Submit 1 Copy To Appropriate District Office
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 87410
District IV – (505) 476-3460
1220 S. St. Francis Dr., Santa Fe, NM 87505

HOBBS

State of New Mexico
Energy, Minerals and Natural Resources

MAR 06 2013

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

RECEIVED

Form C-103
Revised August 1, 2011

| | |
|---|---|
| WELL API NO. 30-025-06912 | |
| 5. Indicate Type of Lease STATE ☐ FEE ☒ | |
| 6. State Oil & Gas Lease No. | |
| 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.) | 7. Lease Name or Unit Agreement Name V.M. HENDERSON |
| 1. Type of Well: Oil Well ☒ Gas Well ☐ Other | 8. Well Number 6 |
| 2. Name of Operator CHEVRON U.S.A. INC. | 9. OGRID Number 4323 |
| 3. Address of Operator 15 SMITH ROAD, MIDLAND TEXAS 79705 | 10. Pool name or Wildcat PENROSE SKELLY GRAYBURG |
| 4. Well Location Unit Letter C : 760 feet from the NORTH line and 1980 feet from the WEST line Section 30 Township 21S Range 37E NMPM County LEA | |
| | 11. Elevation *(Show whether DR, RKB, RT, GR, etc.)* 3505' |

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

| NOTICE OF INTENTION TO: | | SUBSEQUENT REPORT OF: | |
|---|---|---|---|
| PERFORM REMEDIAL WORK ☐ | PLUG AND ABANDON ☐ | REMEDIAL WORK ☐ | ALTERING CASING ☐ |
| TEMPORARILY ABANDON ☐ | CHANGE PLANS ☐ | COMMENCE DRILLING OPNS. ☐ | P AND A ☐ |
| PULL OR ALTER CASING ☐ | MULTIPLE COMPL ☐ | CASING/CEMENT JOB ☐ | |
| DOWNHOLE COMMINGLE ☐ | | | |
| OTHER: SONIC HAMMER, SWAB & 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, SWAB & SCALE SQUEEZE THE PERFS IN THE SUBJECT WELL.

THE INTENDED PROCEDURE, WELLBORE DIAGRAM & C-144 CLEEZ ARE ATTACHED FOR YOUR APPROVAL.

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 Scott Haynes TITLE PERMIT SPECIALIST DATE 3/5/2013

Type or print name SCOTT HAYNES E-mail address: TOXO@CHEVRON.COM PHONE: 432-687-7198

**For State Use Only**

APPROVED BY: Mayley W Brown TITLE Compliance Officer DATE 3/8/2013

Conditions of Approval (if any):

MAR 13 2013

# V. M. Henderson # 6 (Wellbore Diagram)

## Eunice FMT - Penrose Skelly Field

### Well Data

| Well Type | Well # | API No. | Reservoir |
|---|---|---|---|
| Oil | V M Henderson # 6 | 30-025-06912 | Grayburg |
| **First Completed** | **Cost Center** | **Chevron Ref. No.** | **WBS #** |
| 27-Apr-77 | UCU493800 | FA8009 | UWDPS-R3040 |
| **Plug Back-Depth(ft)** | **Total Depth - (ft)** | **Production Method** | **Status** |
| 5065'-5100' (Cmt. Cap) | 6700 | Rod Pump | Online |

**Location: 760' FNL & 1980' FWL**

| Field | County | State | Township |
|---|---|---|---|
| Penrose Skelly | Lea | New Mexico | 21S |
| **Range** | **Section** | **GPS (NAD27) - (Long, Lat)** | |
| 37E | 30 | N 32° 27' 17.928", W -103° 12' 13.284" | |

**Wellhead and Tree Data**

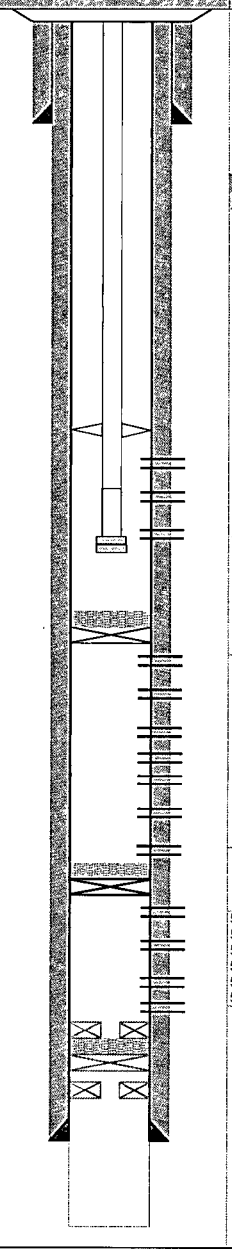
| Item | Maker | Type | Size (in) | Part No. | Rating (psi) |
|---|---|---|---|---|---|
| | | | | | |

### Casing and Liner Data

| Size (in) | Wt (lb/ft) | Grade | Top MD- ft | Bottom MD- ft | Bottom TVD-ft | TOC |
|---|---|---|---|---|---|---|
| 8 5/8 | 24 | J55 | 9 | 1253 | | Surface |
| 5 1/2 | 14 | J56 | 13 | 2804 | | Surface |

### Tubing Data

| Size (in) | Wt (lb/ft) | Grade | Conn | Top (ft) | Bottom MD (ft) | Bottom TVD (ft) | Comments |
|---|---|---|---|---|---|---|---|
| | | | | | | | |



| MDBRT (ft) | TVDBRT (ft) | Description | Min ID (in) | Max OD (in) | Drift (in) | Length |
|---|---|---|---|---|---|---|
| | | Hole Size: 12 1/4", TOC: Surface | | | | |
| 1253 | | 8 5/8", 24#, J-55 Csg w/ 800 sks (Circulated) | 8.097 | 9.625 | 7.972 | |
| | | End of Tubing | | | | |
| 4182 | | 35' of cmt on top of CIBP | | | | |
| 5065 | | CIBP | | | | |
| 5100 | | | | | | |
| 5495 | | 35' of cmt on top of CIBP | | | | |
| 5530 | | CIBP | | | | |
| 5927 | | Baker Model D Pkr | | | | |
| 5980 | | 35' of cmt on top of CIBP | | | | |
| 6004 | | CIBP | | | | |
| | | Baker Model D Pkr | | | | |
| 6531 | | 5 1/2", 14#, J-55 Csg w/1000 sack cement | 5.012 | 6.050 | 4.887 | |
| | | Open Hole Size: 4 3/4", | | | | |
| 6700 | | TD | | | | |

**Perforation Data**

| Perfs: | Zone | Status |
|---|---|---|
| 3648-56' | Grayburg | Open |
| 3676-84' | Grayburg | Open |
| 3690-94' | Grayburg | Open |
| 3698-3702' | Grayburg | Open |
| 3706-12' | Grayburg | Open |
| 3724-29' | Grayburg | Open |
| 3740-48' | Grayburg | Open |
| 3764-68' | Grayburg | Open |
| 3774-80' | Grayburg | Open |
| 3788-92' | Grayburg | Open |
| 3800-06' | Grayburg | Open |
| 3812-16' | Grayburg | Open |
| 3820-26' | Grayburg | Open |
| 3831-36' | Grayburg | Open |
| 3842-48' | Grayburg | Open |
| 3856-62' | Grayburg | Open |
| 3867-75' | Grayburg | Open |
| 3888-96' | Grayburg | Open |
| 3906-14' | Grayburg | Open |
| 3924-28' | Grayburg | Open |
| 5158-68' | Paddock | Open |
| 5173-76' | Paddock | Open |
| 5184-90' | Paddock | Open |
| 5198-5201' | Paddock | Open |
| 5206-09' | Paddock | Open |
| 5212-15' | Paddock | Open |
| 5218-22' | Paddock | Open |
| 5270-75' | Paddock | Open |
| 5424-28' | Paddock | Open |
| 5434-38' | Paddock | Open |
| 5480-84' | Paddock | Open |
| 5512-18' | Paddock | Open |
| 5539-43' | Blinebry - Open | |
| 5547-65' | Blinebry - Open | |
| 5569-87' | Blinebry - Open | |
| 5593-5610' | Blinebry - Open | |
| 5618-28' | Blinebry - Open | |
| 5632-54' | Blinebry - Open | |

**Tubing Data**

| ID | OD | Drift | Length | Description | QTY | QTY |
|---|---|---|---|---|---|---|
| 2.441 | 2 7/8 | 2.347 | 3266 | J-55 T&C External Upset (9'-3275') | | 104 |
| 2.441 | 2 7/8 | 2.347 | 4 | J-55 6.5# T&C External Upset(3275'-3279')-TAC Maker | | 1 |
| 2.441 | 2 7/8 | 2.347 | 316 | J-55 6.5# T&C External Upset (3279'-3595') | | 10 |
| | | | 3 | Tbg Anchor/Catcher -Mech. 5.5" Elder 'B' (3595'-3598') | | 1 |
| 2.441 | 2 7/8 | 2.347 | 409 | J-55 6.5# T&C External Upset(3598'-4007') | | 13 |
| 2.441 | 2 7/8 | 2.347 | 32 | J-55 6.50# T&C External Upset-IPC-TK-99 (4007'-4039') | | 1 |
| | | | 24 | Tubing Pump Barrel (4039'-4063') | | 1 |
| | | | 4 | Seat Nipple- Heavy Duty (2.875") Cup Type (4063'-4064') | | 1 |
| 2.441 | 2 7/8 | 2.347 | 4 | J-55 6.5# T&C External Upset(4064'-4068') | | 1 |
| | | | 20 | Cavins Desander 2 7/8"x20' D-2707 GF PC(4068'- 4088') | | 1 |
| 2.441 | 2 7/8 | 2.347 | 4 | J-55 6.5# T&C External Upset(4088'-4181') | | 3 |
| | | | | Cavins Dump Valve (2.875") ((4181'-4182') | | 1 |

**Rod Data**

| ID | OD | Drift | Length | Description | QTY | QTY |
|---|---|---|---|---|---|---|
| | 1 1/2 | | 26 | Polished Rod Spray Metal x 26 (9'-35') | | 1 |
| | 1 | | 6 | Rod Sub N-97 (HS) x 2 Rod Sub (35'-41') | | 3 |
| | 1 | | 8 | Rod Sub N-97 (HS) x 8 Rod Sub (41'-49') | | 1 |
| | 1 | | 1225 | Rod N-97 (HS) x 25 Rod (49'-1274') | | 49 |
| | 7/8 | | 2400 | Rod N-97 (HS) x 25 Rod (1274'-3674') | | 96 |
| | 1 1/2 | | 400 | Sinker Bar K x 25 Sinker Bar (3674'-4074') | | 16 |
| | 7/8 | | 4 | Rod Sub N-97 (HS) x 4 Rod Sub (4074'-4078') | | 1 |
| | | | | tbg Pump Plunger 25-225-THBC-4-24 (Bore = 2.25) (4078-4103) | | 1 |

**This wellbore diagram is based on the most recent information regarding wellbore configuration and equipment that could be found in the Midland Office well files and computer databases as of the update date below. Verify what is in the hole with the well file in the Eunice Field Office. Discuss w/ WEO Engineer, WO Rep, OS, ALS, & FS prior to rigging up on well regarding any hazards or unknown issues pertaining to the well.**

**Hole Size:** 6 3/4", **TOC:** Above 1570' (By CBL)

Production Interval 6550-6700'
(Drinkard - Below CIBP)

| Prepared by: | Prasanna Kumar Chandran | Checked By: | | 30-Jan-13 | Version: 1 |
|---|---|---|---|---|---|

Chevron

# Workover/ Completion Program

| | | |
|---|---|---|
| **Well:** | **VMHENDERSON #6** | **1.28.2013** |
| **Reservoir:** | **Penrose Skelly- Grayburg** | |
| **Surface Location:** | **T21S, R37E, Sec. 30, 760' FNL & 1980' FWL** | |
| **GPS (NAD27)** – (Long, Lat): | **N 32° 27' 17.928", W -103° 12' 13.284" (NAD27)** | |

Intent

**Job:** **Sonic Hammer Acidize, Swab & Scale Squeeze**

**PREWORK:**

1. Utilize the rig move check list.
2. Check anchors and verify that pull test has been completed in the last 24 months.
3. Ensure location of & distance to power lines is in accordance with MCA SWP. Complete and electrical variance and electrical variance RUMS if necessary.
4. Ensure that location is of adequate build and construction.
5. Ensure that elevators and other lifting equipment are inspected. Caliper all lifting equipment at the beginning of each day or when sizes change.
6. When NU anything over and open wellhead (EPA, etc.) ensure the hole is covered to avoid dropping anything downhole.
7. For wells to be worked on or drilled in an $H_2S$ field/area, include the anticipated maximum amount of $H_2S$ that an individual could be exposed to along with the ROE calculations for 100 ppm and 500 ppm.
8. If the possibility of trapped pressure exists, check for possible obstructions by:
    - Pumping through the fish/tubular – this is not guaranteed with an old fish as the possibility of a hole above the obstruction could yield inconclusive results
    - Dummy run – make a dummy run through the fish/tubular with sandline, slickline, eline or rods to verify no obstruction. Prior to making any dummy run contact RE and discuss.

    If unable to verify that there is no obstruction above the connection to be broken, or if there is an obstruction:

    - Hot Tap at the connection to check for pressure and bleed off

    Observe and watch for signs / indicators of pressure as connection is being broken. Use mud bucket (with seals removed) and clear all non-essential personnel from the floor.

**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 the well has pressure, note tubing and casing pressures on Wellview report. Bleed down well; if necessary, kill with cut brine fluid (8.6 ppg).
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 ½" packer along with a joint of tubing and set ~ @ 25', test BOP pipe rams to 250 psi/1000 psi. Note testing pressures on Wellview report. Release and LD packer.

4. PU 1 joints of tubing and tag for fill (TAC 3595-98', Bottom Perfs 3,928', EOT 4,182', PBTD 5,065'). **Do not push TAC into perfs**. POOH while scanning 2 $^{7}/_{8}$" prod tubing. LD all non-yellow band joints.

   *If fill is tagged:*

   A. *Above 4,210' contact remedial engineer and verify if the clean out is necessary. If so, continue with foam/air clean out per step 5.*

   B. *Below 4,210' clean out not needed, skip step 5.*

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

   Send scan log report to LGBI@chevron.com (Larry Birkelbach).

5. PU and RIH with 4 $^{3}/_{4}$" MT bit, four (3 ½") drill collars on 2 $^{7}/_{8}$" 6.5# L-80 WS. RU power swivel and clean out to 4,205' with foam/air unit **(continue to supplemental procedure and in accordance with attached SOG)**. POOH with 2 $^{7}/_{8}$" WS and bit. LD bit & BHA.

6. Contact sonic tool rep to be on site during job. *Verify that WS is clean, inspect for excessive rust.* PU and RIH with Sonic Hammer tool and work string to 3,935' 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.

7. MI & RU Petroplex. Titrate acids and verify concentration (HCl ±1.5%) report results in daily work summary. Treat all intervals from 3,640' to 3,935' with 30 bbls of 2% KCL 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 2% KCL brine.

8. 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 500 gallons of acid @ 5 BPM over first treating interval from 3,640'-3,671', monitor casing pressure not exceeding 500 psi. Flush tubing with 2% KCL brine 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 | 3640' - 3671' | 31 | 500 |
| 2 | 3671' - 3712' | 41 | 900 |
| 3 | 3712' - 3768' | 56 | 900 |
| 4 | 3768' - 3826' | 58 | 900 |
| 5 | 3826' - 3875' | 49 | 900 |
| 6 | 3875' - 3935' | 60 | 900 |
| | | | 5,000 |

9. 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.

10. POOH Sonic Hammer Tool and WS. LD Sonic Hammer.

11. PU & RIH with 5 ½" packer and WS. Set treating packer at 3600', above the top perf.

12. RU swab crew and flowback tank.

13. Swab well for up to 24 hours.

14. Pump 40 bbls 2% KCL brine water mixed with 3 drums of scale inhibitor (165 gals) Baker SCW-358 Scale Inhibitor Chemical down the packer. Pump at a max rate of 5 BPM.

15. Displace scale squeeze with 110 bbls of 2% KCL brine water.
16. Do not exceed 500 psi casing pressure or 5 BPM while pumping scale squeeze or casing flush. RD and release pump truck.
17. Release packer. POOH packer and WS. LD $2\ ^{7}/_{8}$" WS and packer.
18. 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.
19. 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, four (3 ½") 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 4,250' 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.**