Carlsbad Field Office
OCD Artesia

Form 3160-3
(June 2015)

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

APPLICATION FOR PERMIT TO DRILL OR REENTER

JAN 10 2019

DISTRICT II-ARTESIA O.C.D.

1a. Type of work: ☑ DRILL ☐ REENTER	5. Lease Serial No. NMNM0006808
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other	6. If Indian, Allotee or Tribe Name
1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone	7. If Unit or CA Agreement, Name and No. JAMES RANCH / NMNM070965X
	8. Lease Name and Well No. JAMES RANCH UNIT DI1A WCY-1E 219H 323142
2. Name of Operator BOPCO LP	9. API Well No. 30-015-45613
3a. Address 810 Houston Street Fort Worth TX 76102 / 3b. Phone No. *(include area code)* (817)885-8200	10. Field and Pool, or Exploratory ~~Wildcat~~ LOS MEDANOS 96597
4. Location of Well *(Report location clearly and in accordance with any State requirements.*)* At surface SENW / 1360 FNL / 2510 FWL / LAT 32.381218 / LONG -103.886825 At proposed prod. zone NWNW / 990 FNL / 1120 FWL / LAT 32.38214 / LONG -103.839268	11. Sec., T. R. M. or Blk. and Survey or Area SEC 21 / T22S / R30E / NMP
14. Distance in miles and direction from nearest town or post office*	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) 1360 feet / 16. No of acres in lease 480 / 17. Spacing Unit dedicated to this well 440	
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 30 feet / 19. Proposed Depth 10815 feet / 25298 feet / 20. BLM/BIA Bond No. in file FED: COB000050	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3157 feet / 22. Approximate date work will start* 05/01/2018 / 23. Estimated duration 90 days	

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification.
6. Such other site specific information and/or plans as may be requested by the BLM.

25. Signature	Name *(Printed/Typed)*	Date
(Electronic Submission)	Stephanie Rabadue / Ph: (432)620-6714	12/29/2017

Title: Regulatory Compliance Analyst

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	08/23/2018
Title: Assistant Field Manager Lands & Minerals	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.

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 08/23/2018 RJP 1-14-19

INSTRUCTIONS

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

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

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

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

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

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

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

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.
AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160
PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service wen or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts.
ROUTINE USE: Information from the record and/or the record win be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.
EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:
The BLM conects this information to anow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

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

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Additional Operator Remarks

Location of Well

1. SHL: SENW / 1360 FNL / 2510 FWL / TWSP: 22S / RANGE: 30E / SECTION: 21 / LAT: 32.381218 / LONG: -103.886825 (TVD: 0 feet, MD: 0 feet)
   PPP: NWNW / 990 FNL / 1320 FWL / TWSP: 22S / RANGE: 30E / SECTION: 22 / LAT: 32.383116 / LONG: -103.875421 (TVD: 10815 feet, MD: 13840 feet)
   PPP: NENE / 990 FNL / 1320 FEL / TWSP: 22S / RANGE: 30E / SECTION: 21 / LAT: 32.382125 / LONG: -103.879758 (TVD: 10815 feet, MD: 12520 feet)
   PPP: NWNE / 990 FNL / 2310 FWL / TWSP: 22S / RANGE: 30E / SECTION: 21 / LAT: 32.382231 / LONG: -103.885072 (TVD: 10815 feet, MD: 11200 feet)
   BHL: NWNW / 990 FNL / 1120 FWL / TWSP: 22S / RANGE: 30E / SECTION: 24 / LAT: 32.38214 / LONG: -103.839268 (TVD: 10815 feet, MD: 25298 feet)

BLM Point of Contact

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

Review and Appeal Rights

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

PECOS DISTRICT DRILLING
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BOPCO, L.P.
LEASE NO.:	NMNM-0006808
WELL NAME & NO.:	James Ranch Unit DI1A WCY-1E 219H
SURFACE HOLE FOOTAGE:	1360' FNL & 2510' FWL
BOTTOM HOLE FOOTAGE	0990' FNL & 1120 FWL Sec. 24, T. 22 S., R 30 E.
LOCATION:	Section 21, T. 22 S., R 30 E., NMPM
COUNTY:	County, New Mexico

Commercial Well Determination
A commercial well determination shall be submitted after production has been established for at least six months.

Unit Wells
The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

A. DRILLING OPERATIONS REQUIREMENTS

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

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

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

1. **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.**

2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a "Major" violation.**

3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

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

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

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

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

R-111-P-Potash
WIPP
High Cave/Karst
Possibility of water flows in the Salado and Castile.
Possibility of lost circulation in the Red Beds, Rustler, and Delaware.
Abnormal pressure may be encountered within the 3rd Bone Spring Sand and all subsequent formations.

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

1. The **13-3/8** inch surface casing shall be set at approximately **520** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.

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

    c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.

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

Formation below the 13-3/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe and the mud weight for the bottom of the hole. Report results to BLM office.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

☐ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst and potash.**

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

Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every other joint.

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

☐ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Excess calculates to negative 10% - Additional cement will be required.**

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

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

C. PRESSURE CONTROL

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

2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the

field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

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

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

    a. 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.

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

    c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

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

    e. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**

    f. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

    g. 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.

D. 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.

E. DRILL STEM TEST

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

F. 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.

G. WIPP Requirements

The proposed well is located within 330' of the WIPP Land Withdrawal Area boundary. As a result, BOPCO, L.P. is required to submit daily drilling reports, logs and deviation survey information to the Bureau of Land Management and the Department of Energy per requirements of the Joint Powers Agreement until a total vertical depth of 7,000 feet is reached. These reports will have at a minimum the rate of penetration and a clearly marked section showing the deviation for each 500 foot interval. Operator may be required to do more frequent deviation surveys based on the daily information submitted and may be required to take other corrective measures. Information from this well will be included in the Quarterly Drilling Report. Information will also be provided to the New Mexico Oil Conservation Division after drilling activities have been completed. Upon completion of the well, the operator shall submit a complete directional survey. Any future entry into the well for purposes of completing additional drilling will require supplemental information.

BOPCO, L.P. can email the required information to Mr. Melvin Balderrama at Melvin.Balderama@wipp.ws or Mr. J. Neatherlin at Jimmy.Neatherlin@wipp.ws fax to his attention at 575-234-6062.

JAM 072318

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	BOPCO LP
LEASE NO.:	NMNM06808
WELL NAME & NO.:	JAMES RANCH UNIT DI1A WCY 1E 219H
SURFACE HOLE FOOTAGE:	1360'/N & 2510'/W
BOTTOM HOLE FOOTAGE	990'/N & 1120'/W
LOCATION:	SECTION 21, T22S, R30E, NMPM
COUNTY:	EDDY

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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)

Visual Resource Management Class III
The proposed construction will be limited to the approved pad size.
All above ground facilities, structures, appurtenances, and pipelines will be low profile (less than 8 feet in height).
All above ground facilities, structures, appurtenances, and pipelines will be painted with the non-reflective (flat) paint color Shale Green. Munsell Soil Color No. 5Y 4/2"
Any existing tanks will be replaced with a low profile tank and painted the same color as the proposed tanks.
Upon completion of the well and installation of the production facilities (if the well is a producer) the pad will be reclaimed back to a size necessary for production operations only. The edges will be recontoured and the extra caliche and pad material will be hauled off-site. After one year, the BLM may require reclamation.
The reclaimed area will be grid rolled and reseeded.

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.

Drilling:

Commercial Well Determination
A commercial well determination shall be submitted after production has been established for at least six months.

Unit Wells
The well sign for a unit well shall include the unit number in addition to the surface and bottom hole lease numbers. This also applies to participating area numbers. If a participating area has not been established, the operator can use the general unit designation, but will replace the unit number with the participating area number when the sign is replaced.

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.

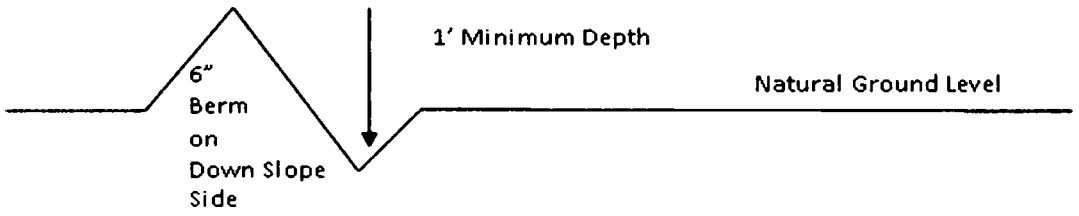
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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

Cattleguards

An appropriately sized cattleguard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattleguards 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 cattleguards 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

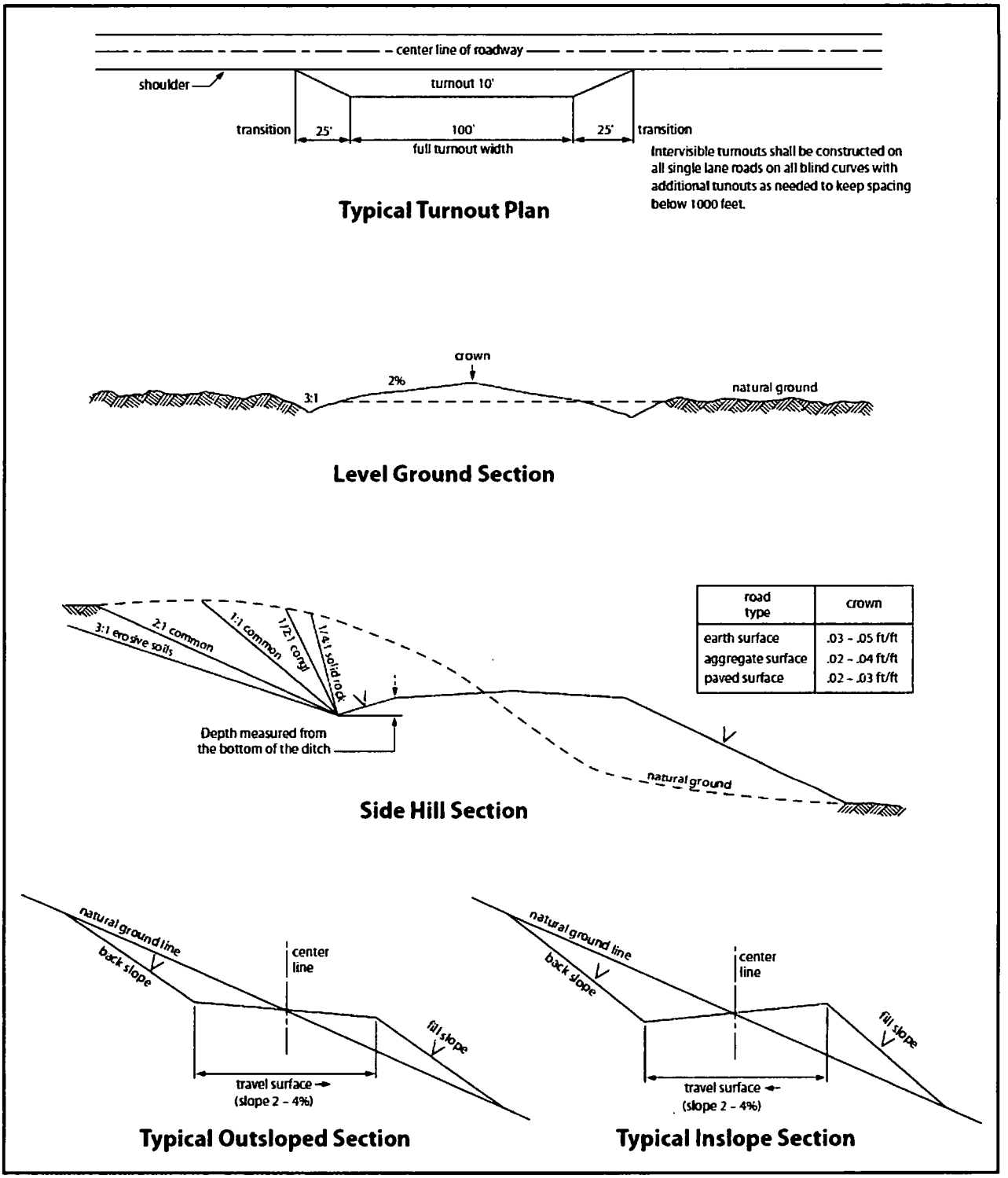


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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).

VRM Facility Requirement
Low-profile tanks not greater than eight-feet-high shall be used.

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the application (Grant, Sundry Notice, APD) 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 activity of 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. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
b. Activities of other parties including, but not limited to:
    (1) Land clearing.
    (2) Earth-disturbing and earth-moving work.
    (3) Blasting.
    (4) Vandalism and sabotage.
c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, 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, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the 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 the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of **20** feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline must be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline must be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline will be "snaked" around hummocks and dunes rather then suspended across these features.

9. The pipeline shall be buried with a minimum of **24** inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. 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.

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. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. 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. Signs will be maintained in a legible condition for the life of the pipeline.

14. 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. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. 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 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.

16. 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, powerline 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.

17. Surface pipelines must be less than or equal to 4 inches and a working pressure below 125 psi.

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).

X. 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 2 Sand/Shinnery Sites

The 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 will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will 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). The 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. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will 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

AFMSS

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

Operator Certification Data Report

09/10/2018

Operator Certification

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

NAME: Stephanie Rabadue **Signed on:** 11/08/2017

Title: Regulatory Compliance Analyst

Street Address: 500 W. Illinois St, Ste 100

City: Midland **State:** TX **Zip:** 79701

Phone: (432)620-6714

Email address: stephanie_rabadue@xtoenergy.com

Field Representative

Representative Name:

Street Address:

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

Phone:

Email address:

APD ID: 10400025884 **Submission Date:** 12/29/2017

Operator Name: BOPCO LP

Well Name: JAMES RANCH UNIT DI1A WCY-1E **Well Number:** 219H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400025884 **Tie to previous NOS?** **Submission Date:** 12/29/2017

BLM Office: CARLSBAD **User:** Stephanie Rabadue **Title:** Regulatory Compliance Analyst

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

Lease number: NMNM0006808 **Lease Acres:** 480

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

Agreement in place? YES **Federal or Indian agreement:** FEDERAL

Agreement number: NMNM070965X

Agreement name:

Keep application confidential? NO

Permitting Agent? NO **APD Operator:** BOPCO LP

Operator letter of designation: JRU_DI1A_Op_Rights_20171228063127.pdf

Operator Info

Operator Organization Name: BOPCO LP

Operator Address: 810 Houston Street **Zip:** 76102

Operator PO Box:

Operator City: Fort Worth **State:** TX

Operator Phone: (817)885-8200

Operator Internet Address:

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: JAMES RANCH UNIT DI1A WCY-1E **Well Number:** 219H **Well API Number:**

Field/Pool or Exploratory? Exploratory **Field Name:** WILDCAT **Pool Name:**

Is the proposed well in an area containing other mineral resources? POTASH

Operator Name: BOPCO LP

Well Name: JAMES RANCH UNIT DI1A WCY-1E **Well Number:** 219H

Describe other minerals:

Is the proposed well in a Helium production area? N **Use Existing Well Pad?** YES **New surface disturbance?** N

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** JAMES RANCH UNIT DI **Number:** 1A

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

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: DELINEATION

Describe sub-type:

Distance to town: **Distance to nearest well:** 30 FT **Distance to lease line:** 1360 FT

Reservoir well spacing assigned acres Measurement: 440 Acres

Well plat: JRU_DI1A_219H_C102_20171228063212.pdf

Well work start Date: 05/01/2018 **Duration:** 90 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number:

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL Leg #1	1360	FNL	2510	FWL	22S	30E	21	Aliquot SENW	32.381218	-103.886825	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 0006808	3157	0	0
KOP Leg #1	1360	FNL	2510	FWL	22S	30E	21	Aliquot SENW	32.382231	-103.885072	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 0006808	-3283	6440	6440
PPP Leg #1	990	FNL	2310	FWL	22S	30E	21	Aliquot NWNE	32.382231	-103.885072	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 0006808	-7658	11200	10815

Operator Name: BOPCO LP

Well Name: JAMES RANCH UNIT DI1A WCY-1E **Well Number:** 219H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
PPP Leg #1	990	FNL	1320	FEL	22S	30E	21	Aliquot NENE	32.382125	-103.879758	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 000295 3B	-7658	12520	10815
PPP Leg #1	990	FNL	1320	FWL	22S	30E	22	Aliquot NWNW	32.383116	-103.875421	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM 000295 3A	-7658	13840	10815
EXIT Leg #1	990	FNL	990	FWL	22S	30E	24	Aliquot NWNW	32.382141	-103.839689	EDDY	NEW MEXICO	NEW MEXICO	F	NMLC0 064827 A	-7658	25100	10815
BHL Leg #1	990	FNL	1120	FWL	22S	30E	24	Aliquot NWNW	32.38214	-103.839268	EDDY	NEW MEXICO	NEW MEXICO	F	NMLC0 064827 A	-7658	25298	10815

Stephanie Rabadue
Regulatory Analyst
XTO Energy Inc.
500 W. Illinois St Ste 100
Midland, Texas 79701
(432) 620-6714
stephanie_rabadue@xtoenergy.com

December 1, 2017

Bureau of Land Management
Carlsbad Field Office
620 E. Greene Street
Carlsbad, NM 88220

RE: Operating Agreement/Rights for James Ranch Unit DI1A:
#217H, 218H, 219H, 220H, 221H, 222H, 223H

To Whom It May Concern:

This is to hereby certify that BOPCO, L.P./XTO Energy, Inc has operating rights over leases: NMNM0002953, NMNM0002953B, NMLC00649877A, NMNM0006808, NMNM0002953A, NMNM0000300, and NMLC0064827A through acreage trades, acquisitions and unitization.

Sincerely,

Stephanie Rabadue

Stephanie Rabadue
Regulatory Analyst
XTO Energy, Inc

JRU_DI1A_5MCM_20171228054826.pdf

BOP Diagram Attachment:

JRU_DI1A_5MBOP_20171228054834.pdf

Section 3 - Casing

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	17.5	13.375	NEW	API	N	0	520	0	520			520	H-40	48	STC	3.24	1.69	DRY	12.9	DRY	12.9
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	3300	0	3300			3300	J-55	36	LTC	1.95	1.1	DRY	3.81	DRY	3.81
3	PRODUCTION	8.75	5.5	NEW	API	N	0	25298	0	10815			25298	P-110	17	BUTT	1.35	1.12	DRY	2.26	DRY	2.26

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

JRU_DI1A_219H_Csg_20171228062946.pdf

Operator Name: BOPCO LP

Well Name: JAMES RANCH UNIT DI1A WCY-1E **Well Number:** 219H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

JRU_DI1A_219H_Csg_20171228062954.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

JRU_DI1A_217H_Csg_20171228054920.pdf

Section 4 - Cement

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	520	160	1.87	12.9	299.2	100	EconoCem-HLTRRC	None
SURFACE	Tail				300	1.35	14.8	405	100	HalCem-C	2% CaCl
INTERMEDIATE	Lead		0	3300	930	1.88	12.9	1748.4	100	Halcem-C	2% CaCl
INTERMEDIATE	Tail				230	1.33	14.8	305.9	100	Halcem-C	2% CaCl
PRODUCTION	Lead		0	25298	780	2.69	10.5	2098.2	20	NeoCem	None

Operator Name: BOPCO LP

Well Name: JAMES RANCH UNIT DI1A WCY-1E **Well Number:** 219H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Tail				2290	1.61	13.2	3686.9	20	VersaCem	none

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: The necessary mud products for weight addition and fluid loss control will be on location at all times.

Describe the mud monitoring system utilized: A Pason or Totco will be used to detect changes in loss or gain of mud volume.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
3300	25298	OTHER : OBM	8.8	10.5							A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system
0	520	OTHER : FW/Native	8.4	8.8							A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system

Operator Name: BOPCO LP

Well Name: JAMES RANCH UNIT DI1A WCY-1E **Well Number:** 219H

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
520	3300	OTHER : Brine/Gel Sweeps	9.8	10.2							A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system

Section 6 - Test, Logging, Coring

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

Open hole logging to include Density/Neutron/PE/Dual Laterlog/Spectral Gamma from kick-off point to intermediate casing shoe.

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

CBL,CNL,DS,GR,MUDLOG

Coring operation description for the well:

No coring will take place on this well.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 5455 **Anticipated Surface Pressure:** 5455

Anticipated Bottom Hole Temperature(F): 160

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

Describe:

Potential loss of circulation through the Capitan Reef.

Contingency Plans geoharzards description:

The necessary mud products for weight addition and fluid loss control will be on location at all times.A Pason or Totco will be used to detect changes in loss or gain of mud volume. A mud test will be performed every 24 hours to determine: density, viscosity, strength, filtration and pH as necessary. Use available solids controls equipment to help keep mud weight down after mud up. Rig up solids control equipment to operate as a closed loop system. Lost circulation could occur but is not expected to be a serious problem in this area and hole seepage will be compensated for by additions of small amounts of LCM in the drilling fluid.

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

JRU_DI1A_H2S_20171228055619.pdf

JRU_DI1A_219H_H2S_Dia_20171228063050.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

JRU_DI1A_219H_DD_20171228063103.pdf

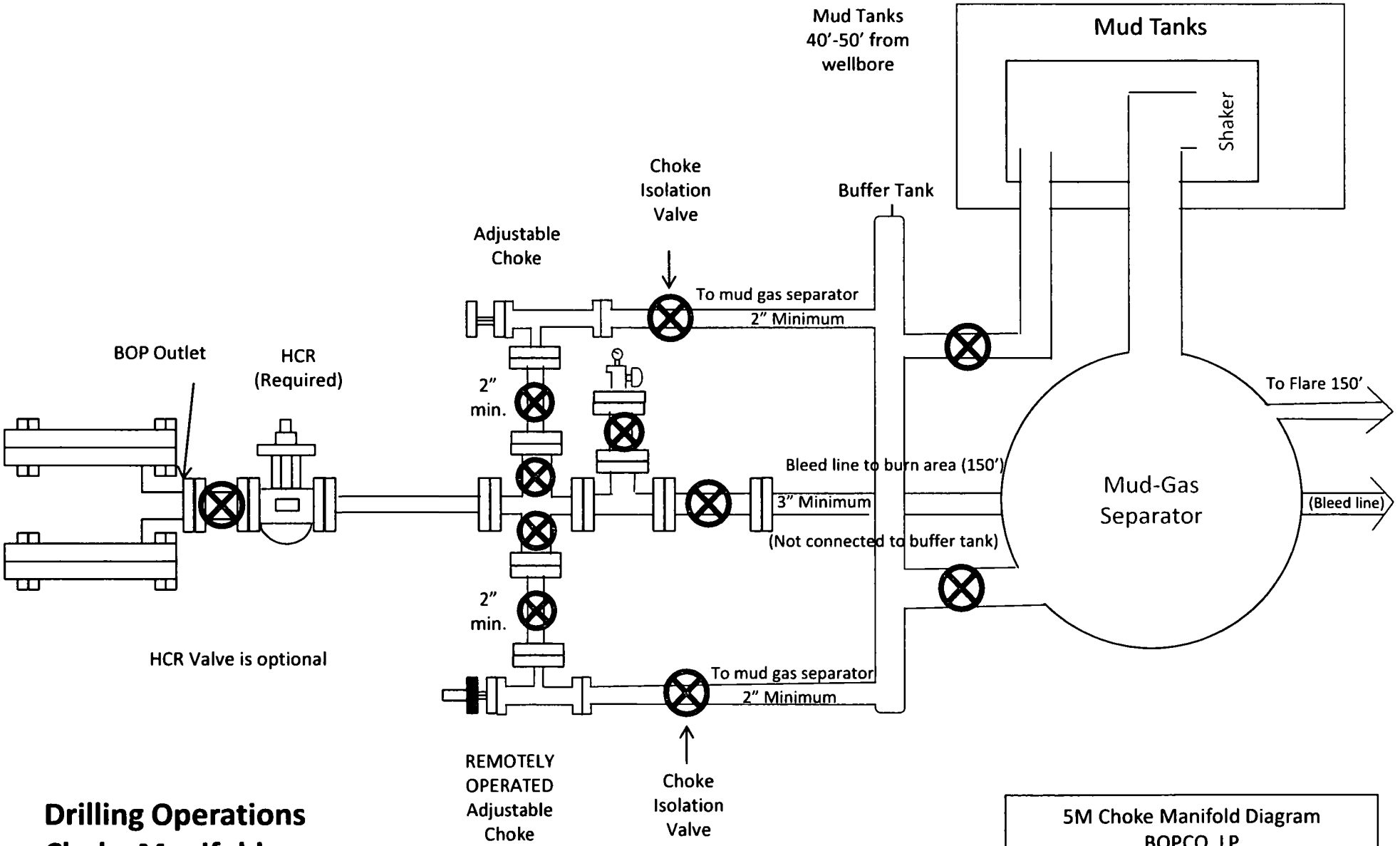
Other proposed operations facets description:

Other proposed operations facets attachment:

JRU_DI1A_219H_GCP_20171228063112.pdf

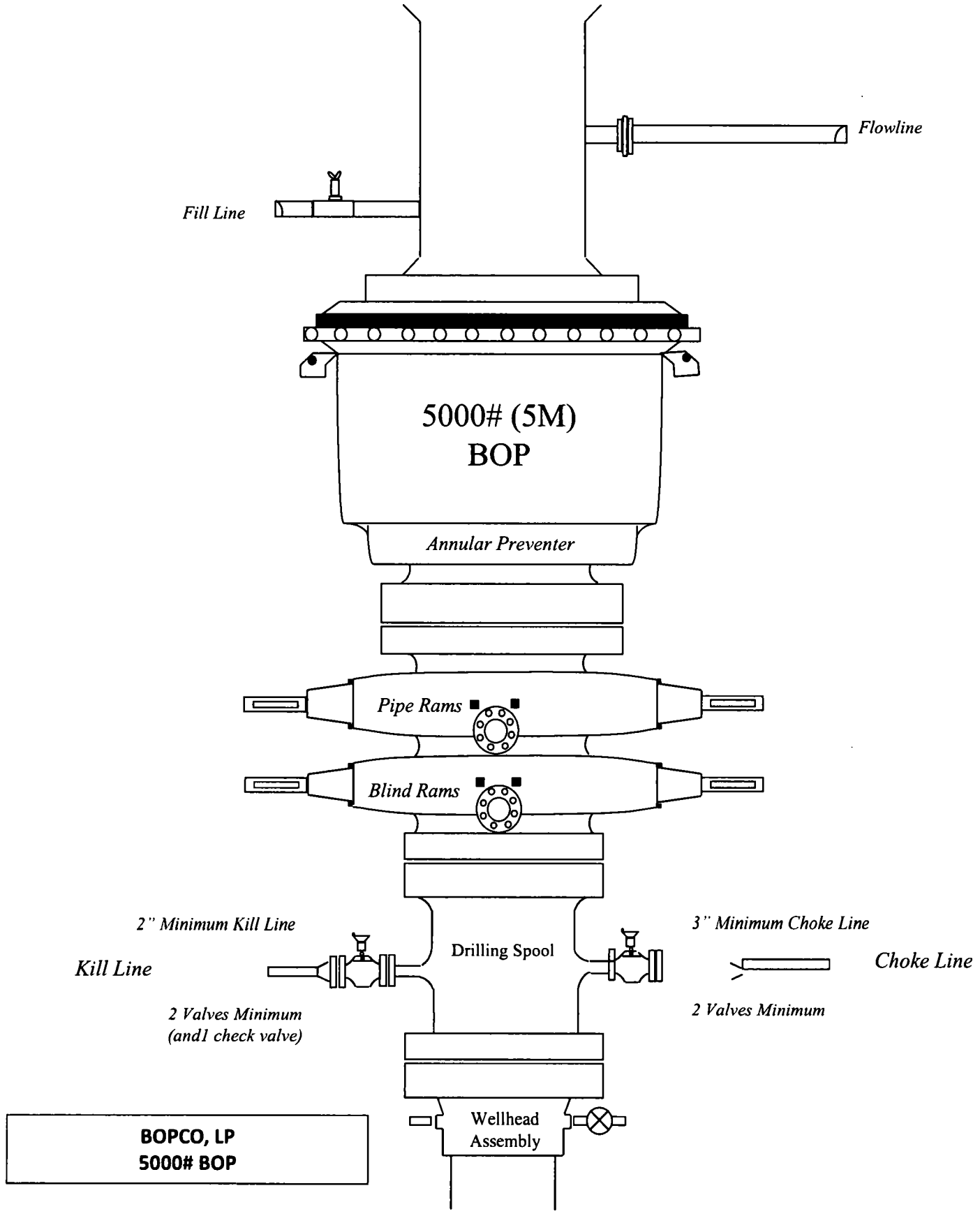
Other Variance attachment:

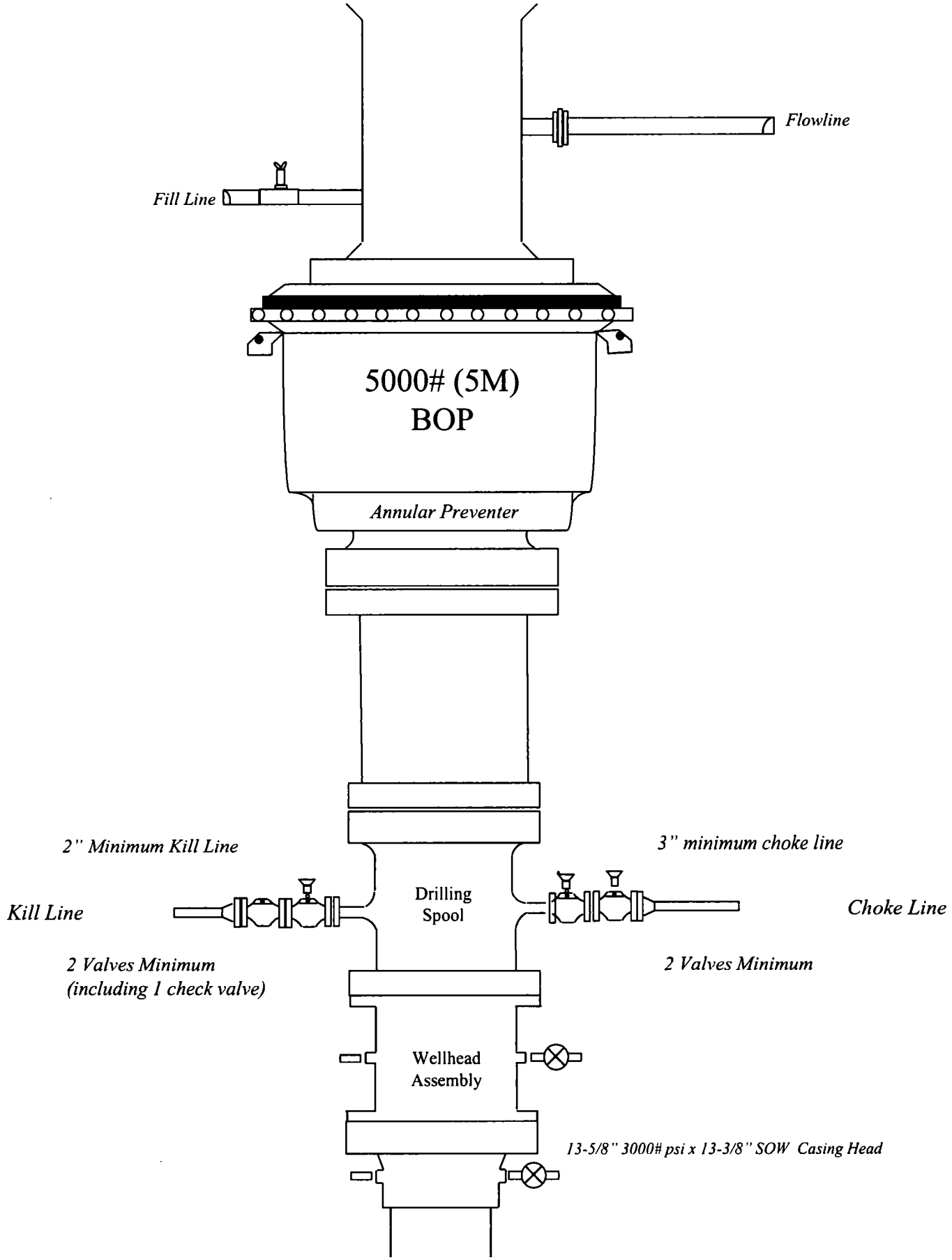
JRU_DI1A_FH_20171228055647.pdf



Drilling Operations
Choke Manifold
5M Service

5M Choke Manifold Diagram
BOPCO, LP


Flowline
Fill Line
5000# (5M)
BOP
Annular Preventer
Pipe Rams
Blind Rams
2" Minimum Kill Line
Kill Line
Drilling Spool
3" Minimum Choke Line
Choke Line
2 Valves Minimum
(and1 check valve)
2 Valves Minimum
Wellhead
Assembly
BOPCO, LP
5000# BOP



BOPCO, LP
5000# BOP

DRILLING PLAN: BLM COMPLIANCE
(Supplement to BLM 3160-3)

XTO Energy Inc.
James Ranch Unit DI1A 217H
Eddy County, NM

1. **CASING PROGRAM:**

Hole Size	Depth	OD Csg	Weight	Collar	Grade	New/Used	SF Burst	SF Collapse	SF Tension
17-1/2"	0' – 520'	13-3/8"	48#	STC	H-40	New	1.69	3.24	12.90
12-1/4"	0' – 3300'	9-5/8"	36#	LTC	J-55	New	1.10	1.95	3.81
8-3/4" x 8-1/2"	0' – 21407'	5-1/2"	17#	BTC	P-110	New	1.12	1.35	2.26

- 9-5/8" collapse assumes ½ evacuation and fresh water internally.
- XTO requests to utilize centralizers only in the curve after the KOP and only a minimum of one every other joint.
- 5-1/2" tension calculated using vertical hanging weight plus the lateral weight multiplied by a friction factor of 0.35.

WELLHEAD:

Permanent Wellhead – GE RSH Multibowl System

A. Starting Head: 13-5/8" 5M top flange x 13-3/8" SOW bottom
B. Tubing Head: 13-5/8" 5M bottom flange x 7-1/16" 10M top flange
   - Wellhead will be installed by manufacturer's representatives.
   - Manufacturer will monitor welding process to ensure appropriate temperature of seal.
   - Manufacturer will witness installation of test plug for initial test.
   - Operator will test the 9-5/8" casing to 70% of casing burst before drilling out.

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(Supplement to BLM 3160-3)

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Eddy County, NM

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(Supplement to BLM 3160-3)

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Eddy County, NM

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(Supplement to BLM 3160-3)

XTO Energy Inc.
James Ranch Unit DI1A 219H
Eddy County, NM

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GENERAL OFFICES – MIDLAND, TEXAS

BOPCO, L.P.

6401 Holiday Hill Road
Midland, Tx 79707
(432) 683-2277

HYDROGEN SULFIDE (H2S) CONTINGENCY PLAN

Assumed 100 ppm ROE = 3000'

100 ppm H2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must

- Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- Evacuate any public places encompassed by the 100 ppm ROE.
- Be equipped with H_2S monitors and air packs in order to control the release.
- Use the "buddy system" to ensure no injuries occur during the response
- Take precautions to avoid personal injury during this operation.
- Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- Have received training in the
  - Detection of H_2S, and
  - Measures for protection against the gas,
  - Equipment used for protection and emergency response.

Ignition of Gas source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever this is an ignition of the gas.

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = I	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = I	2 ppm	N/A	1000 ppm

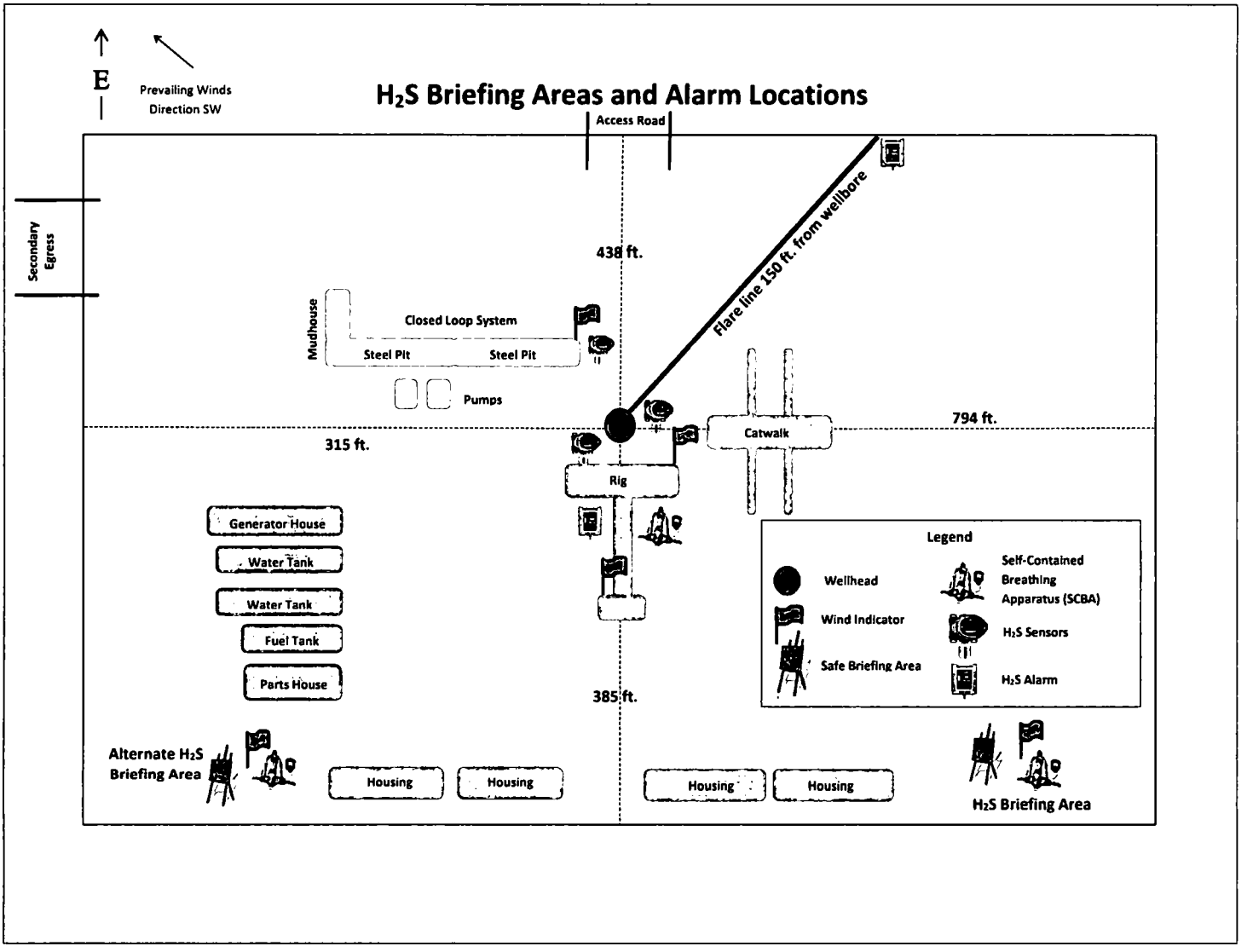
Contacting Authorities

BOPCO, L.P. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. (Operator Name)'s response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

CARLSBAD OFFICE – EDDY & LEA COUNTIES

3104 E. Greene St., Carlsbad, NM 88220	
Carlsbad, NM	575-887-7329

BOPCO, L.P. PERSONNEL:	
Kendall Decker, Drilling Manager	903-521-6477
Milton Turman, Drilling Superintendent	817-524-5107
Jeff Raines, Construction Foreman	432-557-3159
Toady Sanders, EH & S Manager	903-520-1601
Wes McSpadden, Production Foreman	575-441-1147
SHERIFF DEPARTMENTS:	
Eddy County	575-887-7551
Lea County	575-396-3611
NEW MEXICO STATE POLICE:	575-392-5588
FIRE DEPARTMENTS:	911
Carlsbad	575-885-2111
Eunice	575-394-2111
Hobbs	575-397-9308
Jal	575-395-2221
Lovington	575-396-2359
HOSPITALS:	911
Carlsbad Medical Emergency	575-885-2111
Eunice Medical Emergency	575-394-2112
Hobbs Medical Emergency	575-397-9308
Jal Medical Emergency	575-395-2221
Lovington Medical Emergency	575-396-2359
AGENT NOTIFICATIONS:	
For Lea County:	
Bureau of Land Management – Hobbs	575-393-3612
New Mexico Oil Conservation Division – Hobbs	575-393-6161
For Eddy County:	
Bureau of Land Management - Carlsbad	575-234-5972
New Mexico Oil Conservation Division - Artesia	575-748-1283


E
Prevailing Winds
Direction SW
H2S Briefing Areas and Alarm Locations
Access Road
Secondary Egress
438 ft.
Flare line 150 ft. from wellbore
Mudhouse
Closed Loop System
Steel Pit
Steel Pit
Pumps
315 ft.
794 ft.
Catwalk
Rig
Generator House
Water Tank
Water Tank
Fuel Tank
Parts House
385 ft.
Legend
Wellhead
Wind Indicator
Safe Briefing Area
Self-Contained Breathing Apparatus (SCBA)
H2S Sensors
H2S Alarm
Alternate H2S Briefing Area
Housing
Housing
Housing
Housing
H2S Briefing Area

XTO ENERGY

XTO Energy

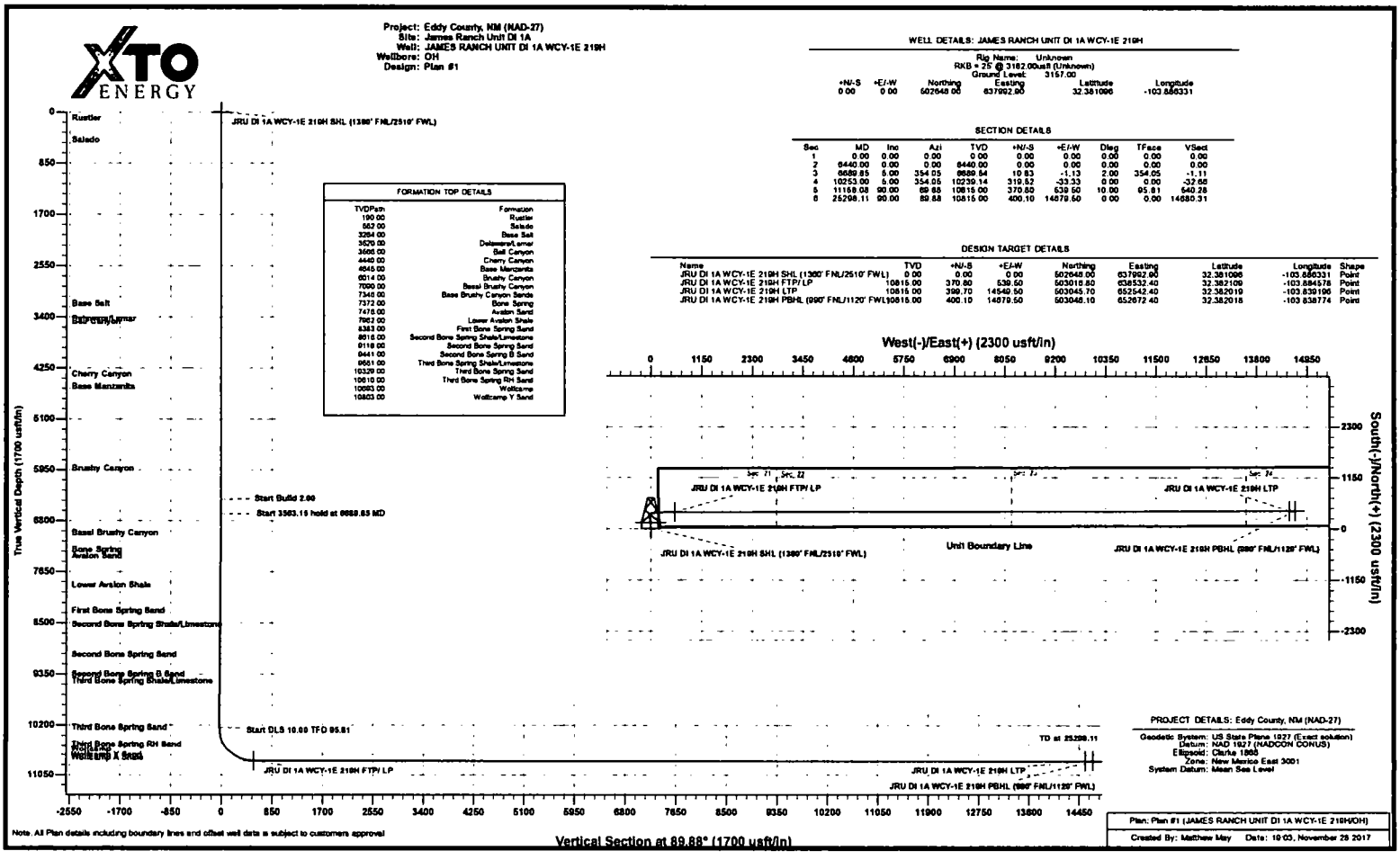
Eddy County, NM (NAD-27)
James Ranch Unit DI 1A
JAMES RANCH UNIT DI 1A WCY-1E 219H

OH

Plan: Plan #1

Standard Planning Report

28 November, 2017


Project: Eddy County, NM (NAD-27)
Site: James Ranch Unit DI 1A
Well: JAMES RANCH UNIT DI 1A WCY-1E 216H
Wellbore: OH
Design: Plan #1
WELL DETAILS: JAMES RANCH UNIT DI 1A WCY-1E 216H
Rig Name: Unknown
RKB = 25' @ 3182.00usft (Unknown)
Ground Level: 3157.00
+N/-S 0.00
+E/-W 0.00
Northing 602648.00
Easting 637992.00
Latitude 32.381096
Longitude -103.886331
SECTION DETAILS
Sec MD Inc Azi TVD +N/-S +E/-W Dleg TFace VSect
1 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00
2 8440.00 0.00 0.00 8440.00 0.00 0.00 0.00 0.00 0.00
3 8689.85 5.00 354.05 8689.54 10.83 -1.13 2.00 354.05 -1.11
4 10253.00 5.00 354.05 10239.14 319.52 -33.33 0.00 0.00 -32.66
5 11168.08 90.00 89.88 10815.00 370.80 539.50 10.00 95.81 540.28
6 25298.11 90.00 89.88 10815.00 400.10 14679.50 0.00 0.00 14680.31
DESIGN TARGET DETAILS
Name TVD +N/-S +E/-W Northing Easting Latitude Longitude Shape
JRU DI 1A WCY-1E 216H SHL (1380' FNL/2510' FWL) 0.00 0.00 0.00 602648.00 637992.00 32.381096 -103.886331 Point
JRU DI 1A WCY-1E 216H FTP/ LP 10815.00 370.80 539.50 603018.80 638532.40 32.382109 -103.884578 Point
JRU DI 1A WCY-1E 216H LTP 10815.00 398.70 14540.50 603045.70 652542.40 32.382019 -103.839100 Point
JRU DI 1A WCY-1E 216H PBHL (990' FNL/1120' FWL) 10815.00 400.10 14679.50 603048.10 652672.40 32.382018 -103.838774 Point
FORMATION TOP DETAILS
TVDPath Formation
190.00 Rustler
562.00 Salado
3264.00 Base Salt
3570.00 Delaware/Lamar
3686.00 Bell Canyon
4440.00 Cherry Canyon
4645.00 Base Manzanita
6014.00 Brushy Canyon
7000.00 Basal Brushy Canyon
7346.00 Base Brushy Canyon Sands
7372.00 Bone Spring
7478.00 Avalon Sand
7662.00 Lower Avalon Shale
8383.00 First Bone Spring Sand
8818.00 Second Bone Spring Shale/Limestone
9118.00 Second Bone Spring Sand
9441.00 Second Bone Spring B Sand
9551.00 Third Bone Spring Shale/Limestone
10329.00 Third Bone Spring Sand
10515.00 Third Bone Spring RH Sand
10983.00 Wolfcamp
10803.00 Wolfcamp Y Sand
JRU DI 1A WCY-1E 216H SHL (1380' FNL/2510' FWL)
Start Build 2.00
Start 3563.15 hold at 8689.85 MD
Start DLS 10.00 TFO 95.81
TD at 25298.11
JRU DI 1A WCY-1E 216H FTP/ LP
JRU DI 1A WCY-1E 216H LTP
JRU DI 1A WCY-1E 216H PBHL (990' FNL/1120' FWL)
True Vertical Depth (1700 usft/in)
Vertical Section at 89.88° (1700 usft/in)
West(-)/East(+) (2300 usft/in)
South(-)/North(+) (2300 usft/in)
Unit Boundary Line
Sec 71
Sec 72
Sec 73
Sec 74
PROJECT DETAILS: Eddy County, NM (NAD-27)
Geodetic System: US State Plane 1927 (Exact solution)
Datum: NAD 1927 (NADCON CONUS)
Ellipsoid: Clarke 1866
Zone: New Mexico East 3001
System Datum: Mean Sea Level
Plan: Plan #1 (JAMES RANCH UNIT DI 1A WCY-1E 216H/OH)
Created By: Matthew May Date: 10:03, November 28 2017
Note: All Plan details including boundary lines and offset well data is subject to customers approval

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well JAMES RANCH UNIT DI 1A WCY-1E 219H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3182.00usft (Unknown)
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3182.00usft (Unknown)
Site:	James Ranch Unit DI 1A	**North Reference:**	Grid
Well:	JAMES RANCH UNIT DI 1A WCY-1E 219H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Eddy County, NM (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		

Site	James Ranch Unit DI 1A				
Site Position:		**Northing:**	502,686.10 usft	**Latitude:**	32.381206
From:	Map	**Easting:**	638,042.80 usft	**Longitude:**	-103.886169
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.24 °

Well	JAMES RANCH UNIT DI 1A WCY-1E 219H					
Well Position	**+N/-S**	-40.10 usft	**Northing:**	502,646.00 usft	**Latitude:**	32.381096
	+E/-W	-49.90 usft	**Easting:**	637,992.90 usft	**Longitude:**	-103.886331
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	0.00 usft	**Ground Level:**	3,157.00 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	9/27/2017	7.08	60.15	47,971

Design	Plan #1				
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	89.88	

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	
6,440.00	0.00	0.00	6,440.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,689.85	5.00	354.05	6,689.54	10.83	-1.13	2.00	2.00	0.00	354.05	
10,253.00	5.00	354.05	10,239.14	319.52	-33.33	0.00	0.00	0.00	0.00	
11,158.08	90.00	89.88	10,815.00	370.80	539.50	10.00	9.39	10.59	95.81	JRU DI 1A WCY-1E
25,298.11	90.00	89.88	10,815.00	400.10	14,679.50	0.00	0.00	0.00	0.00	JRU DI 1A WCY-1E

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well JAMES RANCH UNIT DI 1A WCY-1E 219H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3182.00usft (Unknown)
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3182.00usft (Unknown)
Site:	James Ranch Unit DI 1A	**North Reference:**	Grid
Well:	JAMES RANCH UNIT DI 1A WCY-1E 219H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well JAMES RANCH UNIT DI 1A WCY-1E 219H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3182.00usft (Unknown)
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3182.00usft (Unknown)
Site:	James Ranch Unit DI 1A	**North Reference:**	Grid
Well:	JAMES RANCH UNIT DI 1A WCY-1E 219H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,440.00	0.00	0.00	6,440.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	1.20	354.05	6,500.00	0.62	-0.07	-0.06	2.00	2.00	0.00
6,600.00	3.20	354.05	6,599.92	4.44	-0.46	-0.45	2.00	2.00	0.00
6,689.85	5.00	354.05	6,689.54	10.83	-1.13	-1.11	2.00	2.00	0.00
6,700.00	5.00	354.05	6,699.64	11.71	-1.22	-1.20	0.00	0.00	0.00
6,800.00	5.00	354.05	6,799.26	20.37	-2.13	-2.08	0.00	0.00	0.00
6,900.00	5.00	354.05	6,898.88	29.04	-3.03	-2.97	0.00	0.00	0.00
7,000.00	5.00	354.05	6,998.50	37.70	-3.93	-3.85	0.00	0.00	0.00
7,100.00	5.00	354.05	7,098.12	46.36	-4.84	-4.74	0.00	0.00	0.00
7,200.00	5.00	354.05	7,197.74	55.03	-5.74	-5.62	0.00	0.00	0.00
7,300.00	5.00	354.05	7,297.36	63.69	-6.64	-6.51	0.00	0.00	0.00
7,400.00	5.00	354.05	7,396.98	72.35	-7.55	-7.40	0.00	0.00	0.00
7,500.00	5.00	354.05	7,496.60	81.02	-8.45	-8.28	0.00	0.00	0.00
7,600.00	5.00	354.05	7,596.22	89.68	-9.35	-9.17	0.00	0.00	0.00
7,700.00	5.00	354.05	7,695.84	98.34	-10.26	-10.05	0.00	0.00	0.00
7,800.00	5.00	354.05	7,795.46	107.01	-11.16	-10.94	0.00	0.00	0.00
7,900.00	5.00	354.05	7,895.08	115.67	-12.07	-11.82	0.00	0.00	0.00
8,000.00	5.00	354.05	7,994.70	124.33	-12.97	-12.71	0.00	0.00	0.00
8,100.00	5.00	354.05	8,094.32	133.00	-13.87	-13.59	0.00	0.00	0.00
8,200.00	5.00	354.05	8,193.94	141.66	-14.78	-14.48	0.00	0.00	0.00
8,300.00	5.00	354.05	8,293.56	150.32	-15.68	-15.37	0.00	0.00	0.00
8,400.00	5.00	354.05	8,393.18	158.99	-16.58	-16.25	0.00	0.00	0.00
8,500.00	5.00	354.05	8,492.80	167.65	-17.49	-17.14	0.00	0.00	0.00
8,600.00	5.00	354.05	8,592.42	176.32	-18.39	-18.02	0.00	0.00	0.00
8,700.00	5.00	354.05	8,692.04	184.98	-19.29	-18.91	0.00	0.00	0.00
8,800.00	5.00	354.05	8,791.66	193.64	-20.20	-19.79	0.00	0.00	0.00
8,900.00	5.00	354.05	8,891.28	202.31	-21.10	-20.68	0.00	0.00	0.00
9,000.00	5.00	354.05	8,990.90	210.97	-22.01	-21.56	0.00	0.00	0.00
9,100.00	5.00	354.05	9,090.52	219.63	-22.91	-22.45	0.00	0.00	0.00
9,200.00	5.00	354.05	9,190.14	228.30	-23.81	-23.34	0.00	0.00	0.00
9,300.00	5.00	354.05	9,289.76	236.96	-24.72	-24.22	0.00	0.00	0.00
9,400.00	5.00	354.05	9,389.38	245.62	-25.62	-25.11	0.00	0.00	0.00
9,500.00	5.00	354.05	9,489.00	254.29	-26.52	-25.99	0.00	0.00	0.00
9,600.00	5.00	354.05	9,588.62	262.95	-27.43	-26.88	0.00	0.00	0.00
9,700.00	5.00	354.05	9,688.24	271.61	-28.33	-27.76	0.00	0.00	0.00
9,800.00	5.00	354.05	9,787.86	280.28	-29.24	-28.65	0.00	0.00	0.00
9,900.00	5.00	354.05	9,887.48	288.94	-30.14	-29.53	0.00	0.00	0.00
10,000.00	5.00	354.05	9,987.10	297.60	-31.04	-30.42	0.00	0.00	0.00
10,100.00	5.00	354.05	10,086.72	306.27	-31.95	-31.30	0.00	0.00	0.00
10,200.00	5.00	354.05	10,186.34	314.93	-32.85	-32.19	0.00	0.00	0.00
10,253.00	5.00	354.05	10,239.14	319.52	-33.33	-32.66	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well JAMES RANCH UNIT DI 1A WCY-1E 219H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3182.00usft (Unknown)
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3182.00usft (Unknown)
Site:	James Ranch Unit DI 1A	**North Reference:**	Grid
Well:	JAMES RANCH UNIT DI 1A WCY-1E 219H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,300.00	6.50	40.11	10,285.93	323.60	-31.83	-31.15	10.00	3.20	98.01
10,350.00	10.44	61.71	10,335.38	327.91	-26.01	-25.32	10.00	7.88	43.21
10,400.00	15.02	70.97	10,384.15	332.17	-15.89	-15.19	10.00	9.16	18.51
10,450.00	19.80	75.90	10,431.84	336.35	-1.54	-0.84	10.00	9.56	9.87
10,500.00	24.67	78.96	10,478.11	340.41	16.93	17.64	10.00	9.73	6.12
10,550.00	29.58	81.06	10,522.60	344.33	39.37	40.09	10.00	9.82	4.20
10,600.00	34.51	82.61	10,564.97	348.07	65.62	66.35	10.00	9.86	3.10
10,650.00	39.46	83.81	10,604.90	351.60	95.48	96.22	10.00	9.90	2.40
10,700.00	44.41	84.79	10,642.09	354.91	128.72	129.46	10.00	9.92	1.95
10,750.00	49.38	85.60	10,676.24	357.95	165.09	165.84	10.00	9.93	1.63
10,800.00	54.35	86.30	10,707.11	360.72	204.30	205.06	10.00	9.94	1.40
10,850.00	59.32	86.92	10,734.46	363.19	246.07	246.83	10.00	9.95	1.24
10,900.00	64.30	87.48	10,758.07	365.33	290.07	290.84	10.00	9.95	1.12
10,950.00	69.27	88.00	10,777.77	367.14	335.98	336.74	10.00	9.96	1.03
11,000.00	74.25	88.48	10,793.41	368.60	383.43	384.20	10.00	9.96	0.96
11,050.00	79.23	88.93	10,804.88	369.70	432.07	432.84	10.00	9.96	0.92
11,100.00	84.21	89.38	10,812.07	370.43	481.52	482.30	10.00	9.96	0.89
11,150.00	89.20	89.81	10,814.94	370.78	531.42	532.20	10.00	9.96	0.87
11,158.08	90.00	89.88	10,815.00	370.80	539.50	540.28	10.00	9.96	0.87
11,200.00	90.00	89.88	10,815.00	370.89	581.42	582.20	0.00	0.00	0.00
11,300.00	90.00	89.88	10,815.00	371.09	681.42	682.20	0.00	0.00	0.00
11,400.00	90.00	89.88	10,815.00	371.30	781.42	782.20	0.00	0.00	0.00
11,500.00	90.00	89.88	10,815.00	371.51	881.42	882.20	0.00	0.00	0.00
11,600.00	90.00	89.88	10,815.00	371.72	981.42	982.20	0.00	0.00	0.00
11,700.00	90.00	89.88	10,815.00	371.92	1,081.42	1,082.20	0.00	0.00	0.00
11,800.00	90.00	89.88	10,815.00	372.13	1,181.42	1,182.20	0.00	0.00	0.00
11,900.00	90.00	89.88	10,815.00	372.34	1,281.42	1,282.20	0.00	0.00	0.00
12,000.00	90.00	89.88	10,815.00	372.54	1,381.42	1,382.20	0.00	0.00	0.00
12,100.00	90.00	89.88	10,815.00	372.75	1,481.42	1,482.20	0.00	0.00	0.00
12,200.00	90.00	89.88	10,815.00	372.96	1,581.42	1,582.20	0.00	0.00	0.00
12,300.00	90.00	89.88	10,815.00	373.17	1,681.42	1,682.20	0.00	0.00	0.00
12,400.00	90.00	89.88	10,815.00	373.37	1,781.42	1,782.20	0.00	0.00	0.00
12,500.00	90.00	89.88	10,815.00	373.58	1,881.42	1,882.20	0.00	0.00	0.00
12,600.00	90.00	89.88	10,815.00	373.79	1,981.42	1,982.20	0.00	0.00	0.00
12,700.00	90.00	89.88	10,815.00	374.00	2,081.42	2,082.20	0.00	0.00	0.00
12,800.00	90.00	89.88	10,815.00	374.20	2,181.42	2,182.20	0.00	0.00	0.00
12,900.00	90.00	89.88	10,815.00	374.41	2,281.42	2,282.20	0.00	0.00	0.00
13,000.00	90.00	89.88	10,815.00	374.62	2,381.42	2,382.20	0.00	0.00	0.00
13,100.00	90.00	89.88	10,815.00	374.82	2,481.42	2,482.20	0.00	0.00	0.00
13,200.00	90.00	89.88	10,815.00	375.03	2,581.42	2,582.20	0.00	0.00	0.00
13,300.00	90.00	89.88	10,815.00	375.24	2,681.42	2,682.20	0.00	0.00	0.00
13,400.00	90.00	89.88	10,815.00	375.45	2,781.42	2,782.20	0.00	0.00	0.00
13,500.00	90.00	89.88	10,815.00	375.65	2,881.42	2,882.20	0.00	0.00	0.00
13,600.00	90.00	89.88	10,815.00	375.86	2,981.42	2,982.20	0.00	0.00	0.00
13,700.00	90.00	89.88	10,815.00	376.07	3,081.42	3,082.20	0.00	0.00	0.00
13,800.00	90.00	89.88	10,815.00	376.27	3,181.42	3,182.20	0.00	0.00	0.00
13,900.00	90.00	89.88	10,815.00	376.48	3,281.42	3,282.20	0.00	0.00	0.00
14,000.00	90.00	89.88	10,815.00	376.69	3,381.42	3,382.20	0.00	0.00	0.00
14,100.00	90.00	89.88	10,815.00	376.90	3,481.42	3,482.20	0.00	0.00	0.00
14,200.00	90.00	89.88	10,815.00	377.10	3,581.42	3,582.20	0.00	0.00	0.00
14,300.00	90.00	89.88	10,815.00	377.31	3,681.42	3,682.20	0.00	0.00	0.00
14,400.00	90.00	89.88	10,815.00	377.52	3,781.42	3,782.20	0.00	0.00	0.00
14,500.00	90.00	89.88	10,815.00	377.73	3,881.42	3,882.20	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well JAMES RANCH UNIT DI 1A WCY-1E 219H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3182.00usft (Unknown)
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3182.00usft (Unknown)
Site:	James Ranch Unit DI 1A	**North Reference:**	Grid
Well:	JAMES RANCH UNIT DI 1A WCY-1E 219H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,600.00	90.00	89.88	10,815.00	377.93	3,981.42	3,982.20	0.00	0.00	0.00
14,700.00	90.00	89.88	10,815.00	378.14	4,081.42	4,082.20	0.00	0.00	0.00
14,800.00	90.00	89.88	10,815.00	378.35	4,181.42	4,182.20	0.00	0.00	0.00
14,900.00	90.00	89.88	10,815.00	378.55	4,281.42	4,282.20	0.00	0.00	0.00
15,000.00	90.00	89.88	10,815.00	378.76	4,381.42	4,382.20	0.00	0.00	0.00
15,100.00	90.00	89.88	10,815.00	378.97	4,481.42	4,482.20	0.00	0.00	0.00
15,200.00	90.00	89.88	10,815.00	379.18	4,581.42	4,582.20	0.00	0.00	0.00
15,300.00	90.00	89.88	10,815.00	379.38	4,681.42	4,682.20	0.00	0.00	0.00
15,400.00	90.00	89.88	10,815.00	379.59	4,781.42	4,782.20	0.00	0.00	0.00
15,500.00	90.00	89.88	10,815.00	379.80	4,881.42	4,882.20	0.00	0.00	0.00
15,600.00	90.00	89.88	10,815.00	380.00	4,981.41	4,982.20	0.00	0.00	0.00
15,700.00	90.00	89.88	10,815.00	380.21	5,081.41	5,082.20	0.00	0.00	0.00
15,800.00	90.00	89.88	10,815.00	380.42	5,181.41	5,182.20	0.00	0.00	0.00
15,900.00	90.00	89.88	10,815.00	380.63	5,281.41	5,282.20	0.00	0.00	0.00
16,000.00	90.00	89.88	10,815.00	380.83	5,381.41	5,382.20	0.00	0.00	0.00
16,100.00	90.00	89.88	10,815.00	381.04	5,481.41	5,482.20	0.00	0.00	0.00
16,200.00	90.00	89.88	10,815.00	381.25	5,581.41	5,582.20	0.00	0.00	0.00
16,300.00	90.00	89.88	10,815.00	381.46	5,681.41	5,682.20	0.00	0.00	0.00
16,400.00	90.00	89.88	10,815.00	381.66	5,781.41	5,782.20	0.00	0.00	0.00
16,500.00	90.00	89.88	10,815.00	381.87	5,881.41	5,882.20	0.00	0.00	0.00
16,600.00	90.00	89.88	10,815.00	382.08	5,981.41	5,982.20	0.00	0.00	0.00
16,700.00	90.00	89.88	10,815.00	382.28	6,081.41	6,082.20	0.00	0.00	0.00
16,800.00	90.00	89.88	10,815.00	382.49	6,181.41	6,182.20	0.00	0.00	0.00
16,900.00	90.00	89.88	10,815.00	382.70	6,281.41	6,282.20	0.00	0.00	0.00
17,000.00	90.00	89.88	10,815.00	382.91	6,381.41	6,382.20	0.00	0.00	0.00
17,100.00	90.00	89.88	10,815.00	383.11	6,481.41	6,482.20	0.00	0.00	0.00
17,200.00	90.00	89.88	10,815.00	383.32	6,581.41	6,582.20	0.00	0.00	0.00
17,300.00	90.00	89.88	10,815.00	383.53	6,681.41	6,682.20	0.00	0.00	0.00
17,400.00	90.00	89.88	10,815.00	383.74	6,781.41	6,782.20	0.00	0.00	0.00
17,500.00	90.00	89.88	10,815.00	383.94	6,881.41	6,882.20	0.00	0.00	0.00
17,600.00	90.00	89.88	10,815.00	384.15	6,981.41	6,982.20	0.00	0.00	0.00
17,700.00	90.00	89.88	10,815.00	384.36	7,081.41	7,082.20	0.00	0.00	0.00
17,800.00	90.00	89.88	10,815.00	384.56	7,181.41	7,182.20	0.00	0.00	0.00
17,900.00	90.00	89.88	10,815.00	384.77	7,281.41	7,282.20	0.00	0.00	0.00
18,000.00	90.00	89.88	10,815.00	384.98	7,381.41	7,382.20	0.00	0.00	0.00
18,100.00	90.00	89.88	10,815.00	385.19	7,481.41	7,482.20	0.00	0.00	0.00
18,200.00	90.00	89.88	10,815.00	385.39	7,581.41	7,582.20	0.00	0.00	0.00
18,300.00	90.00	89.88	10,815.00	385.60	7,681.41	7,682.20	0.00	0.00	0.00
18,400.00	90.00	89.88	10,815.00	385.81	7,781.41	7,782.20	0.00	0.00	0.00
18,500.00	90.00	89.88	10,815.00	386.01	7,881.41	7,882.20	0.00	0.00	0.00
18,600.00	90.00	89.88	10,815.00	386.22	7,981.41	7,982.20	0.00	0.00	0.00
18,700.00	90.00	89.88	10,815.00	386.43	8,081.41	8,082.20	0.00	0.00	0.00
18,800.00	90.00	89.88	10,815.00	386.64	8,181.41	8,182.20	0.00	0.00	0.00
18,900.00	90.00	89.88	10,815.00	386.84	8,281.41	8,282.20	0.00	0.00	0.00
19,000.00	90.00	89.88	10,815.00	387.05	8,381.41	8,382.20	0.00	0.00	0.00
19,100.00	90.00	89.88	10,815.00	387.26	8,481.41	8,482.20	0.00	0.00	0.00
19,200.00	90.00	89.88	10,815.00	387.47	8,581.41	8,582.20	0.00	0.00	0.00
19,300.00	90.00	89.88	10,815.00	387.67	8,681.41	8,682.20	0.00	0.00	0.00
19,400.00	90.00	89.88	10,815.00	387.88	8,781.41	8,782.20	0.00	0.00	0.00
19,500.00	90.00	89.88	10,815.00	388.09	8,881.41	8,882.20	0.00	0.00	0.00
19,600.00	90.00	89.88	10,815.00	388.29	8,981.41	8,982.20	0.00	0.00	0.00
19,700.00	90.00	89.88	10,815.00	388.50	9,081.41	9,082.20	0.00	0.00	0.00
19,800.00	90.00	89.88	10,815.00	388.71	9,181.41	9,182.20	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well JAMES RANCH UNIT DI 1A WCY-1E 219H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3182.00usft (Unknown)
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3182.00usft (Unknown)
Site:	James Ranch Unit DI 1A	**North Reference:**	Grid
Well:	JAMES RANCH UNIT DI 1A WCY-1E 219H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,900.00	90.00	89.88	10,815.00	388.92	9,281.41	9,282.20	0.00	0.00	0.00
20,000.00	90.00	89.88	10,815.00	389.12	9,381.41	9,382.20	0.00	0.00	0.00
20,100.00	90.00	89.88	10,815.00	389.33	9,481.41	9,482.20	0.00	0.00	0.00
20,200.00	90.00	89.88	10,815.00	389.54	9,581.41	9,582.20	0.00	0.00	0.00
20,300.00	90.00	89.88	10,815.00	389.74	9,681.40	9,682.20	0.00	0.00	0.00
20,400.00	90.00	89.88	10,815.00	389.95	9,781.40	9,782.20	0.00	0.00	0.00
20,500.00	90.00	89.88	10,815.00	390.16	9,881.40	9,882.20	0.00	0.00	0.00
20,600.00	90.00	89.88	10,815.00	390.37	9,981.40	9,982.20	0.00	0.00	0.00
20,700.00	90.00	89.88	10,815.00	390.57	10,081.40	10,082.20	0.00	0.00	0.00
20,800.00	90.00	89.88	10,815.00	390.78	10,181.40	10,182.20	0.00	0.00	0.00
20,900.00	90.00	89.88	10,815.00	390.99	10,281.40	10,282.20	0.00	0.00	0.00
21,000.00	90.00	89.88	10,815.00	391.20	10,381.40	10,382.20	0.00	0.00	0.00
21,100.00	90.00	89.88	10,815.00	391.40	10,481.40	10,482.20	0.00	0.00	0.00
21,200.00	90.00	89.88	10,815.00	391.61	10,581.40	10,582.20	0.00	0.00	0.00
21,300.00	90.00	89.88	10,815.00	391.82	10,681.40	10,682.20	0.00	0.00	0.00
21,400.00	90.00	89.88	10,815.00	392.02	10,781.40	10,782.20	0.00	0.00	0.00
21,500.00	90.00	89.88	10,815.00	392.23	10,881.40	10,882.20	0.00	0.00	0.00
21,600.00	90.00	89.88	10,815.00	392.44	10,981.40	10,982.20	0.00	0.00	0.00
21,700.00	90.00	89.88	10,815.00	392.65	11,081.40	11,082.20	0.00	0.00	0.00
21,800.00	90.00	89.88	10,815.00	392.85	11,181.40	11,182.20	0.00	0.00	0.00
21,900.00	90.00	89.88	10,815.00	393.06	11,281.40	11,282.20	0.00	0.00	0.00
22,000.00	90.00	89.88	10,815.00	393.27	11,381.40	11,382.20	0.00	0.00	0.00
22,100.00	90.00	89.88	10,815.00	393.47	11,481.40	11,482.20	0.00	0.00	0.00
22,200.00	90.00	89.88	10,815.00	393.68	11,581.40	11,582.20	0.00	0.00	0.00
22,300.00	90.00	89.88	10,815.00	393.89	11,681.40	11,682.20	0.00	0.00	0.00
22,400.00	90.00	89.88	10,815.00	394.10	11,781.40	11,782.20	0.00	0.00	0.00
22,500.00	90.00	89.88	10,815.00	394.30	11,881.40	11,882.20	0.00	0.00	0.00
22,600.00	90.00	89.88	10,815.00	394.51	11,981.40	11,982.20	0.00	0.00	0.00
22,700.00	90.00	89.88	10,815.00	394.72	12,081.40	12,082.20	0.00	0.00	0.00
22,800.00	90.00	89.88	10,815.00	394.93	12,181.40	12,182.20	0.00	0.00	0.00
22,900.00	90.00	89.88	10,815.00	395.13	12,281.40	12,282.20	0.00	0.00	0.00
23,000.00	90.00	89.88	10,815.00	395.34	12,381.40	12,382.20	0.00	0.00	0.00
23,100.00	90.00	89.88	10,815.00	395.55	12,481.40	12,482.20	0.00	0.00	0.00
23,200.00	90.00	89.88	10,815.00	395.75	12,581.40	12,582.20	0.00	0.00	0.00
23,300.00	90.00	89.88	10,815.00	395.96	12,681.40	12,682.20	0.00	0.00	0.00
23,400.00	90.00	89.88	10,815.00	396.17	12,781.40	12,782.20	0.00	0.00	0.00
23,500.00	90.00	89.88	10,815.00	396.38	12,881.40	12,882.20	0.00	0.00	0.00
23,600.00	90.00	89.88	10,815.00	396.58	12,981.40	12,982.20	0.00	0.00	0.00
23,700.00	90.00	89.88	10,815.00	396.79	13,081.40	13,082.20	0.00	0.00	0.00
23,800.00	90.00	89.88	10,815.00	397.00	13,181.40	13,182.20	0.00	0.00	0.00
23,900.00	90.00	89.88	10,815.00	397.20	13,281.40	13,282.20	0.00	0.00	0.00
24,000.00	90.00	89.88	10,815.00	397.41	13,381.40	13,382.20	0.00	0.00	0.00
24,100.00	90.00	89.88	10,815.00	397.62	13,481.40	13,482.20	0.00	0.00	0.00
24,200.00	90.00	89.88	10,815.00	397.83	13,581.40	13,582.20	0.00	0.00	0.00
24,300.00	90.00	89.88	10,815.00	398.03	13,681.40	13,682.20	0.00	0.00	0.00
24,400.00	90.00	89.88	10,815.00	398.24	13,781.40	13,782.20	0.00	0.00	0.00
24,500.00	90.00	89.88	10,815.00	398.45	13,881.40	13,882.20	0.00	0.00	0.00
24,600.00	90.00	89.88	10,815.00	398.66	13,981.40	13,982.20	0.00	0.00	0.00
24,700.00	90.00	89.88	10,815.00	398.86	14,081.40	14,082.20	0.00	0.00	0.00
24,800.00	90.00	89.88	10,815.00	399.07	14,181.40	14,182.20	0.00	0.00	0.00
24,900.00	90.00	89.88	10,815.00	399.28	14,281.40	14,282.20	0.00	0.00	0.00
25,000.00	90.00	89.88	10,815.00	399.48	14,381.39	14,382.20	0.00	0.00	0.00
25,100.00	90.00	89.88	10,815.00	399.69	14,481.39	14,482.20	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well JAMES RANCH UNIT DI 1A WCY-1E 219H
Company:	XTO Energy	**TVD Reference:**	RKB = 25' @ 3182.00usft (Unknown)
Project:	Eddy County, NM (NAD-27)	**MD Reference:**	RKB = 25' @ 3182.00usft (Unknown)
Site:	James Ranch Unit DI 1A	**North Reference:**	Grid
Well:	JAMES RANCH UNIT DI 1A WCY-1E 219H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
25,200.00	90.00	89.88	10,815.00	399.90	14,581.39	14,582.20	0.00	0.00	0.00
25,298.11	90.00	89.88	10,815.00	400.10	14,679.50	14,680.31	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
JRU DI 1A WCY-1E 2 - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	502,646.00	637,992.90	32.381096	-103.886331
JRU DI 1A WCY-1E 2 - plan hits target center - Point	0.00	0.00	10,815.00	370.80	539.50	503,016.80	638,532.40	32.382109	-103.884578
JRU DI 1A WCY-1E 2 - plan misses target center by 0.13usft at 25168.11usft MD (10815.00 TVD, 399.83 N, 14549.50 E) - Point	0.00	0.00	10,815.00	399.70	14,549.50	503,045.70	652,542.40	32.382019	-103.839196
JRU DI 1A WCY-1E 2 - plan hits target center - Point	0.00	0.00	10,815.00	400.10	14,679.50	503,046.10	652,672.40	32.382019	-103.838775

GATES E & S NORTH AMERICA, INC
DU-TEX
134 44TH STREET
CORPUS CHRISTI, TEXAS 78405

PHONE: 361-887-9807
FAX: 361-887-0812
EMAIL: crpe&s@gates.com
WEB: www.gates.com

GRADE D PRESSURE TEST CERTIFICATE

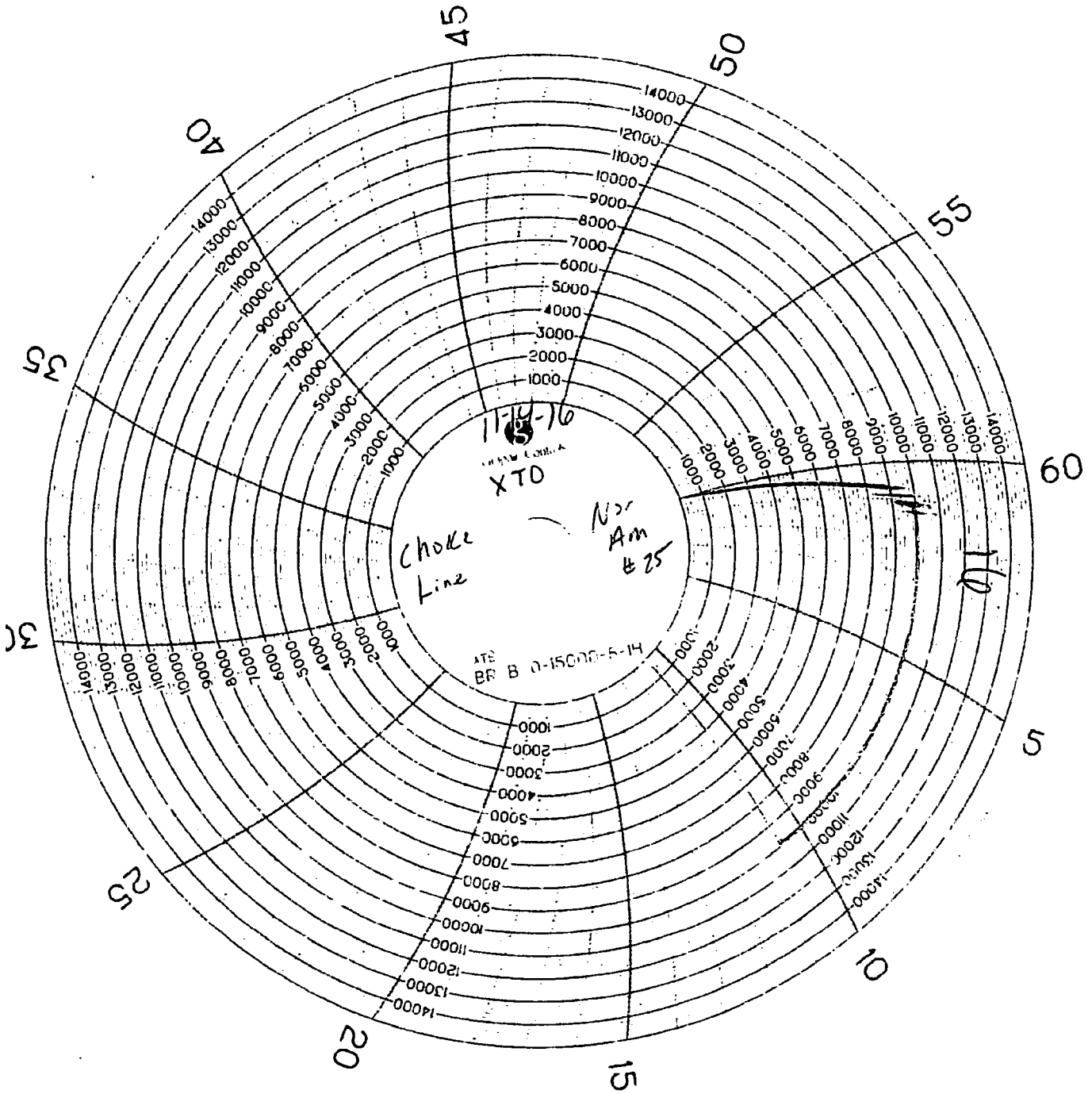
Customer :	AUSTIN DISTRIBUTING	Test Date:	6/8/2014
Customer Ref. :	PENDING	Hose Serial No.:	D-060814-1
Invoice No. :	201709	Created By:	NORMA

Product Description:	FD3.042.0R41/16.5KFLGE/E LE

End Fitting 1 :	4 1/16 in.5K FLG	End Fitting 2 :	4 1/16 in.5K FLG
Gates Part No. :	4774-6001	Assembly Code :	L33090011513D-060814-1
Working Pressure :	5,000 PSI	Test Pressure :	7,500 PSI

Gates E & S North America, Inc. certifies that the following hose assembly has been tested to the Gates Oilfield Roughneck Agreement/Specification requirements and passed the 15 minute hydrostatic test per API Spec 7K/Q1, Fifth Edition, June 2010, Test pressure 9.6.7 and per Table 9 to 7,500 psi in accordance with this product number. Hose burst pressure 9.6.7.2 exceeds the minimum of 2.5 times the working pressure per Table 9.

Quality:	QUALITY	Technical Supervisor :	PRODUCTION
Date :	6/8/2014	Date :	6/8/2014
Signature :		Signature :	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XTO
Choke Line
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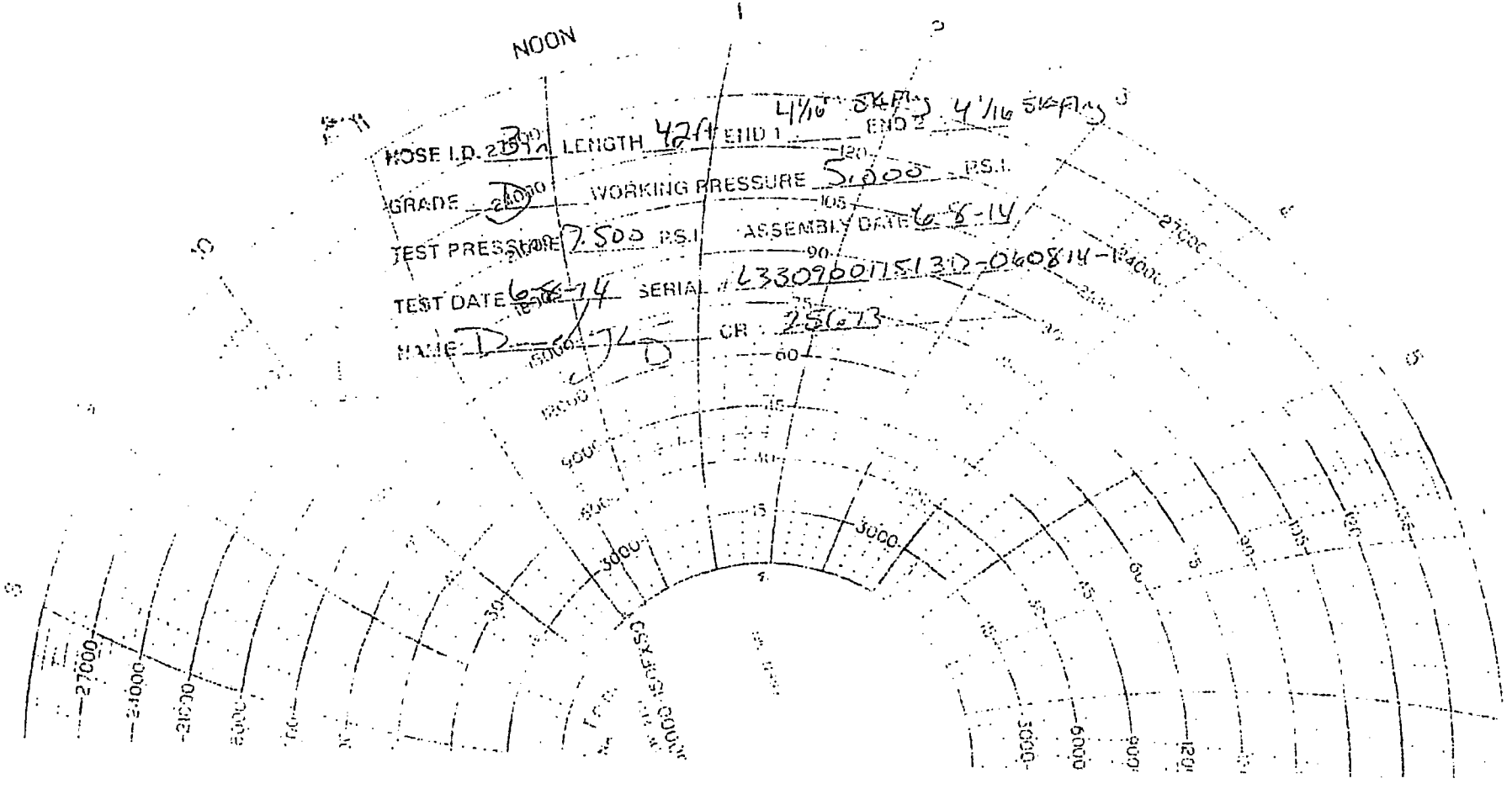

NOON
HOSE I.D. 2 1/2"
LENGTH 42"
END 1 4 1/16" SWAGE
END 2 4 1/16" SWAGE
GRADE D
WORKING PRESSURE 5,000 P.S.I.
TEST PRESSURE 7,500 P.S.I.
ASSEMBLY DATE 6-6-14
TEST DATE 6-6-14
SERIAL # 433096017513D-060814-1
NAME D
CR 25673

APD ID: 10400025884 **Submission Date:** 12/29/2017

Operator Name: BOPCO LP

Well Name: JAMES RANCH UNIT DI1A WCY-1E **Well Number:** 219H

Well Type: OIL 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:

JRU_DI1A_219H_Road_20171228062741.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT **Row(s) Exist?** YES

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? NO

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

JRU_DI1A_1_Mile_20171228053824.pdf

Operator Name: BOPCO LP

Well Name: JAMES RANCH UNIT DI1A WCY-1E **Well Number:** 219H

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: No additional production facilities are necessary for the James Ranch Unit DI1A wells. Once drilled and completed, the wells will flow to the James Ranch Unit DI1A battery, directly adjacent to the James Ranch Unit DI1A. No additional surface disturbance is needed. In the event the well is found productive, 4" composite flexpipe or steel flowlines with a maximum safety pressure rating of 750psi (operating pressure: 125psi) will be laid on the surface within proposed lease road corridors from the proposed JRU DI1A CTB where the oil, gas, and water will be metered and appropriately separated. High pressure gas lines will be buried beneath the surface flowlines per well pad within the proposed lease road corridors for gas lift, fuel gas, and water. Oil will be hauled from the location by truck following existing and proposed lease roads. The distance of proposed flowlines will be approximately 600'. All flowlines will follow proposed lease road corridors. No Gas Sales line is required for this well. No additional surface disturbance is needed. Produced water will be hauled from location to a commercial disposal facility as needed. Once wells are drilled and completed, a 3160-5 sundry notification will be submitted to BLM in compliance with Onshore Order 7. No flare is required for this well. No additional surface disturbance is needed. All permanent (on site six months or longer) aboveground structures constructed or installed on location and not subject to safety requirements will be painted earth-tone colors such as 'shale green' that reduce the visual impacts of the built environment. Containment berms will be constructed completely around any production facilities designed to hold fluids. The containment berms will be constructed of compacted subsoil, be sufficiently impervious, hold 1 ½ times the capacity of the largest tank and away from cut or fill areas. No additional electrical is required for this well. No additional surface disturbance is needed.

Production Facilities map:

JRU_DI1A_CTB_20171228053835.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

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

Water source type: OTHER

Describe type: Fresh Water; Section 21-T23S-R30E

Source latitude:

Source longitude:

Source datum:

Water source permit type: PRIVATE CONTRACT

Source land ownership: FEDERAL

Water source transport method: TRUCKING

Source transportation land ownership: FEDERAL

Water source volume (barrels): 330000

Source volume (acre-feet): 42.53472

Source volume (gal): 13860000

Operator Name: BOPCO LP

Well Name: JAMES RANCH UNIT DI1A WCY-1E **Well Number:** 219H

Water source use type: INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE CASING **Water source type:** OTHER

Describe type: Fresh Water; Section 13-T17S-R33E

Source latitude: **Source longitude:**

Source datum:

Water source permit type: PRIVATE CONTRACT

Source land ownership: FEDERAL

Water source transport method: TRUCKING

Source transportation land ownership: FEDERAL

Water source volume (barrels): 330000 **Source volume (acre-feet):** 42.53472

Source volume (gal): 13860000

Water source and transportation map:

JRU_DI1A_219H_Wtr_20171228062839.pdf

Water source comments: The well will be drilled using a combination of water mud systems as outlined in the Drilling Program. The water will be obtained from a 3rd party vendor and hauled to the existing frac pit in Section 7 by transport truck using the existing and proposed roads depicted in the attached exhibits. No water well will be drilled on the location. Water for drilling, completion and dust control will be purchased from the following company: Rockhouse Water Water for drilling, completion and dust control will be supplied by Rockhouse Water for sale to BOPCO, L.P. from Section 13-T17S-R33E, Eddy County, New Mexico. In the event that Rockhouse Water does not have the appropriate water for BOPCO at time of drilling and completion from this location, then BOPCO water will come from with the location of the water being in Section 21-T23S-R30E, Eddy County, New Mexico. Anticipated water usage for drilling includes an estimated 35,000 barrels of water to drill a horizontal well in a combination of fresh water and brine as detailed in the mud program in the drilling plans. These volumes are calculated for ~1.5bbls per foot of hole drilled with excess to accommodate any lost circulation or wash out that may occur. Actual water volumes used during operations will depend on the depth of the well, length of horizontal sections, and the losses that may occur during the operation. Temporary water flowlines will be permitted via ROW approval letter and proper grants as-needed based on drilling and completion schedules as needed. Well completion is expected to require approximately 330,000 barrels of water per horizontal well. Actual water volumes used during operations will depend on the depth of the well and length of horizontal sections.

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:**

Operator Name: BOPCO LP

Well Name: JAMES RANCH UNIT DI1A WCY-1E **Well Number:** 219H

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:

Section 6 - Construction Materials

Construction Materials description: Construction, reclamation, and/or routine maintenance will not be conducted during periods when the soil conditions for construction could lead to impacts to the surrounding environment, or when watershed damage is likely to occur as a result of these activities. Any construction material that may be required for surfacing of the drill pad and access road will be from a contractor having a permitted source of materials within the general area. No construction materials will be removed from federal lands without prior approval from the appropriate surface management agency. All roads and well pads will be constructed of 6" rolled and compacted caliche. Anticipated Caliche Locations: Pit 1: Federal Caliche Pit, Section 17-T25S-R30E Pit 2: Federal Caliche Pit, Section 34-T25S-R29E
Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: GARBAGE

Waste content description: Garbage, junk and non-flammable waste materials

Amount of waste: 250 pounds

Waste disposal frequency : Weekly

Safe containment description: All garbage, junk and non-flammable waste materials will be contained in a self-contained, portable dumpster or trash cage, to prevent scattering and will be removed and deposited in an approve sanitary landfill. Immediately after drilling all debris and other waste materials on and around the well location not contained in the trash cage will be cleaned up and removed from the location. No potentially adverse materials or substances will be left on the location.
Safe containmant attachment:

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

Disposal location description: A licensed 3rd party vendor will be contracted to haul and safely dispose of garbage, junk and non-flammable waste materials.

Waste type: DRILLING

Waste content description: Fluid

Amount of waste: 500 barrels

Waste disposal frequency : One Time Only

Safe containment description: Steel mud pits

Safe containmant attachment:

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

Disposal type description:

Disposal location description: R360 Environmental Solutions 4507 W Carlsbad Hwy, Hobbs, NM 88240 (575) 393-1079

Waste type: DRILLING

Waste content description: Cuttings

Amount of waste: 2100 pounds

Waste disposal frequency : One Time Only

Safe containment description: The well will be drilled utilizing a closed-loop mud system. Drill cuttings will be held in roll-off style mud boxes.

Safe containmant attachment:

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

Disposal type description:

Disposal location description: R360 Environmental Solutions 4507 W Carlsbad Hwy, Hobbs, NM 88240 (575) 393-1079

Waste type: SEWAGE

Waste content description: Human Waste

Amount of waste: 250 gallons

Waste disposal frequency : Weekly

Safe containment description: Portable, self-contained toilets will be provided for human waste disposal. Upon completion of drilling and completion activities, or as required, the toilet holding tanks will be pumped and the contents thereof disposed of in an approved sewage disposal facility. All state and local laws and regulations pertaining to the disposal of human and solid waste will be complied with. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.

Safe containmant attachment:

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

Disposal type description:

Disposal location description: A licensed 3rd party contractor will be used to haul and dispose of human waste.

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? YES

Description of cuttings location Cuttings. The well will be drilled utilizing a closed-loop mud system. Drill cuttings will be held in roll-off style mud boxes and taken to a New Mexico Oil Conservation Division (NMOCD) approved disposal site. Drilling Fluids. These will be contained in steel mud pits and then taken to a NMOCD approved commercial disposal facility. Produced Fluids. Water produced from the well during completion will be held temporarily in steel tanks and then taken to a NMOCD approved commercial disposal facility. Oil produced during operations will be stored in tanks until sold.

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

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

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

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

JRU_DI1A_219H_Well_20171228062814.pdf

Comments: Drill island has been completed from previous APD approvals. No additional surface disturbance is necessary. Pads are already built under previous EA approvals. Approved APDs on DI: James Ranch Unit DI 1A: #206H, 203H, 204H.

Section 10 - Plans for Surface Reclamation

Type of disturbance: No New Surface Disturbance **Multiple Well Pad Name:** JAMES RANCH UNIT DI

Multiple Well Pad Number: 1A

Recontouring attachment:

Drainage/Erosion control construction: No additional surface disturbance is required. Drill island is already built.

Drainage/Erosion control reclamation: No additional surface disturbance is required. Drill island is already built.

Operator Name: BOPCO LP

Well Name: JAMES RANCH UNIT DI1A WCY-1E **Well Number:** 219H

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

Disturbance Comments:

Reconstruction method: The original stock piled topsoil will be spread over the areas being reclaimed and the original landform will be restored for all disturbed areas including well pads, production facilities, roads, pipelines, and utility corridors as close as possible to the original topography. The location will then be ripped and seeded.
Topsoil redistribution: The original stock piled topsoil will be spread over the areas being reclaimed and the original landform will be restored for all disturbed areas including well pads, production facilities, roads, pipelines, and utility corridors as close as possible to the original topography. The location will then be ripped and seeded.
Soil treatment: A self-sustaining, vigorous, diverse, native (or otherwise approved) plan community will be established on the site with a density sufficient to control erosion and invasion by non-native plants and to re-establish wildlife habitat or forage production. At a minimum, the established plant community will consist of species included in the seed mix and/or desirable species occurring in the surrounding natural vegetation.
Existing Vegetation at the well pad: Environmental Setting. Soils are classified of Reeves soils. These soils are associated with the loamy ecological site which typically supports black and blue grama and tobosa grasslands with an even distribution of yucca, mesquite, American tarbush, cholla, and cresoste. The current vegetative community: none. The pad is caliche. No additional disturbance is necessary.
Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: Environmental Setting. Soils are classified of Reeves soils. These soils are associated with the loamy ecological site which typically supports black and blue grama and tobosa grasslands with an even distribution of yucca, mesquite, American tarbush, cholla, and cresoste. The current vegetative community: none. The pad is caliche. No additional disturbance is necessary.
Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: Environmental Setting. Soils are classified as Simona Gravelly Fine Sandy Loam and Simona-Bippus Complex. Simona soils are found on alluvial fans and plans and form in mixed alluvium and/or Aeolian sands. Bippus soils are found on alluvial fans and floodplains and form in mixed alluvium. The Simona-Bippus soils are dominant to the east and the Simona Gravelly Fine Sandy Loams are dominant to the West. Dominant vegetation species include: mesquite, sumac snakeweed, and various forbs and grasses. Ground cover is minimal, offering 90 percent visibility. Traffic. No truck traffic will be operated during periods or in areas of saturated ground when surface rutting could occur. The access road will be constructed and maintained as necessary to prevent soil erosion and accommodate all-weather traffic. The road will be crowned and ditched with water turnouts installed as necessary to provide for proper drainage along the access road route. Water. There is no permanent or live water in the immediate or within the project area.
Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: Environmental Setting. Soils are classified of Reeves soils. These soils are associated with the loamy ecological site which typically supports black and blue grama and tobosa grasslands with an even distribution of yucca, mesquite, American tarbush, cholla, and cresoste. The current vegetative community: none. The pad is caliche. No additional disturbance is necessary.
Existing Vegetation Community at other disturbances attachment:

Operator Name: BOPCO LP

Well Name: JAMES RANCH UNIT DI1A WCY-1E **Well Number:** 219H

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: Jeff **Last Name:** Raines

Phone: (432)620-4349 **Email:** jeffrey_raines@xtoenergy.com

Seedbed prep: No surface reclamation is planned for this well. BOPCO, L.P. requests a variance to interim reclamation until all wells on the drill island have been drilled and completed, at which time, BOPCO, L.P will contact the appropriate BLM personnel to discuss appropriate interim reclamation plans. Surface Ownership.
Seed BMP: No surface reclamation is planned for this well. BOPCO, L.P. requests a variance to interim reclamation until all wells on the drill island have been drilled and completed, at which time, BOPCO, L.P will contact the appropriate BLM personnel to discuss appropriate interim reclamation plans. Surface Ownership.
Seed method: No surface reclamation is planned for this well. BOPCO, L.P. requests a variance to interim reclamation until all wells on the drill island have been drilled and completed, at which time, BOPCO, L.P will contact the appropriate

BLM personnel to discuss appropriate interim reclamation plans. Surface Ownership.

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: Weed control for all phases will be through the use of approved pesticides and herbicides according to applicable State, Federal and local laws.
Weed treatment plan attachment:

Monitoring plan description: Monitoring of invasive and noxious weeds will be visual and as-needed. If it is determined additional methods are required to monitor invasive and noxious weeds, appropriate BLM authorities will be contacted with a plan of action for approval prior to implementation.
Monitoring plan attachment:

Success standards: 100% compliance with applicable regulations.

Pit closure description: There will be no reserve pit as each well will be drilled utilizing a closed loop mud system. The closed loop system will meet the NMOCD requirements 19.15.17.
Pit closure attachment:

Section 11 - Surface Ownership

Disturbance type: OTHER

Describe: Flowline

Surface Owner: BUREAU OF LAND MANAGEMENT

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:**

Operator Name: BOPCO LP

Well Name: JAMES RANCH UNIT DI1A WCY-1E **Well Number:** 219H

Disturbance type: WELL PAD

Describe:

Surface Owner: BUREAU OF LAND MANAGEMENT

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:**

Section 12 - Other Information

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

ROW Type(s):

ROW Applications

SUPO Additional Information:

Use a previously conducted onsite? YES

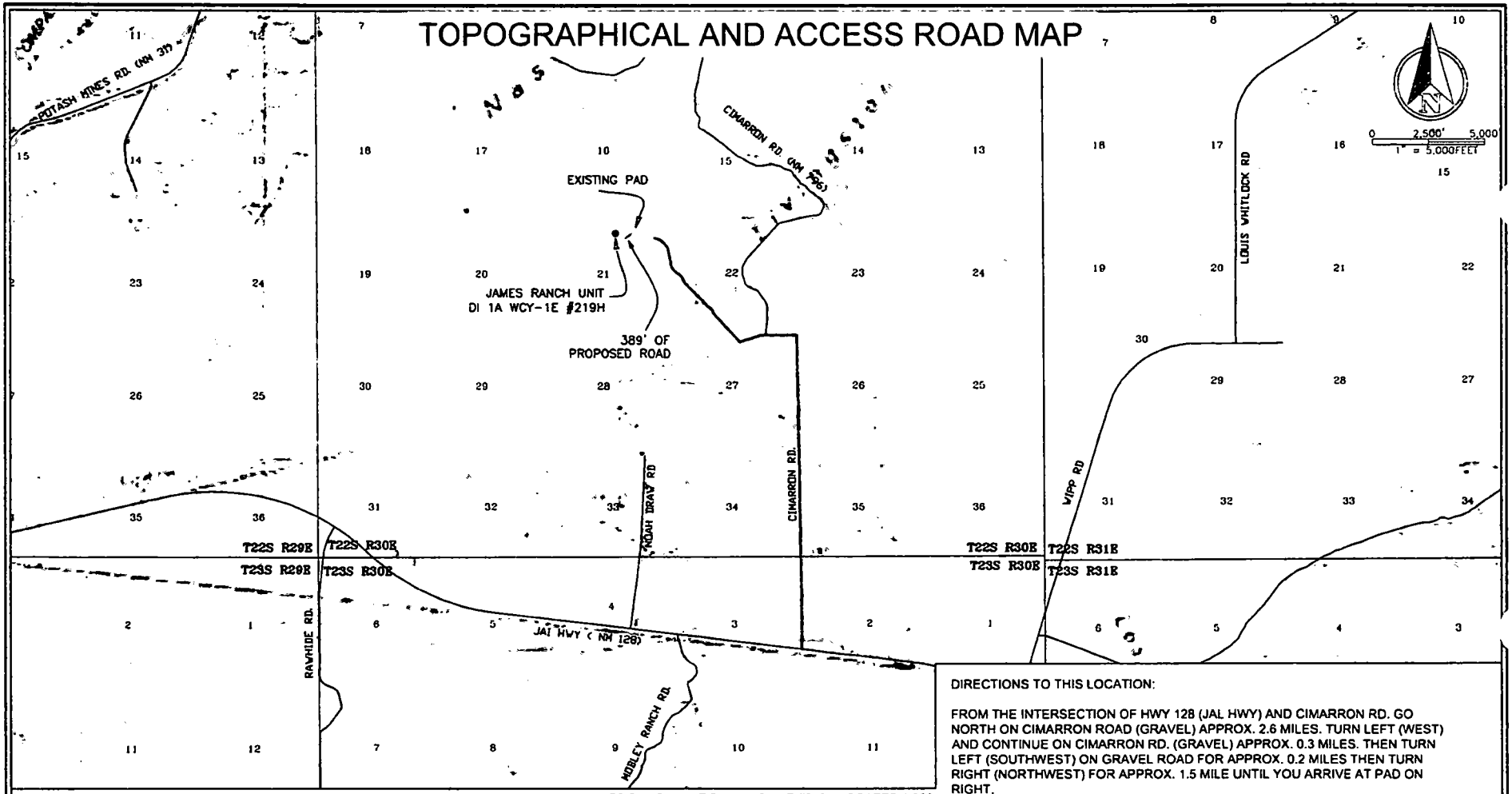
Previous Onsite information: Drill island has been completed from previous APD approvals. No additional surface disturbance is necessary. Pads are already built under previous EA approvals. Approved APDs on DI: James Ranch Unit DI 1A: #206H, 203H, 204H.

Other SUPO Attachment

JRU_DI1A_SUPO_20171228054316.pdf

JRU_DI1A_DI_20171228054309.pdf

TOPOGRAPHICAL AND ACCESS ROAD MAP



DIRECTIONS TO THIS LOCATION:

FROM THE INTERSECTION OF HWY 128 (JAL HWY) AND CIMARRON RD. GO NORTH ON CIMARRON ROAD (GRAVEL) APPROX. 2.6 MILES. TURN LEFT (WEST) AND CONTINUE ON CIMARRON RD. (GRAVEL) APPROX. 0.3 MILES. THEN TURN LEFT (SOUTHWEST) ON GRAVEL ROAD FOR APPROX. 0.2 MILES THEN TURN RIGHT (NORTHWEST) FOR APPROX. 1.5 MILE UNTIL YOU ARRIVE AT PAD ON RIGHT.

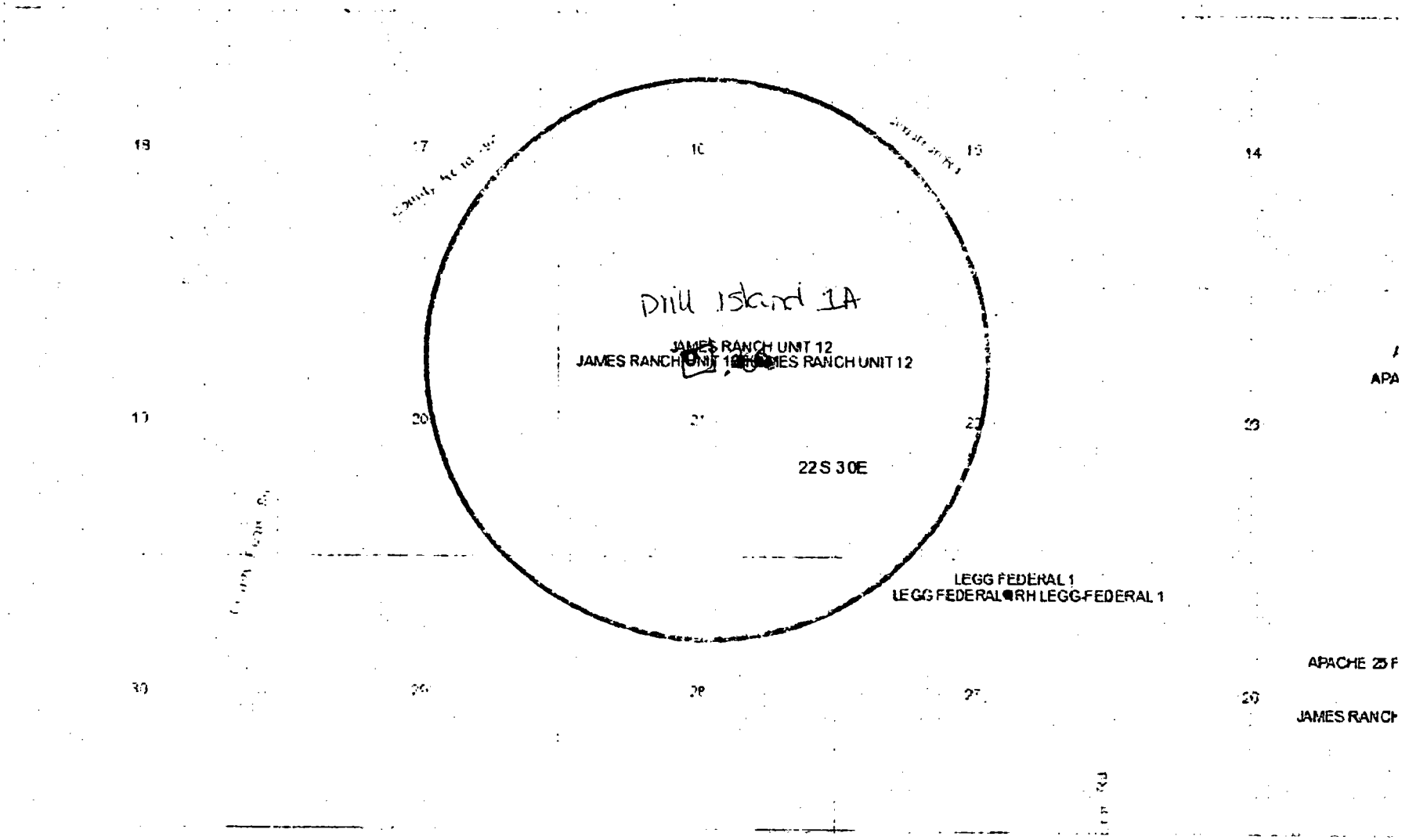
JAMES RANCH UNIT DI 1A WCY-1E #219H LOCATED 1,360 FEET FROM THE NORTH LINE AND 2,510 FEET FROM THE WEST LINE OF SECTION 21, TOWNSHIP 22 SOUTH, RANGE 30 EAST, N.M.P.M. EDDY COUNTY, NEW MEXICO

FSC INC
SURVEYORS+ENGINEERS
550 Bailey Ave., 205 - Fort Worth, TX 76107
Ph: 817.349.9800 - Fax: 979.732.5271
TBPE Firm 17957 | TBPLS Firm 10193887
www.fscinc.net

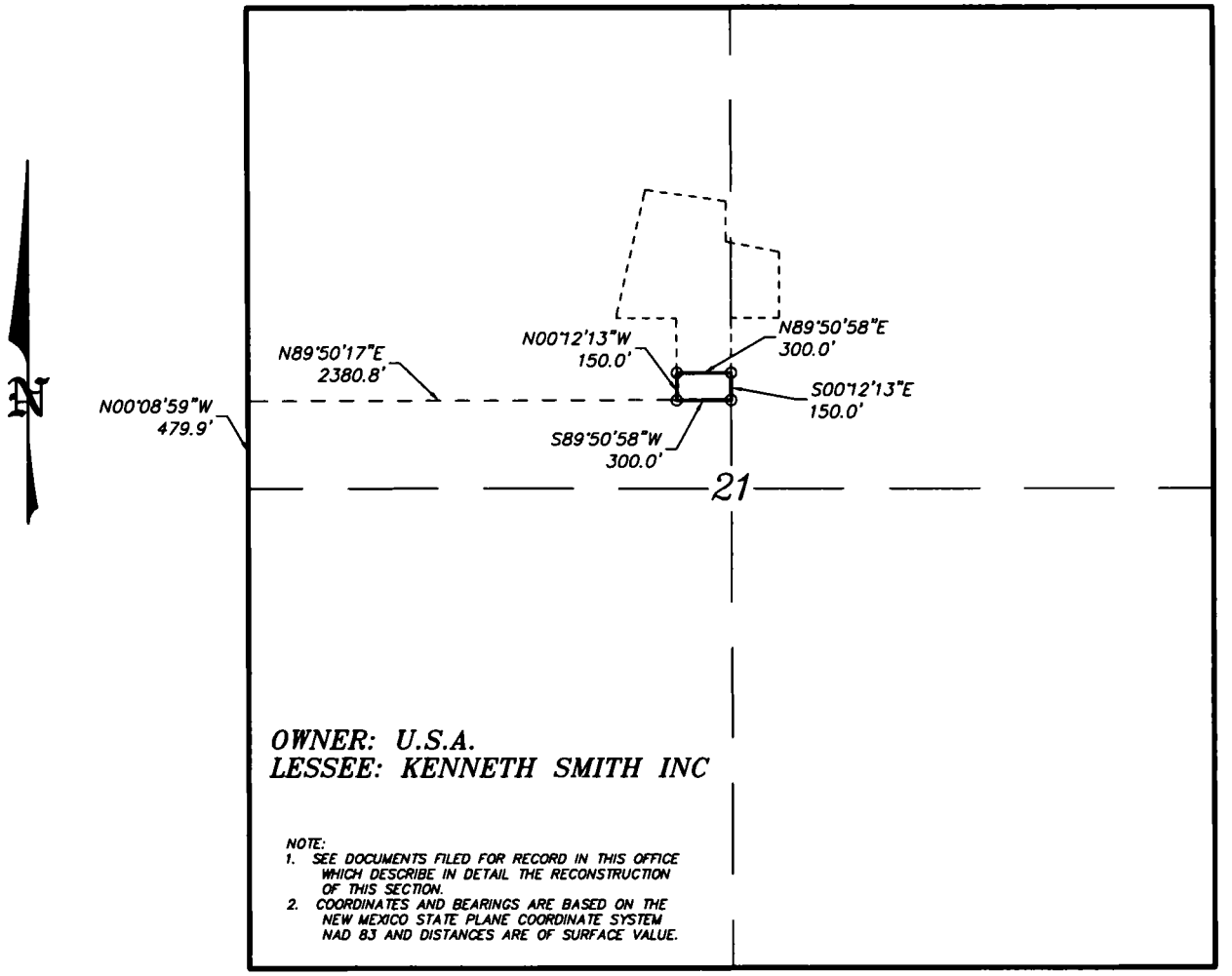
DATE:	12-5-2017	PROJECT NO	2017050658
DRAWN BY	AI	SCALE	1" = 5,000'
CHECKED BY	DH	SHEET	1 OF 1
FIELD CREW:	NM/JD	REVISION	1

James Ranch Unit DI1A

1-Mile Radius Map



SECTION 21, TOWNSHIP 22 SOUTH, RANGE 30 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



LEGAL DESCRIPTION

A TRACT OF LAND LOCATED IN SECTION 21, TOWNSHIP 22 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS.

BEGINNING AT A POINT WHICH LIES N00°08'59"W., 479.9 FEET AND N89°50'17"E., 2380.8 FEET FROM THE WEST QUARTER CORNER OF SAID SECTION 21; THENCE N00°12'13"W., 150.0 FEET; THENCE N89°50'58"E., 300.0 FEET; THENCE S00°12'13"E., 150.0 FEET; THENCE S89°50'58"W., 300.0 FEET TO THE POINT OF BEGINNING. SAID TRACT OF LAND CONTAINING 1.03 ACRES, MORE OR LESS.

I HEREBY CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF AN ACTUAL SURVEY AND MEETS OR EXCEEDS ALL REQUIREMENTS FOR LAND SURVEYS AS SPECIFIED BY THIS STATE.

GARY L. JONES — NEW MEXICO — 7977 — REGISTERED PROFESSIONAL LAND SURVEYOR

GARY L. JONES, P.S. No. 7977
TEXAS No. 5074

1000 0 1000 2000 FEET

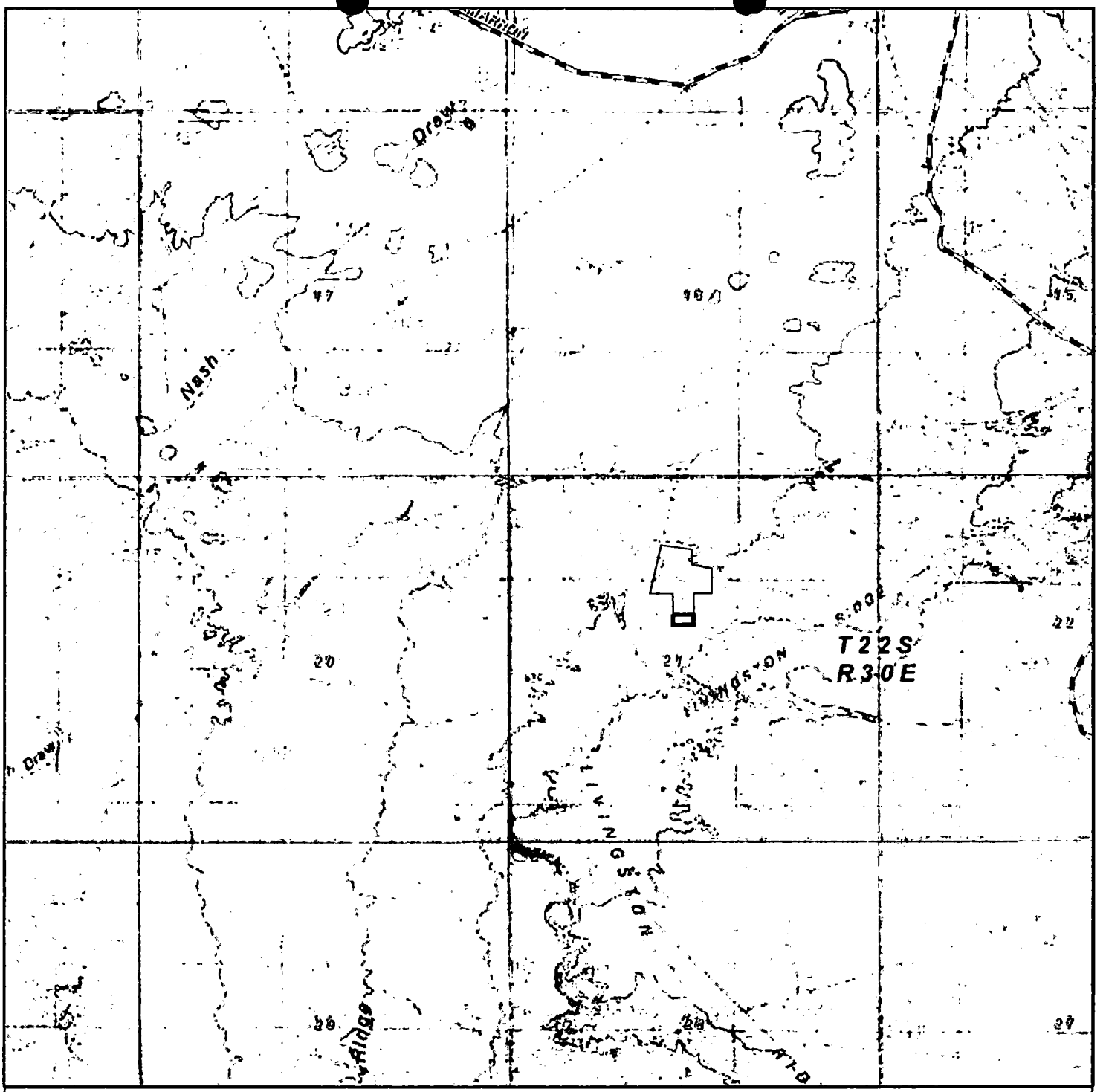
BOPCO, L.P.

REF: PROPOSED JRU DRILL ISLAND 1A PRODUCTION AREA EXTENSION

A TRACT OF LAND LOCATED IN
SECTION 21, TOWNSHIP 22 SOUTH, RANGE 30 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

basin surveys
focused on excellence in the oilfield
P.O. Box 1786
1120 N. West County Rd.
Hobbs, New Mexico 88241
(575) 393-7316 - Office
(575) 392-2206 - Fax
basinsurveys.com

W.O. Number: 32799	Drawn By: J GOAD	Date: 3-27-2017	Survey Date: 3-22-2017	Sheet 1 of 1 Sheets



PROPOSED JRU DRILL ISLAND 1A PRODUCTION AREA EXTENSION

Section 21, Township 22 South, Range 30 East,
N.M.P.M., Eddy County, New Mexico.

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Hobbs, New Mexico 88241
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basinsurveys.com

0' 1000' 2000' 3000' 4000'
SCALE: 1" = 2000'

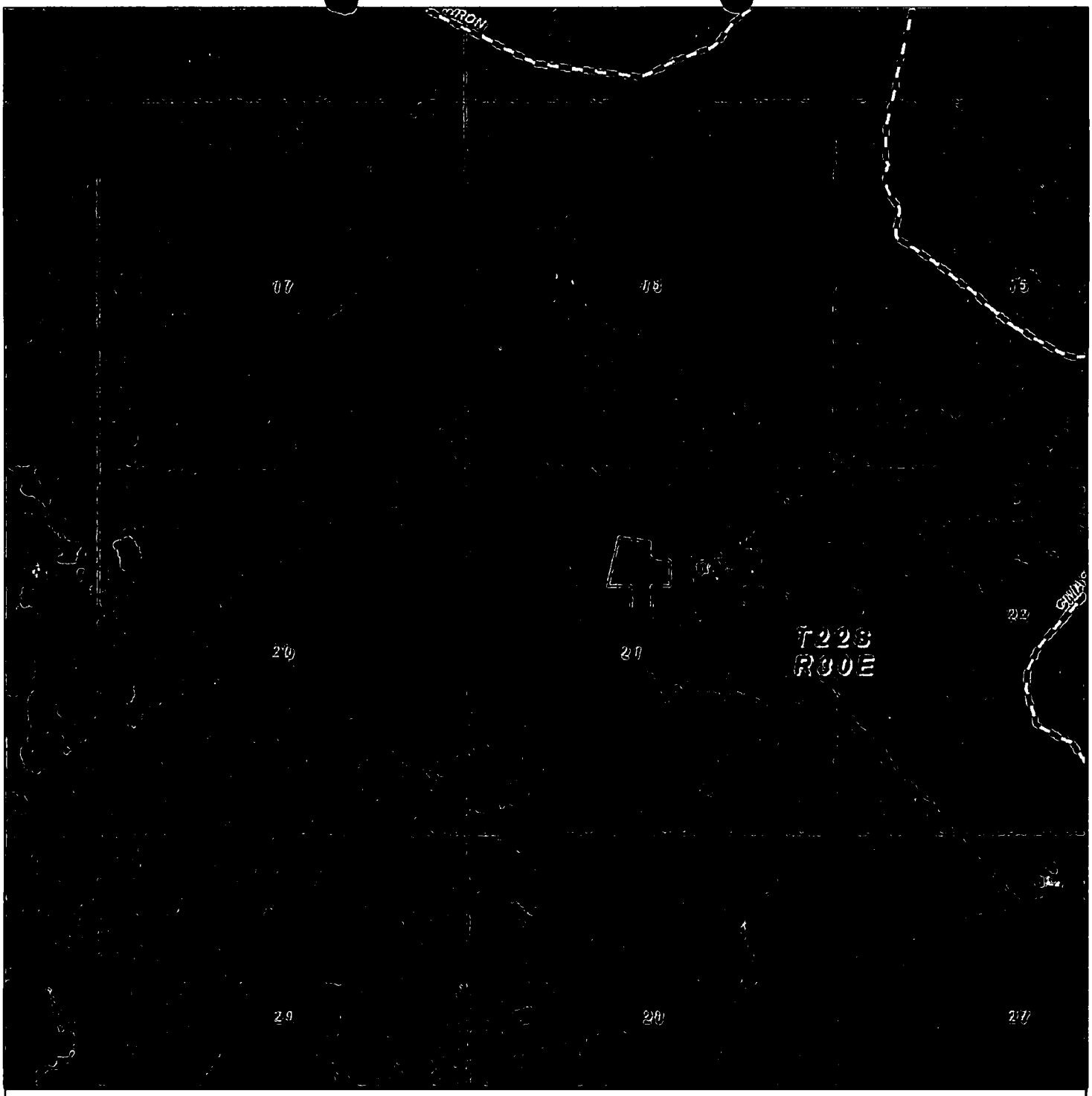
W.O. Number: 32810

Survey Date: 3-23-2017

YELLOW TINT – USA LAND
BLUE TINT – STATE LAND
NATURAL COLOR – FEE LAND

N

BOPCO, L.P.



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0' 1000' 2000' 3000' 4000'
SCALE: 1" = 2000'

W.O. Number: 32810

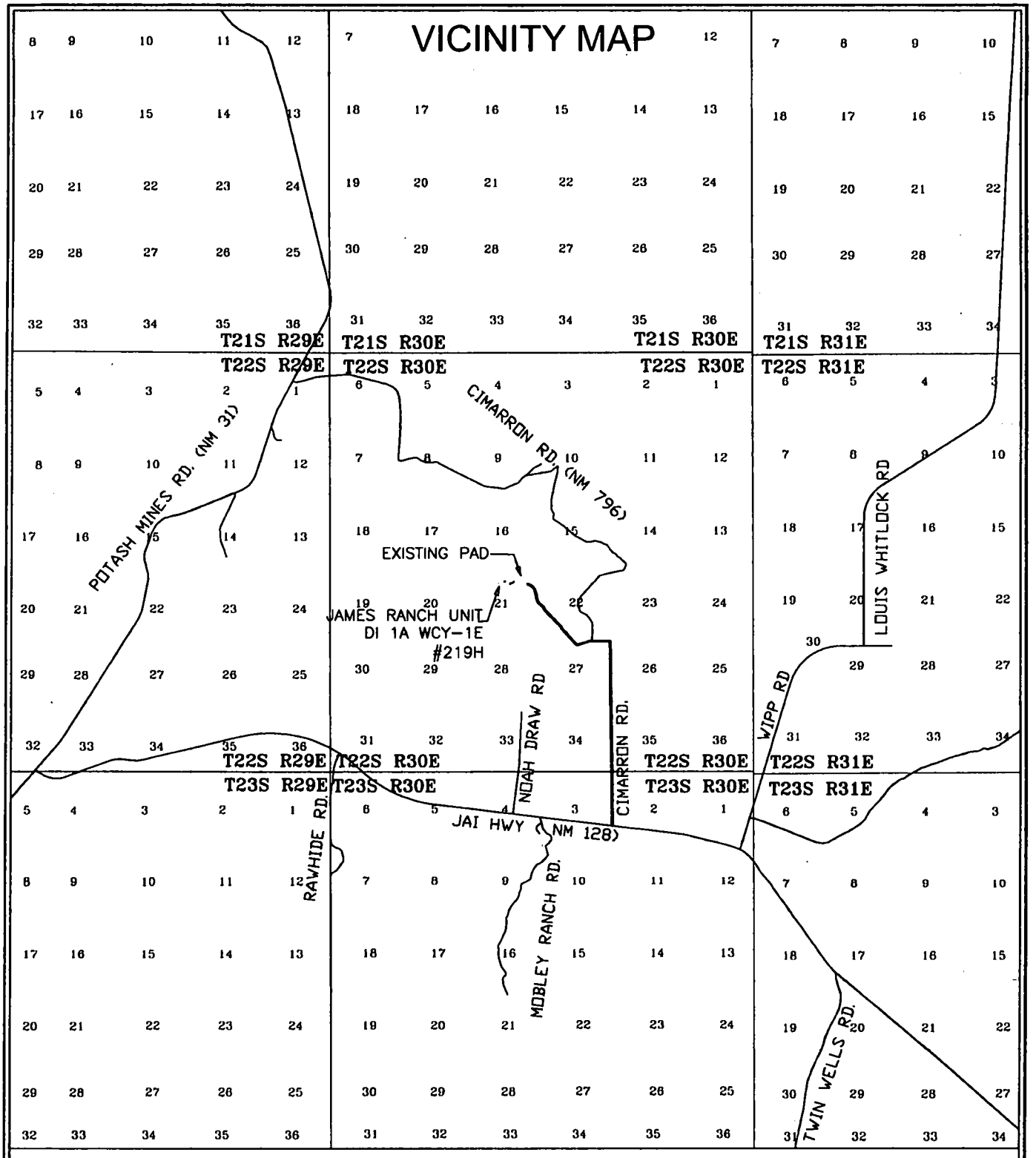
Survey Date: 3-23-2017

YELLOW TINT - USA LAND
BLUE TINT - STATE LAND
NATURAL COLOR - FEE LAND

N

BOPCO, L.P.

VICINITY MAP



JAMES RANCH UNIT DI 1A WCY-1E #219H
LOCATED 1,360 FEET FROM THE NORTH LINE AND 2,510 FEET FROM THE WEST LINE OF SECTION 21, TOWNSHIP 22 SOUTH, RANGE 30 EAST, N.M.P.M. EDDY COUNTY, NEW MEXICO

0 5,000' 10,000'
1" = 10,000 FEET

FSC INC
SURVEYORS+ENGINEERS
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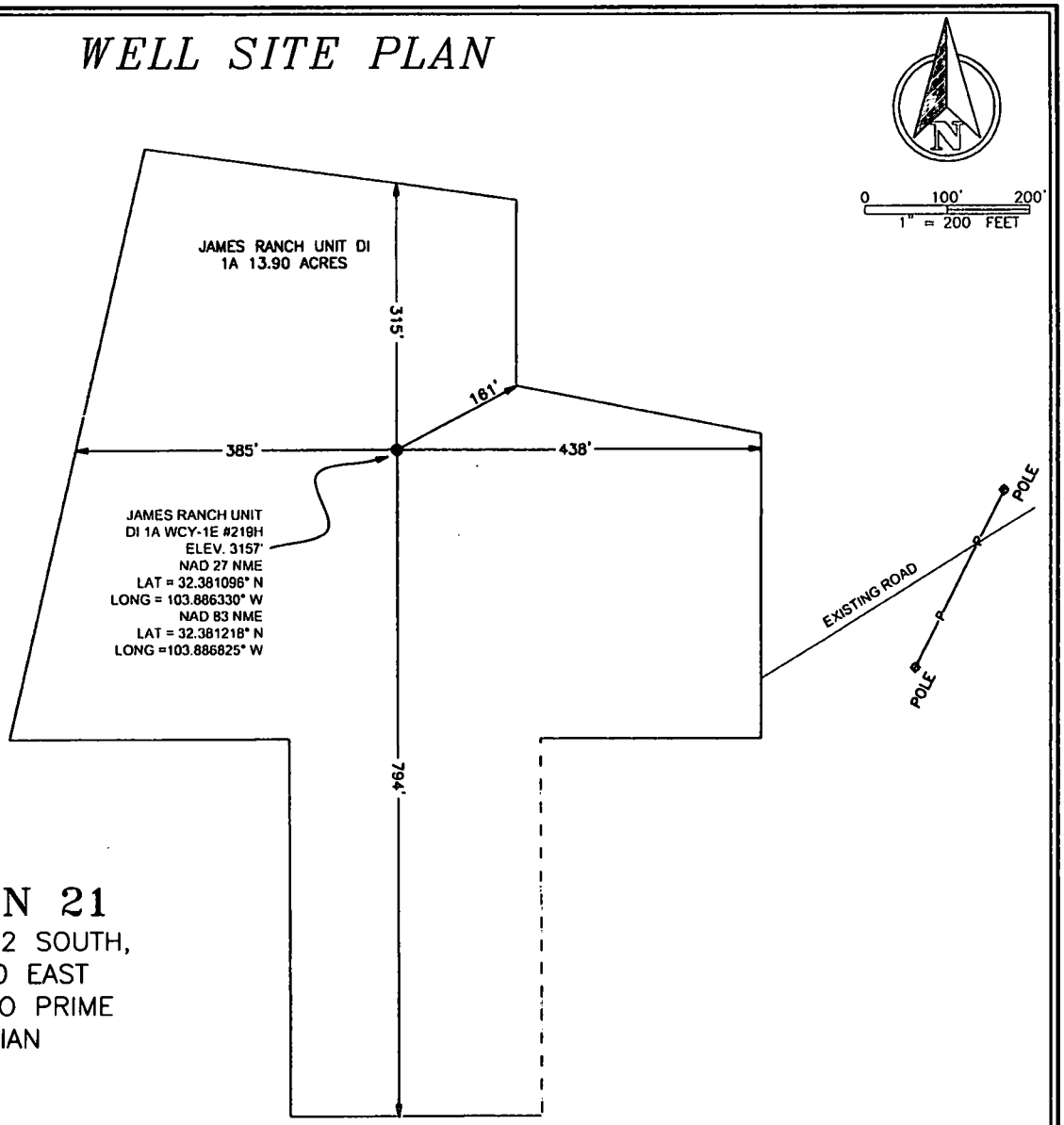
Ph: 817.349.9800 - Fax: 979.732.5271
TBPE Firm 17957 | TBPLS Firm 10193887
www.fscinc.net

DATE:	12-5-2017
DRAWN BY:	RR
CHECKED BY:	AI
FIELD CREW:	RE/PD
PROJECT NO:	2017050658
SCALE:	1"= 10,000'
SHEET:	1 OF 1
REVISION:	1

WELL SITE PLAN



SECTION 21
TOWNSHIP 22 SOUTH,
RANGE 30 EAST
NEW MEXICO PRIME
MERIDIAN

LEGEND

INTERIOR LINES
EXISTING OVERHEAD ELECTRIC

NOTE:

1). SEE "TOPOGRAPHICAL AND ACCESS ROAD MAP" FOR PROPOSED ROAD LOCATION

DIRECTIONS TO THIS LOCATION:

FROM THE INTERSECTION OF HWY 128 (JAL HWY) AND CIMARRON RD. GO NORTH ON CIMARRON ROAD (GRAVEL) APPROX. 2.6 MILES. TURN LEFT (WEST) AND CONTINUE ON CIMARRON RD. (GRAVEL) APPROX. 0.3 MILES. THEN TURN LEFT (SOUTHWEST) ON GRAVEL ROAD FOR APPROX. 0.2 MILES THEN TURN RIGHT (NORTHWEST) FOR APPROX. 1.5 MILE UNTIL YOU ARRIVE AT PAD ON RIGHT.

BOPCO, L.P.

JAMES RANCH UNIT DI 1A WCY-1E #219H LOCATED 1,360 FEET FROM THE NORTH LINE AND 2,510 FEET FROM THE WEST LINE OF SECTION 21, TOWNSHIP 22 SOUTH, RANGE 30 EAST, N.M.P.M. EDDY COUNTY, NEW MEXICO

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www.fscinc.net

DATE:	12-14-2017	PROJECT NO:	2017050658
DRAWN BY:	RR/AI	SCALE:	1" = 200'
CHECKED BY:	DH/AI	SHEET:	1 OF 1
FIELD CREW:	RE/PH	REVISION:	2

Well Site Locations

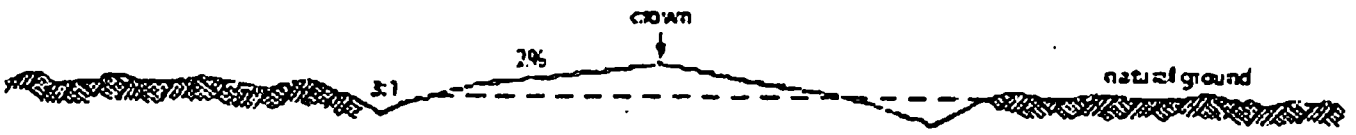
The results of the James Ranch Unit DI1A Development Program will develop economic quantities of oil and gas in the James Ranch Unit with multiple primary formations targeted. Well locations are determined based on cross-section variations and details. Locations will be selected to minimize the likelihood of encountering faults and/or drilling hazards while still targeting suitably productive zones.

If drilling results in an unproductive well, the well will be plugged and abandoned as soon as practical after the conclusion of production testing. Productive wells may be shut-in temporarily for BLM authorization for production activities and facilities.

Surface Use Plan

1. **Existing Roads**
    A. The James Ranch Unit DI1A is accessed from the intersection of Hwy 128 (Jal Hwy) and Cimarron rd. Go North on Cimarron Rd approximately 2.6 miles. Turn left and continue on Cimarron Rd approximately .3 miles then turn left on gravel road for approximately .2 miles. Turn right for approximately 1.5 miles until you arrive at pad on right. Transportation Plan identifying existing roads that will be used to access the project area is included from Frank's Surveying marked as, 'Vicinity Map.'
    B. There are existing access roads to the proposed James Ranch Unit DI1A well locations. All equipment and vehicles will be confined to the routes shown on the Vicinity Map as provided by Frank's Surveying. Maintenance of the access roads will continue until abandonment and reclamation of the well pads is completed.

2. **New or Upgraded Access Roads**
    A. **New Roads**. There are no new roads necessary to access the James Ranch Unit DI1A location.
    B. **Well Pads**. The well pads selected for development will determine which existing roads will be upgraded and which new roads will be built. The lease flow diagram shows the location of proposed roads that will need to be constructed to access the well pads.
    C. **Anticipated Traffic**. After well completion, travel to each well site will included one lease operator truck and two oil trucks per day until the Central Tank Battery is completed. Upon completion of the Central Tank Battery, one lease operator truck will continue to travel to each well site to monitor the working order of the wells and to check well equipment for proper operation. Two oil trucks will continue to travel to the Central Tank Battery only for oil hauling. Additional traffic will include one maintenance truck periodically throughout the year for pad upkeep and weed removal. Well service trips will include only the traffic necessary to work on the wells or provide chemical treatments periodically and as needed throughout the year.
    D. **Routing**. All equipment and vehicles will be confined to the travel routes laid out in the vicinity map provided by Frank's Surveying unless otherwise approved by the BLM and applied for by BOPCO, L.P.
    E. **Road Dimensions**. The maximum width of the driving surface of new roads will be 14 feet. The roads will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1 foot deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.



Level Ground Section

F. **Surface Material**. Surface material will be native caliche. The average grade of all roads will be approximately 3%.
G. **Fence Cuts**: No.
H. **Fences**: No.
I. **Cattle Guards**: No.
J. **Turnouts**: No.
K. **Culverts**: No.
L. **Cuts and Fills**: Not significant.
M. **Topsoil**. Approximately 6 inches of topsoil (root zone) will be stripped from the proposed access road prior to any further construction activity. The topsoil that was stripped will be spread along the edge of the road and within the ditch. The topsoil will be seeded with the proper seed mix designated by the BLM.
N. **Maintenance**. The access road will be constructed and maintained as necessary to prevent soil erosion and accommodate all-weather traffic. The road will be crowned and ditched with water turnouts installed as necessary to provide for proper drainage along with access road route.
O. **Drainage**. The access road and associated drainage structures will be constructed and maintained in accordance with road guidelines contained in the joint BLM/USFS publication: Surface Operating Standards for Oil and Gas Exploration and Development, The Gold Book, Fourth Edition and/or BLM Manual Section 9113 concerning road construction standards on projects subject to federal jurisdiction.

3. Location of Existing Wells

A. See attached 1-mile radius well map.

4. Ancillary Facilities

A. **Ancillary Facilities**. No off-pad ancillary facilities are planned during the exploration phase including, but not limited to: campsites, airstrips or staging areas.

5. Location of Proposed Production Facilities

A. **Production Facilities**. No additional production facilities are necessary for the James Ranch Unit DI1A wells. Once drilled and completed, the wells will flow to the James Ranch Unit DI1A battery, directly adjacent to the James Ranch Unit DI1A. No additional surface disturbance is needed.
B. **Flowlines**. In the event the well is found productive, 4" composite flexpipe or steel flowlines with a maximum safety pressure rating of 750psi (operating pressure: 125psi) will be laid on the surface within proposed lease road corridors from the proposed JRU DI1A CTB where the oil, gas, and water will be metered and appropriately separated. High pressure gas lines will be buried beneath the surface flowlines per well pad within the proposed lease road corridors for gas lift. Oil will be hauled from the location by truck following existing and proposed lease roads. The distance of proposed flowlines will be approximately 600'. All flowlines will follow proposed lease road corridors.
C. **Gas Pipeline**. No Gas Sales line is required for this well. No additional surface disturbance is needed.
D. **Disposal Facilities**. Produced water will be hauled from location to a commercial disposal facility as needed. Once wells are drilled and completed, a 3160-5 sundry notification will be submitted to BLM in compliance with Onshore Order 7.
E. **Flare**. No flare is required for this well. No additional surface disturbance is needed.
F. **Aboveground Structures**. All permanent (on site six months or longer) aboveground structures constructed or installed on location and not subject to safety requirements will be painted earth-tone colors such as 'shale green' that reduce the visual impacts of the built environment.
G. **Containment Berms**. Containment berms will be constructed completely around any production facilities designed to hold fluids. The containment berms will be constructed of compacted subsoil, be sufficiently impervious, hold 1 ½ times the capacity of the largest tank and away from cut or fill areas.

H. **Electrical**. No additional electrical is required for this well. No additional surface disturbance is needed.

Copy This for APD. Removed from .pdf APD Submission.

No additional production facilities are necessary for the James Ranch Unit DI1A wells. Once drilled and completed, the wells will flow to the James Ranch Unit DI1A battery, directly adjacent to the James Ranch Unit DI1A. No additional surface disturbance is needed. In the event the well is found productive, 4" composite flexpipe or steel flowlines with a maximum safety pressure rating of 750psi (operating pressure: 125psi) will be laid on the surface within proposed lease road corridors from the proposed JRU DI1A CTB where the oil, gas, and water will be metered and appropriately separated. High pressure gas lines will be buried beneath the surface flowlines per well pad within the proposed lease road corridors for gas lift, fuel gas, and water. Oil will be hauled from the location by truck following existing and proposed lease roads. The distance of proposed flowlines will be approximately 600'. All flowlines will follow proposed lease road corridors. No Gas Sales line is required for this well. No additional surface disturbance is needed. Produced water will be hauled from location to a commercial disposal facility as needed. Once wells are drilled and completed, a 3160-5 sundry notification will be submitted to BLM in compliance with Onshore Order 7. No flare is required for this well. No additional surface disturbance is needed. All permanent (on site six months or longer) aboveground structures constructed or installed on location and not subject to safety requirements will be painted earth-tone colors such as 'shale green' that reduce the visual impacts of the built environment. Containment berms will be constructed completely around any production facilities designed to hold fluids. The containment berms will be constructed of compacted subsoil, be sufficiently impervious, hold 1 ½ times the capacity of the largest tank and away from cut or fill areas. No additional electrical is required for this well. No additional surface disturbance is needed.

Drill island has been completed from previous APD approvals. No additional surface disturbance is necessary. Pads are already built under previous EA approvals. Approved APDs on DI: James Ranch Unit DI 1A: #206H, 203H, 204H.

6. **Location and Types of Water Supply**
   The well will be drilled using a combination of water mud systems as outlined in the Drilling Program. The water will be obtained from a 3rd party vendor and hauled to the existing frac pit in Section 7 by transport truck using the existing and proposed roads depicted in the attached exhibits. No water well will be drilled on the location.

   Water for drilling, completion and dust control will be purchased from the following company:
   Rockhouse Water

   Water for drilling, completion and dust control will be supplied by Rockhouse Water for sale to BOPCO, L.P. from Section 13-T17S-R33E, Eddy County, New Mexico. In the event that Rockhouse Water does not have the appropriate water for BOPCO at time of drilling and completion from this location, then BOPCO water will come from with the location of the water being in Section 21-T23S-R30E, Eddy County, New Mexico.

   Anticipated water usage for drilling includes an estimated 35,000 barrels of water to drill a horizontal well in a combination of fresh water and brine as detailed in the mud program in the drilling plans. These volumes are calculated for ~1.5bbls per foot of hole drilled with excess to accommodate any lost circulation or wash out that may occur. Actual water volumes used during operations will depend on the depth of the well, length of horizontal sections, and the losses that may occur during the operation.

   Temporary water flowlines will be permitted via ROW approval letter and proper grants as-needed based on drilling and completion schedules as needed. Well completion is expected to require approximately 330,000 barrels of water per horizontal well. Actual water volumes used during operations will depend on the depth of the well and length of horizontal sections.

7. **Construction Activities**

The drill island was constructed by BOPCO, L.P. The drill island is constructed of caliche with concrete cellars inset for drill slots.

8. **Methods for Handling Waste**
   - **Cuttings**. The well will be drilled utilizing a closed-loop mud system. Drill cuttings will be held in roll-off style mud boxes and taken to a New Mexico Oil Conservation Division (NMOCD) approved disposal site.
   - **Drilling Fluids**. These will be contained in steel mud pits and then taken to a NMOCD approved commercial disposal facility.
   - **Produced Fluids**. Water produced from the well during completion will be held temporarily in steel tanks and then taken to a NMOCD approved commercial disposal facility. Oil produced during operations will be stored in tanks until sold.
   - **Sewage**. Portable, self-contained toilets will be provided for human waste disposal. Upon completion of drilling and completion activities, or as required, the toilet holding tanks will be pumped and the contents thereof disposed of in an approved sewage disposal facility. All state and local laws and regulations pertaining to the disposal of human and solid waste will be complied with. This equipment will be properly maintained during the drilling and completion operations and will be removed when all operations are complete.
   - **Garbage and Other Waste Materials.** All garbage, junk and non-flammable waste materials will be contained in a self-contained, portable dumpster or trash cage, to prevent scattering and will be removed and deposited in an approve sanitary landfill. Immediately after drilling all debris and other waste materials on and around the well location not contained in the trash cage will be cleaned up and removed from the location. No potentially adverse materials or substances will be left on the location.
   - **Debris**. Immediately after removal of the drilling rig, all debris and other waste materials not contained in the trash cage will be cleaned and removed from the well location. No potential adverse materials or substances will be left on location.
   - **Hazardous Materials.**
     i. All drilling wastes identified as hazardous substances by the Comprehensive Environmental Response Compensation Liability Act (CERCLA) removed from the location and not reused at another drilling location will be disposed of at a hazardous waste facility approved by the U.S. Environmental Protection Agency (EPA).
     ii. BOPCO, L.P. and its contractors will comply with all applicable Federal, State and local laws and regulations, existing or hereafter enacted promulgated, with regard to any hazardous material, as defined in this paragraph, that will be used, produced, transported or stored on the oil and gas lease. "Hazardous material" means any substance, pollutant or contaminant that is listed as hazardous under the CERCLA of 1980, as amended, 42 U.S.C 9601 et seq., and its regulation. The definition of hazardous substances under CERLCA includes any 'hazardous waste" as defined in the RCRA of 1976, as amended, 42 U.S.C. 6901 et seq., and its regulations. The term hazardous material also includes any nuclear or nuclear by-product material as defined by the Atomic Energy Act of 1954, as amended, 42 U.C.S. 2011 et seq. The term does not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under CERCLA Section 101 (14) U.S.C. 9601 (14) nor does the term include natural gas.
     iii. No hazardous substances or wastes will be stored on the location after completion of the well.
     iv. Chemicals brought to location will be on the Toxic Substance Control Act (TSCA) approved inventory list.
     v. All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in Notice to Lessees (NTL) 3A will be reported to the BLM Carlsbad Field Office. Major events will be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major Events" will be reported in writing within 15 days.

9. **Well Site Layout**
   A. **Rig Plat Diagrams**: No additional surface disturbance is required for these wells. The drill island is built and the pad will not fall off of the drill island boundaries. Drill island plat is attached.

B. **Closed-Loop System**: There will be no reserve pit as each well will be drilled utilizing a closed loop mud system. The closed loop system will meet the NMOCD requirements 19.15.17.
C. **V-Door Orientation**: No additional surface disturbance is required for these wells. The drill island is built and the pad will not fall off of the drill island boundaries. Drill island plat is attached.
D. All equipment and vehicles will be confined to the approved disturbed areas of this APD (i.e., access road, well pad and topsoil storage areas).

10. Plans for Surface Reclamation:

No surface reclamation is planned for this well. BOPCO, L.P. requests a variance to interim reclamation until all wells on the drill island have been drilled and completed, at which time, BOPCO, L.P will contact the appropriate BLM personnel to discuss appropriate interim reclamation plans. Surface Ownership.

A. The James Ranch Unit DI1A is 100% of the surface is under the administrative jurisdiction of the Bureau of Land Management.
B. The surface is multiple-use with the primary uses of the region for grazing and for the production of oil and gas.

12. **Other Information**

- **Well Sites**. Well pad locations have been staked. Surveys of the proposed access roads and well pad locations have been completed by Frank Surveying, a registered professional land surveyor.

- **Cultural Resources – Archaeology**: BOPCO, L.P. previously paid into the PA for the drill island disturbance area.

- **Dwellings and Structures**. There are no dwellings or structures within 2 miles of this location.

Soils and Vegetation

- **Environmental Setting**. Soils are classified of Reeves soils. These soils are associated with the loamy ecological site which typically supports black and blue grama and tobosa grasslands with an even distribution of yucca, mesquite, American tarbush, cholla, and cresoste. The current vegetative community: none. The pad is caliche. No additional disturbance is necessary.

- **Traffic**. No truck traffic will be operated during periods or in areas of saturated ground when surface rutting could occur. The access road will be constructed and maintained as necessary to prevent soil erosion and accommodate all-weather traffic. The road will be crowned and ditched with water turnouts installed as necessary to provide for proper drainage along the access road route.

- **Water**. There is no permanent or live water in the immediate or within the project area.

13. Bond Coverage

Bond Coverage is Nationwide. Bond Number: COB000050

Operator's Representatives:

The BOPCO, L.P. representatives for ensuring compliance of the surface use plan are listed below:

Surface:

Jimie Scott
Contract Construction Lead
XTO Energy, Incorporated
500 W. Illinois St., Suite 100
Midland, Texas 79701
432-488-9955
james_scott@xtoenergy.com

Jeff Raines
Construction Superintendent
XTO Energy, Incorporated
500 W. Illinois St., Suite 100
Midland, Texas 79701
432-620-4349
jeff_raines@xtoenergy.com

● FOUND MONUMENT AS NOTED

DESCRIPTION:

A DRILLING ISLAND SITUATED IN SECTION 21, TOWNSHIP 22 SOUTH, RANGE 30 EAST, N.M.P.M., EDDY COUNTY, NEW MEXICO AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF THE PROPOSED DRILL ISLAND WHICH LIES N 00°08'14" W 482.4 FEET AND S 89°51'46" W 2,380.1 FEET FROM THE WEST QUARTER CORNER OF SAID SECTION 21; THENCE
N 00°04'27" W 150.10 FEET, THENCE
N 00°11'25" W 299.57 FEET, THENCE
S 89°51'20" W 335.39 FEET, THENCE
N 12°58'06" E 720.34 FEET, THENCE
S 82°08'35" E 449.86 FEET, THENCE
S 00°04'30" W 219.88 FEET, THENCE
S 79°12'02" E 300.98 FEET, THENCE
S 00°03'00" W 362.47 FEET, THENCE
N 89°56'58" W 266.86 FEET, THENCE
S 00°12'58" E 300.06 FEET, THENCE
S 00°09'44" E 150.01 FEET, THENCE
S 89°51'23" W 300.26 FEET, TO THE POINT OF BEGINNING AND CONTAINING 13.90 ACRES MORE OR LESS.

GENERAL NOTES

1. BEARINGS AND COORDINATES SHOWN HEREON ARE MERCATOR GRID AND CONFORM TO THE NEW MEXICO COORDINATE SYSTEM "NEW MEXICO EAST ZONE" NORTH AMERICAN DATUM 1983. DISTANCES ARE SURFACE VALUES.
2. LATITUDE AND LONGITUDE VALUES SHOWN HEREON ARE RELATIVE TO THE NORTH AMERICAN DATUM (NAD83).

I, MARK DILLON HARP, NEW MEXICO PROFESSIONAL SURVEYOR NO. 23788, DO HEREBY CERTIFY THAT THIS SURVEY PLAT AND THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT IS BASED WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION; THAT I AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY MEETS THE MINIMUM STANDARDS FOR SURVEYING IN NEW MEXICO, AND THAT IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE AND SHALL NOT BE USED OR VIEWED OR RELIED UPON AS A FINAL SURVEY DOCUMENT

MARK DILLON HARP
REGISTERED PROFESSIONAL LAND SURVEYOR
STATE OF NEW MEXICO NO. 23788

17 | 16
20 | 21

3/4" IRON PIPE W/ BRASS CAP

SECTION 21
TOWNSHIP 22 SOUTH, RANGE 30 EAST
NEW MEXICO PRIME MERIDIAN

LINE	BEARING	DISTANCE
L1	N 00°04'27" W	150.10'
L2	N 00°11'25" W	299.57'
L3	S 89°51'20" W	335.39'
L4	N 12°58'06" E	720.34'
L5	S 82°08'35" E	449.86'
L6	S 00°04'30" W	219.88'
L7	S 79°12'02" E	300.98'
L8	S 00°03'00" W	362.47'
L9	N 89°56'58" W	266.86'
L10	S 00°12'58" E	300.06'
L11	S 00°09'44" E	150.01'
L12	S 89°51'23" W	300.26'

N 00°08'14" W 2637.8'

N 00°08'14" W 482.4' (TIE)

NW/4 NW/4 | NE/4 NW/4 | NW/4 NE/4

SW/4 NW/4 | SE/4 NW/4 | SW/4 NE/4

13.90 ACRES

PRODUCTION AREA

N 89°51'46" E 2380.1' (TIE)

P.O.B.
NAD 27 (NME)
Y = 501,851.6
X = 637,854.9
NAD 83 (NME)
Y = 501,911.9
X = 679,046.7

1 1/2" IRON PIPE W/ BRASS CAP

0 200' 400'
1" = 400' FEET

EXHIBIT OF:
A DRILLING ISLAND FOR:
BOPCO, L.P.
JAMES RANCH UNIT DRILLING ISLAND 1A
SITUATED IN SECTION 21, TOWNSHIP 22 SOUTH, RANGE 30 EAST, N.M.P.M., AND BEING LOCATED APPROXIMATELY 13.8 MILES NORTHEAST OF LOVING, IN EDDY COUNTY, NEW MEXICO.

SURVEY FOR A DRILLING ISLAND FOR THE JAMES RANCH UNIT DRILLING ISLAND 1A #206H, #204H, #203H, AND #217H–#223H.

FSC INC
SURVEYORS+ENGINEERS
550 Bailey Ave., 205 - Fort Worth, TX 76107
Ph: 817.349.9800 - Fax: 979.731.5271
TBPE Firm 17957 | TBPLS Firm 10193887
www.fscinc.net

DATE:	12-12-2017
DRAWN BY:	AI
CHECKED BY:	DH
FIELD CREW:	RE-PO
PROJECT NO:	2017050652
SCALE:	1" = 400'
SHEET:	1 OF 1
REVISION:	1

Section 1 - General

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

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

PWD disturbance (acres):

Lined pit PWD on or off channel:

Lined pit PWD discharge volume (bbl/day):

Lined pit specifications:

Pit liner description:

Pit liner manufacturers information:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Lined pit precipitated solids disposal schedule:

Lined pit precipitated solids disposal schedule attachment:

Lined pit reclamation description:

Lined pit reclamation attachment:

Leak detection system description:

Leak detection system attachment:

Lined pit Monitor description:

Lined pit Monitor attachment:

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

Is the reclamation bond a rider under the BLM bond?

Lined pit bond number:

Lined pit bond amount:

Additional bond information attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

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

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

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

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

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

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

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

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

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

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

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

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

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit?

UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location:

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

Surface discharge PWD discharge volume (bbl/day):

Surface Discharge NPDES Permit?

Surface Discharge NPDES Permit attachment:

Surface Discharge site facilities information:

Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location:

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

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

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

Bond Info Data Report

09/10/2018

Bond Information

Federal/Indian APD: FED

BLM Bond number: COB000050

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: