

NATURAL RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
5816 Corporate Ave., Suite 100 Cypress, CA 90630-4731
Phone:(714) 816-6847 Fax:(714) 816-6853

No. T 115-1070

REPORT ON OPERATIONS

WATER FLOOD PROJECT

Ms. Madelyn (Joyce) Holtzclaw
E & B Natural Resources Management Corporation (E0100)
1600 Norris Rd.
Bakersfield, CA 93308

Cypress, California
November 09, 2015

Your operations at well "**Wnf-I" 3**, A.P.I. No. **037-21768**, Sec. **19**, T. **04S**, R. **13W**, **SB B.&M.**, **Wilmington** field, in **Los Angeles** County, were witnessed on **10/21/2015**, by **Max Chavez-Segura**, a representative of the supervisor.

The operations were performed for the purpose of **demonstrating that all of the injection fluid is confined to the approved zone.**

DECISION: **APPROVED**

DEFICIENCIES NOTED AND CORRECTED: NONE

EXPIRED _____
CANCELLED _____
MAILED _____
EMAILED 11-10-15 TL

HAM:dt

Steven Bohlen
State Oil and Gas Supervisor

By Walter Ateedy
For Daniel J. Dudak, District Deputy

State of California
Department of Conservation
Division of Oil, Gas, and Geothermal Resources

No. T 155-1070

MECHANICAL INTEGRITY TEST (MIT)

| | | | | | |
|---|-----------|-----------|-------------|----------------------------------|-------------------|
| Operator: E & B Natural Resources Management Corp. | | | | Well: "Wnf-1" 3 | |
| Sec. 19 | T. 04S | R. 13W | B.&M. SB | API No.: 037-21768 | Field: Wilmington |
| County: Los Angeles | | | | Witnessed/Reviewed on: 7-22-2015 | |

Max Chavez, representative of the supervisor, was present from 0700 to 1100

Also present were: Aaron Glenn and Raul Ronderos (WellaCo)

Casing record of the well:

The MIT was performed for the purpose of (15)
Demonstrating that all of the injection fluid is confined to the approved zone.

The MIT is approved since it indicates that all of the injection fluid is confined to the formations below
3605 feet at this time.

The MIT is not approved due to the following reasons: (specify)

CONTRACTOR: *Wella Co*

UNCORRECTABLE DEFICIENCIES:

DEFICIENCIES NOTED AND CORRECTED:

| | | | | | | | | |
|--|--------|-------------------|---------------------------------|---------------------------------|-----------------------|--|----------|--------------------|
| Well: "Wnf-I" 3 | | | Date: 7-22-2015 | | | Time: 0700-1100 | | |
| Observed rate: 253 B/D | | | Meter rate: 250 B/D | | | Fluid level: 0 feet | | |
| Injection pressure: 1300 psi | | | MASP: 1572 psi | | | Pick-up depth: 3864 feet | | |
| Initial annulus pressure: 0 psi | | | Pressure after bleed-off: 0 psi | | | | | |
| Casing vented during test (Y/N) Yes | | | Survey company: WellaCo | | | | | |
| <u>SPINNER COUNTS</u> | | | | | | | | |
| DEPTH | COUNTS | RATE | DEPTH | COUNTS | RATE | COMMENTS: | | |
| | | | | | | | | |
| <u>TRACER CASING AND TUBING RATE CHECKS</u> | | | | | | | | |
| Interval 3410'-3418' | | Time (sec.) 10 | Rate (B/D) 253 | | Background log: 3300' | | to 3700' | |
| | | | | COMMENTS: | | | | |
| <u>TOP PERFORATION CHECK</u> | | | | | | | | |
| Top perforation depth: 3605' | | | Wait at: 3418' | | | for 120 seconds | | Beads: (Y/N) No |
| Casing shoe at: 3930' | | WSO holes at: | | Arrival time: <i>Calculated</i> | | <i>Actual</i> | | |
| LOG FROM | TO | SLUG @ | LOG FROM | TO | SLUG @ | COMMENTS: | | |
| 3418' | 3625' | 3487' | | | | Slug traveling south, no upward movement. | | |
| 3625' | 3375' | 3568' | | | | | | |
| 3375' | 3700' | 3670' | | | | | | |
| <u>PACKER CHECK</u> | | | | | | | | |
| Packer at: 3434' | | | Wait at: | | | for seconds | | Beads: (Y/N) No |
| Tubing tail at: 3475' | | | Tubing size: 2-7/8" (Rice) | | 2nd Packer at: | | Mandrel: | |
| LOG FROM | TO | SLUG @ | LOG FROM | TO | SLUG @ | COMMENTS: | | |
| | | | | | | Both checks ran simultaneously. | | |
| COMMENTS: | | | | | | | | |

6/23/2015-DJ

DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

CHECK LIST – RECORDS RECEIVED AND WELL STATUS

| | | |
|----------|--|---|
| Company: | E & B Natural Resources Co. | Well: WNF-1 3 |
| API#: | 037-21768 | Sec. 19 , T. 4S , R. 13W . S. B. B. & M. |
| County: | Los Angeles | Field: Wilmington |

| RECORDS RECEIVED | DATE | STATUS |
|------------------------------|----------|--|
| Well Summary (Form OG100) | 5/6/2015 | Active <input checked="" type="checkbox"/> Drilling <input type="checkbox"/> |
| History (Form OG103) | 5/6/2015 | Abandoned <input type="checkbox"/> Idle <input type="checkbox"/> |
| Core Record (Form OG101) | | Reabandoned <input type="checkbox"/> Other <input type="checkbox"/> |
| Directional Survey | | |
| Sidewall Samples | | |
| Date final records received. | | |
| Electric Logs: | | |
| Other: | | |

| WELL TYPE | |
|--------------|---|
| Oil | <input type="checkbox"/> Waterflood <input checked="" type="checkbox"/> |
| Gas | <input type="checkbox"/> Water Disposal <input type="checkbox"/> |
| Water Source | <input type="checkbox"/> Cyclic Steam <input type="checkbox"/> |
| Observation | <input type="checkbox"/> Steam Flood <input type="checkbox"/> |
| Exploratory | <input type="checkbox"/> Fire Flood <input type="checkbox"/> |
| Dry Hole | <input type="checkbox"/> Other <input type="checkbox"/> |

EFFECTIVE DATE: **2-23-2015**

REMARKS:

| ENGINEERS CHECK LIST | CLERICAL CHECK LIST |
|--|---------------------------------------|
| <input checked="" type="checkbox"/> Summary, History & Core Record (Dupl.) | Location change |
| <input type="checkbox"/> Electric Log | Elevation change |
| <input checked="" type="checkbox"/> Operator's Name | Form OGD121 |
| <input checked="" type="checkbox"/> Signature | Form OGD150b (Release of Bond) |
| <input checked="" type="checkbox"/> Well Designation | Duplicate logs to archives |
| <input checked="" type="checkbox"/> Location | Notice of Records Due |
| <input checked="" type="checkbox"/> Elevation | EDP 6-24-15 VM |
| <input checked="" type="checkbox"/> Notices | District Date Base 10-24-15 VM |
| <input type="checkbox"/> "T" Reports | Final Letter (OG159) |
| <input type="checkbox"/> Casing Record | Update Center |
| <input type="checkbox"/> Plugs | |
| <input type="checkbox"/> Directional Survey | |
| <input checked="" type="checkbox"/> Production/Injection (FAP Codes: 849-03-20) | |
| <input type="checkbox"/> E Well on Prod., enter EDP | |
| <input type="checkbox"/> Surface Inspection Required | FIELD CHECK LIST |
| <input type="checkbox"/> Surface inspection Waived (Island) | Date Surface Inspection Completed: |
| <input type="checkbox"/> Well site restoration deferred (common cellar) | Other: |
| <input type="checkbox"/> Final Letter Required AB: <input type="checkbox"/> REAB: <input type="checkbox"/> | |
| <input type="checkbox"/> Other: | |

| RECORDS NOT APPROVED | RECORDS APPROVED |
|----------------------|--|
| (Reason:) | (Signature) Latiz Ateeg |
| | RELEASE BOND |
| | Date Eligible |
| | (Use date last needed records received.) |
| | MAP AND MAP BOOK |

DOGGR
Received-

MAY 08 2015

NATURAL RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

WELL SUMMARY REPORT

API No. 04-037-21768

| | | | | | | |
|---|--|------------------------------|-------------------|-----------------|--|--------------------|
| Operator E&B Natural Resources Management Corporation | | Well WNF-13 | | | | |
| Field (and Area, if applicable) Wilmington | | County Los Angeles | Sec. 19 | T. 4S | R. 13W | B.&M. SB |
| Location of well (Give surface location from property or section corner, street center line) 95' Northerly along property line & 148' East along NE corner of Main St & AT&SF RR right of way | | | | | Elevation of ground above sea level: 40' | |
| Lat./Long. in decimal degrees, to six decimal places, NAD 83 format: Lat: 33.804864 Long: -118.274920 | | | | | | |

Was the well directionally drilled? Yes No If yes, show coordinates (from surface location) and true vertical depth at total depth.
TVD: 3739', N: 50.09, 1070.15 E

| | | | | | |
|---|---|-------|-------|---|--|
| Commenced drilling (date) 1.1.1977 | Total depth (1st hole) 3930' | (2nd) | (3rd) | Depth measurements taken from top of: <input type="checkbox"/> Derrick Floor <input type="checkbox"/> Rotary Table <input checked="" type="checkbox"/> Kelly Bushing | |
| Completed drilling (date) 1.16.1977 | | | | Which is 9' feet above ground. | |
| Commenced production/injection (date) 3.19.1977 | Present effective depth ' 3930' | | | GEOLOGICAL MARKERS | |
| Production mode: <input type="checkbox"/> Flowing <input type="checkbox"/> Pumping <input type="checkbox"/> Gas lift | Junk? Describe: | | | DEPTH | |
| Name of production/injection zone(s) Ranger Sands | | | | Tar Ranger F | |
| | | | | 3204 | |
| | | | | 3598 | |
| | | | | Formation and age at total depth Pliocene | |
| | | | | Base of fresh water 1978 | |

| | Clean Oil (bbl per day) | API Gravity (clean oil) | Percent Water (including emulsion) | Gas (Mcf per day) | Tubing Pressure | Casing Pressure |
|--------------------------|-------------------------|-------------------------|------------------------------------|-------------------|-----------------|-----------------|
| Initial Production | NA | NA | NA | NA | NA | NA |
| Production After 30 days | NA | NA | NA | NA | NA | NA |

CASING AND CEMENTING RECORD (Present Hole)

| Size of Casing (Inches API) | Top of Casing | Depth of Shoe | Weight of Casing | Grade and Type of Casing | New (N) or Used (U) | Size of Hole Drilled | Number of Sacks or Cubic Feet of Cement | Depth of Cementing (if through perforations) | Top(s) of Cement in Annulus |
|-----------------------------|---------------|---------------|------------------|--------------------------|---------------------|----------------------|---|--|-----------------------------|
| 13-3/8" | surf | 619 | 48 | H40 | N | 17-1/2 | 700 cuft | | surf |
| 8-5/8" | surf | 3593 | 32 | K55 | N | 11 | 650 cuft | | 1090 |
| 6-5/8" | 3504 | 3930 | 24 | K55 | N | 15 | | | |
| 6-5/8" | 2864 | 3504 | 24 | J55 | N | | 85 cuft | 3504 | 2864 |
| 4" | 3471 | 3929 | 11 | L80 | N | | | | |

PERFORATED CASING (Size, top, bottom, perforated intervals, size and spacing of perforations, and method.)

6-5/8", 3517-3595: 2" x 40M, 24"C, 6R wirewrap
6-5/8", 3605-3925: 2" x 40M, 6"C, 24R wirewrap
4", 3570-3929: 0.018" slotted liner

Logs/surveys run? Yes No If yes, list type(s) and depth(s).

In compliance with Sec. 3215, Division 3, of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

| | | | |
|---|---|--|--------------------------|
| Name of person filing report Danielle Uhl | Telephone Number 661.679.1700 | Signature | Date |
| Address 1600 Norris Rd | | City/State Bakersfield, CA | Zip Code 93308 |
| Individual to contact for technical questions: Danielle Uhl | Telephone Number 424.281.8894 | E-Mail Address: duhl@ebresources.com | |

OG100 (3/09)

SUBMIT IN DUPLICATE

DOGGR
Received—
MAY 06 2015

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES

HISTORY OF OIL OR GAS WELL

Operator E&B Natural Resources Management Corporation Field Wilmington County Los Angeles
Well WNF-I 3 Sec. 19 T. 4S R. 13W SB B.&M.
A.P.I. No. 04-037-21768 Name Danielle Uhl Title Engineer
(Person submitting report) (President, Secretary, or Agent)
Date _____
(Month, day, year)
Signature _____
Address 1600 Norris Road; Bakersfield CA 93308 Telephone Number 661.679.1700

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during re-drilling or altering the casing, plugging, or abandonment, with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, and initial production data.

| Date | Description |
|-----------|--|
| 1.22.2015 | MIRU. Start measuring back in hole with mule shoe on work string. |
| 1.23.2015 | Continued measuring in hole with 2-7/8" work string tagging top of 6-5/8" liner at 3502'. Continued in tagging top of fill at 3625'. Dumped 9.5 cuft of sand. Ran back in breaking up sand bridge at 3523' and tagging sand low at 3618'. Dump remaining 9.5 cuft of sand (Estimated top at 3522') Pull tail to 2893'. |
| 1.26.2015 | Ran back in with tubing tagging top of sand at 3526'. Ran in with test packer and attempt a pressure test from 3092' to surface with no success. Move packer up hole in 30' increments all with the same results (Believe to be a problem with tubing or tools) |
| 1.27.2015 | Measured in hole with replacement test packer and pressure test 8-5/8" casing from 3104' to surface at 2,000 psi. Measure and pick work string back up running in hole with diverting sub. Reverse circulate hole clean from 3506'. Change hole over to 10.6 ppg calcium chloride water and monitor well. Stack tubing out on sand plug at 3511'. |
| 1.28.2012 | RIH and stack tubing on top of plug at 3511'. POOH, RIH with 8-5/8" casing scraper to top of liner. Reverse circulate hole clean. New liner had only one set of centralizing lugs, welded on second set of four per centralizing lugs. |
| 1.29.2015 | Made up and ran in hole with 615' of 6-5/8" tie-back with Weatherford's cementing and running tools. Space tubing out and stack tie-back out on liner top 3508' (Top at 2864'). Cementers unavailable. |
| 1.30.2015 | Using Baker Hughes, cement the 6-5/8" tie-back inner liner in place with 15 barrels or 85 cuft of 14.5 ppg slurry. Release from and pull out of hole with running tools. Pressure casing to 400 psi and secured well allowing cement to set over the week-end. |
| 2.2.2015 | Made up and ran in with 7-3/4" bit tagging top of 6-5/8" liner at 2862'. Trip pipe for 5-3/4" bit and took weight 78' high at 3421'. Drill out cement stringers to 3456' and solid cement down to first float at 3490'. Pressure test casing lap to 2,000 psi, solid for 30 minutes. Drill out solid cement and both floats falling out of cement at top of sand 3511'. Clean out sand to 3524'. Circulate clean and pulled bit to liner top. |
| 2.3.2015 | Attempt a pressure test against sand plug 3524' to surface at 1,500 psi, bled to 450 in 18 minutes. Clean out sand to 30' above perforation 3575' and retest with same results. Trip 6-5/8" casing scraper and ran test packer. Test from 3569' with same results, test just inside the new tie-back at 3500' holding solid at 2,000 psi. Attempt to set just under old liner top 3517' finding packer sliding down hole to 3527' with communication around tool. Pull packer to top of liner and secure well. |
| 2.4.2015 | Ran back in with 5-3/4" bit and continued clean out from 3575' to 3625'. Bit stacking out on restriction at 3625' unable to work past. Began recovering large pieces of formation back in returns at this depth. Trip pipe for 3-21/32" OD saw-tooth collar and was unsuccessful to work it past restriction at 3625'. Saw tooth came back with all teeth rolled over. |
| 2.5.2015 | Service equipment. RIH with 2-7/8" workstring to top of restriction at 3624', working it past. Circulate clean. Could not work past second restriction. Put a slight bend in 2-3/8" mule shoe. Broke circulation and work tail past 3624' and 3626'. Cleaned out to 3637'. Tubing stacking out at 3637'. |
| 2.6.2015 | Ran in with 5-3/4" bull nose mill on four 4-1/8" drill collars and cut through restrictions at 3624 - 3626' & 3638' - 3637'. Continued clean out without rotation to 3652'. Pull mill for 5-3/4" open throat bit and ran through bad 6-5/8" 3624' to 3637'. Tag fill 11' high at 3641'. Pull tools above liner and secure rig and well. |

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES
HISTORY OF OIL OR GAS WELL

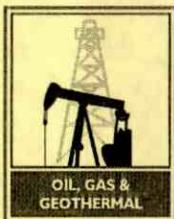
- 2.9.2015 Ran back in with 5-3/4" bit past bad 6-5/8" liner at 3624' tagging fill 10' high at 3630'. Clean out back down to our previous depth 3652' finding returns would not clean up reversing. Clean out to ETD 3930' pumping direct contaminating circulating pit due to heavy iron-oxide returns. Change hole over with 200 barrels of 9 ppg KCl water from drilling storage tanks. Pull bit above bad 6-5/8" and attempt to close well in under pressure finding fluid now pumping away at 300 psi. Secure well and clean roughly 60 barrels of iron-oxide solids from circulating system.
- 2.10.2015 Ran back in with 5-3/4" bit taking 1 weight passing upper restriction at 3624'. Tag 177' of new fill at 3754'. Cleaned out sand and iron oxide back down to ETD 3930' recording a third restriction at 3843'. Bit has to be rocked past this point. Circulate on bottom while waiting on heavy fluid arrival. Brought 70 bbls of 10.6 ppg Calcium Chloride water up to 60 viscosity and equalized across 6-5/8" liner in an attempt to control solids unit liner can be run. Pulled tools above liner and secure rig and well.
- 2.11.2015 Ran back in with 5-3/4" bit tagging 1' of fill at 3929'. Trip pipe for 4-1/2" x 76' feeler recording weight loss as feeler passes 3624'. No other weight loss was encountered. Tag 6' of fill at 3924' (Bottom perforation at 3925') Pull feeler above liner top and secure well with 180 psi.
- 2.17.2015 Ran back in with 4-1/2" feeler tagging seven additional feet of fill at 3918' for a total of 12', bottom perf at 3925'. Pull out slowly keeping hole full and laid down feeler. Secured well with 100 psi.
- 2.18.2015 Ran back in hole with 5-3/4" bit on two 4-1/8" drill collars finding we were unable to work bit past restricted 6-5/8" at 3624'. Trip pipe for the same 5-3/4" mill and cut past restriction 3624' to 3655'. Continue clean out to 3686' mill continually torqueing believe to be due to chasing liner debris down hole. Pull above bad 6-5/8" and check for flow.
- 2.19.2015 Ran back in with 5-3/4" mill recording weight loss at tools past restricted 6-5/8" 3624' -3655'. Continued clean out chasing liner debris to bottom 3929'. Ran in with 439' of 4" inner liner and gravel pack same in place with 68 cuft. Calculated 37 cuft. Release running tool and pull above 6-5/8". Secure well.
- 2.20.2015 Continued out with gravel pack tools. Ran in and set Weatherford's 4" x 6-5/8" hydraulic liner seal at 3471'. Ran in with 2-1/16" tail to ETD at 3929' (No fill encountered) Changed hole over with 220 bbls lease water mixed with poly breaker. Pulled tail out of liner and secured well.
- 2.21.2015 Laid down work strings. Ran Weatherford's new 6-5/8" injection packer in on the original ID coated tubing. Inhibit annuls and set packer at 3466'. Test annulus at 1680 psi for one hour while loading out equipment. DOG rep/ Max Chavez requests witnessing this test this morning. Bled well and left pump on location for testing this morning. All other equipment was moved off location in preparation for drilling.
- 2.23.2015 Tied pump line back to casing and pressure test to 1660 psi. DOG rep/Max Chavez witnessed and approved this test. Plumb injection line and turn well over to operators. RDMO.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES
HISTORY OF OIL OR GAS WELL

Operator E&B Natural Resources Management Corporation Field Wilmington County Los Angeles
 Well WNF-I 8 Sec. 19 T. 4S R. 13W SB B.&M.
 A.P.I. No. 04-037-22620 Name Danielle Uhl Title Engineer
(Person submitting report) (President, Secretary, or Agent)
 Date _____
(Month, day, year)
 Signature _____
 Address 1600 Norris Road; Bakersfield CA 93308 Telephone Number 661.679.1700

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during re-drilling or altering the casing, plugging, or abandonment, with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests, and initial production data.

| Date | |
|-----------|---|
| 3.18.2015 | MIRU |
| 3.19.2015 | Install and function test Class II BOPE. Lay down 128 joints of 2-7/8" Injection string tubing. Assist Guzman Crane racking 2-7/8" work string. Spot mud pump and washout bins. Pick up 10 joints of 2-3/8" Hydrill tubing with 3-3/8" Mule shoe on bottom. Pick up 128 Joints of 2-7/8" work string. Tag at 4281'. Dumped 12 cuft of sand down tubing. Pull tubing above liner top. |
| 3.20.2015 | Work sand to 4160'. Reverse tubing clean. Retag sand at 4160'. POOH with tubing. Make up 5" 18# flush max liner, 39 joints 1620' . RIH with tubing. Tag 5" liner top at 4141'. Sub up tubing. New 5" liner top will be at 2498'. |
| 3.21.2015 | Pumped 88 sacks of cement. Dropped dart. Displace with water. Picked up plug. Bumped plug. Checked floats. Held good. Release from liner. New liner top at 2498'. ETOC at 2386'. Pull out of hole with tubing. |
| 3.23.2015 | Make up and run in the hole with 6-1/8" bit. Tag cement at 2286'. Rig up 2.5 power swivel. Establish reverse circulation. Drill out cement stringers to 2447'. Continue to drill out solid cement to 5" liner top at 2498'. Circulate to clean returns. Pull out 6-1/8" bit. Make up 4-1/8" bit. Pick up six 3-1/8" drill collars. Pick up 2-3/8" tubing to cover 5" liner . Run in hole with BHA to 2498'. Rig up 2.5 power swivel. Continue to drill out cement stringers inside 5" liner to 2640'. Circulate to clean returns. Pulled tubing to liner top. |
| 3.24.2015 | Run in hole with tubing. Tag at 2640'. Was able to work tubing through stringers. Bit fell through at 2694'. Continue to run in hole, tag at 3982'. Rig up swivel and drill out to 4080'. Pressure test back side, good test. Continue to drill out past floats and bull nose to 4152'. Pressure test back sid. Bled off to 600 psi in 8 min. Retest. Bled down to 950 in 13 min. Pull tubing to top of 5" liner. |
| 3.25.2015 | Run in hole with tubing. Rig up 2.5 swivel. Establish reverse circulation. Continue to clean out sand from 4160' to 4230'. Stopped rotating bit at 4230' due to 5" pipeless stainless steel wirewrap liner. Continue to clean out to 4324'. Unable to pass 4324'. Decision was made to run a 2-3/8" mule shoe. Circulate to clean returns. POOH with tubing. Lay down 3-1/8" drill collars and 4-1/8" bit. Make up and run in hole with 2-3/8" mule shoe to 4324'. Pick up production swivel. Establish reverse circulation. Clean out to 4345'. Circulate to clean returns. Got back a large amount of iron sulfide in the returns. POOH with tubing. Found the mule shoe was bent and had scrape marks on one side. Possibly went through a restriction at 4324'. |
| 3.26.2015 | RIH with 5" Scraper to 4200'. Scraper passed with no restrictions. POOH laying down work string. Pick up 5" Weatherford arrowset packer. Pick up 135 joints of 2-3/8" 4.7# N-80 8rd tubing. Strip off BOPE. Set packer with center of element at 4135'. Make up and land tubing on 6-900 Flange 4k compression. Test back side, held good for 15 min. |
| 3.27.2015 | Pressure test annulus for Division of Oil & Gas Representative Eric Weigand. RDMO |



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DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
5816 Corporate Ave., Suite 100 Cypress, CA 90630-4731
Phone:(714) 816-6847 Fax:(714) 816-6853

No. T 116-1024

REPORT ON OPERATIONS

WATER FLOOD PROJECT
RANGER ZONE, FAULT BLOCK I

Ms. Madelyn (Joyce) Holtzclaw
E & B Natural Resources Management Corporation (E0100)
1600 Norris Rd.
Bakersfield, CA 93308

Cypress, California
August 22, 2016

Your operations at well "**Wnf-1" 3**, A.P.I. No. **037-21768**, Sec. **19**, T. **04S**, R. **13W**, **SB B.&M.**, **Wilmington** field, in **Los Angeles** County, were witnessed on **2/23/2015**, by **Max Chavez-Segura**, a representative of the supervisor.

The operations were performed for the purpose of **pressure testing the 8-5/8" casing**.

DECISION: **APPROVED**

EXPIRED _____
CANCELLED _____
MAILED _____
EMAILED 9-9-16 TL

MCS/CLC

cc: Well File

Kenneth A. Harris Jr.

State Oil and Gas Supervisor

By Callio L. Callum
For Daniel J. Dudak, District Deputy

Report on Operations
Standard Annular Pressure Test

E & B Natural Resources
OPERATOR Management Corporation
1600 Norris Rd.
Bakersfield, CA 93308

Your operations at well "Wnf-1" 3 API No. 037-21768
Sec 19 , T 04S , R 13W , SB , B. & M. Wilmington Field, Los Angeles County,
were witnessed on 2-23-2015 . Max Chavez , representative of
the supervisor, was present from 0700 to 0800 .
There was also present Dave Hopkins

Casing record of present hole: 13-3/8" cem 619'; 8-5/8" cem 3593'; 6-5/8" Id 3504'-3930', perf 3605'-3925';
4" Id 3471'-3929', perf 3570'-3929'. TD 3929'.

The operations were performed for the purpose of pressure testing the 8 5/8" casing. The casing was
pressure tested with 1660 psig for 30 minutes. There was 0 pressure drop.
Packer Depth: 3466'

Well Status: Injecting at _____ psi Idle Shut in

DECISION:

The pressure test is Approved Not Approved

CONTRACTOR:

Harbor Resources

UNCORRECTABLE DEFICIENCIES:

None

DEFICIENCIES NOTES AND TO BE CORRECTED:

None

DEFICIENCIES NOTED AND CORRECTED:

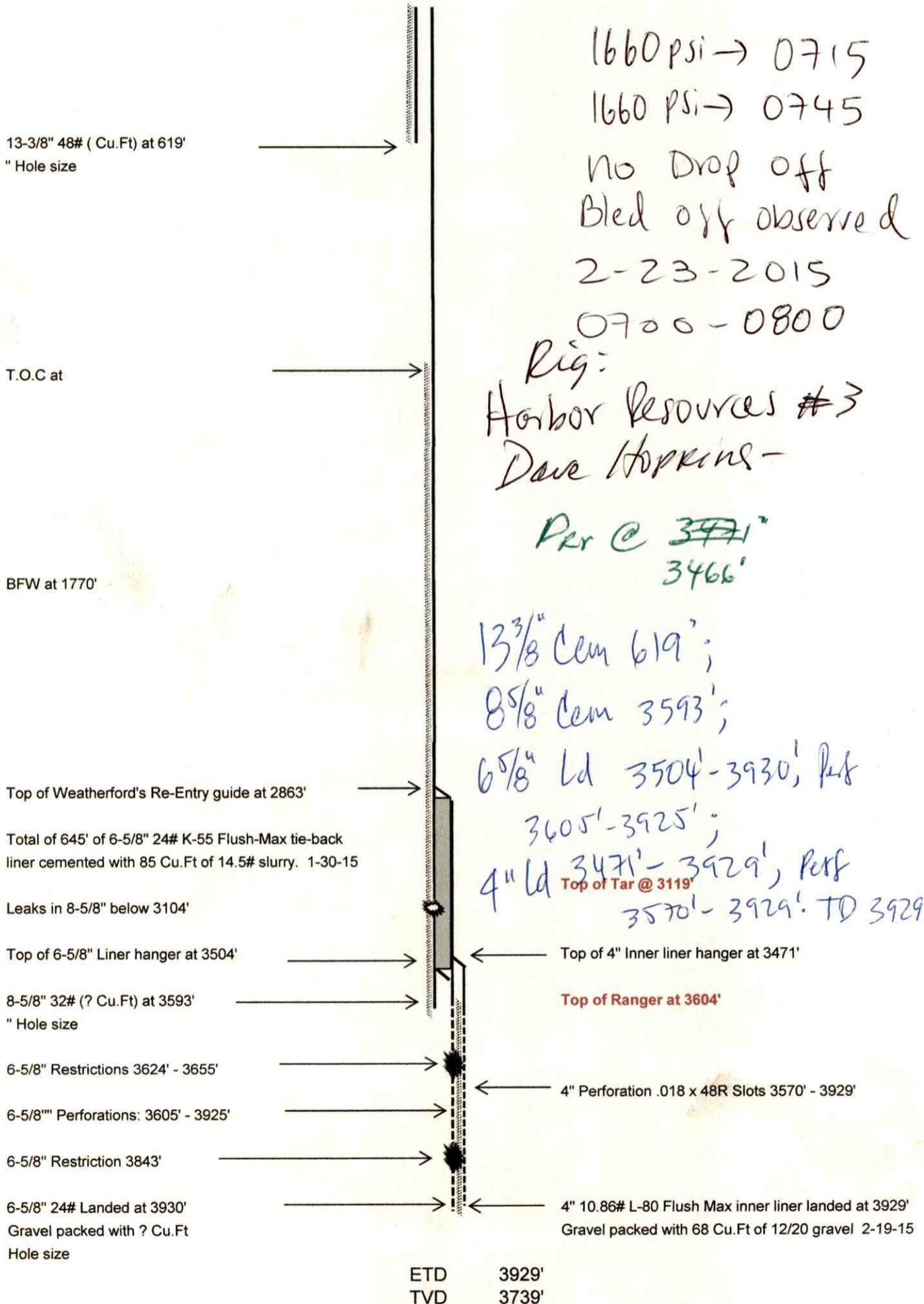
None

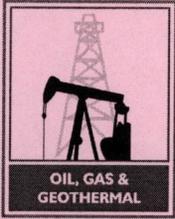
WNF-I #3

Spudded
Completed

Zone: Ranger

Elevation:
KB to Mat 9.00'
Let Down
KB to Head





NATURAL RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
5816 Corporate Ave., Suite 200 Cypress, CA 90630 - 4731

No. P 115-0051

PERMIT TO CONDUCT WELL OPERATIONS

Waterflood
RANGER ZONE, FAULT BLOCK I

| <u>Old</u> | <u>New</u> |
|------------|------------|
| 849 | 849 |
| FIELD CODE | |
| 03 | 03 |
| AREA CODE | |
| 20 | 20 |
| POOL CODE | |

Cypress, California
February 11, 2015

Ms. Madelyn (Joyce) Holtzclaw, Agent
E & B Natural Resources Management Corporation (E0100)
1600 Norris Rd.
Bakersfield, CA 93308

Your **Supplementary** proposal to **REWORK (install 4 1/2" liner)** well "**Wnf-I" 3**, A.P.I. No. **037-21768**, Section **19**, T. **04S**, R. **13W**, **SB B. & M.**, (Lat: **33.804864** Long: **-118.274920** Datum: **83**), **Wilmington** field, **Fault Block I** area, **Ranger** pool, **Los Angeles** County, dated **2/9/2015**, received **2/10/2015** has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED.

In all other respects, the operations are to be conducted in accordance with the provisions outlined in Permit **P 114-0783**, dated **September 16, 2014**.

EXPIRED 5/18/2016
CANCELLED _____
MAILED _____
EMAILED 2/18/15 JH.

Blanket Bond
UIC Project No. 84903008
cc: EDP

Engineer Michel Vasconcellos
Office (714) 816-6847

MV/mv

Steven Bohlen
State Oil and Gas Supervisor

By *Daniel J. Dudak*
For Daniel J. Dudak, District Deputy

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended. Issuance of this permit does not affect the Operator's responsibility to comply with other applicable state, federal, and local laws, regulations, and ordinances.

CRITICAL WELL DEFINITION

As defined in the California Code of Regulations, Title 14, Section 1720 (a), "Critical well" means a well within:

- (1) 300 feet of the following:
 - (A) Any building intended for human occupancy that is not necessary to the operation of the well; or
 - (B) Any airport runway.
- (2) 100 feet of the following:
 - (A) Any dedicated public street, highway or the nearest rail of an operating railway that is in general use;
 - (B) Any navigable body of water or watercourse perennially covered by water;
 - (C) Any public recreational facility such as a golf course, amusement park, picnic ground, campground or any other area of periodic high-density population; or
 - (D) Any officially recognized wildlife preserve.

WELL OPERATIONS REQUIRING BONDING

1. Drilling, re-drilling, or deepening any well.
2. Milling out or removing a casing or liner.
3. Running and cementing casing or tubing.
4. Running and cementing liners and inner liners.
5. Perforating casing in a previously unperforated interval for production, injection, testing, observation, or cementing purposes.
6. Drilling out any type of permanent plug.
7. Re-entering an abandoned well having no bond.

This form may be printed from the DOGGR website at www.conservation.ca.gov/dog/

69



Operator: E&B Natural Resources
 Legal name: WNF-I3
 ST/RD No.: 0
 Field: Wilmington
 API No.: 04-037-21768
 Spud Date: 1/1/1977
 Current Status: COMPLETE
 Status Date: 2/9/2015

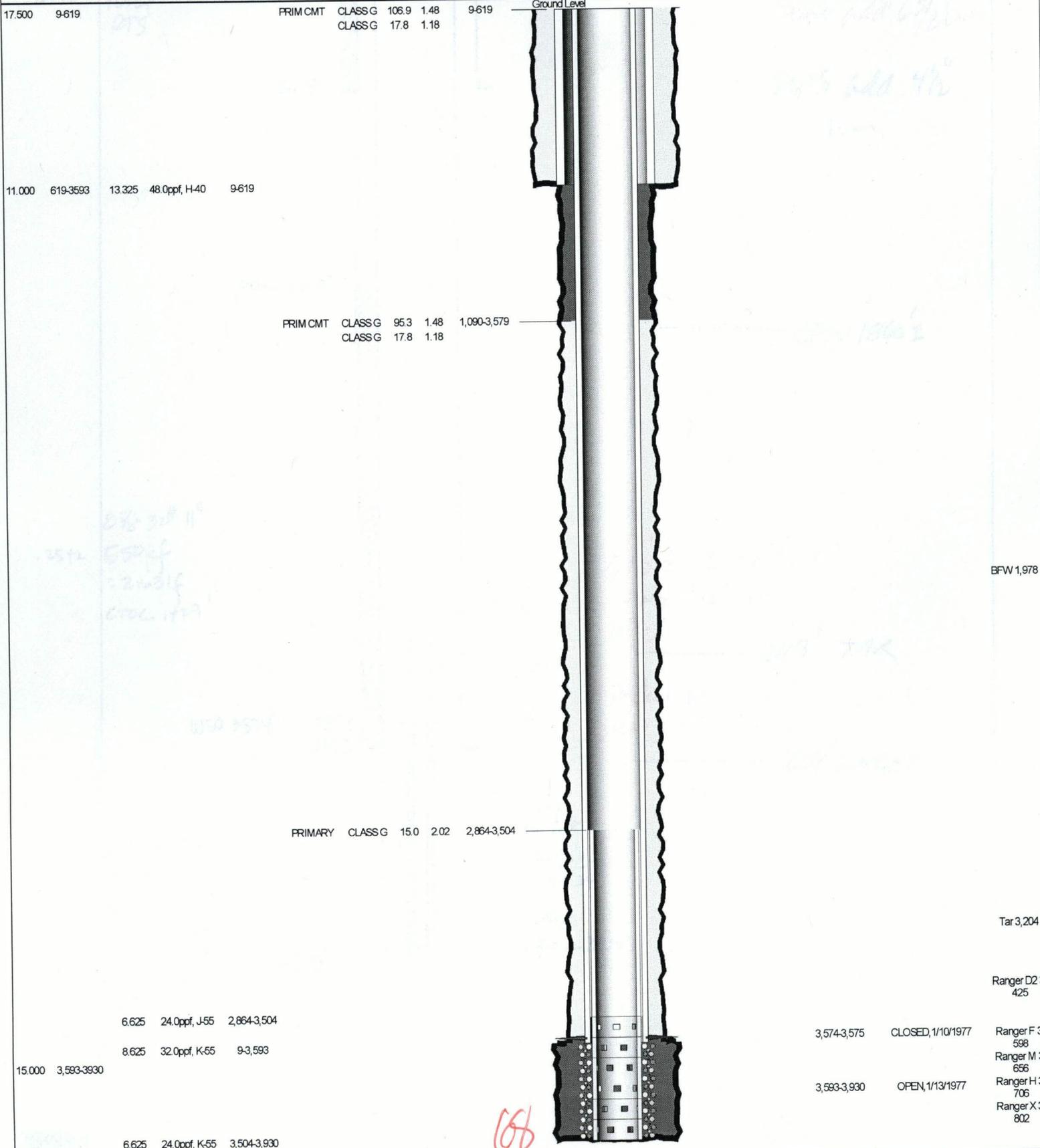
Section: 19
 Township: S
 Range: 13
 Range: W
 Longitude: -118.275
 Latitude: 33.805
 State/Province: CALIFORNIA
 County: Los Angeles

Datum: KB
 Datum Height: 9.0ft

KOP: 0ft
 PBDT: 3,930ft
 TVD BH: 3,739ft
 TD: 3,930ft

| HOLE INFO | | CASING DETAILS | | CEMENT DETAILS | | EQUIPMENT | | PERFS / SLOTS | | GEO INFO | |
|-----------|--|----------------|--|----------------|--|-----------|--|---------------|--|----------|--|
|-----------|--|----------------|--|----------------|--|-----------|--|---------------|--|----------|--|

| Size | Top-Btm (ft) | Size | Weight, Grade | Top-Btm (ft) | Type | Class | Vol (bbl) | Yield (ft/sk) | Top-Btm (ft) | Schematic | Top-Btm | Desc | Top-Btm (ft) | Status, Date | Marker Top (ft) |
|------|--------------|------|---------------|--------------|------|-------|-----------|---------------|--------------|-----------|---------|------|--------------|--------------|-----------------|
|------|--------------|------|---------------|--------------|------|-------|-----------|---------------|--------------|-----------|---------|------|--------------|--------------|-----------------|



037-20768

WNFI 3

MV 7/29/14

DD

1977 OH
 1979 CT I
 1982 OG
 1983 Co2/H2O inj

13 3/8" 48# 17 1/2"

.6946

700cf
RTS

619'

CTOC 1429'

BFW 1860'

8 7/8" 32# 11"

.2542

550cf
= 21631f
CTOC 1429'

319' TAR

WSO 3574'

3504
3593'

3604' RANGER F1

6 5/8" 24# 15"

gravel

SL -

3517
- 3922'

3930'

PPW-1870

Ranger -

666

DD

1977 OH
 1979 CT I
 1982 OG
 1983 Co2/H2O inj

2014 add 6 5/8 liner

2015 add 4 1/2
liner

6946

13 3/8" 48# 17 1/2"
 700cf
 RTS

619'

CTOC 1429'

BFW 1860'±

2542

8 5/8" 32# 11"
 550cf
 = 211631f
 CTOC 1429'

• 620'± 6 5/8" liner
 cemented in
 8 5/8"

3119' TAR

W50 3574'

3504
3593

2384'±
 HIC
 3490'±

• packer in
 new liner

3604' RANGER

6 5/8" 24# 15"
 gravel
 SL -
 3517
 - 3922 T,R

3930'

4 1/2" liner
 3490'± -
 3930

Slotted
 3590-3930

BFW-1870

Ranger

67



NATURAL RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF CONSERVATION
 DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
 5816 Corporate Ave., Suite 200 Cypress, CA 90630 - 4731

No. **P 114-0783**

PERMIT TO CONDUCT WELL OPERATIONS

Critical Well
 Waterflood
 RANGER ZONE, FAULT BLOCK I

| Old | New |
|------------|-----|
| 849 | 849 |
| FIELD CODE | |
| 03 | 03 |
| AREA CODE | |
| 20 | 20 |
| POOL CODE | |

Cypress, California
 September 16, 2014

Mr. Mike McAdams, Agent
 E & B Natural Resources Management Corporation (E0100)
 1600 Norris Rd.
 Bakersfield, CA 93308

Your proposal to **Rework (cement casing liner)** well "Wnf-I" 3, A.P.I. No. 037-21768, Section 19, T. 04S, R. 13W, SB B. & M., (Lat: 33.804864 Long: -118.274920 Datum: 83), **Wilmington** field, **Fault Block I** area, **Tar** and **Ranger** pools, **Los Angeles** County, dated 9/12/2014, received 9/12/2014 has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. Blowout prevention equipment, as defined by this Division's publication No. M07, shall be installed and maintained in operating condition and meet the following minimum requirements:
 - a. Class II 2M, with hydraulic controls, on the 8 5/8" casing.
 - b. A 2M lubricator for wireline operations.
2. Blowout prevention practice drills are conducted at least weekly and recorded on the tour sheet. A practice drill may be required at the time of the test/inspection.
3. Hole fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
4. Prior to commencing injection, and every 5 years thereafter, a Standard Annular Pressure Test (SAPT) is conducted to demonstrate the mechanical integrity of the 8 5/8" casing, injection tubing and packer. The minimum test pressure shall be the Maximum Allowable Surface Pressure (MASP).
5. Within 90 days of commencing injection, and every 2 years thereafter, this Division shall be furnished with an injection survey that demonstrates the confinement of the injected fluid to the approved zone of injection, and the mechanical integrity of the injection tubing and packer.
6. No program changes are made without prior Division approval.
7. **THIS DIVISION SHALL BE NOTIFIED TO:**
 - a. Inspect the installed blowout prevention equipment prior to commencing downhole operations.
 - b. Witness a SAPT of the 8 5/8" casing prior to commencing injection, and every 2 years thereafter.
 - c. Witness the running of an injection survey within 90 days of commencing injection, and every 2 years thereafter.

(Continued on Page 2)

Blanket Bond
 UIC Project No. 84903008
 cc: EDP, Update

Engineer Michel Vasconcellos
 Office (714) 816-6847

MV/mv

Steven Bohlen
 State Oil and Gas Supervisor

By 
 For Daniel J. Dudak, District Deputy

A copy of this permit and the proposal must be posted at the well site prior to commencing operations. Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended. Issuance of this permit does not affect the Operator's responsibility to comply with other applicable state, federal, and local laws, regulations, and ordinances.

65

Page 2

Well #: "Wnf-I" 3

API #: 037-21768

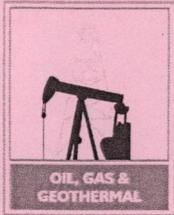
Permit : P 114-0783

Date: September 16, 2014

NOTE:

1. No operation shall be undertaken or continued that will contaminate or otherwise damage the environment.
2. The require History of Oil or Gas Well shall include a description of the required pressure test.
3. **Any well stimulation conducted after January 1, 2014, will be subject to Senate Bill (Chapter 313, 2013 Statute) requirements.**

64



NATURAL RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF CONSERVATION
 DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
 5816 Corporate Ave., Suite 200 Cypress, CA 90630 - 4731

No. **P 114-0783**

PERMIT TO CONDUCT WELL OPERATIONS

Critical Well
 Waterflood
 RANGER ZONE, FAULT BLOCK I

| Old | New |
|------------|-----|
| 849 | 849 |
| FIELD CODE | |
| 03 | 03 |
| AREA CODE | |
| 20 | 20 |
| POOL CODE | |

Cypress, California
 September 16, 2014

Mr. Mike McAdams, Agent
 E & B Natural Resources Management Corporation (E0100)
 1600 Norris Rd.
 Bakersfield, CA 93308

Your proposal to **Rework (cement casing liner)** well "**Wnf-I**" 3, A.P.I. No. **037-21768**, Section **19**, T. **04S**, R. **13W**, **SB B. & M.**, (Lat: **33.804864** Long: **-118.274920** Datum: **83**), **Wilmington** field, **Fault Block I** area, **Tar** and **Ranger** pools, **Los Angeles** County, dated **9/12/2014**, received **9/12/2014** has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. Blowout prevention equipment, as defined by this Division's publication No. M07, shall be installed and maintained in operating condition and meet the following minimum requirements:
 - a. Class **II 2M**, with hydraulic controls, on the **8 5/8"** casing.
 - b. A **2M lubricator** for **wireline** operations.
2. Blowout prevention practice drills are conducted at least weekly and recorded on the tour sheet. A practice drill may be required at the time of the test/inspection.
3. Hole fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
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 - c. Witness the running of an injection survey within **90** days of commencing injection, and every **2** years thereafter.

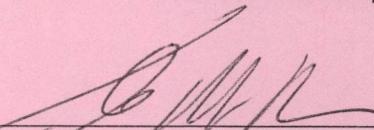
(Continued on Page 2)

Blanket Bond
 UIC Project No. 84903008
 cc: EDP, Update

Engineer Michel Vasconcellos
 Office (714) 816-6847

MV/mv

Steven Bohlen
 State Oil and Gas Supervisor

By 
 For Daniel J. Dudak, District Deputy

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63

Page 2

Well #: "Wnf-I" 3

API #: 037-21768

Permit : P 114-0783

Date: September 16, 2014

NOTE:

1. No operation shall be undertaken or continued that will contaminate or otherwise damage the environment.
2. The require History of Oil or Gas Well shall include a description of the required pressure test.
3. **Any well stimulation conducted after January 1, 2014, will be subject to Senate Bill (Chapter 313, 2013 Statute) requirements.**

62

INFORMATION FOR COMPLIANCE WITH THE CALIFORNIA ENVIRONMENTAL QUALITY ACT OF 1970 (CEQA)

If an environmental document has been prepared by the lead agency, submit a copy of the *Notice of Determination* or *Notice of Exemption* with this notice. Please note that a CEQA determination by a local jurisdiction, if required, must be complete, or the Division may not issue a permit.

CRITICAL WELL DEFINITION

As defined in the California Code of Regulations, Title 14, Section 1720 (a), "Critical well" means a well within:

- (1) 300 feet of the following:
 - (A) Any building intended for human occupancy that is not necessary to the operation of the well; or
 - (B) Any airport runway.
- (2) 100 feet of the following:
 - (A) Any dedicated public street, highway or the nearest rail of an operating railway that is in general use;
 - (B) Any navigable body of water or watercourse perennially covered by water;
 - (C) Any public recreational facility such as a golf course, amusement park, picnic ground, campground or any other area of periodic high-density population; or
 - (D) Any officially recognized wildlife preserve.

WELL OPERATIONS REQUIRING BONDING

1. Drilling, re-drilling, or deepening any well.
2. Milling out or removing a casing or liner.
3. Running and cementing casing or tubing.
4. Running and cementing liners and inner liners.
5. Perforating casing in a previously unperforated interval for production, injection, testing, observation, or cementing purposes.
6. Drilling out any type of permanent plug.
7. Reentering an abandoned well having no bond.

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**E&B Natural Resources
Wilmington North Flank Unit I
Well: WNF-I 3
Waterflood Injector
Scab Liner Installation Procedure**

Purpose:

Run and cement 6-5/8" scab liner across 8-5/8" casing leaks, acidize injection interval, and return to injection.

Contacts:

Aaron Quesada: Wellsite Manager, 424.558.6180
Dan Fouts: Production Engineer, 424.202.1736
Tony Quintanilla: Lease Foreman, 424.558.6198
Mike McAdams: Operations Manager, 424.202.1710

Wellbore Record:

Refer to attached WBD
TD @ 3930'
TVD @ 3739'
13-3/8" 48# H40 @ 619'
8-5/8" 32# K55 @ 3593'
6-5/8" 24# K55 liner @ 3504'-3930'
Liner slotted from 3605'-3925'

Geologic Markers:

BFW @ 1770'
Top of Tar @ 3119'
Top of Ranger @ 3604'

Notes:

Tripped 8-5/8" scraper to 3504' on 7/31/2014
Tested casing from 3083' to surface @ 2000psi for 15 min on 8/7/2014
Pick up 2-7/8" workstring
Use lease water for workover fluid
Anticipated reservoir pressure: 1700 psi
Record all reasons for downtime
Contact DOGGR to witness pressure test of liner and casing
~ 620' x 6-5/8" 24" flush joint liner from JD Rush / Tryad
Liner shoe and top from Weatherford
6-5/8" Arrowset injection packer and jewelry from Weatherford

Procedure:

1. MIRU workover rig and pump. Install and test Class II BOPE.
2. POOH 2-7/8" 6.5# N80 TK70XT ID coated injection string. Place thread protectors on pins if standing back.
3. PU 2-7/8" 6.5# N80 work string.
4. Trip 8-5/8" scraper if warranted. Trip 6-5/8" scraper to 3550' +/-.
5. Tubing set 6-5/8" RBP @ 3515'. Dump 10 linear feet of sand on top of RBP. Tag to verify depth.
6. PU ~ 620' x 6-5/8" liner with shoe and top. RIH and land liner on top of existing 6-5/8" liner @ 3504'.
7. MIRU Ausburn cementers. Cement liner in place.
8. Drill out cement in 8-5/8" casing to top of 6-5/8" liner.
9. Drill out cement to 3490' +/- (10' above 6-5/8" cement shoe).
10. With bit and BHA in hole, pressure test liner top and shoe to 1600 psi for 15'. (MASP = 1572 psi)
11. Drill out to 3505'.
12. Discuss with engineering decision to run CBL across liner and liner top.
13. PU retrieving head. RIH to sand @ 3505'. Circulate out sand. Retrieve RBP.
14. RIH and clean out fill to TD @ 3930'.
15. MIRU McGraw Tool with cupwash tool spacing set @ 20'.
16. MIRU MTS. Cupwash slots from 3605'-3925' with 20 gpf 15% HCl, 20 gpf 6% HCl / 3% HF, and 20 gpf NH4Cl water.
17. Displace tubing with lease injection water.
18. Lay down work string.

Completion:

19. PU 2-7/8" 6.5# N80 TK70XT ID coated injection string with Weatherford 6-5/8" Arrowset injection packer and T2 On/Off tool. Land tubing with packer @ 3490' +/- in bottom of new liner @ 3490'.
Notify DOGGR to witness pressure test.
20. Pressure test back side to 1600 psi for 15'.
21. Treat backside with packer fluid.
22. Nipple down BOPE. Install injection tree. RDMO workover
23. Place well on injection at 200 bwpd.



Operator: E&B Natural Resources
 Legal name: WNF-I 3
 ST/RD No.: 0
 Field: Wilmington
 API No.: 04-037-21768
 Spud Date: 1/1/1977
 Current Status: COMPLETE
 Status Date: 12/31/2014

Section: 19
 Township: 4
 Township: S
 Range: 13
 Range: W
 Longitude: -118.275
 Latitude: 33.805
 State/Province: CALIFORNIA
 County: Los Angeles

Datum: KB
 Datum Height: 9.0ft

KOP: 0ft
 PBTD: 3,930ft
 TVD BH: 3,739ft
 TD: 3,930ft

| HOLE INFO | CASING DETAILS | CEMENT DETAILS | EQUIPMENT | PERFS / SLOTS | GEO INFO |
|-----------|----------------|----------------|-----------|---------------|----------|
|-----------|----------------|----------------|-----------|---------------|----------|

| Size | Top-Btm (ft) | Size | Weight | Grade | Top-Btm (ft) | Type | Class | Vol (bb) | Yield (ft ³ /sk) | Top-Btm (ft) | Schematic | Top-Btm | Desc | Top-Btm (ft) | Status, Date | Marker Top (ft) | |
|--------|--------------|--------|---------|-------|--------------|----------|---------|----------|-----------------------------|--------------|--------------|-------------|-------------------|--------------|--------------|-----------------|-----------------|
| 17.500 | 9-619 | | | | | PRIM CMT | CLASS G | 106.9 | 1.48 | 9-619 | Ground Level | | | | | | |
| | | | | | | | CLASS G | 17.8 | 1.18 | | | | | | | | |
| 11.000 | 619-3593 | 13.325 | 48.0ppf | H-40 | 9-619 | | | | | | | | | | | | |
| | | | | | | PRIM CMT | CLASS G | 95.3 | 1.48 | 1,090-3,579 | | | | | | | |
| | | | | | | | CLASS G | 17.8 | 1.18 | | | | | | | | |
| | | | | | | | | | | | | | | | | | BFW 1,978 |
| | | | | | | | | | | | | | | | | | Tar 3,204 |
| | | | | | | | | | | | | | | | | | Ranger D2 3,425 |
| | | 8.625 | 32.0ppf | K-55 | 9-3,593 | | | | | | | 3,574-3,575 | CLOSED, 1/10/1977 | | | | Ranger F 3,598 |
| 15.000 | 3,593-3930 | | | | | | | | | | | | | | | | Ranger M 3,656 |
| | | | | | | | | | | | | 3,593-3,930 | OPEN, 1/13/1977 | | | | Ranger H 3,706 |
| | | | | | | | | | | | | | | | | | Ranger X 3,802 |
| | | 6.625 | 24.0ppf | K-55 | 3,504-3,930 | | | | | | | | | | | | |

CURRENT

57



NATURAL RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
5816 Corporate Ave., Suite 200 Cypress, CA 90630-4731
Phone:(714) 816-6847 Fax:(714) 816-6853

No. T 114-0766

REPORT ON OPERATIONS

WATER FLOOD PROJECT

Mr. Mike McAdams
E & B Natural Resources Management Corporation (E0100)
1600 Norris Rd.
Bakersfield, CA 93308

Cypress, California
July 30, 2014

Your operations at well "Wnf-1" 3, A.P.I. No. 037-21768, Sec. 19, T. 04S, R. 13W, SB B.&M., Wilmington field, in Los Angeles County, were witnessed on 7/28/2014, by Todd Tyler, a representative of the supervisor.

The operations were performed for the purpose of pressure testing the 8 5/8" casing.

DECISION: **NOT APPROVED**

DEFICIENCIES NOTED AND TO BE CORRECTED: Unable to hold pressure.

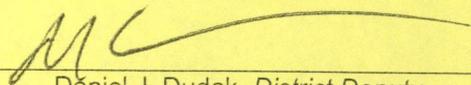
MV/kj

cc: Update
State Lands Commission
Long Beach Dept. of Gas and Oil

Steven Bohlen

State Oil and Gas Supervisor

By _____



Daniel J. Dudak, District Deputy

Natural Resources Agency
Department of Conservation
Division of Oil, Gas, and Geothermal Resources

dem 7/29/14
T 114-0766

Report on Operations

OPERATOR E & B Resources

Your operations at well "Wafi" #3 API No. 037-21768

Sec , T , R , , B. & M.

Wilmington Field, in Los Angeles County,

were witnessed on 7/28/14 by "Todd" Edward Tyler representative of

the supervisor, was present from 12:15 to 13:30

There was also present Jim Shaffer (Foreman), Eli Rovang (operator)

Present condition of well: Not injection

The operations were performed for the purpose of pressure testing the 8 5/8" casing. The casing was pressure tested with 1572 psig for 65 minutes. There was 300 pressure drop.

Packer Depth: 3435'

DECISION:

The pressure test is Approved Not Approved

CONTRACTOR: Welaco

UNCORRECTABLE DEFICIENCIES: None

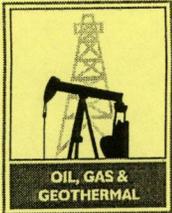
DEFICIENCIES NOTED AND TO BE CORRECTED:

Unable to hold pressure None

DEFICIENCIES NOTED AND CORRECTED:

None

54



NATURAL RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL, GAS & GEOTHERMAL RESOURCES
5816 Corporate Ave., Suite 200 Cypress, CA 90630-4731
Phone:(714) 816-6847 Fax:(714) 816-6853

No. T 113-0273

REPORT ON OPERATIONS

WATER FLOOD PROJECT
RANGER ZONE, FAULT BLOCK I

Mr. Mike McAdams
E & B Natural Resources Management Corporation (E0100)
1600 Norris Rd.
Bakersfield, CA 93308

Cypress, California
May 15, 2013

Your operations at well "**Wnf-I**" 3, A.P.I. No. **037-21768**, Sec. **19**, T. **04S**, R. **13W**, **SB** B.&M., **Wilmington** field, in **Los Angeles** County, were witnessed on **8/28/2012**, by **Todd Tyler**, a representative of the supervisor.

The operations were performed for the purpose of **demonstrating that all of the injection fluid is confined to the approved zone.**

DECISION: **APPROVED**

DEFICIENCIES NOTED AND CORRECTED: None

MW/tl

cc: Update

Tim Kustic

State Oil and Gas Supervisor

By

Daniel J. Dudak, District Deputy

State of California
Department of Conservation
Division of Oil, Gas, and Geothermal Resources

No. T 113-0273

MECHANICAL INTEGRITY TEST (MIT)

| | | | | | |
|--|----|----|-------|--|---------------------------|
| Operator: <u>E+B Natural Resources</u> | | | | Well: <u>WNFEI-3</u> | |
| Sec. | T. | R. | B.&M. | API No.: <u>037-21768</u> | Field: <u>Torrence</u> |
| County: <u>Los Angeles</u> | | | | Witnessed/Reviewed on: <u>8-28-12</u> | |

Ed Tyler, representative of the supervisor, was present from 10:10 to 11:35.

Also present were: Welaco:
Aaron Glen (Survey Tech), Raul Ronderos (wireline op)

Casing record of the well:

Not Reviewed

The MIT was performed for the purpose of

Note: (15)

The MIT is approved since it indicates that all of the injection fluid is confined to the formations below 3595 feet at this time.

The MIT is not approved due to the following reasons: (specify)

CONTRACTOR: Welaco

UNCORRECTABLE DEFICIENCIES:

N/A

DEFICIENCIES NOTED AND TO BE CORRECTED:

N/A

DEFICIENCIES NOTED AND CORRECTED:

N/A

50

| | | |
|--|--|---------------------------------|
| Well: WNFI-3 | Date: 8-28-12 | Time: 10:00 |
| Observed rate: 70 B/D | Meter rate: 175 B/D | Fluid level: Ø feet |
| Injection pressure: 1600 psi | MASP: 1538 | Pick-up depth: 3872 feet |
| Initial annulus pressure: Ø psi | Pressure after bleed-off: Ø psi | |

| | |
|--|-------------------------------|
| Casing vented during test (Y/N) | Survey company: Welaco |
|--|-------------------------------|

| SPINNER COUNTS | | | | | | |
|----------------|--------|------|-------|--------|------|-----------|
| DEPTH | COUNTS | RATE | DEPTH | COUNTS | RATE | COMMENTS: |
| | | | | | | |

| TRACER CASING AND TUBING RATE CHECKS | | | |
|--------------------------------------|-------------|------------|--|
| Interval | Time (sec.) | Rate (B/D) | Background log: 3675' to 3350' |
| 3432'-3440' | 38 | 70 | COMMENTS: |

TOP PERFORATION CHECK

| | | |
|-------------------------------------|--|---------------------|
| Top perforation depth: 3517' | Wait at: 3440' for 600 seconds | Beads: (Y/N) |
|-------------------------------------|--|---------------------|

| | | |
|------------------------------|---------------|---|
| Casing shoe at: 3593' | WSO holes at: | Arrival time: Calculated Actual |
|------------------------------|---------------|---|

| LOG FROM | TO | SLUG @ | LOG FROM | TO | SLUG @ | COMMENTS: |
|----------------|--------------|---------------|----------|----|--------|-----------------------|
| ↑ 3670' | 3375' | 3583' | | | | * Packer good. |
| ↓ 3375' | 3675' | 3604' | | | | |
| ↑ 3675' | 3375' | 3610'* | | | | |

PACKER CHECK

| | | |
|-------------------------------------|--|---------------------|
| Packer at: 3460', COE: 3464' | Wait at: for seconds | Beads: (Y/N) |
|-------------------------------------|--|---------------------|

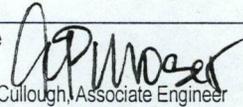
| | | | |
|------------------------------|----------------------------|--------------------------|--------------------|
| Tubing tail at: 3467' | Tubing size: 2 7/8" | 2nd Packer at: No | Mandrel: No |
|------------------------------|----------------------------|--------------------------|--------------------|

| LOG FROM | TO | SLUG @ | LOG FROM | TO | SLUG @ | COMMENTS: |
|----------------|--------------|---------------|----------|----|--------|--------------------------|
| ↑ 3670' | 3375' | 3583' | | | | * Top perf. good. |
| ↓ 3375' | 3675' | 3604' | | | | |
| ↑ 3675' | 3375' | 3610'* | | | | |

COMMENTS:

5

RESOURCES AGENCY OF CALIFORNIA
 DEPARTMENT OF CONSERVATION
 DIVISION OF OIL, GAS AND GEOTHERMAL RESOURCES
REPORT OF PROPERTY AND WELL TRANSFER

| | | | |
|--|--|---|--|
| Field or county <u>Wilmington</u> | | District - <u>Cypress (D1)</u> | |
| Former owner <u>Four Teams Oil Production & Exploration Company, Inc.</u> | | Opcode: <u>F1535</u> | Date <u>August 12, 2010</u> |
| SEE ATTACHMENT | | | |
| Name and location of well(s) | | | |
| Description of the land upon which the well(s) is (are) located <p style="text-align: center;">See Attachment</p> | | | |
| Date of transfer, sale, assignment, conveyance, or exchange <u>8/1/2010</u> | New Owner <u>E & B Natural Resources Management Corp.</u> | Operator code <u>E0100</u> | Type of Organization <u>Corporation</u> |
| | Address <u>1600 Norris Road Bakersfield, CA 93308</u> | | Telephone No. <u>(661) 679-1700</u> |
| Reported by <u>OG30A received 8/11/2010 signed by both parties</u> | | | |
| Confirmed by. <u>Same as above</u> | | | |
| New operator new status (status abbreviation) <u>PA</u> | Request Designation of Agent <u>Jeffrey Blesener</u> | | |
| Old operator new status (status abbreviation) <u>PA</u> | Remarks <u>See Operator File</u> | | |
| Deputy Supervisor <u>Kenneth Carlson</u> | | Signature  <u>Chris McCullough, Associate Engineer</u> | |

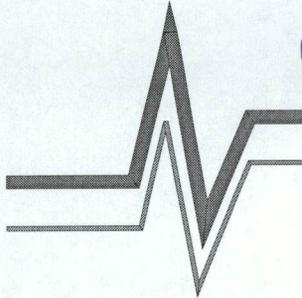
OPERATOR STATUS ABBREVIATIONS

| PA - Producing Active | FORM AND RECORD CHECK LIST | | | | | |
|---------------------------------|----------------------------|----------|------|----------------|----------|------|
| NPA - No Potential Active | Form or record | Initials | Date | Form or record | Initials | Date |
| PI - Potential Inactive | Form OGD121 | | | Map and Book | | |
| NPI - No Potential Inactive | Well records | | | Lease Files | | |
| Ab - Abandoned or No More Wells | New well cards | | | Well Stat | | |

OGD156 (Modified 1/00)

E & B Natural Resources Mgmt. Corp.

30



PRODUCTION LOGGING

WATER INJECTION SURVEY

| | | | | |
|--|---------------------|-------------------|---------------------|-------------------|
| FILING NO. MR | COMPANY: FOUR TEAMS | | | STATE: CALIFORNIA |
| | WELL: #3 | FIELD: WILMINGTON | COUNTY: LOS ANGELES | |
| LOCATION: | | | OTHER SVC: | |
| API NUMBER: 0403721768 | | | 10-3-06 OK ad | |
| SEC: 19 | TWN: 4S | RNG: 13W | | |

| | | |
|---|-------|---|
| PERMANENT DATUM: GROUND LEVEL | ELEV: | -ELEVATIONS- KB: Ft. DF: Ft. GL: Ft. |
| LOG MEASURED FROM MAT 0' ABOVE PERM DATUM | | |
| DRILLING MEASURED FROM | | |

| | | | | | |
|-------------------|-------------|----------------|---------|-----------------|---------|
| DATE LOG RAN | 06-20-2006 | PRESSURE | FLOWING | INJECTION | SHUT-IN |
| RUN NUMBER | ONE | TUBING PSI | | 1600 | |
| EFFECTIVE DEPTH | 3921' | CASING PSI | | 0 | |
| PICKUP DEPTH | 3893' | INJECTION RATE | | 150 B/D | |
| BOT LOGGED INT | 3893' | OBSERVED RATE | | 61 B/D | |
| TOP LOGGED INT | 200' | R/A SOURCE | | I-131 W | |
| TYPE OF INJECT | WATER | ACTIVITY | | .5 MCI | |
| FLUID IN WELL | WATER | HALF LIFE | | 8.08 DAYS | |
| FLUID LEVEL | SURFACE | | | | |
| WELL STATUS | INJECT. | | | PRODUCTION DATA | |
| MAX TEMPERATURE | 125.4 F | OIL Gr. | | OIL = | |
| AT DEPTH | 3894.0' | GAS Gr. | | GAS= MCF/D | |
| TEMPERATURE SENS | 1 F/DIV. | MPP | | BHP = PSI | |
| LOGGING SPEED | VARIOUS | | | WATER= B/D | |
| RECORDED BY | D. PROKUSKI | | | | |
| WITNESSED BY | | | | | |
| ENGINEER | | | | | |
| DEPTH CORRELATION | PACKER | | | | |

Equipment Data

| | | |
|------------------|--------|--|
| R/A Ejector Tool | 1.375" | |
| Collar Locator | 1.375" | |
| Temperature Tool | 1.375" | |
| Gamma Detector | 1.375" | |

Remarks/Survey Results

SURVEY INDICATES NO MIGRATION AROUND TOP PERF OR AT PACKER.

WATER INJECTION SURVEY - PROFILE A:

3596'-3626' APPROX. 41 B/D 67%

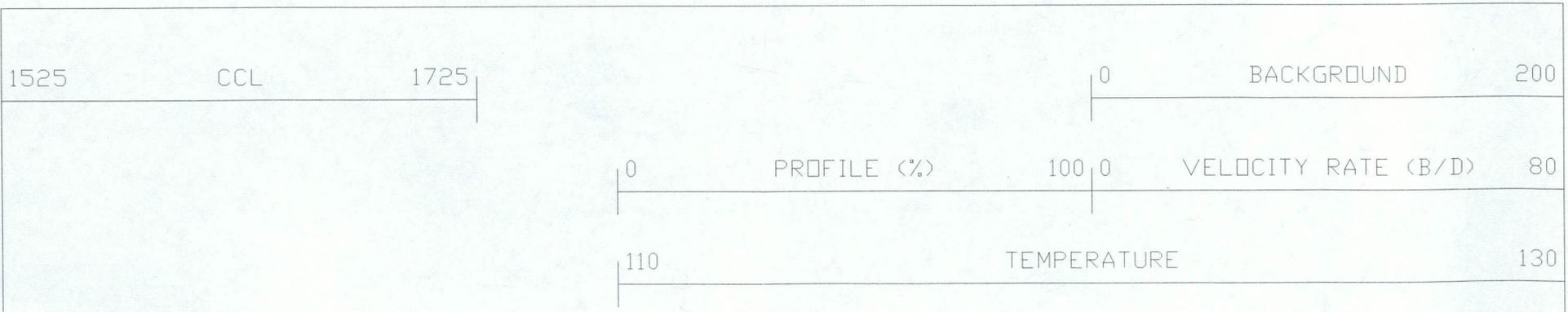
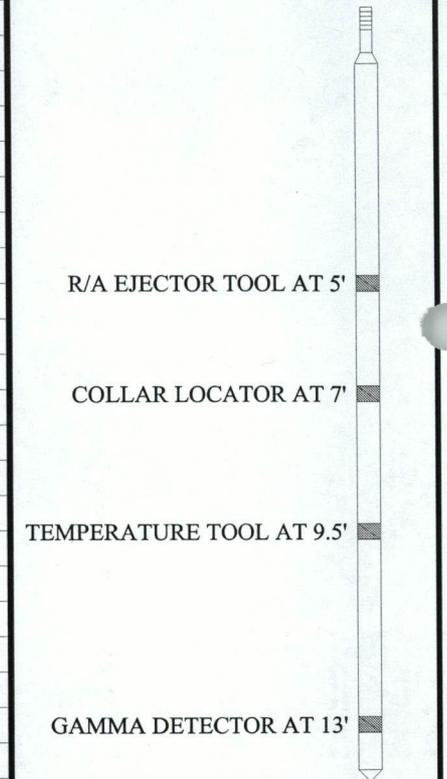
3626'-3650' APPROX. 20 B/D 33%

CASING AND TUBING RECORD

| SIZE | WT(#) | FROM | TO | SIZE | WT(#) | FROM | TO |
|--------|-------|---------|----------|------|-------|------|----|
| 8.625" | | SURFACE | 3584' | | | | |
| 6.625" | | 3495' | 3921' | | | | |
| 2.875" | 6.5 | SURFACE | 3477.12' | | | | |

| STR. | PIPE DIA. | PERFORATIONS |
|------|-----------|--|
| A | 6.625" | 3508'-3586', 3596'-3916'. PACKERS: 3435.8'-3442.8'. |

TOOL DIAGRAM



48

WELL TRANSFER NOTICE

On 12-21-98

XL OPERATING COMPANY

transferred

all wells in the Wilmington field

(See OGD156 dated December 21, 1998 for complete list)

to

FOUR TEAMS OIL PROD. & EXPL., INC.

47

WELL TRANSFER NOTICE

Effec February 7, 1997

XTRA ENERGY CORPORATION

TRANSFERRED

all wells Wilmington

(See Operator File for Complete List)

TO

XL OPERATING COMPANY

SEE OGD156 DATED 02-7-97

46

DIVISION OF OIL AND GAS

Report on Operations
WATERFLOOD PROJECT

Agnes T. List, Agent-XTRA ENERGY CORP.
C T CORPORATION SYSTEM
800 South Figueroa Street, Suite 1000
Los Angeles, CA 90017

Long Beach, Calif.
May 19, 1987

Your operations at well "WNF-I" 3, API No. 037-21768
Sec. 19, T. 4S, R. 13W, S.B.B. & M. Wilmington Field, in Los Angeles County,
were witnessed on 4-7-87 by G. Chakmakian, Engineer, representative of
the supervisor, was present from 1500 to 1630. There were also present D. Woosley,
Drilling Foreman

Present condition of well: 13-3/8" cem 619'; 8-5/8" cem 3593', perf 3574' WSO; 6-5/8" ld
3504'-3930', perf 3517'-3925'. TD 3930'.

The operations were performed for the purpose of demonstrating that all of the injection
fluid is confined to the formations below 3574'.

DECISION: APPROVED.

NOTE: DEFICIENCIES CORRECTED
NONE

DEFICIENCIES TO BE CORRECTED
NONE

UNCORRECTABLE DEFICIENCIES
NONE

CONTRACTOR: Prime Perforating

GC:rh

cc: Update

M. G. MEFFERD

State Oil and Gas Supervisor

William E. Brannon
Deputy Supervisor

for V. F. Gaede

DIVISION OF OIL AND GAS

WATER SHUTOFF TEST

No. T 187-280

Operator Xtra Energy Corporation

Well designation "WNF-I" 3 Sec. 19, T. 4S, R. 13W, SB B.&M.

Field Wilmington, County LA was tested for water shutoff on 4/17/87. (Name) G. Chakmakian, representative of the supervisor, was present from 1500 to 1630. Also present were D. Woosley D.F.

Casing record of well: 13 3/8" cem 619'; 8 5/8" cem 3593', perf 3574' WSO; 6 5/8" ld 3504'-3930', perf 3517'-3925'. TD 3930'.

The operations were performed for the purpose of (P) 3574'

- The _____ " shutoff at _____ ' is approved.
- The seal between the _____ " and _____ " casings is approved.
- The operations are approved as indicating that all of the injection fluid is confined to the formations below 3574 ' at this time.

Hole size: _____ " fr. _____ ' to _____ ' ; _____ " to _____ ' ; & _____ " to _____ ' .

| Size | Casing | | | Date | Cemented | | Top of Fill | | Sqd. Away | Final Press | Test psi/min. Perfs. |
|------|--------|-----|--------|------|----------|--------|-------------|--------|-----------|-------------|----------------------|
| | Wt. | Top | Bottom | | MO-Depth | Volume | Annulus | Casing | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Depth or interval tested _____
 The hole was open to _____ ' for test.

FORMATION TEST:

Packer(s) _____ ' & _____ ' Tail _____ ' Bean size _____ " Cushion _____
 IHP _____ IFP _____ FFP _____ FHP _____
 Blow _____
 Open for test _____ Hr. _____ min. Fluid entry _____

BAILING TEST:

The hole fluid was bailed to _____ ' , at _____ on _____ 19__ .
 The hole fluid was found at _____ ' , at _____ on _____ 19__ .
 (time)

PRODUCTION TEST:

Gauge/meter reading _____ on _____ 19__ , at _____ pump depth _____ ' Engr. _____
 Gauge/meter reading _____ on _____ 19__ , at _____ Engr. _____
 Fluid level _____ ' surveyed on _____ 19__ , reviewed (witnessed) by _____
 Total fluid produced, Bbls. _____ Net oil _____ Water _____
 Rate: _____ B/D oil, _____ B/D water, _____ % water cut

INJECTION SURVEY:

RA/Spinner/Temperature survey run at 190 B/D & 1510 psi on 4/6/1987,
 fluid confined below 3574 ' (Packer depth 3435 ')

Pick-up @ 3896' csg open

44

080-081

DEFICIENCIES NOTED AND CORRECTED:

None

DEFICIENCIES NOTED AND TO BE CORRECTED:

None

UNCORRECTABLE DEFICIENCIES:

None

CONTRACTOR:

Prime Perforating

DIVISION OF OIL AND GAS
CHECK LIST - RECORDS RECEIVED AND WELL STATUS

Company Xtra Energy Corp. Well No. "WNF-1"3
 API No. 037-21764 Sec. 19, T. 4S, R. 13W, S.B. B.&M.
 County Sos Angeles Field Wilmington

| <u>RECORDS RECEIVED</u> | <u>DATE</u> | <u>STATUS</u> | <u>STATUS</u> |
|-----------------------------|-------------------|-----------------------------|------------------------------------|
| Well Summary (Form OG100) | | Producing - Oil | Water Disposal |
| History (Form OG103) | <u>5-14-84(2)</u> | Idle - Oil | Water Flood |
| Core Record (Form OG101) | | Abandoned - Oil | Steam Flood |
| Directional Survey | | Drilling - Idle | Fire Flood |
| Sidewall Samples | | Abandoned - Dry Hole | Air Injection |
| Other | | Producing - Gas | Gas Injection |
| Date final records received | | Idle - Gas | CO ₂ Injection <u>K</u> |
| Electric logs: | | Abandoned - Gas | LPG Injection |
| | | Gas-Open to Oil Zone | Observation |
| | | Water Flood Source | |
| | | DATE | |
| | | RECOMPLETED <u>12-14-83</u> | |
| | | REMARKS | |

ENGINEER'S CHECK LIST

1. Summary, History, & Core record (dupl.)
2. Electric Log
3. Operator's Name
4. Signature
5. Well Designation
6. Location
7. Elevation
8. Notices
9. "T" Reports
10. Casing Record
11. Plugs
12. Surface Inspection
13. Production
14. E Well on Prod. Dir. Sur.

CLERICAL CHECK LIST

1. Location change (F-OGD165)
2. Elevation change (F-OGD165)
3. Form OGD121
4. Form OG159 (Final Letter)
5. Form OGD150b (Release of Bond)
6. Duplicate logs to archives
7. Notice of Records due (F-OGD170)

UPDATE CENTER 6/15/84

RECORDS NOT APPROVED

Reason: _____

RECORDS APPROVED William E. Brannon

RELEASE BOND _____
 Date Eligible _____
 (Use date last needed records were received.)
 MAP AND MAP BOOK  nlc

4

SUBMIT IN DUPLICATE
RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

History of Oil or Gas Well

Operator Xtra Energy Corporation Field Wilmington County Los Angeles
Well WNF-1"#3 , Sec. 19, T 4S, R 13W, S.B.B. & M.
A.P.I. No. 037-21768 Name John D. Carmichael Title Sr. Vice President
Date May 8, 1984 (Person submitting report) (President, Secretary or Agent)

Signature John D. Carmichael

..... 2501 Cherry Avenue Suite 270 Signal Hill Ca 90806 (213) 424-8549
(Address) (Telephone Number)

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

| Date | |
|---------------------------|--|
| 12-6-83 | <u>Convert to Injection.</u> MIRU |
| 12-7-83 | Pulled and laid down rods and pump. Tagged bottom at 3930'. Rigged up wash pump and changed over to water. Pulled tubing. |
| 12-8-83 | Ran in with 8-5/8" scraper to liner top. Ran 6-5/8" scraper and knife tool and scraped liner slots 3596' - 3916'. Tagged fill at 3924' and circulated. Laid down tubing and tools. |
| 12-9-83 to 12-12-83 | IDLE. |
| 12-13-83 | Ran bell collar, no-go nipple, 1 jt 2-7/8" tbg, Otis 8-5/8" Permaretrieve prk, pup, 105 jts 2-7/8" tbg, x-nipple, 2 jts 2-7/8" tbg. Set prk with top @ 3435'. Tbg internally coated hung to 3477'. Released packer and displaced annulus with treated water. Latched into prk and tested annulus ok. |
| 12-14-83 | RDMO |
| 12-14-83 | <u>On Water Injection.</u> 1246 B/D @ 1600 psi. |

RECEIVED

MAY 14 2 0 PM '84

DIVISION OF OIL AND GAS
LONG BEACH, CA.



13-14-83 ON DIRECTOR'S DISCRETION: 1399 B/D 6 1000 BGT.

13-14-83 EDO

PLEASE REFER TO THE ABOVE LIST AND CHECKED AMOUNTS OF
THE FOLLOWING: 1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT.
1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT.

13-15-83

13-16-83

PLEASE REFER TO THE ABOVE LIST AND CHECKED AMOUNTS OF
THE FOLLOWING: 1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT.
1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT.

13-17-83

13-18-83

PLEASE REFER TO THE ABOVE LIST AND CHECKED AMOUNTS OF
THE FOLLOWING: 1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT.
1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT.

13-19-83

COMMITTEE TO DIRECTOR: MTD

of certain items for the purpose of the Department's policy on the handling of such items. The Department's policy is to handle such items in a manner that is consistent with the Department's policy on the handling of such items.

1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT.

1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT.
1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT.
1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT. 1399 B/D 6 1000 BGT.

DIVISION OF OIL AND GAS

DIVISION OF OIL AND GAS

DEPARTMENT OF CONSERVATION
REGULATORY AGENCY OF CALIFORNIA

GOVERNMENT PRINTING OFFICE

40

DIVISION OF OIL AND GAS

Report on Operations

WATERFLOOD PROJECT

John D. Carmichael, Agent
XTRA ENERGY CORPORATION
Box "9"
Signal Hill, CA 90801

Long Beach Calif.
February 24, 1984

Your operations at well "WNF-I" 3, API No. 037-21768,
Sec. 19, T. 4S, R. 13W S.B. B. & M. Wilmington Field, in Los Angeles County,
were witnessed on 12-22-83. M. Johnson, Engineer, representative of
the supervisor, was present from 1000 to 1200. There were also present Rick Smith,
Drilling Foreman.

Present condition of well: 13-3/8" cem 619'; 8-5/8" cem 3593', perf 3574' WSO; 6-5/8"
1d 3504'-3930', perf 3517'-3925'. TD 3930'.

The operations were performed for the purpose of demonstrating that all of the injection
fluid is confined to the formations below 3593'.

DECISION: APPROVED.

NOTE: DEFICIENCIES TO BE CORRECTED
NONE

DEFICIENCIES CORRECTED
NONE

CONTRACTOR - Cooper & Brain, Inc.

MJ:sc

cc: Update

M. G. MEEFERD
STATE OIL AND GAS SUPERVISOR
By [Signature]
V. F. GAEDE, DEPUTY SUPERVISOR

DIVISION OF OIL AND GAS
WATER SHUTOFF TEST

D&C 1227

No. T 184-203

Operator XTRA ENERGY CORPORATION

Well designation 15" WNF-I" 3 Sec. 19, T. 45, R. 13W, S.B. B.&M.

Field WILMINGTON, County LOS ANGELES was ^{REVIEWED} tested for water shutoff on 12/22/83. (Name) MARK JOHNSON, representative of the supervisor, was present from 1000 to 1200. Also present were RICK SMITH, D.F.

Casing record of well: 13 3/8" cem 619'; 8 5/8" cem 3593'; PERF 3574' WSD; 6 5/8" ID 3504'-3930'; PERF 3517'-3925' TO 3930'.

The operations were performed for the purpose of (P) 3593'

- The _____" shutoff at _____' is approved.
- The seal between the _____" and _____" casings is approved.
- The operations are approved as indicating that all of the injection fluid is confined to the formations below 3593' at this time.

Hole size: _____" fr. _____' to _____'; _____" to _____'; & _____" to _____'

| Casing | | | Cemented | | | Top of Fill | | Sqd. Away | Final Press | Test psi/min. Perfs. |
|--------|-----|------------|----------|----------|--------|-------------|--------|-----------|-------------|----------------------|
| Size | Wt. | Top Bottom | Date | MO-Depth | Volume | Annulus | Casing | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |

Depth or interval tested _____
The hole was open to _____' for test.

FORMATION TEST:
Packer(s) _____' & _____' Tail _____' Bean size _____" Cushion _____
IHP _____ IFP _____ FFP _____ FHP _____
Blow _____
Open for test _____ Hr. _____ min. Fluid entry _____

BAILING TEST:
The hole fluid was bailed to _____', at _____ on _____ 19__.
The hole fluid was found at _____', at _____ on _____ 19__.
(time)

PRODUCTION TEST:
Gauge/meter reading _____ on _____ 19__, at _____ pump depth _____' Engr. _____
Gauge/meter reading _____ on _____ 19__, at _____ Engr. _____
Fluid level _____' surveyed on _____ 19__, reviewed (witnessed) by _____
Total fluid produced, Bbls. _____ Net oil _____ Water _____
Rate: _____ B/D oil, _____ B/D water, _____ % water cut

INJECTION SURVEY:
RA/Spinner/Temperature survey run at 10962 B/D & 1580 psi on 27 Dec 83 19__,
fluid confined below 3593' (Packer depth 3435')

38

DEFICIENCIES--TO BE CORRECTED!

NDWE

DEFICIENCIES--CORRECTED

NDWE

CONTRACTOR

COOPER + BRAIN, INC

REPORT ON PROPOSED OPERATIONS

848

(field code)

03

(area code)

20

(new pool code)

00

(old pool code)

WATER AND GAS INJECTION
WATERFLOOD PROJECT
SEC. 3606 WELL

John D. Carmichael, Agent

XTRA ENERGY CORPORATION

Box "9"

Signal Hill, CA 90801

Long Beach, California

December 9, 1983

rework and convert to

Your _____ proposal to "WAG" injection well "WNF-I" 3,

A.P.I. No. 037-21768, Section 19, T. 4S, R. 13W, S.B. B. & M.,

Wilmington field, Fault Block I, Onshore area, Ranger pool,

Los Angeles County, dated 11-28-83, received 12-2-83 has been examined in conjunction with records

filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. This well shall conform to the provisions set forth in our letter of June 24, 1983 approving the project.
2. THIS DIVISION SHALL BE NOTIFIED TO WITNESS THE RUNNING OF AN INJECTION SURVEY.

NOTE:

1. The base of the fresh water sands is above 1850'. The fresh water is protected by the 8-5/8" casing cemented at 3593' with sufficient cement to fill to 1870'±.
2. The water to be injected is fresh water and tests approx. 509 ppm TDS and is obtained from Dominguez Water Company.
3. The water is to be injected into the Ranger zone which extends from 3600' to 3925' and contains a mixture of oil and water. The formation water tests approx. 28,250 ppm TDS.
4. Approx. surface location of well: Fr. Intersection NE Cor. Main St. & AT & SF RR 95 N1y 148 Ely.

WEB:mh

cc: Update

BLANKET BOND

M. G. MEFFERD, State Oil and Gas Supervisor

By *V. F. Gaede*
V. F. Gaede, Deputy Supervisor

A copy of this report and the proposal must be posted at the well site prior to commencing operations.

Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.

36

DIVISION OF OIL AND GAS

*rework and convert to
water and CO₂ injection*

*5
12-6-83*

Notice of Intention to Rework Well

This notice and indemnity or cash bond shall be filed, and approval given, before rework begins. If operations have not commenced within one year of receipt of the notice, this notice will be considered cancelled.

| FOR DIVISION USE ONLY | | |
|-----------------------|-------------------|-------------------|
| BOND | FORMS | |
| | OGD 114 | OGD 121 |
| <i>Blanket</i> | <i>12-6-83 CP</i> | <i>12-6-83 CP</i> |

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework well "WNF - I" # 3, API No. 037-21768
(Well designation)
Sec. 19, T. 4S, R. 13W, S.B.B. & M., Wilmington Field, Los Angeles County.

The present condition of the well is as follows:

- Total depth 3930'
- Complete casing record, including plugs and perforations

| | | | |
|----------------|------------|-------------|--|
| <u>13 3/8"</u> | <u>48#</u> | <u>H-40</u> | <u>619'</u> |
| <u>8 5/8"</u> | <u>32#</u> | <u>K-55</u> | <u>3593'</u> |
| <u>6 5/8"</u> | <u>24#</u> | <u>K-55</u> | <u>Hung @ 3504'</u> , bottom @ <u>3903'</u> , (See Liner Detail) |

- Present producing zone name Ranger; Zone in which well is to be recompleted Ranger
- Present zone pressure 1350 psi; New zone pressure ---
- Last produced 10-25-83 1 140 0
(Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)
(or)
Last injected --- --- --- ---
(Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure, psig)

The proposed work is as follows:

Convert to CO₂ - Water "WAG" injector.

It is understood that if changes in this plan become necessary, we are to notify you immediately.

Address 2501 Cherry Avenue Suite 270 Xtra Energy Corporation
(Street) (Name of Operator)
Signal Hill CA 90806 By John D. Carmichael
(City) (State) (Zip) (Print Name)
Telephone Number (213) 424-8549 *John D. Carmichael* 11-28-83
(Signature) (Date)

RECEIVED
 Dec 2 3 21 PM '83
 DIV. OF OIL AND GAS
 LONG BEACH, CA.

Collect to CO₂ - Meter, AVG, Injector.

The proposed work is as follows:

| Item | Quantity | Unit | Rate | Total |
|--------------|----------|------|--------|--------|
| Gas Injector | 1 | EA | 100.00 | 100.00 |
| Gas Meter | 1 | EA | 100.00 | 100.00 |
| Gas Injector | 1 | EA | 100.00 | 100.00 |
| Gas Meter | 1 | EA | 100.00 | 100.00 |

9 2/8" 33% K-22 11/8" x 3200' 10000' (See Table Below)
 8 2/8" 33% K-22 3200'
 13 3/8" 33% H-10 3200'

5. Complete work record including bills and receipts.

1. Total cost = 3300.

The present condition of the well is as follows:

| Section | Depth | Perforation | Field | Gas Volume | Control |
|---------|------------------------------------|-------------------|-------|------------|---------|
| Sec 15 | 1/2" x 13 3/8" x 11 3/8" x 11 3/8" | 11 3/8" x 11 3/8" | Field | Gas Volume | Control |

In compliance with Section 3302 Division 3, Public Resources Code, notice is hereby given that it is our intention

DIVISION OF OIL AND GAS

| | |
|------------------|---------|
| SEARCHED | INDEXED |
| SERIALIZED | FILED |
| DEC 2 1983 | |
| FBI - LONG BEACH | |

Notice of intention to allow well

Notice of intention to allow well

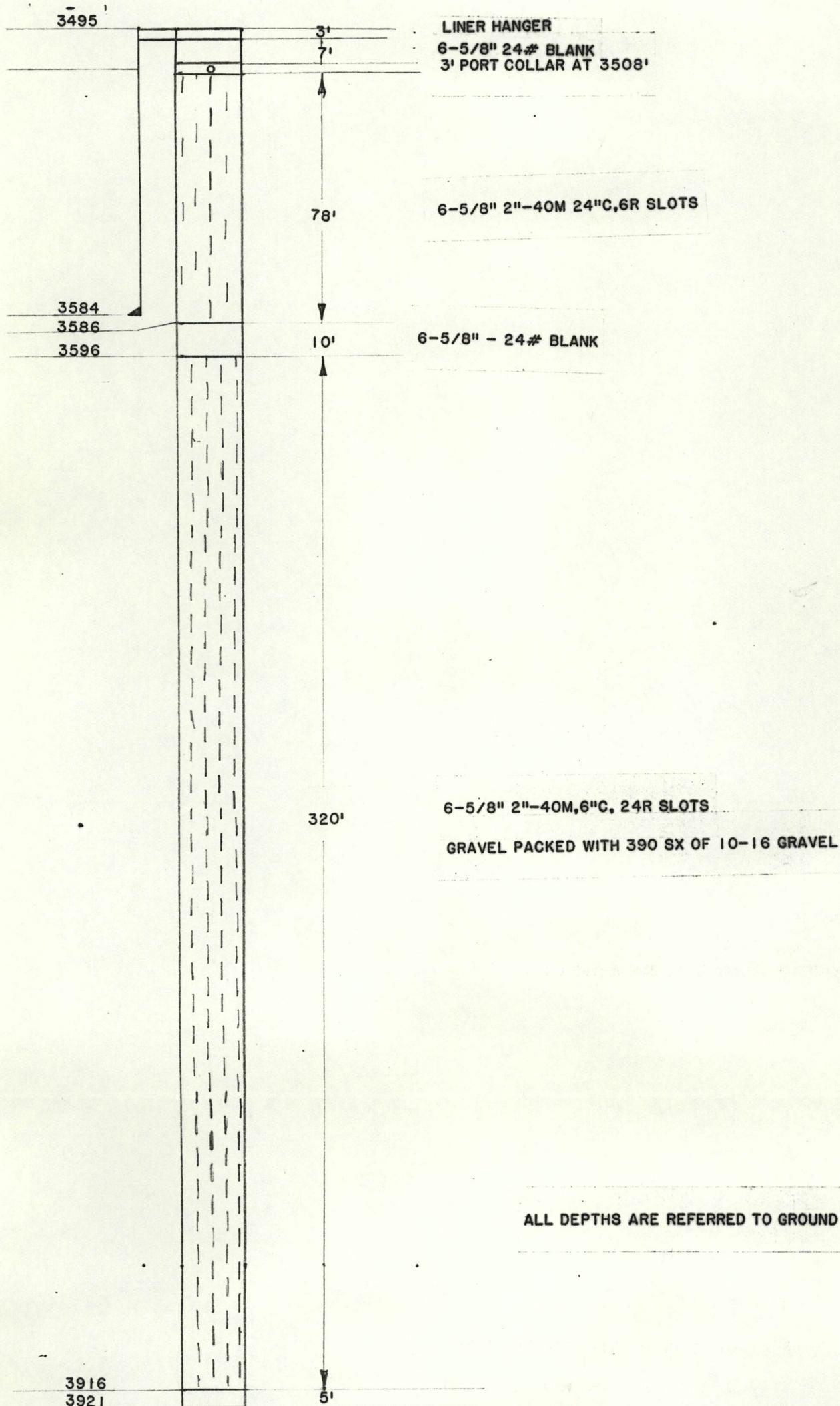
DIVISION OF OIL AND GAS

34

XTRA ENERGY CORP.

LINER DETAIL

WELL NO. 3
(AMERICAN NO. 3)



ALL DEPTHS ARE REFERRED TO GROUND ELEVATION

33

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

Long Beach, California

October 17, 1983

John D. Carmichael, Agent
XTRA ENERGY CORPORATION
2501 Cherry Avenue, Suite 270
Signal Hill, CA 90806

Your request, dated September 15, 1983, proposing to change the designation of
see
well(s) in Sec. below, T. 4S, R. 13W, S. B. B. & M., Wilmington field,
Los Angeles County, District No. 1, has been received.

The proposed change in designation, in accordance with Section 3203, Public Resources Code, is authorized
as follows: Sec. 19-4S-13W

| OLD DESIGN. | NEW DESIGN. | API 037- | OLD | NEW | API 037- |
|-----------------------|-------------|----------|-----------------------|--------------|---------------------|
| 8 | "WNF-I" 8 | 22620 | "American Can" 1 | "WNF-I" 12 | 21433 |
| 10 | "WNF-I" 10 | 22611 | " | 2 "WNF-I" 15 | 21644 |
| 18 | "WNF-I" 18 | 22853 | " | 3 "WNF-I" 3 | 21768 |
| 19 | "WNF-I" 19 | 22846 | "Dasco Unit" 1 | "WNF-I" 1 | 21671 |
| 20 | "WNF-I" 20 | 22652 | I-14 | "WNF-I" 11 | 22603 |
| 23 | "WNF-I" 23 | 22672 | "Purex Unit" 1 | "WNF-I" 9 | 21669 |
| 26 | "WNF-I" 26 | 22666-01 | " | 2 "WNF-I" 5 | 21753 |
| 27 | "WNF-I" 27 | 22673 | " | 3 "WNF-I" 4 | 21754 |
| 28 | "WNF-I" 28 | 22674 | "Sanitation Unit" 1 | "WNF-I" 21 | 21445 |
| 29 | "WNF-I" 29 | 22648 | <u>Sec. 20-4S-13W</u> | | |
| 43 | "WNF-I" 43 | 22682 | 31 "WNF-I" 31 | 22767 | 36 "WNF-I" 36 22769 |
| <u>Sec. 20-4S-13W</u> | | | 33 "WNF-I" 33 | 22768 | 37 "WNF-I" 37 22796 |
| 42 | "WNF-I" 42 | 22689 | 34 "WNF-I" 34 | 22787 | 38 "WNF-I" 38 22752 |
| 44 | "WNF-I" 44 | 22820 | 35 "WNF-I" 35 | 22795 | 39 "WNF-I" 39 22754 |

M. G. MEFFERD, State Oil and Gas Supervisor

By Richard C. Gaede

FOR V. F. GAEDE, Deputy Supervisor

EDP
Update
Conservation Committee
Long Beach Dept. of Oil Properties
OGD 157 (3-79-DWRR-1M)

32

Sec. 20-4S-13W

| <u>OLD</u> | <u>NEW</u> | <u>API</u> | <u>037-</u> |
|----------------|------------|------------|-------------|
| "Shell Unit" 1 | "WNF-I" 32 | 21729 | |
| "Shell Unit" 2 | "WNF-I" 40 | 21769 | |

Sec. 29-4S-13W

| | | | |
|-----------------|------------|-------|--|
| "Lomita Unit" 1 | "WNF-I" 67 | 22487 | |
| 49 | "WNF-I" 49 | 22886 | |
| 50 | "WNF-I" 50 | 22884 | |
| 51 | "WNF-I" 51 | 22885 | |
| 53 | "WNF-I" 53 | 22874 | |
| 54 | "WNF-I" 54 | 22871 | |
| 56 | "WNF-I" 56 | 22865 | |
| 57 | "WNF-I" 57 | 22815 | |

848

(field code)

03

(area code)

20

(new pool code)

20

(old pool code)

REPORT ON PROPOSED OPERATIONS

John D. Carmichael, Agent
XTRA ENERGY CORPORATION
717 Walton Street
Signal Hill, CA 90806

Long Beach, California
January 6, 1983

Your _____ proposal to Rework well "American Can" 3,
A.P.I. No. 037-21768, Section 19, T. 4S, R. 13W, S. B. B. & M.,
Wilmington field, F. B. I, Onshore area, Ranger pool,
Los Angeles County, dated 12-10-82, received 12-27-82 has been examined in conjunction with records
filed in this office.

THE PROPOSAL, COVERING WORK ALREADY COMPLETED IS APPROVED.

WEB:dh

cc: Update

Blanket Bond

No History Needed

M. G. MEFFERD, State Oil and Gas Supervisor

By J. L. Hardoin
J. L. HARDOIN, Deputy Supervisor

A copy of this report and the proposal must be posted at the well site prior to commencing operations.

Records for work done under this permit are due within 60 days after the work has been completed or the operations have been suspended.

0/6

DIVISION OF OIL AND GAS

Notice of Intention to Rework Well

This notice and indemnity or cash bond shall be filed, and approval given, before rework begins. If operations have not commenced within one year of receipt of the notice, this notice will be considered cancelled.

| FOR DIVISION USE ONLY | | |
|-----------------------|----------------|----------------|
| BOND | FORMS | |
| | OGD 114 | OGD 121 |
| Blanket | 12-30-80 CP | 12-30-80 CP |

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework well 11 American Can No. 3, API No. 037-21768
(Well designation)
 Sec. 19, T. 4S, R. 13W, S. B. & M., Wilmington Field, Los Angeles County.

The present condition of the well is as follows:

- Total depth 3930'
- Complete casing record, including plugs and perforations

| | | | | | |
|---------|-----|------|-----------|------|--------------------------|
| 13-3/8" | 48# | H-40 | Buttress, | New, | Surface to 619' |
| 8-5/8" | 32# | K-55 | Buttress, | New, | Surface to 3593' |
| 6-5/8" | 24# | K-55 | SFJ, | New | Slotted fr 3605' - 3925' |

2" x 40M, 6" C, 24R & gravel packed.
- Present producing zone name Ranger; Zone in which well is to be recompleted Ranger
- Present zone pressure 1200 psi; New zone pressure 1200 psi
- Last produced _____
 (Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)
 (or)
 Last injected 8-80 650 -0- 915
 (Date) (Water, B/D) (Gas, Mcf/D) (Surface pressure, psig)

The proposed work is as follows:

The water injection into this well was terminated in August 1980. The well was converted back to production on November, 1982.

FORM RECEIVED
 DIA. OF THE OGD
 DEC 5 1980

It is understood that if changes in this plan become necessary, we are to notify you immediately.

Address 717 Walton Street Xtra Energy Corporation
 (Street) (Name of Operator)
Signal Hill CA 90806 By John D. Carmichael
 (City) (State) (Zip) (Print Name)
 Telephone Number (213) 424-8540
 (Signature) (Date)

RECEIVED
DEC 27 1 16 PM '82
DIV. OF OIL AND GAS
LONG BEACH, CA.

considered back to production on November 1982.
The meter production rate was determined by meter 1982. The meter was
the proposed meter is as follows.

| Item | Quantity | Unit | Value |
|------|----------|-------|---------|
| 1 | 1 | meter | 1500.00 |
| 2 | 1 | meter | 1500.00 |
| 3 | 1 | meter | 1500.00 |

| Item | Quantity | Unit | Value |
|------|----------|-------|---------|
| 4 | 1 | meter | 1500.00 |
| 5 | 1 | meter | 1500.00 |

1 meter 1500.00

The proposed meter is as follows:
To be used in the meter 1982.
The meter is as follows:

discussions with Section 3333 Division 2 Public Resources Code which is hereby cited for the information

DIVISION OF OIL AND GAS

| | |
|------------------|---------|
| SEARCHED | INDEXED |
| SERIALIZED | FILED |
| DEC 27 1982 | |
| FBI - LONG BEACH | |

NOTICE OF INTENTION TO REMOVE WELL

DIVISION OF OIL AND GAS

DEVELOPMENT & CONSERVATION
SECTION OF OIL AND GAS

28

DIVISION OF OIL AND GAS
CHECK LIST - RECORDS RECEIVED AND WELL STATUS

Company Argo Petroleum Corp. Well No. American Can #3
 API No. 037-21768 Sec. 19, T. 4S, R. 13W, S. B. B.&M.
 County _____ Field Wilcox

RECORDS RECEIVED

DATE

Well Summary (Form OGI00) _____
 ✓ History (Form OGI03) 8/1/80 (2)
 Core Record (Form OGI01) _____
 Directional Survey _____
 Sidewall Samples _____
 Other _____
 Date final records received _____
 Electric logs: _____

STATUS

STATUS

| | | | |
|----------------------|-------|---------------------------|-------------------------------------|
| Producing - Oil | _____ | Water Disposal | _____ |
| Idle - Oil | _____ | Water Flood | <input checked="" type="checkbox"/> |
| Abandoned - Oil | _____ | Steam Flood | _____ |
| Drilling - Idle | _____ | Fire Flood | _____ |
| Abandoned - Dry Hole | _____ | Air Injection | _____ |
| Producing - Gas | _____ | Gas Injection | _____ |
| Idle - Gas | _____ | CO ₂ Injection | _____ |
| Abandoned - Gas | _____ | LPG Injection | _____ |
| Gas-Open to Oil Zone | _____ | Observation | _____ |

Water Flood Source _____
 DATE 8-10-79

RECOMPLETED

REMARKS Active - Oil converted to Water Flood

ENGINEER'S CHECK LIST

1. Summary, History, & Core record (dupl.)
2. Electric Log _____
3. Operator's Name
4. Signature
5. Well Designation
6. Location _____
7. Elevation _____
8. Notices
9. "T" Reports
10. Casing Record _____
11. Plugs _____
12. Surface Inspection _____
13. Production _____
14. E Well on Prod. Dir. Sur. _____

CLERICAL CHECK LIST

1. Location change (F-OGD165) _____
2. Elevation change (F-OGD165) _____
3. Form OGD121 _____
4. Form OGI59 (Final Letter) _____
5. Form OGD150b (Release of Bond) _____
6. Duplicate logs to archives _____
7. Notice of Records due (F-OGD170) _____

UPDATE CENTER 8/14/80

No Bond Required

RECORDS NOT APPROVED

Reason: _____

RECORDS APPROVED RS 8-7-80

RELEASE BOND

Date Eligible _____
 (Use date last needed records were received.)

MAP AND MAP BOOK Reg map 128 book 8-11-80

26

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

(037-21768)

History of Oil or Gas Well

OPERATOR Argo Petroleum Corporation FIELD Wilmington

Well No. " AMERICAN CAN #3 ", Sec. 19, T. 4S, R. 13W, S.B. B. & M.

Date July 17, 19 80 Signed [Signature]

940 East Santa Clara
Ventura, CA. 93001 (805) 648-2514 Title Executive Vice President
(Address) (Telephone Number) (President, Secretary or Agent)

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

CONVERT TO WATER INJECTION

Date
1979
5-09

MIRU Sunde. Laid down hydraulic unit. POH. Laid down rods and pump. Unlanded tbg and laid down donut and production "T". Installed injection head and landed tbg. Close in. Move out.

7-26 MIRU Sunde. Installed BOP. Pick up and ran 16 singles of 2½" tbg on top of original string to 3928'. No fill. Pull 16 jts tbg. Shut down.

7-27 Ran tbg to bottom of liner at 3928'. Disp fluid in hole w/230 bbls lease water. Recover approximately 150 bbls. oil. POH. Ran 8 5/8" Atlas csg scraper. Scrape csg to 3504' (top of liner). POH.

7-28 Ran 6 5/8" Atlas csg scraper. Work scraper thru hard scale 3865-3916'. (bottom perf @ 3925'). Backscuttle hole clean. POH. Made up Atlas wire brush. RIH to top of liner.

7-29 Finish run wire brush to 3916'. Spot 700 gals 7½% HCL. Di-Chem acid. Brush perfs 3916-3605'. Close pipe rams. Squeeze formation w/8000 gals acid. Avg rate 1½ BPM @ 950 psi. Final SIP = 700 psi. Close well.

7-30 Well on vacuum this AM. POH. Break down Atlas wire brush. Made up Baker 8 5/8" ADI pkr. RIH to 3497'. Land tbg on donut. Remove and load out BOP. Mix neutralizing chem w/213 bbls water and pump in hole. Set pkr @ 3497'. Test pkr. OK. Flange up wellhead. Move out.

8-10 Started injecting water @ 12 noon. Avg rate = 650 bbl/day @ 300#.

FOR...
DIX...
AUG 15 1980
BE DETAIL

25

DIVISION OF OIL AND GAS

Report on Operations

WATERFLOOD
SEC. 3606 WELL

Mr. M.S. Frankel, Agent

ARGO PETROLEUM CORP.

10880 Wilshire Blvd., Suite 1003

Los Angeles, CA 90024

Long Beach,

Calif.

May 7, 1980

Your operations at well "American Can" 3, API No. 037-21768, Sec. 19, T4S, R.13W
S.B.B. & M. Wilmington Field, in Los Angeles County, were witnessed
on 5/6/80. G.W. Stark, Engineer, representative of the supervisor, was
present from 1200 to 1330. There were also present P. Lyons, Engineer.

Present condition of well: 13-3/8" cem 619'; 8-5/8" cem 3593', perf 3574' WSO; 6-5/8" 1d 3504'-
3930', perf at intervals 3517'-3925'. TD 3930'.

The operations were performed for the purpose of demonstrating that all of the injection fluid
is confined to the formations below 3593'.

DECISION: APPROVED.

GWS:d

cc Update Center
Long Beach Dept. of Oil Properties
E. Perry Lyons

NOTE: DEFICIENCIES CORRECTED

1. None

DEFICIENCIES TO BE CORRECTED

1. None

CONTRACTOR: None

M. G. MEFFERD

State Oil and Gas Supervisor

By

Richard F. Carter
Deputy Supervisor

R. A. YBARRA

23

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

No. P...179-575...

REPORT ON PROPOSED OPERATIONS
WATERFLOOD PROJECT

848
(field code)
03
(area code)
20
(pool code)

Mr. E. Perry Lyons
ARGO PETROLEUM CORP.
940 East Santa Clara
Ventura, CA 93001

Long Beach, California
July 25, 1979

Your ----- injection
proposal to convert to water / well "American Can" 3
A.P.I. No. 037-21768, Section 19, T. 4S, R. 13W, S.B. B. & M.,
Wilmington field, Fault Block I area, Ranger pool,
Los Angeles County, dated 7-18-79, received 7-20-79 has been examined in conjunction with records
filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. This well shall conform to the provisions set forth in our letter of 7-23-79 approving the project.
2. A monthly statement shall be filed with this Division on our Form 110-B showing the amount of fluid injected, pressure required, and source of injection fluid.
3. Injection shall cease if any evidence of damage is observed or upon written notice from this Division.
4. Within three months after injection is started, and annually thereafter, the Division shall be furnished with sufficient data to confirm that the injected fluid is confined to the intended zone of injection.
5. Prior to any sustained injection above a gradient of 0.8 psi per foot of depth as measured at the sand face, injectivity and profile tests shall be made. The results of these tests and the proposed method of operations as to input rate, pressure and water distribution by subzones shall be submitted to this Division for approval.
6. THIS DIVISION SHALL BE NOTIFIED:
To witness the running of a profile survey to confirm that the injection fluid is confined to the intended zone.

NOTE: 1. The base of the fresh water sands is at 1850'. The fresh water is protected by the 8 5/8" casing cemented at 3593' with sufficient cement to fill to 1871'.
2. The water to be injected is fresh water and is obtained from Dominguez Water Co.
3. The water is to be injected into the Ranger zone which extends from 3600' to 3925' and contains a mixture of oil and salt water. The formation water tests approximately 31,440 ppm TDS.
4. Approx. Surface Location of Well:
Fr Intersection NE Cor Main St. & AT & SF RR 95 Nly 148 Ely.

RWS:gm

cc: Long Beach Dept. of Oil Properties
Regional Water Quality Control Board
Dept. Water Resources
M. S. Frankel, Agent
Update Center
Project File

attached to a copy of your notice of proposed operations

A copy of this report/must be posted at the well site prior to commencing operations.

PLEASE RETURN COMPLETION REPORT

No Bond Require

M. G. MEFFERD, State Oil and Gas Supervisor

By R. A. yfana
M. B. Albright, Deputy Supervisor

DIVISION OF OIL AND GAS
Notice of Intention to Rework Well

This notice and indemnity or cash bond shall be filed, and approval given, before rework begins. If operations have not commenced within one year of receipt of the notice, this notice will be considered cancelled.

ARGO WILMINGTON PILOT WATERFLOOD

ATTACHMENT #3

| FOR DIVISION USE ONLY | | |
|-----------------------|-----------|-----------|
| BOND | FORMS | |
| | 114 | 121 |
| <i>mg</i> | <i>sc</i> | <i>sc</i> |

DIVISION OF OIL AND GAS

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to rework well No. AMERICAN CAN #3 ^{*Assembly (WAAP 9)*}, API No. 037-21768, Sec. 19, T. 4S, R. 13W, S.B. B. & M., Wilmington Field, Los Angeles County.

The present condition of the well is as follows:

- Total depth. 3930'
- Complete casing record, including plugs and perforations:
13 3/8", 48#, H-40 Buttress csg cmt'd at 619'.
8 5/8", 32#, K-55 Buttress csg cmt'd at 3593'. WSO
6 5/8", 24#, K055 LTC & SFJ, Gravel packed liner 3504-3930'.

PERFS: 3517-3595', 2" x 40m, 6R, 24"C, mach cut slots
3605-3925', 2" x 40m, 24R, 6"C mach cut slots

- Present producing zone name Ranger Zone in which well is to be recompleted Ranger
- Present zone pressure 1350 New zone pressure -----
- Last produced 5/8/79 9 12 5
(Date) (Oil, B/D) (Water, B/D) (Gas, Mcf/D)
or
- Last injected ----- ----- ----- -----
(Date) (Water, B/D) (Gas, Mcf) (Surface pressure, psig.)

The proposed work is as follows:

- Load well with lease water. Clean out if necessary.
- Scrape liner and casing.
- Squeeze formation with 1500 gal 12%-5% acid solution.
- Run 8 5/8" injection packer on 2 7/8" tubing to 3495'.
- Displace 8 5/8" casing with treated fresh water.
- Set and test packer at 2000 psi.
- Place well on water injection at 400 to 600 bbls/day rate.

It is understood that if changes in this plan become necessary we are to notify you immediately.

Address 940 East Santa Clara
Ventura, California 93001
(City) (State) (Zip)
Telephone Number (805) 648-2514

ARGO PETROLEUM CORPORATION
(Name of Operator)
By *Edg. [Signature]* 7/18/79
(Name) (Date)
Type of Organization Corporation
(Corporation, Partnership, Individual, etc.)

21

RECEIVED

JUL 20 11 21 AM '79

DIV. OF OIL AND GAS
LONG BEACH, CA.

1. The well is a new production well.

2. The well is located in the [redacted] area.

3. The well is being drilled to a depth of [redacted] feet.

4. The well is being drilled by [redacted] Company.

5. The well is being drilled for [redacted] purposes.

6. The well is being drilled to a depth of [redacted] feet.

7. The well is being drilled by [redacted] Company.

8. The well is being drilled for [redacted] purposes.

9. The well is being drilled to a depth of [redacted] feet.

10. The well is being drilled by [redacted] Company.

11. The well is being drilled to a depth of [redacted] feet.

12. The well is being drilled by [redacted] Company.

13. The well is being drilled for [redacted] purposes.

14. The well is being drilled to a depth of [redacted] feet.

15. The well is being drilled by [redacted] Company.

16. The well is being drilled to a depth of [redacted] feet.

17. The well is being drilled by [redacted] Company.

18. The well is being drilled for [redacted] purposes.

19. The well is being drilled to a depth of [redacted] feet.

20. The well is being drilled by [redacted] Company.

| | | |
|--|--|--|
| | | |
| | | |
| | | |

DIVISION OF OIL AND GAS

20

STATE OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED CHANGE OF WELL DESIGNATION

Long Beach, California

July 23, 1979

Mr. Morris S. Frankel, Agent
Argo Petroleum Corp.
10880 Wilshire Blvd., Suite 1003
Los Angeles, CA 90024

DEAR SIR:

Your request dated May 30, 1979, signed by E. Lyons, relative to change in designation of well(s) in Sec. 19, 20, T. 4S, R. 13W, SB B. & M., Wilmington field, Los Angeles County, District No. 1, has been received; and in accordance with Section 3203, Public Resources Code, reading in part as follows:

“ * * * The number or designation by which any well heretofore drilled has been known, and the number or designation specified for any well in a notice filed as required by Section 3203, shall not be changed without first obtaining a written consent of the Supervisor.”

the proposed change in designation is hereby authorized as follows:

| <u>Sec.</u> | <u>Old Designation</u> | <u>API No.</u> | <u>New Designation</u> |
|-------------|------------------------|----------------|------------------------|
| 19-4S-13W | SBB&M WAAP 3 | 037-21664 | American Can 2 |
| " " | " WAAP 9 | 037-21768 | American Can 3 |
| " " | " American Can 2 | 037-21445 | Sanitation Unit 1 |
| " " | " WAAP 4 | 037-21669 | Purex Unit 1 |
| " " | " WAAP 7 | 037-21753 | Purex Unit 2 |
| " " | " WAAP 8 | 037-21754 | Purex Unit 3 |
| " " | " WAAP 6 | 037-21671 | Dasco Unit 1 |
| 20-4S-13W | " WAAP 5 | 037-21729 | Shell Unit 1 |
| " " | " WAAP 10 | 037-21769 | Shell Unit 2 |

MBA:sc

cc: Update Center
EDP Update
Conservation Committee
Dept. of Oil Properties L.B.

M. G. MEFFERD
~~JOHN F. MATTHEWS, JR.~~
State Oil and Gas Supervisor

By M.B. Albright
M. B. Albright, Deputy Supervisor

| CORRECTIONS MADE AS FOLLOWS: | BY WHOM |
|------------------------------|------------|
| FORM 114 | |
| " 118 | |
| " 121 | sc 7-24-79 |
| " 142 | |
| CARDS | |
| PRODUCTION REPORTS | |
| WELL RECORDS (FOOTING) | sc 7-24-79 |
| (CRANES) | sc 7-24-79 |
| FIELD MAPS | |
| MAP BOOK | |

19

DIVISION OF OIL AND GAS
CHECK LIST - RECORDS RECEIVED AND WELL STATUS

Company ARGO PETROLEUM Co Well No. WAAP 9
 API No. 037-21768 Sec. 19, T. 4S, R. 13W, SB B.&M.
 County LA Field WILMINGTON

| <u>RECORDS RECEIVED</u> | <u>DATE</u> |
|---------------------------------------|----------------|
| Well Summary (Form OG100) | <u>6-28-77</u> |
| History (Form OG103) | <u>6-28-77</u> |
| Core Record (Form OG101) | _____ |
| Directional Survey | <u>6-28-77</u> |
| Sidewall Samples | _____ |
| Other | _____ |
| Date final records received | _____ |
| Electric logs: | <u>6-28-77</u> |
| <u>Dik log 2" x 5" (625' - 3918')</u> | _____ |
| <u>CALIPER LOG (3593' - 3932')</u> | _____ |
| _____ | _____ |
| _____ | _____ |

| <u>STATUS</u> | <u>STATUS</u> |
|---|----------------------|
| Producing - Oil <input checked="" type="checkbox"/> | Water Disposal _____ |
| Idle - Oil _____ | Water Flood _____ |
| Abandoned - Oil _____ | Steam Flood _____ |
| Drilling - Idle _____ | Fire Flood _____ |
| Abandoned - Dry Hole _____ | Air Injection _____ |
| Producing - Gas _____ | Gas Injection _____ |
| Idle - Gas _____ | CO2 Injection _____ |
| Abandoned - Gas _____ | LPG Injection _____ |
| Gas-Open to Oil Zone _____ | Observation _____ |
| Water Flood Source _____ | _____ |
| DATE <u>3-19-77</u> | _____ |
| RECOMPLETED _____ | _____ |
| REMARKS _____ | _____ |

- ENGINEER'S CHECK LIST**
- Summary, History, & Core record (dupl.)
 - Electric Log
 - Operator's Name _____
 - Signature _____
 - Well Designation _____
 - Location _____
 - Elevation _____
 - Notices _____
 - "T" Reports _____
 - Casing Record _____
 - Plugs _____
 - Surface Inspection _____
 - Production _____
 - E Well on Prod. Dir. Sur.

- CLERICAL CHECK LIST**
- Location change (F-OGD165) _____
 - Elevation change (F-OGD165) _____
 - Form OGD121 _____
 - Form OG159 (Final Letter) _____
 - Form OGD150b (Release of Bond) _____
 - Duplicate logs to archives _____
 - Notice of Records due (F-OGD170) _____
- Sent to L B Blueprint 7-1-77*

B.B.

RECORDS NOT APPROVED
 Reason: _____

RECORDS APPROVED NS
 RELEASE BOND _____
 Date Eligible _____
 (Use date last needed records were received.)
 MAP AND MAP BOOK 6-29-77 RKB
#128 SW Sopulveda + Panama

DIVISION OF OIL AND GAS

WELL SUMMARY REPORT
SUBMIT IN DUPLICATE

Operator ARGO PETROLEUM CORPORATION, Well No. W.A.A.P. #9, API No. 037-21768,

Sec. 19, T. 4S, R. 13W, S. B. B. & M., Wilmington Field, Los Angeles County.

Location 95' northerly along property line & 148' easterly at right angles to
said line from the SW corner of property (Give subsurface location from property or section corner or street center line and/or Lambert coordinates)
which is the NE corner of Main St & AT&SF RR right of way. Elevation of ground above sea level 40 feet.

All depth measurements taken from top of KB which is 9 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

In compliance with Sec. 3215, Division 3 of the Public Resources Code, the information given herewith is a complete and correct record of the present condition of the well and all work done thereon, so far as can be determined from all available records.

Date June 10, 1977

Signed [Signature]

JJCook
(Engineer or Geologist)

Title Exec. Vice-President

| | DATE | GEOLOGICAL MARKERS | DEPTH |
|-------------------------|--------------------------------------|--------------------|-------|
| Commenced drilling | <u>1-1-77</u> | | |
| Completed drilling | <u>1-16-77</u> | | |
| Total depth (1st hole) | <u>3930'</u> (2nd) _____ (3rd) _____ | | |
| Present effective depth | <u>3930'</u> | | |
| Junk | _____ | | |

Formation and age at total depth Miocene

Commenced producing 3/19/77 ~~flowing gas~~ / pumping
(Date) (Cross out unnecessary words)

Name of producing zone Ranger

Initial production
Production after 30 days

| | Clean Oil bbl. per day | Gravity Clean Oil | Per Cent Water including emulsion | Gas Mcf. per day | Tubing Pressure | Casing Pressure |
|--------------------------|---------------------------|----------------------|--------------------------------------|---------------------|-----------------|-----------------|
| Initial production | <u>2</u> | <u>13.6</u> | <u>95.0</u> | <u>0</u> | <u>20</u> | <u>50</u> |
| Production after 30 days | <u>6</u> | <u>13.6</u> | <u>82.0</u> | <u>0</u> | <u>20</u> | <u>50</u> |

CASING RECORD (Present Hole)

| Size of Casing (A. P. I.) | Depth of Shoe | Top of Casing | Weight of Casing | Grade and Type of Casing | New or Second Hand | Size of Hole Drilled | Numbers of Sacks or Cubic Feet of Cement | Depth of Cementing if through perforations |
|------------------------------|---------------|---------------|---------------------|--------------------------|-----------------------|-------------------------|--|--|
| <u>13 3/8</u> | <u>619'</u> | <u>Surf</u> | <u>48#</u> | <u>H-40 Buttress</u> | <u>N</u> | <u>17 1/2"</u> | <u>700 cf</u> | <u>600</u> |
| <u>8 5/8</u> | <u>3593'</u> | <u>"</u> | <u>32#</u> | <u>K-55 Buttress</u> | <u>N</u> | <u>11"</u> | <u>650cf</u> | <u>550</u> |
| <u>6 5/8</u> | <u>3930'</u> | <u>3504'</u> | <u>24#</u> | <u>K-55 LTC/SFJ</u> | <u>N</u> | <u>15"</u> | <u>Hung & gravel pack</u> | |

PERFORATED CASING
(Size, top, bottom, perforated intervals, size and spacing of perforation and method.)

WSO at 3574'.

3517'-3595' 2" x 40M, 24"C, 6R, slots

3605'-3925' 2" x 40M, 6"C, 24R, slots

Was the well directionally drilled? Yes If yes, show coordinates at total depth 50.09'N & 1070.15'E

Electrical log depths DIL 3930'-619' Other surveys Caliper, BHP

DATE: 3/20/77
WELL NO: 3211
M.O.A.B. # 2000-11 & 1010-12, E

RECEIVED
JUN 28 1 29 AM '77
DIV. OF OIL AND GAS
LONG BEACH, CA.

| DATE | WELL NO. | DEPTH | TEST NO. | TEST TYPE | STATUS | TEST DURATION | TEST RESULTS | REMARKS |
|---------|----------|-------|----------|--------------|--------|---------------|--------------------|---------|
| 3/20/77 | 3211 | 320' | 34# | K-22 T/C/S/E | N | 12" | PROD & INJECT BACK | |
| 3/20/77 | 3211 | " | 35# | K-22 B/C/S/E | N | 11" | PROD | |
| 3/20/77 | 3211 | 315' | 38# | H-10 B/C/S/E | N | 12 1/2" | PROD | |

WELL RECORD (Present Hole)

| PRODUCTION AFTER 30 DAYS | INITIAL PRODUCTION | PER TEST DAY | DEPTH OF WELL | TESTING PERIOD | TEST DURATION | TEST RESULTS |
|--------------------------|--------------------|--------------|---------------|----------------|---------------|--------------|
| 0 | 5 | 0.13 | 320' | 85.0 | 0 | 30 |
| 0 | 5 | 0.13 | 320' | 85.0 | 0 | 30 |

Commenced production: 3/20/77
 Name of producing zone: Kander
 Formation and age of total depth: Miocene
 Present effective depth: 3230'
 Total depth (if hole): 3230' (319')
 Completed drilling: 7-12-77
 Commenced drilling: 7-1-77

DATE: June 10, 1977
 This report of the present condition of the well and all work done thereon, so far as can be determined from all available information, was prepared in accordance with Section 3 of the Public Resources Code, the information given herein is a complete and true statement of the facts known to the reporting party at the time of preparation.
 All depth measurements taken from top of KB
 Location: 82, partially along property line of 148, east side of road and to sec 14, T4N, R3W, S.B. V.M. M. 148
 Operator: M.V.A.B. # 2000-11 & 1010-12, E

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR ARGO PETROLEUM CORPORATION FIELD WilmingtonWell No. W.A.A.P. #9, Sec. 19, T. 4S, R. 13W, S.B. B. & M.Date June 10, 19 77 Signed [Signature]940 East Santa Clara
Ventura, CA. 93001 (805) 648-2514 Title Exec. Vice-President
(Address) (Telephone Number) (President, Secretary or Agent)

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

Date

1976
12-31 MIRU Camrich Drilling Co. Rig #3.

1977
1-1 Spudded in at 12:01AM. Drilled 17½" hole to 619'. Cond. mud. Ran 16 jts, 13 3/8", 48#, H-40 Buttress Sumitomo csg w/B&W guide shoe at 619', baffle at 579' (bottom 3 collars and shoe welded).

1-2 BJ cementers pumped 100 cu. ft. water ahead, followed w/600 cu. ft. class "G" cmt. pre-mixed 1:1 POZ w/4% gel + 2% CaCl2, and 100 cu. ft. class "G" neat cmt w/2% CaCl2. Displaced w/324 cu. ft. mud. Bumped plug at 1000 psi. Cmt returns to surface. CIP at 1:00AM. Landed 13 3/8" csg. Installed BOPE. Tested CSO rams w/1500 psi. OK. RIH w/DA. Tested BOPE at 1500 psi. Witnessed and approved by DOG.

1-3 Drilled out cmt and baffle at 579'. Cmt and shoe at 619'. Drilled 11" hole to 800'. POH w/DA. RIH w/DD. DD to 1103'. POH w/DD. RIH w/DA. Reamed from 800'-1103'. Drilled to 1498'.

1-4 Drilled to 2620'. Reamed from 1430'-1481'.

1-5 Drilled to 3197'.

1-6 Drilled to 3523'.

1-7 Drilled to 3570'. POH w/11" bit. RIH w/7 7/8" bit. Drilled to 3753'.

1-8 Drilled to 3930'. Reamed from 3570'-3600'. POH. Ran Schlumberger DIL 3930'-619'. RIH. Opened hole to 11" from 3570'-3600'. POH.

1-9 Ran 91 jts, 8 5/8", 32#, K-55 Buttress Pipe Sales csg w/B&W guide shoe at 3593', float collar at 3550', centralizers on bottom 26 jts, welded bottom 3 jts. HOWCO pumped 100 cu. ft water ahead, and followed w/550 cu. ft. class "G" cmt pre-

15

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR ARGO PETROLEUM CORPORATION FIELD WilmingtonWell No. W.A.A.P. #9, Sec. 19, T. 4S, R. 13W S.B. B. & M.Date June 10, 19 77 Signed [Signature]940 East Santa Clara
Ventura, CA. 93001 (805) 648-2514 Title Exec. Vice-President
(Address) (Telephone Number) (President, Secretary or Agent)

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

Date

19771-9

cont

mixed 1:1 POZ + 4% Gel + 2% CaCl₂ and 100 cu. ft. class "G" neat cmt + 2% CaCl₂. Disp w/1252 cu. ft. mud. Bumped plug w/1500 psi. CIP at 6:45AM. WOC 4 hrs. Landed 8 5/8" csg. Re-installed BOP and tested at 1500 psi. OK.

1-10

RIH w/7 7/8" RR bit + 8 5/8" csg scraper. CO cmt from 3545' to 3579'. POH. Ran Johnston gun tester on 4 1/2" DP. Shot 4 - 1/2" holes at 3574'.

1-11

Set pkr at 3530', tail to 3534'. Opened tool at 12:45AM for 1 hr. test. Had strong blow for 5 min, then declined to medium to weak blow remainder of test. POH. Rec 110' net rise of drilling fluid. Witnessed and approved by DOG. RIH w/OMT 7 7/8" x 15" HO. CO cmt 3579'-3593' and shoe at 3593'. Opened hole to 15" from 3593'-3715'.

1-12

Opened hole to 15" from 3715'-3930'. POH. Ran Welex caliper log 3593'-3930'. RIH w/HO and re-gauged hole 3690'-3810' and 3875'-3914'. Circ hole clean.

1-13

Ran 12 jts 6 5/8", 24#, K-55 LT&C and SFJ Pipe Sales liner, bottom at 3930', top at 3504'. Detail as follows:

| | |
|-------------|-------------------------|
| 3930'-3925' | Blank |
| 3925'-3605' | 2"x40M, 6"C, 24R, slots |
| 3605'-3595' | Blank |
| 3595'-3517' | 2"x40M, 24"C, 6R, sltos |
| 3517'-3504' | Blank |

1-14

Gravel packed w/233 cu. ft. 10x16 gravel. Worked liner and packed w/additional 12 sacks. Press 700 psi. POH w/tools. RIH w/brass ring adaptor. Stopped at 825'. POH. RIH w/csg scraper. CO obstruction. RIH and drove on adaptor at 3504'. POH.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION

DIVISION OF OIL AND GAS

History of Oil or Gas Well

OPERATOR ARGO PETROLEUM CORPORATION FIELD Wilmington

Well No. W.A.A.P. #9, Sec. 19, T. 4S R. 13W, S.B. B. & M.

Date June 10, 19 77 Signed C. Bowls

940 East Santa Clara
Ventura, CA. 93001 (805) 648-2514 Title Exec. Vice-President
(Address) (Telephone Number) (President, Secretary or Agent)

History must be complete in all detail. Use this form to report all operations during drilling and testing of the well or during redrilling or altering the casing, plugging, or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts of cement used, top and bottom of plugs, perforation details, sidetracked junk, bailing tests and initial production data.

Date

1977

1-15

RIH w/B&W washer and washed perfs 3925'-3517'. POH. RIH to 3509' w/gravel packing tools. Opened port collar at 3509'. Gravel packed w/10x16 gravel. Total gravel in place, 364 cu. ft. Closed port collar, POH. RIH w/washer and washed perfs w/318 GPM at 500 psi. POH.

1-16

RIH w/GP tools. Opened port collar, and re-packed w/26 cu. ft. of 10x16 gravel. Total gravel in place = 390 cu. ft. Closed port collar and tested at 400 psi. POH. Laid down 4½" DP. RIH and landed 2 7/8" tbg w/top lock shoe at 3429', tail at 3460'. Removed BOPE. Released rig at 12:00 midnite.

FORN BEACH CA
DIV OF OIL AND GAS
JUN 15 1977
RECEIVED

13

RECEIVED

JUN 28 1 29 AM '77

DIV. OF OIL AND GAS
LONG BEACH, CA.

1-10
1-12
1-11
1-10
Date
of cement used, top and bottom of bridge, perforation details, sidetracked junk, pulling tests and initial production data.
or affecting the casing, bridging or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts
History must be complete in all details. Use this form to report all operations during drilling and testing of the well or during reworking

1-10
1-12
1-11
1-10
Date
of cement used, top and bottom of bridge, perforation details, sidetracked junk, pulling tests and initial production data.
or affecting the casing, bridging or abandonment with the dates thereof. Include such items as hole size, formation test details, amounts
History must be complete in all details. Use this form to report all operations during drilling and testing of the well or during reworking

(Address) (Telephone Number) (President, Secretary or Agent)
L... .. INC. EXEC. VICE-PRESIDENT
Date June 10, 1977 Signed
Well No. M.V. VBP #2 Sec. 15 T. 42 S. 13M S.B. B & M
OPERATOR ARGO PETROLEUM CORPORATION FIELD MOUNTAIN

History of Oil or Gas Well

DIVISION OF OIL AND GAS

DEPARTMENT OF CONSERVATION
RESOURCES AGENCY OF CALIFORNIA

SUBMIT IN DUPLICATE

ANDERSON & SPENCER

REPORT
of
SUB-SURFACE
DIRECTIONAL
SURVEY

E & B Natural Resources Management Corp.

CORP.

COMPANY

"WNF-I" 3

~~W.A.A.P. No 9~~ (037-21768)

WELL NAME

WILMINGTON, CALIF.

LOCATION

19-45-13W

JOB NUMBER

1-177

TYPE OF SURVEY

SINGLE - SHOT

DATE

1-16-77

LONG BEACH CA
DIA OF OIL AND GAS
JAN 18 1977
RECEIVED

11

RECEIVED
JUN 28 1 30 AM '77
DIV. OF OIL AND GAS
LONG BEACH, CA.

MILWAUKEE COUNTY

~~MILWAUKEE COUNTY (OFFICE)~~

VERO BELMONT COVE

GENERAL

DIRECTION

OF

OF

VERO BELMONT

ANDERSON & ASSOCIATES

RECORD OF SURVEY

ANDERSON & SPENCER

"An. Con" 3

JOB NO. ~~WAAP #9~~

DATE January, 1977

CHECKED BY _____

| STATION | MEASURED DEPTH | | DRIFT ANGLE | TRUE VERTICAL DEPTH | | COURSE DEVIATION | | DRIFT DIRECTION | RECTANGULAR COORDINATES | | | | | |
|---------|----------------|--|-------------|---------------------|----|------------------|--|-----------------|-------------------------|----|-------|--------|------|-----|
| | | | | | | | | | NORTH | | SOUTH | | EAST | |
| 1 | 96 | | 0° 15' | 96 | 00 | 42 | | N 76 E | 10 | | | 41 | | |
| 2 | 190 | | 0° 15' | 190 | 00 | 41 | | S 06 W | | 31 | | 41 | | |
| 3 | 351 | | 0° 15' | 351 | 00 | 70 | | N 44 W | 19 | | | | | 08 |
| 4 | 501 | | 0° | 501 | 00 | | | vertical | 19 | | | | | 08 |
| 5 | 619 | | 0° 30' | 619 | 00 | 1 03 | | N 52 W | 82 | | | | | 89 |
| 6 | 700 | | 0° 15' | 700 | 00 | 35 | | S 71 W | 71 | | | | | 122 |
| 7 | 800 | | 0° 30' | 800 | 00 | 87 | | S 76 W | 50 | | | | | 206 |
| 8 | 867 | | 3° 30' | 866 | 88 | 4 09 | | N 80 E | 1 21 | | | 1 97 | | |
| 9 | 927 | | 6° 30' | 926 | 49 | 6 79 | | N 69 E | 3 64 | | | 8 31 | | |
| 10 | 988 | | 9° 15' | 986 | 70 | 9 81 | | N 75 E | 6 18 | | | 17 79 | | |
| 11 | 1048 | | 11° 45' | 1045 | 44 | 12 22 | | 83 | 7 67 | | | 29 92 | | |
| 12 | 1167 | | 15° | 1160 | 39 | 30 80 | | 83 | 11 42 | | | 60 49 | | |
| 13 | 1257 | | 17° 15' | 1246 | 34 | 26 69 | | 82 | 15 13 | | | 86 92 | | |
| 14 | 1347 | | 19° 30' | 1331 | 18 | 30 04 | | 82 | 19 31 | | | 116 67 | | |
| 15 | 1438 | | 21° | 1416 | 14 | 32 61 | | 83 | 23 28 | | | 149 04 | | |
| 16 | 1528 | | 20° | 1500 | 71 | 30 78 | | 83 | 27 03 | | | 179 59 | | |
| 17 | 1620 | | 19° | 1587 | 70 | 29 95 | | 84 | 30 16 | | | 209 38 | | |
| 18 | 1713 | | 19° | 1675 | 63 | 30 28 | | 87 | 31 74 | | | 239 62 | | |
| 19 | 1805 | | 19° | 1762 | 62 | 29 95 | | 87 | 33 31 | | | 269 53 | | |
| 20 | 1897 | | 19° 15' | 1849 | 48 | 30 33 | | 87 | 34 90 | | | 299 82 | | |
| 21 | 1987 | | 18° 45' | 1934 | 70 | 28 93 | | 87 | 36 41 | | | 328 71 | | |
| 22 | 2077 | | 19° 15' | 2019 | 67 | 29 67 | | 87 | 37 96 | | | 358 34 | | |
| 23 | 2168 | | 20° | 2105 | 18 | 31 12 | | 87 | 39 59 | | | 389 42 | | |
| 24 | 2259 | | 20° 30' | 2190 | 42 | 31 87 | | 88 | 40 70 | | | 421 27 | | |
| 25 | 2349 | | 21° 30' | 2274 | 16 | 32 99 | | 88 | 41 85 | | | 454 24 | | |

RECORD OF SURVEY

ANDERSON & SPENCER

Am. Can "3"

JOB NO. ~~WAAP #9~~

DATE January, 1977

CHECKED BY _____

| STATION | MEASURED DEPTH | DRIFT ANGLE | TRUE VERTICAL DEPTH | | COURSE DEVIATION | | DRIFT DIRECTION | RECTANGULAR COORDINATES | | | | | | |
|---------|----------------|-------------|---------------------|----|------------------|----|-----------------|-------------------------|----|-------|--|------|------------|------|
| | | | | | | | | NORTH | | SOUTH | | EAST | | WEST |
| 26 | 2440 | 22° | 2358 | 53 | 34 | 09 | N 88 E | 43 | 04 | | | 488 | 31 | |
| 27 | 2530 | 22°45' | 2441 | 53 | 34 | 80 | 88 | 44 | 25 | | | 523 | 09 | |
| 28 | 2620 | 23° | 2524 | 38 | 35 | 17 | 88 | 45 | 48 | | | 558 | 24 | |
| 29 | 2710 | 23°15' | 2607 | 07 | 35 | 53 | 89 | 46 | 10 | | | 593 | 76 | |
| 30 | 2801 | 23°30' | 2690 | 52 | 36 | 29 | 88 | 47 | 37 | | | 630 | 03 | |
| 31 | 2890 | 23°30' | 2772 | 14 | 35 | 49 | 89 | 47 | 99 | | | 665 | 51 | |
| 32 | 2982 | 24° | 2856 | 19 | 37 | 42 | 89 | 48 | 64 | | | 702 | 92 | |
| 33 | 3073 | 24° | 2939 | 32 | 37 | 01 | 89 | 49 | 29 | | | 739 | 92 | |
| 34 | 3167 | 23°45' | 3025 | 36 | 37 | 86 | 89 | 49 | 95 | | | 777 | 80 | |
| 35 | 3258 | 23°45' | 3108 | 65 | 36 | 65 | 89 | 50 | 59 | | | 814 | 44 | |
| 36 | 3348 | 23°30' | 3191 | 19 | 35 | 89 | 89 | 51 | 22 | | | 850 | 32 | |
| 37 | 3438 | 23°30' | 3273 | 73 | 35 | 89 | 89 | 51 | 85 | | | 886 | 20 | |
| 38 | 3529 | 23° | 3357 | 50 | 35 | 56 | 89 | 52 | 47 | | | 921 | 75 | |
| 39 | 3593 | 22°45' | 3464 | 48 | 44 | 86 | EAST | 52 | 47 | | | 966 | 61 | |
| 40 | 3737 | 22° | 3549 | 78 | 34 | 46 | S 89 E | 51 | 87 | | | 1001 | 06 | |
| 41 | 3828 | 21°15' | 3634 | 74 | 32 | 98 | S 88 E | 50 | 72 | | | 1034 | 02 | |
| 42 | 3930 | 20°45' | 3730 | 12 | 36 | 14 | S 89 E | 50 | 09 | | | 1070 | 15 | |
| Closure | | | | | | | | 1071.32 | | | | | N 87.32° E | |

8

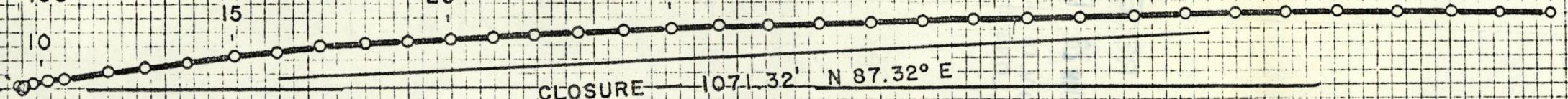


N

ANDERSON
&
SPENCER

1" = 100'

5 10 15 20 25 30 35 40



CLOSURE — 1071.32' N 87.32° E

~~WAAP No 9~~

"Am. Can" 3

7

RECEIVED

JUN 28 1 30 AM '77

DIV. OF OIL AND GAS
LONG BEACH, CA.

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

Report on Operations

SEC. 3606 WELL

No. T 177-26

~~NY~~ Dr. M. S. Frankel, Agent
ARGO PETROLEUM CORP.
10880 Wilshire Blvd., Suite 1003
Los Angeles, CA 90024

Long Beach, Calif.
Jan. 14, 1977

DEAR SIR:

Operations at well No. WAAP 9, API No. 037-21768, Sec. 19, T. 4S, R. 13W,
S.B. B & M. Wilmington Field, in Los Angeles County, were witnessed
on 1/11/77. Mr. G. W. Stark, Engineer, representative of the supervisor was
present from 0300 to 0430. There were also present F. C. Buman, Driller.

Present condition of well: 13-3/8" cem. 619'; 8-5/8" cem. 3593', perf. 3574', WSO. T.D. 3593'. (drilling).

The operations were performed for the purpose of testing the water shut-off with a formation tester.

DECISION: **THE 8-5/8" SHUT-OFF AT 3574' IS APPROVED.**

GWS:d

M. G. MEFFERD, Acting Chief

~~XXXXXXXXXXXXXXXXXXXX~~
~~XXXXXXXXXXXXXXXXXXXX~~

By M. B. Albright Deputy

DIVISION OF OIL AND GAS
 WATER SHUT-OFF TEST

177-26

(28)

Formation test Method: Water Shut-Off Test

Operator ARGO Pet

Well No. WAAP 9 Sec. 19, T. 4S, R. 13W, 58 B&M

Field Wilmington, County LOS Angeles, was tested for water shut-off on Jan 11, 1977, Mr. G.W. Starik, representative of the supervisor was present from 0300 to 0430. There were also present FC. Buman Driller

Casing record of well: 13 3/8" cem. 619'; 8 5/8" cem. 3593', perf. 3574', WSO. T.D. 3593' (Drilling)

The operations were performed for the purpose of D-1 3574.

- The 8 5/8" shut-off at 3574' is approved.
- The operations as witnessed and reported are approved and indicate that no fluid has access to the well from the annulus between _____" and _____" casings.
- The operations as witnessed and reported are approved as indicating that all of the injection fluid is confined to the formations below _____' at this time.

Hole size: 11 3/4" fr. 619' to 3593', _____" to _____' & _____" to _____'

| Casing | | | | Cemented | | | Top of fill | | Squeezed Away | Final Press. | Perfs. |
|---------------|-----------|-------------|--------------|---------------|-------------------|------------------|--------------------|----------|---------------|--------------|----------|
| Size | Wt. | Top | Bottom | Date | MO-Depth | Volume | Annulus | Casing | | | |
| <u>8 5/8"</u> | <u>32</u> | <u>Surf</u> | <u>3593'</u> | <u>1-9-77</u> | <u>Shoe 3593'</u> | <u>650 cu ft</u> | <u>calc. 1871'</u> | <u>—</u> | <u>—</u> | <u>—</u> | <u>—</u> |
| | | | | | | | | | | | |

Depth or interval tested 3574'

The hole fluid was bailed to _____' at _____ on _____ 19____.

The hole was open to _____' for test.

Packer(s) 3530' & — Tail 3544' Bean size 3/4" Cushion 0

IHP 1714 IFP 52 FFP 51 FHP 1714

Blow Strong 5 min, 5 min, med, 5 min faint.

Open for test 1 Hr. 0 min. Fluid entry 110' Gas cut drlg fluid.

Date 19 Time _____ Guage/meter reading _____ Pump depth _____' Engr. _____

Date 19 Time _____ Guage/meter reading _____ Engr. _____

Fluid level _____' surveyed on _____ 19____, reviewed (witnessed) by _____

Total fluid produced, Bbls. _____ Net oil _____ Water _____

Rate: _____ B/D oil, _____ B/D water, _____ % water cut

RA/Spinner (Temperature) survey run at _____ B/D & _____ psi on _____ 19____, fluid confined below _____' (Packer depth _____')

5

RESOURCES AGENCY OF CALIFORNIA
DEPARTMENT OF CONSERVATION
DIVISION OF OIL AND GAS

REPORT ON PROPOSED OPERATIONS No. P 177-13

SEC. 3606 WELL

~~Mr.~~ Dr. M. S. Frankel, Agent
ARGO PETROLEUM CORP.
10880 Wilshire Blvd., Suite 1003
Los Angeles, CA 90024

Long Beach, Calif.
Jan. 6, 1977

DEAR SIR:

Your _____ proposal to drill _____ Well No. WAAP 9 (037-21768),
Section 19, T. 4S, R. 13W, S.B. B. & M., Wilmington Field, Los Angeles County,
dated 12/28/76, received 12/29/76, has been examined in conjunction with records filed in this office.

THE PROPOSAL IS APPROVED PROVIDED:

1. A COPY OF THIS APPROVAL SHALL BE POSTED AT THE WELL SITE PRIOR TO COMMENCING OPERATIONS.
2. Drilling fluid of a quality and in sufficient quantity to control all subsurface conditions in order to prevent blowouts shall be used.
3. Blowout prevention equipment, conforming to this Division's Class III requirements, shall be installed and maintained in operating condition at all times.
4. Sufficient cement shall be used to fill back of the 8-5/8" casing.
5. The provisions of Sec. 3606 relating to derricks and subsurface spacing shall be followed.
6. A directional survey shall be made and filed with this Division.
7. THIS DIVISION SHALL BE NOTIFIED TO WITNESS:
 - a. A test of the installed blowout prevention equipment before drilling below 600'.
 - b. A test of the effectiveness of the 8-5/8" shut-off.

VFG:d

Blanket Bond

cc EDP

M. G. MEFFERD, Acting Chief
~~JOHN F. MATTHEWS, Jr., State Oil and Gas Supervisor~~

By M. B. Albright, Deputy

D
Sec 3606

DIVISION OF OIL AND GAS
Notice of Intention to Drill New Well

037-21768

This notice and indemnity or cash bond shall be filed, and approval given, before drilling begins. If operations have not commenced within one year of receipt of the notice, this notice will be considered cancelled.

| FOR DIVISION USE ONLY | | | | | |
|-----------------------|-----------------|-------|------|-------|-----|
| MAP | MAP BOOK | CARDS | BOND | FORMS | |
| | | | | 114 | 121 |
| 128 | 12/30/76 HPO | ✓ | B | ✓ | ✓ |

"American Can" 3

DIVISION OF OIL AND GAS

~~WAAP 9~~

In compliance with Section 3203, Division 3, Public Resources Code, notice is hereby given that it is our intention to commence drilling well No. ~~WAAP #9~~, API No. 037-21768
(Assigned by Division)

Sec. 19, T. 4S, R. 13W, SB B. & M., Wilmington Field, Los Angeles County.

Legal description of mineral-right lease, consisting of _____ acres, is as follows: _____
(Attach map or plat to scale)
previously submitted

Do mineral and surface leases coincide? Yes _____ No X If answer is no, attach legal description of both surface and mineral leases, and map or plat to scale.

Location of well 95 feet northerly property along ~~section~~ line and 148 feet easterly
(Direction) (Direction)
at right angles to said line from the southwest corner of ~~section~~ property which is the
northeast corner of Main St. and the AT&SF RR right-of-way

If well is to be directionally drilled, show proposed coordinates at total depth 76' N & 1053' E of surface
Elevation of ground above sea level 40 feet.

All depth measurements taken from top of Kelly bushing which is 10 feet above ground.
(Derrick Floor, Rotary Table or Kelly Bushing)

PROPOSED CASING PROGRAM

| SIZE OF CASING INCHES A.P.I. | WEIGHT | GRADE AND TYPE | TOP | BOTTOM | CEMENTING DEPTHS | CALCULATED FILL BEHIND CASING |
|------------------------------|--------|----------------|------|--------|----------------------|-------------------------------|
| 13-3/8" | 48 | H-40 | 0 | 600 | 600 | Surface |
| 8-5/8" | 32 | K-55 | 0 | 3580 | 3580 | 2100' |
| 6-5/8" | 24 | K-55 | 3495 | 3935 | Hung & gravel packed | |

(A complete drilling program is preferred and may be submitted in lieu of the above program)

Intended zone(s) of completion Ranger, 3935', 1000 psi Estimated total depth 3935'
(Name, depth and expected pressure)

It is understood that if changes in this plan become necessary we are to notify you immediately.

Address 10880 Wilshire Blvd., #1003
(Street)
Los Angeles, CA 90024
(City) (State) (Zip)
Telephone Number 213/475-4976

ARGO PETROLEUM CORPORATION
(Name of Operator)
By C. Bosker 12-28-76
(Name) (Date)
Type of Organization corporation
(Corporation, Partnership, Individual, etc.)

2

