

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

Form C-103
Revised August 1, 2011

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

WELL API NO. 30-015-27592
5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No. B-2071-28
7. Lease Name or Unit Agreement Name Mewbourne WDW-1
8. Well Number WDW-1
9. OGRID Number 15694
10. Pool name or Wildcat: Navajo Permo-Penn 96918
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3678' GL

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 **Injection Well**

2. Name of Operator
Navajo Refining Company

3. Address of Operator
Post Office Box 159, Artesia, New Mexico 88211

4. Well Location

Unit Letter **O** : **660** feet from the **South** line and **2210** feet from the **East** line
Section **31** Township **17S** Range **28E** NMPM County **Eddy**

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
3678' GL

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 ☐

OTHER: **CONDUCT PRESSURE FALLOFF TEST**

☒

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

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.

June 10, 2016 – Install bottomhole gauges into WDW-1, WDW-2, and WDW-3 by 11:45am. Continue injection into all three wells.

June 11, 2016 – Continue injection into all three wells.

June 12, 2016 – At 2:00 PM, the offset wells WDW-2 and WDW-3 will be shut-in. A constant injection rate will be established for WDW-1 at 160 GPM and continue for a 30-hour injection period. Do not exceed 1400 psig wellhead pressure.

June 13, 2016 – At 8:00pm, WDW-1 will be shut in for a 30-hour falloff period. WDW-2 and WDW-3 will remain shut-in.

June 14, 2016 – All three wells will continue to be shut in while monitoring falloff pressure in all three wells.

June 15, 2016 – At 8:00am, acquire downhole pressure gauges from all three wells. Tag bottom of fill and come out of hole very slowly, making 7-minute gradient stops while coming out of WDW-1 every 1000 feet (7000 ft, 6000 ft, 5000 ft, 4000 ft, 3000 ft, 2000 ft, 1000 ft, surface). Turn the wells back to Navajo personnel.

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

Refining DATE **6-9-16**


Timothy Jones

TITLE **Project Manager for Subsurface/PB on behalf of Navajo**

Type or print name Timothy Jones E-mail address: jonest1@pbworld.com PHONE: (281) 589-5838
For State Use Only

APPROVED BY: Carol J. Channing TITLE Environmental Engineer DATE 6/10/16
Conditions of Approval (if any):

- 1) Clean well bore in advance of FOT to eliminate well bore issues from FOT results.
- 2) Make sure BH gauges have been calibrated within past year
- 3) Achieve radial condition and pseudo-steady state injection constant rate before pump shut-off.
- 4) Follow OGD VIC FOT Guidance to report FOT results to OGD.
- 5) Notify OGD Artesia District office to witness pump shut-off and pressure changes at start of FOT.

INTRODUCTION

The following work plan has been developed to conduct the annual pressure falloff testing on WDW-1 Mewbourne. The results of the falloff testing will confirm the validity of the reservoir model in the well permit with respect to permeability-thickness.

Note: This procedure follows the guidance in the approved 2012 Falloff Test Plan.

WORK PROGRAM

Thursday, June 9, 2016

WSP personnel travel to Artesia, NM

Friday, June 10, 2016

1. Install bottom hole memory gauges in the three wells given below and continue normal injection for 48 hours. Downhole gauges need to be in wells by 11:45 am (time subject to change). Install surface pressure recorder on Mewbourne Well No. 1. Downhole Gauges to be set at the top of the perforations in all three wells as follows:

Mewbourne Well No. 1	7924 feet
Chukka Well No. 2	7570 feet
Gaines Well No. 3	7660 feet

WSP personnel will return to Houston, TX.

Saturday, June 11, 2016

Continue normal injection into the wells.

Sunday, June 12, 2016

1. At 2:00 pm, Navajo personnel will shut-in offset wells, Chukka Well No. 2 and Gaines Well No. 3, and start the 30-hour injection period for Mewbourne Well No. 1 at rate of approximately 160 GPM. Chukka

Well No. 2 and Gaines Well No. 3 will have to be isolated at the wing valve, MOV, and at the main pipeline valve.

2. Navajo Refining is to maintain a constant injection rate of approximately 160 GPM into the Mewbourne Well No. 1 for a minimum of 30 hours prior to shutting in the well. The 30 hours was the agreed upon time interval by the OCD and Navajo in previous falloff tests.
3. The rate should be constant during the 30-hour injection period. This might be best accomplished by opening the pipe line and wellhead valves wide open allowing full flow to the well. Record the rate and wellhead pressure in the control room on a minimum of 15 second intervals during the injection period. Do not exceed 1400 psig wellhead pressure.
4. Plant personnel will record rate, volume, and pressure during the injection period for all wells to confirm that a constant pre-falloff injection rate is maintained.
5. Collect a grab sample of the injection fluid every 10 hours; analyze the fluid for pH and Specific Gravity.

Monday, June 13, 2016

6. At 8:00 pm, Navajo personnel will shut in Mewbourne Well No. 1 for the 30-hour falloff period. Chukka Well No. 2 and Gaines Well No. 3 will remain shut-in during the 30-hour falloff period. The Mewbourne No. 1 will need to be isolated at the wing valve, MOV, and at the main pipeline valve.

Tuesday, June 14, 2016

7. Leave all three wells shut in and continue to monitor falloff pressures in all three wells. WSP personnel to return to site.

Wednesday, June 15, 2016

8. At 8:00 am, acquire downhole pressure memory gauges from all three wells.
9. Tag bottom of fill and come out of hole at 150-200 feet per minute, making 7-minute gradient stops while coming out of Mewbourne Well No. 1 every 1000 feet (7000 feet, 6000 feet, 5000 feet, 4000 feet, 3000 feet, 2000 feet, 1000 feet, Surface).
10. Turn well over to Navajo personnel to resume injection operations. WSP personnel to return to Houston, TX.

WELL: NAVAJO REFINING MEWBOURNE WELL NO. 1

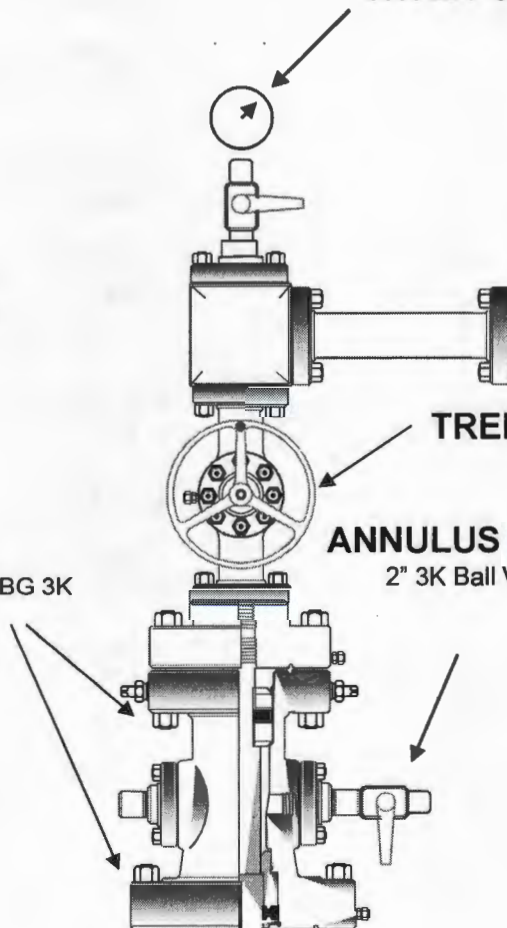
UPPER TREE ASSEMBLY
A5PP, 4-1/2" 3K X 4-1/16" 3K

FLANGE
7-1/16", 3-1/2" 3K X 4-1/16" UPTBG 3K

TOP CONNECTION
2-3/8" 8rd x 4-1/16" 3K
2" x 2-3/8" Ball Valve
2-3/8" Bull Plug 1/2" NPT
5000 LB Pressure Gauge

TREE GATE VALVE
4-1/16" 3K

ANNULUS VALVE
2" 3K Ball Valve



BELOW GROUND DETAILS

All depths are referenced to the Kelly bushing elevation of 12.5' above ground level. Ground level elevation is 3,678' above mean sea level.

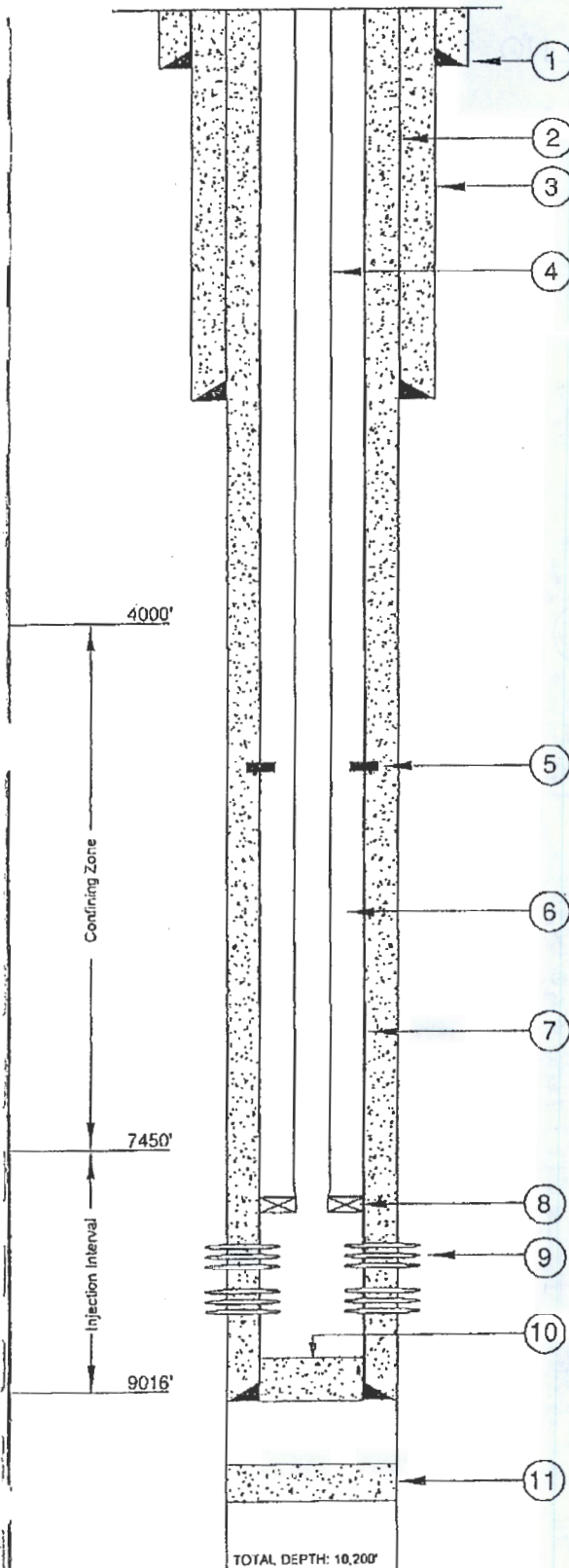
1. Surface Casing: 13 3/8", 48 lb/ft, J-55, ST&C set at 390' in a 17 1/2" hole. Cemented with 150 sx Class C with 3 % calcium chloride, 375 sx Class C Litewate w/3 % calcium chloride and 1/2 lb/sx flocele. Circulated 86 sx to surface.
2. Intermediate Casing: 9 5/8", 36 lb/ft, J-55, ST&C set at 2,555' in a 12 1/4" hole. Cemented w/800 sx of Class C Lite w/ 1/2 lb/sx flocele and 2 lb/sx Gilsonite and 12 % salt. Followed by 200 sx of Class C w/2 % calcium chloride. Circulated 133 sx to surface.
3. Base of the USDW at 493'.
4. Injection Tubing: 4 1/2", 11.6 lb/ft, N-80, SMLS, R3, LT&C set at 7,879'.
5. DV Tool: at 5,498'.
6. Annulus Fluid: 8.7 lb/gal brine water mixed w/UniChem Techni-Hib 370 corrosion inhibitor.
7. Protection Casing: 7", 29 lb/ft, N-80, LT&C: 9094' to 7031'. 7", 29 lb/ft, P-110, LT&C: 7031' to 5845'. 7", 26 lb/ft, P-110, LT&C: 5845' to surface. Casing cemented in two stages as follows:

First Stage - 600 sx modified Class H w/0.4 % CFR-3, 5 lb/sx Gilsonite, 0.5 % Halad-344, and 1 lb/sx salt mixed at 13.0 ppg. Opened DV tool at 5498' and circulated 142 sx to surface.

Second Stage - Lead Slurry: 220 sx Interfill "C" (35:65:6) mixed at 11.7 ppg. Tail Slurry: 550 sx modified Class H w/0.4 % CFR-3, 5 lb/sx, Gilsonite, 0.5 % Halad-344, 0.1 % HR-7, and 1 lb/sx mixed at 13.0 ppg. Circulated 75 sx to surface. Top out w/20 sx permium plus 3 % calcium chloride.
8. Packer: 7" x 3.5" EVI Oil Tools (Arrow), Model X-1 retrievable packer set at 7879'. Minimum I.D. is 3.0". Wireline re-entry guide on bottom. To release: turn 1/4 turn to the right and pick up.
9. Perforations (2 SPF):

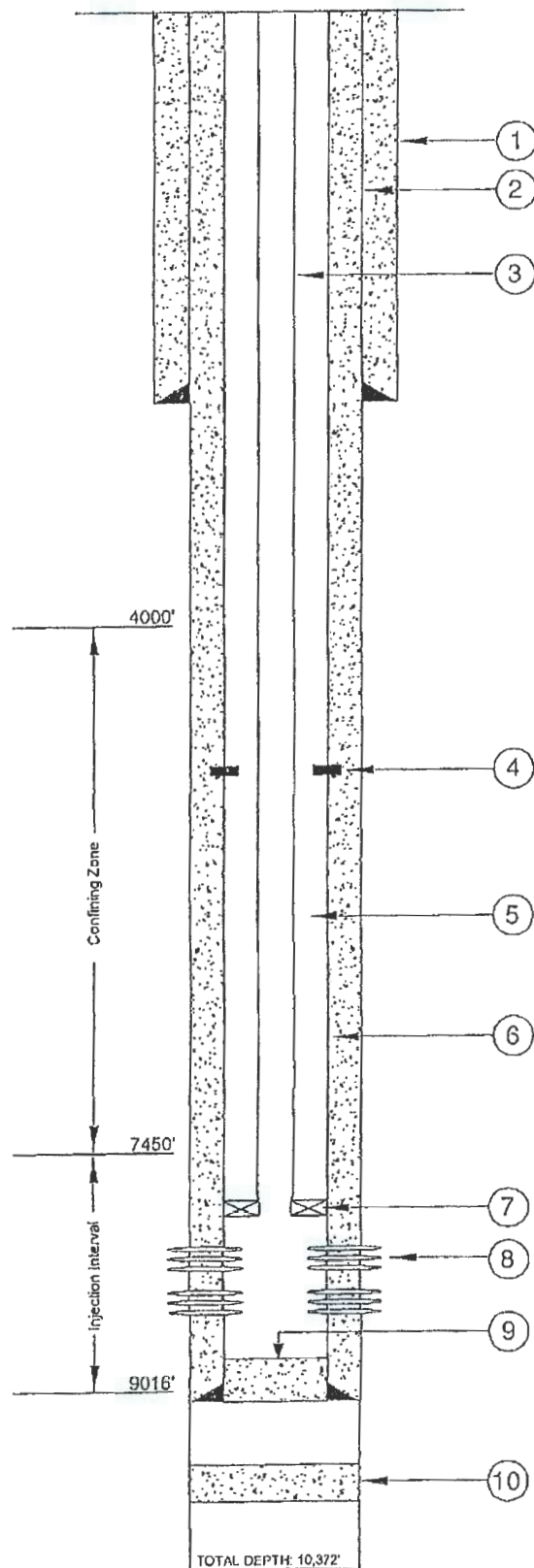
Upper Zone - 7924-7942', 7974-8030', 8050-8056', 8066-8080', 8118-8127', 8132-8140', 8160-8164', 8170-8188'.

Lower Zone - 8220-8254', 8260-8270', 8280-8302', 8360-8366', 8370-8378', 8400-8410', 8419-8423', 8430-8446', 8460-8464', 8470-8476'.
10. PBTD: 9004'.
11. Cement Plug: 45 sx Class H from 9624' to 9734'.



SUBSURFACE		HOUSTON, TX. SOUTH BEND, IN. BATON ROUGE, LA.
NAVAJO REFINING COMPANY ARTESIA, NEW MEXICO		
BELOW GROUND DETAILS WASTE DISPOSAL WELL NO. 1		
DATE: 07/13/01	CHECKED BY:	JOB NO: 7DD5256
DRAWN BY: WDL	APPROVED BY:	DWG. NO:

FIGURE 1



BELOW GROUND DETAILS

All depths are referenced to the Kelly bushing elevation of 13' above ground level. Ground level elevation is 3610' above mean sea level.

1. Base of the USDW at 473'.
2. Surface Casing: 8 $\frac{5}{8}$ ", 32 lb/ft, set at 1995' in an 11" hole. Cemented to surface with 800 sacks of cement.
3. Injection Tubing: 3 $\frac{1}{2}$ ", 9.2 lb/ft, J-55, smls, NUE 10 rd, set at 7528'.
4. DV Tool: at 5,785'.
5. Annulus Fluid: 8.7 lb/gal brine water mixed w/UniChem Techni-Hib 370 corrosion inhibitor.
6. Protection Casing: 5 $\frac{1}{2}$ ", 17 lb/ft, L-80, LT&C: 8869' to the surface and set in a 7 $\frac{7}{8}$ " hole. Casing cemented in two stages as follows:

First Stage - 575 sacks of modified Class "H" with 0.4 % CFR-3, 5 lb/sk Gilsonite, 0.5 % Halad-344, and 3 lb/sk salt. Mixed at 13.0 ppg. Opened DV tool at 5785 and circulated 20 sacks to surface.

Second Stage - Lead Slurry: 300 sacks of Interfill "C" (35:65:6) mixed at 11.7 ppg. Tail slurry: 695 sacks modified Class "H" with 0.4% CFR-3, 5 lb/sk Gilsonite, 0.5 % Halad-344 and 3 lb/sk salt mixed at 13.0 ppg. Circulated 150 sacks to surface. Topped out with 10 yards of Redl-mix.
7. Packer: 5 $\frac{1}{2}$ " x 2 $\frac{7}{8}$ " Weatherford Completion Tools (Arrow) Model X-1 retrievable packer set at 7528'. Minimum ID is 2.4375". Wireline re-entry guide is on bottom. To release: turn $\frac{1}{4}$ turn to the right and pick up.
8. Perforations (2 SPF):

Zone 1: 7570-7620', 7676-7736'

Zone 2: 7826-7834', 7858-7880', 7886-7904', 7916-7936', 7944-7964', 7990-8042', 8096-8116', 8191-8201', 8304-8319', 8395-8399'.
9. PBTD: 8770'
10. Cement Plug: 45 sacks from 9675' to 9775'.

SUBSURFACE		HOUSTON, TX.
		SOUTH BEND, IN.
		BATON ROUGE, LA.
NAVAJO REFINING COMPANY ARTESIA, NEW MEXICO		
BELOW GROUND DETAILS WASTE DISPOSAL WELL NO. 2		
DATE: 07/13/01	CHECKED BY:	JOB NO: 7005256
DRAWN BY: WDL	APPROVED BY:	DWC. NO:

FIGURE 4

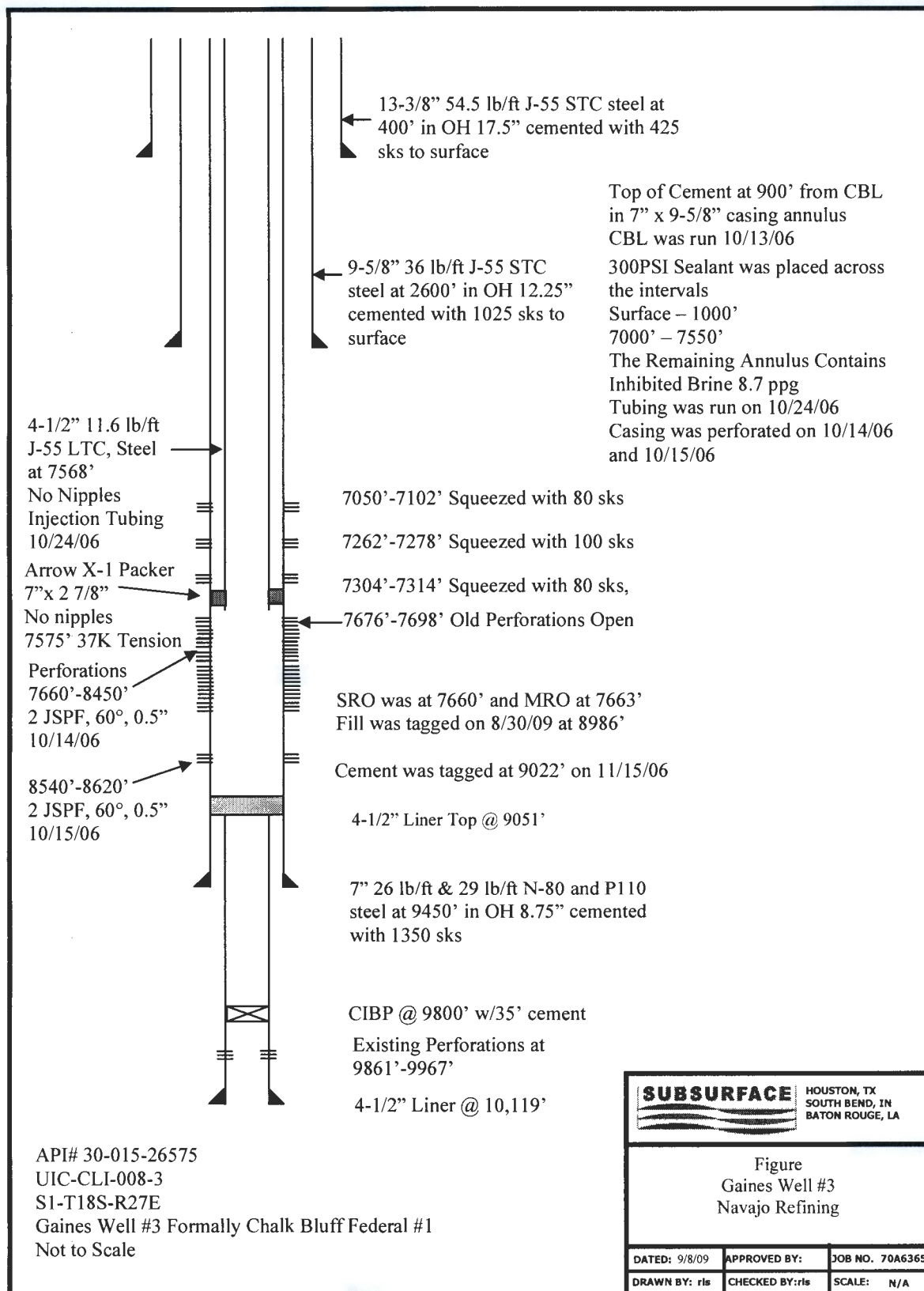


FIGURE 3