State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

David R. Catanach, Division Director
Oil Conservation Division

New Mexico Oil Conservation Division approval and conditions listed below are made in accordance with OCD Rule 19.15.7.11 and are in addition to the actions approved by BLM on the following 3160-4 or 3160-5 form.

Operator Signature Date:8/18/15
Well information:

API WELL #	Well Name	Well #	Operator Name	Type	Stat	County	Surf_Owner	UL	Sec	Twp	N/S	Rng	W/E
30-045-24122-00-00	KRAUSE WN FEDERAL	002E	THOMPSON ENGR & PROD CORP	G	A	San Juan	F	P	28	28	N	11	W

Application Type:

☐ P&A ☐ Drilling/Casing Change ☐ Location Change

☐ Recomplete/DHC (For hydraulic fracturing operations review EPA Underground injection control Guidance #84)

☒ Other: Repair

Conditions of Approval:

Leaks in the casing are required to be repaired per 19.15.16.11 regardless if there is fluid entry or not.

Contact the OCD 24hrs prior to any cementing.

Contact the OCD 24hrs prior to the MIT.

Brandon Powell

NMOCD Approved by Signature

8/31/15
Date

Form 3160-5
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

FORM APPROVED
OMB No. 1004-0135
Expires November 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE – Other instructions on reverse side

Farmington Field Office
Bureau of Land Management

5. Lease Serial No.
SF 078863

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☐ Oil Well ☒ Gas Well ☐ Other

8. Well Name and No.
Krause WN Federal #2E

2. Name of Operator
Thompson Engineering and Production Corp.

9. API Well No.
30-045-24122

3a. Address
7415 E. Main, Farmington, NM, 87402

3b. Phone No. *(include area code)*
505-327-4892

10. Field and Pool, or Exploratory Area
Basin Dakota

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
790 FSL & 1120 FEL, Section 7 (P), T28N, R11W
28

11. County or Parish, State
San Juan, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☒ Casing Repair	☐ New Construction	☐ Recomplete	☐ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operations (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days Following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once Testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Thompson Engineering proposes to repair the casing leaks in this well using the attached procedure.

OIL CONS. DIV DIST. 3
AUG 24 2015

~~OIL CONS. DIV DIST. 3~~
~~AUG 07 2015~~

BLM'S APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

SEE ATTACHED FOR CONDITIONS OF APPROVAL

14. I hereby certify that the foregoing is true and correct

Name *(Printed/Typed)*	Title
Paul C. Thompson, P.E.	President
Signature *Paul C. Thomp*	Date August 4, 2015

THIS SPACE FOR FEDERAL OR STATE USE

Approved by	Title	Date
Abdelgadir Elmadani	PE	08/18/15
Conditions of approval, if any, are attached. Approval of this notice 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.	Office FFO	

Title 18 U.S.C. Section 1001, 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.

(Instructions on reverse)

NMOCD

THOMPSON ENGINEERING & PRODUCTION CORPORATION

WORKOVER PROCEDURE

2/25/15

Well:	**Krause WN Federal #2E**	**Field:**	Basin Dakota
Location:	790' FSL & 1120' FEL Sec 28, T28N, R11, NMPM San Juan County, New Mexico	**Elevation:** **Lease:**	5837' GL 5848' KB BLM – SF 078863

PBTD: 6377' KB, CIBP – 6174' KB

Objective: Determine if casing leaks at 3595' KB and 4285' KB are leaking water into the well. If not, drill the CIBP and return the well to production with a piston. If water entry is occurring, attempt to squeeze the holes prior to drilling the CIBP.

Water In-Flow Test Procedure:

1. Move on location and rig up a swab rig. The well currently has 198 jts of 2-3/8" tubing set at 6168' KB with an "F" nipple at 6104' KB. Note the SICP and SITP. Swab the well down to the pit. Shoot fluid levels to determine if there is fluid entry into the wellbore. Depending on the outcome, proceed to Plan A (return the well to production), or Plan B, (repair the casing leaks).

Plan A: Return Well to Production

1. Move on location and rig up a completion rig with a pump and pit. Hold a safety meeting and explain the procedure to the crew. Blow the well down to the production tank or kill with water if necessary. Nipple down the tubinghead and nipple up the BOP.

2. Pull the donut. Tally out of the hole with 198 jts of 2-3/8" tubing, "F" nipple and tail joint. Replace any bad joints. Pick up a 3-7/8" bit and TIH to the CIBP at 6174' KB. Load the well with water and drill the CIBP. Continue to clean out the well to PBTD at 6377' KB. Circulate the hole clean. TOH and lay down the bit and bit sub.

3. Run a standard seating nipple on 2-3/8" tubing and set the SN below the bottom perf (perfs are 6224' – 6345' KB). Swab the well dry.

4. Nipple down the BOP and nipple up the wellhead. Rig down and release the completion rig. Install a bumper spring and piston and return the well to production.

Plan B: Repair Casing Leaks

1. Move on location and rig up a completion rig and air package. Hold a safety meeting and explain the procedure to the crew. Blow the well down to the production tank or kill with water if necessary. Nipple down the tubinghead and nipple up the BOP.

2. Pull the donut. Tally out of the hole with 198 jts of 2-3/8" tubing, "F" nipple and tail joint. Replace any bad joints.

3. Pick up a 4-1.2" RBP and packer on the 2-3/8" tubing. TIH to the CIBP at 6174' and load the hole with 2% KCl with biocide water. Set the RBP and packer as necessary to confirm the location of the holes (reported to be at 4285' KB and 3595' KB). Note injection rate and pressures.

4. Based to the information collected in Step #3, design squeeze jobs. Squeeze the lower hole (s) first below a packer with micro-matrix cement. Hesitate squeeze to 1,000 psi. WOC overnight.

5. Squeeze any upper hole(s) below a packer with micro matrix cement. Hesitate squeeze to 1,000 psi. WOC overnight.

6. Release the packer and TOH. Lay down the packer. Pick up a 3-7/8" bit on six 3-1/8" drill collars. Drill the top squeeze and pressure test to 500 psi. If successful, drill the lower squeeze and re-test to 500 psi. If both tests are successful, proceed to Step #2 of Plan A and return the well to production. If either pressure test fails attempt to re-squeeze.

Paul C. Thompson, P.E.

BLM CONDITION OF APPROVAL

CASING REPAIR, WORKOVER AND RECOMPLETION OPERATIONS:

1. If casing repair operations are needed, obtain prior approval from this office before commencing repairs. If a CBL or other logs are run, provide this office with a copy.

2. After any casing repair operations, test cement squeeze to a minimum of 500# for 30 minutes with no more than 10 % pressure fall off in the 30 minute test period. Provide test chart with your subsequent report of operations

3. A properly functioning BOP and related equipment must be installed prior to commencing workover, casing repair, and/or recompletion operations.

4. Contact this office at (505) 564-7750 prior to conducting any cementing operations

SPECIAL STIPULATIONS:

1. **Pits will be fenced during work-over operation.**

2. **All disturbance will be kept on existing pad.**

3. **All pits will be pulled and closed immediately upon completion of the recompletion and work-over activities.**

4. **Pits will be lined with an impervious material at least 12 mils thick.**