

Submit 1 Copy To Appropriate District Office

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1625 N French Dr., Hobbs, NM 88240
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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

HOBBS OGD
CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505
APR 02 2012

SUNDRY NOT RECEIVED 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.)		WELL API NO. 30-025-06911 ✓
1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/> ✓
2. Name of Operator CHEVRON U.S.A. INC. ✓		6. State Oil & Gas Lease No.
3. Address of Operator 15 SMITH ROAD, MIDLAND, TEXAS 79705		7. Lease Name or Unit Agreement Name V.M. HENDERSON ✓
4. Well Location Unit Letter B: 660 feet from the NORTH line and 1980 feet from the EAST line Section 30 Township 21-S Range 37-E NMPM County LEA		8. Well Number 5 ✓
11. Elevation (Show whether DR, RKB, RT, GR, etc.)		9. OGRID Number 4323 ✓
		10. Pool name or Wildcat PENROSE SKELLY GRAYBURG ✓

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: 03-29-2012

Type or print name: DENISE PINKERTON

E-mail address: leakejd@chevron.com

PHONE: 432-687-7375

APPROVED BY:

Staff

TITLE

STAFF

DATE

4-4-2012

Conditions of Approval (if any):

APR 04 2012

V.M. Henderson #5
Penrose Skelly – Grayburg
T22S, R37E, Section 30
Job: Sonic Hammer, Acidize & Scale Squeeze

3.14.2012

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 calipered 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 7" 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 3,499', Bottom Perfs 3,920', EOT 4,174', PBTD 4,965'). POOH while scanning 2-7/8" prod tubing. LD all non-yellow band joints. If fill is tagged:
 - A. Above 4,325' continue to step 5.
 - B. Below 4,325' 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.

- **Caliper elevators and tubular EACH DAY prior to handling tubing/tools. Note in JSA when and what items are calipered within the task step that includes that work.**
5. PU and RIH with 6-1/4" MT bit, 4 (3-1/2") drill collars on 2-7/8" 6.5# L-80 WS. RU power swivel and clean out to 4,325'. 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 6-1/4" MT and Bulldog bailer on 2-7/8" 6.5# L-80 WS. Clean out to 4,325'. 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 3,920' 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. Treat all intervals from 3,640' to 3,930" 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.
 - **There are squeezed perms above Grayburg. Make sure that perms take water at a good rate before switching to acid.**
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 3,640' – 3,700', 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 (Ft.)	Acid Volume (gal)
1	3640' - 3700'	60	1,200
2	3700' - 3765'	65	1,200
3	3765' - 3825'	60	1,200
4	3825' - 3875'	50	1,200
5	3875' - 3930'	55	1,200
			6,000

Table A Perforation Intervals for Acid.

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 200 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.

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	3930' - 3875'	5	10	44	11.0
2	Pump Brine while moving from	3930' - 3875'	5	30		41
3	Pump Chemical/brine while moving from	3930' - 3875'	5	10	44	52
4	Pump Brine while moving from	3930' - 3875'	5	12		64
5	Move pipe to next interval of	3875' - 3825'				64
6	Pump Brine while moving from	3875' - 3825'	5	18		82
7	Pump Chemical/brine while moving from	3875' - 3825'	5	10	44	93
8	Pump Brine while moving from	3875' - 3825'	5	11		105
9	Move pipe to next interval of	3825' - 3765'				105
10	Pump Brine while moving from	3825' - 3765'	5	19		123
11	Pump Chemical/brine while moving from	3825' - 3765'	5	10	44	134
12	Pump Brine while moving from	3825' - 3765'	5	11		145
13	Move pipe to next interval of	3765' - 3700'				145
14	Pump Brine while moving from	3765' - 3700'	5	19		164
15	Pump Chemical/brine while moving from	3765' - 3700'	5	10	44	175
16	Pump Brine while moving from	3765' - 3700'	5	11		186
17	Move pipe to above perfs	3640'				186
18	Pump Brine Displacement	3640'	5	69		255

Table B Perforation Intervals for Scale Squeeze

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 @ 4,325' or above, clean-out to 4,325' 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 6-1/4" 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.

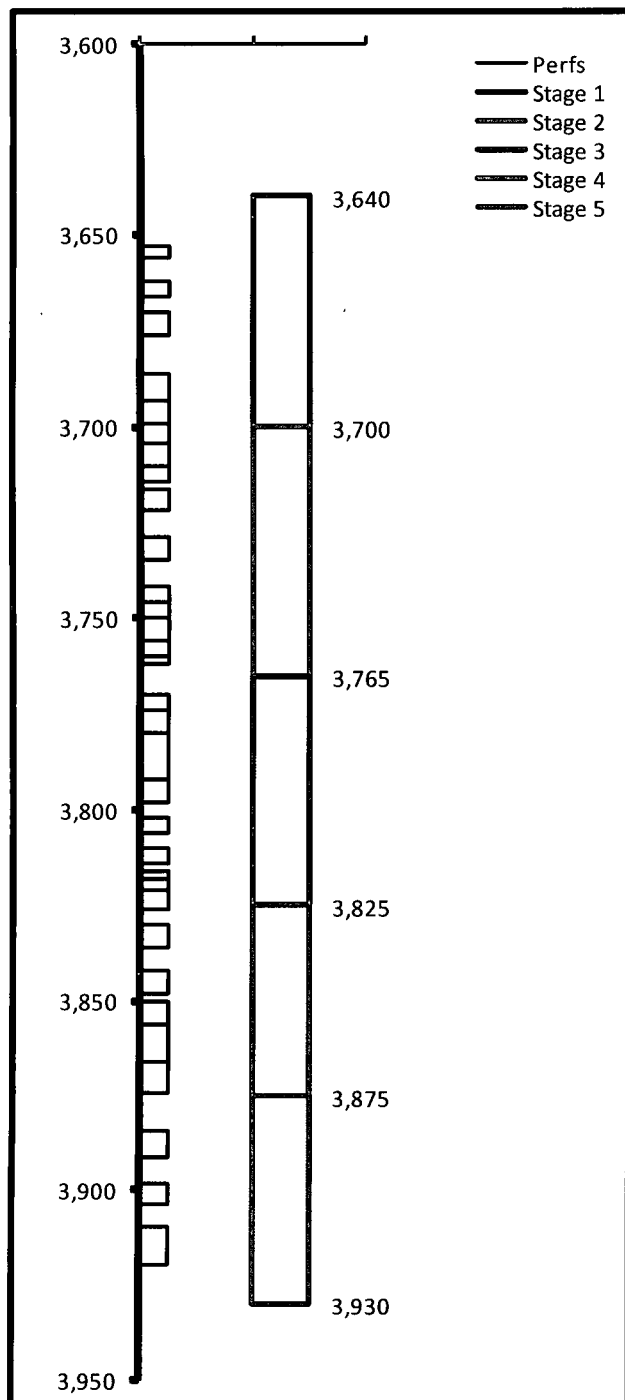
7. Clean out fill to 4,325' with low RPM's rotation and circulation, always keep pipe moving. Short trips can be beneficial to hole cleaning. Circulate well clean for at least 1 hour at the end of the day and pull up above the perforations before shut down for night. If the foam/air unit goes down, pull 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 # 5

[illegible]

Well **V. M. Henderson # 5**Field **Penrose Skelly**Reservoir **Grayburg****Location:**

660' FNL & 1980' FEL
 Section 30
 Township 21S
 Range. 37E
 County Lea State NM

Elevations:

GL 3497'
 KB 3508'
 DF 3506'

Current
Wellbore Diagram

Well ID Info:

Chevno: FA8008
 API No: 30-025-06911
 L5/L6 U493800
 Spud Date 11/19/58
 Compl Date 1/8/59
 GPS (NAD27)
 N 32 4552800, W -103 1995000

Tubing Detail:

#Jts.	Size.	Footage
	KB Correction	11 00
109	J-55 2 875 OD/ 6 50#	3488 03
1	Tubing Anchor/Catcher 2 875"	2 75
14	J-55 2 875 OD/ 6 50#	540 88
1	J-55 2 875 OD/ 6.50# Internal Plastic Ct	31 00
1	J-55 2 875 OD/ 6 40#	12 10
1	Seat Nipple -(2 875") Cup Type	1 10
1	J-55 2 875 OD/ 6 40#	4 10
1	Sand Separator - N/A	19 28
2	J-55 2 875 OD/ 6 40#	63 00
1	Dump Valve (for use w/ Sand Separator	0 80

132 Bottom Of String >> 4174 04

Rod Detail:

#Jts.	Size.	Footage
1	1 500 (1 1/2 in) Spray Metal x 22	26 00
1	0 875 (7/8 in) D Rod Sub(s)	8 00
1	0 875 (7/8 in) D Rod Sub(s)	4 00
1	0 875 (7/8 in) D Rod Sub(s)	2 00
149	0 875 (7/8 in) D x 25 Rod	3725 00
12	1 500 (1 1/2 in) K x 25 Sinker Bar	300 00
1	Rod Guide 1" HS w/Nylon Wheels 2 875	4 00
1	Rod Pump 25-175-HHBC-4-20-16	20 00
1	Strainer Nipple 1 250 OD x 0 5'	0 50

168 Length Of String >> 4089.50

RBP @ 5000'

(20' sand on top)

CIBP @ 5730'

(10' cmt on top)

COTD: 4965'**PBTD: 4965'****TD: 6017'****Updated: 3/12/2012**

By: A M Howell

Surface Csg: 9 5/8", 32 3#, Unknown Grade**Set: @ 1236' w/ 800 sks****Hole Size: 12 1/4"****Circ: Yes TOC: Surface****TOC By: Circulated****Perfs:**

Status:
3506' Eumont - Cmt Sqzd
3512' Eumont - Cmt Sqzd
3520' Eumont - Cmt Sqzd
3527' Eumont - Cmt Sqzd
3533' Eumont - Cmt Sqzd
3541' Eumont - Cmt Sqzd
3550' Eumont - Cmt Sqzd
3556' Eumont - Cmt Sqzd
3562' Eumont - Cmt Sqzd
3568' Eumont - Cmt Sqzd
3574' Eumont - Cmt Sqzd
3581' Eumont - Cmt Sqzd

3653-56'	Grayburg - Open
3662-66'	Grayburg - Open
3670-76'	Grayburg - Open
3693-99'	Grayburg - Open
3704-10'	Grayburg - Open
3716-22'	Grayburg - Open
3729-35'	Grayburg - Open
3746-50'	Grayburg - Open
3756-60'	Grayburg - Open
3774-80'	Grayburg - Open
3792-98'	Grayburg - Open
3802-06'	Grayburg - Open
3810-14'	Grayburg - Open
3818-21'	Grayburg - Open
3830-36'	Grayburg - Open
3842-48'	Grayburg - Open
3856-66'	Grayburg - Open
3884-91'	Grayburg - Open
3898-3904'	Grayburg - Open
3910-20'	Grayburg - Open

Cement Sqzd Grayburg Perfs

3686-3714'
 3742-62'
 3770-92'
 3816-26'
 3850-74'

5172-88' Paddock - Cmt Sqzd

Prod. Csg: 7" 20 & 23#, Unknown Grade**Set: @ 5210' w/ 500 sks****Hole Size: 8 3/4"****Circ: No TOC: 2330'****TOC By: TS**

5562-72'	Blaineby - Below CIBP
5608-12'	Blaineby - Below CIBP
5622-40'	Blaineby - Below CIBP

5779-98' Blaineby - Below CIBP

Liner: 4 1/2" OD, 11.6#, K-55**Set: Bottom @ 6007' w/200 sx cmt, Top @ 5068'****Hole size: 6 1/8"****Circ: Yes TOC: 5068'****TOC By: Circulated**