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Form 3160-3
(June 2015)

JAN 28 2019

DISTRICT II-ARTESIA O.C.D.

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMLC0029338B

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

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

8. Lease Name and Well No.
KIRK FEDERAL COM
1H
324919

2. Name of Operator
EOG RESOURCES INCORPORATED
73717

9. API Well No.
30-015-45660

3a. Address	3b. Phone No. *(include area code)*	10. Field and Pool, or Exploratory
1111 Bagby Sky Lobby2 Houston TX 77002	(713)651-7000	LOCO HILLS / GLORIETA YESO 96118

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*

At surface SWNW / 2079 FNL / 572 FWL / LAT 32.850571 / LONG -103.9321249

At proposed prod. zone SENE / 2112 FNL / 100 FEL / LAT 32.8504415 / LONG -103.917122

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 12 / T17S / R30E / NMP

14. Distance in miles and direction from nearest town or post office*	12. County or Parish	13. State
30.3 miles	EDDY	NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No of acres in lease	17. Spacing Unit dedicated to this well
572 feet	160	240

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth	20. BLM/BIA Bond No. in file
350 feet	4840 feet / 9154 feet	FED: NM2308

21. Elevations (Show whether DF, KDB, RT, GL, etc.)	22. Approximate date work will start*	23. Estimated duration
3766 feet	01/15/2019	60 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)	Tina Huerta / Ph: (575)748-4168	08/02/2018

Title
Regulatory Specialist

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	01/24/2019

Title	Office
Assistant Field Manager Lands & Minerals	CARLSBAD

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

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

APPROVED WITH CONDITIONS

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 01/24/2019 RJP 1-29-19

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: SWNW / 2079 FNL / 572 FWL / TWSP: 17S / RANGE: 30E / SECTION: 12 / LAT: 32.850571 / LONG: -103.9321249 (TVD: 0 feet, MD: 0 feet)
   PPP: SENW / 2112 FNL / 1421 FWL / TWSP: 17S / RANGE: 30E / SECTION: 12 / LAT: 32.8504734 / LONG: -103.9293632 (TVD: 4830 feet, MD: 5395 feet)
   BHL: SENE / 2112 FNL / 100 FEL / TWSP: 17S / RANGE: 30E / SECTION: 12 / LAT: 32.8504415 / LONG: -103.917122 (TVD: 4840 feet, MD: 9154 feet)

BLM Point of Contact

Name: Katrina Ponder
Title: Geologist
Phone: 5752345969
Email: kponder@blm.gov

Approval Date: 01/24/2019

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
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	EOG Resources Incorporated
LEASE NO.:	NMLC0029338B
WELL NAME & NO.:	Kirk Federal Com 1H
SURFACE HOLE FOOTAGE:	2079'/N & 572'/W
BOTTOM HOLE FOOTAGE	2112'/N & 100'/E
LOCATION:	Section 12, T.17 S., R.30 E., NMPM
COUNTY:	Eddy County, New Mexico

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

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

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

Timing Limitation Exceptions:
The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

Hydrology:
The entire 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 with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The 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 water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. 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.

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank or 24 hour production, whichever is greater. Automatic shut off, check valves, or similar systems will be installed for tanks to minimize the effects of catastrophic line failures used in production or drilling.

A leak detection plan will be submitted to the BLM Carlsbad Field Office for approval prior to pipeline installation. The method could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

Electric Lines: Any water erosion that may occur due to the construction of overhead electric line and during the life of the power line will be quickly corrected and proper measures will be taken to prevent future erosion.

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

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

G. ON LEASE ACCESS ROADS

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

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

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

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

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

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

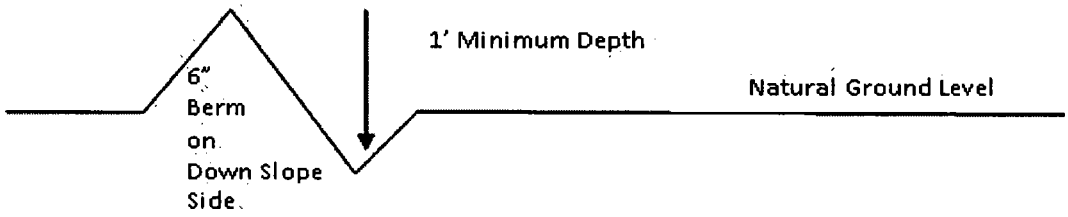
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

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

Cattle guards

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

Fence Requirement

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

Public Access

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

Construction Steps

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

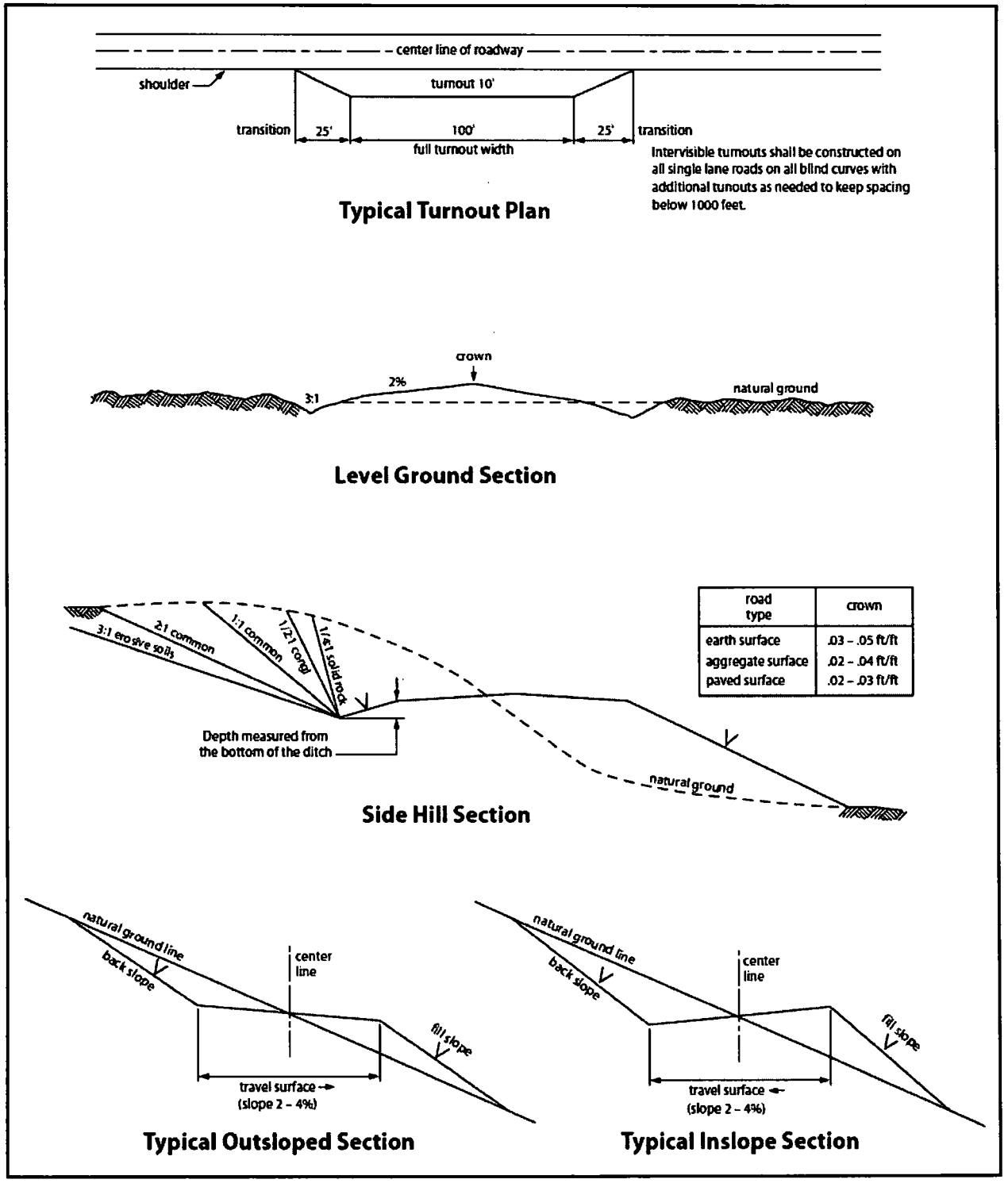


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

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

Containment Structures

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

Painting Requirement
All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, **Shale Green** from the BLM Standard Environmental Color Chart (CC-001: June 2008).

B. PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the Grant and attachments, including stipulations, survey plat(s) and/or map(s), shall be on location during construction. BLM personnel may request to review 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. 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. Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC § 2601 *et seq.* (1982) with regard 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 in particular, 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. 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 provision applies without

regard to whether a release is caused by Holder, its agent, or unrelated third parties.

4. Holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. 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 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 Holder, regardless of fault. Upon failure of Holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he/she 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 Holder. Such action by the Authorized Officer shall not relieve Holder of any responsibility as provided herein.

6. All construction and maintenance activity shall 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 shall 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 shall be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity shall be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation shall be allowed unless approved in

writing by the Authorized Officer.

8. 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 shall be "snaked" around hummocks and dunes rather than 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 shall be less than or equal to 4 inches and a working pressure below 125 psi.

18. Special Stipulations:

a. **Lesser Prairie-Chicken:** Oil and gas activities will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities and pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Normal vehicle use on existing roads will not be restricted.

VIII. INTERIM RECLAMATION

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

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

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

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

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

IX. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

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

Seed Mixture for LPC Sand/Shinnery Sites

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

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

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

Species	lb/acre
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*Pounds of pure live seed:

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

AFMSS

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

rator Certification Data Report

01/24/2019

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: Tina Huerta **Signed on:** 08/01/2018

Title: Regulatory Specialist

Street Address: 104 SOUTH FOURTH STREET

City: Artesia **State:** NM **Zip:** 88210

Phone: (575)748-4168

Email address: tina_huerta@eogresources.com

Field Representative

Representative Name:

Street Address:

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

Phone:

Email address:

APD ID: 10400032189 **Submission Date:** 08/02/2018

Operator Name: EOG RESOURCES INCORPORATED

Well Name: KIRK FEDERAL COM **Well Number:** 1H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400032189 **Tie to previous NOS?** **Submission Date:** 08/02/2018

BLM Office: CARLSBAD **User:** Tina Huerta **Title:** Regulatory Specialist

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

Lease number: NMLC0029338B **Lease Acres:** 160

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

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

Agreement number:

Agreement name:

Keep application confidential? YES

Permitting Agent? NO **APD Operator:** EOG RESOURCES INCORPORATED

Operator letter of designation:

Operator Info

Operator Organization Name: EOG RESOURCES INCORPORATED

Operator Address: 1111 Bagby Sky Lobby2 **Zip:** 77002

Operator PO Box:

Operator City: Houston **State:** TX

Operator Phone: (713)651-7000

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: KIRK FEDERAL COM **Well Number:** 1H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** LOCO HILLS **Pool Name:** GLORIETA YESO

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

Operator Name: EOG RESOURCES INCORPORATED

Well Name: KIRK FEDERAL COM **Well Number:** 1H

Describe other minerals:

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

Type of Well Pad: MULTIPLE WELL **Multiple Well Pad Name:** KIRK FEDERAL COM **Number:** 1H

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

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 30.3 Miles **Distance to nearest well:** 350 FT **Distance to lease line:** 572 FT

Reservoir well spacing assigned acres Measurement: 240 Acres

Well plat: KirkFederalCom1HPlat_20180719144934.pdf

Well work start Date: 01/15/2019 **Duration:** 60 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	2079	FNL	572	FWL	17S	30E	12	Aliquot SWNW	32.850571	-103.9321249	EDDY	NEW MEXICO	NEW MEXICO	F	NMLC0029338B	3766	0	0
KOP Leg #1	2079	FNL	572	FWL	17S	30E	12	Aliquot SWNW	32.850571	-103.9321249	EDDY	NEW MEXICO	NEW MEXICO	F	NMLC0029338B	-410	4176	4176
PPP Leg #1	2112	FNL	1421	FWL	17S	30E	12	Aliquot SENW	32.850434	-103.9293632	EDDY	NEW MEXICO	NEW MEXICO	F	NMNM002748	-1064	5395	4830

Operator Name: EOG RESOURCES INCORPORATED

Well Name: KIRK FEDERAL COM **Well Number:** 1H

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
EXIT Leg #1	2112	FNL	100	FEL	17S	30E	12	Aliquot SENE	32.8504415	-103.917122	EDDY	NEW MEXICO	NEW MEXICO	F	NMLC0055264	-1074	9154	4840
BHL Leg #1	2112	FNL	100	FEL	17S	30E	12	Aliquot SENE	32.8504415	-103.917122	EDDY	NEW MEXICO	NEW MEXICO	F	NMLC0055264	-1074	9154	4840

APD ID: 10400032189 **Submission Date:** 08/02/2018

Operator Name: EOG RESOURCES INCORPORATED

Well Name: KIRK FEDERAL COM **Well Number:** 1H

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

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	RUSTLER	3766	304	304		USEABLE WATER,OIL	No
2	GRAYBURG	-2752	2752	2752		OIL	No
3	SAN ANDRES	-3065	3065	3065		OIL	No
4	GLORIETA	-4541	4541	4541		OIL	No
5	YESO	-4615	4615	4615		OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M **Rating Depth:** 400

Equipment: Rotating head, remote hydraulic choke, flare line. A multibowl wellhead system will be used

Requesting Variance? YES

Variance request: A variance is requested for the use of a flexible choke line from the BOP stack to the choke manifold. See attached for specs for hydrostatic test chart

Testing Procedure: The minimum blowout preventer equipment (BOPE) attached will consist of mud cross and double ram-type (3000 psi WP) preventer and an annular preventer (3000 psi WP). Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOPE will be tested in accordance with Onshore Order No. 2. Before drilling out the surface casing, the ram-type BOP and accessory equipment will be tested to 3000/250 psig and the annular preventer to 1500/250 psig. The surface casing will be tested to 1500 psi for 30 minutes. Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. A hydraulically operated choke will be installed prior to drilling out of the surface casing shoe.

Choke Diagram Attachment:

3MChokeManifoldDiagram_20180717160048.pdf

BOP Diagram Attachment:

3000BOPEXHIBIT1_20180717160058.pdf

Operator Name: EOG RESOURCES INCORPORATED

Well Name: KIRK FEDERAL COM **Well Number:** 1H

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	12.25	9.625	NEW	API	N	0	400	0	400			400	J-55	36	LTC	1.125	1.25	BUOY	1.8	BUOY	1.6
2	PRODUCTION	8.75	7.0	NEW	API	N	0	4918	0	4918			4918	L-80	29	BUTT	1.125	1.25	BUOY	1.8	BUOY	1.6
3	PRODUCTION	8.75	5.5	NEW	API	N	4918	9154	4918	9154			4236	L-80	17	BUTT	1.125	1.25	BUOY	1.8	BUOY	1.6

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

KirkFederalCom1HBLMPlan_20180718141650.pdf

Operator Name: EOG RESOURCES INCORPORATED

Well Name: KIRK FEDERAL COM **Well Number:** 1H

Casing Attachments

Casing ID: 2 **String Type:**PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

KirkFederalCom1HBLMPlan_20180718141700.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

KirkFederalCom1HBLMPlan_20180718141710.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	400	190	1.34	1.34	46		Class C	Calcium Chloride
PRODUCTION	Lead		0	4918	405	2.47	11.9	178	35	Class 50/50 Poz C	BWOW, Salt, Bentonite Gel, Anti Settling Agent, Kolseal, Celloflake, Defoamer

Operator Name: EOG RESOURCES INCORPORATED

Well Name: KIRK FEDERAL COM **Well Number:** 1H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		4918	9154	980	1.48	13	258	35	Class PVL	BWOW, Salt, Expanding Cement, Fluid Loss, Anti Settling Agent, Defoamer

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: Adequate Barite to raise mud weight in system to 10 ppg

Describe the mud monitoring system utilized: Pason Flow Sensors and PVT Monitor Systems

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
400	9154	WATER-BASED MUD	9.2	10.2							
0	400	WATER-BASED MUD	8.6	8.8							

Operator Name: EOG RESOURCES INCORPORATED

Well Name: KIRK FEDERAL COM **Well Number:** 1H

Section 6 - Test, Logging, Coring

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

No logs planned for this well

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

DS

Coring operation description for the well:

No coring planned

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 2567 **Anticipated Surface Pressure:** 1502.2

Anticipated Bottom Hole Temperature(F): 105

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

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

KirkFederalCom1HH2SPlanSummaryAPD_20180717161356.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

KirkFederalCom1HSurveys_20180718144140.pdf
KirkFederalCom1HPlot_20180718144150.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

WellheadSystemSurfProd_20180718144344.pdf
Kirk1HGasCapture_20180718144507.pdf
KirkFederalCom1HAnticollisionRpt_20180718145432.pdf
FlexHoseAtt_20180718145753.pdf
KirkFederalCom1HWellboreSchematic_20180718163522.pdf
KirkFederalCom1HH2SPlanSummaryAPD_20180718163602.pdf
WellSiteDiagram_20180719091736.pdf
KirkFederalCom1HOtherAtt_20180719092414.pdf
KirkWaterMap_20180719143838.pdf
KirkWellsAerialMap_20180719145615.pdf

KirkWellsMiscMap_20180719145912.pdf
KirkFederalCom1HReclamationPlat10dayletterResponse_20181008101055.pdf
KirkWellsInfrastructure_20181010075704.pdf
KirkFederalCom1H10dayletter_20181011141605.pdf

Other Variance attachment:

EXIBIT 1a
EOG Resources, Inc.
3M Choke Manifold Equipment

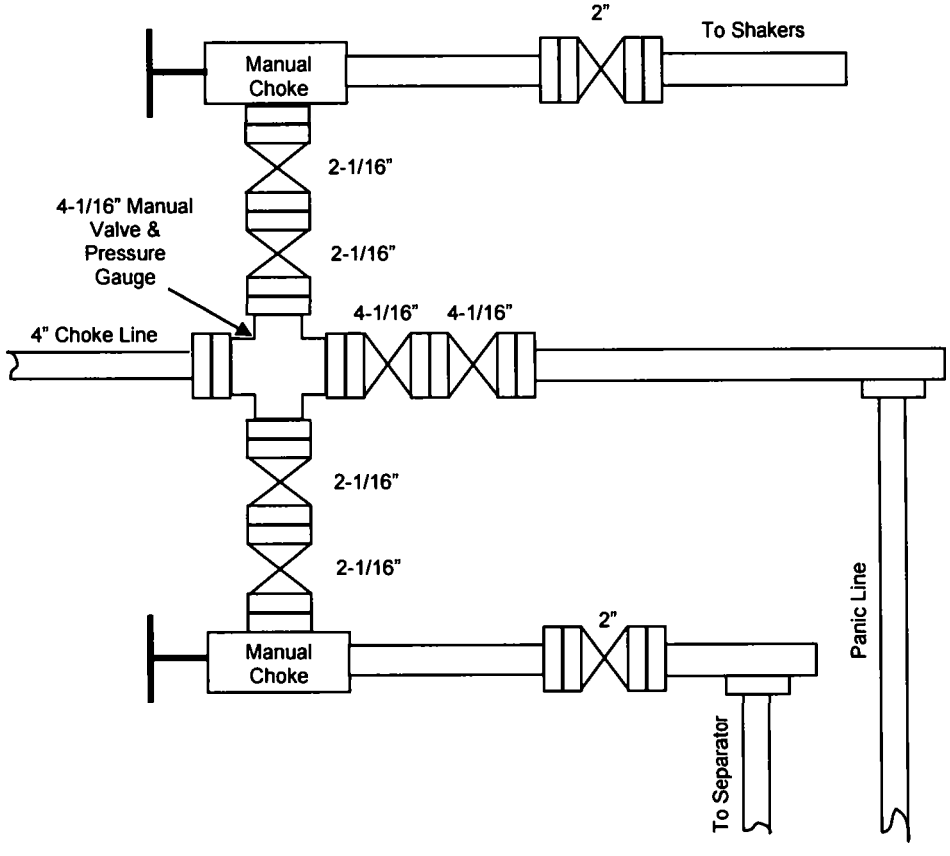
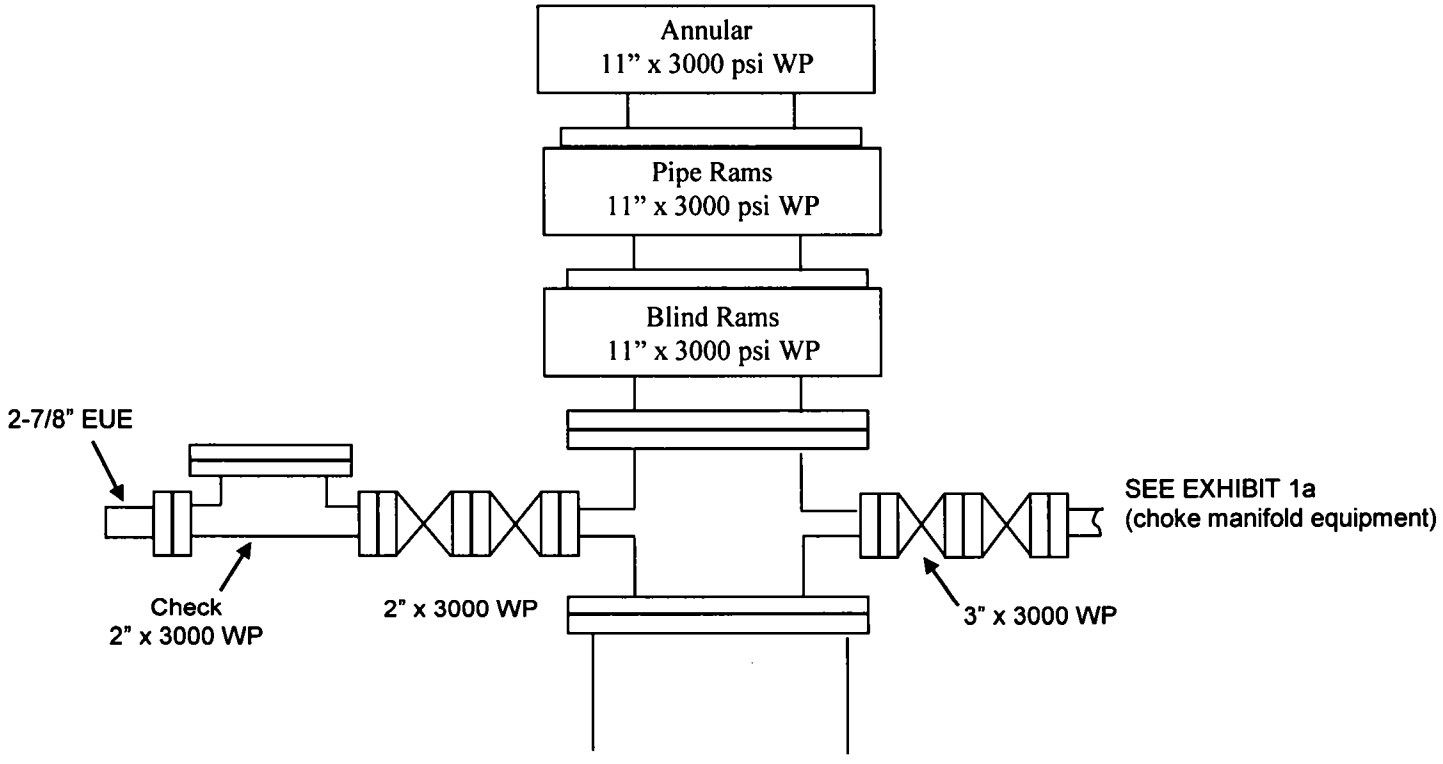


EXHIBIT 1

EOG Resources
3000 PSI BOPE



EOG RESOURCES, INC.
KIRK FEDERAL COM NO. 1H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	304'
Tansill	1,306'
Yates	1,473'
Seven Rivers	1,741'
Queen	2,355'
Grayburg	2,752'
San Andres	3,065'
Glorieta	4,541'
Yeso	4,615'
TD	9,154'

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Rustler	304'	Fresh Water, Oil
Grayburg	2,752'	Oil
San Andres	3,065'	Oil
Glorieta	4,541'	Oil
Yeso	4,615'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 9.625" casing at 400' and circulating cement back to surface.

4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
12.25"	0'-400'	9.625"	36#	J-55	LTC	1.125	1.25	1.60
8.75"	0' –4918 '	7"	29#	L-80	BTC	1.125	1.25	1.60
8.75"	4918'-9154'	5 ½"	17#	L-80	BTC	1.125	1.25	1.60

Cementing Program:
Note: Cement volumes based on bit size plus at least 100% excess on surface and 35% excess in production string.

Depth	No. Sacks	Wt. lb/gal	Yld Ft^3/ft	Slurry Description
400'	190	1.34	1.34	Tail: Class 'C' + 2%PF1(Calcium Chloride)
9154'	405	11.9	2.47	Lead: Class 50/50 PozC + 5%PF44(BWOW)(Salt) + 10% PF20(Bentonite Gel) +.2%PF153(Anti Settling Agent(+ 3#/sk OF42(Kolseal) + 0.125#/sk PF29 (celloflake) + 0.4#/sk PF45 (Defoamer) (TOC @ Surface) 35% Excess
	980	13	1.48	Tail: Class PVL + 1.3% PF44(BWOW)(Salt) + 5% PF174 (Expanding Cement) + 0.5% PF606 (Fluid Loss) + 0.1% PF153 (Anti Settling Agent) + 0.4#/sk PF45 (Defoamer) 35% Excess

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

A variance is requested to use a co-flex line between the BOP and choke manifold, dependent on rig selection (instead of using a steel line). Certification and specs are attached.

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a double rams with blind rams & pipe rams preventer (3,000 psi WP) and an annular preventer (3,000-psi WP). Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 3,000/ 250 psig and the annular preventer to 1,500/ 250 psig. The surface casing will be tested to 1200 psi for 30 minutes.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

A hydraulically operated choke will be installed prior to drilling out of the surface casing shoe.

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal.

The applicable depths and properties of the drilling fluid systems are as follows.

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 400'	Fresh Water	8.6-8.8	28-32	N/c
400' – 9154' Vertical/Curve/Lateral	Brine/Cut Brine	9.2-10.2	32-34	N/c

The highest mud weight needed to balance formation is expected to be 10.2 ppg. In order to maintain hole stability, mud weights up to 10.2 ppg may be utilized.

An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

(A) A kelly cock will be kept in the drill string at all times.

(B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

(C) H_2S monitoring and detection equipment will be utilized from surface casing point to TD.

8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logs are not planned for this well.

GR–Directional surveys will be run in open hole during drilling phase of operations.

9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES AND POTENTIAL HAZARDS:

The estimated bottom-hole temperature (BHT) at TD is 105 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 2567 psig (based on 10.2 ppg MW).

Hydrogen sulfide has been encountered, reported or are known to exist at this depth in this area. Severe loss circulation is expected from spud to surface casing point.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

The drilling operation should be finished in approximately one month. If the well is productive, an additional 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

(A) EOG Resources requests the option to contract a Surface Rig to drill, set surface casing, and cement on the subject well. After WOC 8 hours or 500 psi compressive strength (whichever is greater), the Surface Rig will move off so the wellhead can be installed. A welder will cut the casing to the proper height and weld on the wellhead (both "A" and "B" sections). The weld will be tested to 1000 psi. All valves will be closed and a wellhead cap will be installed (diagram attached). If the timing between rigs is such that EOG Resources would not be able to preset the surface, the Primary Rig will MIRU and drill the well in its entirety per the APD.

11. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the 9-5/8" surface casing, a 9 5/8" BOP/BOPE system with a minimum working pressure of 3,000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3,000 psi pressure test. This pressure test will be repeated at least every 30 days, as per Onshore Order No. 2

The minimum working pressure of the BOP and related BOPE required for drilling below the surface casing shoe shall be 3,000 psi.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Stream Flo HES Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM.

The wellhead will be installed by a third party welder while being monitored by WH vendor's representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

EOG RESOURCES, INC.
KIRK FEDERAL COM NO. 1H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	304'
Tansill	1,306'
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Grayburg	2,752'
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Glorieta	4,541'
Yeso	4,615'
TD	9,154'

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Rustler	304'	Fresh Water, Oil
Grayburg	2,752'	Oil
San Andres	3,065'	Oil
Glorieta	4,541'	Oil
Yeso	4,615'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 9.625" casing at 400' and circulating cement back to surface.

4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
12.25"	0'-400'	9.625"	36#	J-55	LTC	1.125	1.25	1.60
8.75"	0' –4918 '	7"	29#	L-80	BTC	1.125	1.25	1.60
8.75"	4918'-9154'	5 ½"	17#	L-80	BTC	1.125	1.25	1.60

Cementing Program:
Note: Cement volumes based on bit size plus at least 100% excess on surface and 35% excess in production string.

Depth	No. Sacks	Wt. lb/gal	Yld Ft^3/ft	Slurry Description
400'	190	1.34	1.34	Tail: Class 'C' + 2%PF1(Calcium Chloride)
9154'	405	11.9	2.47	Lead: Class 50/50 PozC + 5%PF44(BWOW)(Salt) + 10% PF20(Bentonite Gel) +.2%PF153(Anti Settling Agent(+ 3#/sk OF42(Kolseal) + 0.125#/sk PF29 (celloflake) + 0.4#/sk PF45 (Defoamer) (TOC @ Surface) 35% Excess
	980	13	1.48	Tail: Class PVL + 1.3% PF44(BWOW)(Salt) + 5% PF174 (Expanding Cement) + 0.5% PF606 (Fluid Loss) + 0.1% PF153 (Anti Settling Agent) + 0.4#/sk PF45 (Defoamer) 35% Excess

5. MINIMUM SPECIFICATIONS FOR PRESSURE CONTROL:

A variance is requested to use a co-flex line between the BOP and choke manifold, dependent on rig selection (instead of using a steel line). Certification and specs are attached.

The minimum blowout preventer equipment (BOPE) shown in Exhibit #1 will consist of a double rams with blind rams & pipe rams preventer (3,000 psi WP) and an annular preventer (3,000-psi WP). Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. All BOPE will be tested in accordance with Onshore Oil & Gas order No. 2.

Before drilling out of the surface casing, the ram-type BOP and accessory equipment will be tested to 3,000/ 250 psig and the annular preventer to 1,500/ 250 psig. The surface casing will be tested to 1200 psi for 30 minutes.

Pipe rams will be operationally checked each 24-hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets.

A hydraulically operated choke will be installed prior to drilling out of the surface casing shoe.

6. TYPES AND CHARACTERISTICS OF THE PROPOSED MUD SYSTEM:

During this procedure we plan to use a Closed-Loop System and haul contents to the required disposal.

The applicable depths and properties of the drilling fluid systems are as follows.

Depth	Type	Weight (ppg)	Viscosity	Water Loss
0 – 400'	Fresh Water	8.6-8.8	28-32	N/c
400' – 9154' Vertical/Curve/Lateral	Brine/Cut Brine	9.2-10.2	32-34	N/c

The highest mud weight needed to balance formation is expected to be 10.2 ppg. In order to maintain hole stability, mud weights up to 10.2 ppg may be utilized.

An electronic pit volume totalizer (PVT) will be utilized on the circulating system, to monitor pit volume, flow rate, pump pressure and stroke rate.

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept at the wellsite at all times.

7. AUXILIARY WELL CONTROL AND MONITORING EQUIPMENT:

(A) A kelly cock will be kept in the drill string at all times.

(B) A full opening drill pipe-stabbing valve (inside BOP) with proper drill pipe connections will be on the rig floor at all times.

(C) H_2S monitoring and detection equipment will be utilized from surface casing point to TD.

8. LOGGING, TESTING AND CORING PROGRAM:

Open-hole logs are not planned for this well.

GR–Directional surveys will be run in open hole during drilling phase of operations.

9. ABNORMAL CONDITIONS, PRESSURES, TEMPERATURES AND POTENTIAL HAZARDS:

The estimated bottom-hole temperature (BHT) at TD is 105 degrees F with an estimated maximum bottom-hole pressure (BHP) at TD of 2567 psig (based on 10.2 ppg MW).

Hydrogen sulfide has been encountered, reported or are known to exist at this depth in this area. Severe loss circulation is expected from spud to surface casing point.

10. ANTICIPATED STARTING DATE AND DURATION OF OPERATIONS:

The drilling operation should be finished in approximately one month. If the well is productive, an additional 60-90 days will be required for completion and testing before a decision is made to install permanent facilities.

(A) EOG Resources requests the option to contract a Surface Rig to drill, set surface casing, and cement on the subject well. After WOC 8 hours or 500 psi compressive strength (whichever is greater), the Surface Rig will move off so the wellhead can be installed. A welder will cut the casing to the proper height and weld on the wellhead (both "A" and "B" sections). The weld will be tested to 1000 psi. All valves will be closed and a wellhead cap will be installed (diagram attached). If the timing between rigs is such that EOG Resources would not be able to preset the surface, the Primary Rig will MIRU and drill the well in its entirety per the APD.

11. WELLHEAD:

A multi-bowl wellhead system will be utilized.

After running the 9-5/8" surface casing, a 9 5/8" BOP/BOPE system with a minimum working pressure of 3,000 psi will be installed on the wellhead system and will be pressure tested to 250 psi low followed by a 3,000 psi pressure test. This pressure test will be repeated at least every 30 days, as per Onshore Order No. 2

The minimum working pressure of the BOP and related BOPE required for drilling below the surface casing shoe shall be 3,000 psi.

The multi-bowl wellhead will be installed by vendor's representative(s). A copy of the installation instructions for the Stream Flo HES Multi-Bowl WH system has been sent to the NM BLM office in Carlsbad, NM.

The wellhead will be installed by a third party welder while being monitored by WH vendor's representative.

All BOP equipment will be tested utilizing a conventional test plug. Not a cup or J-packer type.

The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

EOG RESOURCES, INC.
KIRK FEDERAL COM NO. 1H

1. GEOLOGIC NAME OF SURFACE FORMATION:

Permian

2. ESTIMATED TOPS OF IMPORTANT GEOLOGICAL MARKERS:

Rustler	304'
Tansill	1,306'
Yates	1,473'
Seven Rivers	1,741'
Queen	2,355'
Grayburg	2,752'
San Andres	3,065'
Glorieta	4,541'
Yeso	4,615'
TD	9,154'

3. ESTIMATED DEPTHS OF ANTICIPATED FRESH WATER, OIL OR GAS:

Rustler	304'	Fresh Water, Oil
Grayburg	2,752'	Oil
San Andres	3,065'	Oil
Glorieta	4,541'	Oil
Yeso	4,615'	Oil

No other Formations are expected to give up oil, gas or fresh water in measurable quantities. Surface fresh water sands will be protected by setting 9.625" casing at 400' and circulating cement back to surface.

4. CASING PROGRAM - NEW

Hole Size	Interval	Csg OD	Weight	Grade	Conn	DF_{min} Collapse	DF_{min} Burst	DF_{min} Tension
12.25"	0'-400'	9.625"	36#	J-55	LTC	1.125	1.25	1.60
8.75"	0' –4918 '	7"	29#	L-80	BTC	1.125	1.25	1.60
8.75"	4918'-9154'	5 ½"	17#	L-80	BTC	1.125	1.25	1.60

Cementing Program:
Note: Cement volumes based on bit size plus at least 100% excess on surface and 35% excess in production string.

Depth	No. Sacks	Wt. lb/gal	Yld Ft^3/ft	Slurry Description
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The surface casing string will be tested as per Onshore Order No. 2 to at least 0.22 psi/ft or 1500 psi, whichever is greater.

EOG RESOURCES, INC.
Kirk Federal Com 1H

Hydrogen Sulfide Plan Summary

A. All personnel shall receive proper H2S training in accordance with Onshore Order III.C.3.a.

B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.

C. Required Emergency Equipment:

- Well control equipment
  a. Flare line 150' from wellhead to be ignited by flare gun.
  b. Choke manifold with a remotely operated choke.
  c. Mud/gas separator

- Protective equipment for essential personnel.

  Breathing apparatus:
  a. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
  b. Work/Escape packs —4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
  c. Emergency Escape Packs —4 packs shall be stored in the doghouse for emergency evacuation.

  Auxiliary Rescue Equipment:
  a. Stretcher
  b. Two OSHA full body harness
  c. 100 ft 5/8 inch OSHA approved rope
  d. 1-20# class ABC fire extinguisher

- H2S detection and monitoring equipment:
  The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged.
  (Gas sample tubes will be stored in the safety trailer)

- Visual warning systems.
  a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
  b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
  c. Two wind socks will be placed in strategic locations, visible from all angles.

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- Mud program:
  The mud program has been designed to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.

- Metallurgy:
  All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

- Communication:
  Communication will be via cell phones and land lines where available.

EOG RESOURCES, INC.
Kirk Federal Com 1H

Emergency Assistance Telephone List

PUBLIC SAFETY:	**911 or**
Eddy County Sheriff's Department	(575) 887-7551
Fire Department:	
Carlsbad	(575) 885-3125
Artesia	(575) 746-5050
Hospitals:	
Carlsbad	(575) 887-4121
Artesia	(575) 748-3333
Hobbs	(575) 392-1979
Dept. of Public Safety/Carlsbad	(575) 748-9718
Highway Department	(575) 885-3281
New Mexico Oil Conservation	(575) 476-3440
U.S. Dept. of Labor	(575) 887-1174

EOG Resources, Inc.	
EOG / Artesia	Office (575) 748-1471
Company Drilling Consultants:	
Brent Patterson	Cell (575) 365-7032
Drilling Engineer	
Jeremiah Mullen	Office (575) 748-4378
	Cell (575) 703-5467
Drilling Manager	
Tim Bussell	Office (575) 748-4221
	Cell (575) 365-5695
Safety	
Brian Chandler (HSE Manager)	Office (432) 686-3695
	Cell (817) 239-0251

EOG Resources - Artesia

Eddy County (NAD83)
Kirk
Kirk Federal Com #1H

Lateral

Plan: Plan #1

Standard Planning Report

17 July, 2018

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well Kirk Federal Com #1H
Company:	EOG Resources - Artesia	**TVD Reference:**	KB @ 3784.000usft (Planning Rig)
Project:	Eddy County (NAD83)	**MD Reference:**	KB @ 3784.000usft (Planning Rig)
Site:	Kirk	**North Reference:**	Grid
Well:	Kirk Federal Com #1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
Design:	Plan #1		

Project	Eddy County (NAD83)		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Kirk				
Site Position:		**Northing:**	673,405.00 usft	**Latitude:**	32° 51' 2.056 N
From:	Map	**Easting:**	664,546.00 usft	**Longitude:**	103° 55' 55.649 W
Position Uncertainty:	0.000 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.22 °

Well	Kirk Federal Com #1H					
Well Position	**+N/-S**	0.000 usft	**Northing:**	673,405.00 usft	**Latitude:**	32° 51' 2.056 N
	+E/-W	0.000 usft	**Easting:**	664,546.00 usft	**Longitude:**	103° 55' 55.649 W
Position Uncertainty		0.000 usft	**Wellhead Elevation:**	3,784.000 usft	**Ground Level:**	3,766.000 usft

Wellbore	Lateral				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	6/8/2018	7.06	60.56	48,167.51725474

Design	Plan #1				
Audit Notes:					
Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.000
Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**	
	0.000	0.000	0.000	90.361	

Plan Survey Tool Program **Date** 7/17/2018

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.000	9,153.846	Plan #1 (Lateral)	MWD	
				OWSG MWD - Standard	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.000	0.00	0.000	0.000	0.000	0.000	0.00	0.00	0.00	0.00	
400.000	0.00	0.000	400.000	0.000	0.000	0.00	0.00	0.00	0.00	
3,500.000	0.00	0.000	3,500.000	0.000	0.000	0.00	0.00	0.00	0.00	
4,176.115	0.00	0.000	4,176.115	0.000	0.000	0.00	0.00	0.00	0.00	
4,842.781	60.00	93.745	4,727.444	-20.793	317.630	9.00	9.00	0.00	93.75	
4,917.781	60.00	93.745	4,764.944	-25.035	382.443	0.00	0.00	0.00	0.00	
5,168.323	89.85	89.954	4,829.398	-32.187	621.480	12.00	11.91	-1.51	-7.58	
9,153.859	89.85	89.954	4,840.000	-29.000	4,607.000	0.00	0.00	0.00	0.00	[KFC#1H]BHL1

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well Kirk Federal Com #1H
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Project:	Eddy County (NAD83)	**MD Reference:**	KB @ 3784.000usft (Planning Rig)
Site:	Kirk	**North Reference:**	Grid
Well:	Kirk Federal Com #1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
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)
0.000	0.00	0.000	0.000	0.000	0.000	0.000	0.00	0.00	0.00
100.000	0.00	0.000	100.000	0.000	0.000	0.000	0.00	0.00	0.00
200.000	0.00	0.000	200.000	0.000	0.000	0.000	0.00	0.00	0.00
300.000	0.00	0.000	300.000	0.000	0.000	0.000	0.00	0.00	0.00
400.000	0.00	0.000	400.000	0.000	0.000	0.000	0.00	0.00	0.00
500.000	0.00	0.000	500.000	0.000	0.000	0.000	0.00	0.00	0.00
600.000	0.00	0.000	600.000	0.000	0.000	0.000	0.00	0.00	0.00
700.000	0.00	0.000	700.000	0.000	0.000	0.000	0.00	0.00	0.00
800.000	0.00	0.000	800.000	0.000	0.000	0.000	0.00	0.00	0.00
900.000	0.00	0.000	900.000	0.000	0.000	0.000	0.00	0.00	0.00
1,000.000	0.00	0.000	1,000.000	0.000	0.000	0.000	0.00	0.00	0.00
1,100.000	0.00	0.000	1,100.000	0.000	0.000	0.000	0.00	0.00	0.00
1,200.000	0.00	0.000	1,200.000	0.000	0.000	0.000	0.00	0.00	0.00
1,300.000	0.00	0.000	1,300.000	0.000	0.000	0.000	0.00	0.00	0.00
1,400.000	0.00	0.000	1,400.000	0.000	0.000	0.000	0.00	0.00	0.00
1,500.000	0.00	0.000	1,500.000	0.000	0.000	0.000	0.00	0.00	0.00
1,600.000	0.00	0.000	1,600.000	0.000	0.000	0.000	0.00	0.00	0.00
1,700.000	0.00	0.000	1,700.000	0.000	0.000	0.000	0.00	0.00	0.00
1,800.000	0.00	0.000	1,800.000	0.000	0.000	0.000	0.00	0.00	0.00
1,900.000	0.00	0.000	1,900.000	0.000	0.000	0.000	0.00	0.00	0.00
2,000.000	0.00	0.000	2,000.000	0.000	0.000	0.000	0.00	0.00	0.00
2,100.000	0.00	0.000	2,100.000	0.000	0.000	0.000	0.00	0.00	0.00
2,200.000	0.00	0.000	2,200.000	0.000	0.000	0.000	0.00	0.00	0.00
2,300.000	0.00	0.000	2,300.000	0.000	0.000	0.000	0.00	0.00	0.00
2,400.000	0.00	0.000	2,400.000	0.000	0.000	0.000	0.00	0.00	0.00
2,500.000	0.00	0.000	2,500.000	0.000	0.000	0.000	0.00	0.00	0.00
2,600.000	0.00	0.000	2,600.000	0.000	0.000	0.000	0.00	0.00	0.00
2,700.000	0.00	0.000	2,700.000	0.000	0.000	0.000	0.00	0.00	0.00
2,800.000	0.00	0.000	2,800.000	0.000	0.000	0.000	0.00	0.00	0.00
2,900.000	0.00	0.000	2,900.000	0.000	0.000	0.000	0.00	0.00	0.00
3,000.000	0.00	0.000	3,000.000	0.000	0.000	0.000	0.00	0.00	0.00
3,100.000	0.00	0.000	3,100.000	0.000	0.000	0.000	0.00	0.00	0.00
3,200.000	0.00	0.000	3,200.000	0.000	0.000	0.000	0.00	0.00	0.00
3,300.000	0.00	0.000	3,300.000	0.000	0.000	0.000	0.00	0.00	0.00
3,400.000	0.00	0.000	3,400.000	0.000	0.000	0.000	0.00	0.00	0.00
3,500.000	0.00	0.000	3,500.000	0.000	0.000	0.000	0.00	0.00	0.00
3,600.000	0.00	0.000	3,600.000	0.000	0.000	0.000	0.00	0.00	0.00
3,700.000	0.00	0.000	3,700.000	0.000	0.000	0.000	0.00	0.00	0.00
3,800.000	0.00	0.000	3,800.000	0.000	0.000	0.000	0.00	0.00	0.00
3,900.000	0.00	0.000	3,900.000	0.000	0.000	0.000	0.00	0.00	0.00
4,000.000	0.00	0.000	4,000.000	0.000	0.000	0.000	0.00	0.00	0.00
4,100.000	0.00	0.000	4,100.000	0.000	0.000	0.000	0.00	0.00	0.00
4,176.115	0.00	0.000	4,176.115	0.000	0.000	0.000	0.00	0.00	0.00
4,176.717	0.05	93.745	4,176.717	0.000	0.000	0.000	9.00	9.00	0.00
KOP 9°/100' BUILD RATE									
4,200.000	2.15	93.745	4,199.994	-0.029	0.447	0.447	9.00	9.00	0.00
4,250.000	6.65	93.745	4,249.834	-0.280	4.274	4.275	9.00	9.00	0.00
4,300.000	11.15	93.745	4,299.219	-0.785	11.990	11.995	9.00	9.00	0.00
4,350.000	15.65	93.745	4,347.846	-1.542	23.550	23.559	9.00	9.00	0.00
4,400.000	20.15	93.745	4,395.413	-2.545	38.880	38.896	9.00	9.00	0.00
4,450.000	24.65	93.745	4,441.629	-3.789	57.888	57.911	9.00	9.00	0.00
4,500.000	29.15	93.745	4,486.207	-5.267	80.455	80.487	9.00	9.00	0.00
4,550.000	33.65	93.745	4,528.874	-6.968	106.443	106.485	9.00	9.00	0.00
4,600.000	38.15	93.745	4,569.366	-8.883	135.692	135.745	9.00	9.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well Kirk Federal Com #1H
Company:	EOG Resources - Artesia	**TVD Reference:**	KB @ 3784.000usft (Planning Rig)
Project:	Eddy County (NAD83)	**MD Reference:**	KB @ 3784.000usft (Planning Rig)
Site:	Kirk	**North Reference:**	Grid
Well:	Kirk Federal Com #1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
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)
4,650.000	42.65	93.745	4,607.433	-10.999	168.020	168.086	9.00	9.00	0.00
4,700.000	47.15	93.745	4,642.841	-13.304	203.229	203.308	9.00	9.00	0.00
4,750.000	51.65	93.745	4,675.372	-15.783	241.101	241.196	9.00	9.00	0.00
4,800.000	56.15	93.745	4,704.824	-18.421	281.404	281.514	9.00	9.00	0.00
4,842.781	60.00	93.745	4,727.444	-20.793	317.630	317.755	9.00	9.00	0.00
4,843.384	60.00	93.745	4,727.745	-20.827	318.151	318.275	0.00	0.00	0.00
START 75' TANGENT									
4,900.000	60.00	93.745	4,756.053	-24.029	367.077	367.221	0.00	0.00	0.00
4,917.781	60.00	93.745	4,764.944	-25.035	382.443	382.593	0.00	0.00	0.00
4,918.384	60.07	93.734	4,765.245	-25.069	382.964	383.114	12.00	11.90	-1.83
END 60° TANGENT									
4,925.000	60.86	93.614	4,768.506	-25.438	388.708	388.861	12.00	11.90	-1.81
4,950.000	63.83	93.177	4,780.108	-26.749	410.811	410.971	12.00	11.90	-1.75
4,975.000	66.81	92.762	4,790.545	-27.924	433.495	433.662	12.00	11.90	-1.66
5,000.000	69.79	92.364	4,799.788	-28.962	456.697	456.870	12.00	11.91	-1.59
5,025.000	72.77	91.982	4,807.812	-29.859	480.354	480.533	12.00	11.91	-1.53
5,050.000	75.74	91.612	4,814.596	-30.613	504.401	504.584	12.00	11.92	-1.48
5,075.000	78.72	91.251	4,820.120	-31.222	528.773	528.959	12.00	11.92	-1.44
5,100.000	81.70	90.898	4,824.369	-31.683	553.402	553.590	12.00	11.92	-1.41
5,125.000	84.68	90.550	4,827.332	-31.997	578.221	578.411	12.00	11.92	-1.39
5,150.000	87.66	90.206	4,829.000	-32.161	603.162	603.352	12.00	11.92	-1.38
5,168.323	89.85	89.954	4,829.398	-32.187	621.480	621.670	12.00	11.92	-1.37
5,168.997	89.85	89.954	4,829.400	-32.186	622.153	622.344	0.00	0.00	0.00
[KFC#1H]EOC 5169' MD (4829' TVD)									
5,200.000	89.85	89.954	4,829.482	-32.161	653.156	653.346	0.00	0.00	0.00
5,300.000	89.85	89.954	4,829.748	-32.081	753.156	753.343	0.00	0.00	0.00
5,394.840	89.85	89.954	4,830.001	-32.006	847.995	848.180	0.00	0.00	0.00
[KFC#1H]UMP1 5394' MD (4830' TVD)									
5,400.000	89.85	89.954	4,830.014	-32.001	853.155	853.340	0.00	0.00	0.00
5,500.000	89.85	89.954	4,830.280	-31.921	953.155	953.337	0.00	0.00	0.00
5,600.000	89.85	89.954	4,830.546	-31.842	1,053.155	1,053.334	0.00	0.00	0.00
5,700.000	89.85	89.954	4,830.812	-31.762	1,153.154	1,153.331	0.00	0.00	0.00
5,800.000	89.85	89.954	4,831.078	-31.682	1,253.154	1,253.328	0.00	0.00	0.00
5,900.000	89.85	89.954	4,831.344	-31.602	1,353.154	1,353.326	0.00	0.00	0.00
6,000.000	89.85	89.954	4,831.610	-31.522	1,453.153	1,453.323	0.00	0.00	0.00
6,100.000	89.85	89.954	4,831.876	-31.442	1,553.153	1,553.320	0.00	0.00	0.00
6,200.000	89.85	89.954	4,832.142	-31.362	1,653.152	1,653.317	0.00	0.00	0.00
6,300.000	89.85	89.954	4,832.408	-31.282	1,753.152	1,753.314	0.00	0.00	0.00
6,400.000	89.85	89.954	4,832.674	-31.202	1,853.152	1,853.311	0.00	0.00	0.00
6,500.000	89.85	89.954	4,832.940	-31.122	1,953.151	1,953.308	0.00	0.00	0.00
6,600.000	89.85	89.954	4,833.206	-31.042	2,053.151	2,053.305	0.00	0.00	0.00
6,700.000	89.85	89.954	4,833.472	-30.962	2,153.150	2,153.303	0.00	0.00	0.00
6,800.000	89.85	89.954	4,833.738	-30.882	2,253.150	2,253.300	0.00	0.00	0.00
6,900.000	89.85	89.954	4,834.004	-30.802	2,353.150	2,353.297	0.00	0.00	0.00
7,000.000	89.85	89.954	4,834.270	-30.722	2,453.149	2,453.294	0.00	0.00	0.00
7,100.000	89.85	89.954	4,834.536	-30.642	2,553.149	2,553.291	0.00	0.00	0.00
7,200.000	89.85	89.954	4,834.802	-30.562	2,653.148	2,653.288	0.00	0.00	0.00
7,300.000	89.85	89.954	4,835.068	-30.482	2,753.148	2,753.285	0.00	0.00	0.00
7,400.000	89.85	89.954	4,835.334	-30.402	2,853.148	2,853.282	0.00	0.00	0.00
7,500.000	89.85	89.954	4,835.600	-30.322	2,953.147	2,953.280	0.00	0.00	0.00
7,600.000	89.85	89.954	4,835.866	-30.242	3,053.147	3,053.277	0.00	0.00	0.00
7,700.000	89.85	89.954	4,836.132	-30.162	3,153.146	3,153.274	0.00	0.00	0.00
7,800.000	89.85	89.954	4,836.398	-30.082	3,253.146	3,253.271	0.00	0.00	0.00

Database:	EDM 5000.14	**Local Co-ordinate Reference:**	Well Kirk Federal Com #1H
Company:	EOG Resources - Artesia	**TVD Reference:**	KB @ 3784.000usft (Planning Rig)
Project:	Eddy County (NAD83)	**MD Reference:**	KB @ 3784.000usft (Planning Rig)
Site:	Kirk	**North Reference:**	Grid
Well:	Kirk Federal Com #1H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Lateral		
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)
7,900.000	89.85	89.954	4,836.664	-30.003	3,353.146	3,353.268	0.00	0.00	0.00
8,000.000	89.85	89.954	4,836.930	-29.923	3,453.145	3,453.265	0.00	0.00	0.00
8,100.000	89.85	89.954	4,837.196	-29.843	3,553.145	3,553.262	0.00	0.00	0.00
8,200.000	89.85	89.954	4,837.462	-29.763	3,653.145	3,653.260	0.00	0.00	0.00
8,300.000	89.85	89.954	4,837.728	-29.683	3,753.144	3,753.257	0.00	0.00	0.00
8,400.000	89.85	89.954	4,837.994	-29.603	3,853.144	3,853.254	0.00	0.00	0.00
8,500.000	89.85	89.954	4,838.260	-29.523	3,953.143	3,953.251	0.00	0.00	0.00
8,600.000	89.85	89.954	4,838.526	-29.443	4,053.143	4,053.248	0.00	0.00	0.00
8,700.000	89.85	89.954	4,838.792	-29.363	4,153.143	4,153.245	0.00	0.00	0.00
8,800.000	89.85	89.954	4,839.058	-29.283	4,253.142	4,253.242	0.00	0.00	0.00
8,900.000	89.85	89.954	4,839.325	-29.203	4,353.142	4,353.239	0.00	0.00	0.00
9,000.000	89.85	89.954	4,839.591	-29.123	4,453.141	4,453.237	0.00	0.00	0.00
9,100.000	89.85	89.954	4,839.857	-29.043	4,553.141	4,553.234	0.00	0.00	0.00
9,153.859	89.85	89.954	4,840.000	-29.000	4,607.000	4,607.091	0.00	0.00	0.00
[KFC#1H]BHL1 9154' MD (4840' TVD)									

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
[KFC#1H]UMP1	0.00	0.000	4,830.000	-32.000	848.000	673,373.00	665,394.00	32° 51' 1.707 N	103° 55' 45.710 W
- plan misses target center by 0.006usft at 5394.844usft MD (4830.001 TVD, -32.006 N, 848.000 E)									
- Point									
[KFC#1H]BHL1	0.00	0.074	4,840.000	-29.000	4,607.000	673,376.00	669,153.00	32° 51' 1.593 N	103° 55' 1.644 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
4,176.717	4,176.717	0.000	0.000	KOP 9°/100' BUILD RATE
4,843.384	4,727.745	-20.827	318.151	START 75' TANGENT
4,918.384	4,765.245	-25.069	382.964	END 60° TANGENT
5,168.997	4,829.400	-32.186	622.153	[KFC#1H]EOC 5169' MD (4829' TVD)
5,394.840	4,830.001	-32.006	847.995	[KFC#1H]UMP1 5394' MD (4830' TVD)
9,153.859	4,840.000	-29.000	4,607.000	[KFC#1H]BHL1 9154' MD (4840' TVD)

Project: Eddy County (NAD83)
Site: Kirk
Well: Kirk Federal Com #1H
Wellbore: Lateral
Design: Plan #1
Ground Elevation 3766.000
Northing 673405.00
Easting 664546.00
KB @ 3784.000usft (Planning Rig)

PROJECT DETAILS: Eddy County (NAD83)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone

System Datum: Mean Sea Level

eog resources

T G M

Azimuths to Grid North
True North: -0.22°
Magnetic North: 6.85°

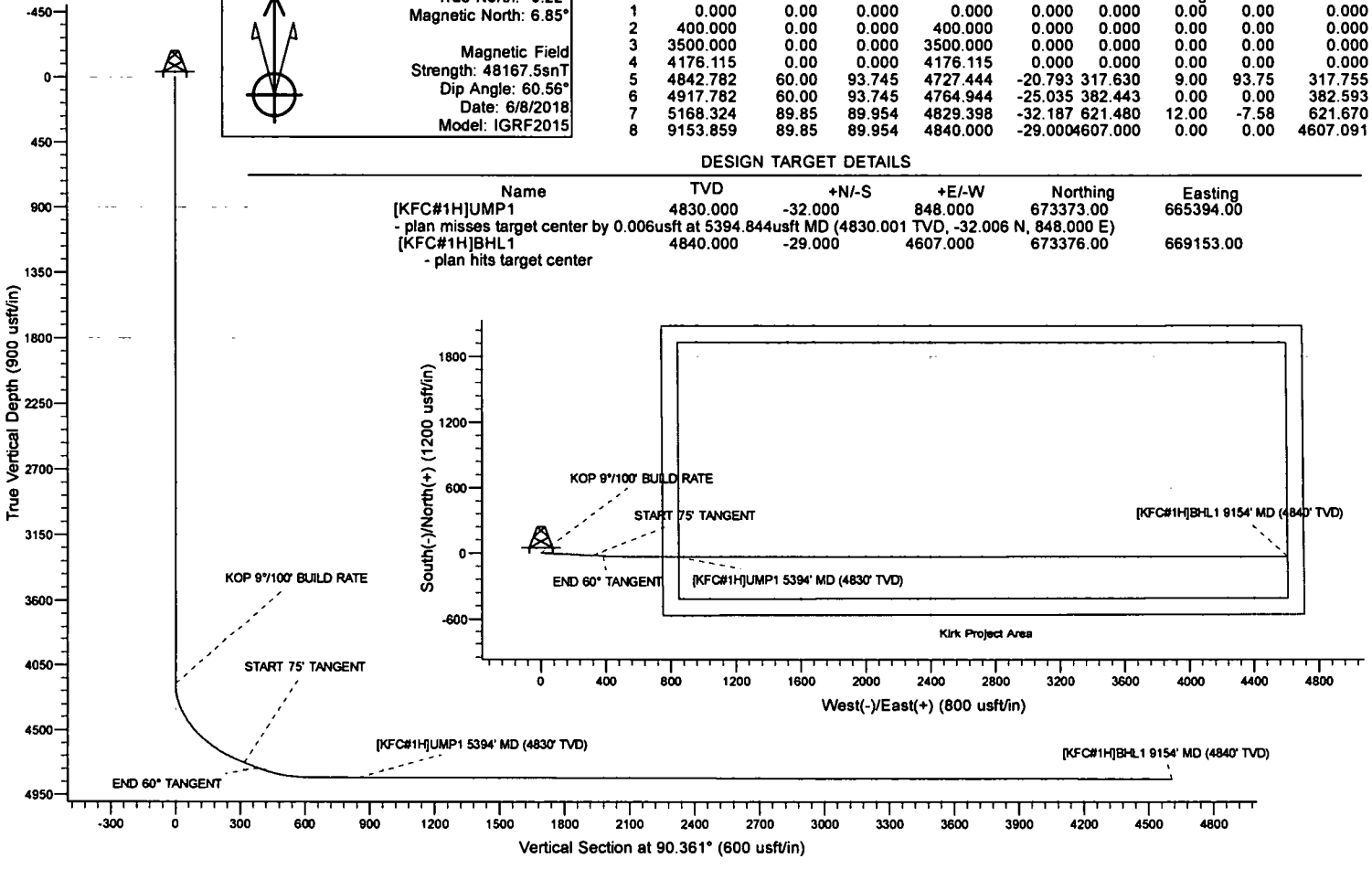
Magnetic Field
Strength: 48167.5snT
Dip Angle: 60.56°
Date: 6/8/2018
Model: IGRF2015

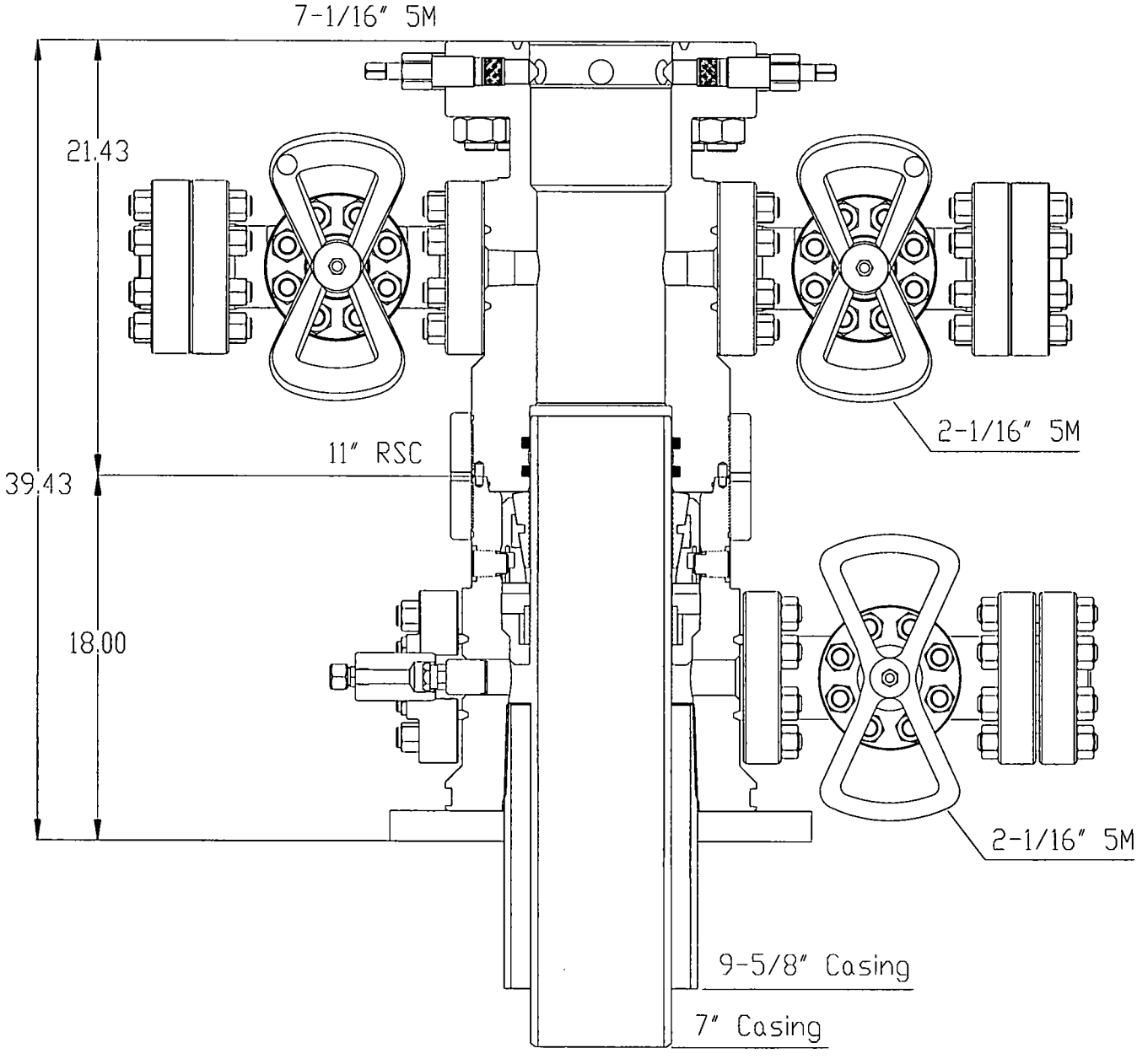
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
1	0.000	0.00	0.000	0.000	0.000	0.000	0.00	0.00	0.000
2	400.000	0.00	0.000	400.000	0.000	0.000	0.00	0.00	0.000
3	3500.000	0.00	0.000	3500.000	0.000	0.000	0.00	0.00	0.000
4	4176.115	0.00	0.000	4176.115	0.000	0.000	0.00	0.00	0.000
5	4842.782	60.00	93.745	4727.444	-20.793	317.630	9.00	93.75	317.755
6	4917.782	60.00	93.745	4764.944	-25.035	382.443	0.00	0.00	382.593
7	5168.324	89.85	89.954	4829.398	-32.187	621.480	12.00	-7.58	621.670
8	9153.859	89.85	89.954	4840.000	-29.000	4607.000	0.00	0.00	4607.091

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
[KFC#1H]UMP1	4830.000	-32.000	848.000	673373.00	665394.00
- plan misses target center by 0.006usft at 5394.844usft MD (4830.001 TVD, -32.006 N, 848.000 E)					
[KFC#1H]BHL1	4840.000	-29.000	4607.000	673376.00	669153.00
- plan hits target center					





*CONCEPT QUOTE DRAWING

EOG RESOURCES INC. 9-5/8" X 7" 5M HES WELLHEAD SYSTEM QUOTE: HOU - 119274	DWN	CB	1/25/18	Stream Flo Woldwide Expertise - Global Strength	DRAWING NO WH-17830
	CHK				
	APP				
		BY	DATE		

eog resources

EOG Resources - Artesia

Eddy County (NAD83)
Kirk
Kirk Federal Com #1H

Lateral
Plan #1

Anticollision Report

17 July, 2018

eog resources

Anticollision Report

Company:	EOG Resources - Artesia	**Local Co-ordinate Reference:**	Well Kirk Federal Com #1H
Project:	Eddy County (NAD83)	**TVD Reference:**	KB @ 3784.000usft (Planning Rig)
Reference Site:	Kirk	**MD Reference:**	KB @ 3784.000usft (Planning Rig)
Site Error:	0.000 usft	**North Reference:**	Grid
Reference Well:	Kirk Federal Com #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.000 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	EDM 5000.14
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference	Plan #1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 9,999.880 usft	**Error Surface:**	Combined Pedal Curve
Warning Levels Evaluated at:	2.00 Sigma	**Casing Method:**	Not applied

Survey Tool Program **Date** 7/17/2018

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.000	9,153.846	Plan #1 (Lateral)	MWD	OWSG MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Gissler B						
Gissler B #71 Est - Vertical - Vertical	6,387.687	4,787.773	98.543	-3.304	0.968	Level 1, CC, ES, SF
Harvard						
Harvard Federal #20 - Vertical - Directional	4,907.634	4,740.060	112.952	88.251	4.573	CC, ES
Harvard Federal #20 - Vertical - Directional	4,917.781	4,745.045	113.296	88.509	4.571	SF

Offset Design Gissler B - Gissler B #71 Est - Vertical - Vertical — Offset Site Error: 0.000 usft

Survey Program: 213-INC-ONLY — Offset Well Error: 0.000 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.000	0.000	0.000	0.000	0.000	0.000	94.06	-130.764	1,840.917	1,846.104				
100.000	100.000	55.000	55.000	0.147	0.481	94.06	-130.764	1,840.917	1,845.556	1,845.053	0.50	3,670.403	
200.000	200.000	155.000	155.000	0.505	1.355	94.06	-130.764	1,840.917	1,845.556	1,844.110	1.45	1,276.312	
300.000	300.000	255.000	255.000	0.884	2.608	94.06	-130.764	1,840.917	1,845.556	1,842.808	2.75	671.673	
400.000	400.000	355.000	355.000	1.222	4.386	94.06	-130.764	1,840.917	1,845.556	1,841.002	4.55	405.322	
500.000	500.000	455.000	455.000	1.581	6.184	94.06	-130.764	1,840.917	1,845.556	1,839.192	6.36	290.024	
541.913	541.913	496.912	496.912	1.731	6.909	94.06	-130.666	1,840.917	1,845.549	1,838.426	7.12	259.110	
600.000	600.000	554.980	554.980	1.939	7.941	94.06	-130.671	1,840.917	1,845.549	1,837.374	8.17	225.761	
700.000	700.000	654.948	654.948	2.298	9.719	94.06	-130.699	1,840.917	1,845.551	1,835.585	9.99	184.803	
800.000	800.000	754.915	754.915	2.656	11.498	94.06	-130.751	1,840.917	1,845.555	1,833.756	11.80	158.419	
900.000	900.000	855.008	855.000	3.015	13.319	94.06	-130.764	1,840.917	1,845.556	1,831.900	13.66	135.145	
946.027	946.027	901.035	901.026	3.180	14.162	94.05	-130.487	1,840.917	1,845.536	1,831.021	14.51	127.148	
1,000.000	1,000.000	954.770	954.759	3.373	15.147	94.06	-130.537	1,840.917	1,845.540	1,830.022	15.52	118.931	
1,100.000	1,100.000	1,055.018	1,055.000	3.732	16.995	94.06	-130.764	1,840.917	1,845.556	1,828.156	17.40	106.070	
1,200.000	1,200.000	1,155.018	1,155.000	4.090	18.669	94.06	-130.764	1,840.917	1,845.556	1,826.249	19.31	95.591	
1,300.000	1,300.000	1,255.018	1,255.000	4.449	20.743	94.06	-130.764	1,840.917	1,845.556	1,824.342	21.21	86.998	
1,340.828	1,340.828	1,295.816	1,295.798	4.595	21.507	94.05	-130.210	1,840.917	1,845.517	1,823.524	21.99	83.916	
1,400.000	1,400.000	1,354.659	1,354.638	4.807	22.614	94.05	-130.254	1,840.917	1,845.520	1,822.401	23.12	79.828	
1,500.000	1,500.000	1,454.642	1,454.619	5.166	24.483	94.05	-130.463	1,840.917	1,845.534	1,820.512	25.02	73.755	
1,600.000	1,600.000	1,555.046	1,555.000	5.524	26.373	94.06	-130.764	1,840.917	1,845.556	1,818.610	26.95	68.492	
1,700.000	1,700.000	1,655.046	1,655.000	5.883	28.294	94.06	-130.764	1,840.917	1,845.556	1,816.657	28.90	63.863	
1,738.661	1,738.661	1,693.905	1,693.858	6.022	29.040	94.05	-130.288	1,840.917	1,845.522	1,815.884	29.66	62.228	

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

eog resources

Anticollision Report

Company:	EOG Resources - Artesia	**Local Co-ordinate Reference:**	Well Kirk Federal Com #1H
Project:	Eddy County (NAD83)	**TVD Reference:**	KB @ 3784.000usft (Planning Rig)
Reference Site:	Kirk	**MD Reference:**	KB @ 3784.000usft (Planning Rig)
Site Error:	0.000 usft	**North Reference:**	Grid
Reference Well:	Kirk Federal Com #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.000 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	EDM 5000.14
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Gissler B - Gissler B #71 Est - Vertical - Vertical — **Offset Site Error:** 0.000 usft

Survey Program: 213-INC-ONLY — **Offset Well Error:** 0.000 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,800.000	1,800.000	1,754.740	1,754.689	6.241	30.208	94.05	-130.359	1,840.917	1,845.527	1,814.681	30.85	59.830	
1,900.000	1,900.000	1,855.070	1,855.000	6.599	32.130	94.06	-130.764	1,840.917	1,845.556	1,812.755	32.80	56.268	
2,000.000	2,000.000	1,955.070	1,955.000	6.958	33.959	94.06	-130.764	1,840.917	1,845.556	1,810.891	34.66	53.240	
2,053.845	2,053.845	2,008.913	2,008.840	7.151	34.944	94.05	-130.280	1,840.917	1,845.522	1,809.833	35.67	51.741	
2,100.000	2,100.000	2,054.840	2,054.767	7.316	35.784	94.05	-130.321	1,840.917	1,845.524	1,809.000	36.52	50.528	
2,200.000	2,200.000	2,154.352	2,154.275	7.675	37.605	94.06	-130.690	1,840.917	1,845.551	1,807.171	38.38	48.087	
2,300.000	2,300.000	2,255.080	2,255.000	8.033	39.415	94.06	-130.764	1,840.917	1,845.556	1,805.331	40.22	45.881	
2,400.000	2,400.000	2,355.080	2,355.000	8.392	41.207	94.06	-130.764	1,840.917	1,845.556	1,803.503	42.05	43.887	
2,452.948	2,452.948	2,408.028	2,407.947	8.582	42.156	94.06	-130.554	1,840.917	1,845.541	1,802.520	43.02	42.899	
2,500.000	2,500.000	2,455.036	2,454.955	8.750	42.999	94.06	-130.582	1,840.917	1,845.541	1,801.662	43.88	42.059	
2,600.000	2,600.000	2,554.943	2,554.861	9.109	44.789	94.06	-130.632	1,840.917	1,845.546	1,799.840	45.71	40.379	
2,700.000	2,700.000	2,655.080	2,655.000	9.467	46.588	94.06	-130.764	1,840.917	1,845.556	1,798.016	47.54	38.821	
2,800.000	2,800.000	2,755.080	2,755.000	9.826	48.435	94.06	-130.764	1,840.917	1,845.556	1,796.134	49.42	37.343	
2,900.000	2,900.000	2,855.080	2,855.000	10.184	50.283	94.06	-130.764	1,840.917	1,845.556	1,794.252	51.30	35.973	
2,940.548	2,940.548	2,895.615	2,895.522	10.330	51.032	94.05	-130.247	1,840.917	1,845.519	1,793.453	52.07	35.445	
3,000.000	3,000.000	2,954.929	2,954.836	10.543	52.128	94.05	-130.289	1,840.917	1,845.522	1,792.339	53.18	34.701	
3,100.000	3,100.000	3,054.695	3,054.601	10.901	53.971	94.06	-130.506	1,840.917	1,845.538	1,790.477	55.06	33.518	
3,200.000	3,200.000	3,155.108	3,155.000	11.260	55.809	94.06	-130.764	1,840.917	1,845.556	1,788.622	56.93	32.416	
3,300.000	3,300.000	3,255.108	3,255.000	11.618	57.602	94.06	-130.764	1,840.917	1,845.556	1,786.784	58.78	31.407	
3,400.000	3,400.000	3,355.108	3,355.000	11.977	59.395	94.06	-130.764	1,840.917	1,845.556	1,784.965	60.59	30.459	
3,439.057	3,439.057	3,394.090	3,393.979	12.117	60.094	94.05	-130.254	1,840.917	1,845.520	1,784.216	61.30	30.105	
3,500.000	3,500.000	3,454.890	3,454.778	12.335	61.184	94.05	-130.324	1,840.917	1,845.525	1,783.109	62.42	29.568	
3,600.000	3,600.000	3,554.658	3,554.544	12.693	62.973	94.06	-130.585	1,840.917	1,845.543	1,781.303	64.24	28.729	
3,700.000	3,700.000	3,655.117	3,655.000	13.052	64.775	94.06	-130.764	1,840.917	1,845.556	1,779.478	66.08	27.930	
3,800.000	3,800.000	3,755.117	3,755.000	13.410	66.569	94.06	-130.764	1,840.917	1,845.556	1,777.649	67.91	27.178	
3,883.445	3,883.445	3,838.562	3,838.444	13.710	68.066	94.06	-130.556	1,840.917	1,845.541	1,776.108	69.43	26.560	
3,900.000	3,900.000	3,855.101	3,854.983	13.769	68.363	94.06	-130.557	1,840.917	1,845.541	1,775.800	69.74	26.465	
4,000.000	4,000.000	3,955.008	3,954.888	14.127	70.155	94.06	-130.607	1,840.917	1,845.545	1,773.881	71.56	25.789	
4,100.000	4,100.000	4,054.911	4,054.793	14.486	71.947	94.06	-130.729	1,840.917	1,845.553	1,772.162	73.39	25.147	
4,176.115	4,176.115	4,131.242	4,131.115	14.759	73.386	94.06	-130.764	1,840.917	1,845.556	1,770.701	74.86	24.655	
4,200.000	4,199.994	4,155.121	4,154.994	14.842	73.844	0.32	-130.764	1,840.917	1,845.108	1,769.787	75.32	24.497	
4,250.000	4,249.834	4,204.981	4,204.834	15.012	74.601	0.32	-130.764	1,840.917	1,841.273	1,764.981	76.29	24.134	
4,300.000	4,299.219	4,254.346	4,254.219	15.183	75.749	0.33	-130.764	1,840.917	1,833.540	1,756.285	77.25	23.734	
4,350.000	4,347.848	4,302.960	4,302.831	15.356	76.682	0.32	-130.280	1,840.917	1,821.922	1,743.719	78.20	23.297	
4,400.000	4,395.413	4,350.411	4,350.281	15.532	77.692	0.33	-130.307	1,840.917	1,808.560	1,727.433	79.13	22.831	
4,450.000	4,441.629	4,396.515	4,396.385	15.714	78.477	0.35	-130.375	1,840.917	1,787.517	1,707.491	80.03	22.337	
4,500.000	4,486.207	4,440.990	4,440.859	15.907	79.331	0.37	-130.461	1,840.917	1,764.909	1,684.016	80.89	21.818	
4,550.000	4,528.874	4,483.561	4,483.429	16.118	80.148	0.40	-130.618	1,840.917	1,738.876	1,657.153	81.72	21.278	
4,600.000	4,569.368	4,524.627	4,524.368	16.355	80.932	0.44	-130.764	1,840.917	1,709.576	1,627.058	82.52	20.718	
4,650.000	4,607.433	4,562.594	4,562.433	16.627	81.643	0.48	-130.764	1,840.917	1,677.179	1,593.840	83.24	20.149	
4,700.000	4,642.841	4,598.002	4,597.841	16.945	82.304	0.53	-130.764	1,840.917	1,641.898	1,557.986	83.91	19.567	
4,750.000	4,675.372	4,630.533	4,630.372	17.321	82.911	0.59	-130.764	1,840.917	1,603.943	1,519.417	84.53	18.976	
4,800.000	4,704.824	4,659.985	4,659.825	17.764	83.461	0.67	-130.764	1,840.917	1,563.555	1,478.472	85.08	18.377	
4,842.781	4,727.444	4,682.605	4,682.444	18.203	83.883	0.77	-130.764	1,840.917	1,527.252	1,441.741	85.51	17.860	
4,900.000	4,756.053	4,711.214	4,711.053	18.869	84.417	0.79	-130.764	1,840.917	1,477.700	1,391.851	86.05	17.173	
4,917.781	4,764.944	4,720.105	4,719.944	19.091	84.583	0.80	-130.764	1,840.917	1,462.301	1,376.084	86.22	16.961	
4,925.000	4,768.506	4,723.667	4,723.506	19.183	84.649	1.10	-130.764	1,840.917	1,456.024	1,369.739	86.28	16.875	
4,950.000	4,780.108	4,735.269	4,735.108	19.518	84.866	2.23	-130.764	1,840.917	1,433.884	1,347.381	86.50	16.578	
4,975.000	4,790.845	4,745.706	4,745.545	19.875	85.061	3.60	-130.764	1,840.917	1,411.175	1,324.474	86.70	16.276	
5,000.000	4,799.788	4,754.949	4,754.788	20.254	85.233	5.32	-130.764	1,840.917	1,387.959	1,301.083	86.88	15.978	
5,025.000	4,807.812	4,762.973	4,762.812	20.655	85.383	7.59	-130.764	1,840.917	1,364.300	1,277.273	87.03	15.677	
5,050.000	4,814.598	4,769.757	4,769.598	21.076	85.510	10.74	-130.764	1,840.917	1,340.263	1,253.108	87.16	15.378	

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

eog resources

Anticollision Report

Company:	EOG Resources - Artesia	**Local Co-ordinate Reference:**	Well Kirk Federal Com #1H
Project:	Eddy County (NAD83)	**TVD Reference:**	KB @ 3784.000usft (Planning Rig)
Reference Site:	Kirk	**MD Reference:**	KB @ 3784.000usft (Planning Rig)
Site Error:	0.000 usft	**North Reference:**	Grid
Reference Well:	Kirk Federal Com #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.000 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	EDM 5000.14
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Gissler B - Gissler B #71 Est - Vertical - Vertical — **Offset Site Error:** 0.000 usft

Survey Program: 213-INC-ONLY — **Offset Well Error:** 0.000 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,075.000	4,820.120	4,775.281	4,775.120	21.516	85.813	15.42	-130.764	1,840.917	1,316.916	1,228.665	87.26	15.080	
5,100.000	4,824.369	4,779.524	4,779.355	21.973	85.692	22.72	-129.753	1,840.917	1,291.245	1,203.905	87.34	14.784	
5,125.000	4,827.332	4,782.478	4,782.309	22.446	85.747	36.17	-129.753	1,840.917	1,266.475	1,179.079	87.40	14.491	
5,150.000	4,829.000	4,784.142	4,783.973	22.931	85.778	61.53	-129.754	1,840.917	1,241.597	1,154.169	87.43	14.201	
5,168.323	4,829.398	4,784.539	4,784.370	23.293	85.785	88.10	-129.754	1,840.917	1,223.334	1,135.898	87.44	13.991	
5,200.000	4,829.462	4,784.623	4,784.454	23.934	85.787	88.16	-129.754	1,840.917	1,191.764	1,104.325	87.44	13.630	
5,300.000	4,829.748	4,784.888	4,784.719	26.080	85.792	88.30	-129.754	1,840.917	1,092.138	1,004.689	87.45	12.489	
5,400.000	4,830.014	4,785.153	4,784.984	28.379	85.797	88.46	-129.754	1,840.917	992.567	905.125	87.48	11.349	
5,500.000	4,830.280	4,785.419	4,785.249	30.798	85.802	88.61	-129.754	1,840.917	893.137	805.656	87.48	10.210	
5,600.000	4,830.546	4,785.684	4,785.515	33.310	85.807	88.76	-129.754	1,840.917	793.824	706.317	87.51	9.072	
5,700.000	4,830.812	4,785.949	4,785.780	35.895	85.812	88.92	-129.754	1,840.917	694.709	607.161	87.55	7.935	
5,800.000	4,831.078	4,786.214	4,786.045	38.540	85.817	89.07	-129.754	1,840.917	595.889	508.273	87.62	6.801	
5,900.000	4,831.344	4,786.479	4,786.310	41.232	85.822	89.23	-129.754	1,840.917	497.541	409.804	87.74	5.671	
6,000.000	4,831.610	4,786.745	4,786.576	43.962	85.827	89.38	-129.754	1,840.917	400.013	312.038	87.98	4.547	
6,100.000	4,831.876	4,787.010	4,786.841	46.725	85.832	89.53	-129.754	1,840.917	304.095	215.584	88.51	3.436	
6,200.000	4,832.142	4,787.275	4,787.106	49.515	85.837	89.69	-129.754	1,840.917	211.983	122.016	89.97	2.358	
6,300.000	4,832.408	4,787.540	4,787.371	52.326	85.842	89.84	-129.754	1,840.917	131.808	37.119	94.79	1.392	Level 3
6,387.687	4,832.642	4,787.773	4,787.604	54.808	85.846	89.98	-129.755	1,840.917	98.543	-3.304	101.85	0.968	Level 1, CC, ES, SF
6,400.000	4,832.674	4,787.805	4,787.636	55.157	85.846	90.00	-129.755	1,840.917	99.309	-2.571	101.88	0.975	Level 1
6,500.000	4,832.940	4,788.071	4,787.901	58.004	85.851	90.15	-129.755	1,840.917	149.415	54.312	95.10	1.571	
6,600.000	4,833.206	4,788.336	4,788.167	60.885	85.856	90.31	-129.755	1,840.917	234.087	142.928	91.14	2.568	
6,700.000	4,833.472	4,788.601	4,788.432	63.738	85.861	90.46	-129.755	1,840.917	327.490	237.841	89.65	3.653	
6,800.000	4,833.738	4,788.866	4,788.697	66.621	85.866	90.61	-129.755	1,840.917	423.924	334.950	88.97	4.765	
6,900.000	4,834.004	4,789.131	4,788.962	69.513	85.871	90.77	-129.755	1,840.917	521.703	433.087	88.62	5.887	
7,000.000	4,834.270	4,789.397	4,789.227	72.414	85.876	90.92	-129.755	1,840.917	620.190	531.787	88.40	7.016	
7,100.000	4,834.536	4,789.662	4,789.493	75.322	85.881	91.08	-129.755	1,840.917	719.095	630.827	88.27	8.147	
7,200.000	4,834.802	4,789.927	4,789.758	78.236	85.886	91.23	-129.755	1,840.917	818.266	730.089	88.18	9.280	
7,300.000	4,835.068	4,790.192	4,790.023	81.156	85.891	91.38	-129.755	1,840.917	917.618	829.503	88.11	10.414	
7,400.000	4,835.334	4,790.457	4,790.288	84.080	85.896	91.54	-129.756	1,840.917	1,017.094	929.028	88.07	11.549	
7,500.000	4,835.600	4,790.723	4,790.553	87.010	85.901	91.69	-129.756	1,840.917	1,116.666	1,028.630	88.04	12.684	
7,600.000	4,835.866	4,790.988	4,790.818	89.943	85.906	91.85	-129.756	1,840.917	1,216.307	1,128.295	88.01	13.820	
7,700.000	4,836.132	4,791.253	4,791.084	92.880	85.911	92.00	-129.756	1,840.917	1,316.003	1,228.008	88.00	14.955	
7,800.000	4,836.398	4,791.518	4,791.349	95.821	85.916	92.15	-129.756	1,840.917	1,415.742	1,327.758	87.98	16.091	
7,900.000	4,836.664	4,791.783	4,791.614	98.765	85.921	92.31	-129.756	1,840.917	1,515.515	1,427.539	87.98	17.226	
8,000.000	4,836.930	4,792.049	4,791.879	101.711	85.926	92.46	-129.756	1,840.917	1,615.316	1,527.345	87.97	18.362	
8,100.000	4,837.196	4,792.314	4,792.144	104.660	85.931	92.62	-129.756	1,840.917	1,715.140	1,627.171	87.97	19.497	
8,200.000	4,837.462	4,792.579	4,792.410	107.612	85.936	92.77	-129.756	1,840.917	1,814.984	1,727.014	87.97	20.632	
8,300.000	4,837.728	4,792.844	4,792.675	110.565	85.941	92.92	-129.757	1,840.917	1,914.844	1,826.872	87.97	21.767	
8,400.000	4,837.994	4,793.109	4,792.940	113.521	85.945	93.08	-129.757	1,840.917	2,014.717	1,926.743	87.97	22.901	
8,500.000	4,838.260	4,793.374	4,793.205	116.478	85.950	93.23	-129.757	1,840.917	2,114.603	2,026.624	87.98	24.035	
8,600.000	4,838.526	4,793.640	4,793.470	119.437	85.955	93.38	-129.757	1,840.917	2,214.499	2,126.514	87.98	25.169	
8,700.000	4,838.792	4,793.905	4,793.735	122.398	85.960	93.54	-129.757	1,840.917	2,314.404	2,226.412	87.99	26.303	
8,800.000	4,839.058	4,794.170	4,794.001	125.360	85.965	93.69	-129.757	1,840.917	2,414.316	2,326.317	88.00	27.436	
8,900.000	4,839.325	4,794.435	4,794.266	128.324	85.970	93.85	-129.757	1,840.917	2,514.236	2,426.229	88.01	28.569	
9,000.000	4,839.591	4,794.700	4,794.531	131.289	85.975	94.00	-129.757	1,840.917	2,614.162	2,526.145	88.02	29.701	
9,100.000	4,839.857	4,794.966	4,794.796	134.255	85.980	94.15	-129.758	1,840.917	2,714.093	2,626.087	88.03	30.833	
9,153.859	4,840.000	4,795.108	4,794.939	135.853	85.983	94.23	-129.758	1,840.917	2,767.917	2,679.886	88.03	31.442	
9,154.459	4,840.001	4,795.110	4,794.940	135.884	85.983	94.24	-129.758	1,840.917	2,768.517	2,679.895	88.62	31.240	

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

Company:	EOG Resources - Artesia	**Local Co-ordinate Reference:**	Well Kirk Federal Com #1H
Project:	Eddy County (NAD83)	**TVD Reference:**	KB @ 3784.000usft (Planning Rig)
Reference Site:	Kirk	**MD Reference:**	KB @ 3784.000usft (Planning Rig)
Site Error:	0.000 usft	**North Reference:**	Grid
Reference Well:	Kirk Federal Com #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.000 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	EDM 5000.14
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Harvard - Harvard Federal #20 - Vertical - Directional — **Offset Site Error:** 0.000 usft

Survey Program: 516-MWD — **Offset Well Error:** 0.000 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.000	0.000	0.000	0.000	0.000	0.000	84.87	43.488	465.561	468.485				
100.000	100.000	70.791	70.791	0.147	0.128	84.85	43.638	465.561	467.602	467.407	0.19	2,398.031	
200.000	200.000	170.491	170.487	0.505	0.308	84.55	44.451	465.561	467.679	467.087	0.59	789.803	
300.000	300.000	270.176	270.160	0.864	0.487	84.36	45.937	465.561	467.823	466.830	0.99	471.374	
400.000	400.000	369.835	369.798	1.222	0.669	84.10	48.094	465.561	468.041	466.647	1.39	335.922	
500.000	500.000	469.461	469.382	1.581	0.849	83.78	50.922	465.561	468.341	466.547	1.79	261.021	
600.000	600.000	569.381	569.226	1.939	1.125	83.35	54.276	465.561	468.718	466.478	2.24	209.062	
700.000	700.000	669.549	669.387	2.298	1.486	82.98	57.338	465.561	469.082	466.345	2.74	171.427	
800.000	800.000	769.761	769.544	2.656	1.847	82.68	59.980	465.561	469.412	466.176	3.24	145.097	
900.000	900.000	869.993	869.752	3.015	2.208	82.39	62.202	465.561	469.700	465.983	3.74	125.700	
1,000.000	1,000.000	970.189	969.930	3.373	2.568	82.17	64.052	465.561	469.948	465.710	4.24	110.883	
1,100.000	1,100.000	1,070.406	1,070.138	3.732	2.925	81.99	65.549	465.561	470.154	465.413	4.74	99.162	
1,200.000	1,200.000	1,170.632	1,170.355	4.090	3.284	81.85	66.694	465.561	470.315	465.070	5.25	89.668	
1,300.000	1,300.000	1,270.865	1,270.586	4.449	3.642	81.75	67.486	465.561	470.428	464.678	5.75	81.820	
1,400.000	1,400.000	1,369.053	1,368.771	4.807	3.981	81.76	67.416	465.615	470.474	464.433	6.24	75.414	
1,500.000	1,500.000	1,469.872	1,469.578	5.166	4.347	81.92	66.109	465.550	470.318	463.568	6.75	69.675	
1,600.000	1,600.000	1,595.841	1,595.429	5.524	4.730	82.18	63.331	461.314	466.281	459.017	7.26	64.188	
1,700.000	1,700.000	1,697.878	1,697.228	5.883	5.074	82.67	58.870	456.167	460.672	452.914	7.76	59.368	
1,800.000	1,800.000	1,791.758	1,790.812	6.241	5.392	83.37	52.609	452.084	455.554	447.315	8.24	55.296	
1,900.000	1,900.000	1,888.111	1,886.840	6.599	5.720	84.26	45.133	449.181	451.721	442.995	8.73	51.770	
2,000.000	2,000.000	1,985.830	1,984.241	6.958	6.058	85.18	37.657	446.719	448.499	439.281	9.22	48.657	
2,100.000	2,100.000	2,085.426	2,083.570	7.316	6.405	86.04	30.732	444.420	445.659	435.943	9.72	45.871	
2,200.000	2,200.000	2,186.231	2,186.070	7.675	6.768	86.98	23.309	441.730	442.601	432.379	10.22	43.300	
2,300.000	2,300.000	2,287.457	2,284.954	8.033	7.122	87.96	15.638	438.754	439.255	428.531	10.72	40.960	
2,400.000	2,400.000	2,386.897	2,384.091	8.392	7.479	88.89	8.422	435.696	436.174	424.945	11.23	38.846	
2,500.000	2,500.000	2,483.643	2,480.577	8.750	7.827	89.77	1.770	433.444	433.554	421.826	11.73	36.966	
2,600.000	2,600.000	2,587.720	2,584.389	9.109	8.203	90.68	-5.111	430.698	430.934	418.690	12.24	35.196	
2,700.000	2,700.000	2,685.187	2,681.618	9.467	8.557	91.52	-11.321	427.904	428.185	415.437	12.75	33.589	
2,800.000	2,800.000	2,783.933	2,780.095	9.826	8.917	92.44	-18.144	425.411	425.695	412.640	13.26	32.130	
2,900.000	2,900.000	2,884.487	2,880.352	10.184	9.285	93.44	-25.411	422.822	423.688	409.920	13.77	30.773	
3,000.000	3,000.000	2,983.766	2,979.352	10.543	9.650	94.41	-32.428	420.342	421.674	407.395	14.28	29.531	
3,100.000	3,100.000	3,088.047	3,081.289	10.901	10.027	95.51	-40.245	417.317	419.379	404.581	14.80	28.340	
3,200.000	3,200.000	3,185.773	3,180.684	11.260	10.398	96.61	-47.971	414.117	416.998	401.685	15.31	27.232	
3,300.000	3,300.000	3,285.818	3,280.372	11.618	10.770	97.69	-55.485	410.889	414.724	398.895	15.83	26.200	
3,400.000	3,400.000	3,386.339	3,380.586	11.977	11.144	98.73	-62.617	407.646	412.440	396.093	16.35	25.231	
3,500.000	3,500.000	3,486.208	3,480.137	12.335	11.516	99.80	-69.752	404.030	410.109	393.246	16.86	24.320	
3,600.000	3,600.000	3,585.971	3,579.560	12.693	11.888	100.86	-76.824	400.612	408.002	390.623	17.38	23.478	
3,700.000	3,700.000	3,688.406	3,679.713	13.052	12.264	101.83	-83.669	396.997	405.853	387.954	17.90	22.675	
3,800.000	3,800.000	3,788.304	3,779.285	13.410	12.638	103.03	-91.019	393.265	403.745	385.328	18.42	21.922	
3,900.000	3,900.000	3,888.104	3,878.768	13.769	13.012	104.13	-98.043	389.629	401.753	382.817	18.94	21.217	
4,000.000	4,000.000	3,988.176	3,978.528	14.127	13.388	105.22	-104.975	385.787	399.885	380.430	19.45	20.555	
4,100.000	4,100.000	4,085.619	4,077.661	14.486	13.761	106.32	-111.840	381.977	398.069	378.098	19.97	19.930	
4,176.115	4,176.115	4,161.694	4,153.522	14.759	14.046	107.12	-116.826	379.202	396.842	376.474	20.37	19.484	
4,200.000	4,199.894	4,185.676	4,177.441	14.842	14.135	13.65	-118.323	378.331	396.019	375.529	20.49	19.327	
4,250.000	4,249.834	4,235.555	4,227.195	15.012	14.322	14.39	-121.352	376.512	391.486	370.743	20.74	18.874	
4,300.000	4,299.219	4,284.759	4,276.270	15.183	14.506	15.40	-124.390	374.672	389.213	368.221	20.99	18.254	
4,350.000	4,347.846	4,332.569	4,323.952	15.356	14.684	18.72	-127.389	372.882	371.325	350.088	21.24	17.483	
4,400.000	4,395.413	4,378.973	4,370.237	15.532	14.858	18.40	-130.261	371.188	356.026	334.547	21.48	16.576	
4,450.000	4,441.629	4,423.681	4,414.850	15.714	15.024	20.54	-132.925	369.700	337.502	315.791	21.71	15.545	
4,500.000	4,486.207	4,468.847	4,457.936	15.907	15.183	23.22	-135.112	368.557	316.011	294.075	21.94	14.406	
4,550.000	4,528.874	4,509.372	4,500.423	16.118	15.334	26.67	-136.693	367.718	291.707	269.555	22.16	13.168	
4,600.000	4,569.386	4,549.992	4,541.029	16.355	15.477	31.09	-137.560	367.170	264.841	242.475	22.37	11.841	

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

eog resources

Anticollision Report

Company:	EOG Resources - Artesia	**Local Co-ordinate Reference:**	Well Kirk Federal Com #1H
Project:	Eddy County (NAD83)	**TVD Reference:**	KB @ 3784.000usft (Planning Rig)
Reference Site:	Kirk	**MD Reference:**	KB @ 3784.000usft (Planning Rig)
Site Error:	0.000 usft	**North Reference:**	Grid
Reference Well:	Kirk Federal Com #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.000 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	EDM 5000.14
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Offset Design Harvard - Harvard Federal #20 - Vertical - Directional — **Offset Site Error:** 0.000 usft

Survey Program: 516-MWD — **Offset Well Error:** 0.000 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
4,850.000	4,807.433	4,588.455	4,579.490	16.627	15.613	36.88	-137.801	366.880	235.850	213.269	22.58	10.444	
4,700.000	4,842.841	4,623.977	4,615.011	16.946	15.733	44.48	-137.705	366.725	205.446	182.639	22.81	9.008	
4,750.000	4,875.372	4,656.535	4,647.568	17.321	15.843	54.22	-137.586	366.577	174.882	151.782	23.08	7.576	
4,800.000	4,704.824	4,685.959	4,676.992	17.764	15.942	65.90	-137.400	366.436	146.245	122.790	23.46	6.235	
4,842.781	4,727.444	4,708.204	4,699.238	18.203	16.017	76.37	-137.275	366.327	126.254	102.339	23.92	5.279	
4,900.000	4,756.053	4,736.309	4,727.341	18.869	16.113	88.48	-137.172	366.187	113.147	88.523	24.62	4.595	
4,807.634	4,759.870	4,740.060	4,731.091	18.964	16.125	90.13	-137.163	366.169	112.952	88.251	24.70	4.573	CC, ES
4,917.781	4,764.944	4,745.045	4,736.077	19.091	16.142	92.32	-137.153	366.144	113.298	88.509	24.79	4.571	SF
4,925.000	4,768.508	4,748.545	4,739.576	19.183	16.154	93.85	-137.146	366.126	113.968	89.130	24.84	4.588	
4,950.000	4,780.108	4,760.051	4,751.083	19.518	16.193	98.57	-137.128	366.069	119.102	94.160	24.94	4.776	
4,975.000	4,790.645	4,770.408	4,761.439	19.875	16.228	102.24	-137.108	366.019	128.351	103.406	24.95	5.145	
5,000.000	4,799.788	4,779.569	4,770.600	20.254	16.259	104.83	-137.089	365.976	141.145	116.281	24.88	5.672	
5,025.000	4,807.612	4,787.509	4,778.540	20.655	16.285	106.32	-137.071	365.939	156.797	132.003	24.79	6.324	
5,050.000	4,814.596	4,794.206	4,785.236	21.076	16.308	106.66	-137.054	365.908	174.672	149.973	24.70	7.072	
5,075.000	4,820.120	4,799.640	4,790.670	21.516	16.326	105.80	-137.040	365.884	194.244	169.634	24.61	7.893	
5,100.000	4,824.369	4,803.795	4,794.826	21.973	16.340	103.65	-137.029	365.865	215.100	190.568	24.53	8.768	
5,125.000	4,827.332	4,806.660	4,797.691	22.446	16.350	100.04	-137.021	365.852	236.920	212.456	24.46	9.685	
5,150.000	4,829.000	4,808.226	4,799.257	22.931	16.355	94.82	-137.017	365.845	259.450	235.047	24.40	10.632	
5,168.323	4,829.398	4,808.545	4,799.576	23.293	16.356	89.92	-137.016	365.844	276.298	251.934	24.36	11.341	
5,200.000	4,829.482	4,808.490	4,799.521	23.934	16.356	89.69	-137.016	365.844	305.849	281.848	24.30	12.586	
5,300.000	4,829.748	4,808.316	4,799.347	26.060	16.355	89.80	-137.016	365.845	401.277	377.106	24.17	16.602	
5,400.000	4,830.014	4,808.142	4,799.173	28.379	16.355	89.70	-137.017	365.848	498.500	474.403	24.10	20.687	
5,500.000	4,830.280	4,807.968	4,798.999	30.798	16.354	89.61	-137.017	365.847	596.842	572.591	24.05	24.807	
5,600.000	4,830.546	4,807.793	4,798.824	33.310	16.354	89.51	-137.018	365.847	695.313	671.291	24.02	28.944	
5,700.000	4,830.812	4,807.618	4,798.649	35.895	16.353	89.41	-137.018	365.848	794.317	770.313	24.00	33.091	
5,800.000	4,831.078	4,807.442	4,798.473	38.540	16.352	89.32	-137.019	365.849	893.543	869.550	23.99	37.242	
5,900.000	4,831.344	4,807.266	4,798.297	41.232	16.352	89.22	-137.019	365.850	992.924	968.937	23.99	41.395	
6,000.000	4,831.610	4,807.090	4,798.121	43.962	16.351	89.13	-137.020	365.850	1,092.418	1,068.434	23.98	45.547	
6,100.000	4,831.876	4,806.913	4,797.944	46.725	16.351	89.03	-137.020	365.851	1,191.997	1,168.011	23.99	49.697	
6,200.000	4,832.142	4,806.736	4,797.767	49.516	16.350	88.93	-137.021	365.852	1,291.640	1,267.652	23.99	53.844	
6,300.000	4,832.408	4,806.559	4,797.590	52.328	16.350	88.83	-137.021	365.853	1,391.335	1,367.341	23.99	57.987	
6,400.000	4,832.674	4,806.381	4,797.412	55.157	16.349	88.74	-137.022	365.854	1,491.071	1,467.070	24.00	62.124	
6,500.000	4,832.940	4,806.203	4,797.233	58.004	16.348	88.64	-137.022	365.854	1,590.840	1,566.829	24.01	66.257	
6,600.000	4,833.206	4,806.024	4,797.055	60.865	16.348	88.54	-137.023	365.855	1,690.636	1,666.615	24.02	70.383	
6,700.000	4,833.472	4,805.845	4,796.876	63.738	16.347	88.44	-137.023	365.856	1,790.455	1,766.423	24.03	74.502	
6,800.000	4,833.738	4,805.666	4,796.696	66.621	16.347	88.35	-137.024	365.857	1,890.293	1,866.248	24.05	78.615	
6,900.000	4,834.004	4,805.486	4,796.517	69.513	16.348	88.25	-137.024	365.858	1,990.147	1,966.088	24.06	82.719	
7,000.000	4,834.270	4,805.306	4,796.336	72.414	16.345	88.15	-137.025	365.858	2,090.015	2,065.941	24.07	86.816	
7,100.000	4,834.536	4,805.125	4,796.156	75.322	16.345	88.05	-137.025	365.859	2,189.895	2,165.805	24.09	90.903	
7,200.000	4,834.802	4,804.944	4,795.975	78.236	16.344	87.95	-137.026	365.860	2,289.788	2,265.679	24.11	94.982	
7,300.000	4,835.068	4,804.763	4,795.794	81.156	16.343	87.85	-137.026	365.861	2,389.686	2,365.560	24.13	99.052	
7,400.000	4,835.334	4,804.581	4,795.612	84.080	16.343	87.75	-137.027	365.862	2,489.594	2,465.449	24.14	103.112	
7,500.000	4,835.600	4,804.399	4,795.430	87.010	16.342	87.65	-137.027	365.862	2,589.508	2,565.344	24.16	107.162	
7,600.000	4,835.866	4,804.216	4,795.247	89.943	16.342	87.55	-137.028	365.863	2,689.430	2,665.244	24.19	111.201	
7,700.000	4,836.132	4,804.034	4,795.064	92.880	16.341	87.45	-137.028	365.864	2,789.357	2,765.150	24.21	115.229	
7,800.000	4,836.398	4,803.850	4,794.881	95.821	16.340	87.35	-137.029	365.865	2,889.288	2,865.059	24.23	119.247	
7,900.000	4,836.664	4,803.666	4,794.697	98.765	16.340	87.25	-137.029	365.866	2,989.225	2,964.972	24.25	123.252	
8,000.000	4,836.930	4,803.482	4,794.513	101.711	16.339	87.15	-137.030	365.866	3,089.165	3,064.888	24.28	127.246	
8,100.000	4,837.196	4,803.298	4,794.328	104.660	16.339	87.05	-137.030	365.867	3,189.110	3,164.808	24.30	131.228	
8,200.000	4,837.462	4,803.113	4,794.144	107.612	16.338	86.95	-137.031	365.868	3,289.057	3,264.730	24.33	135.198	
8,300.000	4,837.728	4,802.927	4,793.958	110.565	16.337	86.85	-137.031	365.869	3,389.008	3,364.654	24.35	139.154	
8,400.000	4,837.994	4,802.742	4,793.772	113.521	16.337	86.75	-137.032	365.870	3,488.962	3,464.580	24.38	143.098	

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

eog resources

Anticollision Report

Company:	EOG Resources - Artesia	**Local Co-ordinate Reference:**	Well Kirk Federal Com #1H
Project:	Eddy County (NAD83)	**TVD Reference:**	KB @ 3784.000usft (Planning Rig)
Reference Site:	Kirk	**MD Reference:**	KB @ 3784.000usft (Planning Rig)
Site Error:	0.000 usft	**North Reference:**	Grid
Reference Well:	Kirk Federal Com #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.000 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	EDM 5000.14
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

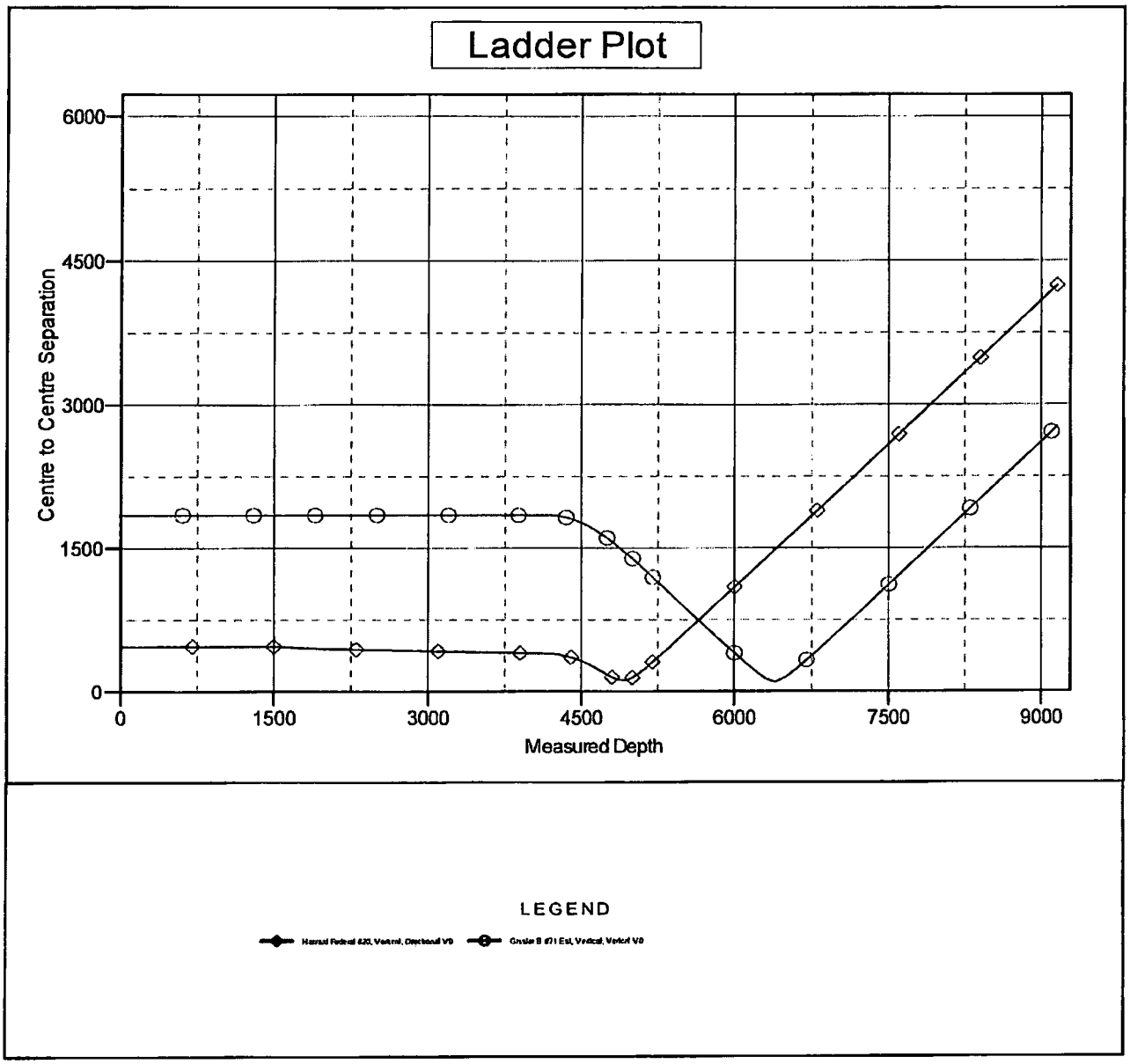
Offset Design Harvard - Harvard Federal #20 - Vertical - Directional — **Offset Site Error:** 0.000 usft

Survey Program: 516-MWD — **Offset Well Error:** 0.000 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
8,500.000	4,838.280	4,802.555	4,793.588	116.478	16.336	86.85	-137.032	365.871	3,588.018	3,564.508	24.41	147.028	
8,600.000	4,838.526	4,802.369	4,793.400	119.437	16.335	86.54	-137.033	365.871	3,688.876	3,664.438	24.44	150.945	
8,700.000	4,838.792	4,802.182	4,793.213	122.398	16.335	86.44	-137.033	365.872	3,788.837	3,764.369	24.47	154.847	
8,800.000	4,839.058	4,801.994	4,793.025	125.360	16.334	86.34	-137.034	365.873	3,888.800	3,864.301	24.50	158.738	
8,900.000	4,839.325	4,801.807	4,792.837	128.324	16.334	86.24	-137.035	365.874	3,988.764	3,964.234	24.53	162.618	
9,000.000	4,839.591	4,801.618	4,792.649	131.289	16.333	86.14	-137.035	365.875	4,088.730	4,064.169	24.56	166.489	
9,100.000	4,839.857	4,801.430	4,792.460	134.255	16.332	86.03	-137.036	365.876	4,188.698	4,164.104	24.59	170.314	
9,163.859	4,840.000	4,801.328	4,792.359	135.853	16.332	85.98	-137.036	365.876	4,242.541	4,217.929	24.61	172.378	
9,154.459	4,840.001	4,801.327	4,792.357	135.884	16.332	85.98	-137.036	365.876	4,243.141	4,218.502	26.64	159.281	

Company:	EOG Resources - Artesia	**Local Co-ordinate Reference:**	Well Kirk Federal Com #1H
Project:	Eddy County (NAD83)	**TVD Reference:**	KB @ 3784.000usft (Planning Rig)
Reference Site:	Kirk	**MD Reference:**	KB @ 3784.000usft (Planning Rig)
Site Error:	0.000 usft	**North Reference:**	Grid
Reference Well:	Kirk Federal Com #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.000 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	Lateral	**Database:**	EDM 5000.14
Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to KB @ 3784.000usft (Planning Rig)	Coordinates are relative to: Kirk Federal Com #1H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Central Meridian is 104° 20' 0.000 W	Grid Convergence at Surface is: 0.22°



Company:	EOG Resources - Artesia	**Local Co-ordinate Reference:**	Well Kirk Federal Com #1H
Project:	Eddy County (NAD83)	**TVD Reference:**	KB @ 3784.000usft (Planning Rig)
Reference Site:	Kirk	**MD Reference:**	KB @ 3784.000usft (Planning Rig)
Site Error:	0.000 usft	**North Reference:**	Grid
Reference Well:	Kirk Federal Com #1H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.000 usft	**Output errors are at**	2.00 sigma
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Reference Design:	Plan #1	**Offset TVD Reference:**	Offset Datum

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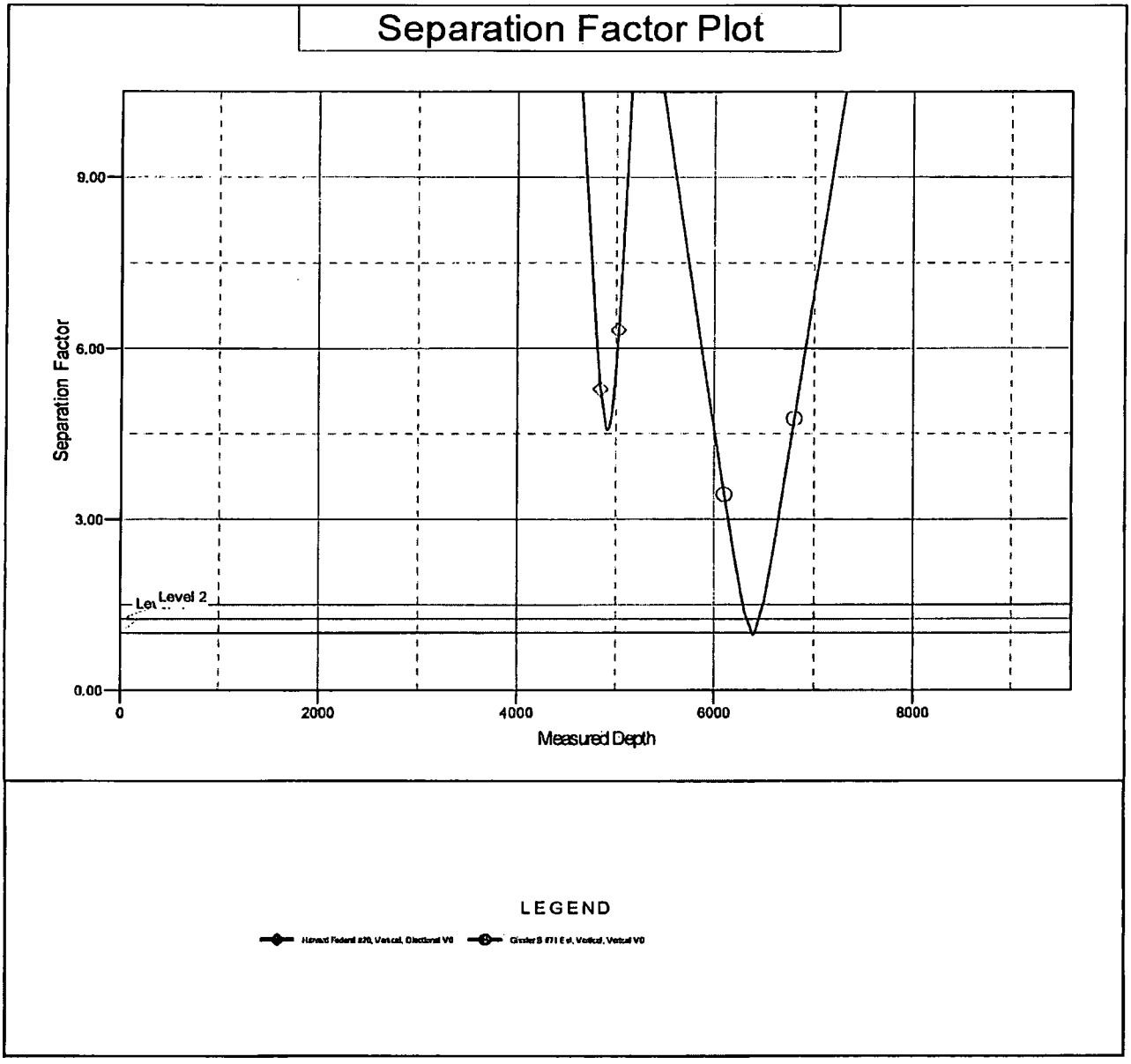


CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Manufacturer: Midwest Hose & Specialty

Serial Number: SN#90067

Length: 35'

Size: OD = 8" ID = 4"

Ends: Flanges Size: 4-1/16"

WP Rating: 10,000 psi Anchors required by manfacturer: No

MIDWEST

HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT

Customer:	P.O. Number:
CACTUS	RIG #123
	Asset # M10761

HOSE SPECIFICATIONS

Type: CHOKE LINE		Length: 35'	
I.D. 4"	*INCHES*	O.D. 8"	*INCHES*

WORKING PRESSURE	TEST PRESSURE	BURST PRESSURE
10,000 *PSI*	15,000 *PSI*	*PSI*

COUPLINGS

Type of End Fitting	
4 1/16 10K FLANGE	
Type of Coupling: SWEDGED	MANUFACTURED BY MIDWEST HOSE & SPECIALTY

PROCEDURE

Hose assembly pressure tested with water at ambient temperature.

TIME HELD AT TEST PRESSURE	ACTUAL BURST PRESSURE:
1 *MIN.*	0 *PSI*

COMMENTS:

SN#90087 M10761
Hose is covered with stainless steel armour cover and wraped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting eyes

Date:	Tested By:	Approved:
6/6/2011	BOBBY FINK	MENDI JACKSON

Midwest Hose & Specialty, Inc.

Internal Hydrostatic Test Graph

Customer: CACTUS

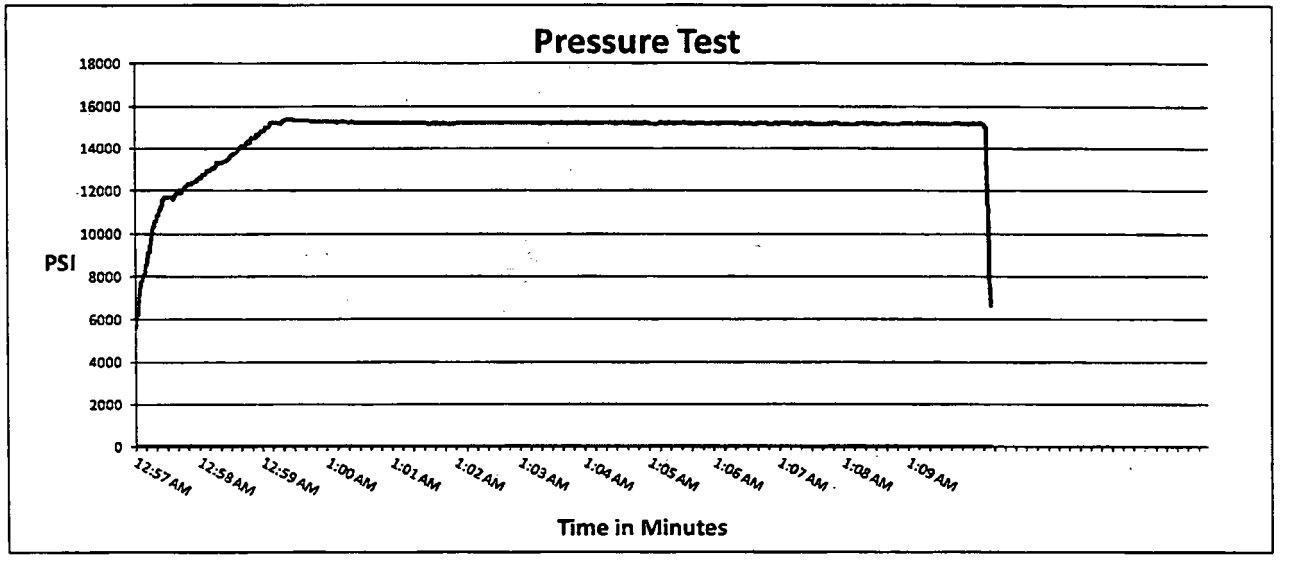
SALES ORDER# 90067

Hose Specifications

Hose Type	Length
C & K	35'
I.D.	O.D.
4"	8"
Working Pressure	Burst Pressure
10000 PSI	Standard Safety Multiplier Applies

Verification

Type of Fitting	Coupling Method
4 1/16 10K	Swage
Die Size	Final O.D.
6.62"	6.68"
Hose Serial #	Hose Assembly Serial #
	90067



Test Pressure	Time Held at Test Pressure	Actual Burst Pressure	Peak Pressure
15000 PSI	11 1/4 Minutes		15439 PSI

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

Tested By: *Bobby Fink*

Approved By: *Mendi Jackson*

Mendi Jackson

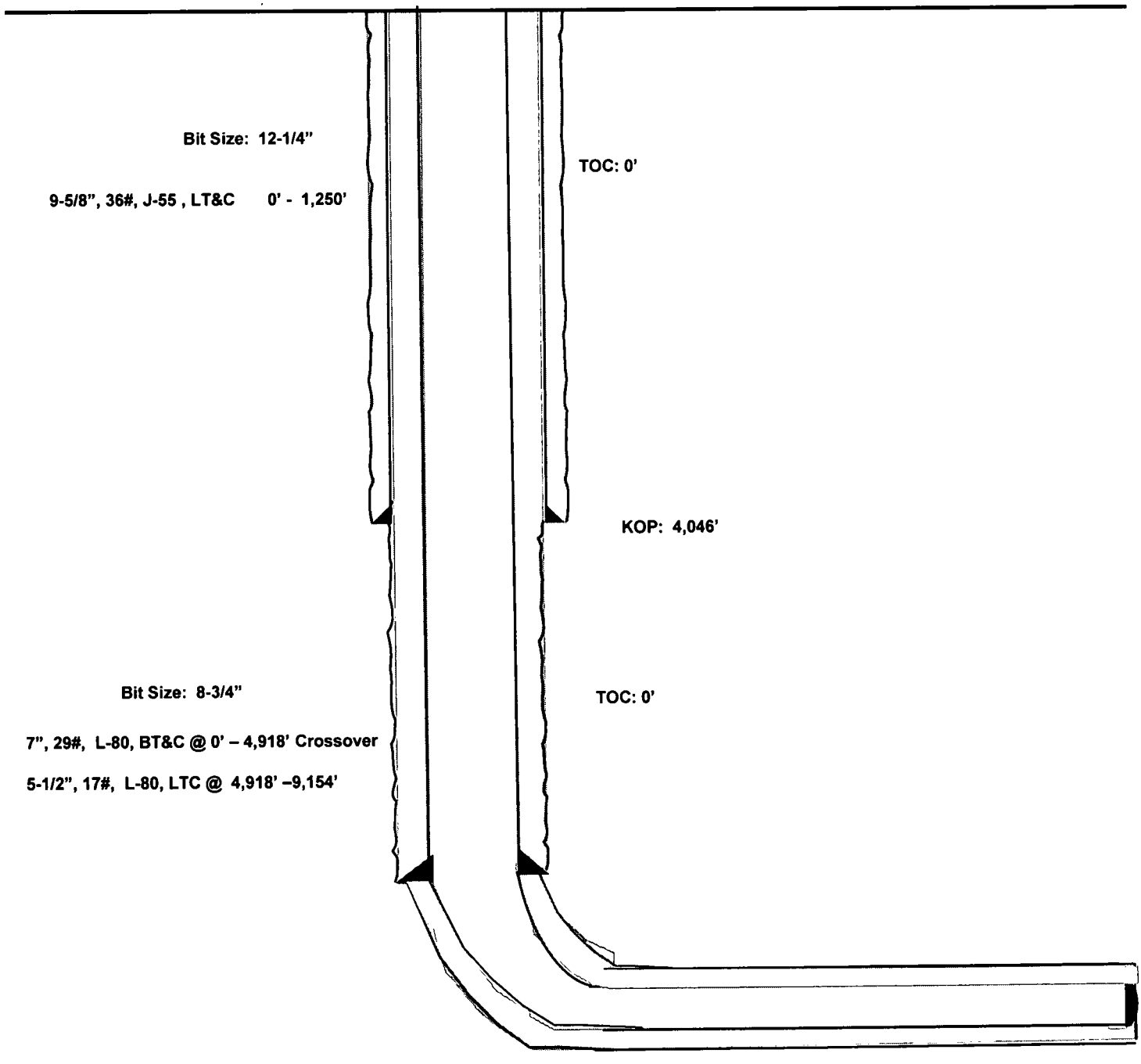
Kirk Federal Com #1H
Eddy County, New Mexico

2079' FNL
572' FWL
Section 12
T-17-S, R-30-E

Proposed Wellbore

API: 30-015-***

KB: 3,766'
GL: 3,784'



Lateral: 9,154' MD, 4,840' TVD

BH Location: 2,112' FNL & 100' FEL
Section 12
T-17-S, R-30-E

EOG RESOURCES, INC.
Kirk Federal Com 1H

Hydrogen Sulfide Plan Summary

A. All personnel shall receive proper H2S training in accordance with Onshore Order III.C.3.a.

B. Briefing Area: two perpendicular areas will be designated by signs and readily accessible.

C. Required Emergency Equipment:

- Well control equipment
  a. Flare line 150' from wellhead to be ignited by flare gun.
  b. Choke manifold with a remotely operated choke.
  c. Mud/gas separator

- Protective equipment for essential personnel.

  Breathing apparatus:
  a. Rescue Packs (SCBA) — 1 unit shall be placed at each breathing area, 2 shall be stored in the safety trailer.
  b. Work/Escape packs —4 packs shall be stored on the rig floor with sufficient air hose not to restrict work activity.
  c. Emergency Escape Packs —4 packs shall be stored in the doghouse for emergency evacuation.

  Auxiliary Rescue Equipment:
  a. Stretcher
  b. Two OSHA full body harness
  c. 100 ft 5/8 inch OSHA approved rope
  d. 1-20# class ABC fire extinguisher

- H2S detection and monitoring equipment:
  The stationary detector with three sensors will be placed in the upper dog house if equipped, set to visually alarm @ 10 ppm and audible @ 14 ppm. Calibrate a minimum of every 30 days or as needed. The sensors will be placed in the following places: Rig floor / Bell nipple / End of flow line or where well bore fluid is being discharged.
  (Gas sample tubes will be stored in the safety trailer)

- Visual warning systems.
  a. One color code condition sign will be placed at the entrance to the site reflecting the possible conditions at the site.
  b. A colored condition flag will be on display, reflecting the current condition at the site at the time.
  c. Two wind socks will be placed in strategic locations, visible from all angles.

EOG RESOURCES, INC.
Kirk Federal Com 1H

- Mud program:
  The mud program has been designed to minimize the volume of H2S circulated to surface. The operator will have the necessary mud products to minimize hazards while drilling in H2S bearing zones.

- Metallurgy:
  All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold and lines, and valves shall be suitable for H2S service.

- Communication:
  Communication will be via cell phones and land lines where available.

EOG RESOURCES, INC.
Kirk Federal Com 1H

Emergency Assistance Telephone List

PUBLIC SAFETY:	**911 or**
Eddy County Sheriff's Department	(575) 887-7551
Fire Department:	
Carlsbad	(575) 885-3125
Artesia	(575) 746-5050
Hospitals:	
Carlsbad	(575) 887-4121
Artesia	(575) 748-3333
Hobbs	(575) 392-1979
Dept. of Public Safety/Carlsbad	(575) 748-9718
Highway Department	(575) 885-3281
New Mexico Oil Conservation	(575) 476-3440
U.S. Dept. of Labor	(575) 887-1174

EOG Resources, Inc.	
EOG / Artesia	Office (575) 748-1471

Company Drilling Consultants:	
Brent Patterson	Cell (575) 365-7032

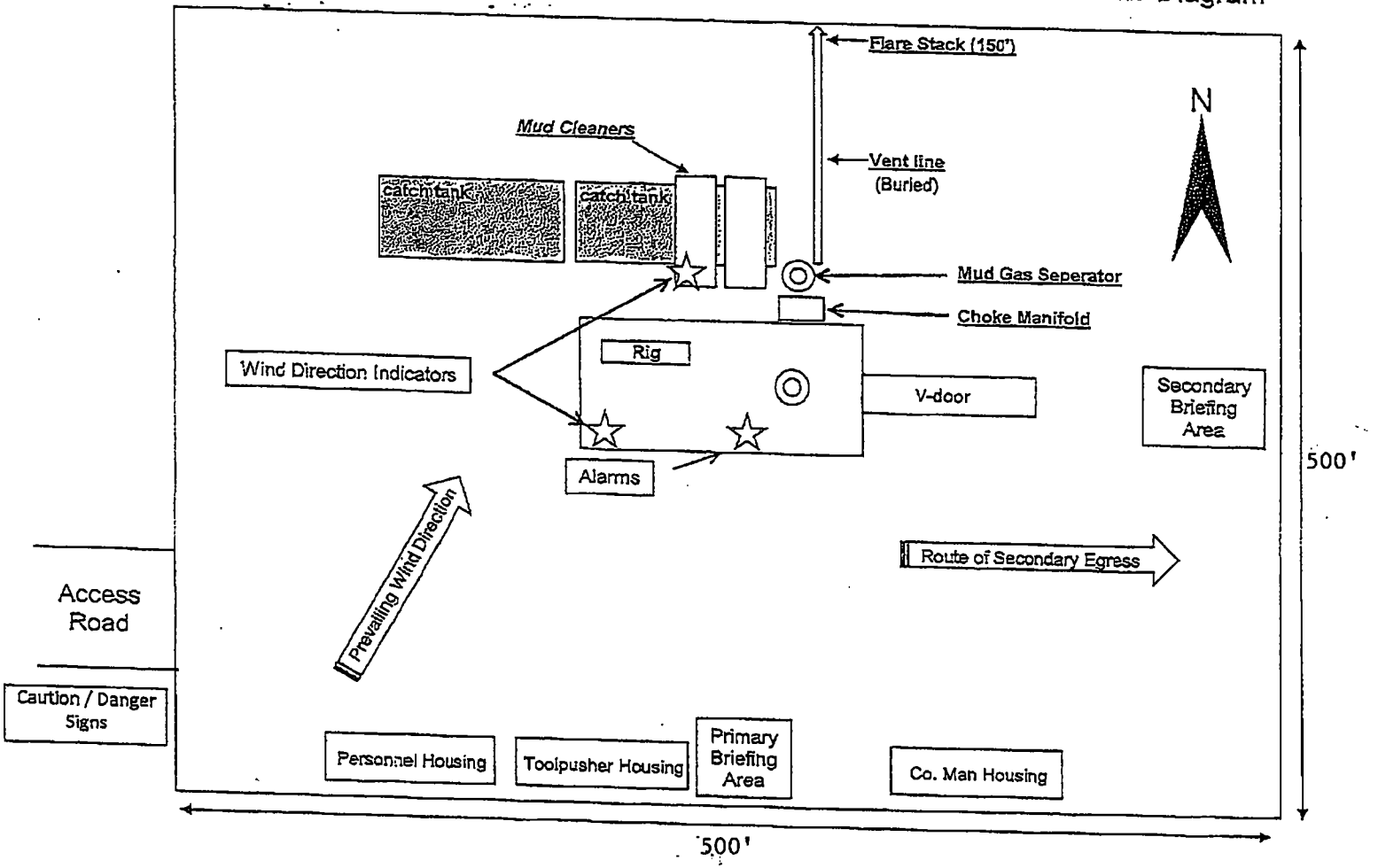
Drilling Engineer	
Jeremiah Mullen	Office (575) 748-4378
	Cell (575) 703-5467

Drilling Manager	
Tim Bussell	Office (575) 748-4221
	Cell (575) 365-5695

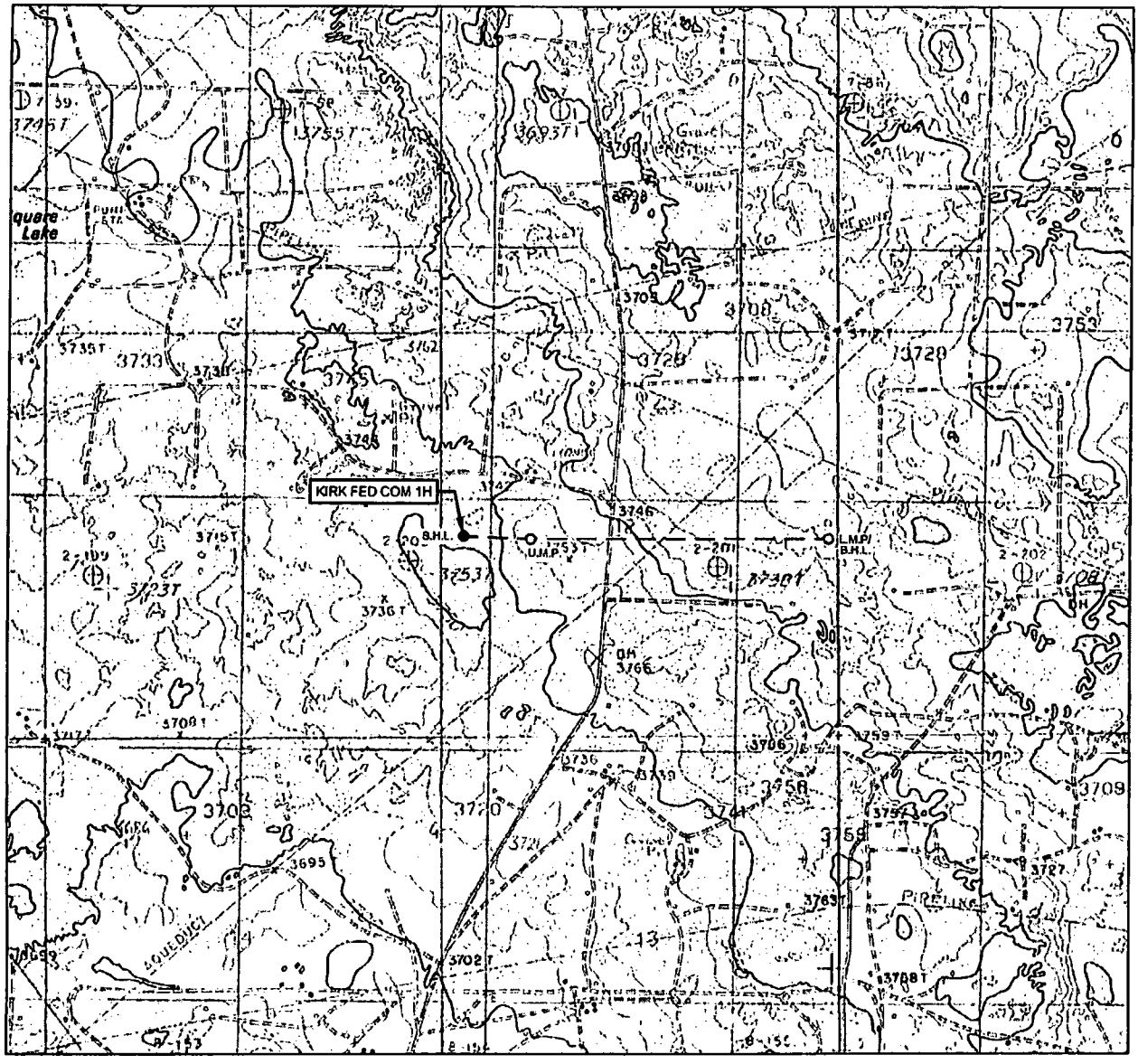
Safety	
Brian Chandler (HSE Manager)	Office (432) 686-3695
	Cell (817) 239-0251

EOG Resources

Well Site Diagram



LOCATION & ELEVATION VERIFICATION MAP



eog resources, inc.

LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

SECTION 12 TWP 17-S RGE 30-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM ELEVATION 3766'
DESCRIPTION 2079 FN/SL & 572 FW/EL

LATITUDE N 32.8505710 LONGITUDE W 103.9321249

-N-

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

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

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

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LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 148 · FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 · FAX (817) 744-7554
2803 NORTH BIG SPRING · MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 · FAX (432) 682-1743
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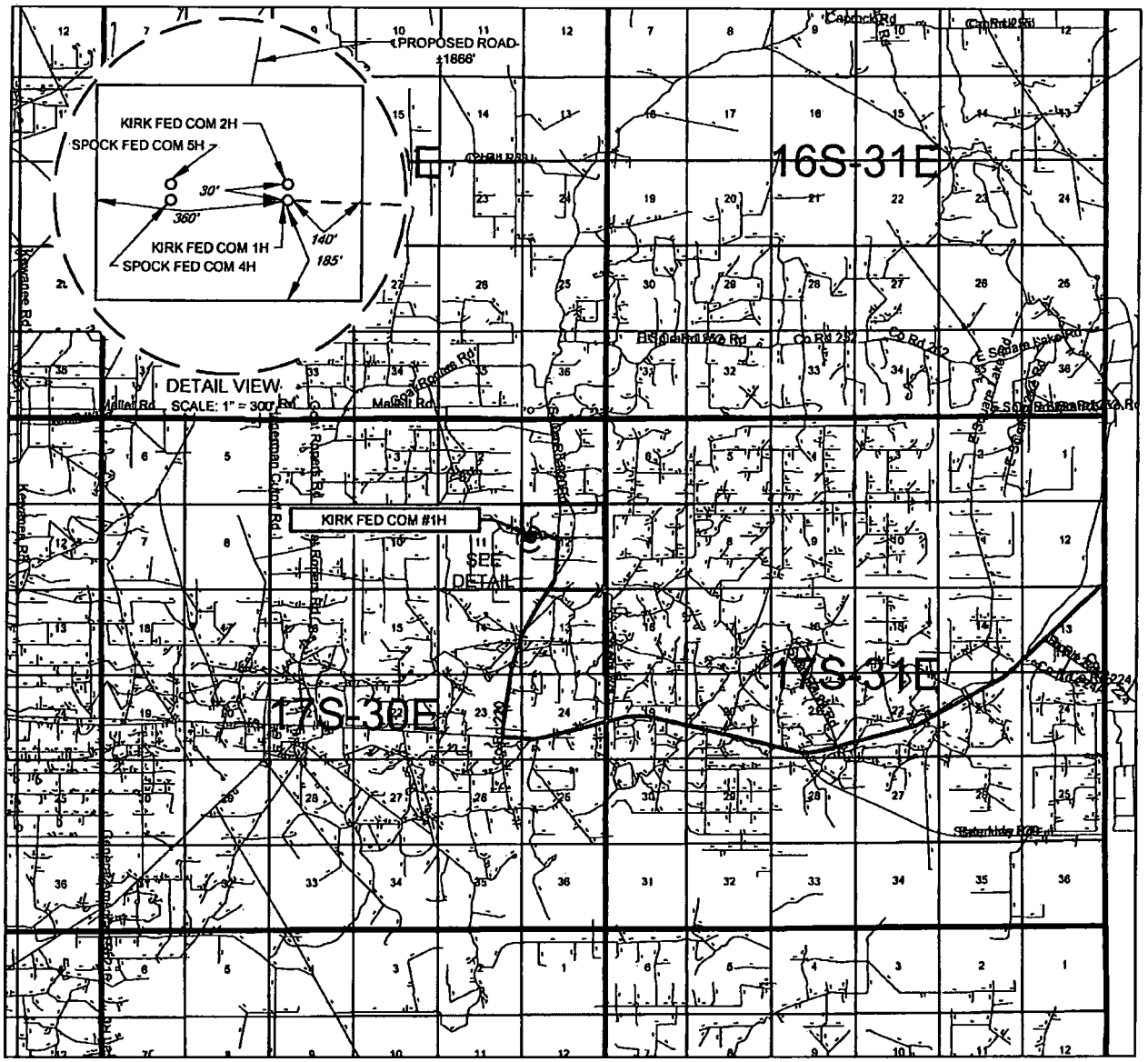
EXHIBIT 2

VICINITY MAP



eog resources, Inc.

LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

SECTION 12 TWP 17-S RGE 30-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 2079 FN/SL & 572 FW/EL

DISTANCE & DIRECTION

FROM INT. OF NM-18 N. & HWY. 82, GO WEST ON HWY. 82 ±36.8 MILES, THENCE RIGHT (NORTH) ON SQUARE LAKE ROAD ±2.5, THENCE LEFT (WEST) ON LEASE ROAD ±0.3 MILES TO A POINT ±225 FEET NORTH OF THE LOCATION.

N

SCALE: 1" = 1000'
0' 500' 1000'

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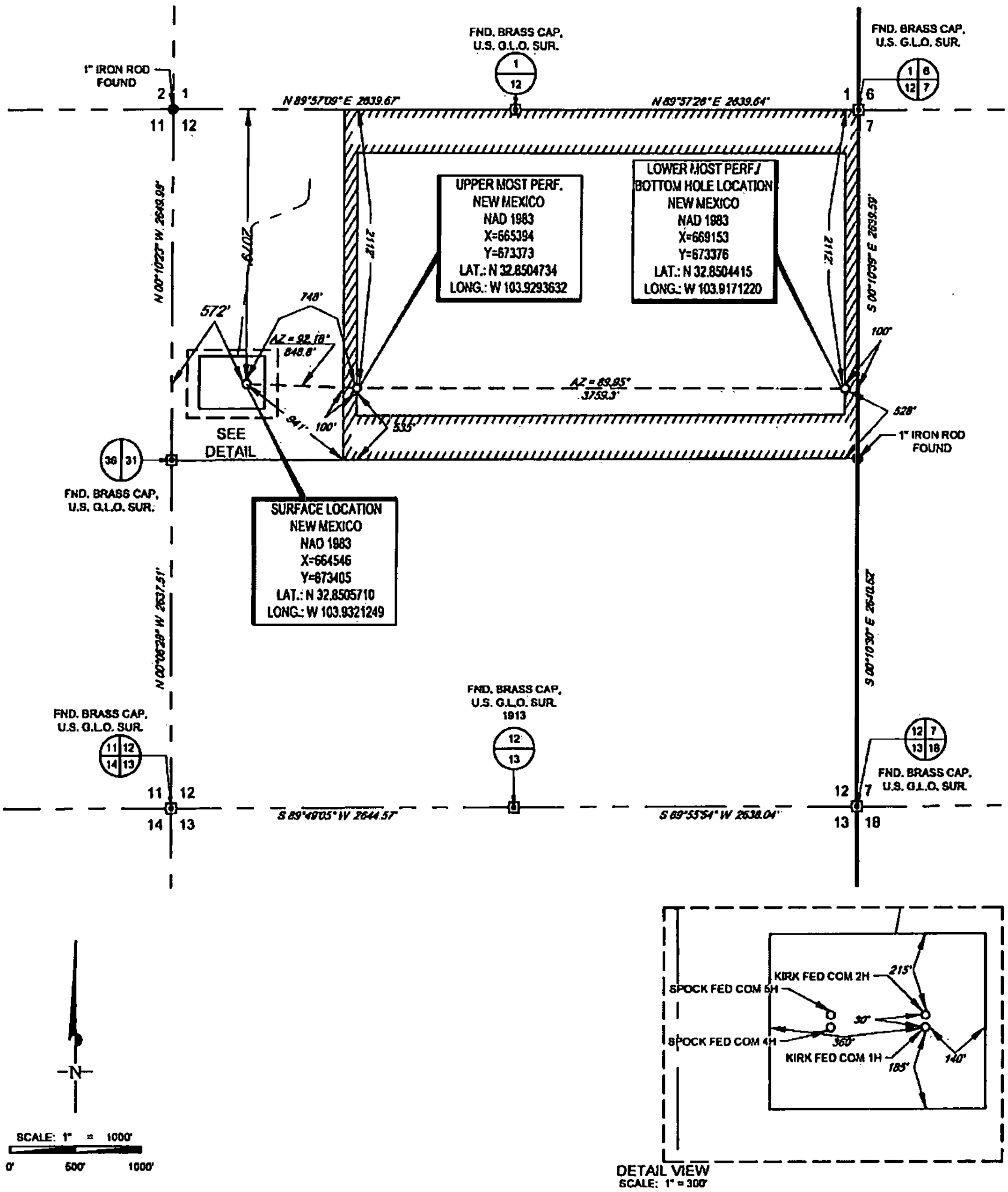
EXHIBIT 2A

SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

SECTION 12 TWP 17-S RGE 30-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 2079 FN/SL & 572 FW/EL

DISTANCE & DIRECTION
FROM INT. OF NM-18 N. & HWY. 82, GO WEST ON HWY. 82 ±36.8 MILES, THENCE RIGHT (NORTH) ON SQUARE LAKE ROAD ±2.5, THENCE LEFT (WEST) ON LEASE ROAD ±0.3 MILES TO A POINT ±225 FEET NORTH OF THE LOCATION.

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

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"PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE."

Michael Blake Brown, P.S. No. 18329
JULY 13, 2018

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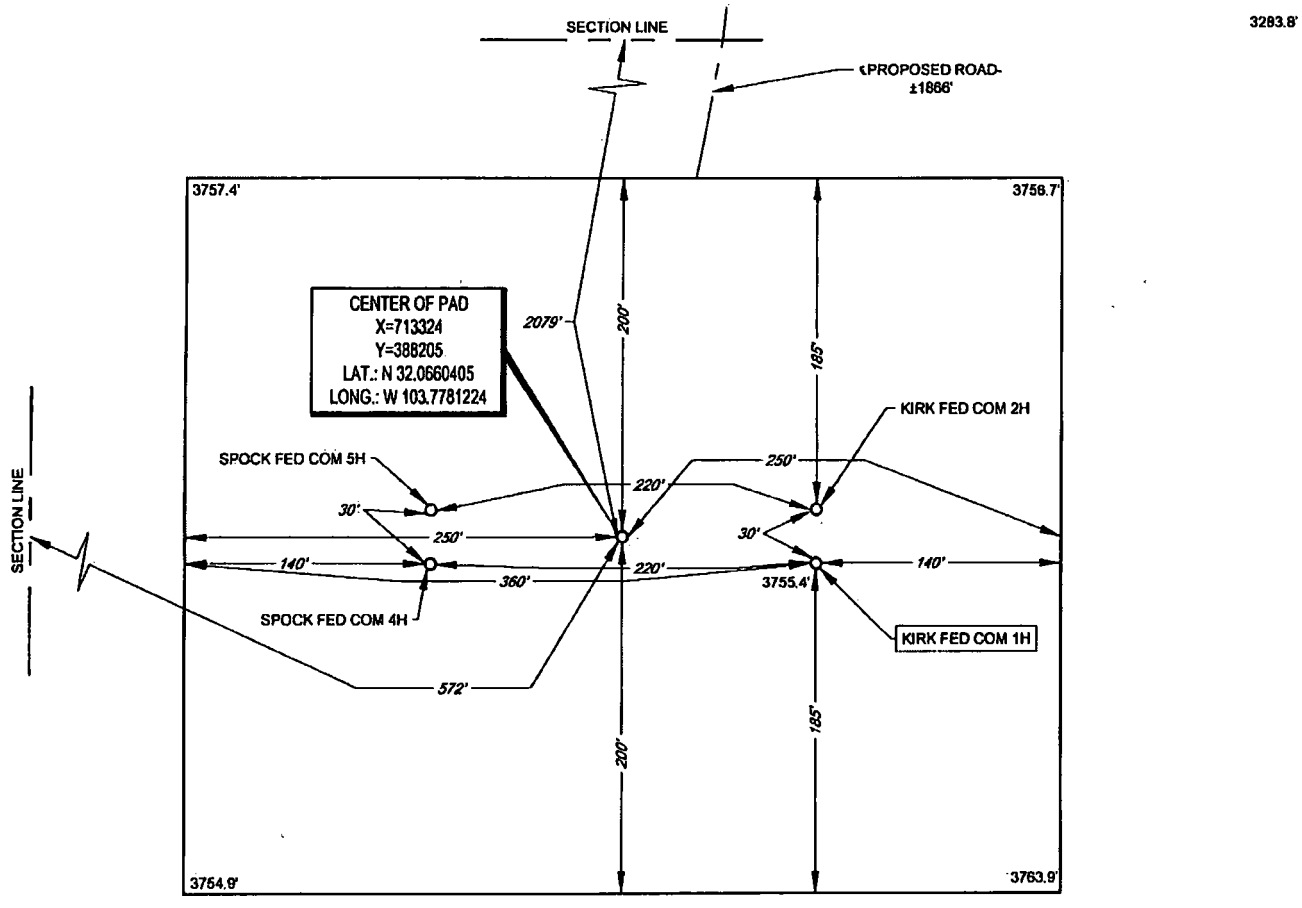
EXHIBIT 2B

eog resources, inc.

SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

1H LATITUDE N 32.8505710 1H LONGITUDE W 103.9321249

LEGEND

- CENTERLINE ROAD
- SECTION LINE
- EXISTING PIPELINE

N

SCALE: 1" = 100'

0' 50' 100'

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

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

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TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
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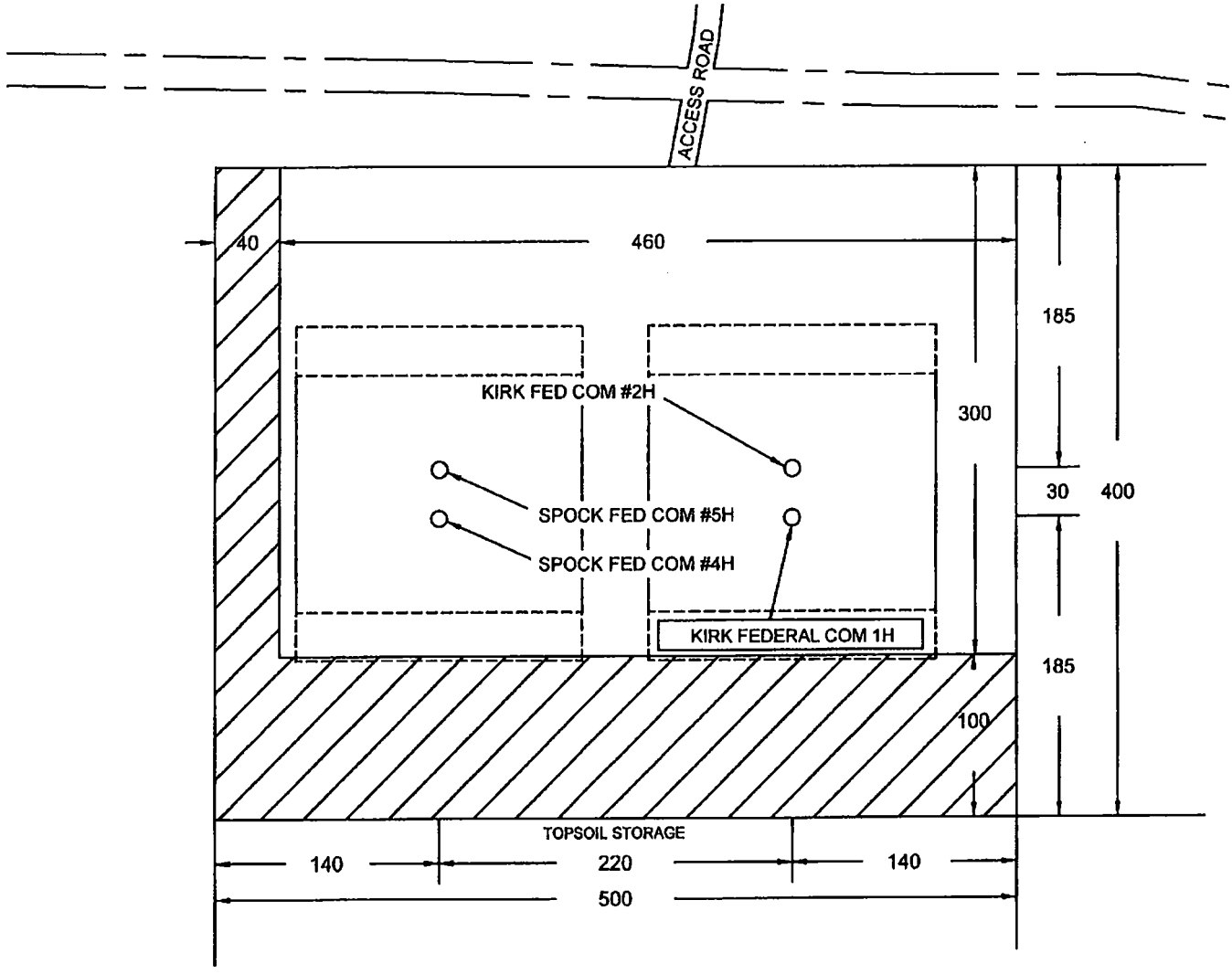
ORIGINAL DOCUMENT SIZE: 8.5" X 11"

EXHIBIT 2C

RECLAMATION AND FACILITY DIAGRAM - PRODUCTION FACILITIES DIAGRAM

SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

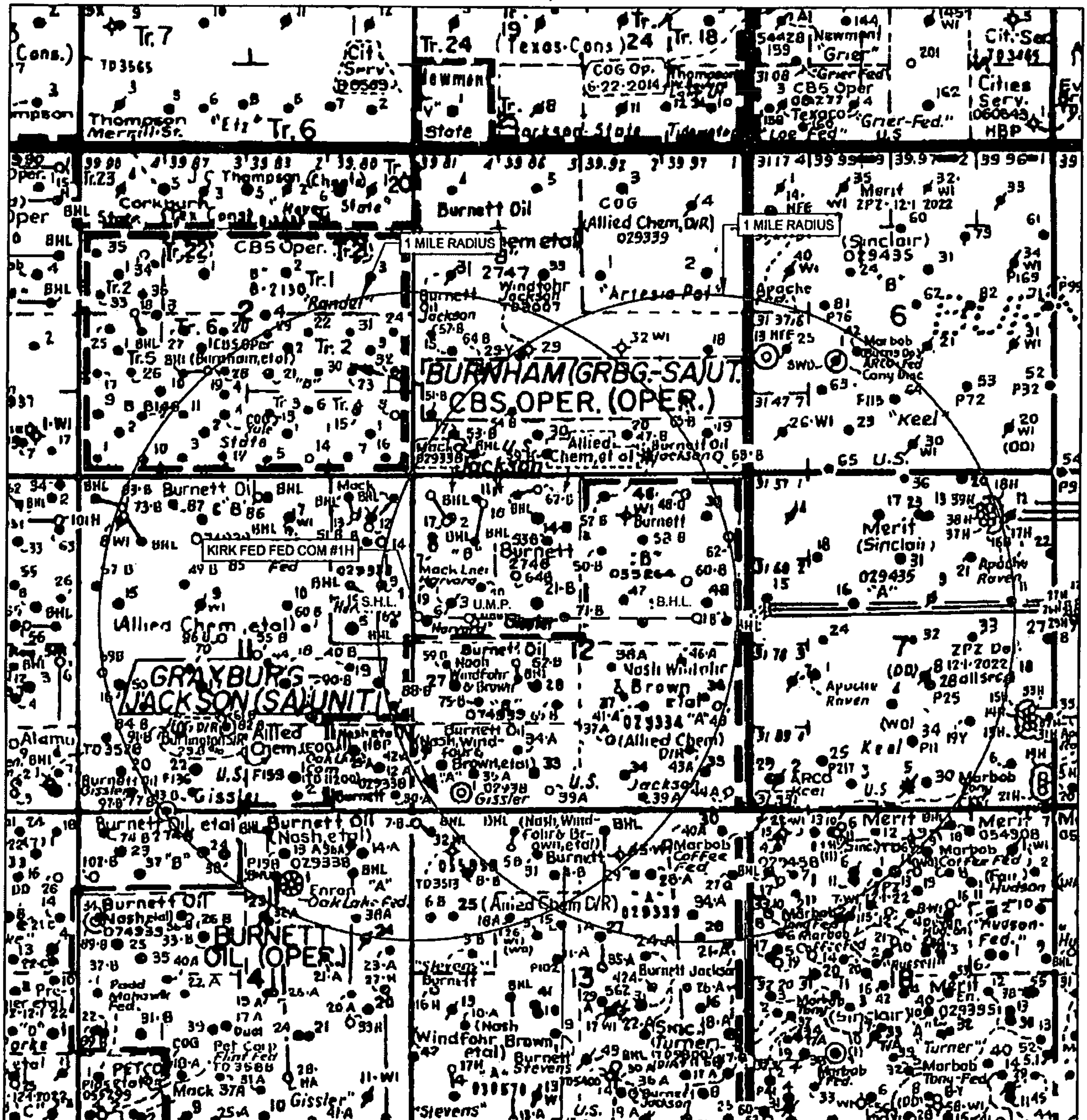
1H LATITUDE N 32.8505710 1H LONGITUDE W 103.9321249

S:\SURVEY\EOG_ARTESIA\KIRK_FEDERAL_COM\FINAL_PRODUCTS\LO_KIRK_FED_COM_1H_REV1.DWG 7/17/2018 10:59:52 AM csmith5

EXHIBIT 3

eog resources, Inc.

SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

SCALE: NTS

#1H LATITUDE N 32.8505710 #1H LONGITUDE W 103.9321249

-N-

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

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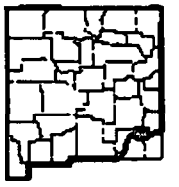
S:\SURVEY\EOG_ARTESIA\KIRK_FEDERAL_COM\FINAL_PRODUCTS\LO_KIRK_FED_COM_1H_REV1.DWG 7/17/2018 10:59:56 AM



Legend

- Jeffersonian Sections
- Artesia SHL Directional
- Artesia Well Path
- Well Plans
- Well Pad Areas
- Land Calendar Legend
  - EXPIRATION
  - OBLIGATION
  - PAYMENT

35,352.5 0 17,676.27 35,352.5 Feet

1: 212,115

Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Date: 7/19/2018

eog resources

ARTESIA DIVISION

Water Source
Kirk Federal Com #1H, #2H, #3H

Author: Trixy Duke


KIRK FEDERAL COM 3H
KIRK FEDERAL COM 2H
KIRK FEDERAL COM 4H
KIRK FEDERAL COM -WELLS

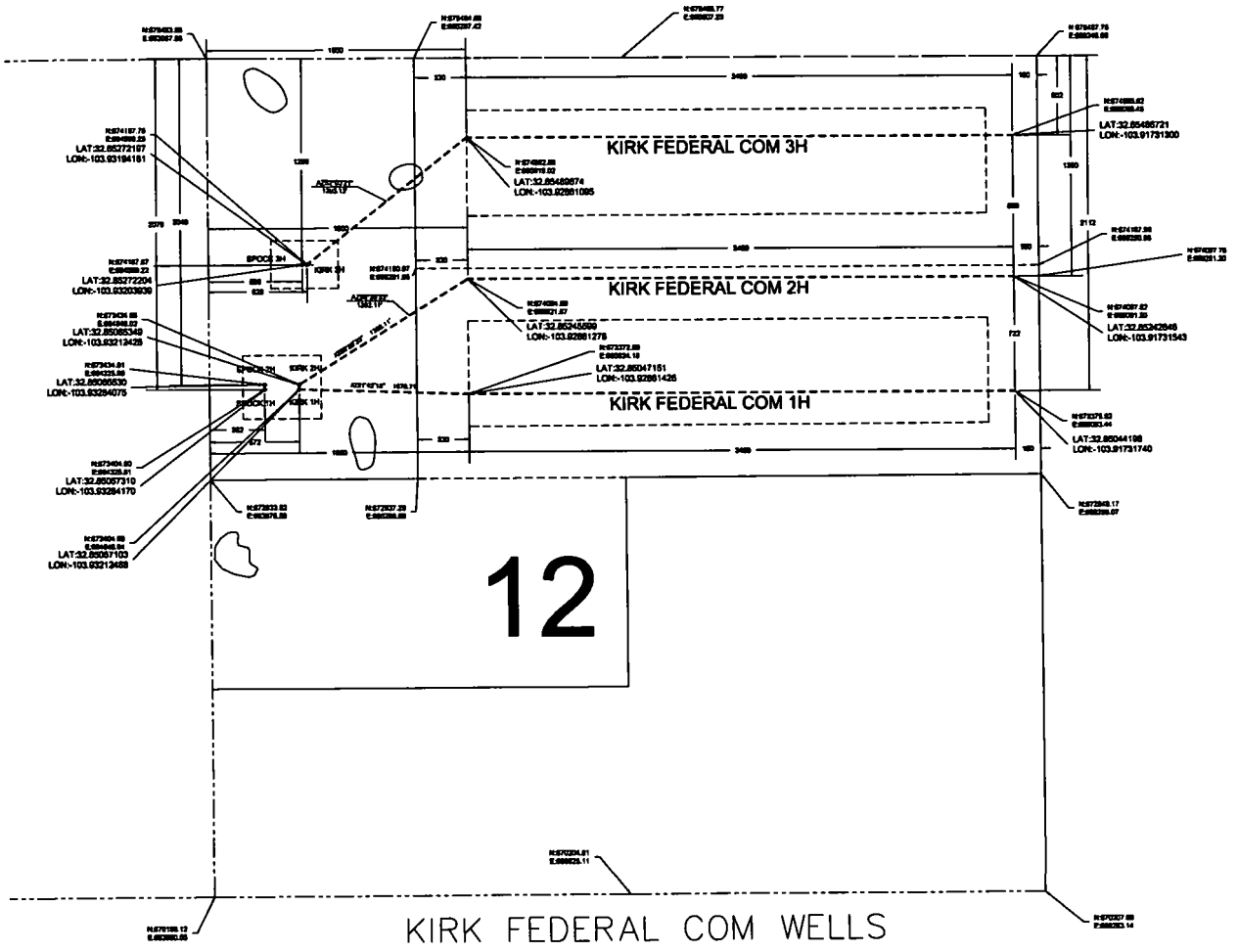
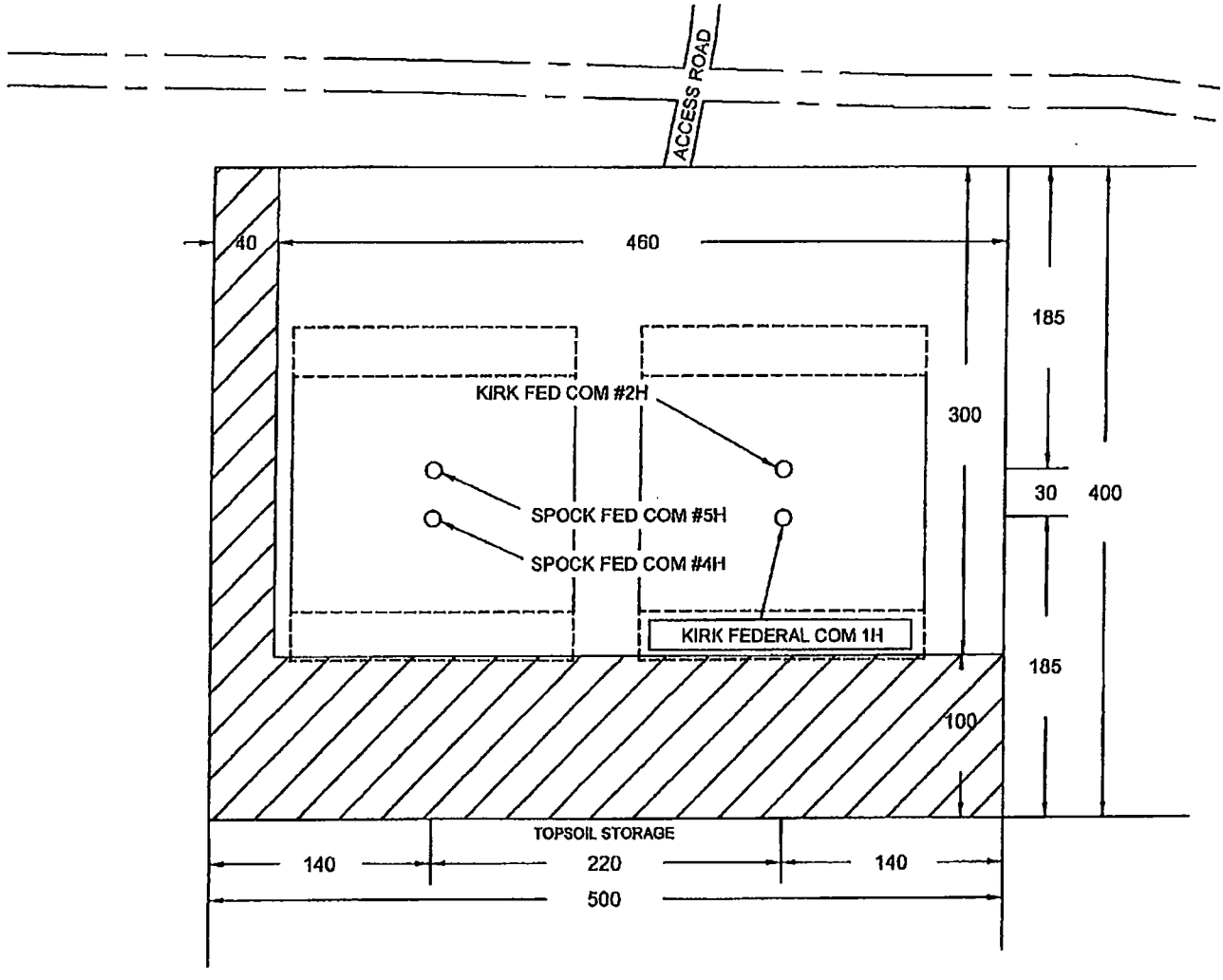

KIRK FEDERAL COM 3H
KIRK FEDERAL COM 2H
KIRK FEDERAL COM 1H
12
KIRK FEDERAL COM WELLS

EXHIBIT 2C
RECLAMATION AND FACILITY DIAGRAM - PRODUCTION FACILITIES DIAGRAM

SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



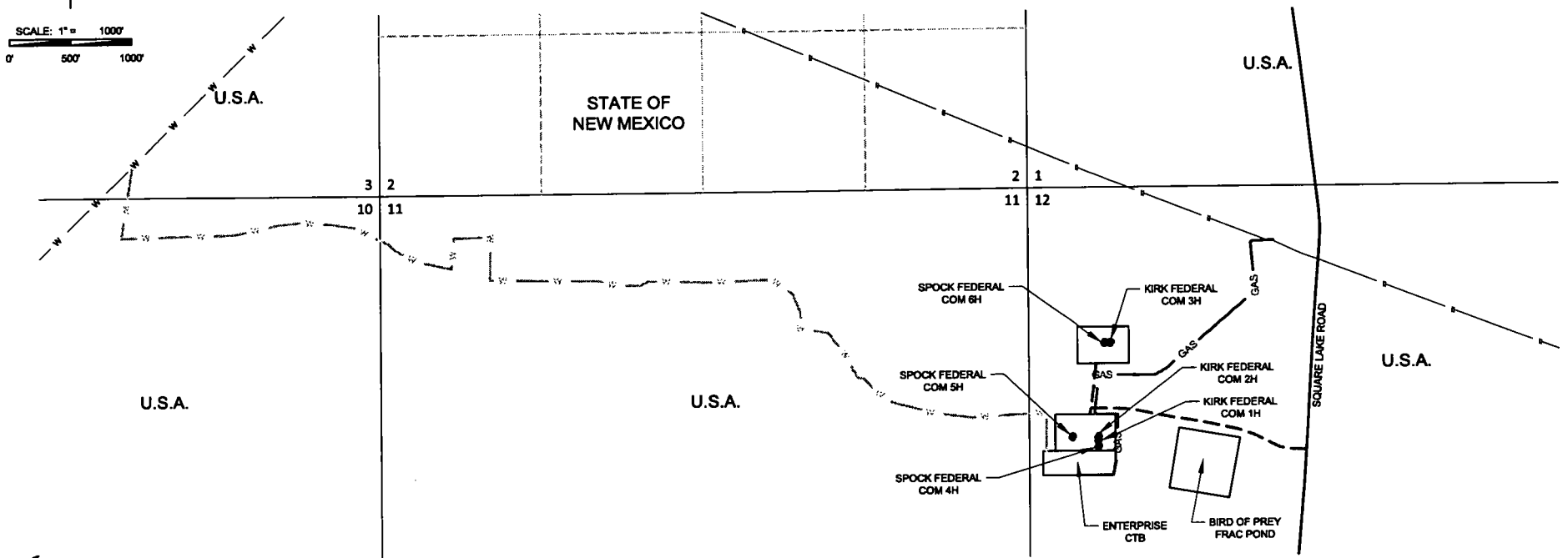
LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

1H LATITUDE N 32.8505710 1H LONGITUDE W 103.9321249

EXHIBIT 5

SECTIONS 3, 10, 11, & 12, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.
EDDY COUNTY, NEW MEXICO

KIRK FEDERAL COM 1H-3H
SPOCK FEDERAL COM 1H-4H
INFRASTRUCTURE



eog resources, inc.

KIRK FEDERAL COM 1H-3H SPOCK FEDERAL COM 1H-4H INFRASTRUCTURE	REVISION:	
	INT	DATE
DATE: 10/9/2018		
FILE: SK_KIRK_SPOCK_FEDERAL_COM_INFRASTRUCTURE		
DRAWN BY: C.E.S.		
SHEET: 1 OF 1		

PROPOSED ROAD
-TOTAL FOOTAGE..... 2,236 FT
FROM LEASE RD.
TO: KIRK FEDERAL COM 1H & 2H
SPOCK FEDERAL COM 4H & 5H
..... 2,184 FT
FROM: KIRK FEDERAL COM 1H & 2H
SPOCK FEDERAL COM 4H & 5H
TO: KIRK FEDERAL COM 3H
SPOCK FEDERAL COM 6H
..... 52 FT

PROPOSED GAS LINE
-TOTAL FOOTAGE..... 3,447 FT

PROPOSED WATER LINE
-TOTAL FOOTAGE..... 9,718 FT

United States Department of the Interior

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE
620 E. GREENE ST.
CARLSBAD, NM 88220
BLM_NM_CFO_APD@BLM.GOV

In Reply To:
3160 (Office Code)
[NMLC0029338B]

10/05/2018

Attn: TINA HUERTA
EOG RESOURCES INCORPORATED
1111 BAGBY SKY LOBBY2
HOUSTON, TX 77002

Re: Receipt and Acceptability of Application for Permit to Drill (APD)
FEDERAL - NMLC0029338B

Well Name / Number:	**KIRK FEDERAL COM / 1H**
Legal Description:	T17S, R30E, SEC 12, SWNW
County, State:	EDDY, NM
Date APD Received:	08/02/2018

Dear Operator:

The BLM received your Application for Permit to Drill (APD), for the referenced well, on 08/02/2018 . The BLM reviewed the APD package pursuant to part III.D of Onshore Oil and Gas Order No.1 and it is:

1. ☑ Incomplete/Deficient (*The BLM cannot process the APD until you submit the identified items within 45 calendar days of the date of this notice or the BLM will return your APD.*)

- ☐ Well Plat
- ☑ Drilling Plan
- ☑ Surface Use Plan of Operations (SUPO)
  - ☑ Certification of Private Surface Owner Access Agreement
- ☐ Bonding
- ☐ Onsite (The BLM has scheduled the onsite to be on)
  This requirement is exempt of the 45-day timeframe to submit deficiencies. This requirement will be satisfied on the date of the onsite.
- ☑ Other

[Please See Addendum for further clarification of deficiencies]

2. ☐ Missing Necessary Information (*The BLM can start, but cannot complete the analysis until you submit the identified items. This is an early notice and the BLM will restate this in a 30-day deferral letter, if you have not submitted the information at that time. You will have two (2) years from the date of the deferral to submit this information or the BLM will deny your APD.*)

[*Please See Addendum for further clarification of deficiencies*]

NOTE: The BLM will return your APD package to you, unless you correct all deficiencies identified above (item 1) within 45 calendar days.

- The BLM will not refund an APD processing fee or apply it to another APD for any returned APD.

Extension Requests:

- If you know you will not be able to meet the 45-day timeframe for reasons beyond your control, you must submit a written request through email/standard mail for extension prior to the 45th calendar day from this notice, **11/19/2018.**

- The BLM will consider the extension request if you can demonstrate your diligence (providing reasons and examples of why the delay is occurring beyond your control) in attempting to correct the deficiencies and can provide a date by which you will correct the deficiencies. If the BLM determines that the request does not warrant an extension, the BLM will return the APD as incomplete after the 45 calendar days have elapsed.

    - The BLM will determine whether to grant an extension beyond the required 45 calendar days and will document this request in the well file. If you fail to submit deficiencies by the date defined in the extension request, the BLM will return the APD.

APDs remaining Incomplete:

- If the APD is still not complete, the BLM will notify you and allow 10 additional business days to submit a written request to the BLM for an extension. The request must describe how you will address all outstanding deficiencies and the timeframe you request to complete the deficiencies.

    - The BLM will consider the extension request if you can prove your diligence (providing reasons and examples of why the delay is occurring) in attempting to correct the deficiencies and you can provide a date by which you will correct the deficiencies. If the BLM determines that the request does not warrant an additional extension, the BLM will return the APD as incomplete.

If you have any questions, please contact Katrina Ponder at (575) 234-5969.

Sincerely,

Cody Layton
Assistant Field Manager

cc: Official File

ADDENDUM - Incomplete/Deficient Clarifications

ADDENDUM - Deficient

Surface Comments

- Well Site Layout Deficiency:
  Well site and production facilities layout needs to be a professional plat.

- Plans for Surface Reclamation Deficiency:
  Reclamation plan needs to be a professional plat.

Engineering Comments

- BOP requirements are not met
  Submit a variance to use a flex choke hose line.

* - Engineering Review: Other submitted information are inadequate and/or incomplete
  Submit a contingency casing plan if there was a total loss of fluid.

ADDENDUM - Incomplete or Necessary Information

Adjudication Comments

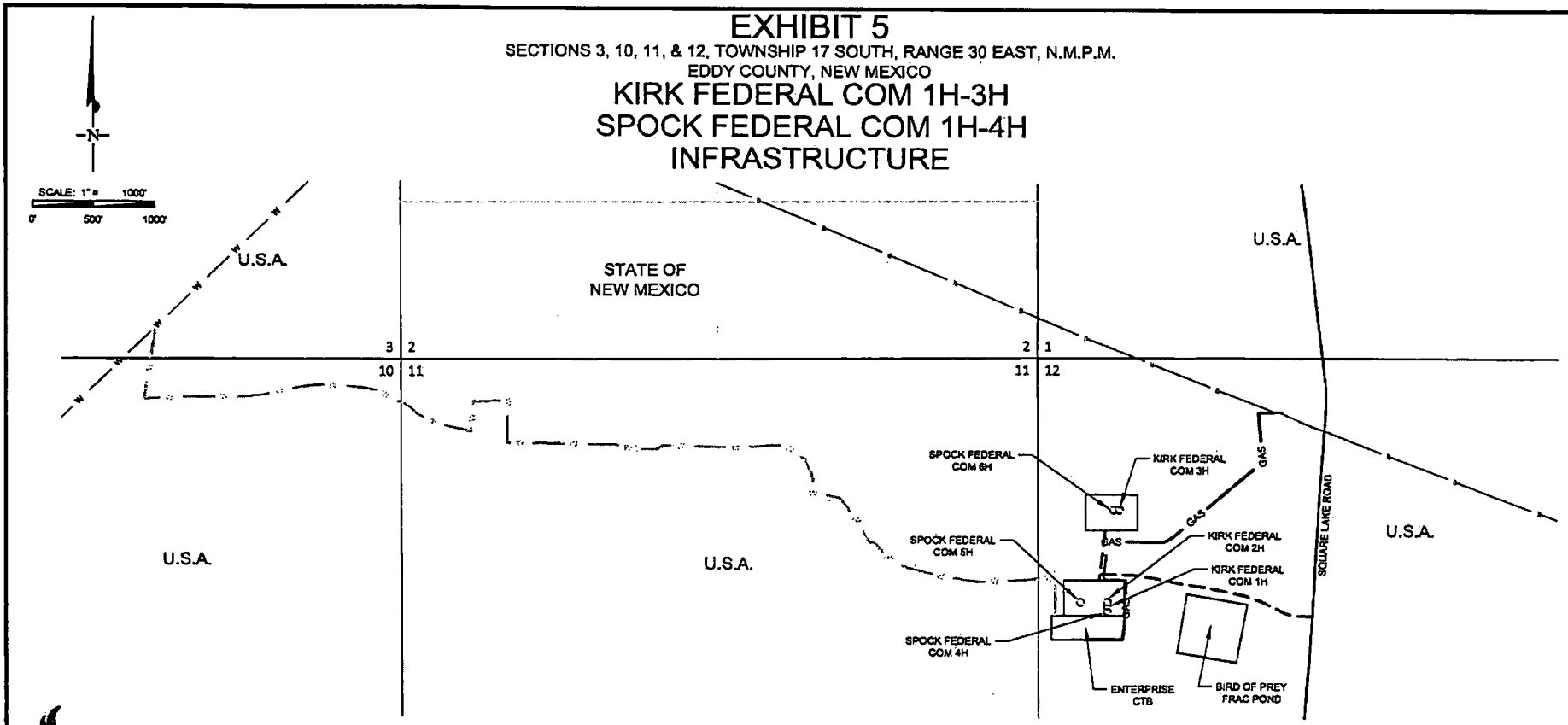
- Adjudicator additional information:
  In well location table of AFMSS 2, MD/TVD for SHL should be 0'.

*Nota Stevens rescinded Contingency request per phone conversation 10/11/18 @ 1:15 pm.

EXHIBIT 5

SECTIONS 3, 10, 11, & 12, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.
EDDY COUNTY, NEW MEXICO

KIRK FEDERAL COM 1H-3H
SPOCK FEDERAL COM 1H-4H
INFRASTRUCTURE



eog resources, inc.

KIRK FEDERAL COM 1H-3H SPOCK FEDERAL COM 1H-4H INFRASTRUCTURE	REVISION:	
	INT	DATE
DATE: 10/9/2018		
FILE: SL_KIRK_SPOCK_FEDERAL_COM_INFRASTRUCTURE		
DRAWN BY: C.E.S.		
SHEET: 1 OF 1		

PROPOSED ROAD
-TOTAL FOOTAGE ..... 2,239 FT
FROM LEASE RD.
TO: KIRK FEDERAL COM 1H & 2H
SPOCK FEDERAL COM 4H & 5H ..... 3,194 FT
FROM: KIRK FEDERAL COM 1H & 2H
SPOCK FEDERAL COM 4H & 5H
TO: KIRK FEDERAL COM 3H
SPOCK FEDERAL COM 6H ..... 52 FT

PROPOSED GAS LINE
-TOTAL FOOTAGE ..... 3,447 FT

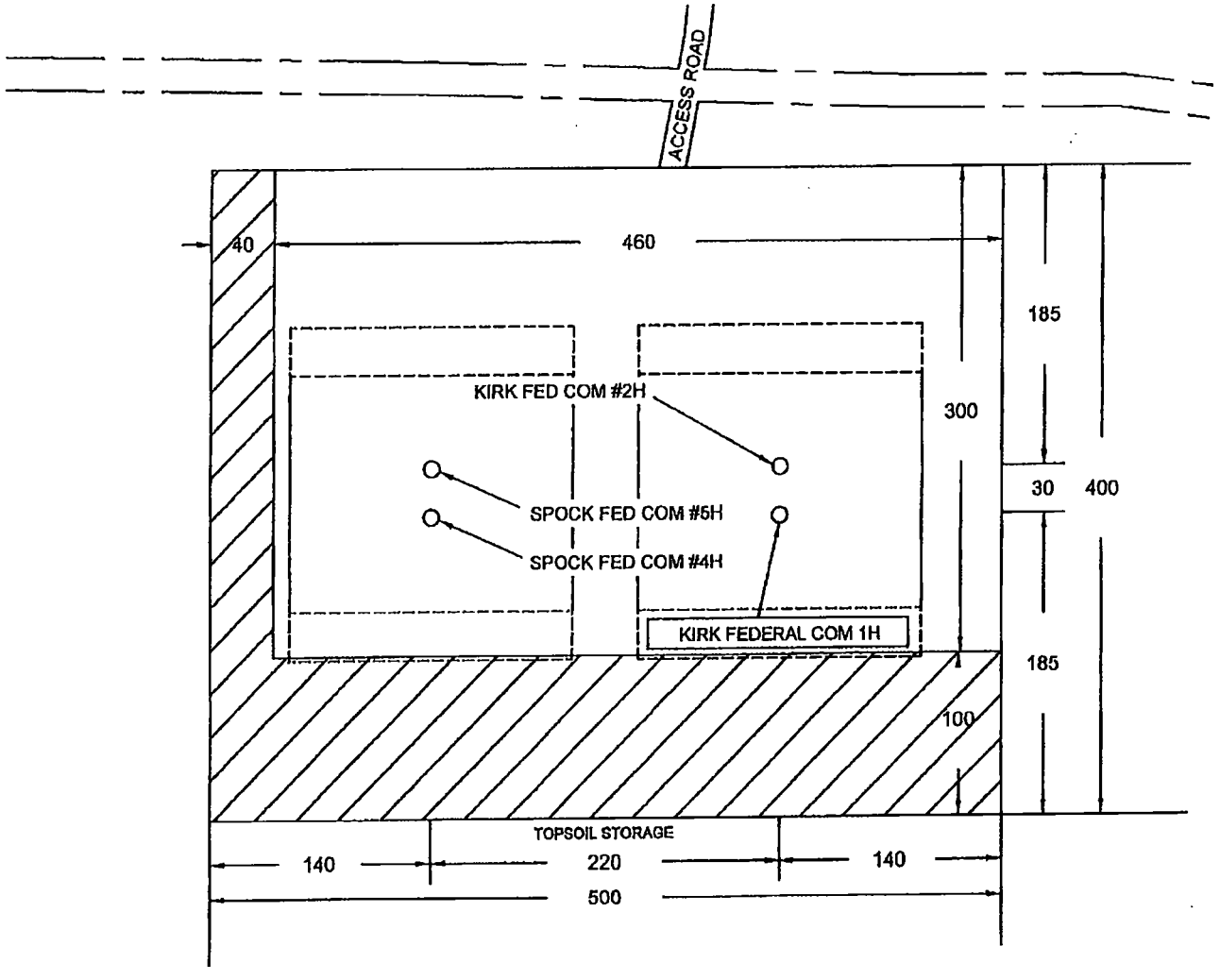
PROPOSED WATER LINE
-TOTAL FOOTAGE ..... 5,718 FT

EXHIBIT 2C

RECLAMATION AND FACILITY DIAGRAM - PRODUCTION FACILITIES DIAGRAM

SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

1H LATITUDE N 32.8505710 1H LONGITUDE W 103.9321249

APD ID: 10400032189
Submission Date: 08/02/2018
Operator Name: EOG RESOURCES INCORPORATED
Well Name: KIRK FEDERAL COM
Well Number: 1H
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:

KirkFederalCom1HRoadMap_20180719085541.pdf

Existing Road Purpose: ACCESS,FLUID TRANSPORT

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

Will new roads be needed? NO

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

KirkFederalCom1HExistingWellMap_20180719085732.pdf

Operator Name: EOG RESOURCES INCORPORATED

Well Name: KIRK FEDERAL COM **Well Number:** 1H

Existing Wells description:

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description:

Production Facilities map:

KirkWellsproductionfacilitymap_20180802101000.pdf
BO_ENTERPRISE_CTB_T17S_R30E_SEC12_20181101145107.pdf
EP_ENTERPRISE_CTB_GL_SEC12_20181101145108.pdf
EP_ENTERPRISE_CTB_WL_SEC3_20181101145108.pdf
EP_ENTERPRISE_CTB_WL_SEC10_20181101145109.pdf
EP_ENTERPRISE_CTB_WL_SEC11_20181101145109.pdf
EP_ENTERPRISE_CTB_WL_SEC12_20181101145110.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

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

Water source type: GW WELL

Describe type:

Source longitude:

Source latitude:

Source datum: NAD83

Water source permit type: WATER WELL

Source land ownership: PRIVATE

Water source transport method: PIPELINE

Source transportation land ownership: PRIVATE

Water source volume (barrels): 120000

Source volume (acre-feet): 15.467172

Source volume (gal): 5040000

Water source and transportation map:

KirkWaterMap_20180719143701.pdf

Water source comments:

New water well? NO

New Water Well Info

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

Well target aquifer:

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

Aquifer comments:

Aquifer documentation:

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

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

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

Drilling method: **Drill material:**

Grout material: **Grout depth:**

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

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

Construction Materials description:

Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drill fluids and produced oil and water from the well during drilling and completing operations will be stored safely and disposed of properly in an NMOCD approved disposal facility. Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly. Human waste and grey water will be properly contained of and disposed of properly. After drilling and completion operations; trash, chemicals, salts, frac sand, and other waste material will be removed and disposed of properly at a state approved disposal facility.
Amount of waste: 0 barrels

Waste disposal frequency : Daily

Safe containment description: Steel Tanks

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Trucked to NMOCD approved disposal facility

Reserve Pit

Reserve Pit being used? NO

Operator Name: EOG RESOURCES INCORPORATED

Well Name: KIRK FEDERAL COM **Well Number:** 1H

Temporary disposal of produced water into reserve pit?

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

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

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

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? NO

Description of cuttings location

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

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

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

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

WellSiteDiagram_20180719084250.pdf
KirkWellsInfrastructure_20181010075625.pdf
KirkFederalCom1HOtherAtt_20181106093711.pdf

Comments:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: KIRK FEDERAL COM **Well Number:** 1H

Section 10 - Plans for Surface Reclamation

Type of disturbance: No New Surface Disturbance **Multiple Well Pad Name:** KIRK FEDERAL COM

Multiple Well Pad Number: 1H

Recontouring attachment:

KirkFederalCom1HReclamationPlat10dayletterResponse_20181008101035.pdf

Drainage/Erosion control construction: Proper erosion control methods will be used on the area to control erosion, runoff, and siltation of the surrounding area.

Drainage/Erosion control reclamation: The interim reclamation will be monitored periodically to ensure that vegetation has reestablished and that erosion is controlled.

Well pad proposed disturbance (acres): 0

Road proposed disturbance (acres): 0

Powerline proposed disturbance (acres): 0

Pipeline proposed disturbance (acres): 0

Other proposed disturbance (acres): 0

Total proposed disturbance: 0

Well pad interim reclamation (acres):

Road interim reclamation (acres):

Powerline interim reclamation (acres): 0

Pipeline interim reclamation (acres):

Other interim reclamation (acres):

Total interim reclamation:

Well pad long term disturbance (acres):

Road long term disturbance (acres):

Powerline long term disturbance (acres): 0

Pipeline long term disturbance (acres):

Other long term disturbance (acres):

Total long term disturbance:

Disturbance Comments:

Reconstruction method: In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads. Areas planned for interim reclamation will be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.

Topsoil redistribution: Topsoil will be evenly respreads and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts and fills. To see the area, the proper BLM seed mixture, free of noxious weeds, will be used. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.

Soil treatment: Re-seed according to BLM standards. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion is controlled.

Existing Vegetation at the well pad: Grass, forbs, and small wood vegetation, such as mesquite will be excavated as the topsoil is removed. Large wood vegetation will be stripped and stored separately and respreads evenly on the site following topsoil respreading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils.

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road: All disturbed areas, including roads, pipelines, pads, will be recontoured to the contour existing prior to the initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline: All disturbed areas, including roads, pipelines, pads, will be recontoured to the contour existing prior to the initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.
Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances: All disturbed areas, including roads, pipelines, pads, will be recontoured to the contour existing prior to the initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.
Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO

Seed harvest description:

Seed harvest description attachment:

Seed Management

Seed Table

Seed type:

Seed source:

Seed name:

Source name:

Source address:

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre:

Proposed seeding season:

Seed Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Operator Name: EOG RESOURCES INCORPORATED

Well Name: KIRK FEDERAL COM **Well Number:** 1H

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: **Last Name:**

Phone: **Email:**

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, erosion is controlled, and free of noxious weeds. Weeds will be treated if found.
Weed treatment plan attachment:

Monitoring plan description: Reclamation will be completed within 6 months of well plugging. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, erosion is controlled, and free of noxious weeds.
Monitoring plan attachment:

Success standards: N/A

Pit closure description: N/A

Pit closure attachment:

Section 11 - Surface Ownership

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:

Operator Name: EOG RESOURCES INCORPORATED

Well Name: KIRK FEDERAL COM **Well Number:** 1H

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? NO

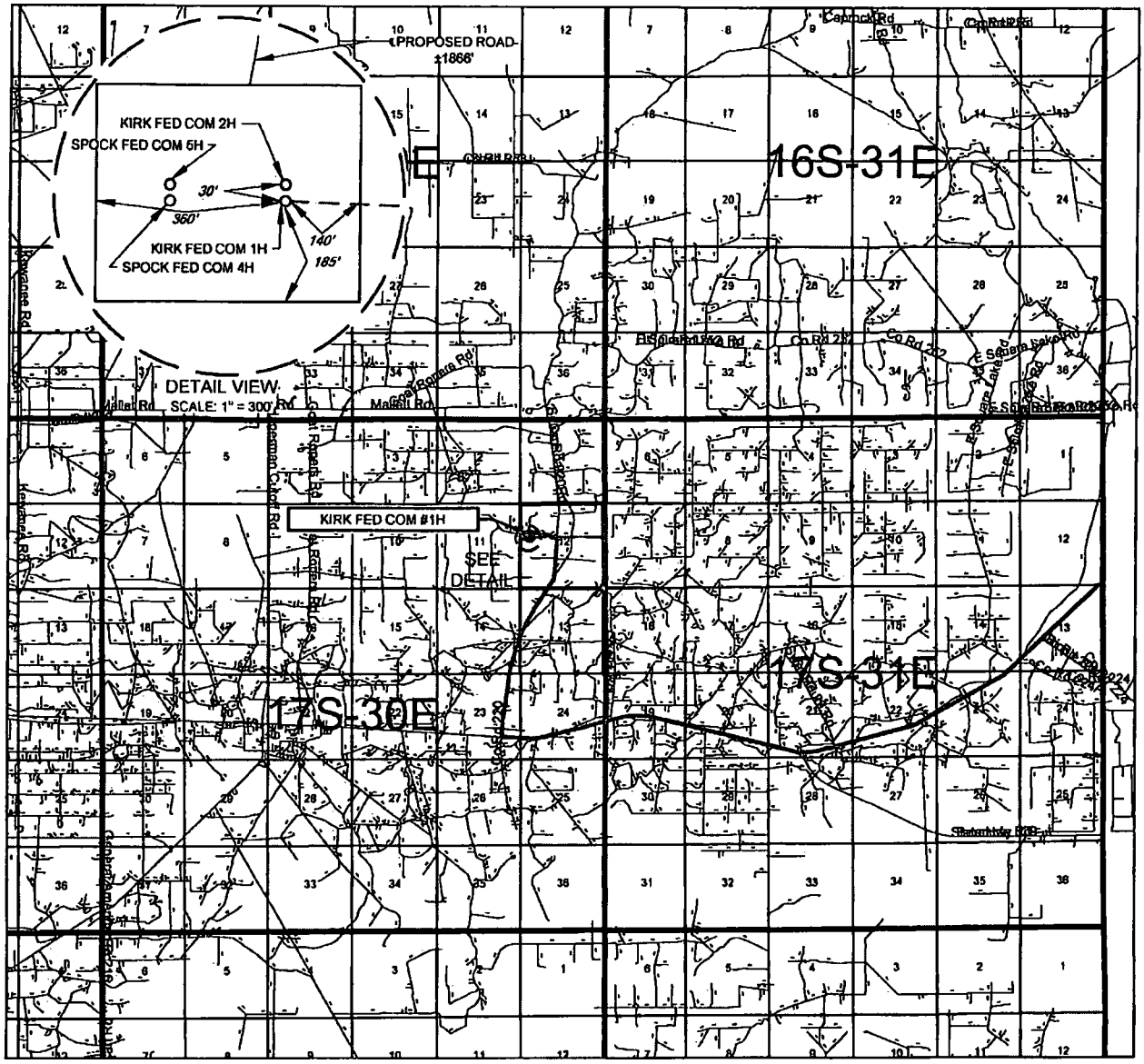
Previous Onsite information:

Other SUPO Attachment

KirkFederalCom1HSUPO_20180719091508.pdf

EXHIBIT 2

VICINITY MAP



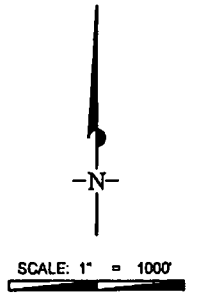
eog resources, inc.

LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

SECTION 12 TWP 17-S RGE 30-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 2079 FN/SL & 572 FW/EL

DISTANCE & DIRECTION

FROM INT. OF NM-18 N. & HWY. 82, GO WEST ON HWY. 82 ±36.8 MILES, THENCE RIGHT (NORTH) ON SQUARE LAKE ROAD ±2.5, THENCE LEFT (WEST) ON LEASE ROAD ±0.3 MILES TO A POINT ±225 FEET NORTH OF THE LOCATION.



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

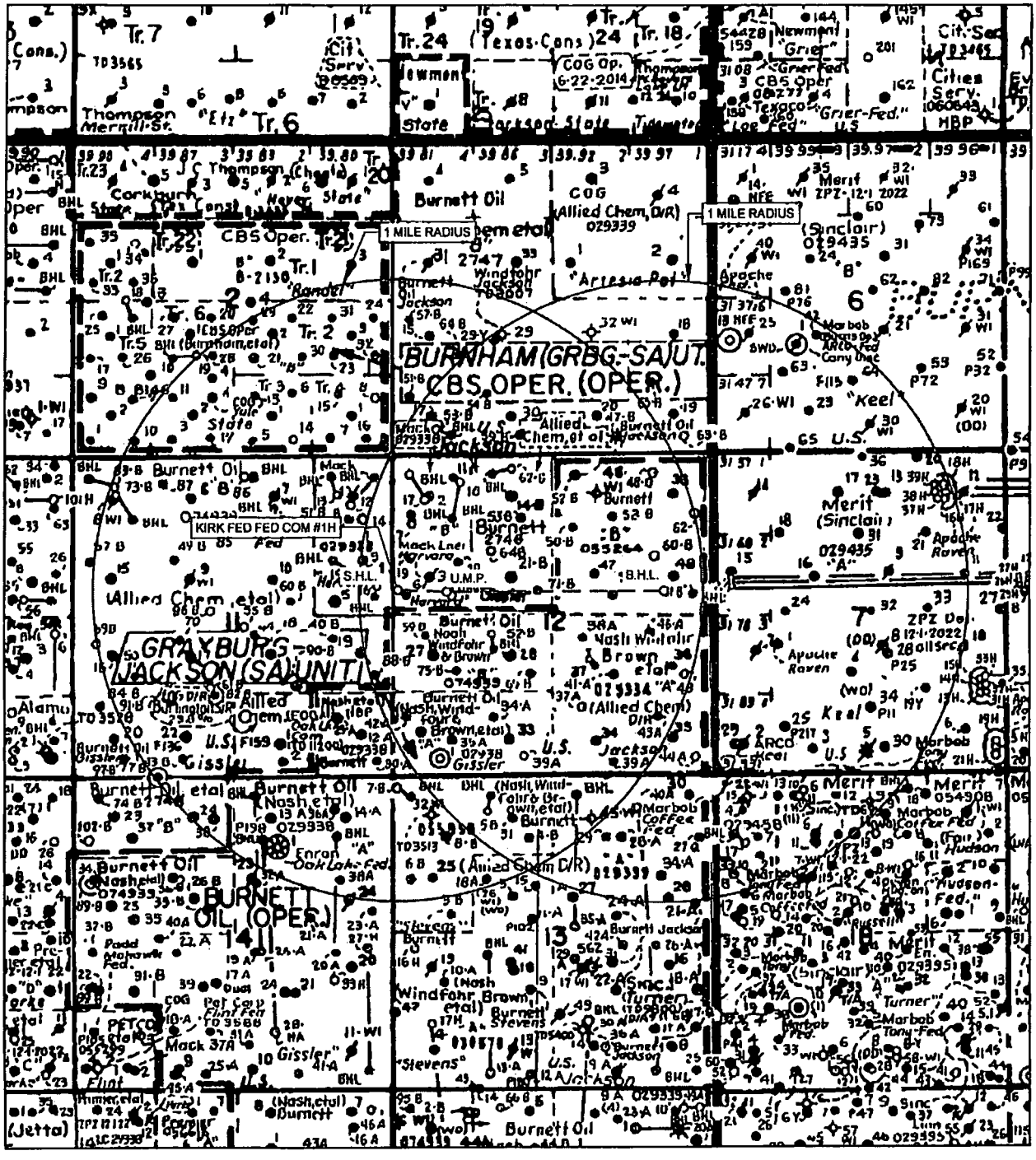
ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO COORDINATE SYSTEM OF 1983, EAST ZONE, U.S. SURVEY FEET.

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
1400 EVERMAN PARKWAY, Ste. 146 • FT. WORTH, TEXAS 76140
TELEPHONE: (817) 744-7512 • FAX (817) 744-7554
2903 NORTH BIG SPRING • MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 • FAX (432) 682-1743
WWW.TOPOGRAPHIC.COM

EXHIBIT 3

SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

eog resources, inc.



LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

SCALE: NTS

#1H LATITUDE N 32.8505710 #1H LONGITUDE W 103.9321249

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

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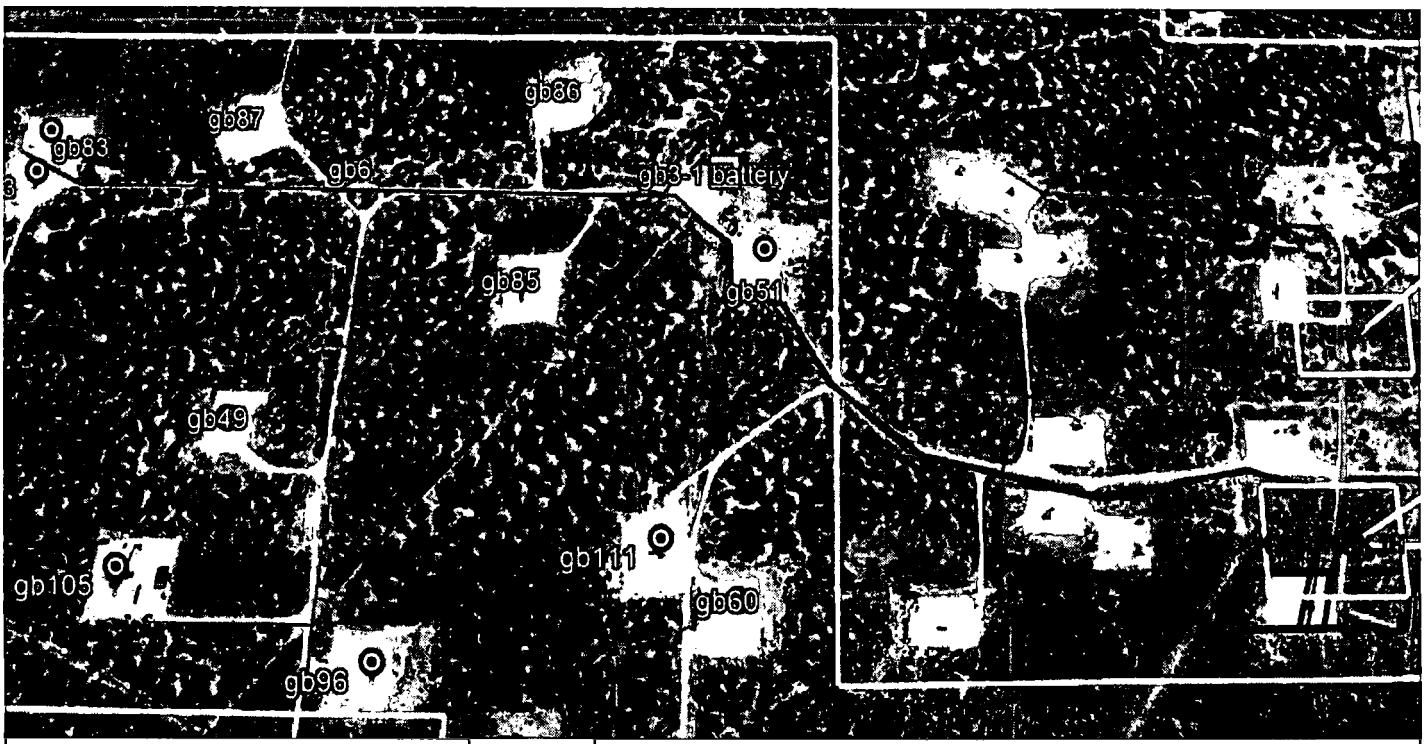

Legend/Key	
Color	**Description**
	Kirk/Spock Drilling Pads
	Proposed Electrical Hookup
	Current CVE Electric Grid
	Projected Wellbore Paths
	Kirk #3H Flowline Path
	Kirk #2H Flowline Path
	Kirk #1H Flowline Path
	Proposed location for Enterprise CTB
	Water Transfer Line
	EOG Acreage Outline
	Surface gas gathering lines to Gissler batteries

Proposed Flowlines for Wells, water takeaway, and gas takeaway		
	Proposed Electrical Hookup	Total Footage - 675 ft
	Kirk #3H Flowline Path	2- 4" Poly SDR-7 Flowlines, 2- 4" Flexsteel Lines (working pressures 75-125 psi) total footage per line 1,500 ft
	Kirk #2H Flowline Path	2- 4" Poly SDR-7 Flowlines, 2- 4" Flexsteel Lines (working pressures 75-125 psi) total footage per line 500 ft
	Kirk #1H Flowline Path	2- 4" Poly SDR-7 Flowlines, 2- 4" Flexsteel Lines (working pressures 75-125 psi) total footage per line 500 ft
	Water Transfer Line	4- 4" Poly SDR-7 Flowlines, total footage per line = 6,500'

Legend/Key	
Color	Description
	Kirk/Spock Drilling Pads
	Proposed Electrical Hookup
	Current CVE Electric Grid
	Projected Wellbore Paths
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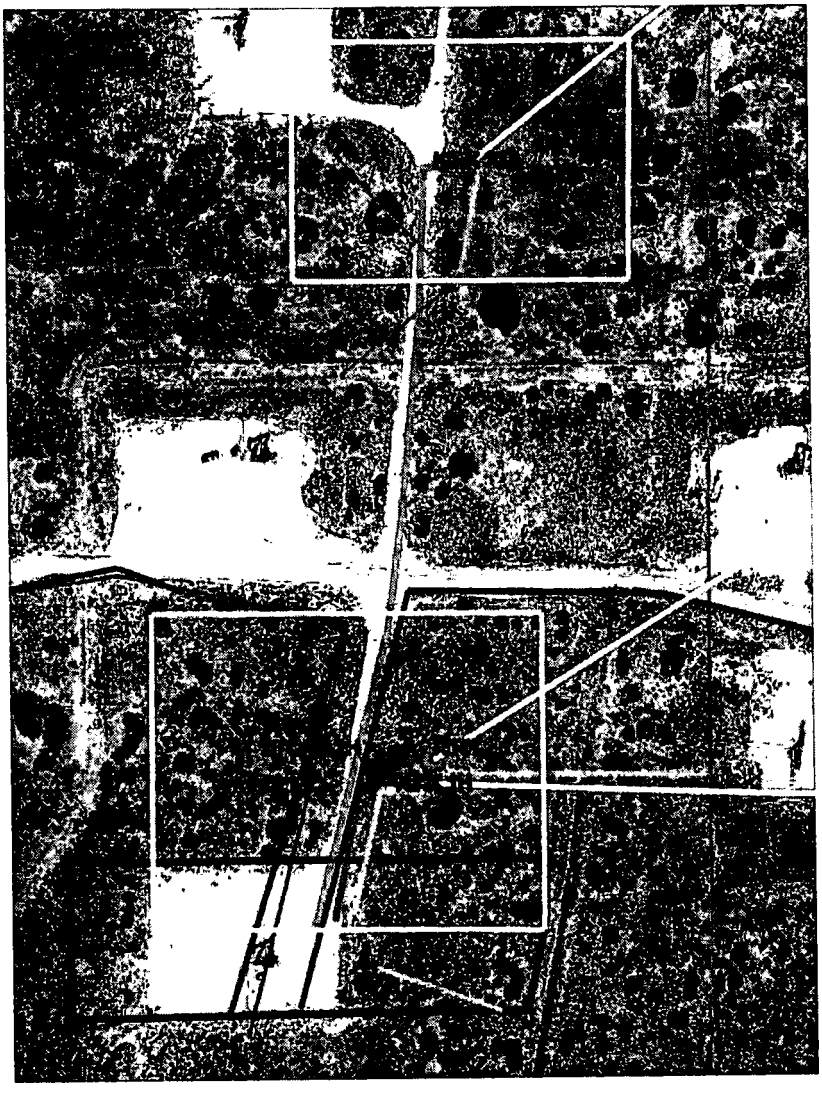
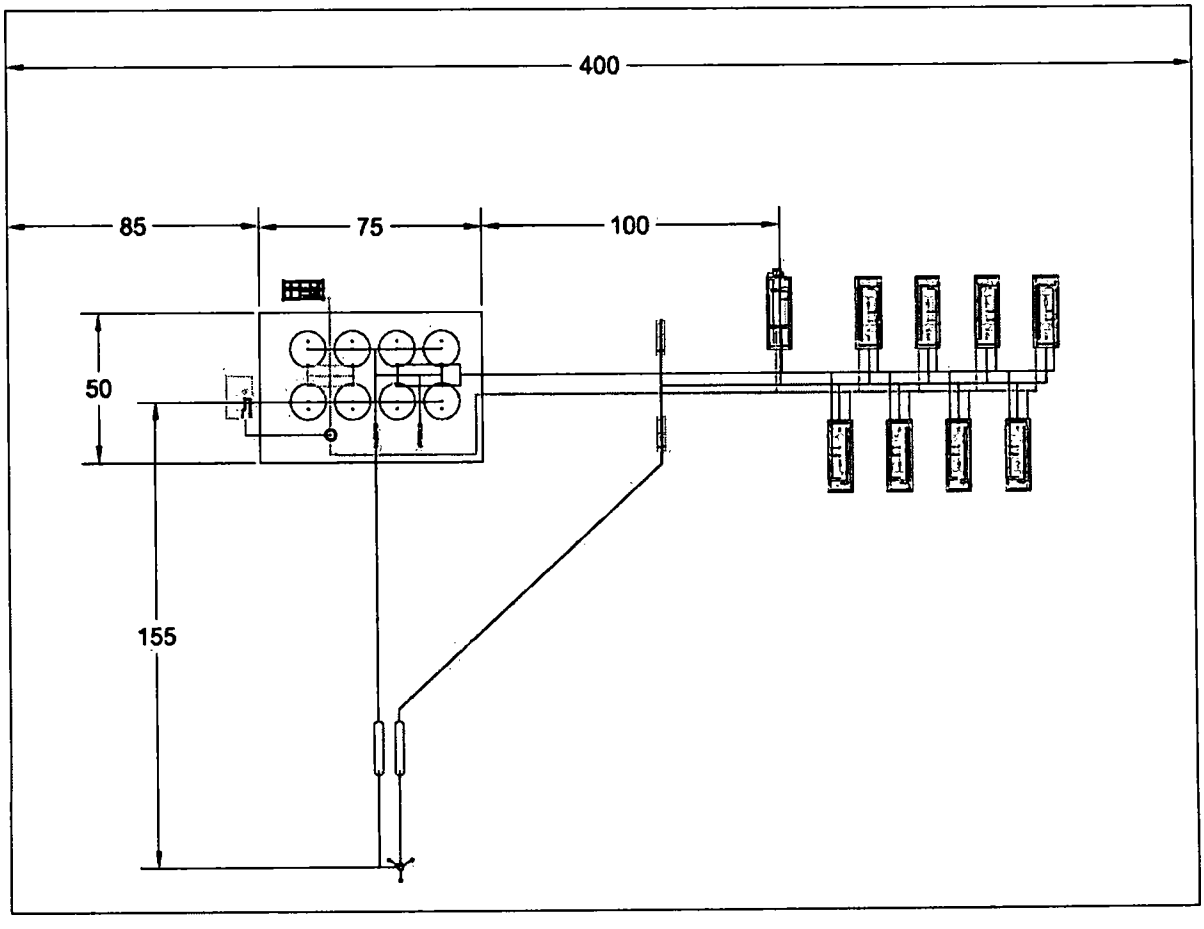
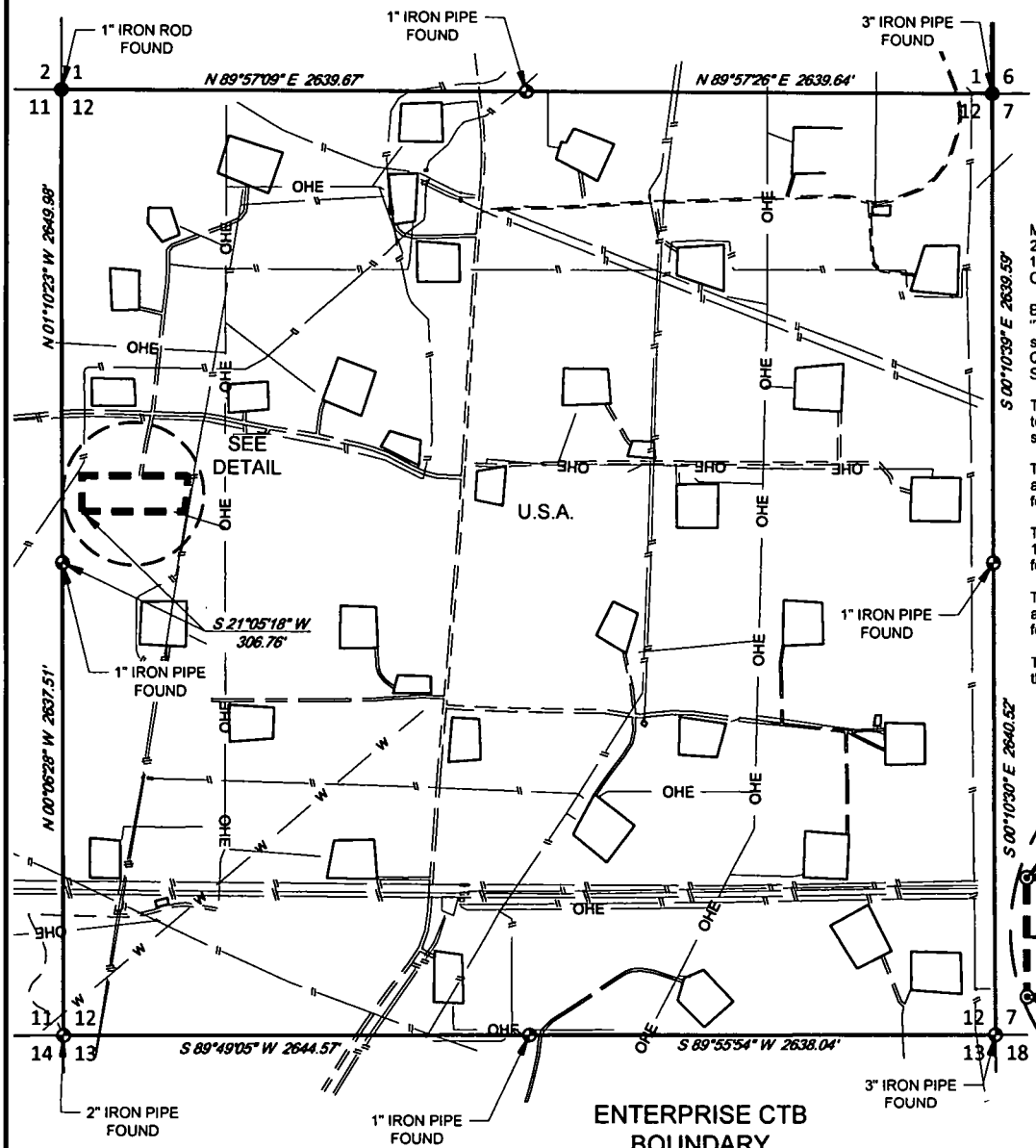



400
85
75
100
50
155

SCALE: 1" = 1000'

0' 500' 1000'

SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



ENTERPRISE CTB BOUNDARY

ENTERPRISE CTB BOUNDARY - 119,040 SQ FT, 2.73 ACRES

-N-

Metes and Bounds Description of a proposed 2.73 acre CTB located within Section 12, Township 17 South, Range 30 East, N.M.P.M., in Eddy County, New Mexico.

BEGINNING at a 1/2" iron rod with cap stamped "Topographic" set for the Southwest corner of this site, from whence a brass cap found for the West Quarter corner of said Section 12, bears: S 21°05'18" W, a distance of 306.76 feet;

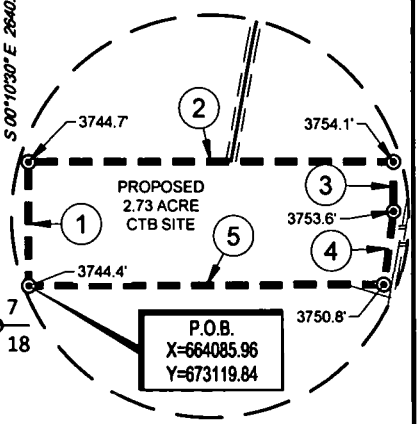
Thence N 00°00'00" W, a distance of 200.00 feet, to a 1/2" iron rod with cap stamped "Topographic" set for the Northwest corner of this site;

Thence N 90°00'00" E, a distance of 600.00 feet to a 1/2" iron rod with cap stamped "Topographic" set for the Northeast corner of this site;

Thence S 00°00'00" E, a distance of 80.00 feet to a 1/2" iron rod with cap stamped "Topographic" set for an angle point of this site;

Thence S 07°35'41" W, a distance of 121.06 feet to a 1/2" iron rod with cap stamped "Topographic" set for the Southeast corner of this site;

Thence N 90°00'00" W, a distance of 584.00 feet to the Point of Beginning.



DETAIL VIEW
SCALE: 1" = 300'

LEGEND

- SURVEY/SECTION LINE
- TRACT BORDER
- PROPOSED SITE
- ROAD WAY
- X — FENCE LINE
- EXISTING PIPELINE
- OHE — OVERHEAD ELECTRIC
- W — WATER LINE
- IRON ROD FOUND
- IRON PIPE FOUND
- IRON ROD SET

LINE TABLE

LINE	BEARING	DISTANCE
1	N 00°00'00" W	200.00'
2	N 90°00'00" E	600.00'
3	S 00°00'00" E	80.00'
4	S 07°35'41" W	121.06'
5	N 90°00'00" W	584.00'

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Michael Blake Brown, P.S. No. 18329
AUGUST 12, 2018

eog resources, inc.

ENTERPRISE CTB	REVISION: INT	DATE
DATE: 08/14/2018		
FILE: BO_ENTERPRISE_CTB_T17S_R30E_SEC12		
DRAWN BY: SME		
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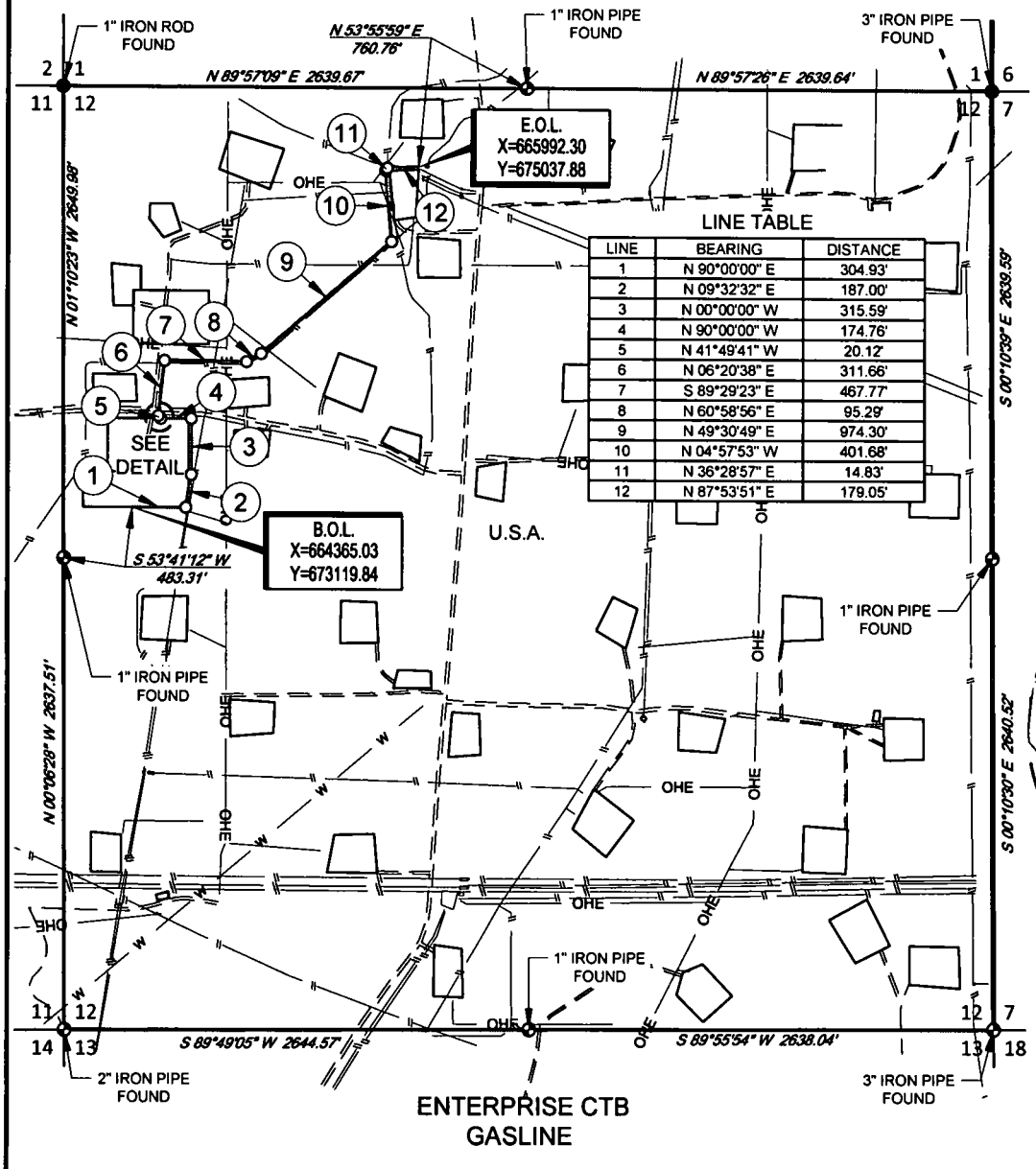
4. B.O.L./P.O.B. = BEGINNING OF LINE/POINT OF BEGINNING
5. E.O.L./P.O.E. = END OF LINE/POINT OF EXIT
6. ADJOINER INFORMATION SHOWN FOR INFORMATIONAL PURPOSES ONLY.

SCALE: 1" = 1000'

0' 500' 1000'

SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

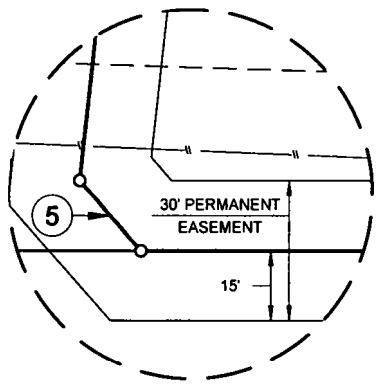


LINE TABLE

LINE	BEARING	DISTANCE
1	N 90°00'00" E	304.93'
2	N 09°32'32" E	187.00'
3	N 00°00'00" W	315.59'
4	N 90°00'00" W	174.76'
5	N 41°49'41" W	20.12'
6	N 06°20'38" E	311.66'
7	S 89°29'23" E	467.77'
8	N 60°58'56" E	95.29'
9	N 49°30'49" E	974.30'
10	N 04°57'53" W	401.68'
11	N 36°28'57" E	14.83'
12	N 87°53'51" E	179.05'

LEGEND

- SURVEY/SECTION LINE
- RANGE LINE
- TRACT BORDER
- SURVEYED BASELINE
- EDGE OF EASEMENT
- ROAD WAY
- X — FENCE LINE
- EXISTING PIPELINE
- OHE — OVERHEAD ELECTRIC
- W — WATER LINE
- IRON ROD FOUND
- IRON PIPE FOUND
- POINT OF INTERSECTION



DETAIL VIEW
SCALE: 1" = 40'

Being a proposed gasline easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 3446.98 feet or 208.91 rods, containing 2.37 acres more or less.

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Michael Blake Brown, P.S. No. 18329
OCTOBER 1, 2018

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ENTERPRISE CTB GASLINE	REVISION: INT	DATE
DATE: 10/01/2018		
FILE: EP_ENTERPRISE_CTB_GL_SEC12		
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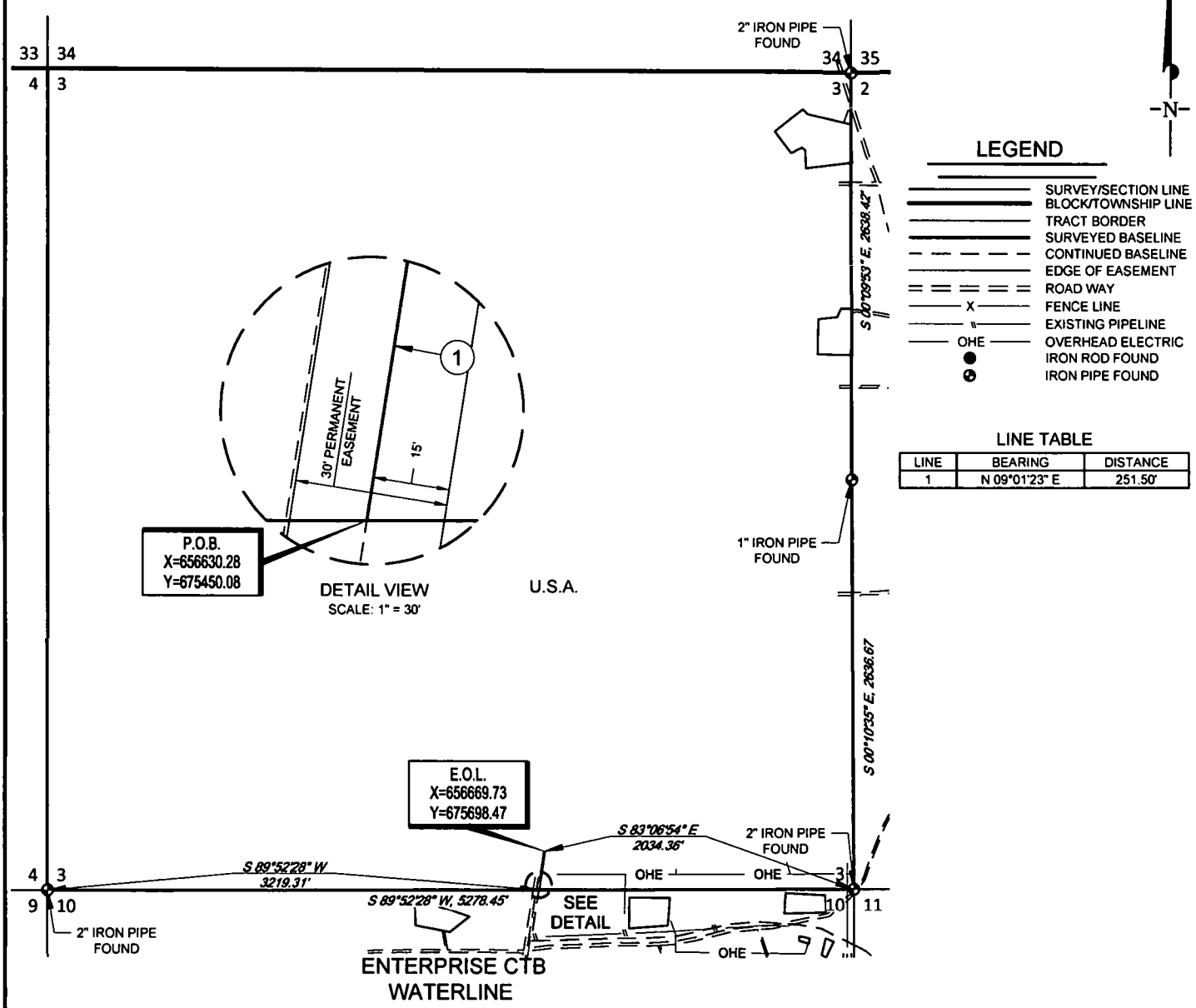
SCALE: 1" = 1000'

0' 500' 1000'

SECTION 3, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



LINE TABLE

LINE	BEARING	DISTANCE
1	N 09°01'23" E	251.50'

Being a proposed waterline easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 251.50 feet or 15.24 rods, containing 0.17 acres more or less.

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OCTOBER 1, 2018

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ENTERPRISE CTB WATERLINE	REVISION: INT	DATE
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FILE: EP_ENTERPRISE_CTB_WL_SEC3		
DRAWN BY: IMU		
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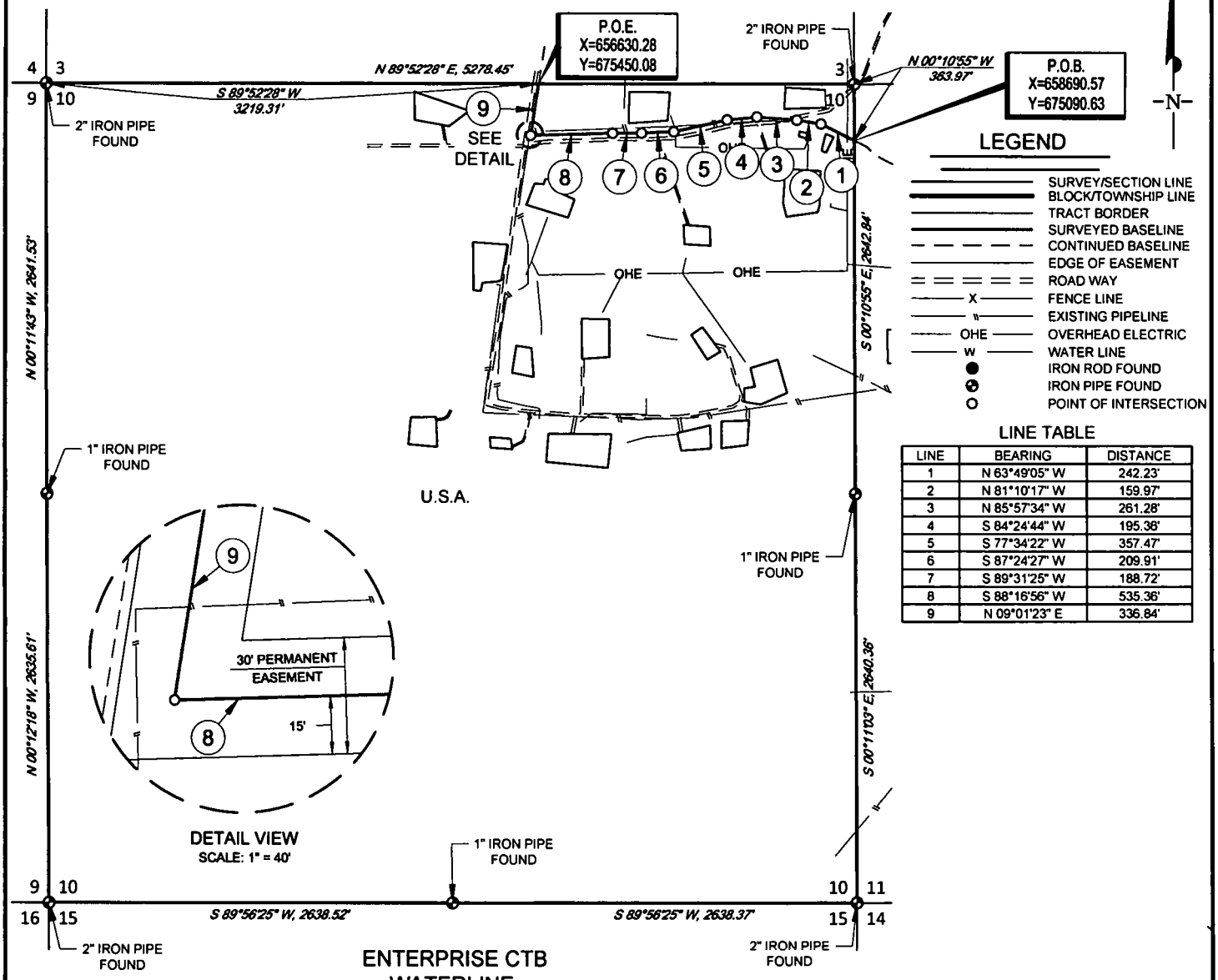
SCALE: 1" = 1000'

0' 500' 1000'

SECTION 10, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



LEGEND

- SURVEY/SECTION LINE
- BLOCK/TOWNSHIP LINE
- TRACT BORDER
- SURVEYED BASELINE
- CONTINUED BASELINE
- EDGE OF EASEMENT
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OHE — OVERHEAD ELECTRIC
- W — WATER LINE
- IRON ROD FOUND
- IRON PIPE FOUND
- POINT OF INTERSECTION

LINE TABLE

LINE	BEARING	DISTANCE
1	N 63°49'05" W	242.23'
2	N 81°10'17" W	159.97'
3	N 85°57'34" W	261.28'
4	S 84°24'44" W	195.36'
5	S 77°34'22" W	357.47'
6	S 87°24'27" W	209.91'
7	S 89°31'25" W	188.72'
8	S 88°16'56" W	535.36'
9	N 09°01'23" E	336.84'

ENTERPRISE CTB WATERLINE

Being a proposed waterline easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 2487.14 feet or 150.74 rods, containing 1.71 acres more or less.

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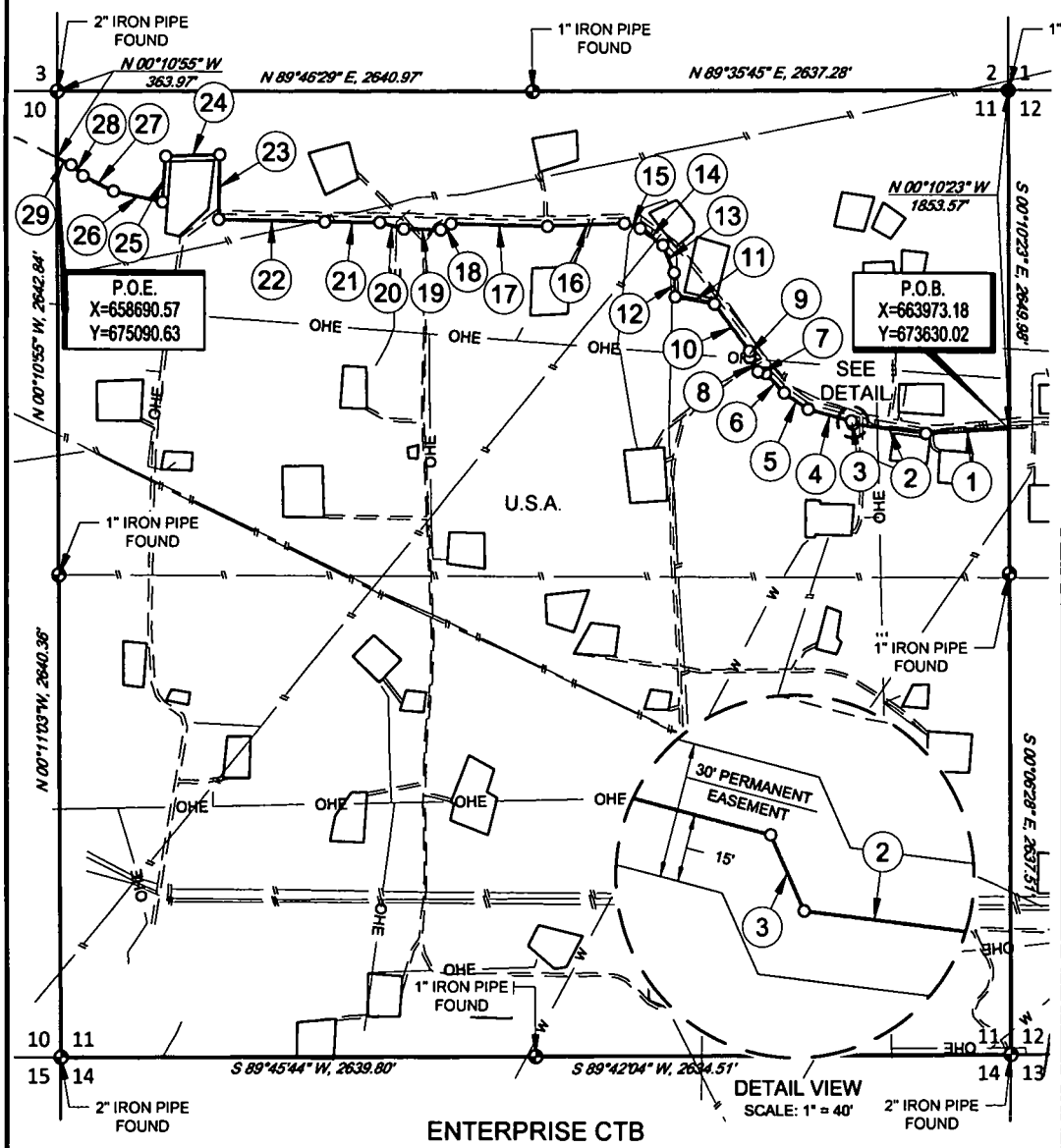
SCALE: 1" = 1000'

0' 500' 1000'

SECTION 11, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



DETAIL VIEW
SCALE: 1" = 40'

LEGEND

- SURVEY/SECTION LINE
- BLOCK/TOWNSHIP LINE
- TRACT BORDER
- SURVEYED BASELINE
- CONTINUED BASELINE
- EDGE OF EASEMENT
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OHE — OVERHEAD ELECTRIC
- W — WATER LINE
- IRON ROD FOUND
- IRON PIPE FOUND
- POINT OF INTERSECTION

LINE TABLE

LINE	BEARING	DISTANCE
1	S 86°31'29" W	462.47'
2	N 82°53'09" W	409.32'
3	N 24°02'28" W	18.21'
4	N 75°22'34" W	248.09'
5	N 55°51'32" W	160.88'
6	N 44°11'52" W	147.93'
7	N 78°57'36" W	43.06'
8	N 30°56'52" W	91.50'
9	N 01°18'12" W	33.97'
10	N 36°58'00" W	320.55'
11	N 79°59'45" W	221.02'
12	N 02°37'35" W	131.13'
13	N 22°30'22" W	163.33'
14	N 54°12'08" W	155.46'
15	N 72°11'09" W	91.79'
16	S 87°37'20" W	427.18'
17	N 88°42'18" W	534.62'
18	S 59°31'15" W	67.07'
19	N 88°44'30" W	205.00'
20	N 75°02'12" W	138.13'
21	N 89°36'55" W	306.47'
22	N 89°01'25" W	590.14'
23	N 00°58'35" E	355.19'
24	S 88°06'50" W	300.88'
25	S 04°10'59" W	251.18'
26	N 77°53'48" W	276.27'
27	N 63°56'35" W	187.88'
28	N 47°18'10" W	89.38'
29	N 63°49'05" W	85.76'

ENTERPRISE CTB WATERLINE

Being a proposed waterline easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 6513.86 feet or 394.78 rods, containing 4.49 acres more or less.

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OCTOBER 1, 2018

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FILE: EP_ENTERPRISE_CTB_WL_SEC11		
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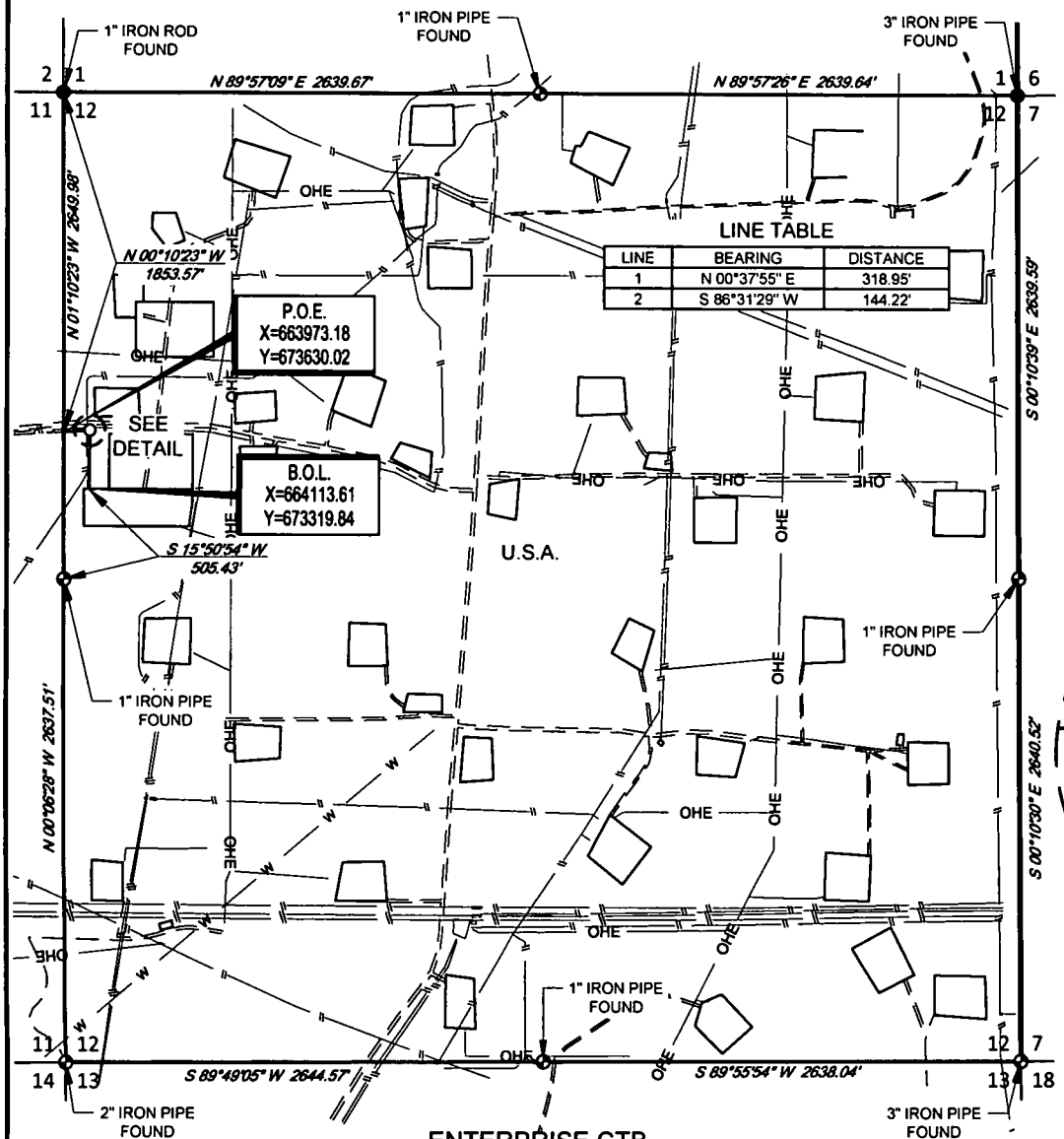
SCALE: 1" = 1000'

0' 500' 1000'

SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



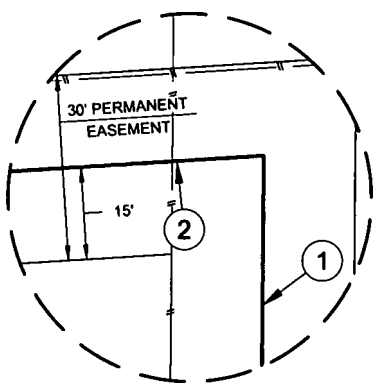
ENTERPRISE CTB
WATERLINE

LINE TABLE

LINE	BEARING	DISTANCE
1	N 00°37'55" E	318.95'
2	S 86°31'29" W	144.22'

LEGEND

- SURVEY/SECTION LINE
- BLOCK/TOWNSHIP LINE
- TRACT BORDER
- SURVEYED BASELINE
- CONTINUED BASELINE
- EDGE OF EASEMENT
- ROAD WAY
- FENCE LINE
- EXISTING PIPELINE
- OVERHEAD ELECTRIC
- WATER LINE
- IRON ROD FOUND
- IRON PIPE FOUND
- POINT OF INTERSECTION



DETAIL VIEW
SCALE: 1" = 30'

Being a proposed waterline easement being 30 feet in width, 15 feet left, and 15 feet right of the above platted centerline total line footage containing 463.17 feet or 28.07 rods, containing 0.32 acres more or less.

TOPOGRAPHIC
LOYALTY INNOVATION LEGACY
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OCTOBER 1, 2018

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FILE: EP_ENTERPRISE_CTB_WL_SEC12		
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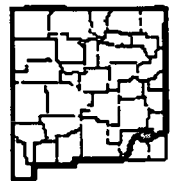


Legend

- Jeffersonian Sections
- Artesia SHL Directional
- Artesia Well Path
- Well Plans
- Well Pad Areas
- Land Calendar Legend
  - EXPIRATION
  - OBLIGATION
  - PAYMENT

35,352.5 0 17,676.27 35,352.5 Feet

1: 212,115

Projection: WGS_1984_Web_Mercator_Auxiliary_Sphere

This map is a user generated static output from an Internet mapping site and is for reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

Date: 7/19/2018

eog resources

ARTESIA DIVISION

Water Source
Kirk Federal Com #1H, #2H, #3H

Author: Trixy Duke

EOG Resources

Well Site Diagram

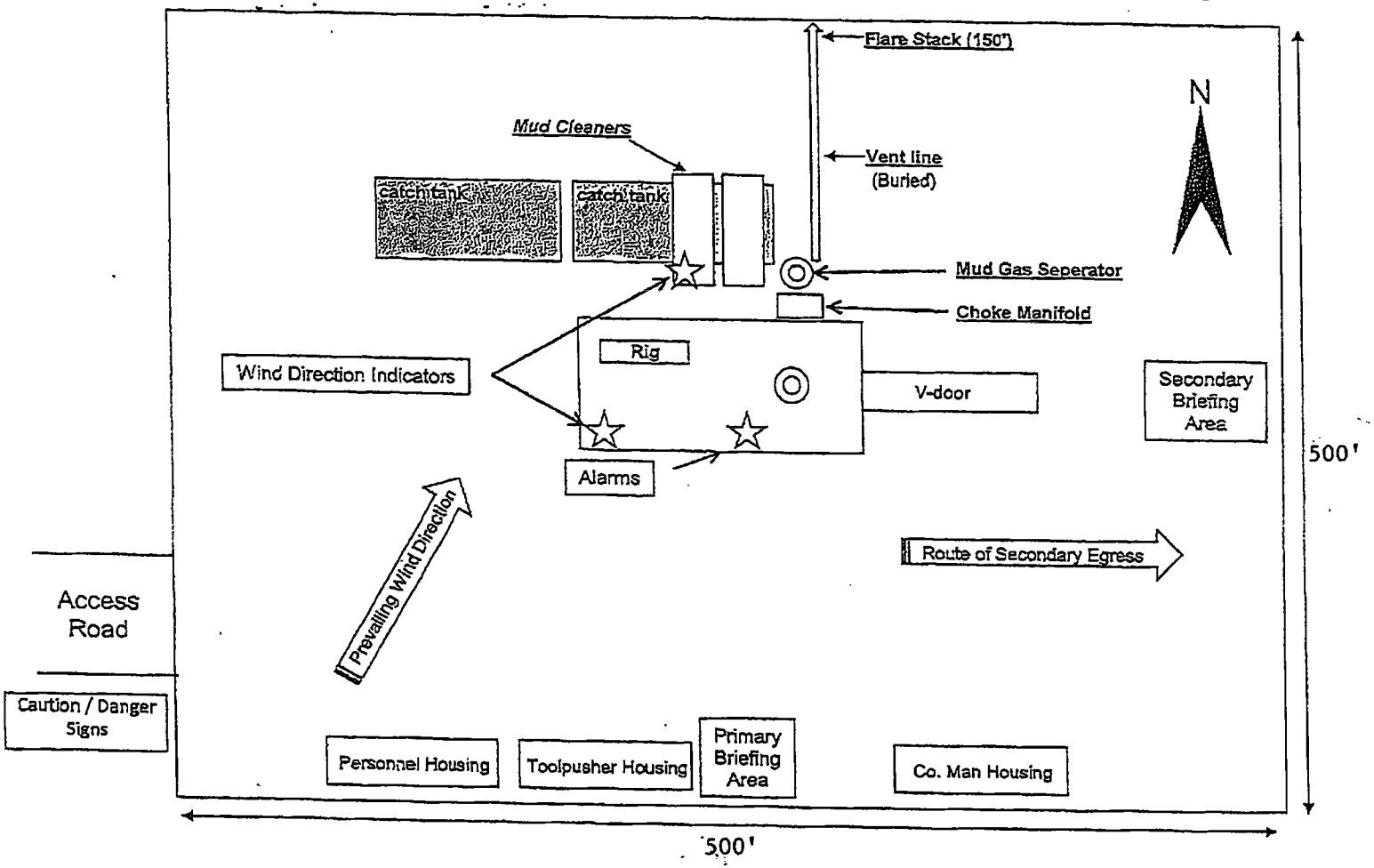
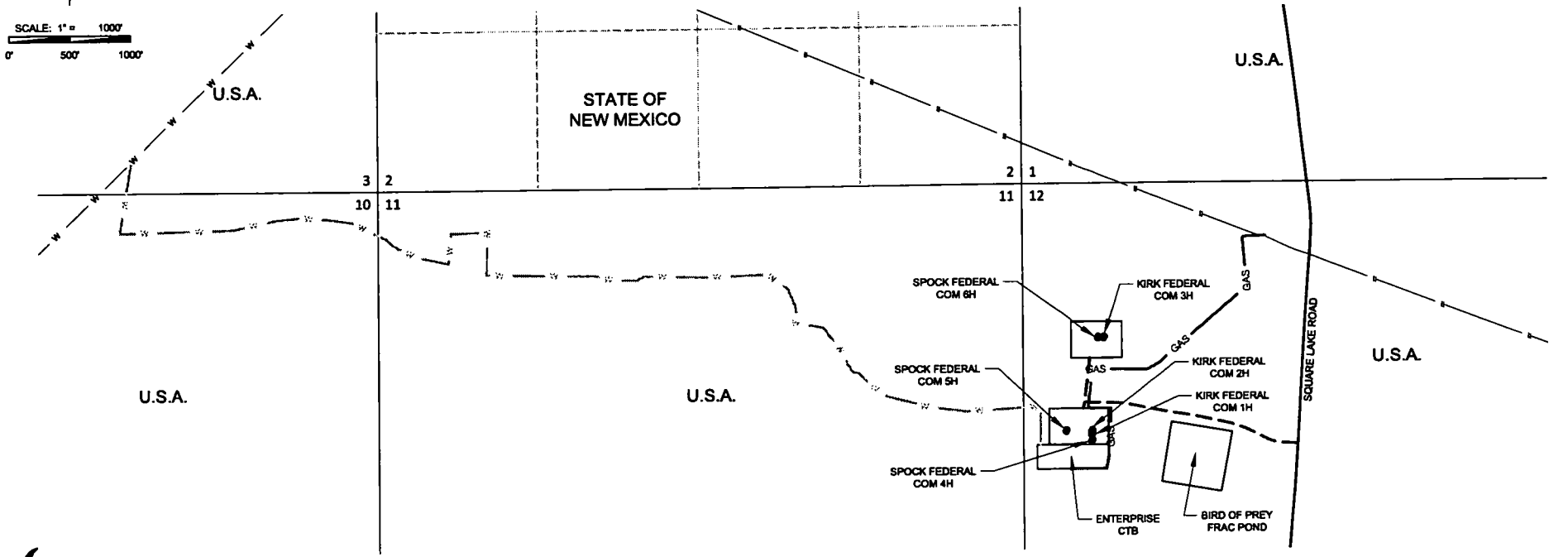


EXHIBIT 5

SECTIONS 3, 10, 11, & 12, TOWNSHIP 17 SOUTH, RANGE 30 EAST, N.M.P.M.
EDDY COUNTY, NEW MEXICO

KIRK FEDERAL COM 1H-3H
SPOCK FEDERAL COM 1H-4H
INFRASTRUCTURE



eog resources, inc.

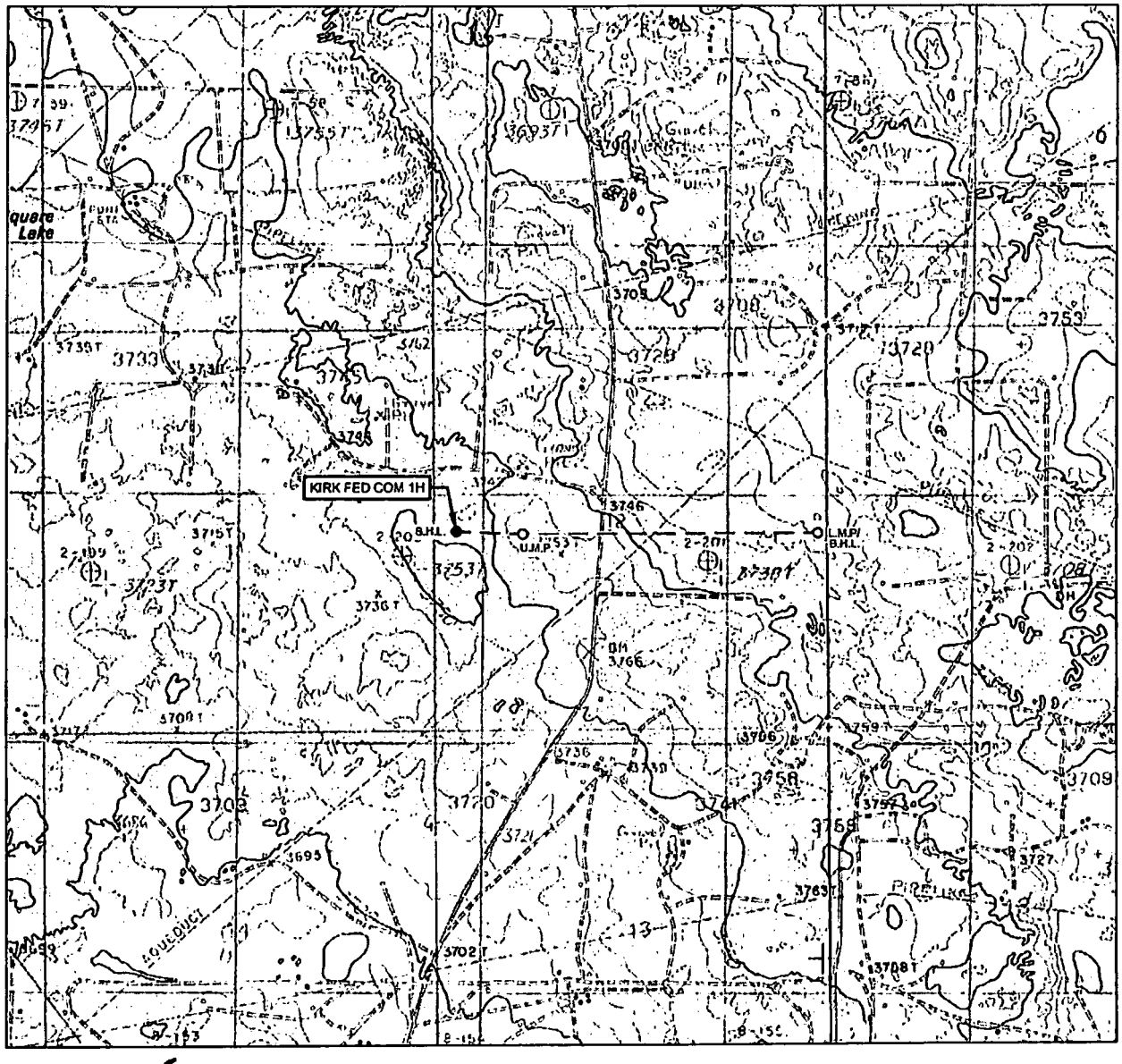
KIRK FEDERAL COM 1H-3H SPOCK FEDERAL COM 1H-4H INFRASTRUCTURE	REVISION:	
	INT	DATE
DATE: 10/9/2018		
FILE: SI_KIRK_SPOCK_FEDERAL_COM_INFRASTRUCTURE		
DRAWN BY: C.E.S.		
SHEET : 1 OF 1		

PROPOSED ROAD
-TOTAL FOOTAGE..... 2,238 FT
FROM LEASE RD.
TO: KIRK FEDERAL COM 1H & 2H SPOCK FEDERAL COM 4H & 6H ..... 2,184 FT
FROM: KIRK FEDERAL COM 1H & 2H SPOCK FEDERAL COM 4H & 6H
TO: KIRK FEDERAL COM 3H SPOCK FEDERAL COM 6H ..... 52 FT

PROPOSED GAS LINE
-TOTAL FOOTAGE..... 3,447 FT

PROPOSED WATER LINE
-TOTAL FOOTAGE..... 9,716 FT

LOCATION & ELEVATION VERIFICATION MAP



eog resources, inc.

LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

SECTION 12 TWP 17-S RGE 30-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM ELEVATION 3766'
DESCRIPTION 2079 FN/SL & 572 FW/EL

LATITUDE N 32.8505710 LONGITUDE W 103.9321249

-N-

SCALE: 1" = 2000'

0' 1000' 2000'

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

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2803 NORTH BIG SPRING · MIDLAND, TEXAS 79705
TELEPHONE: (432) 682-1653 OR (800) 767-1653 · FAX (432) 682-1743
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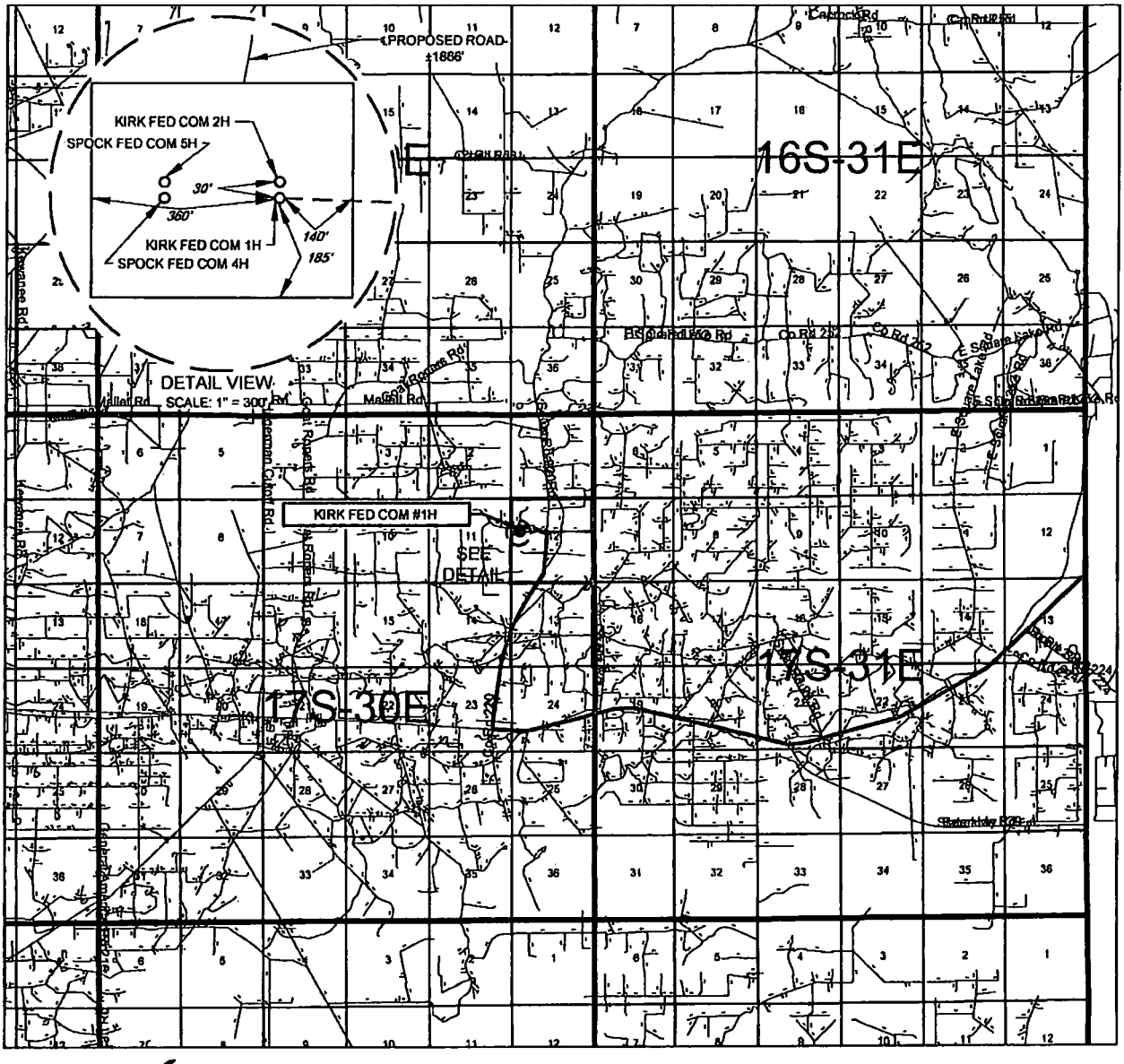
EXHIBIT 2

VICINITY MAP



eog resources, inc.

LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

SECTION 12 TWP 17-S RGE 30-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 2079 FN/SL & 572 FW/EL

DISTANCE & DIRECTION

FROM INT. OF NM-18 N. & HWY. 82, GO WEST ON HWY. 82 ±36.8 MILES, THENCE RIGHT (NORTH) ON SQUARE LAKE ROAD ±2.5, THENCE LEFT (WEST) ON LEASE ROAD ±0.3 MILES TO A POINT ±225 FEET NORTH OF THE LOCATION.

-N-

SCALE: 1" = 1000'

0' 500' 1000'

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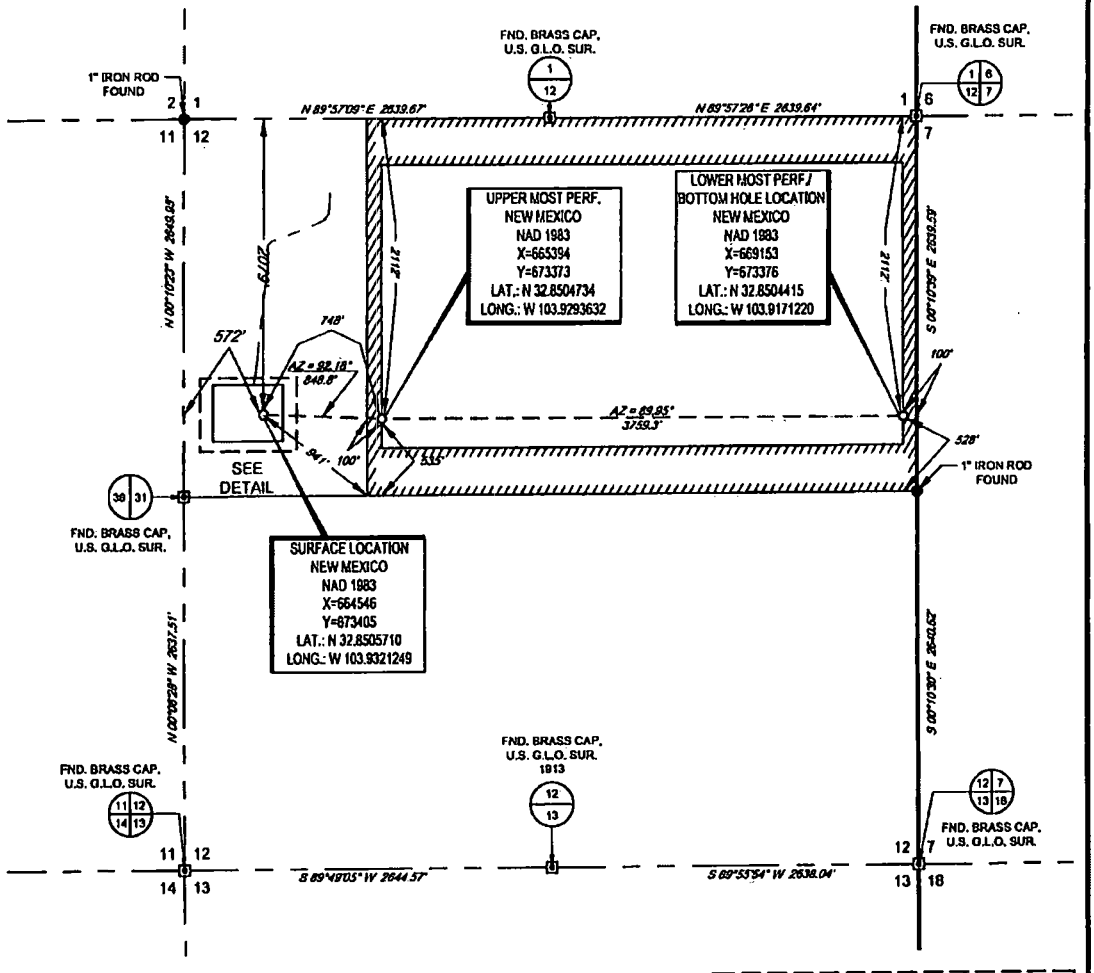
EXHIBIT 2A

SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO



LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

SECTION 12 TWP 17-S RGE 30-E SURVEY N.M.P.M.
COUNTY EDDY STATE NM
DESCRIPTION 2079 FN/SL & 572 FW/EL

DISTANCE & DIRECTION

FROM INT. OF NM-18 N. & HWY. 82, GO WEST ON HWY. 82 ±36.6 MILES, THENCE RIGHT (NORTH) ON SQUARE LAKE ROAD ±2.5, THENCE LEFT (WEST) ON LEASE ROAD ±0.3 MILES TO A POINT ±225 FEET NORTH OF THE LOCATION.

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"PRELIMINARY, THIS DOCUMENT SHALL NOT BE RECORDED FOR ANY PURPOSE."

Michael Blake Brown, P.S. No. 18329
JULY 13, 2018

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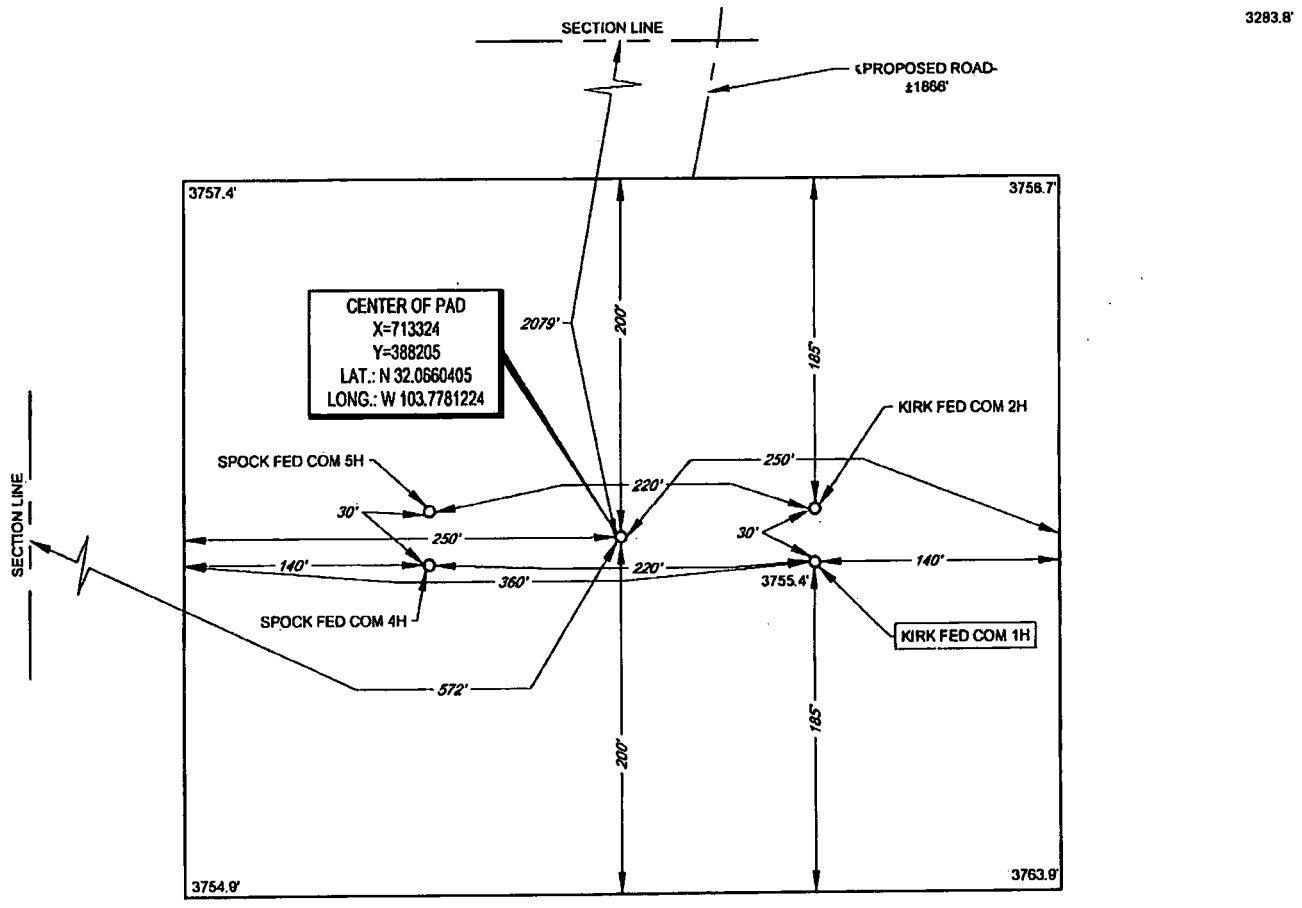
EXHIBIT 2B

eog resources, Inc.

SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H
1H LATITUDE N 32.8505710 1H LONGITUDE W 103.9321249

LEGEND

- CENTERLINE ROAD
- SECTION LINE
- EXISTING PIPELINE

-N-

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

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

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

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ORIGINAL DOCUMENT SIZE: 8.5" X 11"

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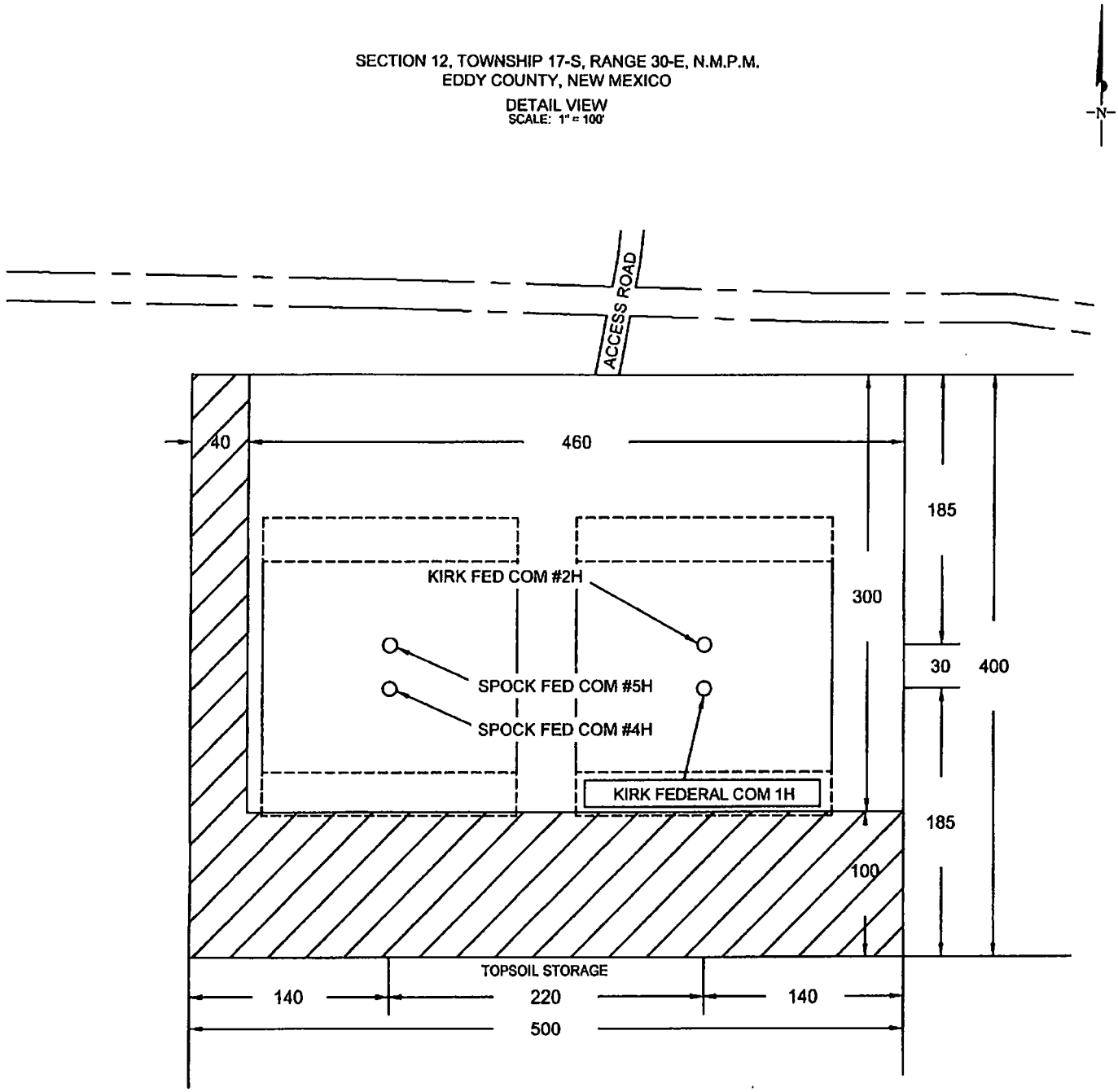
EXHIBIT 2C

RECLAMATION AND FACILITY DIAGRAM - PRODUCTION FACILITIES DIAGRAM

SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

1H LATITUDE N 32.8505710 1H LONGITUDE W 103.9321249

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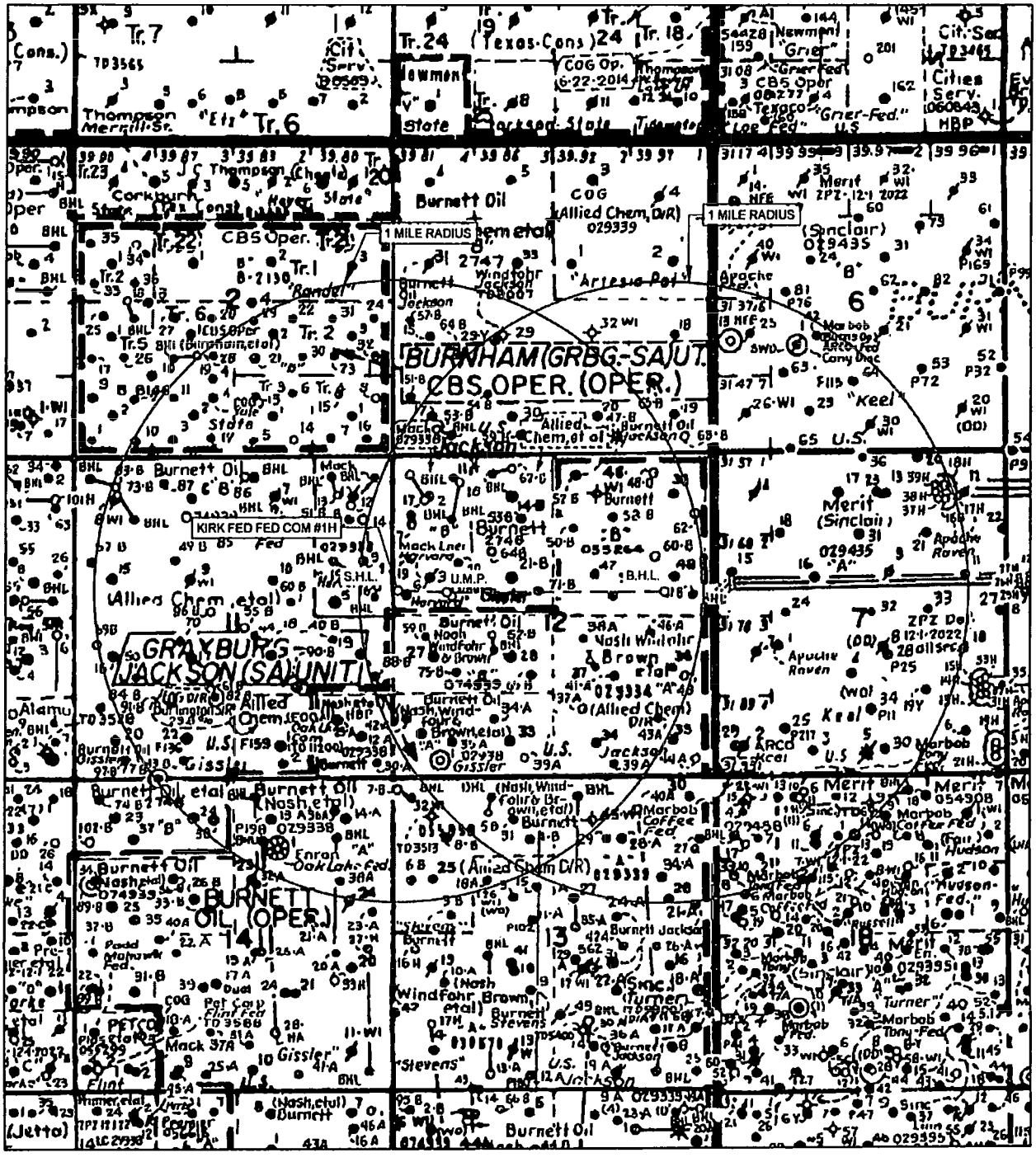
EXHIBIT 3

SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

eog resources, inc.



LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

SCALE: NTS

#1H LATITUDE N 32.8505710 #1H LONGITUDE W 103.9321249

-N-

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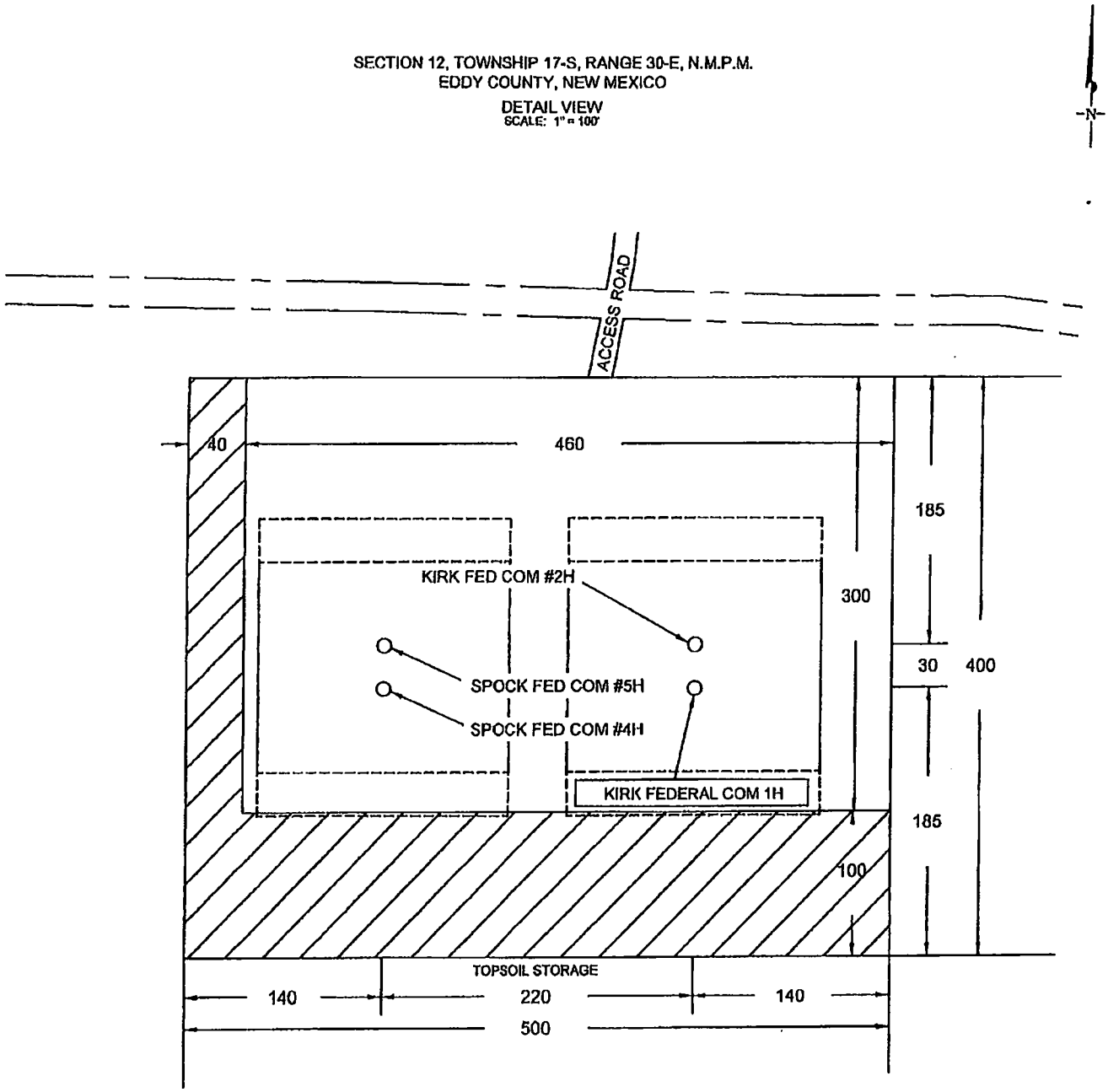
SECTION 12, TOWNSHIP 17-S, RANGE 30-E, N.M.P.M.
EDDY COUNTY, NEW MEXICO

DETAIL VIEW
SCALE: 1" = 100'



LEASE NAME & WELL NO.: KIRK FEDERAL COM 1H

1H LATITUDE N 32.8505710 1H LONGITUDE W 103.9321249

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MULTI-POINT SURFACE USE AND OPERATIONS PLAN
EOG Resources, Inc.

Kirk Federal Com 1H
2079' FNL and 572' FWL Section 12, T17S-R30E - Surface Hole Location
2112' FNL and 100' FEL Section 12, T17S-R30E -Bottom Hole Location
Eddy County, New Mexico

This plan is submitted with Form 3160-3, Application for Permit to Drill, covering the above described well. The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plan, the magnitude of the surface disturbance involved and the procedures to be followed in rehabilitating the surface after completion of the operations, so that a complete appraisal can be made of the environmental effect associated with the operations.

1. EXISTING ROADS:

The County map showing the well and roads in the vicinity of the proposed location. The proposed well site is located approximately 27 miles northeast of Artesia, New Mexico and the access route to the location is indicated on Exhibit. Operator will maintain existing roads in condition the same or better than before operations begin. Operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures along the entire access route such as cattle guards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use. Operator will reasonably prevent and abate fugitive dust as needed when created by vehicular traffic and equipment caused by the operator. The BLM's written approval will be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.

DIRECTIONS:
From Artesia, go West on US-82 for approximately 27.5 miles. Turn left (North) onto CR220 (Square Lake Rd). Travel North on CR220 for 2.5 miles. Turn left (West) to lease road. Continue down lease road for 0.3 miles. Location will be located south of roadway approximately 10 yards.

2. PLANNED ACCESS ROAD.

A. Existing access road runs along Southeast edge of well location. The road will be crowned and ditched to a 2% slope from the tip of the crown to the edge of the driving surface.
B. The road will be 14 feet in width (driving surface) and will be adequately drained to control to control runoff and soil erosion. Ditches will be 3' wide with a 3:1 slopes.
C. The road will be bladed with drainage on one side. A traffic turnout may be built.
D. Existing roads will be maintained in the same or better condition.
E. The route of road is visible.

3. LOCATION OF EXISTING WELL

A. There is no drilling activity within a one-mile radius of the well site.
B. Exhibits shows existing wells within a one-mile radius of the proposed well site.

4. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES

   A. There are no production facilities on this lease at the present time.
   B. Central tank battery will be an on location gathering facility with water and gas take away.

5. LOCATION AND TYPE OF WATER SUPPLY:

   A. It is planned to drill the proposed well with a fresh water system. The water will be obtained from commercial sources and will be hauled to the location by truck over the existing and proposed roads shown in Exhibit.

6. SOURCE OF CONSTRUCTION MATERIALS:

   Dirt contractor will locate closest pit and obtain any permits and materials needed for construction of the well location.

7. METHODS OF HANDLING WASTE DISPOSAL:

   A. This well will be drilled with a closed loop system
   B. The closed loop system will be constructed, maintained, and closed in compliance with the State of New Mexico, Energy and Natural Resources Department, Oil Conservation Division – the "Pit Rule" 19.15.17 NMAC.
   C. Drilling fluids will be removed after drilling and completions are completed.
   D. Water produced during operations will be collected in tanks until hauled to an approved disposal system, or separate disposal application will be submitted.
   E. Oil produced during operations will be stored in tanks until sold.
   F. Current laws and regulations pertaining to the disposal of human waste will be complied with.
   G. All trash, junk, and other waste materials will be contained in trash cages or bins to prevent scattering and will be removed and deposited in an approved sanitary landfill. Burial on site is not approved.

8. ANCILLARY FACILITIES: None.

9. WELLSITE LAYOUT:

   A. Exhibit shows the relative location and dimensions of the well pad, the closed loop mud system, location of the drilling equipment. All of the location will be constructed within the 400' x 500' staked area.
   B. A 400' x 500' area has been staked and flagged.

9. PLANS FOR RESTORATION:

   A. After finishing drilling and/or completion operations, all equipment and other material not needed for further operations will be removed. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible. The location will be reduced to a 250' x 250' after completion operations have been conducted. At this point the surfacing material will be removed and topsoil will be redistributed. The area will be contoured as closely as possible to its original state and reseeded. Please note Reclamation Plat.

B. If the proposed well is plugged and abandoned, all equipment and other material will be removed. The location will be cleaned of all trash and junk to leave the well site in as aesthetically pleasing a condition as possible. At this point the surfacing material will be removed, topsoil will be redistributed. The area will be contoured as closely as possible to its original location and reseeded. These actions will be completed and accomplished as expeditiously as possible.

C. The reclamation of the pad will be done in sixty days if possible after the well is put in production.

11. SURFACE OWNERSHIP:

Surface Estate:	Bureau of Land Management 620 E. Greene Street Carlsbad, NM 88220-6292
Mineral Estate:	BLM – NMLC-029338B leased to COG Operating LLC 600 W Illinois Ave Midland, TX 79701/4882

12. OTHER INFORMATION:

A. Topography: Refer to the existing archaeological report for a description of the topography, flora, fauna, soil characteristics, dwellings, historical and cultural sites.
B. The primary surface use is for grazing.

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

01/24/2019

Bond Information

Federal/Indian APD: FED

BLM Bond number: NM2308

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: