

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-HOBBS

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.

HOBBS OCD

5. Lease Serial No.
NMNM112940

6. If Indian, Allottee or Tribe Name

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

SUBMIT IN TRIPLICATE - Other instructions on reverse side

MAY 12 2015

1. Type of Well

☐ Oil Well ☐ Gas Well ☒ Other: INJECTION

8. Well Name and No.

BRINSTOOL 25 FEDERAL 1

2. Name of Operator

OWL SWD OPERATING, LLC

Contact: KATY WELCH

E-Mail: kwelch@oilfieldwaterlogistics.com

RECEIVED

9. API Well No.

30-025-37582

3a. Address

8214 WESTCHESTER DRIVE SUITE 850
DALLAS, TX 75255

3b. Phone No. (include area code)

Ph: 432-234-0427

10. Field and Pool, or Exploratory

SWD; BELL CNYN-CHRRY CNYN

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 25 T23S R33E Mer NMP SENE 1980FNL 660FEL

11. County or Parish, and State

LEA COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Workover Operations
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> 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 recompleat 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 recompleat 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.)

PER BLM CFO PERSONNEL - THIS IS A NEW NOI SUNDRY TO MOVE FORWARD WITH REPLUGGING AND SWD CONFIGURATION OPERATIONS. WELL IS CURRENTLY TA'D FROM 2/11/15

MIRU - RUPU - Install BOP & Test. Conduct Safety Meeting.

PROPOSED OPERATIONS ? REPLUG 4 ?? LINER

1. Drill out and clean out all existing plugs as follows; D/O CIBP at 7462?; reenter 4 ?? liner @ 7810?; tag and drill out 4 ?? CIBP at 10990?; tag CIBP @ 11950?.
2. Set Class H plug from tag on CIBP at 11950? to 11536? (to cover ?? Csg shoe depth @ 11,908? and Wolfcamp formation top at 11586?). No tag required.

WITNESS
PLUG BACKSEE ATTACHED FOR
CONDITIONS OF APPROVAL

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

Electronic Submission #300617 verified by the BLM Well Information System
For OWL SWD OPERATING, LLC, sent to the Hobbs
Committed to AFMSS for processing by PAUL SWARTZ on 05/07/2015 ()

Name (Printed/Typed) BEN STONE

Title AGENT/CONSULTANT

Signature (Electronic Submission)

Date 05/05/2015

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.

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

SUBJECT TO LIKE
APPROVAL BY STATE

MAY 13 2015

Additional data for EC transaction #300617 that would not fit on the form

32. Additional remarks, continued

3. Set 4 ?? CIBP @ 10950? & tag. Spot cmt plug 35sx minimum Class ?H?.
4. RU wireline & run CBL log from approximately 9000? (below TOC) w/ 0 psi to 7450? which ties into previously run CBL on 12/22/14. (Provide BLM with a PDF copy CBL - may be emailed to pswartz@blm.gov. The CFO BLM on call engineer may be reached at 575-706-2779.
5. Conduct MIT test on 4 ?? Csg stub with PKR set in 7? Csg just above stub; test @ 500 psi for 30 minutes. (Notify BLM to witness with as much lead time as possible when this step is anticipated.)
6. Perforate @ 7860? (~50? below the 4 ?? Csg stub) and set a Class H 25 sx minimum balanced cement plug from 10? below perms. Tag the plug at least 60? above the stub @ 7750?.

PROPOSED OPERATIONS ? CONFIGURE FOR SWD (Per NMOCD SWD-1364)

1. Set CIBP 7450? w/ 35? cement cap.
2. Conduct MIT test of hole w/ 1045 psi. (Notify BLM and OCD 24 hours prior to witness - submit test to BLM via subsequent sundry.)
3. RU wireline. Perforate selected intervals to be determined between a maximum top-of 5223? and a maximum bottom of 7380? as permitted by SWD-1364.
4. Test for oil and gas production from the injection zone. (Notify BLM ASAP - Demonstrate that paying quantities of hydrocarbons are not produced when the well has a pumped off fluid level. Obtain VERBAL approval to continue w/ operations.
5. RIH w/pkr & workstring; acidize w/ 15,000 gals 15% HCl & gel spacers. Swab / flowback.
6. Perform step rate test. (Notify BLM 24 hours prior to witness - submit test to BLM via subsequent sundry.) Submit request to OCD for injection pressure increase if warranted.
7. RIH w/ 4.5? IC tubing and PRK ? set PRK @ 5125?.
8. Install injection wellhead. Rig down workover unit.
9. Hook up injection equipment and commence injection @ 1045 psi or new permitted pressure max.

District I
1625 N. French Dr., Hobbs, NM 88240

District II
1301 W. Grand Avenue, Artesia, NM 88210

District III
1000 Rio Brazos Rd., Aztec, NM 87410

District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-025-37582	² Pool Code 96802	³ Pool Name SWD; Bell Canyon-Cherry Canyon
⁴ Property Code 313548	⁵ Property Name Brinstool 25 Federal SWD	⁶ Well Number 1
⁷ OGRID No. 308339	⁸ Operator Name Owl SWD Operating, LLC	⁹ Elevation 3626 feet

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	25	23-S	33-E		1980	North	660	East	Lea

¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

¹² Dedicated Acres n/a	¹³ Joint or Infill n/a	¹⁴ Consolidation Code n/a	¹⁵ Order No. SWD-1364
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

¹⁶ 	¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.	
	Signature Benjamin E. Stone Printed Name	Date 5/05/2015
	SOS Consulting, LLC; agent for: Owl SWD Operating, LLC	
	¹⁸ SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.	
August 31, 2005 Date of Survey		
Signature and Seal of Professional Surveyor: Gary G. Edison		
NM Cert. No.12641 Certificate Number		

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
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1000 Rio Brazos Rd., Aztec, NM 87410
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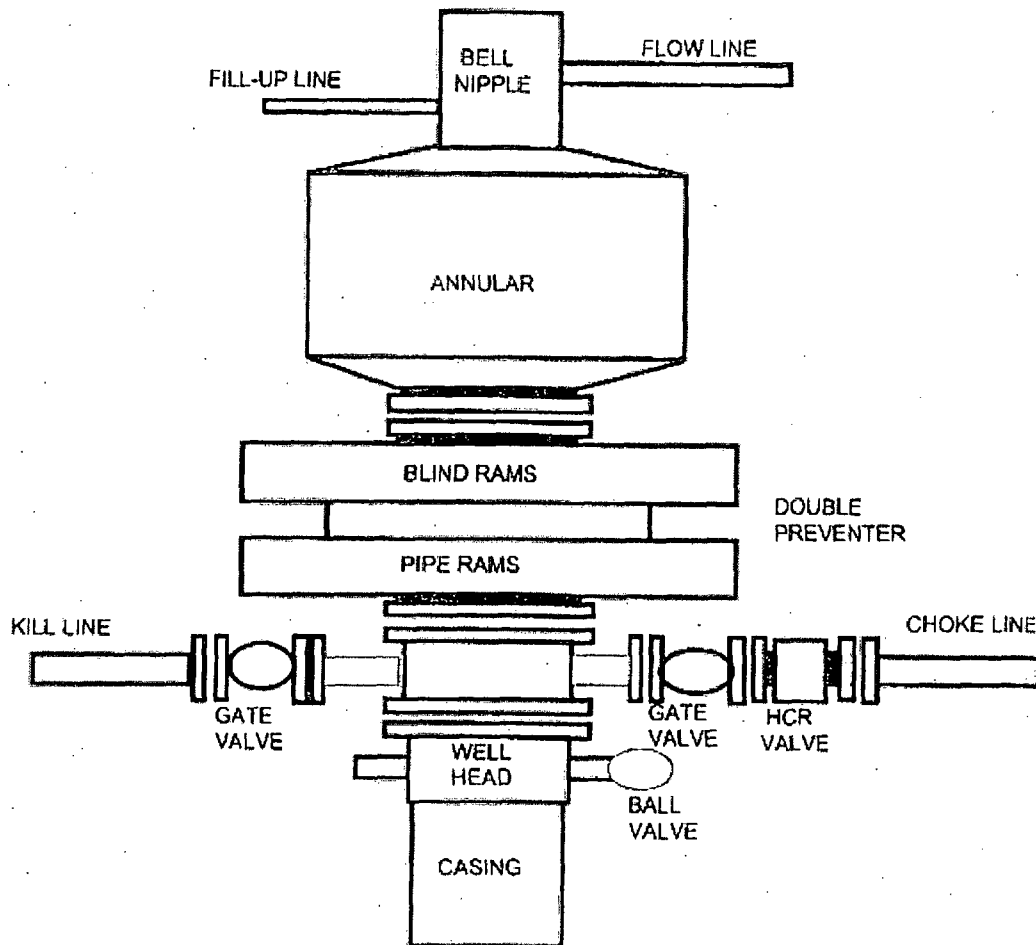
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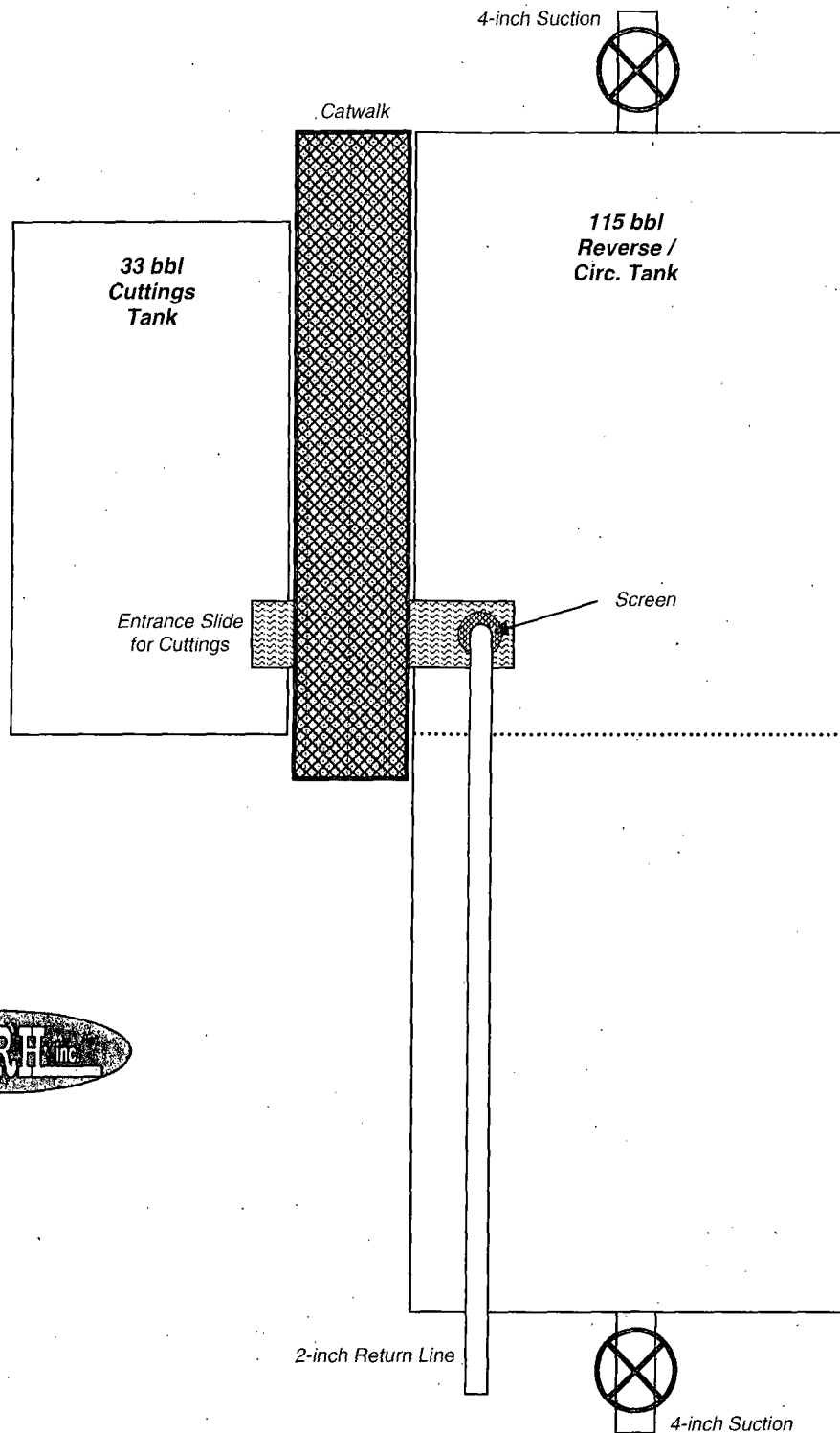
¹⁶ 	¹⁷ OPERATOR CERTIFICATION <i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i> Signature 5/05/2015 Date Benjamin E. Stone Printed Name SOS Consulting, LLC; agent for: Owl SWD Operating, LLC	
	¹⁸ SURVEYOR CERTIFICATION <i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i> August 31, 2005 Date of Survey Signature and Seal of Professional Surveyor: Gary G. Edison	
	NM Cert. No. 12641 Certificate Number	

BLOWOUT PREVENTER DIAGRAM

5000 PSI WORKING PRESSURE

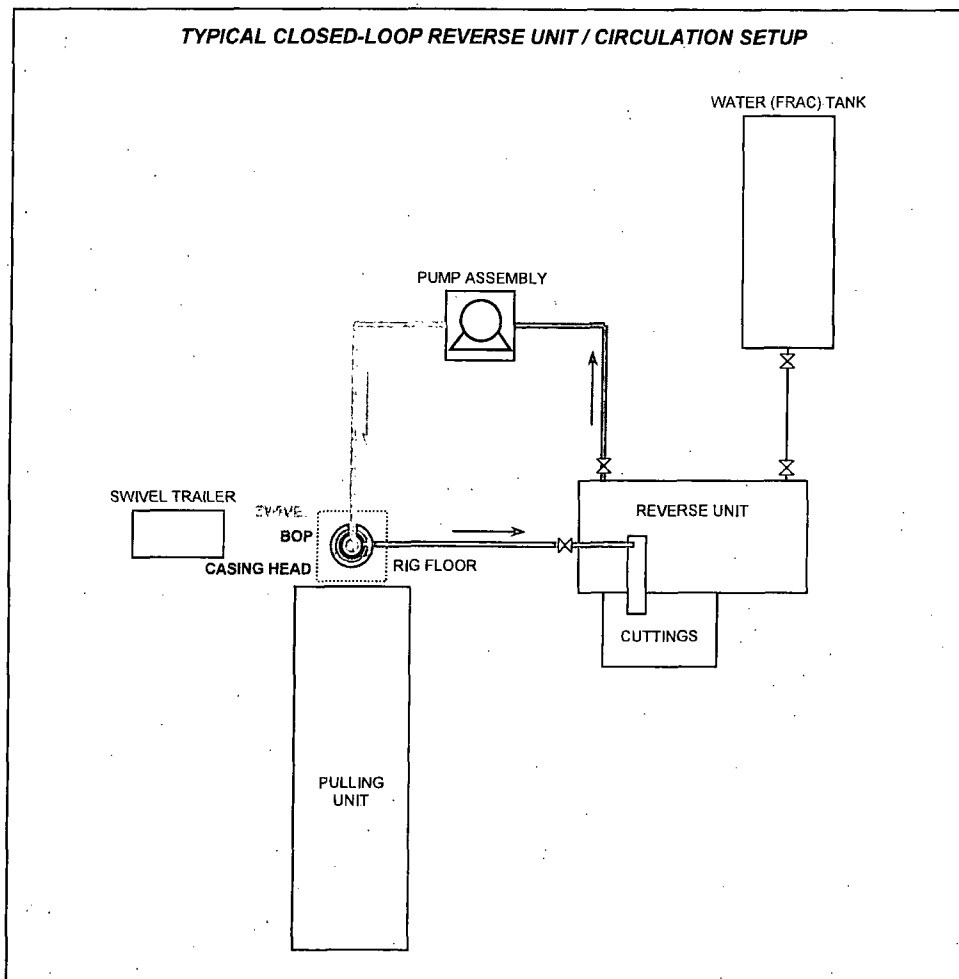


Reverse / Circulation Tank for Workovers & Drillouts



Standard Operating Procedure - Re-entry Closed-Loop Reverse Unit Diagram

1. Blow Out Preventer tested prior to any operations. Notify OCD at least 4 hours prior.
2. Visual monitoring maintained on returns. Proceed with drillout operations accordingly.
3. Cuttings / waste hauled to specified facility. CRI - LEA COUNTY
4. Spills contained & cleaned up immediately. Repair or otherwise correct the situation within 48 hours before resuming operations. Notify OCD within 24 hours. Remediation started ASAP if required. Operator shall comply with 19.15.29 NMAC and 19.15.30 NMAC, as appropriate.
5. Subsequent sundry / forms filed as needed - well returned to service.



Conditions of Approval

Delaware Water Company
Brininstool - 01, 3002537582
T23S-R33E, Sec 25, 1980FL & 660FEL
May 06, 2015

1. Subject to like approval by the New Mexico Oil Conservation Division.
2. Considering that the well is to be used for commercial water disposal a BLM Right of Way Agreement is to be secured before its use.
3. **Prior to active disposal of production water into the Brininstool – 01 API# 3002537582** wellbore, the abandoned Mary – 03 API# 302527479 must be reentered and isolation of Bell Canyon, Cherry Canyon, and Bone Spring formations established. Submit a notice of intent for accomplishment of that procedure for the Mary – 03.
4. **Notify BLM 575-393-3612 Lea Co as work begins.** Some procedures are to be witnessed. If there is no response, call 575-361-2822, leave a voice mail with the API#, workover purpose, and a call back phone number
5. Surface disturbance beyond the existing pad must have prior approval.
6. A closed loop system is required. The operator shall properly dispose of drilling/circulating contents at an authorized disposal site. Tanks are required for all operations, no excavated pits.
7. Functional H₂S monitoring equipment shall be on location.
8. 5,000psig (5M) Blow Out Prevention Equipment to be used. All BOPE and workover procedures shall establish fail safe well control. Ram(s) for the work string(s) used is required equipment. Manual BOP closure system including a blind ram and pipe ram(s) designed to close on all (hand wheels) equipment shall be installed regardless of BOP design. Function test the installed BOPE to 500psig when well conditions allow. Related equipment, (choke manifolds, kill trucks, gas vent or flare lines, etc.) shall be employed when needed for reasonable well control requirements.
9. All waste (i.e. 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.
10. The BLM PET witness is to run tbg tally and agree to cement volumes and placement. Sample each plug for cement curing time and tag and/or pressure test as requested by BLM PET witness.
11. **This procedure is subject to the next three numbered paragraphs.**

12. Mix cement plugs to cover a minimum of 100ft plus 10ft for every 1,000ft from the bottom of the plug, rounding the number of necessary sacks up to the nearest 5 sacks. Never use less than 25sx. Examples: A cement plug set at 8000 in 7" casing would require a min of 35sx. A 25sx plug in 5 1/2" casing should cover 250ft, which may exceed 100ft plus 10ft per 1000ft.
13. Class H > 7500ft & C < 7500ft) cement plugs(s) will be necessary. For any plug that requires a tag or pressure test a minimum WOC time of 4 hours(C) & 8 hours(H) is recommended. Formation isolation plugs of Class "C" to be mixed 14.8#/gal, 1.32 ft³/sx, 6.3gal/sx water and "H" to be mixed 16.4#/gal, 1.06ft³/sx, 4.3gal/sx water.
14. Minimum requirement for mud placed between plugs is 25 sacks of salt water gel per 100 barrels in 9 lb/gal brine.
15. Remove 7" CIBP at 7462. (Top of 4 1/2" csg at 7810).
16. Tag and drill out 4 1/2" CIBP at 10990'.
17. Record tag on CIBP at 11950'.
18. Set Class H plug from tag on CIBP at 11950' to 11536' or above covering 7" csg shoe at 11,908' and Wolfcamp formation top at 11586'. Tag the plug with tubing.
19. Reset a 4 1/2" CIBP less than 100ft above 11046-155 perfs and place balanced cmt plug 25sx minimum Class H on the CIBP. Tag the plug with tubing.
20. **Provide BLM with an electronic copy (Adobe Acrobat Document) of a 4 1/2" casing cement bond log record from 9000' or below to top of cement taken with 0psig casing pressure. The CBL may be attached to a pswartz@blm.gov email. The CFO BLM on call engineer may be reached at 575-706-2779.**
21. **Use the CBL to confirm cement coverage (in the 4 1/2" x 7" annulus) from 8780 or below to 8650 or above across the Bone Spring and set a Class "H" (25sx minimum) cement plug (inside the 4 1/2" csg) to cover from 8780 or below to 8650 or above, covering the Bone Spring formation top at 8726. Tag the plug with tubing.**
22. Record a pressure chart testing the 4 1/2" csg stub at least 1500psig for 30min with a 7" packer set just above the stub.
23. Perforate 50ft below the 4 1/2" csg stub at 7892 and set a Class H 25sx minimum balanced cement plug from 10ft below those perfs. Tag the plug with tubing at least 60ft above the stub.
24. After setting the top plug and before perforating, **perform a charted casing integrity test** of 1045psig minimum. Document the pressure test on a one hour full rotation calibrated (within 6 months) recorder chart registering within 25 to 85 per cent of its full range. **Verify all annular casing vents are plumbed to the surface and open during this pressure test.** Submit a subsequent Sundry Form 3160-5 relating the dated daily wellbore and MIT activities, include a copy of the chart.
25. The operator shall test for oil and gas production from the injection zone. Demonstrate that paying quantities of hydrocarbons are not produced when the well has a pumped off fluid

level. Open hole logs may support the evaluation. BLM agreement is to be obtained prior completion as a disposal well.

26. File intermediate **subsequent sundry** Form 3160-5 within 30 days of any interrupted workover procedures and a complete workover subsequent sundry.
27. Submit the BLM Form 3160-4 **Recompletion Report** within 30 days of the date all BLM approved procedures are complete.
28. Workover approval is good for 90 days (completion to be within 90 days of approval).
29. An inactive/shut-in well bore is a non-producing completion that is capable of “beneficial use” i.e. production in **paying quantities** or of service use.
30. Submit evidence to support your determination that the well has been returned to active “beneficial use” for BLM approval on the Sundry Notice Form 3160-5 (the original and 3 copies) before 11/25/2015.
31. Should “beneficial use” not be achieved submit for BLM approval a plan for plug and abandonment.

PRS 050615

Operations for a Well with an Inj Packer

- 1) Conduct a Mechanical Integrity Test of the tubing/casing annulus after a tubing, packer or casing seal is established.
- 2) The minimum test pressure should be 500 psig for 30 minutes or 300 psig for 60 minutes, with a minimum 200 psig differential between tubing and casing pressure (at test time) but no more than 70% of casing burst pressure as described by Onshore Order 2.III.B.1.h. (The tubing or reservoir pressure may need to be reduced). **Verify all annular casing vent valves are open to the surface during this pressure test.** An alternate method for a BLM approved MIT is to have the fluid filled system open to atmospheric pressure and have a loss of less than five barrels in 30 days witnessed by a BLM authorized officer.
- 3) Document the pressure test on a one hour full rotation calibrated (within 6 months) recorder chart registering within 25 to 85 per cent of its full range. Greater than 10% pressure leakoff will be viewed as a failed MIT. Less than 10% pressure leakoff will be evaluated site specifically and may restrict injection approval.
- 4) Make arrangements 24 hours before the test for BLM to witness. In Lea County phone 575-393-3612. If no answer, leave a voice mail or email with the API#, workover purpose, and a call back phone number.
- 5) Submit a subsequent Sundry Form 3160-5 relating the MIT activity. Include a copy of the recorded MIT pressure chart. List the name of the BLM witness, or the notified person and date of notification. NMOCD is to retain the original recorded MIT chart.
- 6) Use of tubing internal protection, tubing on/off equipment just above the packer, a profile nipple, and an in line tubing check valve below the packer or between the on/off tool and packer is a “Best Management Practice”. The setting depths and descriptions of each are to be included in the subsequent sundry.

- 7) **Submit the original subsequent sundry with three copies to BLM Carlsbad.**
- 8) Compliance with a NMOCD Administrative Order is required, submit documentation of that authorization.
- 9) When injection pressure is within 50 psig of the maximum pressure, install automation equipment that will prevent exceeding that maximum. Submit a subsequent report (Sundry Form 3160-5) describing the installed automation equipment within 30 days.
- 10) Unexplained significant variations of rate or pressure to be reported within 5 days of notice.
- 11) The casing/tubing annulus is required to be monitored for communication with injection fluid or loss of casing integrity. A BLM inspector may request verification of a full annular fluid level at any time.
- 12) A "Best Management Practice" is to maintain the annulus full of packer fluid at atmospheric pressure. Equipment that will display on site, continuous open to the air fluid level is necessary to achieve this goal.
- 13) Loss of packer fluid above five barrels per month indicates a developing problem. Notify BLM Carlsbad Field Office, Petroleum Engineering within 5 days.
- 14) A suggested format for monthly records documenting that the casing annulus is fluid filled is available from the BLM Carlsbad Field Office.
- 15) Gain of annular fluid pressure requires notification within 24 hours. Cease injection and maintain a production casing pressure of Opsia. Notify the BLM's authorized officer ("Paul R. Swartz" <pswartz@blm.gov>, cell phone 575-200-7902). If there is no response phone 575-361-2822.
- 16) Submit a (Sundry Form 3160-5) subsequent report (daily reports) describing all wellbore activity and Mechanical Integrity Test as per item 1) above. Include the date(s) of the well work, and the setting depths of installed equipment: internally corrosive protected tubing, tubing on/off equipment just above the packer, and an in line tubing check valve below the packer or between the on/off tool and packer. The setting depths and descriptions of each are to be included in the subsequent sundry.
- 17) A request for increased wellhead pressures is to be accompanied by a step rate test. **PRIOR to a Step Rate Test** BLM – CFO is requiring a Notice of Intent.
- 18) Class II (production water disposal) wells will not be permitted stimulation injection pressures that exceed frac pressure.

Access information for use of Form 3160-5 "Sundry Notices and Reports on Wells"

NM Fed Regs & Forms - http://www.blm.gov/nm/st/en/prog/energy/oil_and_gas.html

§ 43 CFR 3162.3-2 Subsequent Well Operations.

§ 43 CFR 3160.0-9 (c)(1) Information collection.

§ 3162.4-1 (c) Well records and reports.

Step Rate Test - Conditions of Approval

Delaware Water Company, LLC
Brininstool - 01, API 3002537582
T23S-R33E, Sec 25, 1980FL & 660FEL
May 06, 2015

Submit an anticipated bottom hole fracture pressure for the field or pool formation.

State the **targeted** maximum bbl/min injection rate. **The objective is to avoid fracturing the injection formation.**

Submit the injection fluid lbs/gal weight.

Submit an anticipated formation fracture or breakdown pressure at the injection top.

Stop injection a minimum of 48 hours before the step rate test and record the tubing pressure as it drops. The pressure should stabilize at or below the NMOCD permitted pressure for 8 hours.

Calculate seven injection rates by multiplying the targeted maximum bbl/min injection by 0.05 for Step 1, 0.10 for Step 2, 0.20 for Step 3, 0.40 for Step 4, 0.60 for Step 5, 0.80 for Step 6, and 1.00 for Step 7. The first two step rate pressures must be below 0.2psig/ft x depth at top of injection. Record both surface and top perforation step pressures at five minute increments. Each step's time duration (30 minutes or more) should be within 1 minute or less of the preceding step. If stabilized pressure values ($\Delta \pm 15$ psig) are not obtained between the last two (five minute) increments the test results will be considered inconclusive.

The Step Rate fluid used should be the same as the proposed injection fluid.

Flow rates are to be controlled with a constant flow regulator and measured with a turbine flow meter calibrated within 0.1 bbl/min. Record those rates using a chart recorder or strip chart and **complete the "Step Rate Test Data for BLM, CFO" information sheet.**

Use a down hole transmitting pressure device and a surface pressure device with accuracies of ± 10 psig to measure pressures.

Notify BLM 575-200-7902 , if there is no response, 575-361-2822 Eddy Co. or 575-393-3612 Lea Co 24 hours before beginning the test. If no answer, leave a voice mail or email with the API#, workover purpose, and a call back phone number.

When breakdown pressure is not achieved at the **targeted rate** the formation is accepting the injection fluid without fracturing, which is the **objective**. Stop the test.

When the formation fracture pressure has been exceeded as evidenced by at least two rate-pressure combinations greater than the breakdown pressure stop the test and record the bottom hole Instantaneous Shut-in Pressure. This ISIP is considered the minimum pressure to hold open a fracture in this formation at this well. Fifty psig less than the wellhead fracture pressure is the maximum surface pressure BLM will approve.

Record with each five minute interval the corresponding rate (bbl/min), down hole, and surface pressure (psig). Provide BLM with the tabulation of each five minute interval. Provide a time graph plot displaying rates and surface pressures as the test progresses. Also include a graph showing the stabilized pressure at each injection rate. Submit that data to BLM with the shut-in pressure recording.

File a sundry subsequent report with documentation of the data collected, requesting your proposed wellhead injection pressure.

STEP RATE TEST DATA for BLM, CFO

Operator: Delaware Water Company, LLC

Well: Brininstool - 01

API#: 3002537582

Lease: NM112940

Data collected:

Sfc Loc: T23S-R33E, Sec 25, 1980FL & 660FEL

Input cell

Packer set at:

Inj Pipe I.D.:

Top Injection Depth: X 0.20psig/ft = Expected Surface Fracture psig: 0
 With Mud Wt Scale: 8.3 lbs/gal Beginning Formation psig: 1800 at Depth: 3400
 Injection fluid lbs/gal: 8.5 Hydrostatic Pressure of fluid at top depth of injection: 0
 Beginning Wellhead psig: 300 Target Maximum Rate - bpd(barrels per day):

1. Take a charted record of shut in psig for no less than 48 hours. If the shut in psig is above the expected fracture pressure, **the wellhead pressure will need to be bled off before beginning the Step Rate Test.**
2. Perform a minimum of seven steps, recording rate to ± 0.1 bpm and surface pressures to ± 10 psig in five minute intervals. The first two step rate pressures must be below 0.2psig/ft x depth at top of injection.
4. The last two five minute surface pressure readings of each (minimum 30 minute) step are to be within 15psig of each other. If not, hold that step injection rate past the 30 minute step until two consecutive pressure readings are within 15psig. Record the average of those two readings as the Data Point for that Step #.

Step 1								0.0	bpm pmp'd for Step 1
Target Test Rate (5% of maximum bpd/1440 =								0.0	bpm (barrels per minute) for Step 1
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:		
Surface (psig):							End Time:		
Formation (psig):							Graph Data for Point #1		
bpm:									
Time:	35 min	40 min	45 min	50 min	55 min	60 min			
Surface (psig):							Sfc psig:		
Formation (psig):							F psig:		
bpm:							bpd:		

Step 1 has a target bpd rate of: 0

Step 2								0.0	bpm pmp'd for Step 2
Target Test Rate (10% of maximum bpd/1440 =								0.0	bpm for Step 2
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:		
Surface (psig):							End Time:		
Formation (psig):							Graph Data for Point #2		
bpm:									
Time:	35 min	40 min	45 min	50 min	55 min	60 min			
Surface (psig):							Sfc psig:		
Formation (psig):							F psig:		
bpm:							bpd:		

Step 2 has a target bpd rate of: 0

Step 3								0.0	bpm pmp'd for Step 3
Target Test Rate (20% of maximum bpd/1440 =								0.0	bpm for Step 3
Time:	5 min	10 min	15 min	20 min	25 min	30 min	Start Time:		
Surface (psig):							End Time:		
Formation (psig):							Graph Data for Point #3		
bpm:									
Time:	35 min	40 min	45 min	50 min	55 min	60 min			
Surface (psig):							Sfc psig:		
Formation (psig):							F psig:		
bpm:							bpd:		

Step 3 has a target bpd rate of: 0

STEP RATE TEST DATA for BLM, CFO

Operator: Delaware Water Company, LLC

Well: Brininstool - 01

API#: 3002537582

Lease: NM112940

Data collected: 0

Sfc Loc: T23S-R33E, Sec 25, 1980FL & 660FEL

Step 4		0.0 bpm pmp'd for Step 4	
Target Test Rate (40% of maximum bpd/1440 =		0.0 bpm for Step 4	
Time:	5 min 10 min 15 min 20 min 25 min 30 min	Start Time:	
Surface (psig):		End Time:	
Formation (psig):		Graph Data for Point #4 Sfc psig: <input type="text"/> F psig: <input type="text"/> bpd: <input type="text"/>	
Rate bbl/min:			
Time:	35 min 40 min 45 min 50 min 55 min 60 min		
Surface (psig):		Sfc psig: <input type="text"/>	
Formation (psig):		F psig: <input type="text"/>	
bpm:		bpd: <input type="text"/>	

Step 4 has a target bpd rate of: 0

Step 5		0.0 bpm pmp'd for Step 5	
Target Test Rate (60% of maximum bpd/1440 =		0.0 bpm for Step 5	
Time:	5 min 10 min 15 min 20 min 25 min 30 min	Start Time:	
Surface (psig):		End Time:	
Formation (psig):		Graph Data for Point #5 Sfc psig: <input type="text"/> F psig: <input type="text"/> bpd: <input type="text"/>	
bpm:			
Time:	35 min 40 min 45 min 50 min 55 min 60 min		
Surface (psig):		Sfc psig: <input type="text"/>	
Formation (psig):		F psig: <input type="text"/>	
bpm:		bpd: <input type="text"/>	

Step 5 has a target bpd rate of: 0

Step 6		0.0 bpm pmp'd for Step 6	
Target Test Rate (80% of maximum bpd/1440 =		0.0 bpm for Step 6	
Time:	5 min 10 min 15 min 20 min 25 min 30 min	Start Time:	
Surface (psig):		End Time:	
Formation (psig):		Graph Data for Point #6 Sfc psig: <input type="text"/> F psig: <input type="text"/> bpd: <input type="text"/>	
Rate bbl/min:			
Time:	35 min 40 min 45 min 50 min 55 min 60 min		
Surface (psig):		Sfc psig: <input type="text"/>	
Formation (psig):		F psig: <input type="text"/>	
bpm:		bpd: <input type="text"/>	

Step 6 has a target bpd rate of: 0

Step 7		0.0 bpm pmp'd for Step 7	
Target Test Rate (100% of maximum bpd/1440 =		0.0 bpm for Step 7	
Time:	5 min 10 min 15 min 20 min 25 min 30 min	Start Time:	
Surface (psig):		End Time:	
Formation (psig):		Graph Data for Point #7 Sfc psig: <input type="text"/> F psig: <input type="text"/> bpd: <input type="text"/>	
bpm:			
Time:	35 min 40 min 45 min 50 min 55 min 60 min		
Surface (psig):		Sfc psig: <input type="text"/>	
Formation (psig):		F psig: <input type="text"/>	
bpm:		bpd: <input type="text"/>	

Step 7 has a target bpd rate of: 0

Instant Shut In Pressure:
 5 minute Shut In Pressure:
 10 minute Shut In Pressure:
 15 minute Shut In Pressure: