

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

State of New Mexico
Energy, Minerals and Natural Resources

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

Form C-103
Revised July 18, 2013

| | | |
|--|--|--|
| 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.) | | WELL API NO. 30-021-20632 |
| 1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other | | 5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE |
| 2. Name of Operator WHITING OIL AND GAS CORPORATION | | 6. State Oil & Gas Lease No. 313331 |
| 3. Address of Operator 400 W ILLINOIS STE 1300 MIDLAND, TX 79701 | | 7. Lease Name or Unit Agreement Name STATE 2028 36 |
| 4. Well Location Unit Letter J 1660 feet from the SOUTH line and 1749 feet from the EAST line Section 36 Township 20N Range 28E NMPM County HARDING | | 8. Well Number 01 |
| 11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5388' GR | | 9. OGRID Number 25078 |
| | | 10. Pool name or Wildcat BRAVO DOME CARBON DIOXIDE 640 |

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

| NOTICE OF INTENTION TO: | | SUBSEQUENT REPORT OF: | |
|--|--|--|--|
| PERFORM REMEDIAL WORK <input type="checkbox"/> | PLUG AND ABANDON <input checked="" type="checkbox"/> | REMEDIAL WORK <input type="checkbox"/> | ALTERING CASING <input type="checkbox"/> |
| TEMPORARILY ABANDON <input type="checkbox"/> | CHANGE PLANS <input type="checkbox"/> | COMMENCE DRILLING OPNS. <input type="checkbox"/> | P AND A <input type="checkbox"/> |
| PULL OR ALTER CASING <input type="checkbox"/> | MULTIPLE COMPL <input type="checkbox"/> | CASING/CEMENT JOB <input type="checkbox"/> | |
| DOWNHOLE COMMINGLE <input type="checkbox"/> | | | |
| CLOSED-LOOP SYSTEM <input type="checkbox"/> | | | |
| OTHER: <input type="checkbox"/> | | | |

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.

SEE ATTACHED P&A PROCEDURE AND SCHEMATIC

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

Kay Maddox

TITLE: REGULATORY ANALYST DATE: 12/08/2015

Type or print name Kay Maddox E-mail address: kay.Maddox@Whiting.com PHONE: 432-638-8475

For State Use Only

APPROVED BY:

[Signature]

TITLE

POST IV

DATE

12/28/15

Conditions of Approval (if any):



* EXP *

30-021-20632

State 2028 #361 P&A

RECOMMENDED REMEDIAL WORK

Date December 8, 2015

Lease State 2028 Well No #361 WOG GW 100.00 % (87.5 % NWI)
Pool Bravo Dome, West County Harding State NM API # 30 - 021 - 20632
Legal Location: 1660' FSL, 1749' FEL, Sec 36, T - 20 - N, R - 28 - E
Completion Date @ T. D. 2,360' I. P. / AOF:
Water Hrs 24 flowing, Present T. D. 2360' Elevation 5388' GL KB = 5513'

DESCRIPTION OF PROSPECTIVE OR PAY ZONES

| Name or Type of Zone | Top | Bottom | Remarks |
|------------------------------|---------------|---------------|---|
| <u>Santa Rosa</u> | <u>-1432'</u> | <u>-1820'</u> | <u>Regional CO2 Production Interval</u> |
| <u>San Andres / Glorieta</u> | <u>-1910'</u> | <u>-2230'</u> | <u>Lost Circulation Interval</u> |
| <u>Tubb sand</u> | <u>-2960'</u> | <u>-3045'</u> | <u>Proposed CO2 Pay Interval (from seismic)</u> |

CASING AND LINER RECORD

| Size | Weight | Grade | Set At | SX CMT | Hole Size | Perf. | Remarks |
|---------------|------------|-------------|--------------|-------------|----------------|-----------------------------|-----------------------------|
| <u>9-5/8"</u> | <u>36#</u> | <u>J-55</u> | <u>724'</u> | <u>450</u> | <u>12-1/4"</u> | <u> </u> | <u>Cement circulated</u> |
| <u>7"</u> | <u>20#</u> | <u>J-55</u> | <u>1638'</u> | <u>none</u> | <u>8-3/4"</u> | <u> </u> | <u>stuck: 1424' - 1638'</u> |

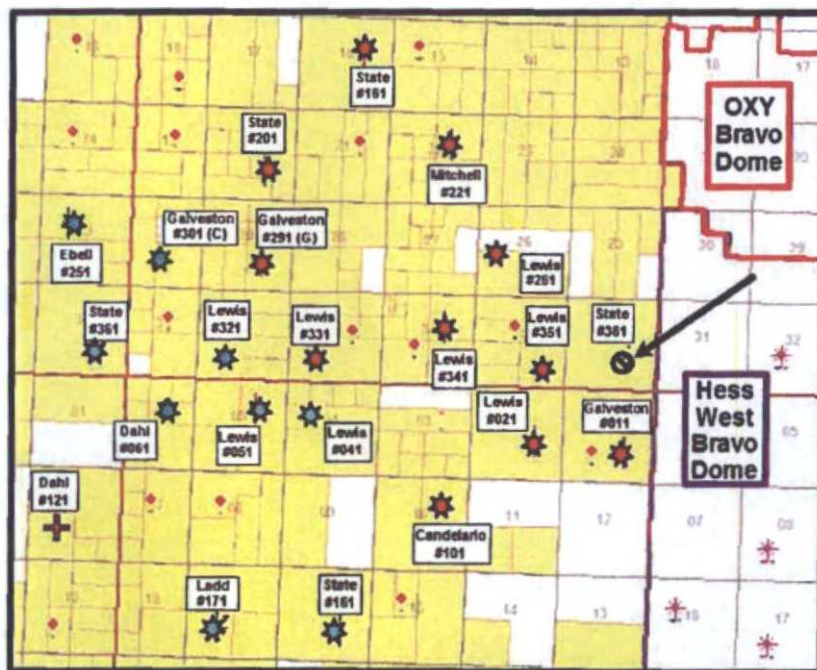
COMPLETION AND REMEDIAL WORK RECORD

| Production Test Before | | | | | Treatment | | Production Test After | | | | |
|-----------------------------|--|-------|-----------|------|-----------|------|-----------------------|-----|-------|-----------|--|
| Date | Gas | @ psi | water Hrs | Type | Amount | From | To | Gas | @ psi | water Hrs | |
| <u>07-03-14</u> | <u>Drill to 2360', no circulation. Ran 7" to 1638', suspended drilling</u> | | | | | | | | | <u>x</u> | |
| <u>01-26-15</u> | <u>fill casing with mud and drill out 7" casing shoe</u> | | | | | | | | | <u>x</u> | |
| <u> </u> | <u> </u> | | | | | | | | | <u>x</u> | |

CUM. Prod. MMCF, MBWas of: Last Test: MCFPD BWPDDate:

Reasons for Plug and Abandonment:

This is a wildcat well offset to Hess's West Bravo Dome CO2 Unit and OXY's Bravo Dome CO2 Unit. This well hit a cavern in the San Andres and circulation could not be restored. A 7" liner was run to cover the loss zone, but it got stuck in the way down. Subsequent seismic work indicated the Tubb sand is structurally low and probably wet, so no further work was done on the well.

Robert McNaughton 

Objective: Plug and Abandon**Basic Procedure:**

Background: Circulation was lost while drilling the production hole in the San Andres at 2070'. LCM pills and 150 sx were unable to restore circulation. The hole was dry-drilled to a casing seat at 2360' and 7" casing was run. On the second run attempt, the casing stacked out at 1638' and would not move up or down. Mud was pumped on a strong vacuum while the casing was rotated. A free point indicated the casing was stuck from 1424' to 1638'. Remedial options were very limited and further work was suspended due to the tight drilling rig schedule.

Over the next two months, leftover drilling mud and pit fluids were dumped in the casing in attempt to seal up the caverns. After 1410 Bbls of fluid was dumped in the well, it caught pressure when it was filled up on January 20th. Six days later, the 7" casing shoe was drilled out to facilitate any future wellbore work. No fluid was tagged in the well going in with the bit, so fluid was still leaking off into the formation.

- Dig out the 9-5/8" casing valve and check the annulus for any pressure. Tie onto the 7" x 9-5/8" casing valve and try to pump into the annulus.
- PU a workstring and bit and TIH. Tag TD and check for fill. Note the fluid level if tagged.
- Pump 150 sx on bottom from 1960' to 2360' to seal off formation fractures. WOC and pump water in to see if circulation is restored.
- Load hole w/ 10 PPG salt gel mud. If hole won't load, may need to pump more cement on bottom. Establishing circulation makes the P&A much easier, but is not necessary.
- Set a 5-1/2" retainer above the 7" casing shoe at about 1600' and gently pump 100 sx or as directed.
- Cut & Pull 7" casing at about 774' to 800'. If using a collar buster, a CCL strip will need to be run as no other logs were run in the well. A free-point and manual back-off can be tried, but the plugging rig may not be big enough to pull enough on the casing for an accurate stretch measurement.
- Pump a 75 sx plug across the 9-5/8" casing shoe from 600' to 800' (to top of cut casing). Pump a 75 sx FW plug from 300' to 500'. If the NMOCD requires tags, it may be faster and cheaper to just fill the casing to surface with cement (~280 sx from 774').
- Pump 20 sx and fill casing from 50' to the surface.
- Fill in the annulus around the 9-5/8" at the surface with cement as needed.
- Remove the wellhead and weld on cap with standard dry - hole marker.
- Cut off rig anchors and smooth location. Remove fences and caliche as needed



Whiting Petroleum Corporation

SI - CO2 Supply Well

FIELD: Bravo Dome, West

LEASE: State 2028

COUNTY: Harding

DATE: Aug. 10, 2014

BY: RTM

WELL: #361

STATE: New Mexico

Location: 1660' FSL & 1749' FEL Sec. 36 - T20N- R28E

Spud: 06/28/2014 Completed: NA

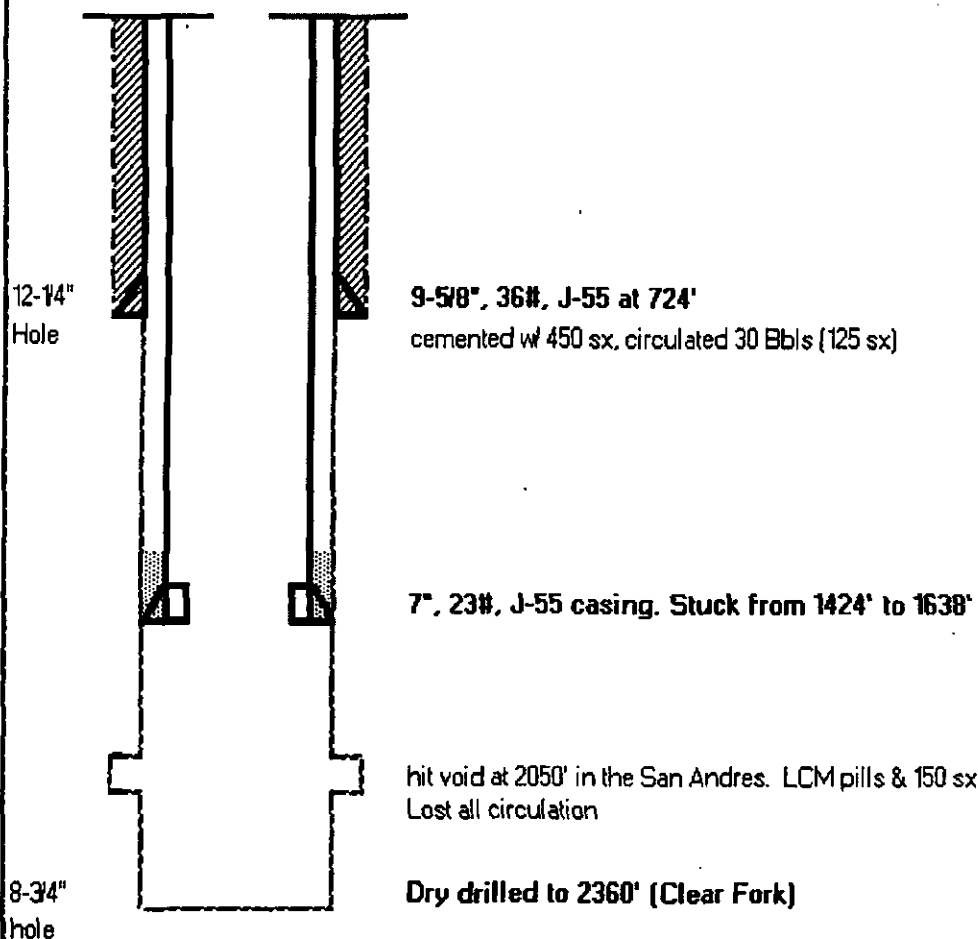
Current Status: SI - Suspended

Formation: Tubb (CO2)

KB = 5,394'

GL = 5,388'

API = 30-021-20632



PBD @

TD @ 2950'

There are two main issues with properly plugging this well: Sealing off the 7" shoe and how to handle the uncemented 7" casing. Washing over the stuck 7" casing and pulling all of it isn't practical and is unnecessary since we are plugging the well.

- **7" shoe:** The first problem is sealing off the annulus and casing around the 7" shoe (if the NMOCD tells us to do it). After getting stuck, the casing could be rotated, so there is no guarantee that the annulus was or is now effectively sealed off. After we set the bottom cement plug, it should allow circulation like it did after the first squeeze. If successful, my recommendation is set a retainer above the casing shoe and gently pump 100 sx to seal the casing below the shoe.

The second and more important consideration is how to handle the uncemented 7" casing.

- **7" annulus – SQZ:** The simplest option is to bradenhead–squeeze the annulus. At 100% fill, 125 sx will fill the casing annulus down to 900'. But there is no guarantee where it will go and the NMOCD may require a CBL and more SQZ perms to prove it is sealed off. The prudent method is to shoot SQZ perms at the bottom and circulate cement to the surface. But that may still require more SQZ work and a bigger working pit at the surface. When properly cemented, the extra casing string adds a layer of protection for the fresh water formations, but that's not a major concern if the casing is filled with cement.
- **7" – cut and pull:** The other option is cut the casing at around 800' (at least 50' below surface casing shoe) and lay it down. The casing cost was \$10.95/ ft., but after pulling and laying it all down, shipping to Odessa and inspection..., it doesn't have any significant value. If the well will hold fluid, then the rest of the P&A is relatively simple, although it will take a lot of cement. Filling up the 9-5/8" casing from 800' will take almost 300 sx.



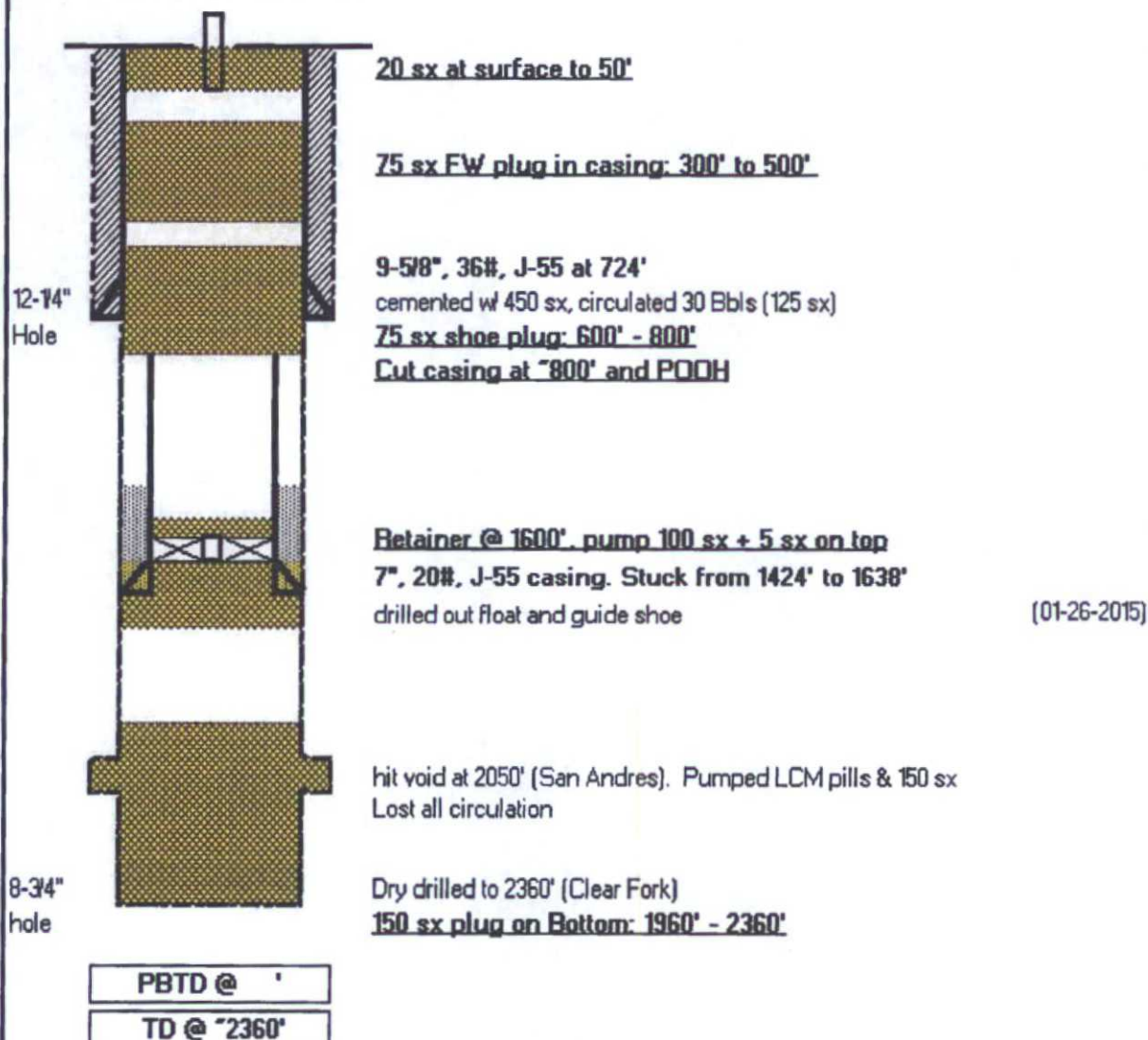
Proposed P&A

FIELD: Bravo Dome, West
 LEASE: **State 2028-36**
 COUNTY: Harding

DATE: Nov. 30, 2015
 BY: RTM
 WELL: **#1**
 STATE: New Mexico

Location: 1660' FSL & 1749' FEL Sec. 36 - T20N- R28E
 Spud: 06/28/2014 Suspended: 07/03/2014
 Current Status: SI
 Formation: Tubb (CO2)

KB = 5,394'
 GL = 5,388'
 API = 30-021-20632



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Phone (505) 476-3470 Fax (505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

Form C-101
August 1, 2011
Permit 188172

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

| | | |
|---|-----------------------------------|-------------------------------|
| 1. Operator Name and Address WHITING OIL AND GAS CORPORATION 400 W. Winols Midland, TX 79701 | | 2. OGRID Number 25078 |
| | | 3. API Number 30-021-20632 |
| 4. Property Code ✓ 313331 | 5. Property Name STATE 2028 36 | 6. Well No. 1 |

| 7. Surface Location | | | | | | | | | |
|---------------------|---------|----------|-------|---------|-----------|----------|-----------|----------|---------|
| UL - Lot | Section | Township | Range | Lot 1st | Feet From | N/S Line | Feet From | E/W Line | County |
| J | 36 | 20N | 28E | | 1680 | S | 1749 | E | Harding |

| 8. Proposed Bottom Hole Location | | | | | | | | | |
|----------------------------------|---------|----------|-------|---------|-----------|----------|-----------|----------|---------|
| UL - Lot | Section | Township | Range | Lot 1st | Feet From | N/S Line | Feet From | E/W Line | County |
| J | 36 | 20N | 28E | J | 1680 | S | 1749 | E | Harding |

| 9. Pool Information | |
|-----------------------------------|-------|
| BRAVO DOME CARBON DIOXIDE GAS 640 | 88010 |

| Additional Well Information | | | | |
|-----------------------------|----------------------------|--|-------------------------|------------------------------------|
| 11. Well Type New Well | 12. Well Type CO2 | 13. Casing/Rotary | 14. Lease Type State | 15. Ground Level Elevation 5388 |
| 16. Multiple N | 17. Proposed Depth 3800 | 18. Formation Tubb | 19. Completion | 20. Spud Date 6/12/2014 |
| Depth to Ground water | | Distance from nearest fresh water well | | Distance to nearest surface water |

We will be using a closed-loop system in lieu of lined pits

| 21. Proposed Casing and Cement Program | | | | | | |
|--|-----------|-------------|---------------|---------------|-----------------|---------------|
| Type | Well Size | Casing Size | Casing Weight | Setting Depth | Depth of Cement | Estimated TOC |
| Surf | 12.25 | 9.875 | 36 | 750 | 500 | 0 |
| Prod | 8.75 | 5.5 | 15.5 | 3800 | 450 | 0 |

| Casing/Cement Program: Additional Comments |
|--|
| |

| 22. Proposed Blowout Prevention Program | | | |
|---|------------------|---------------|--------------|
| Type | Working Pressure | Test Pressure | Manufacturer |
| Annular | 3000 | 3000 | REGAN TAURUS |

| | | | |
|---|--|----------------------------------|--|
| 23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify I have complied with 19.15.14.9 (A) NMAC and/or 19.15.14.9 (B) NMAC, if applicable. | | OIL CONSERVATION DIVISION | |
| Signature | | Approved By | |
| Printed Name: Electronically filed by Kay Maddox | | Charlie Pettin | |
| Title: Regulatory Agent | | Title: District Supervisor | |
| Email Address: kay.maddox@whiting.com | | Approved Date: 6/5/2014 | |
| Date: 5/30/2014 | | Expiration Date: 6/5/2016 | |
| Phone: 432-686-8709 | | Conditions of Approval Attached | |