Submit 1 Copy To Appropriate District Office	State of New Mexico		Form C-103		
<u>District I</u> – (575) 393-6161	Energy, Minerals and Natural Resources		Revised August 1, 2011 WELL API NO.		
1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> – (575) 748-1283	OIL CONCEDUATION	DIVICION	30-025-06908		
District II – (575) 748-1283 811 S First St , Artesia, NN 188240 S OCD District III – (505) 334-6178	OIL CONSERVATION 1220 South St. Fran		5. Indicate Type of Lease		
1000 Rio Brazos Rd., Aztec, NM 87419, 2017	Santa Fe, NM 87		STATE FEE Z		
District IV – (505) 476-3460 AY US 2012 1220 S St Francis Dr., Santa Fe, NM	Sama re, mivi o/	303	6. State Oil & Gas Lease No.		
87505	AND DEDODITE ON WELLS		7 June 21 July 2 American Street		
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			7. Lease Name or Unit Agreement Name V.M. HENDERSON		
PROPOSALS)  1. Type of Well: Oil Well ☐ Gas	Well Other		8. Well Number 2		
2. Name of Operator	/		9. OGRID Number 4323		
CHEVRON U.S.A. INC.	,		10 P 1 W11 W		
3. Address of Operator 15 SMITH ROAD, MIDLAND, TEXA	AS 79705		10. Pool name or Wildcat PENROSE SKELLY GRAYBURG		
4. Well Location					
	the NORTH line and 660 feet				
	Township 21-S Range I. Elevation (Show whether DR,		NMPM County LEA		
	i. Elevation (Snow whether DK,	KKD, KI, GK, etc.			
12. Check Appr	ropriate Box to Indicate Na	ature of Notice,	Report or Other Data		
NOTICE OF INTE			SEQUENT REPORT OF:		
PERFORM REMEDIAL WORK PLUG AND ABANDON REMEDIAL WOR			<del></del>		
TEMPORARILY ABANDON					
DOWNHOLE COMMINGLE	OLIN EL COMI E	CASHAO/CEMEN	1 305		
_					
OTHER: INTENT TO SONIC HAMME		OTHER	d give portinent dates, including estimated date		
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, ACID	OIZE, & SCALE SO	OUEEZE THE SUBJECT WELL.		
PLEASE FIND ATTACHED, THE	INTENDED PROCEDURE, W	ELLBORE DIAG	RAM, & C-144 INFO.		
G. ID.	D: D t D				
Spud Date:	Rig Release Da	te:			
			<del></del>		
I hereby certify that the information above	ve is true and complete to the be	st of my knowledg	ge and belief.		
× () '					
SIGNATURE DEVISE YWELL	title: regu	JLATORY SPECIA	ALIST DATE: 05-04-2012		
Type or print name: DENISE PINKERT			PHONE: 432-687-7375		
APPROVED BY: TITLE MAY 0 8 2012					
Conditions of Approval (if any):					

V M Henderson 2 Penrose Skelly - Grayburg T21S, R37E, Sec.30 N 32° 27' 19.044", W -103° 11' 42.792" (NAD27) Job: Sonic Hammer. Acidize & Scale Squeeze

## **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 3,559', Bottom Perfs 3,894', EOT 3,931', PBTD 4,003'). POOH while scanning 2-7/8" prod tubing. LD all non-yellow band joints. If fill is tagged:
  - A. Above 3,990' continue to step 5.
  - B. Below 3,990' 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 <a href="mailto:lgbi@chevron.com">lgbi@chevron.com</a>.

- > 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 4,003'. 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 4,003'. 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 3,896' 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 (HCl ±1.5%). Treat all intervals from 3,655' to 3,896' 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 5,000 gals 15% NEFE HCl of total acid for all intervals. Spot 3 bbls of acid outside tubing, shut in casing, pump 1,250 gallons of acid @ 5 BPM over first treating interval from 3,655'-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.

Table A: Perforation Intervals for acid.

Interval	Depth	Interval (Ft.)	Acid Volume (gal)
1	3655' - 3710'	55	1,250
2	3710' - 3770'	60	1,250
3	3775' - 3837'	62	1,250
4	3837' - 3896'	59	1,250
			5,000

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 250 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.

Step	Table B:	Scale Sqz Pun	Max	Volume	Volume	Cum Volume
		(ft)	:Rate (BPM):	Brine S (bbl)	Scale Chemi (Gal)	(bbl)
1	Pump Chemical/brine while moving from	3896' - 3837'	5	13	55	14.3
2	Pump Brine while moving from	3896' - 3837'	5	. 37	-	51
3	Pump Chemical/brine while moving from	3896' - 3837'	5	13	,55	66
4	Pump Brine while moving from	3896' - 3837'	5	.8		74
5	Move pipe to next interval of	3837' - 3775'		, , ,	, , ,	74
6	Pump Brine while moving from	3837' - 377,5'	<b>.</b> 5:	29	,	103
7	Pump Chemical/brine while moving from	3837' - 3775'	∵ ∙5	13	55 <sup>°</sup>	. 117
8	Pump Brine while moving from	3837' - 3775'	` · · 5	8 ,		125
9	Move pipe to next interval of	3770' - 3710'	.,,			125
10	Pump Brine while moving from	3770' - 3710'	5	29	,	. 154
11	Pump Chemical/brine while moving from	3770' - 3710'	5	13	55 <sup>°</sup>	168
12	Pump Brine while moving from	3770' - 3710'	5	8		176
13	Move pipe to next interval of	3710' - 3655'		\$0° , (	14	176
14	Pump Brine while moving from	3710' - 3655'	5	79		255

- 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 indentified @ 3,990' or above, clean-out to 4,003' 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.
  - NU stripper head with <u>NO Outlets</u> (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.

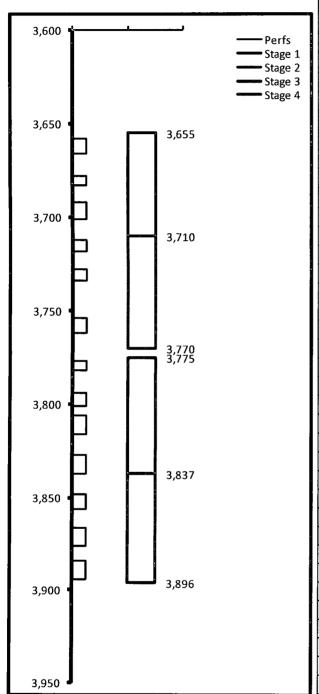
- 7. Clean out fill to 4,003' with low RPM's rotation and circulation, always keep pipe moving. Short trips can be beneficial to hole cleaning. Circulate well clean for at least 1 hour at the end of the day and pull up above the perforations before shut down for night. If the foam/air unit goes down, 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.

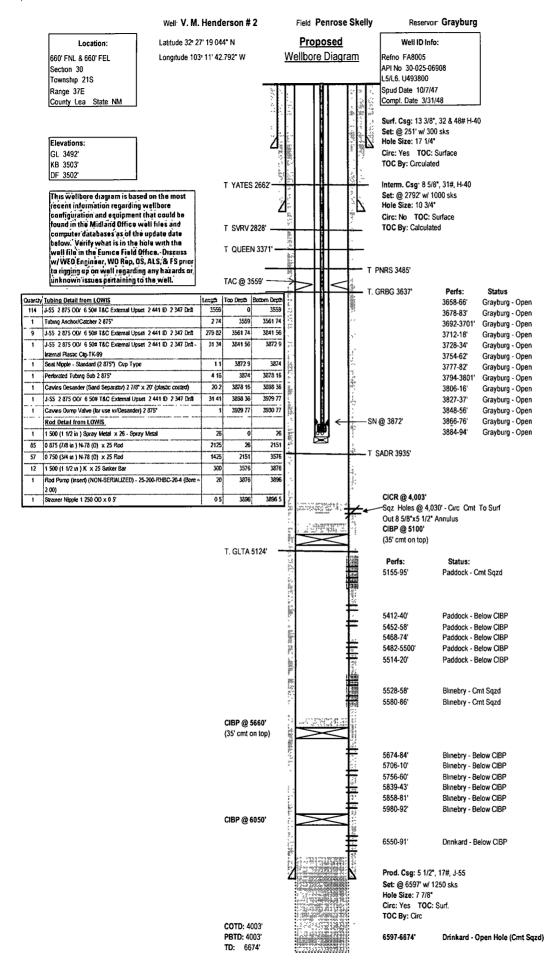
Before rigging up power swivel to rotate, carefully inspect Kelly hose to ensure that it is in good condition. Ensure that swivel packing is in good condition.

Continue on with original procedure for completion.

## V. M. Henderson # 2



		S. San San San San		
_		Perfs Detail	C: .	
	Bottom			Reservoir
. ft`		ft		Canada
3,658	3,666	8	Open	Grayburg
3,678	3,683	5	Open	Grayburg
3,692	3,701	9	Open	Grayburg
3,712	3,718	6	Open	Grayburg
3,728	3,734	. 6	Open	Grayburg
3,75,4	3,762 。	8	Open 🦡	Grayburg
3,777	3,782	5	Open	Grayburg
3,794	3,801	7	Open	Grayburg
3,806	3,816	10	Open	Grayburg
3,827	3,837	10	Open	Grayburg
3,848	3,856	. 8	Open	Grayburg
3,866	3,876	10	Open	- Grayburg
3,884	3,894	<sup>'</sup> 10	Open	Grayburg
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Updated: 4/11/2012 By: sehe