-470.36	531.20	466.66	64.54	8.230	
9,200.00	9,158.09	9,180.73	9,158.09	32.44	33.01	-74.45	119.09	-470.36	545.06	480.26	64.80	8.412	
9,250.00	9,193.46	9,216.10	9,193.46	32.58	33.14	-71.24	119.09	-470.36	562.03	496.99	65.04	8.641	
9,300.00	9,225.61	9,248.25	9,225.61	32.72	33.25	-67.98	119.09	-470.36	582.29	517.02	65.27	8.921	
9,350.00	9,254.30	9,276.94	9,254.30	32.86	33.35	-64.76	119.09	-470.36	605.88	540.39	65.49	9.252	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #221H - Wellbore #1 - Design #3 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,400.00	9,279.32	9,301.96	9,279.32	33.01	33.44	-61.62	119.09	-470.36	632.75	567.06	65.68	9.634	
9,450.00	9,300.46	9,323.10	9,300.46	33.17	33.51	-58.61	119.09	-470.36	662.73	596.87	65.85	10.064	
9,500.00	9,317.59	9,340.23	9,317.59	33.34	33.57	-55.78	119.09	-470.36	695.56	629.56	66.00	10.539	
9,550.00	9,330.55	9,353.19	9,330.55	33.52	33.61	-53.14	119.09	-470.36	730.93	664.80	66.13	11.054	
9,575.31	9,335.49	9,358.13	9,335.49	33.62	33.63	-51.88	119.09	-470.36	749.68	683.50	66.18	11.328	
9,600.00	9,339.47	9,362.11	9,339.47	33.71	33.65	-50.71	119.09	-470.36	768.41	702.19	66.22	11.603	
9,650.00	9,345.57	9,368.21	9,345.57	33.91	33.67	-48.48	119.09	-470.36	807.50	741.19	66.30	12.179	
9,700.00	9,349.08	9,371.72	9,349.08	34.13	33.68	-46.46	119.09	-470.36	847.89	781.52	66.37	12.776	
9,741.98	9,350.00	9,372.64	9,350.00	34.32	33.68	-44.90	119.09	-470.36	882.63	816.22	66.41	13.291	
9,800.00	9,350.00	9,372.64	9,350.00	34.61	33.68	-42.89	119.09	-470.36	931.18	864.72	66.46	14.011	
9,900.00	9,350.00	9,372.64	9,350.00	35.15	33.68	-39.68	119.09	-470.36	1,015.09	948.55	66.54	15.255	
10,000.00	9,350.00	9,372.64	9,350.00	35.75	33.68	-36.74	119.09	-470.36	1,099.07	1,032.45	66.62	16.498	
10,100.00	9,350.00	11,053.13	10,300.00	36.40	39.26	-90.11	-862.78	-468.54	1,156.57	1,103.75	52.82	21.896	
10,123.34	9,350.00	11,076.48	10,300.00	36.56	39.40	-90.11	-886.13	-468.49	1,156.65	1,103.63	53.02	21.815	
10,200.00	9,350.00	11,153.13	10,300.00	37.10	39.90	-90.11	-962.78	-468.35	1,156.66	1,102.94	53.71	21.535	
10,300.00	9,350.00	11,253.13	10,300.00	37.86	40.60	-90.11	-1,062.78	-468.17	1,156.66	1,101.98	54.68	21.153	
10,400.00	9,350.00	11,353.13	10,300.00	38.68	41.35	-90.11	-1,162.78	-467.98	1,156.66	1,100.94	55.73	20.756	
10,500.00	9,350.00	11,453.13	10,300.00	39.54	42.16	-90.11	-1,262.78	-467.80	1,156.66	1,099.82	56.85	20.347	
10,600.00	9,350.00	11,553.13	10,300.00	40.46	43.01	-90.11	-1,362.78	-467.61	1,156.67	1,098.63	58.03	19.931	
10,700.00	9,350.00	11,653.13	10,300.00	41.42	43.91	-90.11	-1,462.78	-467.43	1,156.67	1,097.38	59.29	19.510	
10,800.00	9,350.00	11,753.13	10,300.00	42.43	44.85	-90.11	-1,562.78	-467.24	1,156.67	1,096.07	60.60	19.087	
10,900.00	9,350.00	11,853.13	10,300.00	43.48	45.83	-90.11	-1,662.78	-467.06	1,156.68	1,094.71	61.97	18.665	
11,000.00	9,350.00	11,953.13	10,300.00	44.56	46.85	-90.11	-1,762.78	-466.87	1,156.68	1,093.29	63.39	18.246	
11,100.00	9,350.00	12,053.13	10,300.00	45.68	47.90	-90.11	-1,862.78	-466.69	1,156.68	1,091.82	64.86	17.832	
11,200.00	9,350.00	12,153.13	10,300.00	46.83	48.99	-90.11	-1,962.78	-466.50	1,156.69	1,090.30	66.38	17.424	
11,300.00	9,350.00	12,253.13	10,300.00	48.00	50.11	-90.11	-2,062.78	-466.32	1,156.69	1,088.74	67.94	17.024	
11,400.00	9,350.00	12,353.13	10,300.00	49.21	51.26	-90.11	-2,162.78	-466.13	1,156.69	1,087.14	69.55	16.632	
11,500.00	9,350.00	12,453.13	10,300.00	50.44	52.43	-90.11	-2,262.78	-465.95	1,156.69	1,085.51	71.19	16.249	
11,600.00	9,350.00	12,553.13	10,300.00	51.70	53.63	-90.11	-2,362.78	-465.76	1,156.70	1,083.84	72.86	15.875	
11,700.00	9,350.00	12,653.13	10,300.00	52.98	54.86	-90.11	-2,462.78	-465.58	1,156.70	1,082.13	74.57	15.512	
11,800.00	9,350.00	12,753.13	10,300.00	54.28	56.10	-90.11	-2,562.78	-465.39	1,156.70	1,080.40	76.31	15.159	
11,900.00	9,350.00	12,853.13	10,300.00	55.59	57.37	-90.11	-2,662.78	-465.21	1,156.71	1,078.63	78.07	14.816	
12,000.00	9,350.00	12,953.13	10,300.00	56.93	58.66	-90.11	-2,762.78	-465.02	1,156.71	1,076.84	79.86	14.483	
12,100.00	9,350.00	13,053.13	10,300.00	58.28	59.96	-90.11	-2,862.78	-464.84	1,156.71	1,075.03	81.68	14.161	
12,200.00	9,350.00	13,153.13	10,300.00	59.65	61.28	-90.11	-2,962.78	-464.65	1,156.71	1,073.19	83.52	13.849	
12,300.00	9,350.00	13,253.13	10,300.00	61.03	62.62	-90.11	-3,062.78	-464.46	1,156.72	1,071.33	85.39	13.547	
12,400.00	9,350.00	13,353.13	10,300.00	62.43	63.97	-90.11	-3,162.78	-464.28	1,156.72	1,069.45	87.27	13.255	
12,500.00	9,350.00	13,453.13	10,300.00	63.83	65.34	-90.11	-3,262.78	-464.09	1,156.72	1,067.55	89.17	12.972	
12,600.00	9,350.00	13,553.13	10,300.00	65.25	66.72	-90.11	-3,362.78	-463.91	1,156.73	1,065.64	91.09	12.699	
12,700.00	9,350.00	13,653.13	10,300.00	66.68	68.11	-90.11	-3,462.78	-463.72	1,156.73	1,063.70	93.03	12.434	
12,800.00	9,350.00	13,753.13	10,300.00	68.12	69.51	-90.11	-3,562.78	-463.54	1,156.73	1,061.75	94.98	12.179	
12,900.00	9,350.00	13,853.13	10,300.00	69.57	70.93	-90.11	-3,662.78	-463.35	1,156.74	1,059.79	96.95	11.932	
13,000.00	9,350.00	13,953.13	10,300.00	71.03	72.35	-90.11	-3,762.78	-463.17	1,156.74	1,057.81	98.93	11.693	
13,100.00	9,350.00	14,053.13	10,300.00	72.50	73.79	-90.11	-3,862.78	-462.98	1,156.74	1,055.82	100.92	11.462	
13,200.00	9,350.00	14,153.13	10,300.00	73.98	75.23	-90.11	-3,962.78	-462.80	1,156.74	1,053.82	102.93	11.239	
13,300.00	9,350.00	14,253.13	10,300.00	75.46	76.68	-90.11	-4,062.78	-462.61	1,156.75	1,051.80	104.94	11.022	
13,400.00	9,350.00	14,353.13	10,300.00	76.95	78.14	-90.11	-4,162.78	-462.43	1,156.75	1,049.78	106.97	10.813	
13,500.00	9,350.00	14,453.13	10,300.00	78.45	79.61	-90.11	-4,262.78	-462.24	1,156.75	1,047.74	109.01	10.611	
13,600.00	9,350.00	14,553.13	10,300.00	79.95	81.09	-90.11	-4,362.77	-462.06	1,156.76	1,045.69	111.06	10.415	
13,700.00	9,350.00	14,653.13	10,300.00	81.46	82.57	-90.11	-4,462.77	-461.87	1,156.76	1,043.64	113.12	10.226	
13,800.00	9,350.00	14,753.13	10,300.00	82.98	84.06	-90.11	-4,562.77	-461.69	1,156.76	1,041.57	115.19	10.042	
13,900.00	9,350.00	14,853.13	10,300.00	84.50	85.55	-90.11	-4,662.77	-461.50	1,156.76	1,039.50	117.26	9.865	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #221H - Wellbore #1 - Design #3

Offset Site Error: 0.00 usft
Offset Well Error: 0.00 usft

Survey Program: 0-MWD

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,000.00	9,350.00	14,953.13	10,300.00	86.02	87.05	-90.11	-4,762.77	-461.32	1,156.77	1,037.42	119.35	9.693	
14,100.00	9,350.00	15,053.13	10,300.00	87.55	88.56	-90.11	-4,862.77	-461.13	1,156.77	1,035.33	121.44	9.526	
14,185.37	9,350.00	15,138.50	10,300.00	88.71	89.85	-90.11	-4,948.14	-460.97	1,156.77	1,033.76	123.01	9.404	

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #225H - Wellbore #1 - Design #3 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	89.74	0.14	29.95	29.95				
100.00	100.00	100.00	100.00	0.13	0.13	89.74	0.14	29.95	29.95	29.70	0.25	117.676	
200.00	200.00	200.00	200.00	0.49	0.49	89.74	0.14	29.95	29.95	28.98	0.97	30.830	
300.00	300.00	300.00	300.00	0.84	0.84	89.74	0.14	29.95	29.95	28.26	1.69	17.739	
400.00	400.00	400.00	400.00	1.20	1.20	89.74	0.14	29.95	29.95	27.54	2.41	12.452	
500.00	500.00	500.00	500.00	1.56	1.56	89.74	0.14	29.95	29.95	26.83	3.12	9.592	
600.00	600.00	600.00	600.00	1.92	1.92	89.74	0.14	29.95	29.95	26.11	3.84	7.801	
700.00	700.00	700.00	700.00	2.28	2.28	89.74	0.14	29.95	29.95	25.39	4.56	6.574	
800.00	800.00	800.00	800.00	2.64	2.64	89.74	0.14	29.95	29.95	24.68	5.27	5.680	CC, ES
900.00	899.99	899.37	899.36	2.99	2.99	90.68	0.92	30.98	30.73	24.74	5.98	5.136	
1,000.00	999.91	998.68	998.59	3.35	3.34	93.26	3.25	34.07	33.10	26.41	6.69	4.949	
1,066.93	1,066.72	1,068.68	1,064.88	3.60	3.59	95.58	5.67	37.29	35.63	28.46	7.17	4.968	
1,100.00	1,099.70	1,101.88	1,097.83	3.71	3.71	96.72	7.06	39.13	37.10	29.69	7.41	5.006	
1,200.00	1,199.46	1,202.00	1,197.46	4.07	4.07	99.66	11.26	44.70	41.60	33.47	8.13	5.117	
1,300.00	1,299.21	1,302.12	1,297.10	4.44	4.43	102.03	15.46	50.27	46.19	37.33	8.85	5.217	
1,400.00	1,398.97	1,402.24	1,396.73	4.80	4.80	103.97	19.66	55.83	50.84	41.26	9.58	5.308	
1,500.00	1,498.73	1,502.37	1,496.37	5.17	5.16	105.58	23.86	61.40	55.54	45.24	10.31	5.389	
1,600.00	1,598.48	1,602.49	1,596.00	5.53	5.53	106.93	28.05	66.97	60.28	49.24	11.04	5.461	
1,700.00	1,698.24	1,702.61	1,695.64	5.90	5.90	108.09	32.25	72.53	65.05	53.28	11.77	5.527	
1,800.00	1,797.99	1,802.73	1,795.27	6.27	6.27	109.09	36.45	78.10	69.84	57.34	12.50	5.585	
1,900.00	1,897.75	1,902.85	1,894.90	6.64	6.63	109.96	40.65	83.67	74.65	61.41	13.24	5.639	
2,000.00	1,997.51	2,002.97	1,994.54	7.01	7.00	110.73	44.85	89.24	79.48	65.50	13.97	5.687	
2,100.00	2,097.26	2,103.10	2,094.17	7.38	7.37	111.41	49.05	94.80	84.31	69.60	14.71	5.731	
2,200.00	2,197.02	2,203.22	2,193.81	7.75	7.74	112.01	53.25	100.37	89.16	73.71	15.45	5.772	
2,300.00	2,296.77	2,303.34	2,293.44	8.12	8.12	112.55	57.44	105.94	94.02	77.83	16.19	5.809	
2,400.00	2,396.53	2,396.54	2,393.08	8.49	8.46	113.04	61.64	111.50	98.88	81.98	16.90	5.852	
2,500.00	2,496.28	2,503.58	2,492.71	8.86	8.86	113.48	65.84	117.07	103.75	86.09	17.66	5.874	
2,557.14	2,553.28	2,553.49	2,549.64	9.07	9.04	113.72	68.24	120.25	106.54	88.48	18.06	5.900	
2,600.00	2,596.06	2,603.70	2,592.35	9.23	9.23	113.76	70.04	122.64	108.58	90.18	18.40	5.901	
2,700.00	2,695.95	2,703.81	2,691.99	9.59	9.60	112.93	74.24	128.21	112.96	93.83	19.13	5.905	
2,800.00	2,795.93	2,803.98	2,791.59	9.95	9.97	110.91	78.44	133.77	116.92	97.06	19.85	5.890	
2,824.07	2,820.00	2,820.04	2,815.55	10.04	10.03	110.25	79.45	135.11	117.83	97.84	19.99	5.893	
2,900.00	2,895.93	2,904.22	2,891.10	10.30	10.35	108.14	82.63	139.33	120.78	100.22	20.56	5.873	
3,000.00	2,995.93	3,004.46	2,990.62	10.65	10.72	105.51	86.82	144.89	124.91	103.63	21.28	5.871	
3,100.00	3,095.93	3,104.71	3,090.13	11.01	11.09	103.06	91.02	150.45	129.28	107.29	21.99	5.880	
3,200.00	3,195.93	3,204.95	3,189.64	11.36	11.46	100.77	95.21	156.01	133.87	111.17	22.70	5.898	
3,300.00	3,295.93	3,305.19	3,289.15	11.71	11.84	98.64	99.40	161.57	138.67	115.26	23.41	5.923	
3,400.00	3,395.93	3,394.56	3,388.67	12.07	12.17	96.65	103.60	167.13	143.64	119.56	24.08	5.965	
3,500.00	3,495.93	3,505.68	3,488.18	12.42	12.58	94.79	107.79	172.69	148.77	123.94	24.83	5.991	
3,600.00	3,595.93	3,605.93	3,587.69	12.77	12.96	93.06	111.98	178.25	154.05	128.51	25.54	6.031	
3,700.00	3,695.93	3,694.81	3,688.19	13.13	13.29	91.46	116.15	183.78	159.37	133.15	26.22	6.079	
3,800.00	3,795.93	3,798.14	3,791.39	13.48	13.66	90.36	119.16	187.78	163.20	136.25	26.95	6.056	
3,900.00	3,895.93	3,901.66	3,894.89	13.84	14.03	89.90	120.50	189.55	164.91	137.24	27.67	5.961	
4,000.00	3,995.93	4,002.70	3,995.93	14.19	14.38	89.87	120.57	189.64	165.00	136.63	28.37	5.816	
4,100.00	4,095.93	4,102.70	4,095.93	14.55	14.73	89.87	120.57	189.64	165.00	135.92	29.08	5.675	
4,200.00	4,195.93	4,202.70	4,195.93	14.90	15.08	89.87	120.57	189.64	165.00	135.22	29.78	5.541	
4,300.00	4,295.93	4,302.70	4,295.93	15.26	15.42	89.87	120.57	189.64	165.00	134.51	30.49	5.412	
4,400.00	4,395.93	4,402.70	4,395.93	15.61	15.77	89.87	120.57	189.64	165.00	133.81	31.19	5.290	
4,500.00	4,495.93	4,502.70	4,495.93	15.97	16.12	89.87	120.57	189.64	165.00	133.10	31.90	5.173	
4,600.00	4,595.93	4,602.70	4,595.93	16.32	16.47	89.87	120.57	189.64	165.00	132.39	32.61	5.060	
4,700.00	4,695.93	4,702.70	4,695.93	16.68	16.82	89.87	120.57	189.64	165.00	131.69	33.31	4.953	
4,800.00	4,795.93	4,802.70	4,795.93	17.03	17.17	89.87	120.57	189.64	165.00	130.98	34.02	4.850	

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #225H - Wellbore #1 - Design #3 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,900.00	4,895.93	4,902.70	4,895.93	17.39	17.52	89.87	120.57	189.64	165.00	130.27	34.73	4.751	
5,000.00	4,995.93	5,002.70	4,995.93	17.75	17.87	89.87	120.57	189.64	165.00	129.56	35.44	4.656	
5,100.00	5,095.93	5,102.70	5,095.93	18.10	18.22	89.87	120.57	189.64	165.00	128.85	36.15	4.565	
5,200.00	5,195.93	5,202.70	5,195.93	18.46	18.57	89.87	120.57	189.64	165.00	128.14	36.86	4.477	
5,300.00	5,295.93	5,302.70	5,295.93	18.82	18.92	89.87	120.57	189.64	165.00	127.43	37.57	4.392	
5,400.00	5,395.93	5,402.70	5,395.93	19.17	19.27	89.87	120.57	189.64	165.00	126.72	38.28	4.311	
5,500.00	5,495.93	5,502.70	5,495.93	19.53	19.62	89.87	120.57	189.64	165.00	126.01	38.99	4.232	
5,600.00	5,595.93	5,602.70	5,595.93	19.89	19.97	89.87	120.57	189.64	165.00	125.30	39.70	4.156	
5,700.00	5,695.93	5,702.70	5,695.93	20.24	20.33	89.87	120.57	189.64	165.00	124.59	40.41	4.083	
5,800.00	5,795.93	5,802.70	5,795.93	20.60	20.68	89.87	120.57	189.64	165.00	123.88	41.12	4.013	
5,900.00	5,895.93	5,902.70	5,895.93	20.96	21.03	89.87	120.57	189.64	165.00	123.17	41.83	3.945	
6,000.00	5,995.93	6,002.70	5,995.93	21.31	21.38	89.87	120.57	189.64	165.00	122.46	42.54	3.879	
6,100.00	6,095.93	6,102.70	6,095.93	21.67	21.74	89.87	120.57	189.64	165.00	121.75	43.25	3.815	
6,200.00	6,195.93	6,202.70	6,195.93	22.03	22.09	89.87	120.57	189.64	165.00	121.04	43.96	3.753	
6,300.00	6,295.93	6,302.70	6,295.93	22.38	22.44	89.87	120.57	189.64	165.00	120.32	44.68	3.693	
6,400.00	6,395.93	6,402.70	6,395.93	22.74	22.80	89.87	120.57	189.64	165.00	119.61	45.39	3.635	
6,500.00	6,495.93	6,502.70	6,495.93	23.10	23.15	89.87	120.57	189.64	165.00	118.90	46.10	3.579	
6,600.00	6,595.93	6,602.70	6,595.93	23.45	23.51	89.87	120.57	189.64	165.00	118.19	46.81	3.525	
6,700.00	6,695.93	6,702.70	6,695.93	23.81	23.86	89.87	120.57	189.64	165.00	117.47	47.53	3.472	
6,800.00	6,795.93	6,802.70	6,795.93	24.17	24.21	89.87	120.57	189.64	165.00	116.76	48.24	3.421	
6,900.00	6,895.93	6,902.70	6,895.93	24.53	24.57	89.87	120.57	189.64	165.00	116.05	48.95	3.371	
7,000.00	6,995.93	7,002.70	6,995.93	24.88	24.92	89.87	120.57	189.64	165.00	115.34	49.66	3.322	
7,100.00	7,095.93	7,102.70	7,095.93	25.24	25.28	89.87	120.57	189.64	165.00	114.62	50.38	3.275	
7,200.00	7,195.93	7,202.70	7,195.93	25.60	25.63	89.87	120.57	189.64	165.00	113.91	51.09	3.230	
7,300.00	7,295.93	7,302.70	7,295.93	25.96	25.99	89.87	120.57	189.64	165.00	113.20	51.80	3.185	
7,400.00	7,395.93	7,402.70	7,395.93	26.31	26.34	89.87	120.57	189.64	165.00	112.48	52.52	3.142	
7,500.00	7,495.93	7,502.70	7,495.93	26.67	26.70	89.87	120.57	189.64	165.00	111.77	53.23	3.100	
7,600.00	7,595.93	7,602.70	7,595.93	27.03	27.05	89.87	120.57	189.64	165.00	111.06	53.94	3.059	
7,700.00	7,695.93	7,702.70	7,695.93	27.39	27.41	89.87	120.57	189.64	165.00	110.34	54.66	3.019	
7,800.00	7,795.93	7,802.70	7,795.93	27.74	27.76	89.87	120.57	189.64	165.00	109.63	55.37	2.980	
7,900.00	7,895.93	7,902.70	7,895.93	28.10	28.12	89.87	120.57	189.64	165.00	108.92	56.08	2.942	
8,000.00	7,995.93	8,002.70	7,995.93	28.46	28.47	89.87	120.57	189.64	165.00	108.20	56.80	2.905	
8,100.00	8,095.93	8,102.70	8,095.93	28.82	28.83	89.87	120.57	189.64	165.00	107.49	57.51	2.869	
8,200.00	8,195.93	8,202.70	8,195.93	29.17	29.18	89.87	120.57	189.64	165.00	106.78	58.22	2.834	
8,300.00	8,295.93	8,302.70	8,295.93	29.53	29.54	89.87	120.57	189.64	165.00	106.06	58.94	2.800	
8,400.00	8,395.93	8,402.70	8,395.93	29.89	29.89	89.87	120.57	189.64	165.00	105.35	59.65	2.766	
8,500.00	8,495.93	8,502.70	8,495.93	30.25	30.25	89.87	120.57	189.64	165.00	104.63	60.37	2.733	
8,600.00	8,595.93	8,602.70	8,595.93	30.60	30.60	89.87	120.57	189.64	165.00	103.92	61.08	2.701	
8,700.00	8,695.93	8,702.70	8,695.93	30.96	30.96	89.87	120.57	189.64	165.00	103.20	61.80	2.670	
8,775.31	8,771.24	8,778.01	8,771.24	31.23	31.23	89.87	120.57	189.64	165.00	102.67	62.33	2.647	
8,800.00	8,795.92	8,802.69	8,795.92	31.31	31.32	89.69	120.57	189.64	164.90	102.39	62.50	2.638	
8,850.00	8,845.72	8,852.49	8,845.72	31.47	31.49	88.21	120.57	189.64	164.11	101.27	62.83	2.612	
8,900.00	8,894.95	8,901.72	8,894.95	31.62	31.67	85.21	120.57	189.64	162.86	99.71	63.15	2.579	
8,950.00	8,943.23	8,950.01	8,943.23	31.77	31.84	80.66	120.57	189.64	161.85	98.39	63.46	2.550	
8,969.74	8,961.96	8,968.73	8,961.96	31.83	31.91	78.45	120.57	189.64	161.73	98.15	63.58	2.544	
9,000.00	8,990.21	9,003.01	8,990.21	31.91	32.03	74.62	120.57	189.64	162.09	98.31	63.79	2.541 SF	
9,050.00	9,035.53	9,042.30	9,035.53	32.05	32.17	67.29	120.57	189.64	164.85	100.79	64.06	2.573	
9,100.00	9,078.83	9,085.60	9,078.83	32.18	32.32	59.07	120.57	189.64	171.45	107.09	64.35	2.664	
9,150.00	9,119.79	9,126.56	9,119.79	32.31	32.47	50.58	120.57	189.64	182.96	118.32	64.64	2.830	
9,200.00	9,158.09	9,164.87	9,158.09	32.44	32.61	42.42	120.57	189.64	199.99	135.08	64.92	3.081	
9,250.00	9,193.46	9,200.23	9,193.46	32.58	32.73	35.05	120.57	189.64	222.61	157.44	65.17	3.416	
9,300.00	9,225.61	9,232.38	9,225.61	32.72	32.85	28.67	120.57	189.64	250.46	185.06	65.40	3.830	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Offset Design Warren 25-23S-27E RB Fed COM - #225H - Wellbore #1 - Design #3 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
9,350.00	9,254.30	9,261.07	9,254.30	32.86	32.95	23.31	120.57	189.64	282.95	217.35	65.60	4.313	
9,400.00	9,279.32	9,286.09	9,279.32	33.01	33.04	18.87	120.57	189.64	319.42	253.65	65.77	4.857	
9,450.00	9,300.46	9,307.24	9,300.46	33.17	33.11	15.21	120.57	189.64	359.20	293.30	65.90	5.450	
9,500.00	9,317.59	9,324.36	9,317.59	33.34	33.17	12.19	120.57	189.64	401.69	335.68	66.01	6.085	
9,550.00	9,330.55	9,337.32	9,330.55	33.52	33.22	9.70	120.57	189.64	446.30	380.21	66.09	6.753	
9,575.31	9,335.49	9,342.27	9,335.49	33.62	33.24	8.60	120.57	189.64	469.53	403.40	66.12	7.101	
9,600.00	9,339.47	9,346.24	9,339.47	33.71	33.25	7.62	120.57	189.64	492.47	426.33	66.15	7.445	
9,650.00	9,345.57	9,352.35	9,345.57	33.91	33.27	5.89	120.57	189.64	539.59	473.40	66.18	8.153	
9,700.00	9,349.08	9,355.85	9,349.08	34.13	33.29	4.43	120.57	189.64	587.35	521.15	66.21	8.872	
9,741.98	9,350.00	9,356.77	9,350.00	34.32	33.29	3.38	120.57	189.64	627.80	561.59	66.22	9.481	
9,800.00	9,350.00	9,356.77	9,350.00	34.61	33.29	2.20	120.57	189.64	684.23	618.00	66.22	10.332	
9,900.00	9,350.00	9,356.77	9,350.00	35.15	33.29	0.86	120.57	189.64	782.75	716.52	66.24	11.817	
10,000.00	9,350.00	9,356.77	9,350.00	35.75	33.29	0.17	120.57	189.64	882.23	815.98	66.25	13.317	
10,100.00	9,350.00	11,037.53	10,300.00	36.40	39.10	89.92	-861.56	191.46	950.00	910.90	39.10	24.299	
10,123.34	9,350.00	11,060.87	10,300.00	36.56	39.24	89.94	-884.90	191.51	950.00	910.77	39.23	24.218	
10,200.00	9,350.00	11,137.53	10,300.00	37.10	39.74	89.95	-961.56	191.65	950.00	910.32	39.68	23.942	
10,300.00	9,350.00	11,237.53	10,300.00	37.86	40.43	89.95	-1,061.56	191.84	950.00	909.69	40.31	23.565	
10,400.00	9,350.00	11,337.53	10,300.00	38.68	41.18	89.95	-1,161.56	192.02	950.00	909.00	41.00	23.171	
10,500.00	9,350.00	11,437.53	10,300.00	39.54	41.99	89.95	-1,261.56	192.21	950.00	908.27	41.73	22.763	
10,600.00	9,350.00	11,537.53	10,300.00	40.46	42.84	89.95	-1,361.56	192.39	950.00	907.49	42.51	22.346	
10,700.00	9,350.00	11,637.53	10,300.00	41.42	43.74	89.95	-1,461.56	192.58	950.00	906.66	43.34	21.922	
10,800.00	9,350.00	11,737.53	10,300.00	42.43	44.68	89.96	-1,561.56	192.76	950.00	905.80	44.20	21.494	
10,900.00	9,350.00	11,837.53	10,300.00	43.48	45.66	89.96	-1,661.56	192.95	950.00	904.90	45.10	21.065	
11,000.00	9,350.00	11,937.53	10,300.00	44.56	46.68	89.96	-1,761.56	193.13	950.00	903.97	46.03	20.637	
11,100.00	9,350.00	12,037.53	10,300.00	45.68	47.73	89.96	-1,861.56	193.32	950.00	903.00	47.00	20.211	
11,200.00	9,350.00	12,137.53	10,300.00	46.83	48.82	89.96	-1,961.56	193.50	950.00	901.99	48.01	19.789	
11,300.00	9,350.00	12,237.53	10,300.00	48.00	49.94	89.97	-2,061.56	193.69	950.00	900.96	49.04	19.373	
11,400.00	9,350.00	12,337.53	10,300.00	49.21	51.09	89.97	-2,161.56	193.88	950.00	899.90	50.10	18.963	
11,500.00	9,350.00	12,437.53	10,300.00	50.44	52.27	89.97	-2,261.56	194.06	950.00	898.82	51.18	18.561	
11,600.00	9,350.00	12,537.53	10,300.00	51.70	53.47	89.97	-2,361.56	194.25	950.00	897.71	52.29	18.167	
11,700.00	9,350.00	12,637.53	10,300.00	52.98	54.70	89.98	-2,461.56	194.43	950.00	896.58	53.42	17.782	
11,800.00	9,350.00	12,737.53	10,300.00	54.28	55.94	89.98	-2,561.56	194.62	950.00	895.42	54.58	17.406	
11,900.00	9,350.00	12,837.53	10,300.00	55.59	57.21	89.98	-2,661.56	194.80	950.00	894.25	55.75	17.039	
12,000.00	9,350.00	12,937.53	10,300.00	56.93	58.50	89.99	-2,761.56	194.99	950.00	893.05	56.95	16.682	
12,100.00	9,350.00	13,037.53	10,300.00	58.28	59.81	89.99	-2,861.56	195.17	950.00	891.84	58.16	16.335	
12,200.00	9,350.00	13,137.53	10,300.00	59.65	61.13	90.00	-2,961.56	195.36	950.00	890.61	59.39	15.997	
12,300.00	9,350.00	13,237.53	10,300.00	61.03	62.47	90.00	-3,061.56	195.55	950.00	889.37	60.63	15.669	
12,400.00	9,350.00	13,337.53	10,300.00	62.43	63.82	90.01	-3,161.56	195.73	950.00	888.11	61.89	15.350	
12,500.00	9,350.00	13,437.53	10,300.00	63.83	65.19	90.02	-3,261.55	195.92	950.00	886.84	63.16	15.041	
12,600.00	9,350.00	13,537.53	10,300.00	65.25	66.57	90.02	-3,361.55	196.10	950.00	885.55	64.45	14.741	
12,700.00	9,350.00	13,637.53	10,300.00	66.68	67.97	90.03	-3,461.55	196.29	950.00	884.25	65.75	14.450	
12,800.00	9,350.00	13,737.53	10,300.00	68.12	69.37	90.04	-3,561.55	196.47	950.00	882.94	67.06	14.167	
12,900.00	9,350.00	13,837.53	10,300.00	69.57	70.79	90.06	-3,661.55	196.66	950.00	881.62	68.38	13.894	
13,000.00	9,350.00	13,937.53	10,300.00	71.03	72.21	90.07	-3,761.55	196.84	950.00	880.29	69.71	13.629	
13,100.00	9,350.00	14,037.53	10,300.00	72.50	73.65	90.09	-3,861.55	197.03	950.00	878.95	71.05	13.372	
13,200.00	9,350.00	14,137.53	10,300.00	73.98	75.09	90.10	-3,961.55	197.21	950.00	877.60	72.40	13.122	
13,300.00	9,350.00	14,237.53	10,300.00	75.46	76.55	90.13	-4,061.55	197.40	950.00	876.25	73.75	12.881	
13,400.00	9,350.00	14,337.53	10,300.00	76.95	78.01	90.16	-4,161.55	197.59	950.00	874.88	75.12	12.646	
13,500.00	9,350.00	14,437.53	10,300.00	78.45	79.48	90.20	-4,261.55	197.77	950.00	873.51	76.49	12.419	
13,600.00	9,350.00	14,537.53	10,300.00	79.95	80.96	90.25	-4,361.55	197.96	950.00	872.12	77.88	12.199	
13,700.00	9,350.00	14,637.53	10,300.00	81.46	82.44	90.32	-4,461.55	198.14	950.00	870.73	79.27	11.985	
13,800.00	9,350.00	14,737.53	10,300.00	82.98	83.93	90.43	-4,561.55	198.33	950.00	869.34	80.66	11.778	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

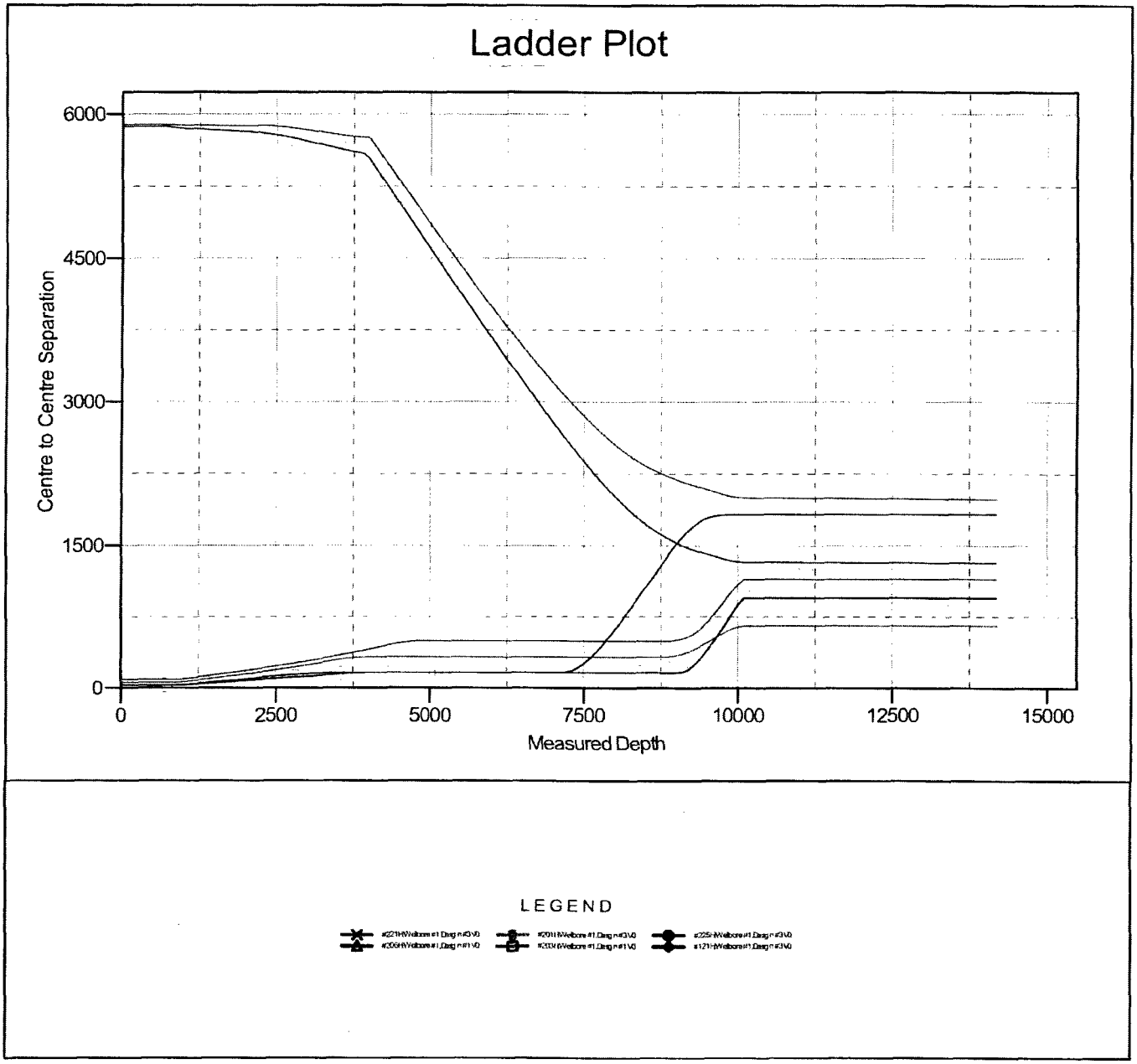
Offset Design Warren 25-23S-27E RB Fed COM - #225H - Wellbore #1 - Design #3

Offset Site Error: 0.00 usft
Survey Program: 0-MWD
Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Azimuth from North (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
13,900.00	9,350.00	14,837.53	10,300.00	84.50	85.43	90.62	-4,661.55	198.51	950.00	867.94	82.06	11.577	
14,000.00	9,350.00	14,937.53	10,300.00	86.02	86.93	91.01	-4,761.55	198.70	950.00	866.53	83.47	11.381	
14,100.00	9,350.00	15,037.53	10,300.00	87.55	88.44	92.32	-4,861.55	198.88	950.00	865.12	84.88	11.192	
14,185.37	9,350.00	15,122.89	10,300.00	88.71	89.73	0.00	-4,946.92	199.04	950.00	864.21	85.79	11.074	

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

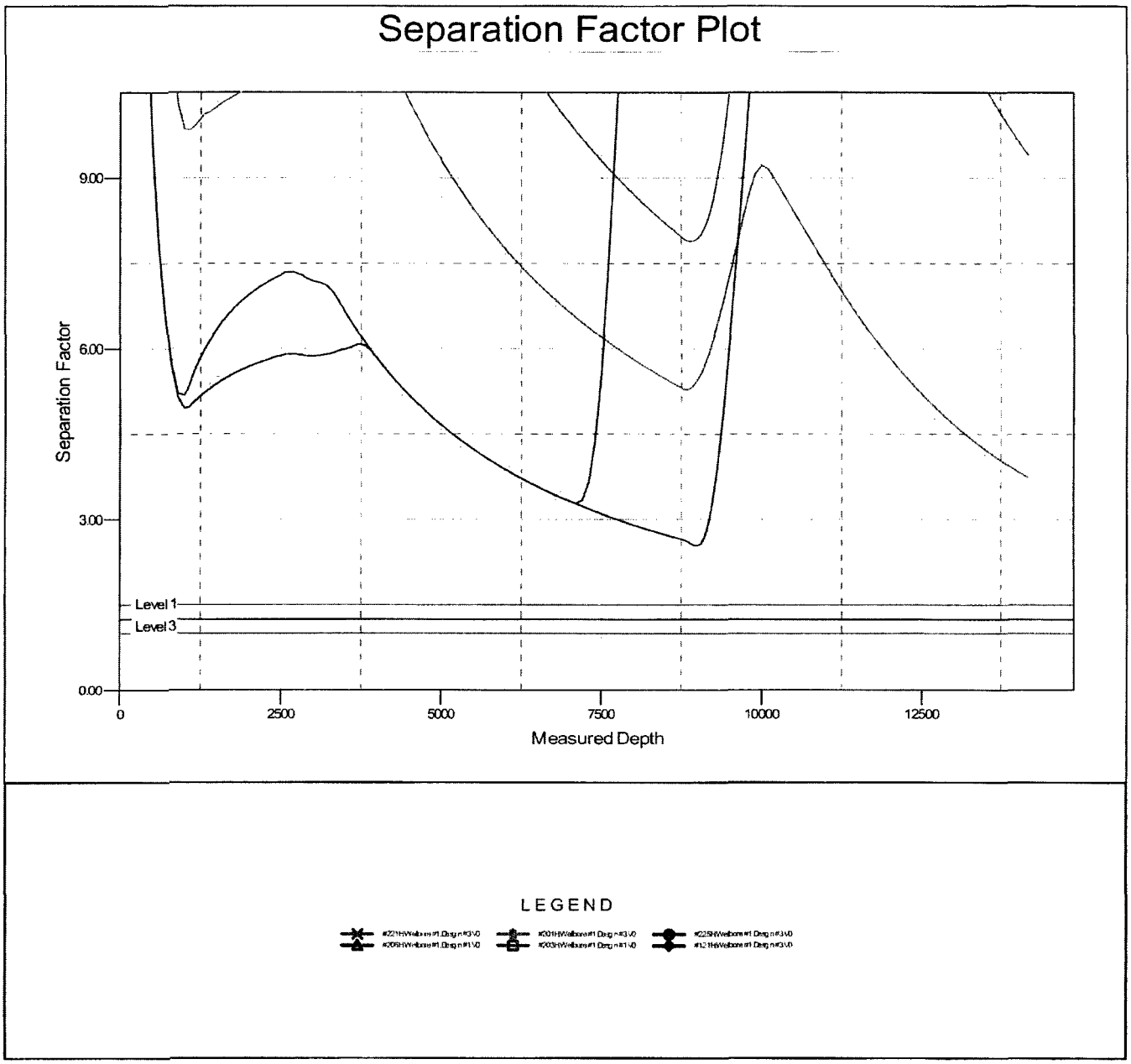
Reference Depths are relative to WELL @ 3162.00usft (Patterson 297) Coordinates are relative to: #205H
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Central Meridian is 104° 20' 0.000 W Grid Convergence at Surface is: 0.10°



CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

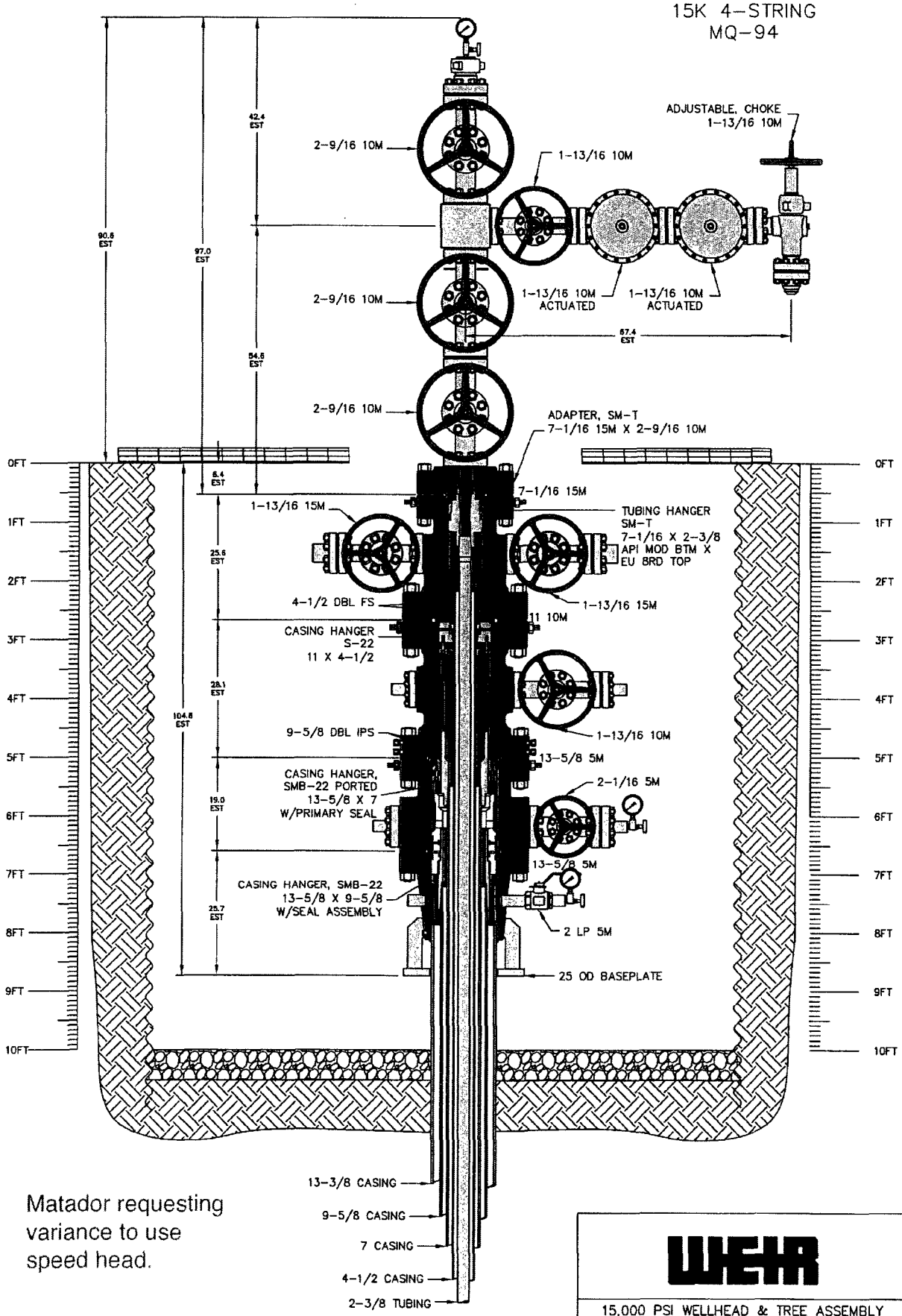
Company:	Matador Resources	**Local Co-ordinate Reference:**	Well #205H
Project:	Eddy County, New Mexico (NAD 27)	**TVD Reference:**	WELL @ 3162.00usft (Patterson 297)
Reference Site:	Warren 25-23S-27E RB Fed COM	**MD Reference:**	WELL @ 3162.00usft (Patterson 297)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	#205H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM Conroe
Reference Design:	Design #3	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 3162.00usft (Patterson 297) Coordinates are relative to: #205H
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30
Central Meridian is 104° 20' 0.000 W Grid Convergence at Surface is: 0.10°



CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

MATADOR
15K 4-STRING
MQ-94



Matador requesting variance to use speed head.

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

15,000 PSI WELLHEAD & TREE ASSEMBLY
13-3/8 X 9-5/8 X 7 X 4-1/2 X 2-3/8

DRAWN BY:	SCALE	DATE	REV
RPL	1:10	18JAN16	
CHECKED BY:	DRAWING NO.		
APPROVED BY:	P-20986		

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

December 31 2015

Tenaris

Size: 4.500 in.
Wall: 0.290 in.
Weight: 13.50 lbs/ft
Grade: P110-ICY
Min. Wall Thickness: 87.5 %

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

Nominal OD	**4.500** in.	Nominal Weight	**13.50** lbs/ft	Standard Drift Diameter	**3.795** in.
Nominal ID	**3.920** in.	Wall Thickness	**0.290** in.	Special Drift Diameter	**N/A**
Plain End Weight	**13.05** lbs/ft				

Body Yield Strength	**479** x 1000 lbs	Internal Yield	**14100** psi	SMYS	**125000** psi
Collapse	**11620** psi				

Connection OD	**5.000** in.	Coupling Length	**9.075** in.	Connection ID	**3.908** in.
Critical Section Area	**3.836** sq. in.	Threads per in.	**5.00**	Make-Up Loss	**4.016** in.

Tension Efficiency	**100** %	Joint Yield Strength	**479** x 1000 lbs	Internal Pressure Capacity[1]	**14100** psi
Structural Compression Efficiency	**100** %	Structural Compression Strength	**479** x 1000 lbs	Structural Bending[2]	**127** °/100 ft
External Pressure Capacity	**11620** psi				

Minimum	**6950** ft-lbs	Optimum	**7720** ft-lbs	Maximum	**8490** ft-lbs

Operating Torque	**10500** ft-lbs	Yield Torque	**12200** ft-lbs		

Blanking Dimensions

Matador Production Company
Warren Fed Com 221H
SHL 170' FNL & 740' FWL Sec. 25
BHL 240' FSL & 330' FWL Sec. 25
T. 23 S., R. 27 E., Eddy County, NM

Drilling Program

1. ESTIMATED TOPS

Formation	TVD	MD	Bearing
Quaternary	000	000	water
Salado salt	500	500	salt
Castile anhydrite	759	759	barren
(KOP	800	800	N/A)
Lamar Limestone	2343	2347	barren
Bell Canyon Sandstone	2408	2412	barren
Cherry Canyon Sandstone	3159	3168	hydrocarbons
Brushy Canyon Sandstone	4336	4357	hydrocarbons
Bone Spring Limestone	5828	5850	hydrocarbons
1st Bone Spring Carbonate	6497	6620	hydrocarbons
1st Bone Spring Sand	6867	6890	hydrocarbons
2nd Bone Spring Carbonate	7069	7092	hydrocarbons
2nd Bone Spring Sand	7515	7538	hydrocarbons
3rd Bone Spring Carbonate	7666	7689	hydrocarbons
3rd Bone Spring Sand	8853	8876	hydrocarbons
Wolfcamp Limestone	9217	9240	hydrocarbons
Wolfcamp X Sand Top	9226	9249	hydrocarbons
Wolfcamp X Sand Base	9260	9283	hydrocarbons
Wolfcamp Y Sand Top	9304	9327	hydrocarbons
Wolfcamp Y Sand Base	9345	9368	hydrocarbons
Wolfcamp Z Sand Top	9382	9405	hydrocarbons
Wolfcamp Z Sand Base	9474	9497	hydrocarbons
Wolfcamp A Fat Carbonate	9477	9500	hydrocarbons
Wolfcamp B Carbonate	9590	9613	hydrocarbons & goal
Wolfcamp B Carbonate	10292	10600	hydrocarbons & goal
TD	10300	15147	hydrocarbons

2. NOTABLE ZONES

Wolfcamp Y is the goal for this well. Hole will extend south of the last perforation point to allow for pump installation. All perforations will be ≥330' from the dedication perimeter. A windmill is ≈2700' SSW, but it is not in the State Engineer's database. Closest water well (C 02567) in the database is 2381' west. Water bearing strata were found at 120'.

3. PRESSURE CONTROL

A 5K BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram, and 1 annular preventer will be installed. BOP will be used below surface casing to TD. See attached BOP and choke manifold diagrams.

An accumulator complying with Onshore Order 2 requirements for the BOP stack pressure rating will be present. Rotating head will be installed as needed.

Pressure tests will be conducted before drilling out from under all casing strings. BOP will be inspected and operated as required by Onshore Order 2. 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 surface casing is set and the BOP is nipped up, then the BOP pressure tests will be made to 250 psi low and 2000 psi high. Intermediate 1 pressure tests will be made to 250 psi low and 3000 psi high. Intermediate 2 pressure tests will be made to 250 psi low and 5000 psi high. Annular preventer will be tested to 250 psi low and 1000 psi high on the surface casing, and 250 psi low and 2500 psi high on the intermediate 1 and 2 casing.

In the case of running a speed head with landing mandrel for 9.625" and 7" casing, after surface casing is set, BOP test pressures will be 250 psi low and

3000 psi high. Wellhead seals will be tested to 5000 psi once the 9.625" casing has been landed and cemented. BOP will then be lifted to install the C-section of the wellhead. BOP will then be nippled back up and pressure tests made to 250 psi low and 5000 psi high and the annular will be tested to 250 psi low and 2500 psi high.

Matador requests a variance to use a speed head. A diagram of the wellhead is attached.

Matador 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. The hose is not required by the manufacturer to be anchored. If the specific hose is not available, then one of equal or higher rating will be used.

4. CASING & CEMENT

All casing will be API and new.

Hole O. D.	Set MD	Set TVD	Casing O. D.	Weight (lb/ft)	Grade	Joint	Collapse	Burst	Tension
17.5"	0' - 475'	0' - 475'	13.375"	54.5	J-55	BTC	1.125	1.125	1.8
12.25"	0' - 2450'	0' - 2446'	9.625"	40	J-55	BTC	1.125	1.125	1.8
8.75"	0' - 10544'	0' – 10285'	7"	29	P-110	BTC	1.125	1.125	1.8
6.125"	0' – 15147'	0' – 10300'	4.5"	13.5	P-110	BTC/TXP	1.125	1.125	1.8

Name	Type	Sacks	Yield	Cu. Ft.	Weight	Blend
Surface	Lead	100	1.82	182	12.8	Class C + Bentonite + 2% $CaCl_2$ + 3% NaCl + LCM
	Tail	350	1.38	483	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			Centralizers per Onshore Order 2.III.B.1f	
Intermediate 1	Lead	510	2.13	1086	12.6	Class C + Bentonite + 1% $CaCl_2$ + 8% NaCl + LCM
	Tail	270	1.38	372	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			2 on btm jt, 1 on 2nd jt, 1 every 4th jt to surface	
Intermediate 2	Lead	600	2.36	1416	11.5	TXI + Fluid Loss + Dispersant + Retarder + LCM
	Tail	320	1.38	441	13.2	TXI + Fluid Loss + Dispersant + Retarder + LCM
TOC = 1400'		35% Excess			2 on btm jt, 1 on 2nd jt, 1 every other jt to top of tail cement (500' above TOC)	
Production	Tail	550	1.17	643	15.8	Class H + Fluid Loss + Dispersant + Retarder + LCM
TOC = 10000'		25% Excess			2 on btm jt, 1 on 2nd jt, 1 every third jt to top of curve	

5. MUD PROGRAM

An electronic Pason mud monitoring system complying with Onshore Order 1 will be used. All necessary mud products (barite, bentonite, LCM) for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to hole conditions. A closed loop system will be used.

Type	Interval	lb/gal	Viscosity	Fluid Loss
fresh water spud	0' - 475'	8.3	28	NC
brine water	475' - 2450'	10.0	30-32	NC
fresh water & cut brine	2450' - 10544'	9.0	30-31	NC
OBM	10544' – 15147'	12.5	50-60	<10

6. CORES, TESTS, & LOGS

No core or drill stem test is planned.

A 2-person mud-logging program will be used from ≈5600' to TD.

No electric logs are planned at this time. GR will be collected through the MWD tools from intermediate casing to TD. CBL with CCL will be run as far as gravity will let it fall to TOC.

7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈7500 psi. Expected bottom hole temperature is ≈170° F.

Matador does not anticipate that there will be enough H_2S from surface to the Bone Spring to meet BLM's minimum requirements for submitting an "H_2S Drilling Operation Plan" or "Public Protection Plan" for drilling and completing this well. Since Matador has an H_2S safety package on all wells, an "H_2S Drilling Operations Plan" is attached. Adequate flare lines will be installed off the mud/gas separator where gas will be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

8. OTHER INFORMATION

Anticipated spud date is upon approval. It is expected it will take ≈3 months to drill and complete the well. Matador Production Company owns the majority working interest in this well. Per its discussions with its potential partners, Matador will be named operator upon execution of the final Operating Agreements signed by the partners or the issuance of a pooling order by the State.

APD ID: 10400012800 **Submission Date:** 03/31/2017

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

Well Type: CONVENTIONAL GAS WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Warren_221H_Road_Map_07-25-2017.pdf

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

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? YES

New Road Map:

Warren_221H_Road_Map_07-25-2017.pdf

New road type: LOCAL

Length: 400 Feet **Width (ft.):** 30

Max slope (%): 1 **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: CROWN AND DITCH SURFACE WITH CALICHE

New road access plan or profile prepared? NO

New road access plan attachment:

Access road engineering design? NO

Access road engineering design attachment:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

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 DRAINAGE CROSSED

Road Drainage Control Structures (DCS) description: NONE NEEDED

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:

Warren_221H_Well_Map_03-30-2017.pdf

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:

Production Facilities map:

Warren_221H_Production_Diagram_03-30-2017.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

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

Water source type: GW WELL

Describe type:

Source longitude:

Source latitude:

Source datum:

Water source permit type: WATER WELL

Source land ownership: PRIVATE

Water source transport method: PIPELINE,TRUCKING

Source transportation land ownership: PRIVATE

Water source volume (barrels): 15000

Source volume (acre-feet): 1.9333965

Source volume (gal): 630000

Water source and transportation map:

Warren_221H_Water_Source_Map_03-30-2017.pdf

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.):**

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

Section 6 - Construction Materials

Construction Materials description: CALICHE - See Water Source Map

Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: CUTTINGS AND MUD

Amount of waste: 15000 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

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

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:

Warren_221H_Well_Site_Layout_03-30-2017.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: WARREN SLOT

Multiple Well Pad Number: 1

Recontouring attachment:

Warren_221H_Recontouring_Plat_03-30-2017.PDF

Drainage/Erosion control construction: TOPSOIL PILE WILL BE BERM ON UPHILL SIDE

Drainage/Erosion control reclamation: WILL HARROW ON CONTOUR

Wellpad long term disturbance (acres): 2.37

Wellpad short term disturbance (acres): 3.65

Access road long term disturbance (acres): 0.28

Access road short term disturbance (acres): 0.28

Pipeline long term disturbance (acres): 0

Pipeline short term disturbance (acres): 0

Other long term disturbance (acres): 0

Other short term disturbance (acres): 0

Total long term disturbance: 2.65

Total short term disturbance: 3.93

Reconstruction method: Interim reclamation will shrink the pad 35% by removing caliche and reclaiming the south side (130' x 430'), leaving 2.37 acres for 5 wells, truck turn around, and production equipment. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas. Disturbed areas will be seeded in accordance with BLM requirements. Enough stockpiled topsoil will be retained to cover the remainder of the pad when the wells are plugged. Once the last well is plugged, then the remainder of the pad and new road will be similarly reclaimed. Noxious weeds will be controlled.

Topsoil redistribution: EVENLY

Soil treatment: AS REQUIRED BY LANDOWNER

Existing Vegetation at the well pad:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

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?

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project?

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation?

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

Total pounds/Acre:

Seed Type	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? YES

Existing invasive species treatment description: HERBICIDE

Existing invasive species treatment attachment:

Weed treatment plan description: HERBICIDE

Weed treatment plan attachment:

Monitoring plan description: INSPECTION BY PUMPER

Monitoring plan attachment:

Success standards: AS REQUIRED BY LANDOWNER

Pit closure description: NO PIT

Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: NEW ACCESS ROAD

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:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

Other Local Office:

USFS Region:

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

Fee Owner: ANTONIO ONSUREZ **Fee Owner Address:** PO BOX 598 LOVING, NM 88256

Phone: (575)706-2280 **Email:**

Surface use plan certification: YES

Surface use plan certification document:

Warren_221H_Surface_Use_Agreement_03-30-2017.pdf

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: SURFACE USE AGREEMENT WITH OWNER

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Fee Owner: WILLIAM COLWELL **Fee Owner Address:** 241 COLWELL RANCH RD CARLSBAD, NM 88220

Phone: (575)826-3384 **Email:**

Surface use plan certification: YES

Surface use plan certification document:

Warren_221H_Surface_Use_Agreement_03-30-2017.pdf

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: SURFACE AGREEMENT WITH OWNER

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

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:**

Fee Owner: WILLIAM COLWELL

Fee Owner Address: 241 COLWELL RANCH RD CARLSBAD, NM 88220

Phone: (575)826-3384

Email:

Surface use plan certification: YES

Surface use plan certification document:

Warren_221H_Surface_Use_Agreement_03-30-2017.pdf

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: SURFACE USE AGREEMENT WITH OWNER

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

Disturbance type: OTHER

Describe: POWERLINE

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:**

Fee Owner: ANTONIO ONSUREZ **Fee Owner Address:** PO BOX 598 LOVING, NM 88256

Phone: (575)706-2280 **Email:**

Surface use plan certification: YES

Surface use plan certification document:

Warren_221H_Surface_Use_Agreement_03-30-2017.pdf

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: SURFACE USE AGREEMENT WITH OWNER

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

Fee Owner: WILLIAM COLWELL **Fee Owner Address:** 241 COLWELL RANCH RD CARLSBAD, NM 88220

Phone: (575)826-3384 **Email:**

Surface use plan certification: YES

Surface use plan certification document:

Warren_221H_Surface_Use_Agreement_03-30-2017.pdf

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: SURFACE USE AGREEMENT WITH OWNER

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Disturbance type: PIPELINE

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:**

Fee Owner: ANTONIO ONSUREZ **Fee Owner Address:** PO BOX 598 LOVING, NM 88256

Phone: (575)706-2280 **Email:**

Surface use plan certification: YES

Surface use plan certification document:

Warren_221H_Surface_Use_Agreement_03-30-2017.pdf

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: SURFACE USE AGREEMENT WITH OWNER

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Fee Owner: WILLIAM COLWELL **Fee Owner Address:** 241 COLWELL RANCH RD CARLSBAD, NM 88220

Phone: (575)826-3384 **Email:**

Surface use plan certification: YES

Surface use plan certification document:

Warren_221H_Surface_Use_Agreement_03-30-2017.pdf

Surface access agreement or bond: Agreement

Surface Access Agreement Need description: SURFACE USE AGREEMENT WITH OWNER

Surface Access Bond BLM or Forest Service:

BLM Surface Access Bond number:

USFS Surface access bond number:

Section 12 - Other Information

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

ROW Type(s):

ROW Applications

SUPO Additional Information: Deficiency Letter Dated 7/24/17: See Map 4 of Road Map attachment for requested pipeline and power line plats. See Item 4 of Surface Use Plan for pipeline specifications.

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: WARREN FED COM **Well Number:** 221H

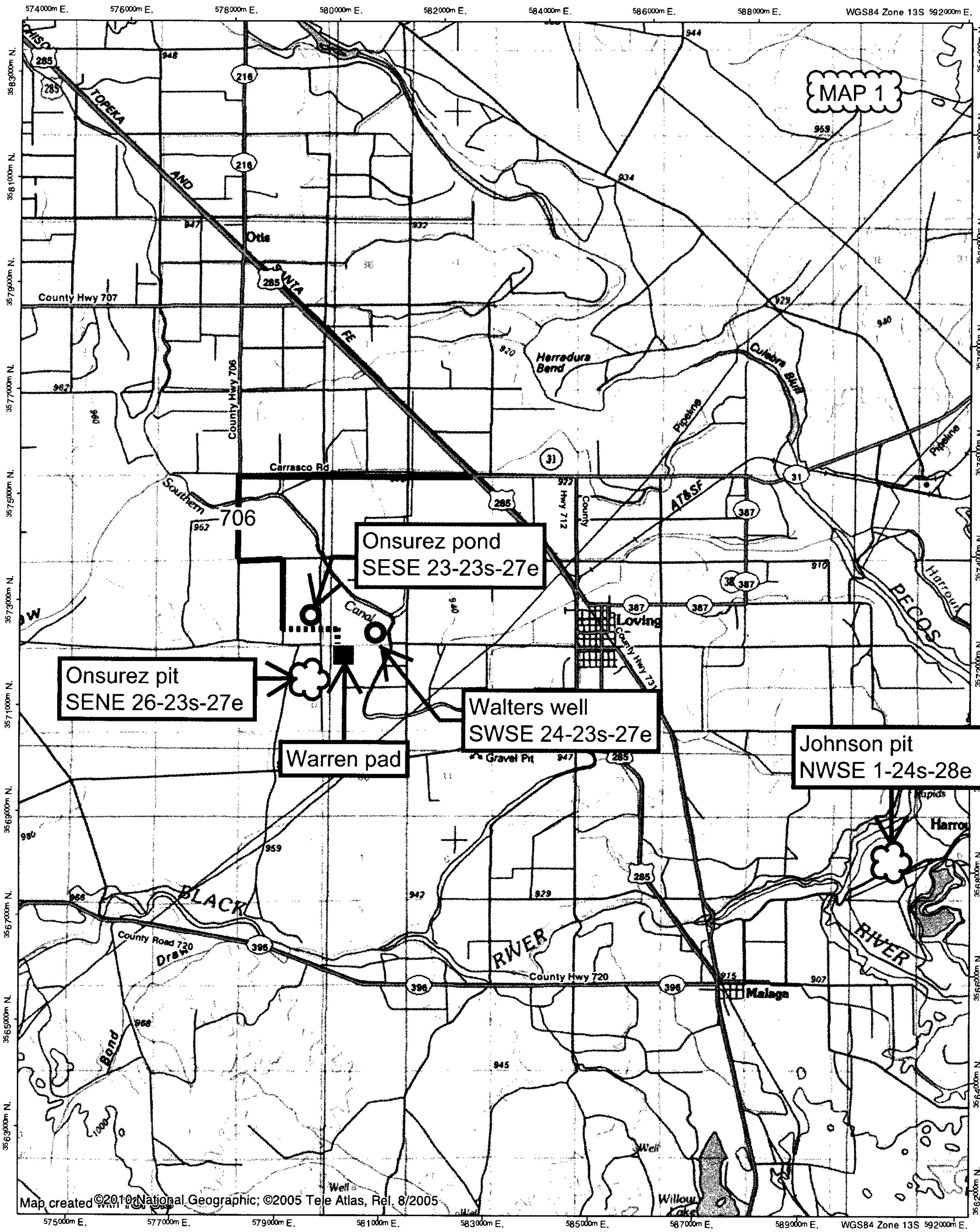
Use a previously conducted onsite? YES

Previous Onsite information: ONSITE INSPECTION WAS HELD WITH VANCE WOLF (BLM) ON NOVEMBER 29, 2016.

Other SUPO Attachment

Warren_221H_General_SUPO_07-21-2017.pdf

TOPO! map printed on 03/16/17 from "Untitled.tpo"

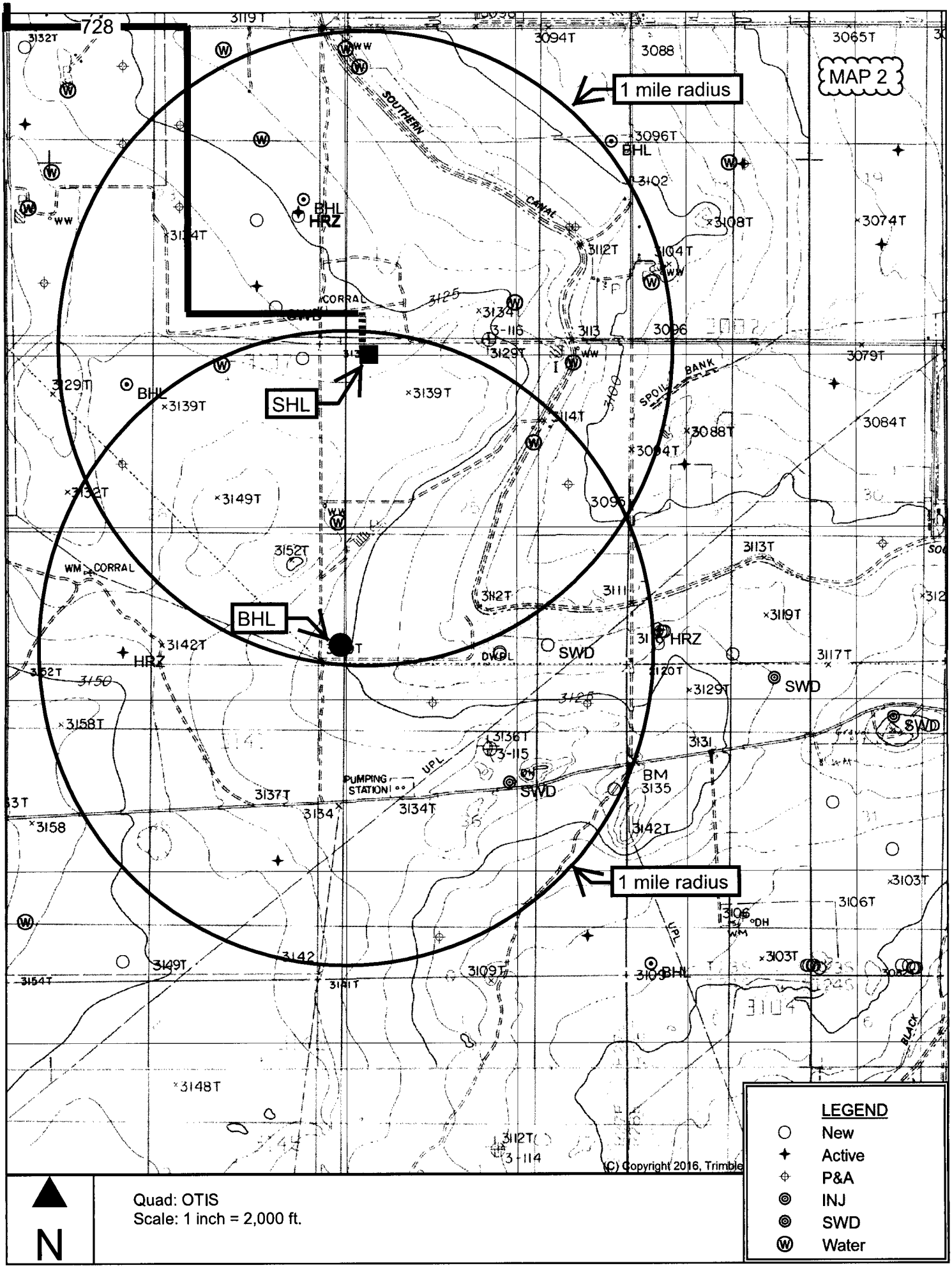


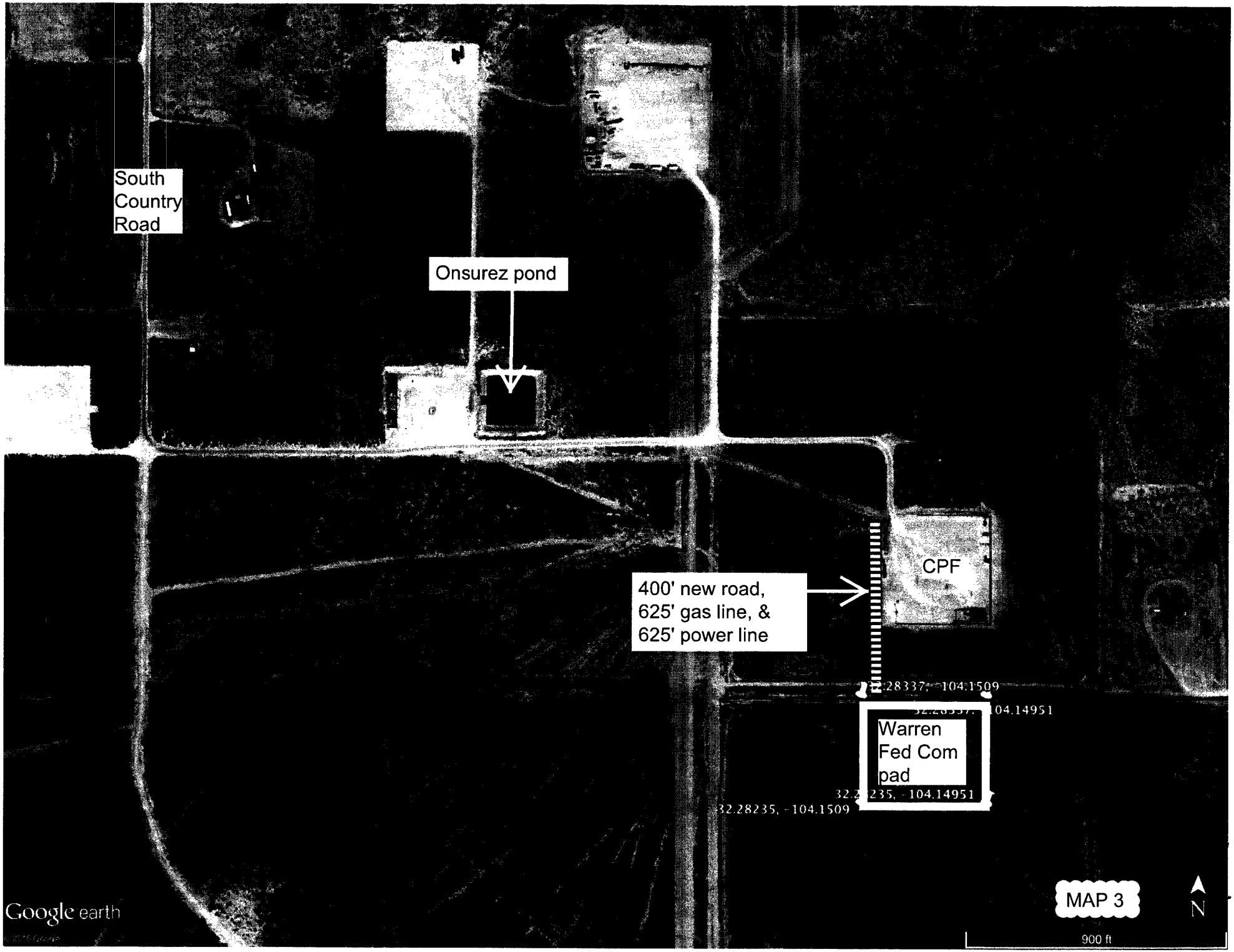
MAP 1
Onsurez pond
SESE 23-23s-27e
Onsurez pit
SENE 26-23s-27e
Walters well
SWSE 24-23s-27e
Warren pad
Johnson pit
NWSE 1-24s-28e
706
Carrasco Rd
County Hwy 707
County Hwy 706
County Hwy 720
County Road 720
Otis
Loving
Malaga
Herradura Bend
Culebra Bluff
Pipeline
AT&SF
BLACK RIVER
PECOS RIVER
Gravel Pit
Willow Lake
Map created with TOPO! ©2010 National Geographic; ©2005 Tele Atlas, Rel. 8/2005
WGS84 Zone 13S

NATIONAL GEOGRAPHIC

0.0 0.5 1.0 1.5 2.0 2.5 3.0 miles
0 1 2 3 4 5 km

TN MN 7°
03/16/17


728
MAP 2
1 mile radius
SHL
BHL
1 mile radius
SOUTHERN CANAL
SPOIL BANK
CORRAL
PUMPING STATION
UPL
BLACK
SWD
HRZ
BM 3135
(C) Copyright 2016, Trimble
LEGEND
New
Active
P&A
INJ
SWD
Water
N
Quad: OTIS
Scale: 1 inch = 2,000 ft.

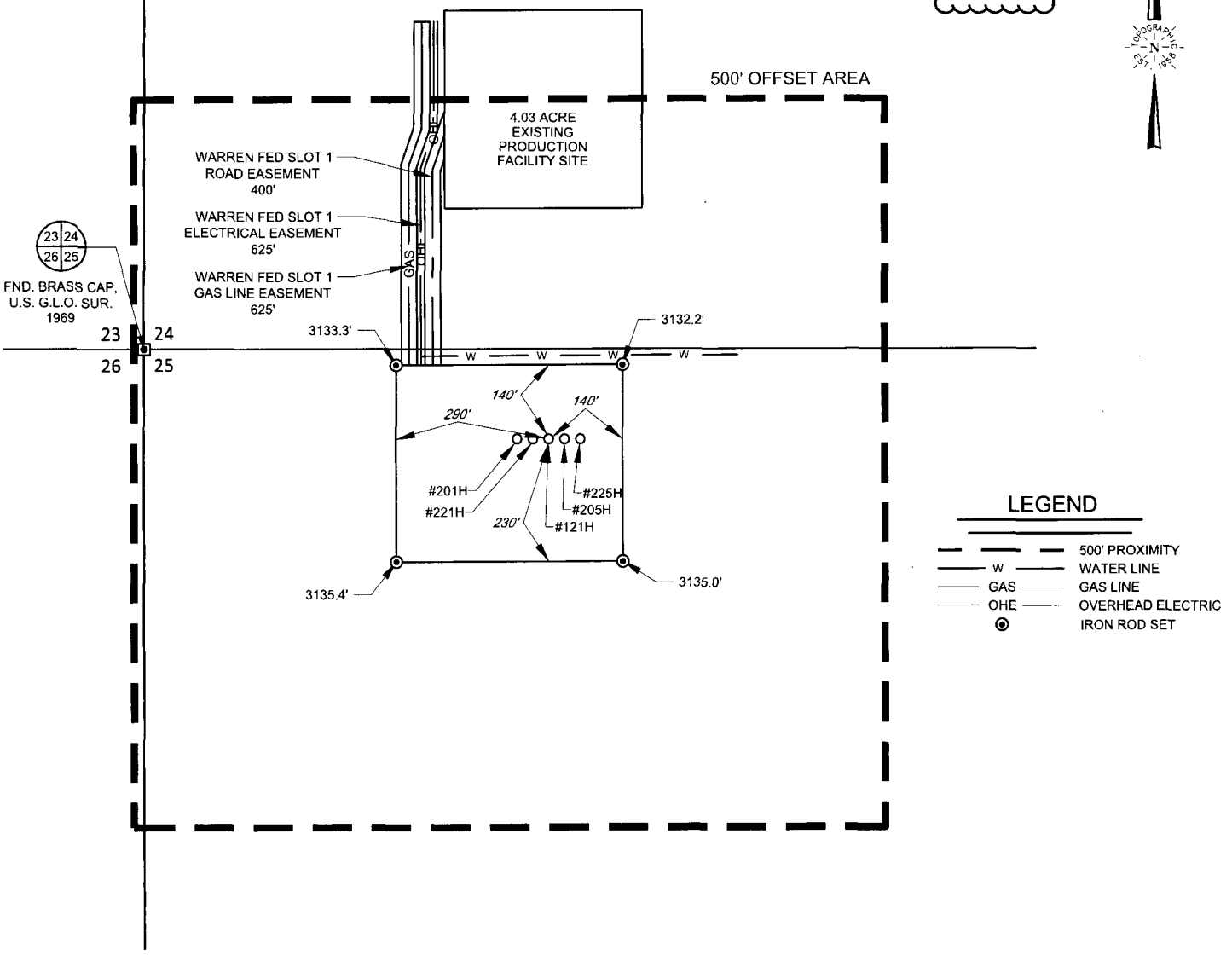

South Country Road
Onsurez pond
CPF
400' new road, 625' gas line, & 625' power line
Warren Fed Com pad
32.28235, -104.1509
32.28235, -104.14951
Google earth
MAP 3
N
900 ft

SCALE: 1" = 300'

0' 150' 300'

SECTION 25, TOWNSHIP 23-S, RANGE 27-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

MAP 4



LEGEND

- 500' PROXIMITY
- W — WATER LINE
- GAS — GAS LINE
- OHE — OVERHEAD ELECTRIC
- IRON ROD SET

Michael Blake Brown, P.S. No. 18329
DECEMBER 6, 2016

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

WARREN FED COM	REVISION:	
	A.V.F.	08/05/2016
PROXIMITY MAP	A.V.F.	08/18/2016
DATE: 08/05/2016	J.S.T.	08/19/2016
FILE: LO_WARREN_FED_COM_121H_REV6	E.A.H.	10/21/2016
DRAWN BY: A.V.F.	G.J.U.	12/06/2016
SHEET :		

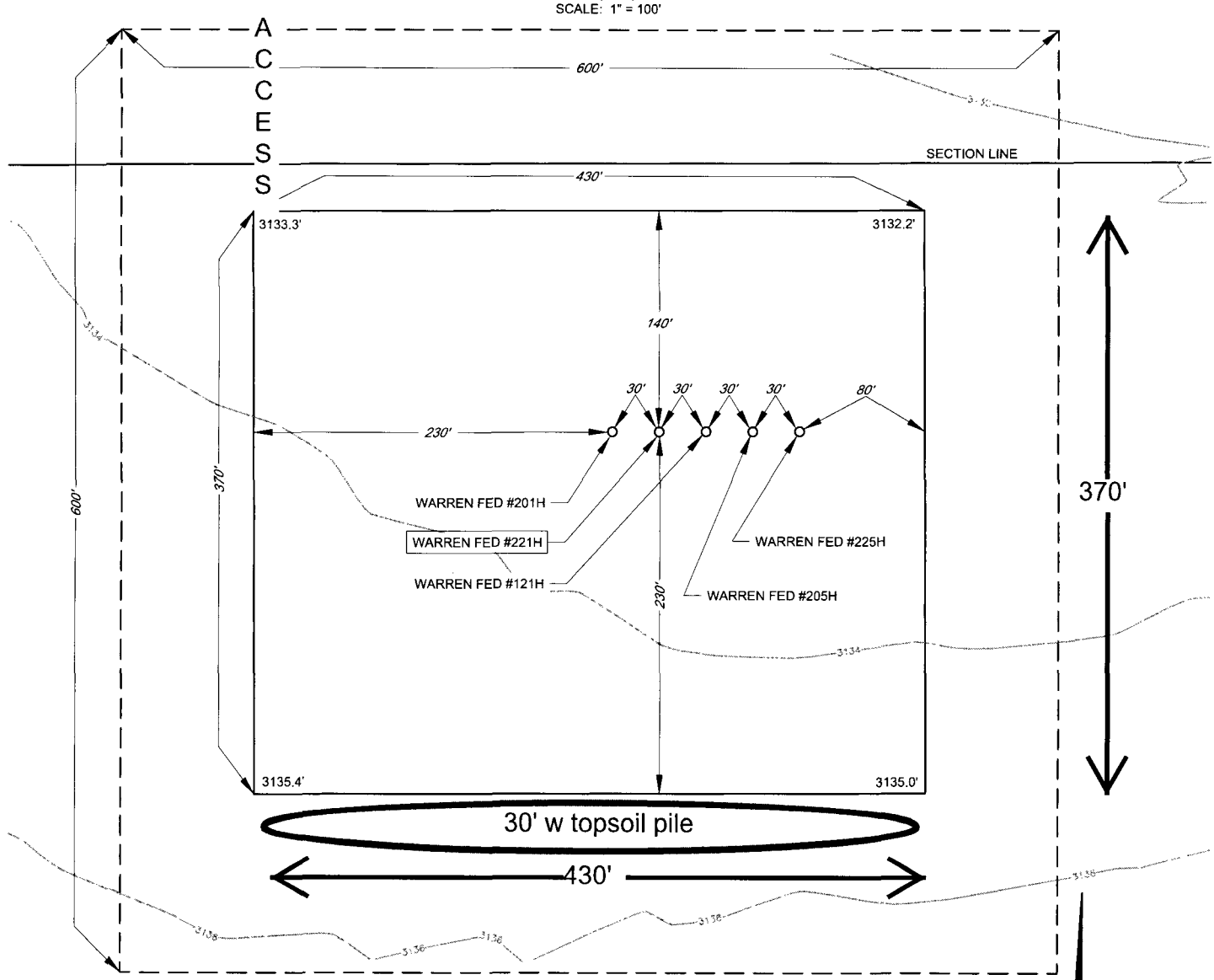
NOTES:
1. ORIGINAL DOCUMENT SIZE: 8.5" X 11"
2. ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREIN ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE, U.S. SURVEY FEET, NORTH AMERICAN DATUM 1927.
3. CERTIFICATION IS MADE ONLY TO THE LOCATION OF THIS EASEMENT, IN RELATION TO THE EVIDENCE FOUND DURING A FIELD SURVEY, MADE ON THE GROUND, UNDER MY SUPERVISION, AND USING DOCUMENTATION PROVIDED BY MATADOR RESOURCES, INC. 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.

Matador PRODUCTION COMPANY

MAP 5

SECTION 25, TOWNSHIP 23-S, RANGE 27-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: WARREN FED #221H

#221H LATITUDE N 32.2828226 #221H LONGITUDE W 104.1495449

-N-

LEGEND

ARCH SITE

SCALE: 1" = 100'

0' 50' 100'

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 1927, U.S. SURVEY FEET

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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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ORIGINAL DOCUMENT SIZE: 8.5" X 11"

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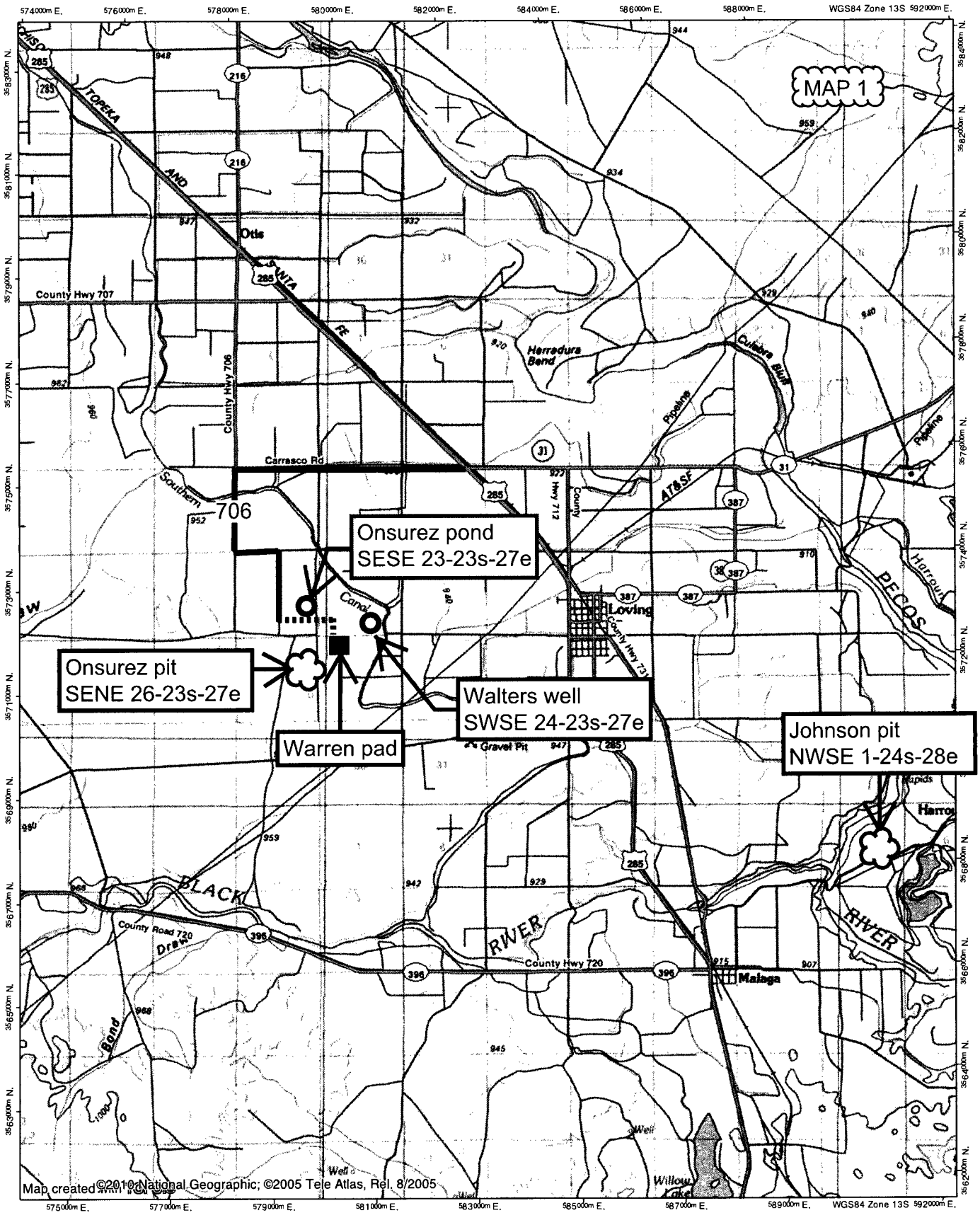
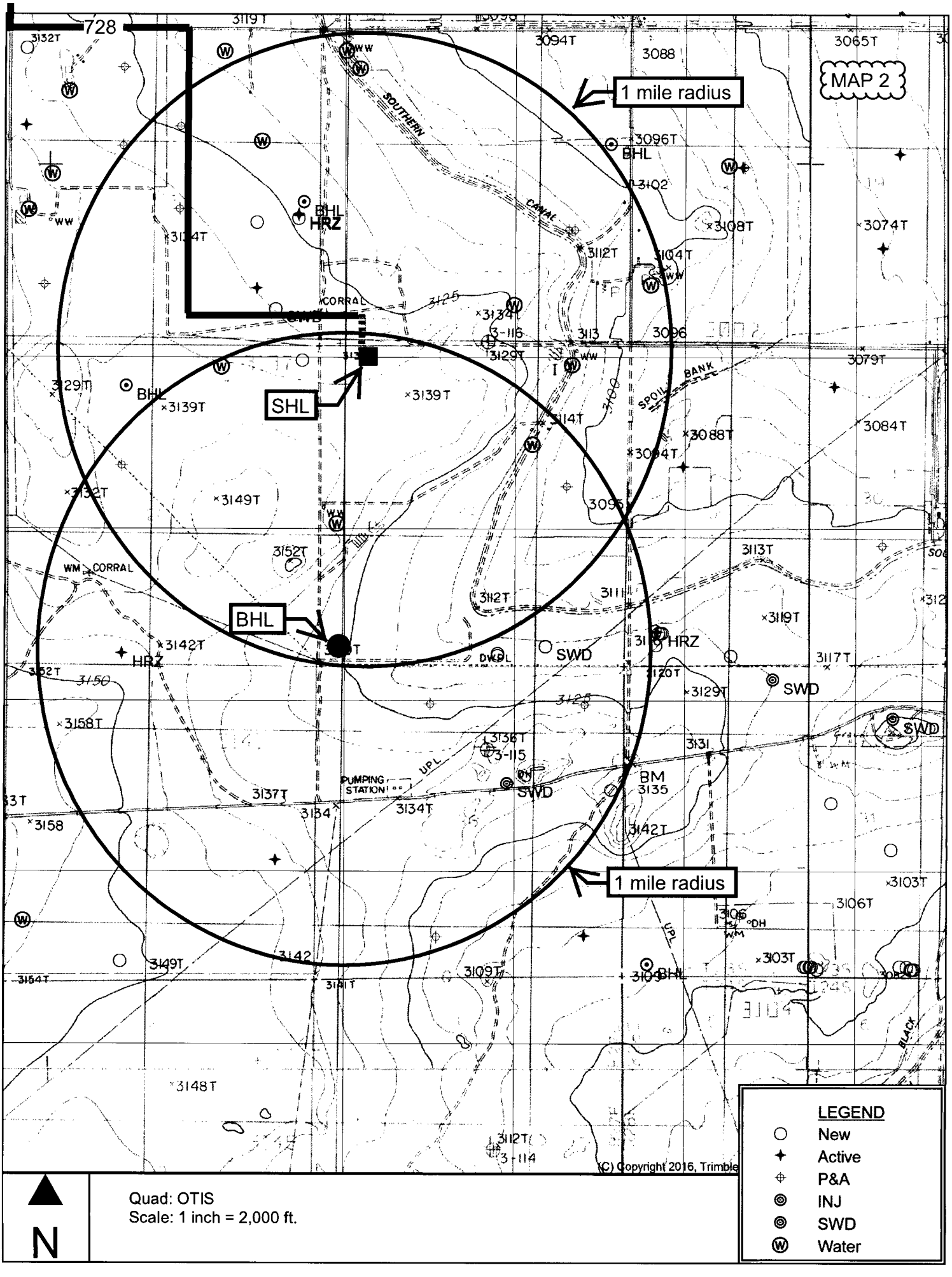
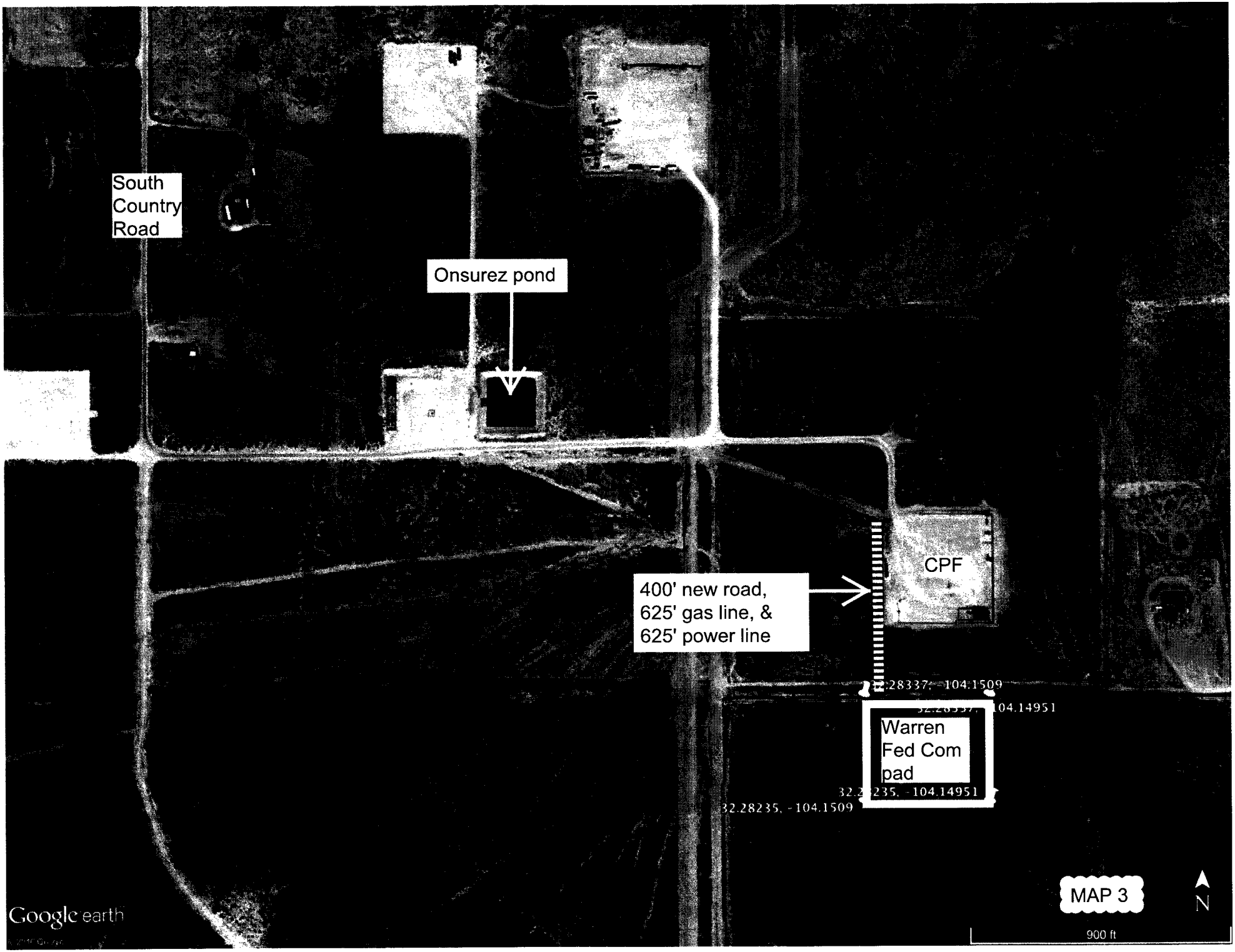


NATIONAL GEOGRAPHIC

0.0 0.5 1.0 1.5 2.0 2.5 3.0 miles
0 1 2 3 4 5 km

TN MN 7° 03/16/17


728
MAP 2
1 mile radius
1 mile radius
SHL
BHL
BHL
HRZ
SOUTHERN CANAL
CORRAL CANAL
SPOIL BANK
WM CORRAL
PUMPING STATION
UPL
SWD
HRZ
BM 3135
3119T
3094T
3088
3065T
3096T
3102
3108T
3074T
3112T
3104T
3134T
3129T
3139T
3114T
3088T
3084T
3094T
3149T
3152T
3113T
3119T
3142T
3117T
3120T
3129T
3158T
3136T
3131
3137T
3134T
3142T
3103T
3106T
3109T
3148T
3112T
(C) Copyright 2016, Trimble
N
Quad: OTIS
Scale: 1 inch = 2,000 ft.
LEGEND
New
Active
P&A
INJ
SWD
Water

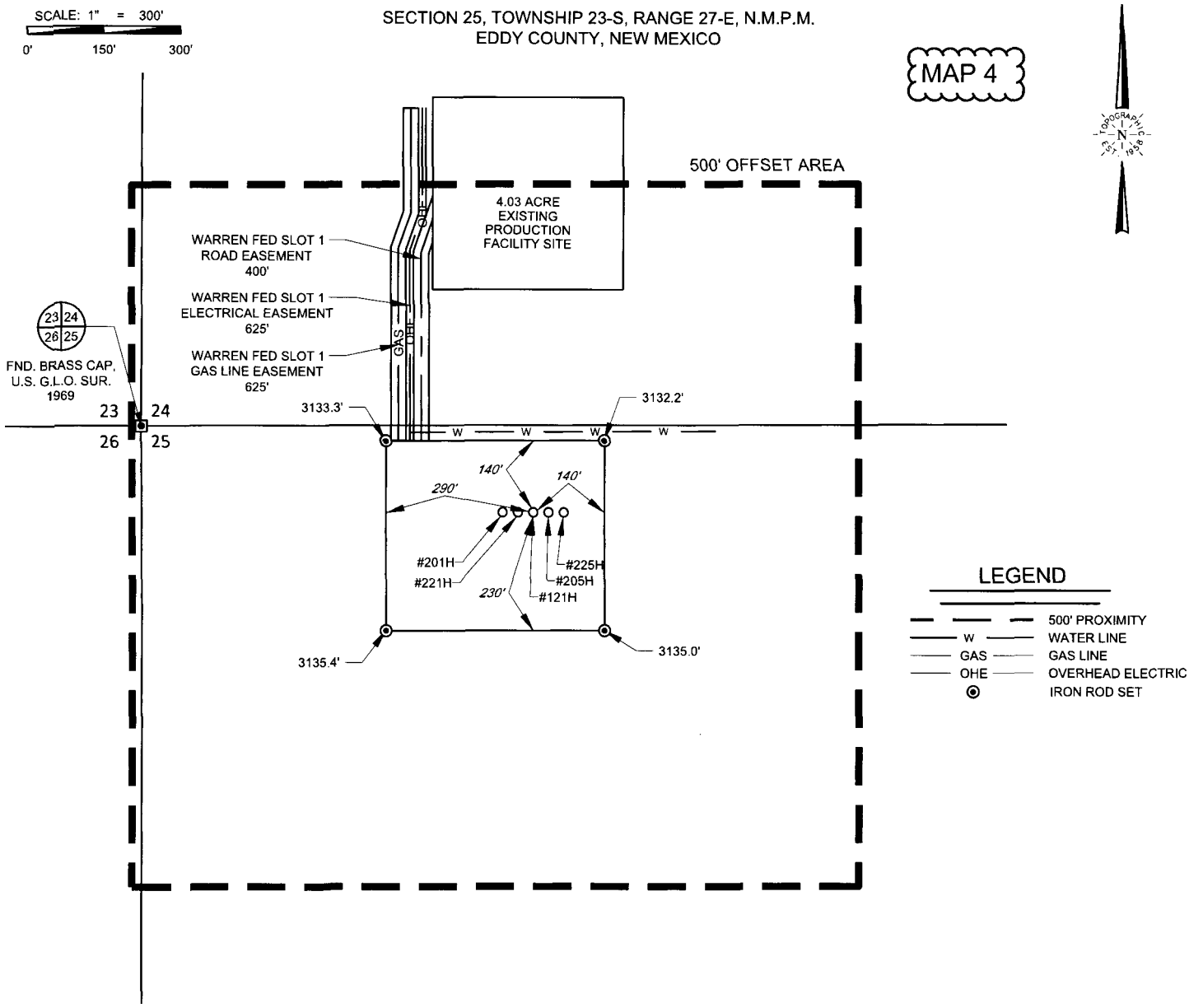

South Country Road
Onsurez pond
CPF
400' new road, 625' gas line, & 625' power line
Warren Fed Com pad
32.28235, -104.1509
32.28235, -104.14951
MAP 3
N
900 ft
Google earth

SCALE: 1" = 300'

0' 150' 300'

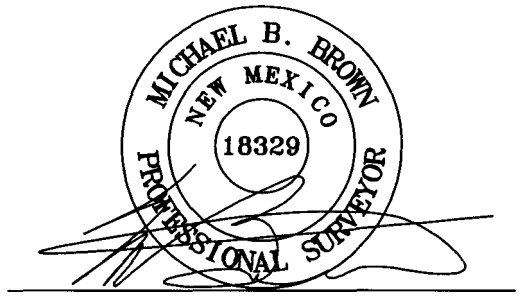
SECTION 25, TOWNSHIP 23-S, RANGE 27-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

MAP 4



LEGEND

- 500' PROXIMITY
- W — WATER LINE
- GAS — GAS LINE
- OHE — OVERHEAD ELECTRIC
- IRON ROD SET



Michael Blake Brown, P.S. No. 18329
DECEMBER 6, 2016

Matador PRODUCTION COMPANY

TOPOGRAPHIC
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WARREN FED COM PROXIMITY MAP	REVISION:	
	A.V.F.	08/05/2016
	A.V.F.	08/18/2016
DATE: 08/05/2016	J.S.T.	08/19/2016
FILE: LO_WARREN_FED_COM_121H_REV6	E.A.H.	10/21/2016
DRAWN BY: A.V.F.	G.J.U.	12/06/2016
SHEET :		

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 1927.
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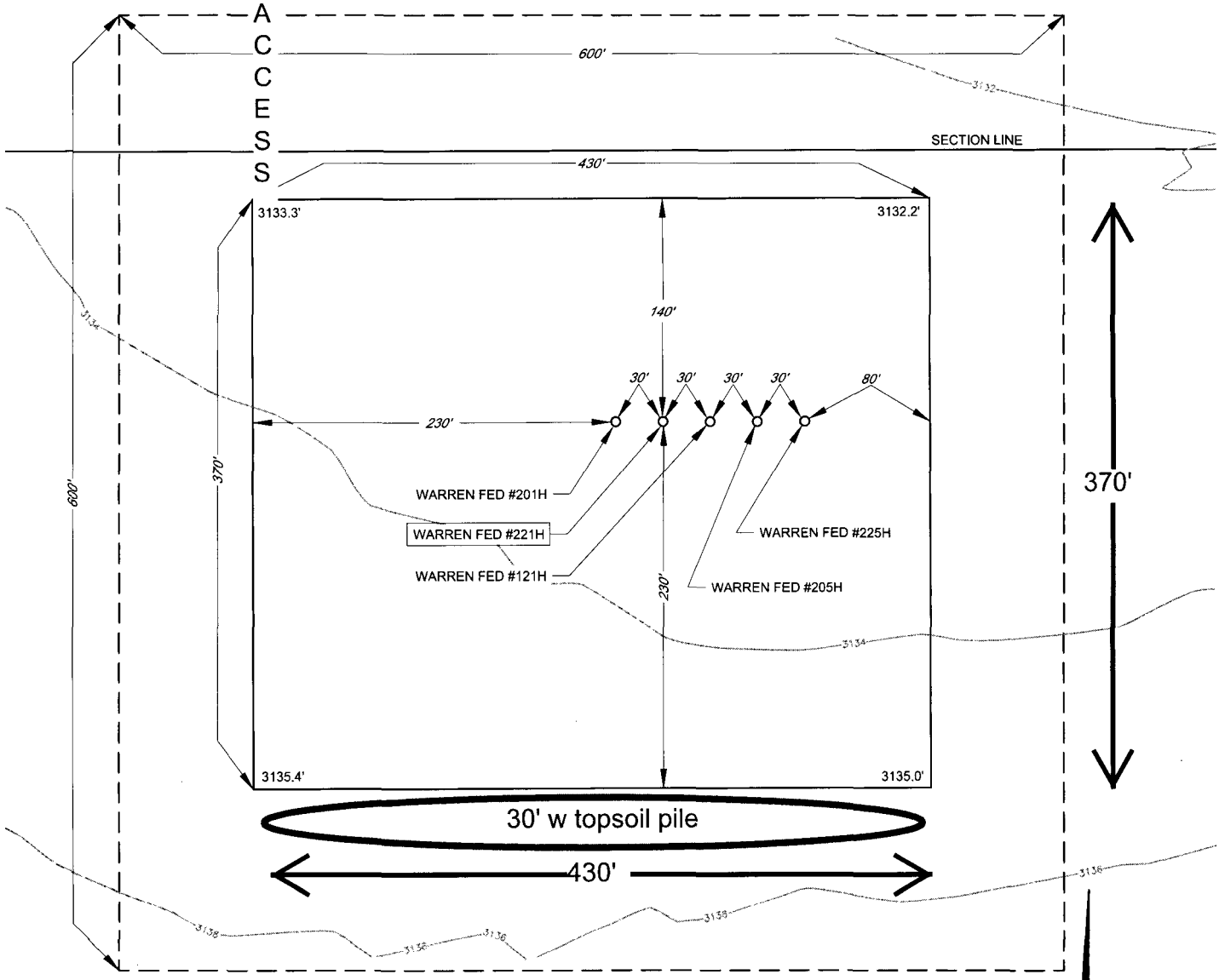
S:\SURVEY\MATADOR_RESOURCES\WARREN_FED_COM_121H\FINAL_PRODUCTS\LO_WARREN_FED_COM_121H_REV6.DWG 7/5/2017 9:01:46 AM ccaston

Matador PRODUCTION COMPANY

MAP 5

SECTION 25, TOWNSHIP 23-S, RANGE 27-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: WARREN FED #221H

#221H LATITUDE N 32.2828226 #221H LONGITUDE W 104.1495449

-N-

LEGEND

ARCH SITE

SCALE: 1" = 100'

0' 50' 100'

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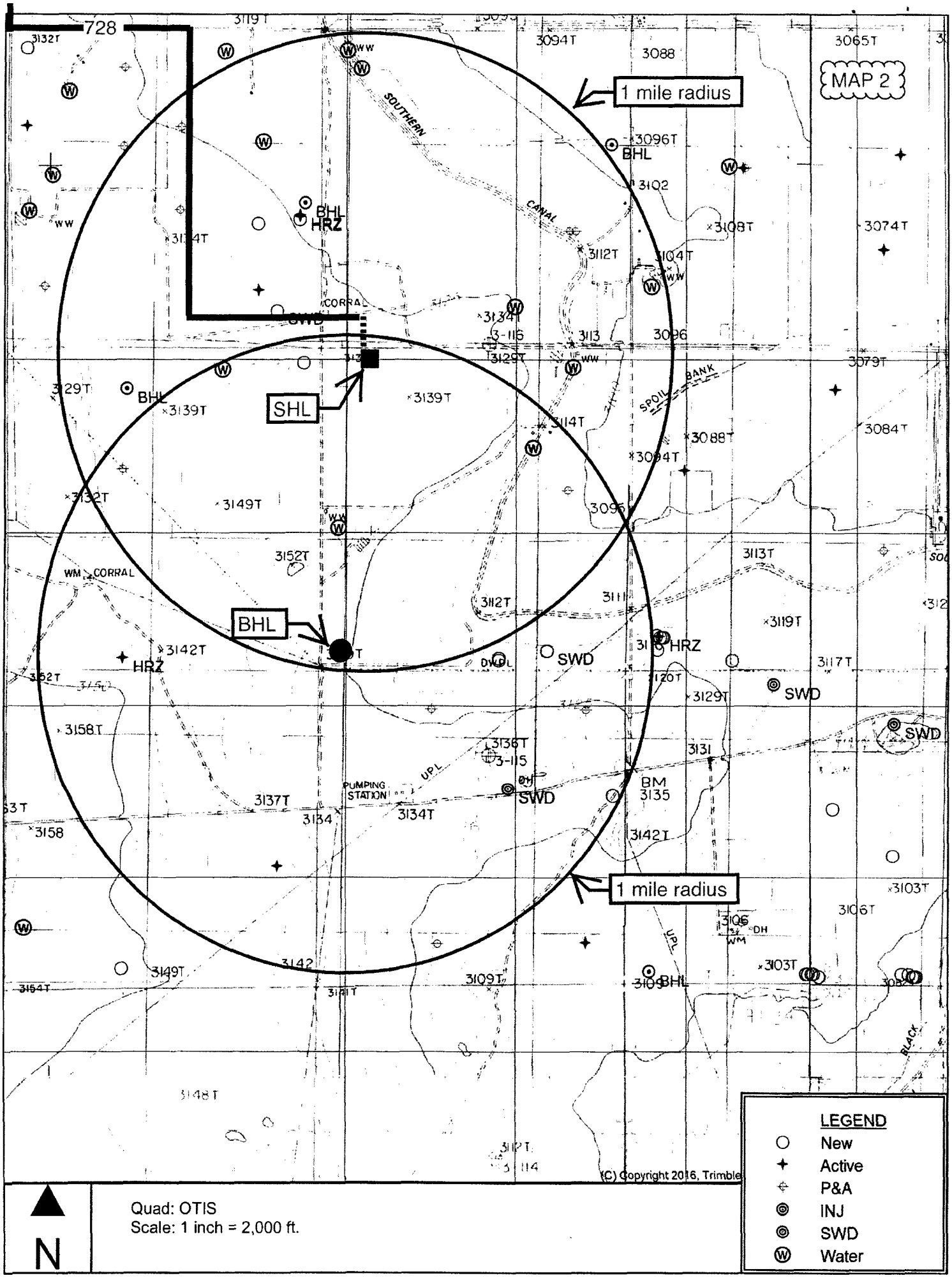
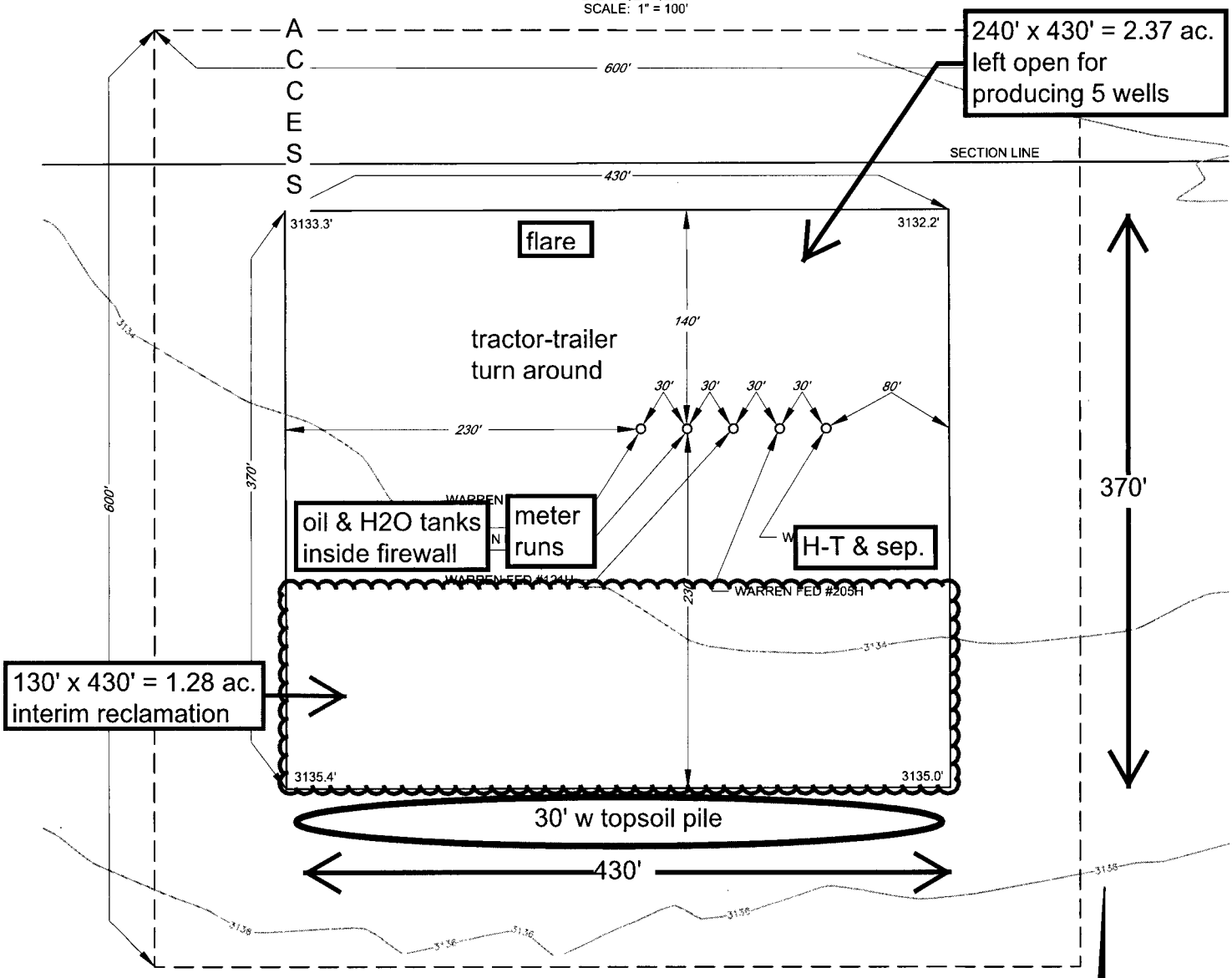

728
MAP 2
1 mile radius
SHL
BHL
1 mile radius
LEGEND
New
Active
P&A
INJ
SWD
Water
N
Quad: OTIS
Scale: 1 inch = 2,000 ft.
(C) Copyright 2016, Trimble

SECTION 25, TOWNSHIP 23-S, RANGE 27-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: WARREN FED #221H

#221H LATITUDE N 32.2828226 #221H LONGITUDE W 104.1495449

LEGEND

ARCH SITE

SCALE: 1" = 100'

0' 50' 100'

INTERIM RECLAMATION & PRODUCTION DIAGRAM

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 1927, U.S. SURVEY FEET

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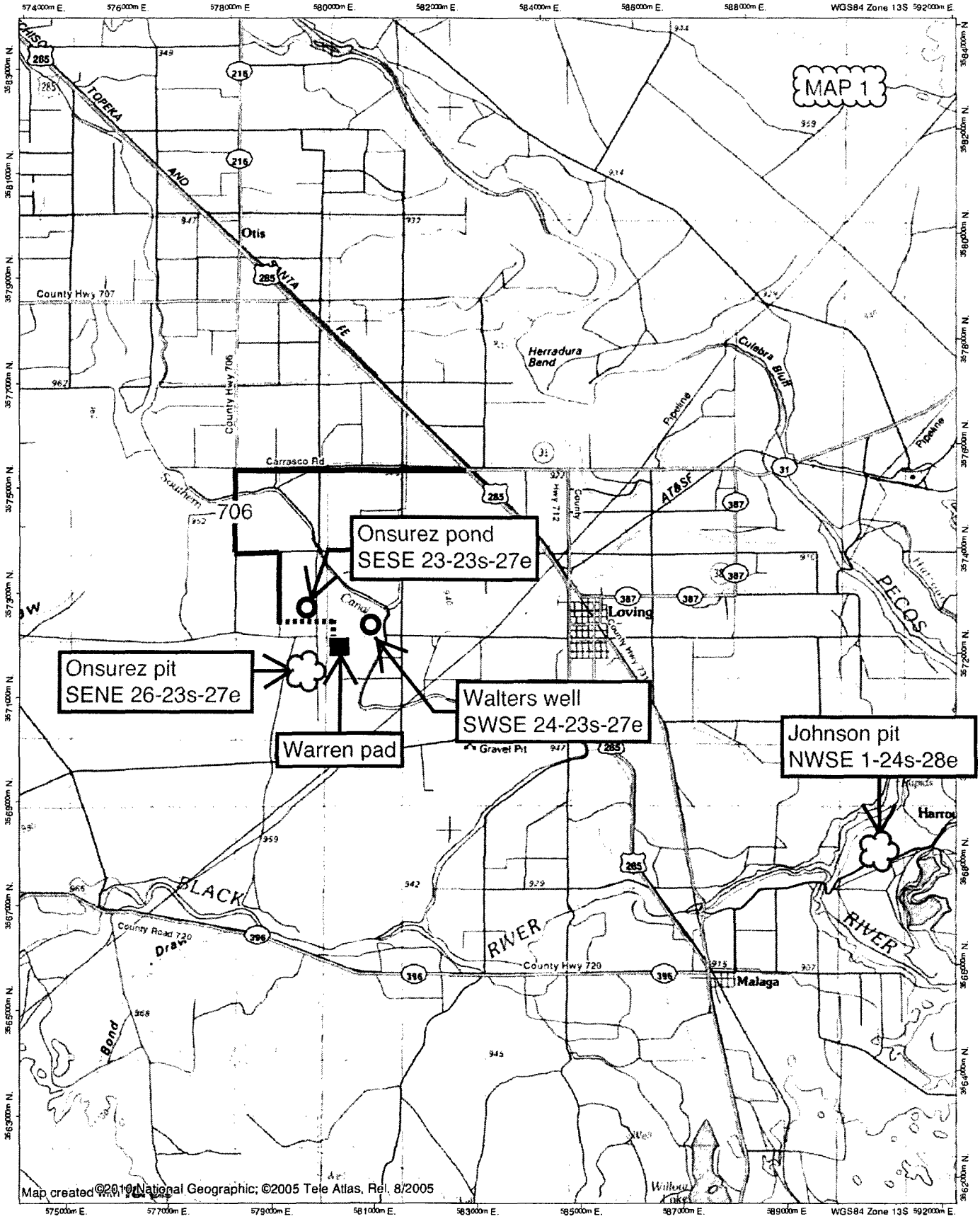
TOPO! map printed on 03/16/17 from "Untitled.tpo"



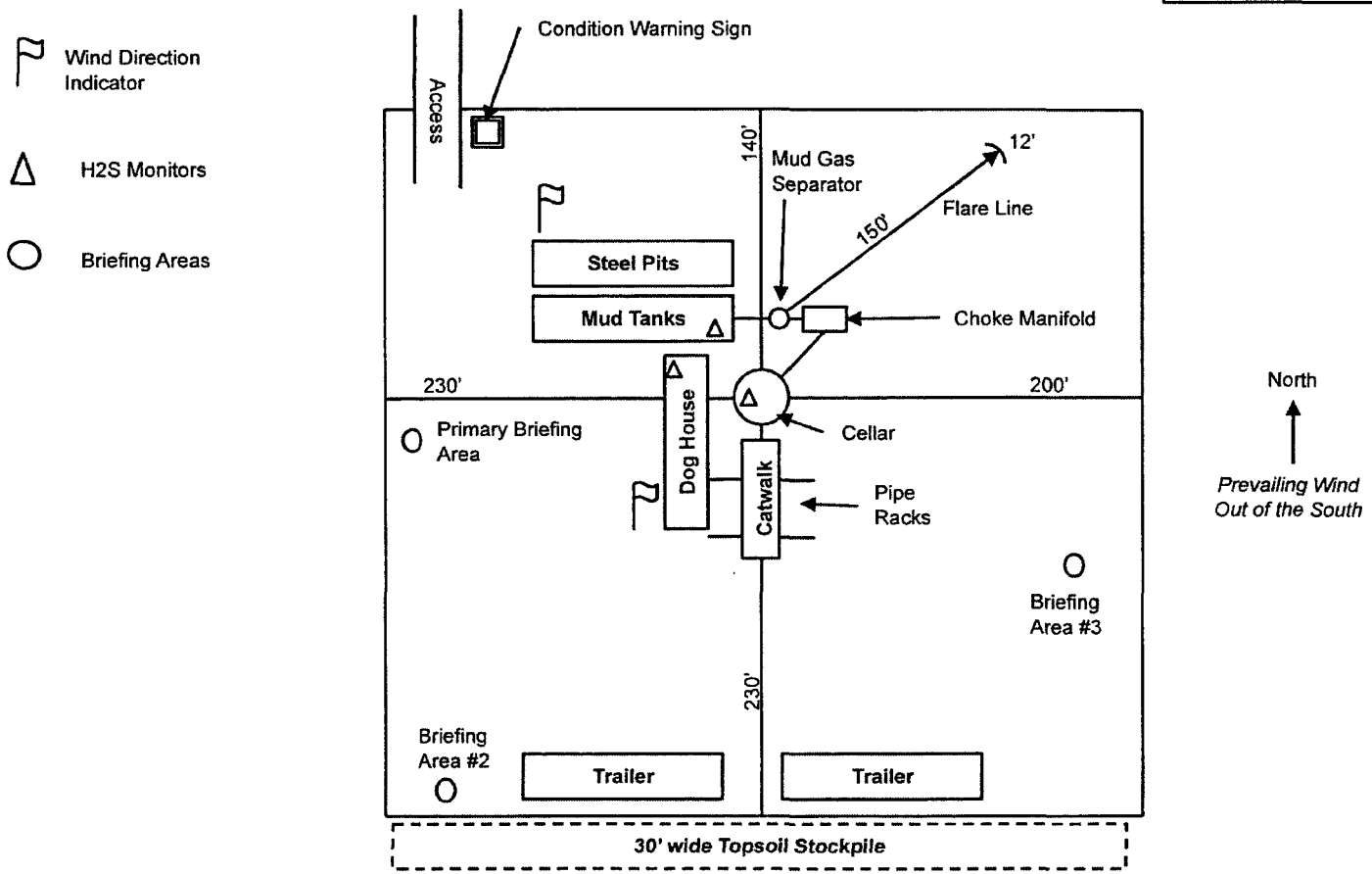
NATIONAL GEOGRAPHIC

0.0 0.5 1.0 1.5 2.0 2.5 3.0 miles
0 1 2 3 4 5 km

TN MN
7°
03/16/17

Rig Diagram

Warren Fed Com 221H
SHL 170' FNL & 710' FWL 5
25-23S-27E Eddy County, NM

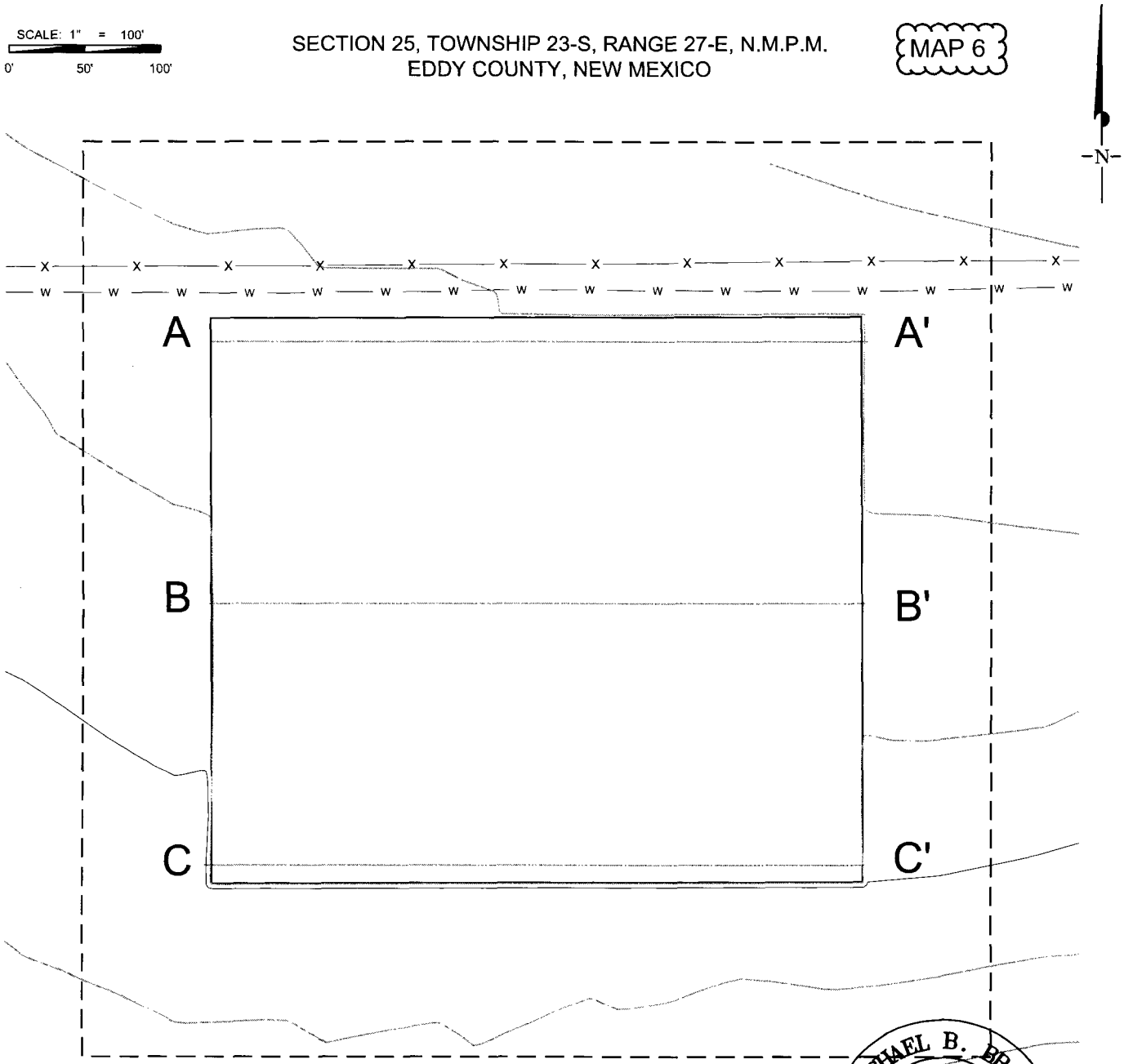


SCALE: 1" = 100'

0' 50' 100'

SECTION 25, TOWNSHIP 23-S, RANGE 27-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

MAP 6



MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

Matador PRODUCTION COMPANY

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY

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TEXAS FIRM REGISTRATION NO. 10042504
WWW.TOPOGRAPHIC.COM

Michael Blake Brown, P.S. No. 18329
DECEMBER 8, 2016
Field note description of even date accompanies this plat.

WARREN FED #221H SURFACE PAD SITE PROFILE	REVISION:	
	A.V.F.	08/08/2016
	J.S.T.	08/19/2016
DATE: 05/17/16	G.L.H.	11/03/2016
FILE: CD_WARREN_FED_221H_SURFACE_PAD_SITE_PRO_REV5	E.A.H.	11/07/2016
DRAWN BY: S.R.J.	G.J.U.	12/08/2016
SHEET :		

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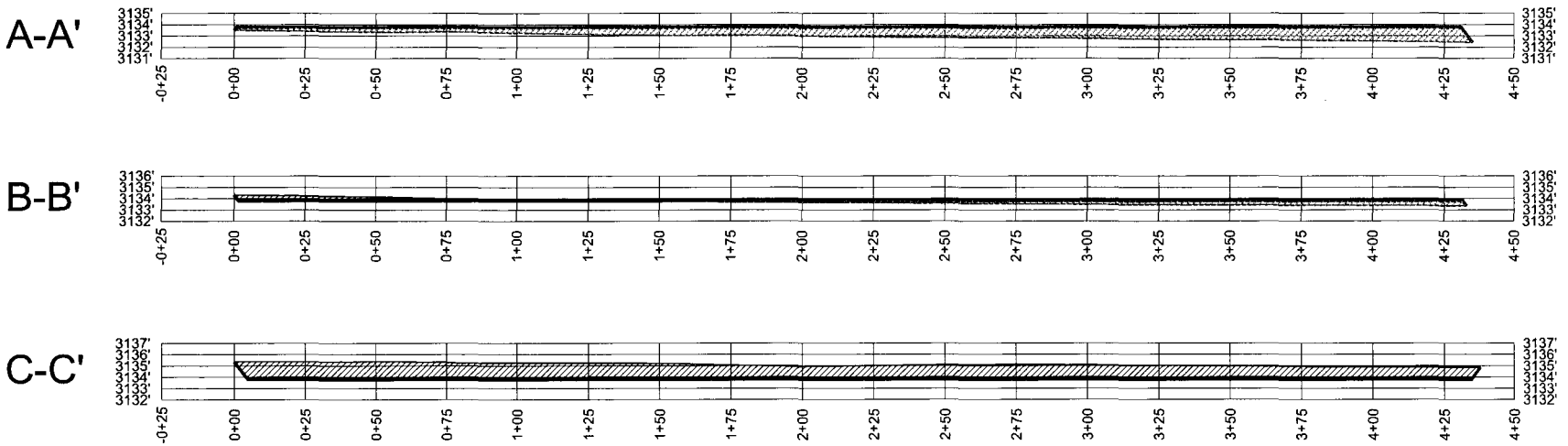
TOP OF PAD ELEVATION:
3133.8033

CUT SLOPE: 33.33% 3.00:1 18.43°
FILL SLOPE: 33.33% 3.00:1 18.43°
BALANCE TOLERANCE (C.Y.): 0.00
CUT SWELL FACTOR: 1.00
FILL SHRINK FACTOR: 1.00

PAD EARTHWORK VOLUMES
CUT : 49,095.1 C.F., 1,818.34 C.Y.
FILL: 49,095.1 C.F., 1,818.34 C.Y.
BALANCE EXPORT: 0.1 C.F., 0.00 C.Y.
AREA: 163655.9 SQ.FT., 3.757 ACRES

SECTION 25, TOWNSHIP 23-S, RANGE 27-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

Matador PRODUCTION COMPANY



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TEXAS FIRM REGISTRATION NO. 10042504
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Horizontal Scale = 1:60
Vertical Scale = 1:15

MICHAEL B. BROWN
NEW MEXICO
18329
PROFESSIONAL SURVEYOR

WARREN FED #221H SURFACE PAD SITE PROFILE	REVISION:	
	A.V.F.	08/08/2016
	J.S.T.	08/19/2016
	G.L.H.	11/03/2016
DATE: 05/17/16	E.A.H.	11/07/2016
FILE: CD_WARREN_FED_221H_SURFACE_PAD_SITE_PRO_REVS	G.J.U.	12/08/2016
DRAWN BY: S.R.J.		
SHEET :		

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Michael Blake Brown, P.S. No. 18329
DECEMBER 8, 2016
Field note description of even date accompanies this plat.

MAP 7

D:\USER DATA\JSTOVALL\DESKTOP\PUBLISH\WARREN FED SLOT 1\CD_WARREN_FED_221H_SURFACE_PAD_SITE_PRO_REV5.DWG 12/8/2016 11:19:43 AM jstovall

March 24, 2017

To Who it May Concern:

Matador Resources Company has a private surface owner agreement with William Colwell ((575) 826-3384; 241 Colwell Ranch Rd., Carlsbad NM 88220) for the Warren Fed Com 221H well site, pipeline, power line, and road in Section 25, T. 23 S., R. 27 E. Eddy County, NM.

Matador Resources Company has a private surface owner agreement with Antonio Onsurez, Trustee ((575) 706-2280; PO Box 598, Loving NM 88256) for the road, pipeline, and power line in Section 24, T. 23 S., R. 27 E. Eddy County, NM.

Brian Wood

March 24, 2017

To Who it May Concern:

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Brian Wood

Matador Production Company
Warren Fed Com 221H
SHL 170' FNL & 740' FWL Sec. 25
BHL 240' FSL & 330' FWL Sec. 25
T. 23 S., R. 27 E., Eddy County, NM

Surface Use Plan

1. ROAD DIRECTIONS & DESCRIPTIONS (See MAPS 1 - 5)

From the gas stations in Loving, NM...
Go NW 2-1/4 miles on US 285
Then turn left and go W 2-3/4 miles on Carrasco Road
Then turn left and go S 1.0 mile on County Road 706
Then turn left and go E 0.6 mile on County Road 728
Then turn right and go S 0.85 mile on South Country Road
Then turn left and go E ½ mile on an existing Onsurez private road
Then turn right and go S 1/10 mile onto a central production facility (CPF)
Then veer right off the CPF and go S ≈400' cross-country to the Warren pad

Non-county roads will be maintained as needed to Gold Book standards. This includes pulling ditches, preserving the crown, and cleaning culverts. This will be done at least once a year, and more often as needed. Caliche will be hauled from existing pits on private land (Onsurez pit in SENE 26-23s-27e or Johnson pit in NWSE 1-24s-28e).

2. ROAD TO BE BUILT OR UPGRADED (See MAPS 2 - 5)

Four hundred feet of new road will be built. The new road will be crowned and ditched, have a 14' wide driving surface, and be surfaced with caliche. A cattle guard will be installed in the fence north of the pad. Maximum disturbed width = 30'. Maximum grade = 1%. Maximum cut or fill = 1'. No upgrade, culvert, or vehicle turn out is needed.

3. EXISTING WELLS (See MAP 2)

Existing oil, gas, water, disposal, and P & A wells are within a mile. No injection well is within a mile.

4. PROPOSED PRODUCTION FACILITIES (see MAPS 3 & 4)

Facilities will be built on the south side of the pad (see Interim Reclamation & Production Diagram). Six hundred twenty-five feet of buried gas pipeline and 625' of overhead raptor safe 3-phase power line will be built north to tie into the CPF lines. Pipeline (1/well) will be 3" O. D., carbon steel, Schedule 80 x 52. Operating pressure will be $\leq$1200 psi.

5. WATER SUPPLY (See MAPS 1 - 4)

Water will be surface pipelined from the existing Onsurez frac pond (SESE 23-23s-27e) or existing Walters well (SWSE 24-23s-27e)

6. CONSTRUCTION MATERIALS & METHODS (see MAP 5)

NM One Call (811) will be notified before construction starts. There is a buried water line north of the pad and south of the fence. Top $\approx$6" of soil and brush will be stockpiled south of the pad. Pipe racks will be to the south. A closed loop drilling system will be used. Caliche will be hauled from existing pits on private land (Onsurez pit in SENE 26-23s-27e or Johnson pit in NWSE 1-24s-28e).

7. WASTE DISPOSAL

All trash will be placed in a portable trash cage. It will be hauled to the Eddy County landfill. There will be no trash burning. Contents (drill cuttings, mud,

salts, and other chemicals) of the mud tanks will be hauled to R360's state approved (NM1-6-0) disposal site at Halfway. Human waste will be disposed of in chemical toilets and hauled to the Carlsbad wastewater treatment plant.

8. ANCILLARY FACILITIES

There will be no airstrip or camp. Camper trailers will be on location for the company man, tool pusher, or mud logger.

9. WELL SITE LAYOUT

See Rig Diagram for depictions of the well pad, trash cage, access onto the location, parking, living facilities, and rig orientation.

10. RECLAMATION

Interim reclamation will shrink the pad ≈35% by removing caliche and reclaiming the south side (130' x 430'), leaving 2.37 acres for 5 wells, truck turn around, and production equipment. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas. Disturbed areas will be seeded in accordance with BLM requirements. Enough stockpiled topsoil will be retained to cover the remainder of the pad when the wells are plugged. Once the last well is plugged, then the remainder of the pad and new road will be similarly reclaimed. Noxious weeds will be controlled.

11. SURFACE OWNER

All construction will be on private land. Matador has a private surface owner agreement with William Colwell ((575) 826-3384; 241 Colwell Ranch Rd., Carlsbad NM 88220) for the well site and part of the pipeline, power line, and

road. Matador has a private surface owner agreement with Antonio Onsurez, Trustee ((575) 706-2280; PO Box 598, Loving NM 88256) for the remainder of the road, pipeline, and power line.

Land use:
625' x 45' pipeline & power line corridor = 0.65 acres
400' x 30' road = 0.28 acres
+ 370' x 430' pad = 3.65 acres
4.58 acres short term
- 1.28 acres interim reclamation on pad
- 0.43 acres reclaimed pipeline (all)
2.87 acres long term

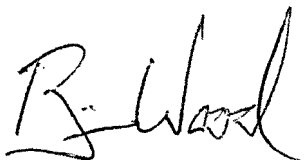
12. OTHER INFORMATION

On site inspection was held with Vance Wolf (BLM) on November 29, 2016.

Lone Mountain filed archaeology report NMCRIS-137745 on March 22, 2017.

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. Executed this 24th day of March, 2017.



Brian Wood, Consultant
Permits West, Inc.
37 Verano Loop, Santa Fe, NM 87508
(505) 466-8120 FAX: (505) 466-9682 Cellular: (505) 699-2276

Field representative will be:

Sam Pryor, Senior Staff Landman
Matador Production Company
5400 LBJ Freeway, Suite 1500
Dallas TX 75240
Phone: (972) 371-5241
FAX: (214) 866-4841

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

PWD Data Report
12/21/2017

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:

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

Bond Info Data Report

12/21/2017

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: