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Form C-105  
Revised 11-68

NEW MEXICO OIL CONSERVATION COMMISSION  
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

RECEIVED

MAY 19 1978

|                                                                                                                                         |  |                                                                                |  |                                             |  |                                                      |  |                                        |  |                                                                                                      |  |
|-----------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------|--|---------------------------------------------|--|------------------------------------------------------|--|----------------------------------------|--|------------------------------------------------------------------------------------------------------|--|
| 1a. TYPE OF WELL                                                                                                                        |  | OIL WELL <input checked="" type="checkbox"/>                                   |  | GAS WELL <input type="checkbox"/>           |  | DRY <input type="checkbox"/>                         |  | OTHER <input type="checkbox"/>         |  | 5a. Indicate Type of Lease<br>State <input checked="" type="checkbox"/> Fee <input type="checkbox"/> |  |
| b. TYPE OF COMPLETION                                                                                                                   |  | NEW WELL <input checked="" type="checkbox"/>                                   |  | WORK OVER <input type="checkbox"/>          |  | DEEPEN <input type="checkbox"/>                      |  | PLUG BACK <input type="checkbox"/>     |  | 5. State Oil & Gas Lease No.<br>647                                                                  |  |
|                                                                                                                                         |  |                                                                                |  |                                             |  |                                                      |  |                                        |  | 7. Unit Agreement Name<br>Empire Abo Pressure Maintenance Project                                    |  |
| 2. Name of Operator<br>Atlantic Richfield Company                                                                                       |  |                                                                                |  |                                             |  |                                                      |  |                                        |  | 8. Farm or Lease Name<br>Empire Abo Unit "H"                                                         |  |
| 3. Address of Operator<br>P. O. Box 1710, Hobbs, New Mexico 88240                                                                       |  |                                                                                |  |                                             |  |                                                      |  |                                        |  | 9. Well No.<br>301                                                                                   |  |
| 4. Location of Well                                                                                                                     |  |                                                                                |  |                                             |  |                                                      |  |                                        |  | 10. Field and Pool, or Wildcat<br>Empire Abo                                                         |  |
| UNIT LETTER <u>N</u> LOCATED <u>150</u> FEET FROM THE <u>South</u> LINE AND <u>1650</u> FEET FROM                                       |  |                                                                                |  |                                             |  |                                                      |  |                                        |  | 12. County<br>Eddy                                                                                   |  |
| THE <u>West</u> LINE OF SEC. <u>33</u> TWP. <u>17S</u> RGE. <u>28E</u> NMPM                                                             |  |                                                                                |  |                                             |  |                                                      |  |                                        |  |                                                                                                      |  |
| 15. Date Spudded<br>4/15/78                                                                                                             |  | 16. Date T.D. Reached<br>4/29/78                                               |  | 17. Date Compl. (Ready to Prod.)<br>5/13/78 |  | 18. Elevations (DF, RKB, RT, GR, etc.)<br>3659.8' GR |  | 19. Elev. Casinghead                   |  |                                                                                                      |  |
| 20. Total Depth<br>6378'                                                                                                                |  | 21. Plug Back T.D.<br>6282'                                                    |  | 22. If Multiple Compl., How Many            |  | 23. Intervals Drilled By<br>Rotary Tools<br>0-6378'  |  | Cable Tools                            |  |                                                                                                      |  |
| 24. Producing Interval(s), of this completion - Top, Bottom, Name<br>6084-6100' w/2 JSPF Abo Reef                                       |  |                                                                                |  |                                             |  |                                                      |  | 25. Was Directional Survey Made<br>No  |  |                                                                                                      |  |
| 26. Type Electric and Other Logs Run<br>DLL w/RXO & Caliper, GR-N, GR, CNL, FDC w/Caliper, GR Sonic, VDL                                |  |                                                                                |  |                                             |  |                                                      |  | 27. Was Well Cored<br>No               |  |                                                                                                      |  |
| 28. CASING RECORD (Report all strings set in well)                                                                                      |  |                                                                                |  |                                             |  |                                                      |  |                                        |  |                                                                                                      |  |
| CASING SIZE                                                                                                                             |  | WEIGHT LB./FT.                                                                 |  | DEPTH SET                                   |  | HOLE SIZE                                            |  | CEMENTING RECORD                       |  | AMOUNT PULLED                                                                                        |  |
| 8-5/8" OD                                                                                                                               |  | 24# K-55                                                                       |  | 595'                                        |  | 11"                                                  |  | 350 sx + 7 yds Redi-mix                |  |                                                                                                      |  |
| 5-1/2" OD                                                                                                                               |  | 15.5# K-55                                                                     |  | 6368'                                       |  | 7-7/8"                                               |  | 1125 sx                                |  |                                                                                                      |  |
|                                                                                                                                         |  |                                                                                |  |                                             |  |                                                      |  |                                        |  |                                                                                                      |  |
|                                                                                                                                         |  |                                                                                |  |                                             |  |                                                      |  |                                        |  |                                                                                                      |  |
| 29. LINER RECORD                                                                                                                        |  |                                                                                |  |                                             |  |                                                      |  |                                        |  |                                                                                                      |  |
| SIZE                                                                                                                                    |  | TOP                                                                            |  | BOTTOM                                      |  | SACKS CEMENT                                         |  | SCREEN                                 |  |                                                                                                      |  |
|                                                                                                                                         |  |                                                                                |  |                                             |  |                                                      |  |                                        |  |                                                                                                      |  |
|                                                                                                                                         |  |                                                                                |  |                                             |  |                                                      |  |                                        |  |                                                                                                      |  |
| 30. TUBING RECORD                                                                                                                       |  |                                                                                |  |                                             |  |                                                      |  |                                        |  |                                                                                                      |  |
| SIZE                                                                                                                                    |  | DEPTH SET                                                                      |  | PACKER SET                                  |  |                                                      |  |                                        |  |                                                                                                      |  |
| 2-3/8" OD                                                                                                                               |  | 5895'                                                                          |  | 5895'                                       |  |                                                      |  |                                        |  |                                                                                                      |  |
|                                                                                                                                         |  |                                                                                |  |                                             |  |                                                      |  |                                        |  |                                                                                                      |  |
|                                                                                                                                         |  |                                                                                |  |                                             |  |                                                      |  |                                        |  |                                                                                                      |  |
| 31. Perforation Record (Interval, size and number)<br>6084-6100' (2 JSPF = 34 - .40" holes)                                             |  |                                                                                |  |                                             |  | 32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.       |  |                                        |  |                                                                                                      |  |
|                                                                                                                                         |  |                                                                                |  |                                             |  | DEPTH INTERVAL                                       |  | AMOUNT AND KIND MATERIAL USED          |  |                                                                                                      |  |
|                                                                                                                                         |  |                                                                                |  |                                             |  | 6206-6226'                                           |  | 300 gals 15% NE FE acid, 500 gals      |  |                                                                                                      |  |
|                                                                                                                                         |  |                                                                                |  |                                             |  |                                                      |  | 10# CaCl wtr, 500 gals LC, 2000 gals   |  |                                                                                                      |  |
|                                                                                                                                         |  |                                                                                |  |                                             |  |                                                      |  | 60/40 15% NE/xylene, flushed w/18      |  |                                                                                                      |  |
|                                                                                                                                         |  |                                                                                |  |                                             |  |                                                      |  | BLC. (cont'd on attached Page 2)       |  |                                                                                                      |  |
| 33. PRODUCTION                                                                                                                          |  |                                                                                |  |                                             |  |                                                      |  |                                        |  |                                                                                                      |  |
| Date First Production<br>5/13/78                                                                                                        |  | Production Method (Flowing, gas lift, pumping - Size and type pump)<br>Flowing |  |                                             |  |                                                      |  | Well Status (Prod. or Shut-in)<br>Prod |  |                                                                                                      |  |
| Date of Test<br>5/15/78                                                                                                                 |  | Hours Tested<br>24                                                             |  | Choke Size<br>48/64"                        |  | Prod'n. For Test Period<br>514                       |  | Oil - Bbl.<br>278                      |  | Gas - Oil Ratio<br>540:1                                                                             |  |
| Flow Tubing Press.<br>225#                                                                                                              |  | Casing Pressure<br>Pkr                                                         |  | Calculated 24-Hour Rate<br>514              |  | Oil - Bbl.<br>278                                    |  | Gas - MCF<br>0                         |  | Water - Bbl.<br>44°                                                                                  |  |
| 34. Disposition of Gas (Sold, used for fuel, vented, etc.)<br>Sold                                                                      |  |                                                                                |  |                                             |  |                                                      |  |                                        |  | Test Witnessed By<br>N. H. Truitt                                                                    |  |
| 35. List of Attachments<br>Logs as listed in item 26 above & Inclination Report                                                         |  |                                                                                |  |                                             |  |                                                      |  |                                        |  |                                                                                                      |  |
| 36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief. |  |                                                                                |  |                                             |  |                                                      |  |                                        |  |                                                                                                      |  |
| SIGNED <u>[Signature]</u>                                                                                                               |  |                                                                                |  | TITLE <u>Dist Drlg. Supt.</u>               |  |                                                      |  | DATE <u>5/18/78</u>                    |  |                                                                                                      |  |

This form is to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

# INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

## Southeastern New Mexico

## Northwestern New Mexico

|                          |                        |                             |                        |
|--------------------------|------------------------|-----------------------------|------------------------|
| T. Anhy _____            | T. Canyon _____        | T. Ojo Alamo _____          | T. Penn. "B" _____     |
| T. Salt _____            | T. Strawn _____        | T. Kirtland-Fruitland _____ | T. Penn. "C" _____     |
| B. Salt _____            | T. Atoka _____         | T. Pictured Cliffs _____    | T. Penn. "D" _____     |
| T. Yates _____           | T. Miss _____          | T. Cliff House _____        | T. Leadville _____     |
| T. 7 Rivers _____        | T. Devonian _____      | T. Menefee _____            | T. Madison _____       |
| T. Queen _____           | T. Silurian _____      | T. Point Lookout _____      | T. Elbert _____        |
| T. Grayburg _____        | T. Montoya _____       | T. Mancos _____             | T. McCracken _____     |
| T. San Andres _____      | T. Simpson _____       | T. Gallup _____             | T. Ignacio Qtzte _____ |
| T. Glorieta _____        | T. McKee _____         | Base Greenhorn _____        | T. Granite _____       |
| T. Paddock _____         | T. Ellenburger _____   | T. Dakota _____             | T. _____               |
| T. Blinebry _____        | T. Gr. Wash _____      | T. Morrison _____           | T. _____               |
| T. Tubb _____            | T. Granite _____       | T. Todilto _____            | T. _____               |
| T. Drinkard _____        | T. Delaware Sand _____ | T. Entrada _____            | T. _____               |
| T. Abo _____ 5940'       | T. Bone Springs _____  | T. Wingate _____            | T. _____               |
| T. Wolfcamp _____        | T. _____               | T. Chinle _____             | T. _____               |
| T. Penn. _____           | T. _____               | T. Permian _____            | T. _____               |
| T. Cisco (Bough C) _____ | T. _____               | T. Penn. "A" _____          | T. _____               |

## OIL OR GAS SANDS OR ZONES

|                                                    |                            |
|----------------------------------------------------|----------------------------|
| No. 1, from _____ 6084' _____ to _____ 6100' _____ | No. 4, from _____ to _____ |
| No. 2, from _____ to _____                         | No. 5, from _____ to _____ |
| No. 3, from _____ to _____                         | No. 6, from _____ to _____ |

## IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

|                                 |                  |
|---------------------------------|------------------|
| No. 1, from _____ to _____ feet | None encountered |
| No. 2, from _____ to _____ feet | _____            |
| No. 3, from _____ to _____ feet | _____            |
| No. 4, from _____ to _____ feet | _____            |

## FORMATION RECORD (Attach additional sheets if necessary)

| From | To   | Thickness<br>in Feet | Formation         | From | To | Thickness<br>in Feet | Formation |
|------|------|----------------------|-------------------|------|----|----------------------|-----------|
| 0    | 783  |                      | Surface & Red Bed |      |    |                      |           |
| 783  | 2072 |                      | Anhydrite         |      |    |                      |           |
| 2072 | 4204 |                      | Anhydrite & Lime  |      |    |                      |           |
| 4204 | 6378 |                      | Lime              |      |    |                      |           |

Empire Abo Unit "H" #301  
Form C-105

32. Acid, Shot, Fracture, Cement Squeeze, Etc (cont'd)

| <u>Depth Interval</u> | <u>Amount &amp; Kind Material Used</u>                                                                                               |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| 6206-6226'            | Squeeze cemented perfs w/92 sx C1 C LWL & C1 C<br>cmt cont'g 2% CaCl                                                                 |
| 6084-6100'            | Acidized w/300 gals 15% HCL followed by 1000 gals<br>10# CaCl wtr, 1000 gals LC, 2000 gals 60/40 15%<br>NE/xylene. Flushed w/24 BLC. |

FIELD Empire Abo COUNTY Eddy OCC NUMBER \_\_\_\_\_  
OPERATOR Atlantic Richfield Company ADDRESS P. O. Box 1710, Hobbs, NM 88240  
LEASE Empire Abo Unit #H 301 WELL NO. H301 SURVEY 150' FSL & 1650' FWL  
33-17-28

RECORD OF INCLINATION

| <u>DEPTH (FEET)</u> | <u>ANGLE OF INCLINATION (DEGREES)</u> |
|---------------------|---------------------------------------|
| 503                 | 1/2                                   |
| 600                 | 1                                     |
| 1093                | 3/4                                   |
| 1582                | 1                                     |
| 1979                | 3                                     |
| 2542                | 2 1/2                                 |
| 3023                | 2                                     |
| 3518                | 2                                     |
| 3604                | 2 1/4                                 |
| 4100                | 1 3/4                                 |
| 4593                | 2 1/2                                 |
| 4838                | 3                                     |
| 5023                | 4                                     |
| 5243                | 4 1/4                                 |
| 5341                | 4                                     |
| 5591                | 4                                     |
| 6029                | 4 1/2                                 |
| 6370                | 4                                     |

Certification of personal knowledge Inclination Data:

I hereby certify that I have personally assembled the data and facts placed on this form, and such information given above is true and complete to the best of my knowledge.

HONDO DRILLING COMPANY

BY: [Signature]  
Walter Frederickson  
Vice President

Sworn and subscribed to before me the undersigned authority, on this the

10<sup>th</sup> day of May, 1978.

Margaret B. Anderson Notary Public in and for Hilland, County, Texas  
Margaret B. Anderson