

Office

Revised August 1, 2011

District I - (575) 393-6161

1625 N French Dr., Hobbs, NM 88240

District II - (575) 748-1283

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District III - (505) 334-6178

1000 Rio Brazos Rd., Aztec, NM 87410

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1220 S St Francis Dr., Santa Fe, NM

87505

Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

Santa Fe, NM 87505

RECEIVED

WELL API NO. 30-025-37836
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name V.M. HENDERSON
8. Well Number 23
9. OGRID Number 4323
10. Pool name or Wildcat PENROSE SKELLY GRAYBURG

SUNDRY NOTICES 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 C: 330 feet from the NORTH line and 2500 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 SONIC HAMMER, ACIDIZE, SC SQZ

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 INFO.

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: 02-20-2012

Type or print name: DENISE PINKERTON

E-mail address: leakejd@chevron.com

PHONE: 432-687-7375

APPROVED BY: ELC TITLE: STAFF MGR DATE: 2-23-2012

Conditions of Approval (if any):

FEB 23 2012

V. M. Henderson # 23
Penrose Skelly - Grayburg
T21S, R37E, Section 30
Job: Sonic Hammer, Acidize & Scale Squeeze

2/9/2012

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. Review rig move checklist. Check location, anchors and pad location ahead of time.
2. 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.**
3. MI & RU workover unit.
4. Unseat pump, POOH with rods and pump. Examine rods for wear/pitting/paraffin and capture any samples for analysis. 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/800 psi. Note testing pressures on wellview report. Release and LD packer.
5. PU tubing and tag for fill (TAC 3,547', Top Perf 3,651', Bottom Perf 3,921', EOT 4,102.5', PBTD 4,266'). POOH while scanning 2-7/8" prod tubing. LD all non-yellow band joints. If fill is tagged:
 - A. Above 4,200' continue to step 6.
 - B. Below 4,200' continue to step 8.

Note: Strap pipe out of the hole to verify depths and note them on wellview report.
Send scan log report to 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.**
6. 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 PBTD at 4,266'. 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 7) or foam/air unit (additional signature approval might be required, continue to supplemental procedure on back).
 7. PU and RIH with 4-3/4" MT and Bulldog bailer on 2-7/8" 6.5# L-80 WS. Clean out to PBTD at 4,266'. 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.**
 8. Contact sonic tool rep to be on site during job. PU and RIH with Sonic Hammer tool and work string to 3,921' 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.

9. MI & RU Petroplex. Treat all intervals from 3,651' – 3,921' 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.
10. Follow the brine water wash with 5,000 gals 15% NEFE HCl of total acid for all intervals. Spot 3 bbls of acid outside tubing, shut in casing, pump 1,000 gallons of acid @ 5 BPM over first treating interval from 3,651' – 3,710', 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.

Interval	Depth	Interval Depth (Ft.)	Acid Volume (gal)
1	3,651' – 3,710'	59	1,000 Gal
2	3,713' – 3,757'	44	1,000 Gal
3	3,779' – 3,838'	59	1,000 Gal
4	3,845' – 3,882'	37	1,000 Gal
5	3,885' – 3,921'	36	1,000 Gal
			5,000 Gal

Table A: Perforation Intervals for Acid

11. 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.
12. Scale squeeze will with a total of 250 bbls 8.6 ppg brine water and 3 drums (165 gallons) Baker SCW-358 Scale Inhibitor Chemical. Continue moving uphole with Sonic Hammer. For the first interval of 3,921' - 3,885' pump pill made up of 33 gal SCW-358 mixed with 22 bbls brine (1.5 gals/bbl concentration) followed by a displacement of 28 bbls of brine. Pump at 5 BPM. Ensure top of tubing is flushed with brine water before making a connection. Continue to next interval referring to Table B.

Interval	Depth	Interval (Ft.)	Brine Pill Volume (bbls)	SCW-358 Pill Vol. (gal)	Brine Flush Vol. (bbls)
1	3,921' - 3,885'	36	22	33	28
2	3,882' - 3,845'	37	22	33	28
3	3,838' - 3,779'	59	22	33	28
4	3,757' - 3,713'	44	22	33	28
5	3,710' - 3,651'	59	22	33	28
Totals			110	165	140

Table B: Perforation Intervals for Scale Squeeze

13. Ensure Sonic Hammer is above all perforations. RD and release pump truck. Pump 50 bbls 8.6 PPG cut brine water to scale squeeze well. Do not exceed 500 psi casing pressure or 5 BPM while pumping scale squeeze or casing flush.

14. Run back in the hole and tag for fill. If fill entry was identified @ 4,200' or above, clean-out to PBTD (4,266') following steps 6 or 7.
15. POOH & LD 2-7/8" WS and Sonic Hammer tool.
16. 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.
17. 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, bit sub (bore for float with dart-type float), 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 4266' maintain circulation at optimum rate, allowing fill to clear bit before continuing to clean downhole, 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 to step 6.

Well: **V. M. Henderson # 23**Field **Penrose Skelly**Reservoir **Grayburg****Location:**

330' FNL & 2500' FWL
 Section 30
 Township 21S
 Range 37E
 County Lea State NM

Elevations:

GL 3500'
 KB 3506'
 DF 3505'

Current
Wellbore Diagram

Well ID Info:

Chevno JA3647
 API No. 30-025-37836
 L5/L6 UCU493800
 Spud Date 6/2/2006
 Compl. Date

Surf. Csg: 8 5/8", 24#, J-55

Set: @ 446' w/ 475 sks

Hole Size: 12 1/4"

Circ: Yes TOC: Surface

TOC By: Circulated

Tubing Detail:

#Jts:	Size:	Footage
	KB Correction	11 00
112	Jts 2 7/8" EUE 8R J-55 Tbg	3,533 70
	TAC	2 76
14	Jts 2 7/8" EUE 8R J-55 Tbg	434 71
1	Jt 2 7/8" EUE 8R J-55 IPC Tbg	31 35
	SN	1 10
	2 7/8" x 4' Perf Tbg Sub	4 17
1	Sand Separator	20 22
	Mud anchor	63 51
128	Bottom Of String >>	4,102.52

Rod Detail

#Jts:	Size:	Footage
	KB Correction	
1	1 5" Polished Rod	26 00
1	1" Rod sub N-78	2 00
2	1" Rod sub N-79	12 00
58	1" Rod N-78	1,450 00
88	7/8" Rod N-79	2,200 00
12	1 5" Sinker Bars	300 00
1	Rod pump 25-200-RHBC-16-1	16 00
163	Length Of String >>	4,006.00

Perfs: 4jspi, 120 phasing

Perfs:	Status:
3651-55	Grayburg - Open
3681-84	Grayburg - Open
3686-90	Grayburg - Open
3694-98	Grayburg - Open
3704-10	Grayburg - Open
3713-20	Grayburg - Open
3735-37	Grayburg - Open
3751-57	Grayburg - Open
3779-87	Grayburg - Open
3793-97	Grayburg - Open
3804-08	Grayburg - Open
3815-20	Grayburg - Open
3822-29	Grayburg - Open
3833-38	Grayburg - Open
3845-50	Grayburg - Open
3853-58	Grayburg - Open
3860-68	Grayburg - Open
3870-75	Grayburg - Open
3878-82	Grayburg - Open
3885-93	Grayburg - Open
3897-3900	Grayburg - Open
3902-08	Grayburg - Open
3912-21	Grayburg - Open

COTD: 4266'

PBSD: 4266' (float collar)

TD: 4357'

Updated: 1/19/2012

By: DNCU

Prod. Csg: 5 1/2", 15.50#, J-55

Set: @ 4357' w/ 1050 sks

Hole Size: 7 7/8"

Circ: Yes TOC: Surface

TOC By: Circulated