

Submit 1 Copy To Appropriate District Office"

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1625 N. French Dr., Hobbs, NM 88240

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811 S. First St., Artesia, NM 88210

District III - (505) 334-6178

1000 Rio Brazos Rd., Aztec, NM 87410

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

HOBBBS OGD

CONSERVATION DIVISION

1220 South St. Francis Dr.

MAY 25 2012 Santa Fe, NM 87505

WELL API NO.

30-025-37412

5. Indicate Type of Lease

STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

V.M. HENDERSON

8. Well Number 20

9. OGRID Number 4323

10. Pool name or Wildcat

PENROSE; SKELLY GRAYBURG

SUNDRY NOTICES/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 F: 1360 feet from the NORTH line and 1360 feet from the WEST line

Section 30

Township 21-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: INTENT TO 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 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: 05-24-2012

Type or print name: DENISE PINKERTON

E-mail address: [leakejd@chevron.com](mailto:leakejd@chevron.com)

PHONE: 432-687-7375

APPROVED BY:

*[Signature]*

TITLE

*Staff MGR*

DATE

*5-29-2012*

Conditions of Approval (if any).

MAY 29 2012

V.M. Henderson #20  
Penrose Skelly, Grayburg Reservoir  
T21S, R37E, Sec.30  
N 32° 27' 11.916", W -103° 12' 20.124" (NAD27)  
Job: Sonic Hammer, Acidize & Scale Squeeze

5.17.2012

**Procedure:**

**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 MOC**

1. Verify that well does not have pressure or flow. If well has pressure, note 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/tools. Note in JSA when and what items are callipered within the task step that includes that work.**
2. MI & RU workover unit.
3. Unseat pump, POOH with rods and pump. Examine rods for wear/pitting/paraffin. Do not hot water unless necessary. ND wellhead, unset TAC, NU BOP. POOH and LD 1 jt, PU 5-1/2" packer and set ~ @ 25', test BOP pipe rams to 250 psi/1000 psi. Note testing pressures on wellview report. Release and LD packer.

**Note: Prior to ND WH, e-mail or call Remedial Engineer to summarize what it was done to mitigate the well control hazard.**

4. PU tubing and tag for fill (TAC 3,528', Bottom Perfs 3,936', EOT 4,039', PBTD 4,198'). POOH while scanning 2-7/8" prod tubing. LD all non-yellow band joints. If fill is tagged:
  - A. Above 4,150' continue to step 5.
  - B. Below 4,150' continue to step 7.

**Note: Strap pipe out of the hole to verify depths and note them on Wellview report.**

Send scan log report to [hccf@chevron.com](mailto:hccf@chevron.com).

- **Caliper elevators and tubular EACH DAY prior to handling tubing/tools. Note in JSA when and what items are callipered within the task step that includes that work.**
5. PU and RIH with 4-3/4" MT bit, 4 (3-1/2") drill collars on 2-7/8" 6.5# L-80 WS. RU power swivel and clean out to 4,150'. POOH with 2-7/8" WS and bit. LD bit & BHA.

**Note: If circulation is not expected, notify Remedial Engineer to discuss CO with bailer (continue to step 6) or foam/air unit (continue to supplemental procedure on back).**
  6. PU and RIH with 4-3/4" MT and Bulldog bailer on 2-7/8" 6.5# L-80 WS. Clean out to 4,150'. POOH with 2-7/8" WS and bit. LD bit & 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.**
  7. Contact sonic tool rep to be on site during job. PU and RIH with Sonic Hammer tool and work string to 3,936' or enough to cover the bottom perforations with a whole stand. Hydrotest tubing to 6,000 psi. Stand back tubing to top perforations. Install stripper head and stand pipe with sufficient treating line to move tools vertically ~ 65'. Rig up pressure gauges to allow monitoring of tubing and casing pressures.

8. MI & RU Petroplex. Titrate acids and verify concentration ( $\text{HCl} \pm 1.5\%$ ). Treat all intervals from 3,675' to 3,936' with 50 bbls of 8.6 ppg cut brine water per interval (refer to Table A). 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.
9. Follow the brine water wash with 6,000 gals 15% NEFE HCl of total acid for all intervals. Spot 3 bbls of acid outside tubing, shut in casing, pump 1,200 gallons of acid @ 5 BPM over first treating interval from 3,675'-3,724', monitor casing pressure not exceeding 500 psi. Flush tubing with brine water after every acidized interval, make a connection and continue with remaining interval. Refer to Table A.

**Table A: Perforation Intervals for acid.**

Interval	Depth	Interval (Ft.)	Acid Volume (gal)
1	3675' - 3724'	49	1,200
2	3724' - 3777'	53	1,200
3	3777' - 3828'	51	1,200
4	3828' - 3889'	61	1,200
5	3889' - 3936'	47	1,200
			6,000

10. Shut in well for 1 hr for the acid to spend. Monitor casing pressure to keep it below 500 psi. Bleed off excess pressure if necessary.

11. Scale squeeze will with a total of 300 bbls 8.6 ppg brine water and 4 drums (220 gallons) Baker SCW-358 Scale Inhibitor Chemical. Continue moving uphole with Sonic Hammer. Pump at max rate of 5 BPM per pump schedule. Ensure top of tubing is flushed with brine water before making a connection.

**Table B: Scale Sqz 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	3936' - 3889'	5	10	44	11.0
2	Pump Brine while moving from	3936' - 3889'	5	40		51
3	Pump Chemical/brine while moving from	3936' - 3889'	5	10	44	62
4	Pump Brine while moving from	3936' - 3889'	5	12		74
5	Move pipe to next interval of	3889' - 3828'				74
6	Pump Brine while moving from	3889' - 3828'	5	28		102
7	Pump Chemical/brine while moving from	3889' - 3828'	5	10	44	113
8	Pump Brine while moving from	3889' - 3828'	5	11		125
9	Move pipe to next interval of	3828' - 3777'				125
10	Pump Brine while moving from	3828' - 3777'	5	29		153
11	Pump Chemical/brine while moving from	3828' - 3777'	5	10	44	164
12	Pump Brine while moving from	3828' - 3777'	5	11		175
13	Move pipe to next interval of	3777' - 3724'				175
14	Pump Brine while moving from	3777' - 3724'	5	29		204
15	Pump Chemical/brine while moving from	3777' - 3724'	5	10	44	215
16	Pump Brine while moving from	3777' - 3724'	5	11		226
17	Move pipe to next interval of	3724' - 3675'				226
18	Pump Brine while moving from	3724' - 3675'	5	79		305

12. Ensure Sonic Hammer is above all perforations. Do not exceed 500 psi casing pressure or 5 BPM while pumping scale squeeze or casing flush. RD and release pump truck.
13. Run back in the hole and tag for fill. If fill entry was identified @ 4,150' or above, clean-out to 4,150' following steps 5 or 6.
14. POOH & LD 2-7/8" WS and Sonic Hammer tool.
15. RIH with 2-7/8" production tubing hydrotesting to 6,000 psi. Set TAC per ALCR recommendation. ND BOP. NU WH. RIH with rods and pump per ALCR. Hang well on. RD and release workover unit.

**Note: Prior to ND BOP, e-mail or call Remedial Engineer to summarize what it was done to mitigate the well control hazard.**

16. 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.**

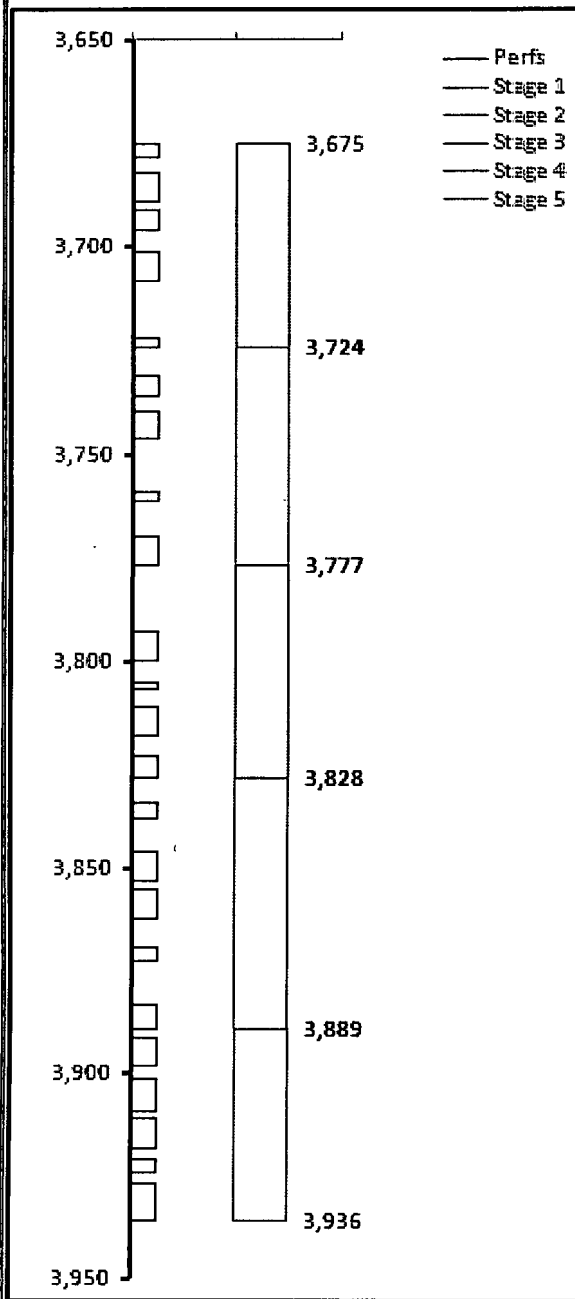
7. Clean out fill to 4,150' with low RPM's rotation and circulation, always keep pipe moving. Short trips can be beneficial to hole cleaning. Circulate well clean for at least 1 hour at the end of the day and pull up above the perforations before shut down for night. If the foam/air unit goes down, pull 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.**

**V.M. Henderson #20**

[illegible]

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# Chevron U.S.A. Inc. Wellbore Diagram : VMHENDERSON20G

