

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NM OIL CONSERVATION

ARTEZIA DISTRICT

JAN 13 2015

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

RECEIVED

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well ☐ Oil Well ☒ Gas Well ☐ Other		5. Lease Serial No. NMNM108025
2. Name of Operator COG OPERATING LLC		6. If Indian, Allottee or Tribe Name
3a. Address ONE CONCHO CENTER 600 W ILLINOIS AVENUE MIDLAND, TX 79701		7. If Unit or CA/Agreement, Name and/or No.
3b. Phone No. (include area code) Ph: 432-221-0467		8. Well Name and No. DRY LAND SHINER FEDERAL 1
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 3 T21S R25E Lot 1 940FNL 660FEL		9. API Well No. 30-015-32815-00-S1
		10. Field and Pool, or Exploratory WC-015 G-01 S212503A
		11. County or Parish, and State EDDY COUNTY, 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 Operation (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.)

COG respectfully request to test the upper Bone Spring in the Dry Land Shiner Federal #1.

Please see attached procedures and before/after well bore diagrams.

All operations will be conducted using a closed-loop system.

SEE ATTACHED FOR
CONDITIONS OF APPROVALAccepted for record
NMDCD

JRD

1/14/2015

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

Electronic Submission #267151 verified by the BLM Well Information System

For COG OPERATING LLC, sent to the Carlsbad

Committed to AFMSS for processing by JENNIFER MASON on 01/05/2015 (15JAM0153SE)

Name (Printed/Typed) BRIAN MAIORINO

Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission)

Date 09/30/2014

APPROVED

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

Title

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

BUREAU OF LAND MANAGEMENT
CARLSBAD FIELD OFFICE

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.

** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

Dry Land Shiner Fed 1
940' fnl, 660' fel
A-3-21S-25E
Eddy Co., NM
30-015-32815
Bone Spring Recompletion Procedure
24 Sep 14

Basic Data:

13-3/8" @ 360' Circ. Cmt.

9-5/8" @ 2750' Circ. Cmt.

7" x 5-1/2" @ 10560', XO @ 8998', TOC @ 4200' TS.

7"/23ppf/L80/LTC	Burst=6340 psi, 5072 psi at 80% Nom. ID=6.366" Drift ID=6.241"
7"/23ppf/Mav95/LTC	Burst=7530 psi, 6024 psi at 80% Nom. ID=6.366" Drift ID=6.241"
5.5"/17ppf/M95-110/LTC	Burst=10640 psi, 8512 psi at 80% Nom. ID=4.892" Drift ID=4.767"
2.875"/6.5ppf/L80/EUE	Burst=10570 psi, 8456 psi at 80% Nom ID=2.441" Drift ID=2.347"
	Collapse=11160 psi, 8928 at 80%
	Tensile=144,960 lb with no safety factor

Objective: Test Bone Spring.

Procedure:

1. MIRU WSU and pull rods and pump.
2. Kill well and NU 3k minimum WP hydraulic double ram BOP (2-7/8" and blind rams) with hydraulic closing unit and manual hand wheels to close rams. Unseat TAC and TOO H with 2-7/8" tubing.

Note: The interval being tested is sub-normally pressured and will require a frac job and artificial lift in order to produce, therefore a full choke manifold will not be needed. However, a choke manifold will be installed if well conditions dictate.

3. RIH with open-ended tubing to CIBP at 6880' (plug is set 70' above BS perfs at 6950-7050'). Tag plug then spot 30 sx Class C cement on top of plug (14.8 ppg, 1.32 cfps, approx. 125 deg F BHST). Pull 10-15 stands, reverse circulate tubing clean, WOC approx. 4 hrs, tag plug, and TOO H laying down approx. 1700' of tubing. If tag deeper than 6780', visit with BLM Pet Tech to see if plug back is adequate or if another plug is required. (30 sx H should occupy 179' of casing volume with plug approx. 6700-6880')
4. RIH with CIBP on tubing to 5170', set CIBP, tag plug then spot 30 sx Class C cement on top of plug (14.8 ppg, 1.32 cfps, approx. 115 deg F BHST). Pull 10-15 stands, reverse circulate tubing clean, WOC approx. 4 hrs, tag plug, and TOO H laying down approx. 1000' of tubing. If tag deeper than 5070', visit with BLM Pet Tech to see if plug back is adequate or if another plug is required. (30 sx H should occupy 179' of casing volume with plug approx. 4990-5170')
5. RU pump truck, close blind rams and pressurize casing to 4000 psi.
6. RU wireline, install lubricator, and shoot 6 squeeze holes at 60 deg phasing at approx. 4100'. Open 7" x 9-5/8" annulus, close blind rams and attempt to pump down 7" casing and out of the 7" x 9-5/8" annulus.

If circulation can't be established, shoot 6 more squeeze holes at approx. 4000' and attempt to establish circulation out of the annulus. If circulation still can't be established, tie onto 7" x 9-5/8" annulus, pressurize 7" casing to 1500 psi and attempt to establish injection down the 7" x 9-5/8" annulus while limiting injection pressure to 3000 psi.

Steps 7-13 assume circulation is established down the 7" and out of the 7" x 9-5/8" annulus through squeeze holes at 4100' or 4000'

7. Set cement retainer on wireline approx. 50' above the top circulation perf.
8. Sting into retainer and place cement behind 7" as follows:
 - a) 10 bbl FW spacer
1000 gals. Mud Flush
10 bbl FW spacer
200 sx. Halliburton Light (12.7 ppg, 1.9 cfps)
200 sx Class C neat (14.8 ppg, 1.32 cfps)
est. static BHT = 100°F at 4200'
 - b) Cement volume calculated to bring TOC to 1900' using caliper + 25% excess in open hole section.
9. WOC for at least 24 hrs and run Cement Bond Log from cement retainer to 300' above the definite TOC of the remedial cement job so we know where cement coverage is for future well operations and for plugging the well in the future.
10. Perf the Bone Spring at the depths shown below.

Bone Spring: 3697-3699' (10 shots), 3858-3860' (10 shots) (20 shots total) OH log
11. RIH with treating packer to approx. 3650' and acidize with 2500 gals NE Fe 15% HCL acid.
12. Frac down casing with slick water and low gel crosslinked gel carrying 26,250 lbs 40/70 sand plus 55,000 lbs 2040 white sand plus 20,000 lbs 2040 curable resin coated sand.
13. PWOP and test.

Steps 14-23 assume circulation couldn't be established through squeeze holes at 4100' or 4000', but injection was established down the annulus in Step 6.

14. If circulation can't be established from squeeze holes at 4100' or 4000', but injection can be established down the 7" x 9-5/8" annulus, RU wireline, set CIBP 50' above top squeeze shot, close blind rams, test CIBP to 4000 psi, then shoot 6 squeeze holes at 60 deg phasing at approx. 3400'. Open 7" x 9-5/8" annulus, close blind rams and attempt to pump down 7" casing and out of the 7" x 9-5/8" annulus.
15. **If circulation is established from perfs at 3400' out the 7" x 9-5/8" annulus**, set cement retainer on wireline approx. 100' above the circulation perfs. Proceed to Step 17 below.

16. If circulation can't be established from perfs at 3400' out the 7" x 9-5/8" annulus, jump forward to Step 20 below.

17. Sting into retainer and place cement behind 7" as follows:

- a) 10 bbl FW spacer
1000 gals. Mud Flush
10 bbl FW spacer
300 sx Class C neat (14.8 ppg, 1.32 cfps)
est. static BHT = 90°F at 3400'

b) Cement volume calculated to bring TOC to 2100' using caliper + 25% excess in open hole section.

18. WOC for at least 24 hrs and drill retainer and cement and clean out to CIBP. Close pipe rams and test casing to 1000 psi.

19. Run Cement Bond Log from PBD (CIBP) to 300' above the definite TOC of the remedial cement job so we know where cement coverage is for future well operations and for plugging the well in the future.

20. Perf the Bone Spring at the depths shown below.

Bone Spring: 3697-3699' (10 shots), 3858-3860' (10 shots) (20 shots total) OH log

21. RIH with 3-1/2" treating string to approx. 3450' and acidize with 2500 gals NE Fe 15% HCL acid.

22. Frac down 3-1/2" work string with slick water and low gel crosslinked gel carrying 26,250 lbs 40/70 sand plus 55,000 lbs 2040 white sand plus 20,000 lbs 2040 curable resin coated sand.

23. PWOP and test.

Steps 24-28 assume circulation couldn't be established through squeeze holes at 4100' or 4000', and injection couldn't be established down the annulus in Step 6.

24. If circulation can't be established from squeeze holes at 4100' or 4000', and injection can't be established down the 7" x 9-5/8" annulus, RU wireline, set CIBP 50' above top squeeze shot, close blind rams and test CIBP to 4000 psi.

25. Perf the Bone Spring at the depths shown below.

Bone Spring: 3697-3699' (10 shots), 3858-3860' (10 shots) (20 shots total) OH log

26. RIH with treating packer to approx. 3650' and acidize with 2500 gals NE Fe 15% HCL acid.

27. Frac down casing with slick water and low gel crosslinked gel carrying 26,250 lbs 40/70 sand plus 55,000 lbs 2040 white sand plus 20,000 lbs 2040 curable resin coated sand.

28. PWOP and test.

30-015 32815

Dry Land Shiner Fed 1
940' FNL, 660' FEL
A: 3-21s-25e
Eddy NM

Zero: 17' HGL
MB: 3315'
GL: 3298'

17 1/2"

13 3/8" / 98 / H40 / STC @ 360' 425sx "C" (cane 425x)

12 1/4"

9 5/8" / 36 / J55 / STC @ 2750' 1150sx HLC + 250"C" (cane 300sx)

TOC 4200 TS

8 3/4" to 9 5/8"

Before

5220-5345' 1st BS

5565-5755' 1st BS

CIBP 6860' 6950-7050' 3rd BS

CIBP 8000 + 25sx "H" 8078-8088' 8116-8149' 5' 2d Upper Penn

25sx 8627-8729' XO @ 8998'

7 7/8" 9596' - TD

CIBP + 35' cmt 9670' 9710-9731' Atoka

CIBP + 35' cmt 9980' 10016-10022' Mrrw

CIBP 10064' 10090-10231' Mrrw

CIBP 10324' 10349-10375' Lwr Mrrw

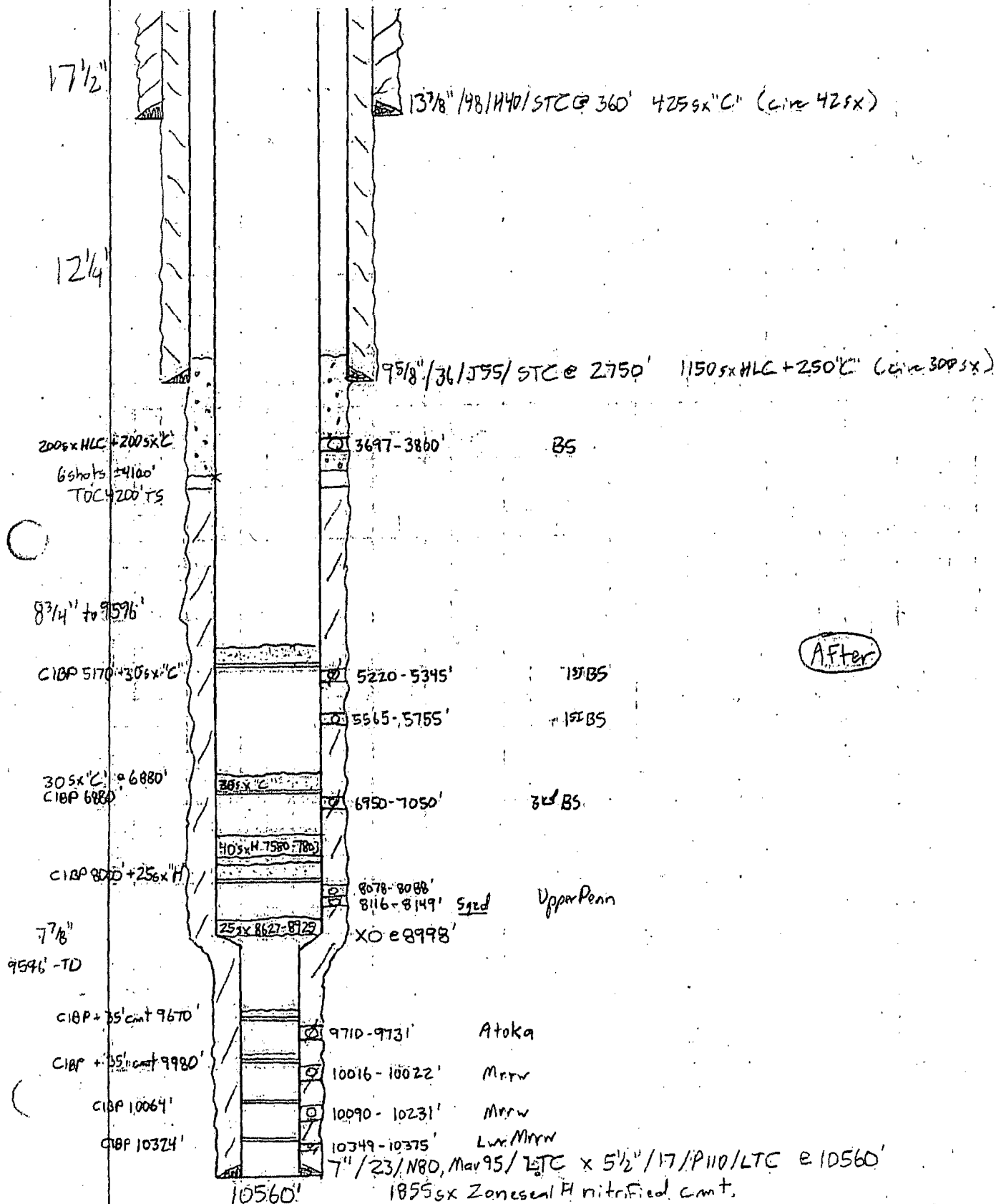
7" / 23 / N80, Mar 95 / LTC x 5 1/2" / 17 / P110 / LTC @ 10560'
1855sx Zoned cal H nitrified cmt.

10560'

30-D15 32815

Dry Land Shiner Fld 1
940' FNL, 660' FEL
A-3-215-25e
Eddy NM

Zero: 17' AGL
MB: 3315'
GL: 3298'



**Dry Land Shiner Federal 1
30-015-32815
COG Operating, LLC.
January 08, 2015
Conditions of Approval**

Notify BLM at 575-361-2822 a minimum of 24 hours prior to commencing work.

Work to be completed by April 08, 2015.

- 1. Cement plugs approved as written. Tag required on both plugs.**
- 2. The first squeeze is approved at 4100'. If circulation is not established, continue with the second squeeze at 4000'. If the second squeeze is unsuccessful contact the BLM prior to continuing. Submit results of CBL to the BLM.**
- 3. If Bone Spring is not capable of producing, submit a sundry to recompleat or P&A the well.**
- 4. Before casing or a liner is added or replaced, prior BLM approval of the design is required. Use notice of intent Form 3160-5.**
- 5. Surface disturbance beyond the originally approved pad must have prior approval.**
- 6. Closed loop system required.**
- 7. All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of work over operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.**
- 8. Operator to have H2S monitoring equipment on location.**
- 9. A minimum of a 3000 (3M) BOP to be used. All blowout preventer (BOP) and related equipment (BOPE) shall comply with reasonable well control requirements. A two ram system with a blind ram and a pipe ram designed for the size of the work string shall be adequate. Tapered work strings will require an additional pipe ram. The manifold shall comply with Onshore Oil and Gas Order #2 Attachment I (3M Diagrams of Choke Manifold Equipment). The accumulator system shall have an immediately available power source to close the rams and retain 200 psi above pre-charge. The pre-charge test shall follow requirements in Onshore Order #2.**

10. Subsequent sundry required detailing work done and completion report for the new formations. Operator to include well bore schematic of current well condition when work is complete.

11. See attached for general requirements.

JAM 010815

BUREAU OF LAND MANAGEMENT
Carlsbad Field Office
620 East Greene Street
Carlsbad, New Mexico 88220
575-234-5972

General Requirements for Plug Backs

Failure to comply with the following Conditions of Approval may result in a Notice of Incidents of Noncompliance (INC) in accordance with 43 CFR 3163.1.

1. Plugging operations shall commence within **ninety (90)** days from this approval.

If you are unable to plug back the well by the 90th day provide this office, prior to the 90th day, with the reason for not meeting the deadline and a date when we can expect the well to be plugged back. Failure to do so will result in enforcement action.

2. **Notification:** Contact the appropriate BLM office at least 24 hours prior to the commencing of any plug back operations. For wells in Eddy County, call 575-361-2822.

3. **Blowout Preventers:** A blowout preventer (BOP), as appropriate, shall be installed before commencing any plugging operation. The BOP must be installed and maintained as per API and manufacturer recommendations. The minimum BOP requirement is a 2M system for a well not deeper than 9,090 feet; a 3M system for a well not deeper than 13,636 feet; and a 5M system for a well not deeper than 22,727 feet.

4. **Mud Requirement:** Mud shall be placed between all plugs. Minimum consistency of plugging mud shall be obtained by mixing at the rate of 25 sacks (50 pounds each) of gel per 100 barrels of **brine** water. Minimum nine (9) pounds per gallon.

5. **Cement Requirement:** Sufficient cement shall be used to bring any required plug to the specified depth and length. Any given cement volumes on the proposed plugging procedure are merely estimates and are not final. Unless specific approval is received, no plug except the surface plug shall be less than 25 sacks of cement. Any plug that requires a tag will have a minimum WOC time of 4 hours.

In lieu of a cement plug across perforations in a cased hole (not for any other plugs), a bridge plug set within 50 feet to 100 feet above the perforations shall be capped with 25 sacks of cement.

Before pumping cement on top of CIBP, tag will be required to verify depth. Based on depth, a tag of the cement may be deemed necessary.

Unless otherwise specified in the approved procedure, the cement plug shall consist of either **Neat Class "C"**, for up to 7,500 feet of depth or **Neat Class "H"**, for deeper than 7,500 feet plugs.

6. **Subsequent Plug back Reporting:** Within 30 days after plug back work is completed, file one original and three copies of the Subsequent Report, Form 3160-5 to BLM. The report should give in detail the manner in which the plug back work was carried out, the extent (by depths) of cement plugs placed, and the size and location (by depths) of casing left in the well. **Show date work was completed.**

7. **Trash:** All trash, junk and other waste material shall 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 permitted.