PECOS DISTRICT
DRILLING OPERATIONS
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Matador Production Company
LEASE NO.:	NMLC065607
WELL NAME & NO.:	203H-Verna RAE Fed Com
SURFACE HOLE FOOTAGE:	230'/N & 1845'/E
BOTTOM HOLE FOOTAGE	240'/S & 2310'/E
LOCATION:	Section 6, T.20 S, R.34, NMPM
COUNTY:	Lea 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. A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the **Yates - Seven Rivers** formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

1. The **20** inch surface casing shall be set at approximately **1600** 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 **24 hours in the Potash Area** 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.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

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 Capitan Reef and Potash.**

3. The minimum required fill of cement behind the **7 5/8 X 7** inch second intermediate casing is:

    - Cement should tie-back at least **50 feet above the Capitan Reef** (Top of Capitan Reef estimated at 4750'). Operator shall provide method of verification.

The 7 5/8" 29.7 lbs/ft P110 BTC casing must be set at or above 4700' in order to meet the 0.422" minimum clearance requirement.

4. The minimum required fill of cement behind the **5 1/2 X 4 1/2** inch production casing is:

    - Cement as proposed. 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).

Option 1:

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. 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.

4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **7 5/8 X 7** inch second intermediate casing shoe shall be **5000 (5M)** psi.

Option 2:

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

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

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

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

d. **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. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

f. 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 12272017

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.

Matador Production Company **DRILL PLAN PAGE 3**
Verna Rae Fed Com ~~204H~~ 203H
SHL 230' FNL & 1725' FEL
BHL 240' FSL & 990' FEL
Sec. 6, T. 20 S., R. 34 E., Lea County, NM

Hole O. D.	Set MD	Set TVD	Name	Casing O. D.	TOC	Weight (lb/ft)	Grade	Joint
20"	0' - 1600'	0' - 1596'	Surface	13.375"	GL	54.5	J-55	BTC
12.25"	0' - 5400'	0' - 5381'	Intermediate 1	9.625"	GL	40	J-55	BTC
8.75"	0' - ~~5300'~~ 4400'	0' - 5282'	Intermediate 2	7.625"	4400'	29.7	P-110	BTC
	~~5300'~~ 4400' - 10300'	5282'- 10268'		7.625"		29.7	P-110	VAM HTF-NR
	10300'- 11100'	10268'- 10919'		7"		29	P-110	BTC
6.125"	0' - 10200'	0' - 10168'	Production	5.5"	10100'	20	P-110	Tenaris XP
	10200'- 15693'	10168'- 10930'		4.5"		13.5	P-110	Tenaris XP

SEE COA for casing depth Change

Name	Type	Sacks	Yield	Cu. Ft.	Weight	Blend
Surface	Lead	1764	1.75	3087	13.5	Class C + 3% NaCl + LCM
	Tail	559	1.38	771	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			Centralizers per Onshore Order 2.III.B.1f	
Intermediate 1	Lead	1262	1.81	2284	13.5	Class C + Bentonite + 1% $CaCl_2$ + 8% NaCl + LCM
	Tail	490	1.38	676	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	840	2.36	1982	11.5	TXI + Fluid Loss + Dispersant + Retarder + LCM
	Tail	167	1.38	230	13.2	TXI + Fluid Loss + Dispersant +

Approval Date: 02/02/2018

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Matador Production Company
LEASE NO.:	NMLC065607
WELL NAME & NO.:	203H-Verna RAE Fed Com
SURFACE HOLE FOOTAGE:	230'/N & 1845'/E
BOTTOM HOLE FOOTAGE	240'/S & 2310'/E
LOCATION:	Section 6, T.20 S, R.34, NMPM
COUNTY:	Lea County, New Mexico

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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)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

Watershed/Water Quality:

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

1. The compacted berm shall be constructed at a minimum of 24 inches high with impermeable mineral material (e.g. caliche).
2. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
3. The topsoil stockpile shall be located outside the bermed well pad.
4. Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
5. No storm drains, tubing or openings shall be placed in the berm.
6. 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.
7. 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.
8. 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:

1. Tank battery locations 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.
1. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

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

G. ON LEASE ACCESS ROADS

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

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

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

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

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

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

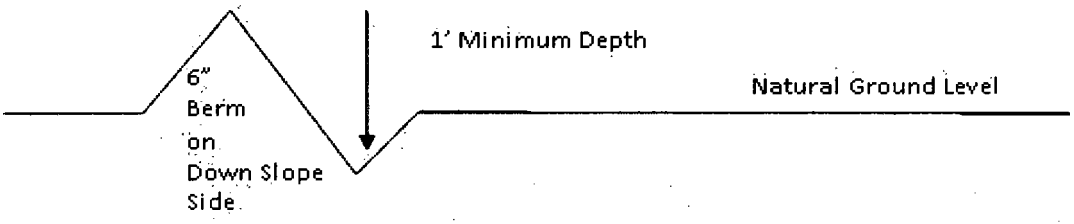
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

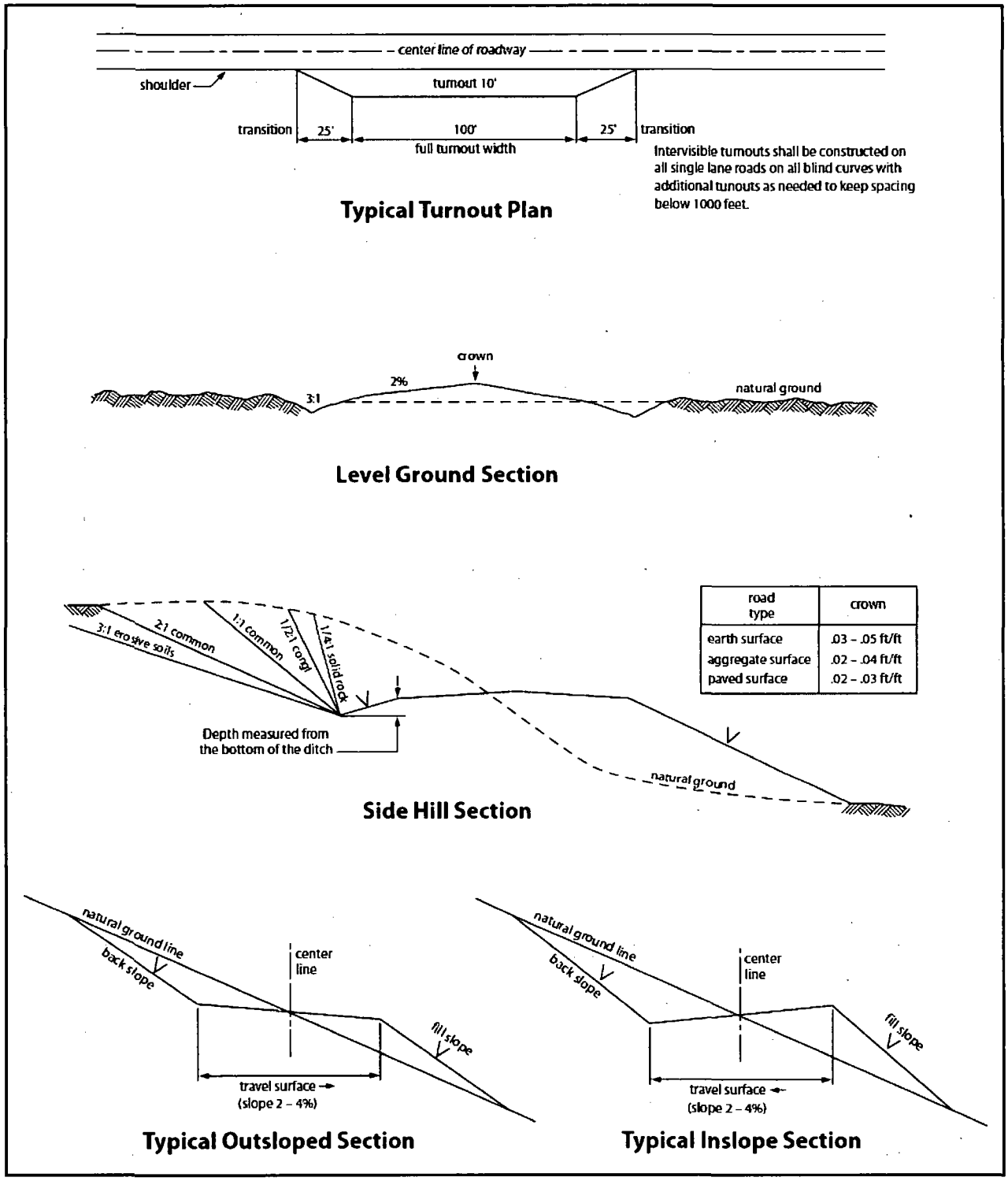


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. 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).

VIII. INTERIM RECLAMATION

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

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

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

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

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

IX. FINAL ABANDONMENT & RECLAMATION

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

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

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

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

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Exhibit A-1
Company: Matador Resources
Lease #:
Well name: Verna Rae Fed Com 203H
November 11, 2017

Seed Mixture for LPC Sand/Shinnery 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 will be tested and the viability testing of seed shall 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 will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/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 will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. 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 Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*Pounds of pure live seed:

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

Approval Date: 02/02/2018

Hydrogen Sulfide Drilling

Operations Plan

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 will 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 attachments

6 Communication:

- 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 of emergency help is required. In most cases cellular telephones will be available at 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 required to be familiar with the effects H2S has on tubulars good and other mechanical equipment.

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

11 Emergency Contacts

- See following page

H2S Contingency Plan Emergency Contacts
Verna Rae Fed Com wells
Matador Production Company
Sec. 6, T20S, R34E Lea County, NM

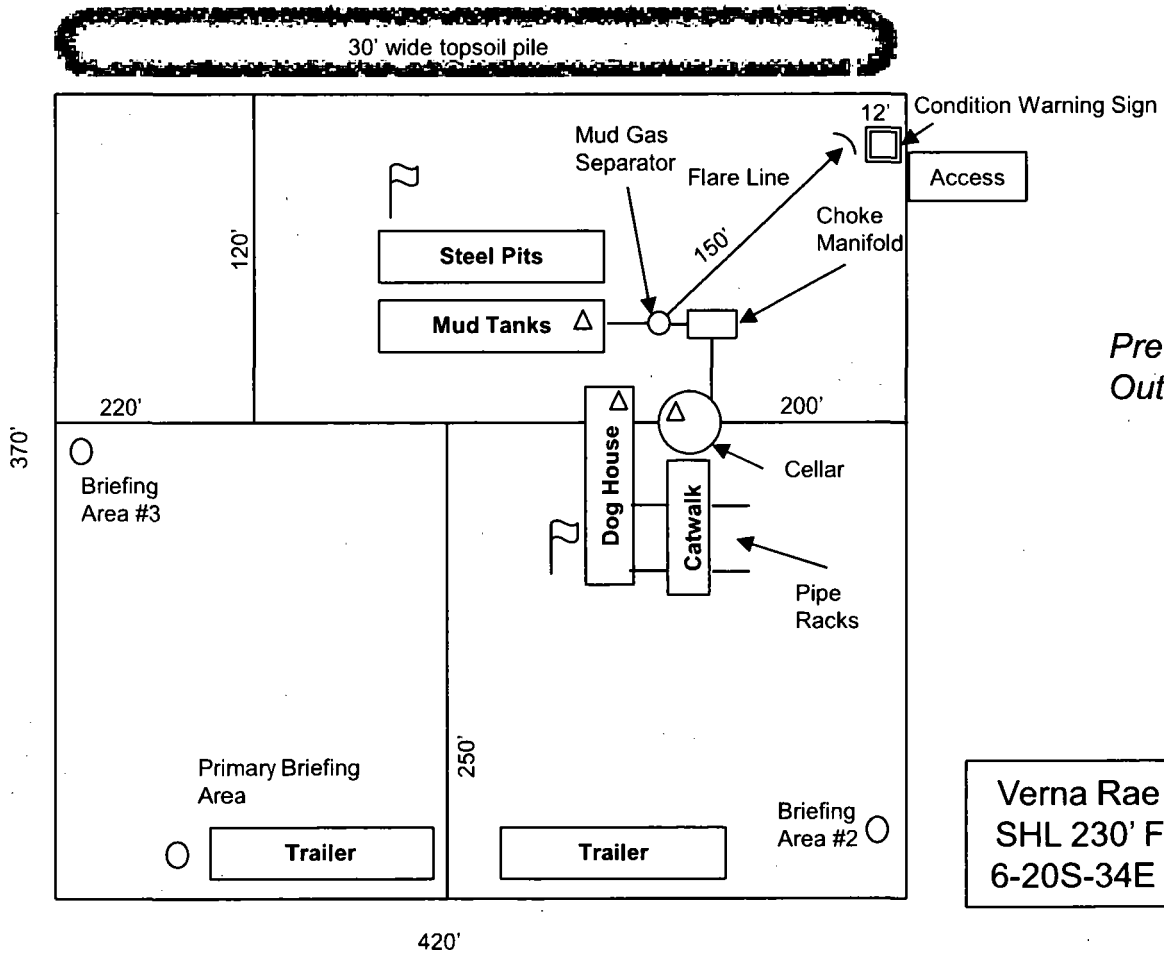
Company Office			
Matador Production Company	(972)-371-5200		
Key Personnel			
Name	**Title**	**Office**	**Mobile**
Billy Goodwin	Vice President Drilling	972-371-5210	817-522-2928
Gary Martin	Drilling Superintendent		601-669-1774
Dee Smith	Drilling Superintendent	972-371-5447	972-822-1010
Patrick Walsh	Drilling Engineer	972-371-5291	626-318-5808
Greg Deevers	Construction Superintendent		405-431-9527
Jimmy Benefield	Construction Superintendent		318-548-6659
Lea County			
Ambulance		911	
Nor Lea General Hospital (Hobbs)		575-397-0560	
State Police (Hobbs)		575-392-5580	
City Police (Hobbs)		575-397-9625	
Sheriff's Office (Lovington)		575-396-3611	
Fire Marshall (Lovington)		575-391-2983	
Volunteer Fire Dept. (Monument)		575-393-4339	
Emergency Management (Lovington)		575-391-2983	
New Mexico Oil Conservation Division (Hobbs)		575-393-6161	575-390-3186
BLM (Hobbs)		575-393-3612	
Hobbs Animal Clinic		575-392-5563	
Dal Paso Animal Hospital (Hobbs)		575-397-2286	
Mountain States Equine (Hobbs)		575-392-7488	
Carlsbad			
BLM		575-234-5972	
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			
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 SE, D3; Albuquerque, NM		505-842-4433	
SB Air Med Service- 2505 Clark Carr Loop SE; 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	
NM Dept. of Transportation (Roswell)		575-637-7200	

H2S Rig Diagram

Wind Direction Indicator

△ H2S Monitors

○ Briefing Areas



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Prevailing Wind Out of the South

Verna Rae Fed Com 203H
SHL 230' FNL & 1845' FEL
6-20S-34E Lea County, NM

Matador Resources Company

Pro Directional

Survey Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 203H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3648.50usft (GL:3620'+KB:28.5'(809))
Site:	Verna Rae	**MD Reference:**	Rig @ 3648.50usft (GL:3620'+KB:28.5'(809))
Well:	203H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Prelim Plan A	**Database:**	WellPlanner1

Project	Lea County, NM		
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		

Site	Verna Rae				
Site Position:		**Northing:**	585,923.00 usft	**Latitude:**	32.6086426°N
From:	Map	**Easting:**	727,046.00 usft	**Longitude:**	103.5960109°W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.40 °

Well	203H					
Well Position	**+N/-S**	0.00 usft	**Northing:**	585,921.00 usft	**Latitude:**	32.6086394°N
	+E/-W	0.00 usft	**Easting:**	726,926.00 usft	**Longitude:**	103.5964006°W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,620.00 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	HDGM	4/21/2017	6.80	60.63	48,396.80

Design	Prelim Plan A				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.00	0.00	0.00	179.95	

Survey Tool Program **Date** 5/31/2017

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	15,714.10	Prelim Plan A (OH)	MWD - OWSG	MWD - OWSG

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	1.00	290.62	299.99	0.31	-0.82	-0.31	1.00	1.00	0.00
400.00	2.00	290.62	399.96	1.23	-3.27	-1.23	1.00	1.00	0.00
500.00	3.00	290.62	499.86	2.77	-7.35	-2.77	1.00	1.00	0.00
600.00	4.00	290.62	599.68	4.92	-13.06	-4.93	1.00	1.00	0.00
700.00	5.00	290.62	699.37	7.68	-20.41	-7.70	1.00	1.00	0.00
800.00	5.00	290.62	798.99	10.75	-28.56	-10.77	0.00	0.00	0.00
900.00	5.00	290.62	898.60	13.82	-36.72	-13.85	0.00	0.00	0.00

Pro Directional

Survey Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 203H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3648.50usft (GL:3620'+KB:28.5'(809))
Site:	Verna Rae	**MD Reference:**	Rig @ 3648.50usft (GL:3620'+KB:28.5'(809))
Well:	203H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Prelim Plan A	**Database:**	WellPlanner1

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)
1,000.00	5.00	290.62	998.22	16.89	-44.88	-16.93	0.00	0.00	0.00
1,100.00	5.00	290.62	1,097.84	19.96	-53.03	-20.01	0.00	0.00	0.00
1,200.00	5.00	290.62	1,197.46	23.03	-61.19	-23.08	0.00	0.00	0.00
1,300.00	5.00	290.62	1,297.08	26.10	-69.35	-26.16	0.00	0.00	0.00
1,400.00	5.00	290.62	1,396.70	29.17	-77.50	-29.24	0.00	0.00	0.00
1,500.00	5.00	290.62	1,496.32	32.24	-85.66	-32.31	0.00	0.00	0.00
1,600.00	5.00	290.62	1,595.94	35.31	-93.82	-35.39	0.00	0.00	0.00
1,700.00	5.00	290.62	1,695.56	38.38	-101.98	-38.47	0.00	0.00	0.00
1,800.00	5.00	290.62	1,795.18	41.45	-110.13	-41.54	0.00	0.00	0.00
1,900.00	5.00	290.62	1,894.80	44.52	-118.29	-44.62	0.00	0.00	0.00
2,000.00	5.00	290.62	1,994.42	47.59	-126.45	-47.70	0.00	0.00	0.00
2,100.00	5.00	290.62	2,094.04	50.66	-134.60	-50.77	0.00	0.00	0.00
2,200.00	5.00	290.62	2,193.66	53.73	-142.76	-53.85	0.00	0.00	0.00
2,300.00	5.00	290.62	2,293.28	56.80	-150.92	-56.93	0.00	0.00	0.00
2,400.00	5.00	290.62	2,392.90	59.87	-159.08	-60.01	0.00	0.00	0.00
2,500.00	5.00	290.62	2,492.52	62.94	-167.23	-63.08	0.00	0.00	0.00
2,600.00	5.00	290.62	2,592.14	66.01	-175.39	-66.16	0.00	0.00	0.00
2,700.00	5.00	290.62	2,691.76	69.08	-183.55	-69.24	0.00	0.00	0.00
2,800.00	5.00	290.62	2,791.37	72.15	-191.70	-72.31	0.00	0.00	0.00
2,900.00	5.00	290.62	2,890.99	75.22	-199.86	-75.39	0.00	0.00	0.00
3,000.00	5.00	290.62	2,990.61	78.29	-208.02	-78.47	0.00	0.00	0.00
3,100.00	5.00	290.62	3,090.23	81.36	-216.17	-81.54	0.00	0.00	0.00
3,200.00	5.00	290.62	3,189.85	84.43	-224.33	-84.62	0.00	0.00	0.00
3,300.00	5.00	290.62	3,289.47	87.50	-232.49	-87.70	0.00	0.00	0.00
3,400.00	5.00	290.62	3,389.09	90.57	-240.65	-90.78	0.00	0.00	0.00
3,500.00	5.00	290.62	3,488.71	93.64	-248.80	-93.85	0.00	0.00	0.00
3,600.00	5.00	290.62	3,588.33	96.71	-256.96	-96.93	0.00	0.00	0.00
3,700.00	5.00	290.62	3,687.95	99.78	-265.12	-100.01	0.00	0.00	0.00
3,800.00	5.00	290.62	3,787.57	102.84	-273.27	-103.08	0.00	0.00	0.00
3,900.00	5.00	290.62	3,887.19	105.91	-281.43	-106.16	0.00	0.00	0.00
4,000.00	5.00	290.62	3,986.81	108.98	-289.59	-109.24	0.00	0.00	0.00
4,100.00	5.00	290.62	4,086.43	112.05	-297.74	-112.31	0.00	0.00	0.00
4,200.00	5.00	290.62	4,186.05	115.12	-305.90	-115.39	0.00	0.00	0.00
4,300.00	5.00	290.62	4,285.67	118.19	-314.06	-118.47	0.00	0.00	0.00
4,400.00	5.00	290.62	4,385.29	121.26	-322.22	-121.55	0.00	0.00	0.00
4,500.00	5.00	290.62	4,484.91	124.33	-330.37	-124.62	0.00	0.00	0.00
4,600.00	5.00	290.62	4,584.53	127.40	-338.53	-127.70	0.00	0.00	0.00
4,700.00	5.00	290.62	4,684.14	130.47	-346.69	-130.78	0.00	0.00	0.00
4,800.00	5.00	290.62	4,783.76	133.54	-354.84	-133.85	0.00	0.00	0.00
4,900.00	5.00	290.62	4,883.38	136.61	-363.00	-136.93	0.00	0.00	0.00
5,000.00	5.00	290.62	4,983.00	139.68	-371.16	-140.01	0.00	0.00	0.00
5,100.00	5.00	290.62	5,082.62	142.75	-379.32	-143.08	0.00	0.00	0.00
5,200.00	5.00	290.62	5,182.24	145.82	-387.47	-146.16	0.00	0.00	0.00
5,300.00	5.00	290.62	5,281.86	148.89	-395.63	-149.24	0.00	0.00	0.00

Pro Directional

Survey Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 203H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3648.50usft (GL:3620'+KB:28.5'(809))
Site:	Verna Rae	**MD Reference:**	Rig @ 3648.50usft (GL:3620'+KB:28.5'(809))
Well:	203H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Prelim Plan A	**Database:**	WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	5.00	290.62	5,381.48	151.96	-403.79	-152.31	0.00	0.00	0.00
5,500.00	5.00	290.62	5,481.10	155.03	-411.94	-155.39	0.00	0.00	0.00
5,600.00	5.00	290.62	5,580.72	158.10	-420.10	-158.47	0.00	0.00	0.00
5,700.00	5.00	290.62	5,680.34	161.17	-428.26	-161.55	0.00	0.00	0.00
5,800.00	5.00	290.62	5,779.96	164.24	-436.41	-164.62	0.00	0.00	0.00
5,900.28	5.00	290.62	5,879.86	167.32	-444.59	-167.71	0.00	0.00	0.00
6,000.00	4.00	290.62	5,979.27	170.08	-451.92	-170.47	1.00	-1.00	0.00
6,100.00	3.00	290.62	6,079.08	172.23	-457.64	-172.63	1.00	-1.00	0.00
6,200.00	2.00	290.62	6,178.98	173.77	-461.72	-174.17	1.00	-1.00	0.00
6,300.00	1.00	290.62	6,278.95	174.69	-464.18	-175.10	1.00	-1.00	0.00
6,400.28	0.00	0.00	6,379.23	175.00	-465.00	-175.41	1.00	-1.00	0.00
6,500.00	0.00	0.00	6,478.94	175.00	-465.00	-175.41	0.00	0.00	0.00
6,600.00	0.00	0.00	6,578.94	175.00	-465.00	-175.41	0.00	0.00	0.00
6,700.00	0.00	0.00	6,678.94	175.00	-465.00	-175.41	0.00	0.00	0.00
6,800.00	0.00	0.00	6,778.94	175.00	-465.00	-175.41	0.00	0.00	0.00
6,900.00	0.00	0.00	6,878.94	175.00	-465.00	-175.41	0.00	0.00	0.00
7,000.00	0.00	0.00	6,978.94	175.00	-465.00	-175.41	0.00	0.00	0.00
7,100.00	0.00	0.00	7,078.94	175.00	-465.00	-175.41	0.00	0.00	0.00
7,200.00	0.00	0.00	7,178.94	175.00	-465.00	-175.41	0.00	0.00	0.00
7,300.00	0.00	0.00	7,278.94	175.00	-465.00	-175.41	0.00	0.00	0.00
7,400.00	0.00	0.00	7,378.94	175.00	-465.00	-175.41	0.00	0.00	0.00
7,500.00	0.00	0.00	7,478.94	175.00	-465.00	-175.41	0.00	0.00	0.00
7,600.00	0.00	0.00	7,578.94	175.00	-465.00	-175.41	0.00	0.00	0.00
7,700.00	0.00	0.00	7,678.94	175.00	-465.00	-175.41	0.00	0.00	0.00
7,800.00	0.00	0.00	7,778.94	175.00	-465.00	-175.41	0.00	0.00	0.00
7,900.00	0.00	0.00	7,878.94	175.00	-465.00	-175.41	0.00	0.00	0.00
8,000.00	0.00	0.00	7,978.94	175.00	-465.00	-175.41	0.00	0.00	0.00
8,100.00	0.00	0.00	8,078.94	175.00	-465.00	-175.41	0.00	0.00	0.00
8,200.00	0.00	0.00	8,178.94	175.00	-465.00	-175.41	0.00	0.00	0.00
8,300.00	0.00	0.00	8,278.94	175.00	-465.00	-175.41	0.00	0.00	0.00
8,400.00	0.00	0.00	8,378.94	175.00	-465.00	-175.41	0.00	0.00	0.00
8,500.00	0.00	0.00	8,478.94	175.00	-465.00	-175.41	0.00	0.00	0.00
8,600.00	0.00	0.00	8,578.94	175.00	-465.00	-175.41	0.00	0.00	0.00
8,700.00	0.00	0.00	8,678.94	175.00	-465.00	-175.41	0.00	0.00	0.00
8,800.00	0.00	0.00	8,778.94	175.00	-465.00	-175.41	0.00	0.00	0.00
8,900.00	0.00	0.00	8,878.94	175.00	-465.00	-175.41	0.00	0.00	0.00
9,000.00	0.00	0.00	8,978.94	175.00	-465.00	-175.41	0.00	0.00	0.00
9,100.00	0.00	0.00	9,078.94	175.00	-465.00	-175.41	0.00	0.00	0.00
9,200.00	0.00	0.00	9,178.94	175.00	-465.00	-175.41	0.00	0.00	0.00
9,300.00	0.00	0.00	9,278.94	175.00	-465.00	-175.41	0.00	0.00	0.00
9,400.00	0.00	0.00	9,378.94	175.00	-465.00	-175.41	0.00	0.00	0.00
9,500.00	0.00	0.00	9,478.94	175.00	-465.00	-175.41	0.00	0.00	0.00
9,600.00	0.00	0.00	9,578.94	175.00	-465.00	-175.41	0.00	0.00	0.00

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 203H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3648.50usft (GL:3620'+KB:28.5'(809))
Site:	Verna Rae	**MD Reference:**	Rig @ 3648.50usft (GL:3620'+KB:28.5'(809))
Well:	203H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Prelim Plan A	**Database:**	WellPlanner1

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)
9,700.00	0.00	0.00	9,678.94	175.00	-465.00	-175.41	0.00	0.00	0.00
9,800.00	0.00	0.00	9,778.94	175.00	-465.00	-175.41	0.00	0.00	0.00
9,900.00	0.00	0.00	9,878.94	175.00	-465.00	-175.41	0.00	0.00	0.00
10,000.00	0.00	0.00	9,978.94	175.00	-465.00	-175.41	0.00	0.00	0.00
10,100.00	0.00	0.00	10,078.94	175.00	-465.00	-175.41	0.00	0.00	0.00
10,200.00	0.00	0.00	10,178.94	175.00	-465.00	-175.41	0.00	0.00	0.00
10,300.00	0.00	0.00	10,278.94	175.00	-465.00	-175.41	0.00	0.00	0.00
10,403.06	0.00	0.00	10,382.00	175.00	-465.00	-175.41	0.00	0.00	0.00
10,450.00	4.69	179.95	10,428.89	173.08	-465.00	-173.48	10.00	10.00	0.00
10,500.00	9.69	179.95	10,478.48	166.82	-464.99	-167.22	10.00	10.00	0.00
10,550.00	14.69	179.95	10,527.34	156.26	-464.98	-156.67	10.00	10.00	0.00
10,600.00	19.69	179.95	10,575.09	141.48	-464.97	-141.89	10.00	10.00	0.00
10,650.00	24.69	179.95	10,621.37	122.60	-464.96	-123.01	10.00	10.00	0.00
10,700.00	29.69	179.95	10,665.83	99.76	-464.94	-100.17	10.00	10.00	0.00
10,750.00	34.69	179.95	10,708.13	73.13	-464.92	-73.53	10.00	10.00	0.00
10,800.00	39.69	179.95	10,747.94	42.91	-464.89	-43.32	10.00	10.00	0.00
10,850.00	44.69	179.95	10,784.97	9.34	-464.87	-9.75	10.00	10.00	0.00
10,900.00	49.69	179.95	10,818.94	-27.33	-464.84	26.93	10.00	10.00	0.00
10,950.00	54.69	179.95	10,849.58	-66.82	-464.81	66.42	10.00	10.00	0.00
11,000.00	59.69	179.95	10,876.66	-108.84	-464.77	108.43	10.00	10.00	0.00
11,050.00	64.69	179.95	10,899.98	-153.05	-464.74	152.64	10.00	10.00	0.00
11,100.00	69.69	179.95	10,919.35	-199.12	-464.70	198.72	10.00	10.00	0.00
11,150.00	74.69	179.95	10,934.64	-246.71	-464.66	246.31	10.00	10.00	0.00
11,200.00	79.69	179.95	10,945.71	-295.46	-464.62	295.05	10.00	10.00	0.00
11,250.00	84.69	179.95	10,952.50	-344.98	-464.58	344.57	10.00	10.00	0.00
11,303.05	90.00	179.95	10,954.96	-397.95	-464.54	397.55	10.00	10.00	0.00
11,400.00	90.00	179.95	10,954.96	-494.90	-464.46	494.49	0.00	0.00	0.00
11,500.00	90.00	179.95	10,954.96	-594.90	-464.38	594.49	0.00	0.00	0.00
11,600.00	90.00	179.95	10,954.96	-694.90	-464.30	694.49	0.00	0.00	0.00
11,700.00	90.00	179.95	10,954.96	-794.90	-464.22	794.49	0.00	0.00	0.00
11,800.00	90.00	179.95	10,954.96	-894.90	-464.14	894.49	0.00	0.00	0.00
11,900.00	90.00	179.95	10,954.96	-994.90	-464.06	994.49	0.00	0.00	0.00
12,000.00	90.00	179.95	10,954.96	-1,094.90	-463.98	1,094.49	0.00	0.00	0.00
12,100.00	90.00	179.95	10,954.97	-1,194.90	-463.90	1,194.49	0.00	0.00	0.00
12,200.00	90.00	179.95	10,954.97	-1,294.90	-463.82	1,294.49	0.00	0.00	0.00
12,300.00	90.00	179.95	10,954.97	-1,394.90	-463.74	1,394.49	0.00	0.00	0.00
12,400.00	90.00	179.95	10,954.97	-1,494.90	-463.66	1,494.49	0.00	0.00	0.00
12,500.00	90.00	179.95	10,954.97	-1,594.90	-463.58	1,594.49	0.00	0.00	0.00
12,600.00	90.00	179.95	10,954.97	-1,694.90	-463.50	1,694.49	0.00	0.00	0.00
12,700.00	90.00	179.95	10,954.97	-1,794.90	-463.42	1,794.49	0.00	0.00	0.00
12,800.00	90.00	179.95	10,954.97	-1,894.90	-463.34	1,894.49	0.00	0.00	0.00
12,900.00	90.00	179.95	10,954.97	-1,994.90	-463.26	1,994.49	0.00	0.00	0.00
13,000.00	90.00	179.95	10,954.97	-2,094.90	-463.18	2,094.49	0.00	0.00	0.00

Pro Directional

Survey Report

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 203H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3648.50usft (GL:3620'+KB:28.5'(809))
Site:	Verna Rae	**MD Reference:**	Rig @ 3648.50usft (GL:3620'+KB:28.5'(809))
Well:	203H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Prelim Plan A	**Database:**	WellPlanner1

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)
13,100.00	90.00	179.95	10,954.98	-2,194.90	-463.10	2,194.49	0.00	0.00	0.00
13,200.00	90.00	179.95	10,954.98	-2,294.90	-463.02	2,294.49	0.00	0.00	0.00
13,300.00	90.00	179.95	10,954.98	-2,394.90	-462.94	2,394.49	0.00	0.00	0.00
13,400.00	90.00	179.95	10,954.98	-2,494.90	-462.86	2,494.49	0.00	0.00	0.00
13,500.00	90.00	179.95	10,954.98	-2,594.90	-462.78	2,594.49	0.00	0.00	0.00
13,600.00	90.00	179.95	10,954.98	-2,694.90	-462.70	2,694.49	0.00	0.00	0.00
13,700.00	90.00	179.95	10,954.98	-2,794.90	-462.62	2,794.49	0.00	0.00	0.00
13,800.00	90.00	179.95	10,954.98	-2,894.90	-462.54	2,894.49	0.00	0.00	0.00
13,900.00	90.00	179.95	10,954.98	-2,994.90	-462.46	2,994.49	0.00	0.00	0.00
14,000.00	90.00	179.95	10,954.98	-3,094.90	-462.38	3,094.49	0.00	0.00	0.00
14,100.00	90.00	179.95	10,954.98	-3,194.90	-462.30	3,194.49	0.00	0.00	0.00
14,200.00	90.00	179.95	10,954.99	-3,294.90	-462.22	3,294.49	0.00	0.00	0.00
14,300.00	90.00	179.95	10,954.99	-3,394.90	-462.13	3,394.49	0.00	0.00	0.00
14,400.00	90.00	179.95	10,954.99	-3,494.90	-462.05	3,494.49	0.00	0.00	0.00
14,500.00	90.00	179.95	10,954.99	-3,594.90	-461.97	3,594.49	0.00	0.00	0.00
14,600.00	90.00	179.95	10,954.99	-3,694.90	-461.89	3,694.49	0.00	0.00	0.00
14,700.00	90.00	179.95	10,954.99	-3,794.90	-461.81	3,794.49	0.00	0.00	0.00
14,800.00	90.00	179.95	10,954.99	-3,894.90	-461.73	3,894.49	0.00	0.00	0.00
14,900.00	90.00	179.95	10,954.99	-3,994.90	-461.65	3,994.49	0.00	0.00	0.00
15,000.00	90.00	179.95	10,954.99	-4,094.90	-461.57	4,094.49	0.00	0.00	0.00
15,100.00	90.00	179.95	10,954.99	-4,194.90	-461.49	4,194.49	0.00	0.00	0.00
15,200.00	90.00	179.95	10,955.00	-4,294.90	-461.41	4,294.49	0.00	0.00	0.00
15,300.00	90.00	179.95	10,955.00	-4,394.90	-461.33	4,394.49	0.00	0.00	0.00
15,400.00	90.00	179.95	10,955.00	-4,494.90	-461.25	4,494.49	0.00	0.00	0.00
15,500.00	90.00	179.95	10,955.00	-4,594.90	-461.17	4,594.49	0.00	0.00	0.00
15,600.00	90.00	179.95	10,955.00	-4,694.90	-461.09	4,694.49	0.00	0.00	0.00
15,700.00	90.00	179.95	10,955.00	-4,794.90	-461.01	4,794.49	0.00	0.00	0.00
15,714.10	90.00	179.95	10,955.00	-4,809.00	-461.00	4,808.60	0.00	0.00	0.00

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
[VR203]FPP	0.00	0.00	0.00	-103.00	-465.00	585,818.00	726,461.00	32.6083652°N	103.5979129°W
- plan misses target center by 476.27usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
[VR203]LPP	0.00	0.00	0.00	-4,719.00	-461.00	581,202.00	726,465.00	32.5956775°N	103.5980036°W
- plan misses target center by 4741.46usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
[VR203]PBHL	0.00	0.00	10,955.00	-4,809.00	-461.00	581,112.00	726,465.00	32.5954302°N	103.5980056°W
- plan hits target center									
- Point									

Company:	Matador Resources	**Local Co-ordinate Reference:**	Well 203H
Project:	Lea County, NM	**TVD Reference:**	Rig @ 3648.50usft (GL:3620'+KB:28.5'(809))
Site:	Verna Rae	**MD Reference:**	Rig @ 3648.50usft (GL:3620'+KB:28.5'(809))
Well:	203H	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Prelim Plan A	**Database:**	WellPlanner1

Checked By: _____ Approved By: _____ Date: _____

Matador Production Company **DRILL PLAN PAGE 1**
Verna Rae Fed Com 203H
SHL 230' FNL & 1845' FEL
BHL 240' FSL & 2310' FEL
Sec. 6, T. 20 S., R. 34 E., Lea County, NM

Drilling Program

1. ESTIMATED TOPS

Formation Name	TVD	MD	Bearing
Quaternary	000'	000'	water
Rustler anhydrite	1475'	1479'	N/A
Top salt	1605'	1609'	N/A
Base salt	3160'	3170'	N/A
Tansill sandstone	3195'	3205'	N/A
Yates gypsum	3302'	3313'	N/A
Seven Rivers dolomite	3695'	3707'	N/A
Queen sandstone	4602'	4617'	N/A
Capitan/Goat Seep Reef carbonate	4750'	4766'	water
Delaware Mt. Group sandstones	5295'	5313'	hydrocarbons
Brushy Canyon sandstone	6194'	6215'	hydrocarbons
Bone Spring Limestone	8279'	8300'	hydrocarbons
1st Bone Spring carbonate	9010'	9031'	hydrocarbons
1st Bone Spring sandstone	9400'	9421'	hydrocarbons
2nd Bone Spring carbonate	9695'	9716'	hydrocarbons
2nd Bone Spring sandstone	9930'	9951'	hydrocarbons
(KOP	10429'	10450'	hydrocarbons)
3rd Bone Spring carbonate	10446'	10467'	hydrocarbons
3rd Bone Spring sandstone	10670'	10704'	hydrocarbons
Wolfcamp X sandstone	10884'	10921'	hydrocarbons
Wolfcamp Y sandstone	10940'	11174'	hydrocarbons & goal
TD	10955'	15714'	hydrocarbons

2. NOTABLE ZONES

Wolfcamp Y is the goal. Hole will extend south of the last perforation point to allow for pump installation. All perforations will be ≥330' from the dedication perimeter. Closest water well (L 07213) is 1863' NNE. Depth to water is 110' in this 160' deep inactive well.

3. PRESSURE CONTROL

A 12,000' 5000-psi BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram, and 1 annular preventer will be used below surface casing to TD. See attached BOP, choke manifold, co-flex hose, and speed head diagrams.

An accumulator complying with Onshore Order 2 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 in 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 nippled up, then 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 7500 psi high. Annular preventer will be tested to 250 psi low and 2500 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 tested to 250 psi low and 7500 psi high. Annular will be tested to 250 psi low and 2500 psi high.

Matador is requesting a variance to use a speed head. Speed head diameter range is 13.375" x 9.625" x 7.625" x 5.5".

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. Manufacturer does not require the hose to be anchored. If the specific hose is not available, then one of equal or higher rating will be used.

4. CASING & CEMENT

Matador Production Company **DRILL PLAN PAGE 3**
Verna Rae Fed Com 203H
SHL 230' FNL & 1845' FEL
BHL 240' FSL & 2310' FEL
Sec. 6, T. 20 S., R. 34 E., Lea County, NM

All casing will be API and new. See attached casing assumption worksheet.

Hole O. D.	Set MD	Set TVD	Name	Casing O. D.	TOC	Weight (lb/ft)	Grade	Joint
20"	0' - 1600'	0' - 1596'	Surface	13.375"	GL	54.5	J-55	BTC
12.25"	0' - 5400'	0' - 5381'	Intermediate 1	9.625"	GL	40	J-55	BTC
8.75"	0' - 5300'	0' - 5282'	Intermediate 2	7.625"	4400'	29.7	P-110	BTC
	5300'- 10350'	5282'- 10339'		7.625"		29.7	P-110	VAM HTF-NR
	10350'- 11100'	10339'- 10919'		7"		29	P-110	BTC
6.125"	0' - 10250'	0' - 10229'	Production	5.5"	10100'	20	P-110	Tenaris XP
	10250'- 15714'	10229'- 10955'		4.5"		13.5	P-110	Tenaris XP

Name	Type	Sacks	Yield	Cu. Ft.	Weight	Blend
Surface	Lead	1764	1.75	3087	13.5	Class C + 3% NaCl + LCM
	Tail	559	1.38	771	14.8	Class C + 5% NaCl + LCM
TOC = GL		100% Excess			Centralizers per Onshore Order 2.III.B.1f	
Intermediate 1	Lead	1262	1.81	2284	13.5	Class C + Bentonite + 1% $CaCl_2$ + 8% NaCl + LCM
	Tail	490	1.38	676	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	845	2.36	1994	11.5	TXI + Fluid Loss + Dispersant + Retarder + LCM
	Tail	155	1.38	213	13.2	TXI + Fluid Loss + Dispersant + Retarder + LCM

TOC = 4400'		35% Excess			2 on btm jt, 1 on 2nd jt, 1 every other jt to top of tail cement (500' above TOC), 1 every 4th jt to GL	
Production	Tail	421	1.38	580	15.8	Class H + Fluid Loss + Dispersant + Retarder + LCM
TOC = 10100'		10% Excess			2 on btm jt, 1 on 2nd jt, 1 every third jt to top of tail cement (1000' tie back)	

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	Casing	Interval	lb/gal	Viscosity	Fluid Loss
fresh water spud	surface	0' - 1600'	8.3	28	NC
brine water	intermediate 1	1600' - 5400'	10.0	30-32	NC
fresh water & cut brine	intermediate 2	5400' - 11100'	9.0	30-31	NC
OBM	production	11100' – 15714'	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 ≈1600' to TD.

No electric log is 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 ≈7668 psi. Expected bottom hole temperature is ≈170° F.

In accordance with Onshore Order 6, Matador does not anticipate that there will be enough H_2S from the 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 may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

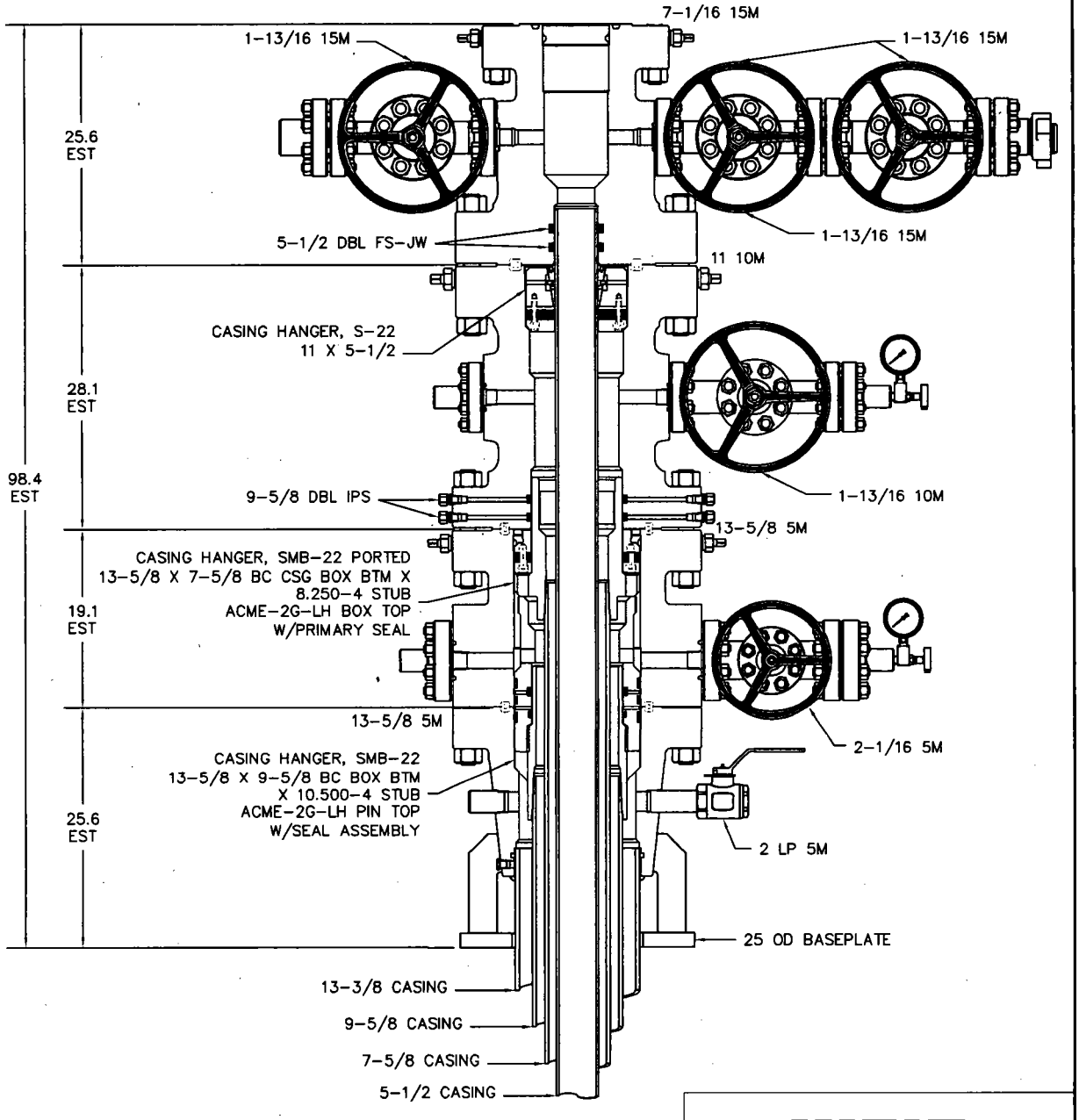
8. OTHER INFORMATION

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.

MATADOR PRODUCTION COMPANY
13-3/8" X 9-5/8" X 7-5/8" X 5-1/2"
HO-2171

D Culbertson #234H



WEIR

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

DRAWN BY:	SCALE	DATE	REV
JS	1-11	10/19/16	
CHECKED BY:	DRAWING NO.		
APPROVED BY:	P-21713		

Issued on: 12 Janv. 2017 by T. DELBOSCO

VRCC 16-1177 Rev02 for Houston Field Service

DATA ARE INFORMATIVE ONLY.
BASED ON SI_PD-101836 P&B

VAM® HTF-NR™
Connection Data Sheet

OD	Weight	Wall Th.	Grade	API Drift	Connection
7 5/8 in.	29.70 lb/ft	0.375 in.	P110 EC	6.750 in.	VAM® HTF NR

PIPE PROPERTIES	
Nominal OD	7.625 in.
Nominal ID	6.875 in.
Nominal Cross Section Area	8.541 sqin.
Grade Type	Enhanced API
Min. Yield Strength	125 ksi
Max. Yield Strength	140 ksi
Min. Ultimate Tensile Strength	135 ksi
Tensile Yield Strength	1 068 klb
Internal Yield Pressure	10 760 psi
Collapse pressure	7 360 psi

CONNECTION PROPERTIES	
Connection Type	Premium Integral Flush
Connection OD (nom)	7.701 in.
Connection ID (nom)	6.782 in.
Make-Up Loss	4.657 in.
Critical Cross Section	4.971 sqin.
Tension Efficiency	58 % of pipe
Compression Efficiency	72.7 % of pipe
Compression Efficiency with Sealability	34.8 % of pipe
Internal Pressure Efficiency	100 % of pipe
External Pressure Efficiency	100 % of pipe

CONNECTION PERFORMANCES	
Tensile Yield Strength	619 klb
Compression Resistance	778 klb
Compression with Sealability	372 klb
Internal Yield Pressure	10 760 psi
External Pressure Resistance	7 360 psi
Max. Bending	44 °/100ft
Max. Bending with Sealability	17 °/100ft

TORQUE VALUES	
Min. Make-up torque	9 600 ft.lb
Opti. Make-up torque	11 300 ft.lb
Max. Make-up torque	13 000 ft.lb
Max. Torque with Sealability	58 500 ft.lb
Max. Torsional Value	73 000 ft.lb

VAM® HTF™ (High Torque Flush) is a flush OD integral connection providing maximum clearance along with torque strength for challenging applications such as extended reach and slim hole wells, drilling liner / casing, liner rotation to acheive better cementation in highly deviated and critical High Pressure / High Temperature wells.

Looking ahea on the outcoming testing industry standards, VAM® decided to create an upgraded design and launch on the market the VAM® HTF-NR as the new standard version of VAM® extreme high torque flush connection. The VAM® HTF-NR has extensive tests as per API RP 5C5:2015 CAL II which include the gas sealability having load points with bending, internal pressure and high temperature at 135°C.

Do you need help on this product? - Remember no one knows VAM® like VAM®

canada@vamfieldservice.com *uk@vamfieldservice.com* *china@vamfieldservice.com*
usa@vamfieldservice.com *dubai@vamfieldservice.com* *baku@vamfieldservice.com*
mexico@vamfieldservice.com *nigeria@vamfieldservice.com* *singapore@vamfieldservice.com*
brazil@vamfieldservice.com *angola@vamfieldservice.com* *australia@vamfieldservice.com*

Over 180 VAM® Specialists available worldwide 24/7 for Rig Site Assistance

Other Connection Data Sheets are available at www.vamservices.com

Vallourec Group

vallourec

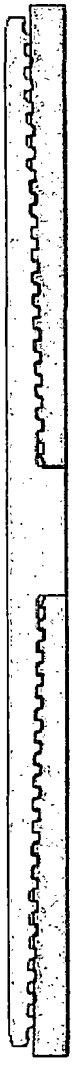
For the latest performance data, always visit our website: www.tenaris.com

July 15 2015

Tenaris

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

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



PIPE BODY DATA

GEOMETRY

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

PERFORMANCE

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

TENARISXP™ BTC CONNECTION DATA

GEOMETRY

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

PERFORMANCE

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

ESTIMATED MAKE-UP TORQUES(3)

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

OPERATIONAL LIMIT TORQUES

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

BLANKING DIMENSIONS

Blanking Dimensions

(1) Internal Pressure Capacity related to structural resistance only. Internal pressure leak resistance as per section 10.3 API 5C3 / ISO 10400 - 2007.

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

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

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

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

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 **SURFACE PLAN PAGE 1**
Verna Rae Fed Com 203H
SHL 230' FNL & 1845' FEL
BHL 240' FSL & 2310' FEL
Sec. 6, T. 20 S., R. 34 E., Lea County, NM

Surface Use Plan

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

From the Hobbs Airport....
Go SW 22.3 miles on US 62/180 to the equivalent of Mile Post 78.2
Then turn right and go West 1.0 mile on a caliche road to a fence
Then go W and SW 830.32' cross-country to the slot 4 pad
Then go NW and W 629.25' cross-country to the Slot 3 pad (113H/123H/133H/134H/203H/204H

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.

2. ROAD TO BE BUILT OR UPGRADED (See MAPS 4 & 5)

The 629.25' of new road will be crowned and ditched, have a 14' wide driving surface, and be surfaced with caliche. Maximum disturbed width = 30'. Maximum grade = 3%. Maximum cut or fill = 2'. Underground pipelines will be padded before crossing. No culvert, cattle guard, or vehicle turn out is needed. Upgrading will consist of patching potholes with caliche. Roadwork associated with slot 4 pad is described in its APDs.

3. EXISTING WELLS (See MAP 3)

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

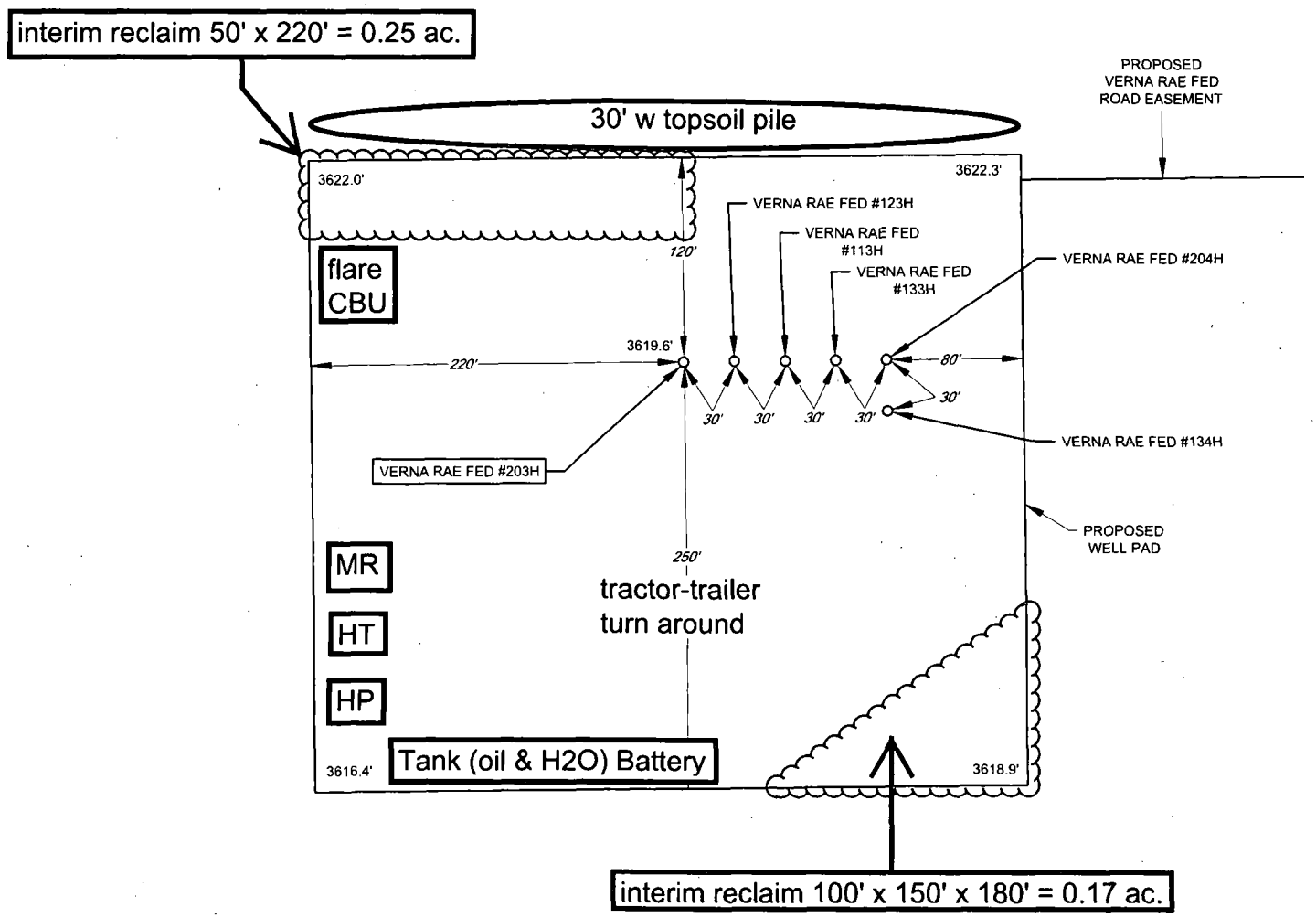
4. PROPOSED PRODUCTION FACILITIES (see MAPS 4, 6, & 7)

A 1415.63' long overhead raptor safe 3-phase power line will be built east to the slot 4 pad. (Power line to slot 4 pad is BLM right-of-way NMNM-137063). Oil tanks, water tanks, meter runs, separators, pumps, heater-treaters, combustion unit, and a flare will be installed on the south and west sides of the pad (see preceding diagram). Gas line

SECTION 6, TOWNSHIP 20-S, RANGE 34-E, N.M.P.M.
LEA COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'

SECTION LINE



LEASE NAME & WELL NO.: VERNA RAE FED #203H

#203H LATITUDE N 32.6087624 #203H LONGITUDE W 103.5968937

LEGEND

EXISTING ROAD

SECTION LINE

INTERIM RECLAMATION & PRODUCTION DIAGRAM

-N-

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 1983, U.S. SURVEY FEET

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

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

ORIGINAL DOCUMENT SIZE: 8.5" X 11"

plans have not been finalized, though it appears DCP will build a short line from its existing line that is between the Verna Rae Fed Com slot 3 and 4 pads.

5. WATER SUPPLY (See MAP 2)

Water will be trucked from existing water stations on private land. Sonny's water station (L 07431A) is in NENE 5-19s-36e. Berry's water station (CP 00802) is in SWNE 2-21s-32e.

6. CONSTRUCTION MATERIALS & METHODS (See MAPS 2 & 10-12)

NM One Call (811) will be notified before construction starts. Top ≈6" of soil and brush will be stockpiled north of the pad. V-door will face south. Closed loop drilling system will be used. Caliche will be hauled from existing caliche pits on private land. Klein pit is in SWNW 27-19s-35e. Berry pit is in E2NE4 35-20s-34e.

7. WASTE DISPOSAL

All trash will be placed in a portable trash cage. It will be hauled to the Lea 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 (NM-01-0006) disposal site at Halfway. Human waste will be disposed of in chemical toilets and hauled to the Hobbs 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, and mud logger.

9. WELL SITE LAYOUT (See MAPS 7 & 8)

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

10. RECLAMATION

Interim reclamation will be completed within 6 months of completing the well. Interim reclamation will consist of shrinking the pad ≈12% (0.42 acre) by removing caliche and reclaiming the north side (50' x 220') and southeast corner (100' x 150' x 180'). This will leave 3.15 acres for the production equipment (e. g., tank battery, heater-treater, separator, meter run), pump jacks, and tractor-trailer turn around. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas and harrowed on the contour. Disturbed areas will be seeded in accordance with the surface owner's requirements.

Enough stockpiled topsoil will be retained to cover the remainder of the pad when the well is plugged. Once the well is plugged, then the rest of the pad and 629.25' of new road will be similarly reclaimed within 6 months of plugging. Noxious weeds will be controlled. Land use:

629.25' x 30' road = 0.43 acre
1415.63' x 15' power line = 0.49 acre
+ 370' x 420' pad = 3.57 acres
4.49 acres short term
- 0.49 acre power line
- 0.42 acre interim reclamation
3.58 acres long term (0.43 ac. road + 3.15 ac. pad)

11. SURFACE OWNER

All pad, road (629.25'), and power line (1415.63') construction will be on land owned by Larry Hughes (HC 69 Box 57, Monument NM 88265). His phone number is 575 263-7602.

12. OTHER INFORMATION

On site inspection was held with Vance Wolf, Cassie Brooks, and Bob Ballard (all BLM) on April 3, 2017.

Lone Mountain inspected and filed archaeology report NMCRIS-138083 May 18, 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 16th day of June, 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

June 16, 2017

To Who it May Concern:

Matador Resources Company has a private surface owner agreement with Larry Hughes (HC 69 Box 57, Monument NM 88265) for the Verna Rae Fed Com road in SESE Sec. 31, T. 19 S., R. 34 E. and the Verna Rae Fed Com slot 3 well site, road, and power line in Lots 1 & 2 of Section 6, T. 20 S., R. 34 E., Lea County, NM. His phone number is (575) 263-7602.

Matador Resources Company will file an Application for Right-Of-Way Easement with the NM State Land Office (PO Box 1148, Santa Fe NM 87504) for road access across S2S2 32-19s-34e. Their phone number is (505) 827-5728.

Brian Wood