

District I - (575) 393-6161
1625 N French Dr., Hobbs, NM 88240
District II - (575) 748-1283
811 S. First St., Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Rd., Aztec, NM 87414
District IV - (505) 476-3460
1220 S St Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
Revised August 1, 2011

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO. 30-025-31955
5. Indicate Type of Lease STATE ☐ FEE ☒
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name B.F. HARRISON "B"
8. Well Number 8
9. OGRID Number 4323
10. Pool name or Wildcat Teague;Glorieta Upper Paddock SW

SUNDRY RECEIPTS AND REPORTS ON WELLS
(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

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

2. Name of Operator
CHEVRON U.S.A. INC.

3. Address of Operator
15 SMITH ROAD, MIDLAND, TEXAS 79705

4. Well Location
Unit Letter D: 510 feet from the NORTH line and 660 feet from the WEST line
Section 9 Township 23-S Range 37-E NMPM County LEA

11. Elevation (Show whether DR, RKB, RT, GR, etc.)

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: SONIC HAMMER, ACIDIZE, SCALE SQUEEZE

OTHER:

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

CHEVRON U.S.A. INC. INTENDS TO SONIC HAMMER, ACIDIZE, & SCALE SQUEEZE THE SUBJECT WELL.

PLEASE FIND ATTACHED, THE INTENDED PROCEDURE, WELLBORE DIAGRAM, & C-144 INFORMATION.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE

Denise Pinkerton

TITLE: REGULATORY SPECIALIST

DATE: 07-13-2012

Type or print name DENISE PINKERTON

E-mail address: leakejd@chevron.com

PHONE: 432-687-7375

For State Use Only

APPROVED BY

[Signature]

TITLE

DIST MGR

DATE

7-16-2012

Conditions of Approval (if any):

JUL 16 2012

B.F. Harrison B #8 – [30-025-31955]
NM Teague North field
T23S, R37E, Section 9
N 32° 19' 28.056", W -103° 10' 25.248" (NAD27)
Job: Sonic Hammer, Acidize & Scale Squeeze

This procedure is meant to be followed. It is up to the WSM, Remedial Engineer and Production Engineer to make the decisions necessary to do SAFELY what is best for the well. In the extent that this procedure does not reflect actual operations, please contact RE, PE and Superintendent for possible MOC.

Procedure:

1. MI & RU Workover unit.
2. Verify that well does not have pressure/flow. If well has pressure, record tubing and casing pressures on WellView report. Bleed down well; if necessary, kill with cut brine fluid (8.6 ppg).
- **Caliper elevators and tubular EACH DAY prior to handling tubing/rods/tools. Note in JSA when and what items are callipered within the task step that includes that work.**
3. Unseat pump. POOH with rods & pump. Examine rod string for paraffin/corrosion. Do not hot water, unless significant paraffin is seen. ND wellhead, unset TAC, NU BOP.
4. POOH & LD 1 joint, PU 5-1/2" packer and set @ ~ 25'. Close and test BOP pipe rams to 250psi (low)/ 500psi (high). Record testing pressures on WellView report. Release and LD packer.
5. PU tubing and run back in hole to tag for fill.
 Depths: (TAC 5,084', Bottom Perfs 5,286', EOT 5,311', PBTD 5,380')
6. RU Scanners and POOH while scanning all 2-7/8" 6.5# J-55 production tubing. LD all non-yellow band joints. If fill is tagged:
 - a. Above 5,350' proceed to step #7.
 - b. Below 5,350' skip to step #9.

Strap pipe out of the hole to verify depths. Send scan report to lgbi@chevron.com.

- **Caliper elevators and tubular EACH DAY prior to handling tubing/rods/tools. Note in JSA when and what items are callipered within the task step that includes that work.**
7. PU and RIH with 4-3/4" Milled Tooth (MT) Bit, 4 (3-1/2') drill collars on 2-7/8" 6.5# L-80 Workstring. RU power swivel and C/O to 5,380'. POOH with 2-7/8" WS and bit. LD bit and BHA.
 Note: If circulation is not expected/achieved, notify Remedial Engineer to discuss C/O with bailer (proceed to step #8) or utilize foam/air unit (continue to supplemental procedure at end).
8. PU and RIH with 4-3/4" MT and Bulldog bailer on 2-7/8" 6.5# L-80 WS. Clean out to 5,380'. POOH with 2-7/8" WS and bit. LD bit and BHA.

- **Expect trapped pressure inside tubing while breaking connections during bailing operations, discuss on JSA and mitigate hazard. Use mudbucket (remove bottom seals if applicable) while breaking connections.**
- 9. Contact sonic tool representative to be on-site during job. PU and RIH with Sonic Hammer tool and 2-7/8" Workstring to 5,290' or enough depth to cover the bottom perforations (@ 5,286') with a whole stand. Hydrotest tubing to 6,000 psi. Stand back tubing to top perforations (@ 5,108'). Install stripper head and stand pipe with sufficient treating line to move tools vertically ~ 30'. RU pressure gauges to allow monitoring of tubing and casing pressures during job.
- 10. MI and RU Petroplex equipment. Titrate acids and verify concentration ($\text{HCl} \pm 1.5\%$). Treat all intervals from 5,105' to 5,290' with 20 bbls of 8.6 ppg cut brine water per interval (**see Table 1**). Pump down Sonic Hammer tool at 5 BPM while reciprocating tool across intervals. Do not exceed 5,000 psi tubing pressure. Leave annulus open in circulation mode while treating intervals with brine water.

Perf Intervals for Acid			
Interval (#)	Depth	Net Feet (ft)	Acid Volume (gal)
1	5,105' - 5,125'	20	1,000
2	5,170' - 5,195'	25	1,000
3	5,265' - 5,290'	25	1,000
Total		70	3,000

Table 1

- 11. Follow the brine water wash with 3,000 gals 15% NEFE HCl of total acid for all intervals. Spot 3 bbls of acid outside tubing, shut in casing, pump 1,000 gals of acid @ 5 BPM over first treating interval from 5,105' – 5,125', monitor casing pressure not exceeding 500 psi on backside. Flush tubing with brine water after every acidizing interval, make a connection and continue with remaining interval. **Refer to Table 1.**
- 12. Shut in well for 1 hr to allow time for acid to spend. Monitor and bleed off excess pressure at surface if necessary to keep casing pressure below 500 psi.
- 13. Scale squeeze well with a total of 170 bbls 8.6 ppg brine water mixed with 2 drums (110 gallons) Baker SCW-358 Scale Inhibitor Chemical. Pump down Sonic Hammer tool at a max rate of 5 BPM. Start from lowest interval of 5,290' – 5,265' and continue moving uphole per pump schedule (**see Table 2**). Ensure top of tubing is flushed with brine water before making a connection.

Scale Squeeze Pump Schedule					
Step	Interval (ft)	Max Rate (BPM)	Volume Brine (bbl)	Volume Scale Chem. (gal)	Cum Volume (bbl)
1	Pump Chemical/brine while moving from 5290' - 5265'	5	10	40	10
2	Pump Brine while moving from 5290' - 5265'	5	40		50
3	Move pipe to next interval of 5195' - 5170'				50
4	Pump Brine while moving from 5195' - 5170'	5	13		63
5	Pump Chemical/brine while moving from 5195' - 5170'	5	8	35	73
6	Pump Brine while moving from 5195' - 5170'	5	29		102
7	Move pipe to next interval of 5125' - 5105'				102
8	Pump Brine while moving from 5125' - 5105'	5	13		115
9	Pump Chemical/brine while moving from 5125' - 5105'	5	8	35	123
10	Pump Brine while moving from 5125' - 5105'	5	49		172

Table 2

14. PU workstring to higher than top perforations. Displace tubing volume with 8.6 ppg cut brine water. Do not exceed 500 psi casing pressure or 5 BPM while pumping scale squeeze or casing flush. Release Petroplex.
15. TOH and LD 2-7/8" WS and Sonic Hammer tool.
16. RIH with 2-7/8" production tubing and hydrotest to 6,000 psi. ND BOP, set TAC, NU WH. RIH with rods and pump per ALCR's recommendation/Rodstar design. Hang well on.
17. RD and release Workover unit. Turn well over to production.

FOAM / AIR CLEANOUT PROCEDURE

- This procedure is an addition to the original procedure.
 1. Install flowback manifold with two chokes. All components on flowback manifold must be rated to at least 5,000 psi. If possible, flowback manifold components should be hydrotested before delivery. Hardline pipes from 2" casing valve to manifold to half pit with gas buster.
 2. Install flowback tank downwind from rig.
 3. Position Air unit upwind from Rig next to water tanks. Have vacuum truck on standby to empty halfpit. (if needed)
 4. RIH with 4-3/4" MT bit, 4 (3-1/2") drill collars on 2-7/8" 6.5# L-80 WS.
 5. NU stripper head with **NO Outlets** (Check stripper cap for thread type - course threads preferred). **Stripper head to be stump tested to 1,000 psi before being delivered to rig.** Check chart or test at rig.
 6. RU foam air unit. Make quality foam on surface before going down hole with foam/air. Install flapper float at surface before beginning to pump. Break circulation with foam/air. Evacuate fluid from well.

Pump high quality foam at all times. Do not pump dry air at any time. Fluid injection rates will generally be above 12 gallons per minute.

Whenever there is pressure on the stripper head, have a dedicated person continuously monitor pressure at choke manifold and have a dedicated person at accumulator ready to close annular BOP in case stripper leaks. Do not allow pressure on stripper head to exceed 500 psi. If pressure cannot be controlled below 500 psi, stop pumping, close BOP and bleed off pressure.

7. Clean out fill to 5,380' with low RPM's rotation and circulation, always keep pipe moving. Short trips can be beneficial to hole cleaning. Circulate well clean for at least 1 hour at the end of the day and pull up above the perforations before shut down for night. If the foam/air unit goes down, pull above the perforations.
8. When tripping out of hole, have special float bleed off tool available to relieve trapped pressure below float.

Ensure that high quality, stiff foam is pumped while circulating the fill. Stiff foam is required to prevent segregation while circulating. Monitor flow and pressures carefully when cleaning out.

Before rigging up power swivel to rotate, carefully inspect Kelly hose to ensure that it is in good condition. Ensure that swivel packing is in good condition.

Continue on with original procedure for completion.

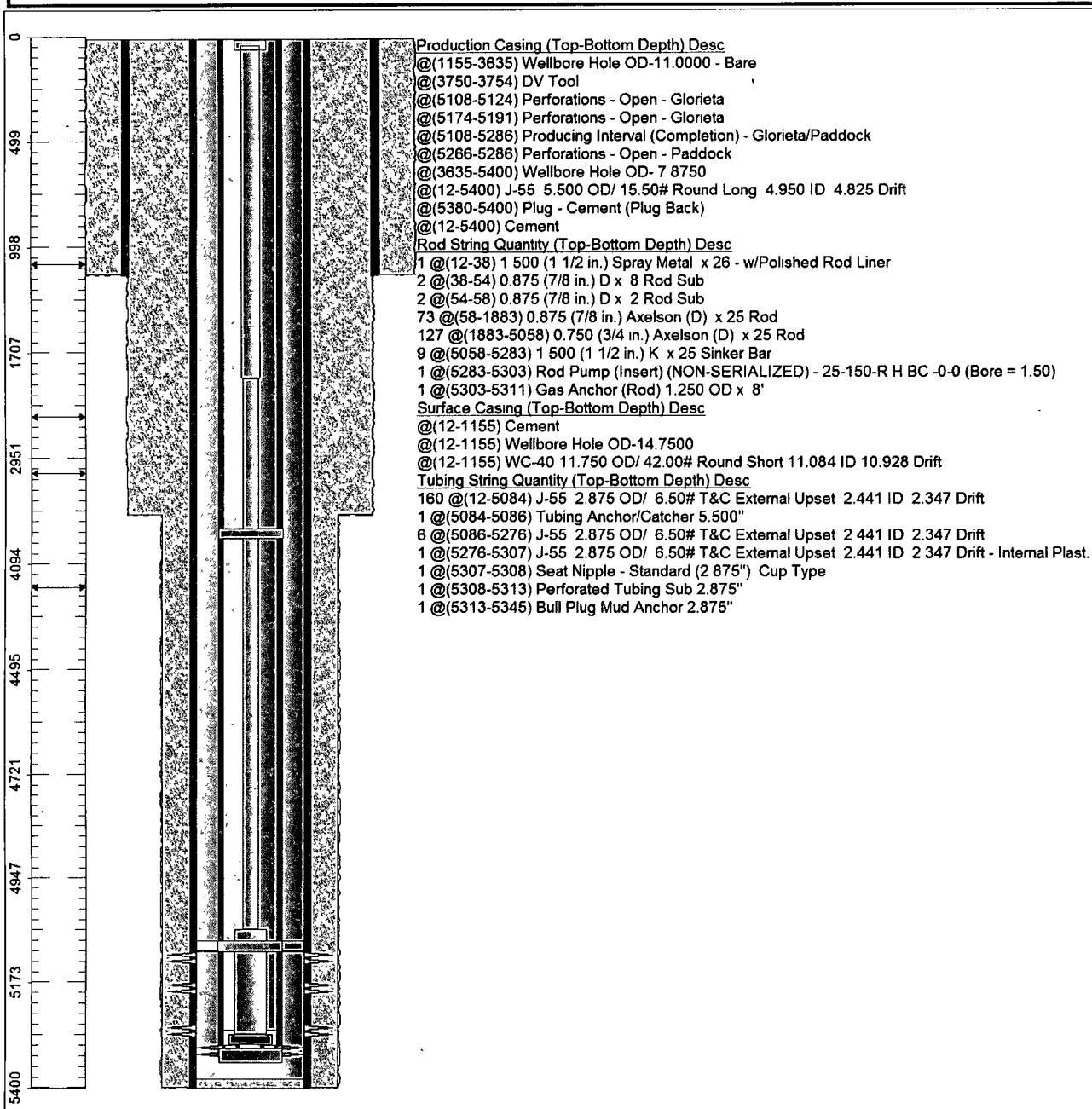
Figure 1 is a vertical bar chart showing the distribution of 1000 observations across four stages (Perfs, Stage 1, Stage 2, Stage 3) for three different values (5,105, 5,170, 5,265). The y-axis ranges from 5,050 to 5,300. The legend indicates that the bars represent the distribution of 1000 observations.

Value	Perfs	Stage 1	Stage 2	Stage 3
5,105	5,050	5,050	5,050	5,050
5,170	5,105	5,105	5,105	5,105
5,265	5,170	5,170	5,170	5,170

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Chevron U.S.A. Inc. Wellbore Diagram : BFHARRISONB8

Lease: OEU EUNICE		Well No.: HARRISON, B. F. -B- 8		Field: FLD-NM TEAGUE NORTH	
Location: 510FNL660FWL		Sec.: N/A		Blk:	Survey: N/A
County: Lea	St.: New Mexico	Refno: QU1935		API: 3002531955	Cost Center: UCU820500
Section: 9		Township: 023 S			Range: 037 E
Current Status: ACTIVE				Dead Man Anchors Test Date: NONE	
Directions:					



Ground Elevation (MSL):: 3317.00	Spud Date: 05/25/1993	Compl. Date: 06/15/1993
Well Depth Datum:: CSI0000N	Elevation (MSL):: 0.00	Correction Factor: 12.00
Last Updated by: bujq	Date: 07/03/2012	