

(SUBMIT IN TRIPLICATE)

Indian Agency Window Rock

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

Allottee Navajo

Lease No. 14-20-603-735

|  |    |  |
|--|----|--|
|  |    |  |
|  | X  |  |
|  | 13 |  |

SUNDRY NOTICES AND REPORTS ON WELLS

|                                               |                                            |
|-----------------------------------------------|--------------------------------------------|
| NOTICE OF INTENTION TO DRILL                  | SUBSEQUENT REPORT OF WATER SHUT-OFF        |
| NOTICE OF INTENTION TO CHANGE PLANS           | SUBSEQUENT REPORT OF SHOOTING OR ACIDIZING |
| NOTICE OF INTENTION TO TEST WATER SHUT-OFF    | SUBSEQUENT REPORT OF ALTERING CASING       |
| NOTICE OF INTENTION TO REDRILL OR REPAIR WELL | SUBSEQUENT REPORT OF REDRILLING OR REPAIR  |
| NOTICE OF INTENTION TO SHOOT OR ACIDIZE       | SUBSEQUENT REPORT OF ABANDONMENT           |
| NOTICE OF INTENTION TO PULL OR ALTER CASING   | SUPPLEMENTARY WELL HISTORY                 |
| NOTICE OF INTENTION TO ABANDON WELL           | Completion Summary                         |

(INDICATE ABOVE BY CHECK MARK NATURE OF REPORT, NOTICE, OR OTHER DATA)

June 16, 1959

Well No. 4 is located 1980 ft. from N line and 1980 ft. from E line of sec. 13

C SW NE Section 13 26N 14W New Mexico PM  
(1/4 Sec. and Sec. No.) (Twp.) (Range) (Meridian)

Bisti-Gallup San Juan New Mexico  
(Field) (County or Subdivision) (State or Territory)

The elevation of the ~~surface~~ above sea level is 6357 ft.  
Ground Level

DETAILS OF WORK

(State names of and expected depths to objective sands; show sizes, weights, and lengths of proposed casings; indicate mudding, cementing points, and all other important proposed work)

PBTD - 5227'. Swabbed hole down and dry tested casing. Loaded hole with 40 bbls. of oil. Ran gamma-ray/neutron survey from 5229' to 5000'. Perforated with 4 jets per foot from 5190' to 5206'. Swabbed back 40 bbls. of load oil. Swabbed 8 bbls. of new oil in 2 hours. Loaded hole with 120 bbls. of oil. Pumped 30 bbls. of oil into formation at rate of 40 bbls. per. min. and 2400 psi. Sand-fraced with 60,000 lbs of sand and 1500 lbs of FL-2 in 30,000 gal of lease crude. Flushed with 150 bbls of oil. Initial treating pressure 2400 psi., final treating pressure 2000 psi, final flush pressure 2200 psi, 10 min SIP - 250 psi. Two hour SIP - 125 psi. Total load oil used 1000 bbls. Flowed back 13 bbls. of load oil. Cleaned out 72' sand. Recovered 1000 bbls of load oil in two days.

BHP - 1058 psig at plus 1300' datum after 42 hours shut in.

I understand that this plan of work must receive approval in writing by the Geological Survey before operations may be commenced.

Company The British-American Oil Producing Company

Address P. O. Box 180

Denver 1, Colorado

Original Signed By:

By Thomas M. Hogan

Title District Superintendent

GEOLOGICAL COMPLETION REPORT  
BRITISH-AMERICAN NO. 4 NAVAJO

Well Classification:

Development Well  
Bisti-Gallup Field  
San Juan County, New Mexico  
British-American Navajo #4  
C SW NE Section 13-26N-14W



Well Data:

|                            |                                                                                                |
|----------------------------|------------------------------------------------------------------------------------------------|
| Commenced drilling:        | April 17, 1959                                                                                 |
| Completed drilling:        | April 24, 1959                                                                                 |
| Contractor:                | Foree Drilling Company                                                                         |
| Casing Record:             | 13 3/4" at 333.30 KB w/300 sx cmt<br>5 1/2" at 5295 KB w/100 sx cmt 2% gel.<br>GL 6357 KB 6366 |
| Elevation:                 | Driller 5300 +1066; E.S. 5297 +1069                                                            |
| Total Depth and Datum:     | 5227 +1139 Gallup ss.                                                                          |
| PBTD, Datum and Formation: |                                                                                                |

Completion Data:

|                     |                                                                                           |                    |
|---------------------|-------------------------------------------------------------------------------------------|--------------------|
| Producing zone      | Gallup ss.                                                                                | Net Pay: 16' Perf. |
| Perforations:       | 5190-5206                                                                                 |                    |
| Treatment:          | SOF w/60,000# sand & 30,000 gallons oil<br>B.D. at 2400 psi Treating press 2400 - 2000psi |                    |
| Initial Production: | 175 BO 24 hrs pumping 15x54 S...M.                                                        |                    |

Geological Data:

|                 |                                                                                            |
|-----------------|--------------------------------------------------------------------------------------------|
| Samples:        | 10' samples from 5100-5300<br>Stored at: Four Corners Sample Cut<br>Farmington, New Mexico |
| E.S. Induction: | 2" from 332-5297<br>5" from 1450-1750; 3850-4150; 5050-5297 K.B.                           |
| Microlog:       | Same as 5" Induction                                                                       |
| Gamma ray:      | 5000-5220                                                                                  |
| Geolograph:     | 333-5300                                                                                   |

Formation Record:

| <u>Name</u>     | <u>Schl. Top</u> | <u>Schl. Datum</u> | <u>Fluid Content</u> |
|-----------------|------------------|--------------------|----------------------|
| Pictured Cliffs | 1510             | +4856              | —                    |
| Point Lookout   | 3982             | +2384              | —                    |
| Mancos          | 4137             | +2229              | —                    |
| Upper Gallup    | 5102             | +1264              | —                    |
| Gallup Pay      | 5176             | +1190              | —                    |

Core Record:

| <u>Core No.</u> | <u>Interval</u> | <u>Formation</u> | <u>Ft. Recovered</u> |
|-----------------|-----------------|------------------|----------------------|
| #1              | 5172-5222       | Gallup ss        | 50'                  |

Drill Stem Test Record:

None

# THE BRITISH AMERICAN OIL PRODUCING COMPANY

## Core Report

LEASE Navajo WELL NO. #4 FIELD Bisti-Callup  
 Core No. 1 From 5172' To 5222' Total Recovery in Feet 50' COUNTY San Juan  
 Cutterhead: Size \_\_\_\_\_ Kind \_\_\_\_\_ Date Core Taken \_\_\_\_\_

| DEPTH |       | Coring Time<br>Min Per Ft. | Amt.<br>Rec. | Dip | Complete<br>Formation Description                                                                                          | Fluid<br>Content |
|-------|-------|----------------------------|--------------|-----|----------------------------------------------------------------------------------------------------------------------------|------------------|
| From  | To    |                            |              |     |                                                                                                                            |                  |
| 5172  | 82    |                            |              |     | Sh, Blk w/ few scatt siltst lami                                                                                           |                  |
| 5182  | 90½   |                            |              |     | Lami, sh & siltst 50/50, siltst vfg, gr hd & tite                                                                          | N/S              |
| 5190½ | 5191½ |                            |              |     | Sh, blk, rott.                                                                                                             |                  |
| 5191½ | 97    |                            |              |     | SS, tan, <del>crs</del> g, s & p w/carb spkn, gd ptp dec aly<br>at 96 due to incr shly lenass, gd even stn<br>& yell flor. |                  |
| 5197  | 03½   |                            |              |     | SS, tan, f-m, s&p, glau, flar perm w/stks gd<br>perm, gd por gd even stn & for, sh stks at<br>97, 98, 99, 5200, 01½.       |                  |
| 5203½ | 07    |                            |              |     | SS, shly, vfg, cly fill, no perm, fair por,<br>lt stn, scatt yell flor                                                     |                  |
| 5207  | 08    |                            |              |     | SS, aa, w/4" stk, ss wh, f-m, flau, calc blue<br>flor in wh sd.                                                            |                  |
| 5208  | 10    |                            |              |     | SS, vfg, tan glau & clay fill v. shly - scatt<br>lt stn & flor. no perm. p por                                             |                  |
| 5210  | 22    |                            |              |     | V. shly ss - 60 sd/40 sh, gr-dk gr, vfg cly<br>fill, hd & tite, N/S                                                        |                  |
|       |       |                            |              |     |                                                                                                                            |                  |
|       |       |                            |              |     |                                                                                                                            |                  |
|       |       |                            |              |     |                                                                                                                            |                  |
|       |       |                            |              |     |                                                                                                                            |                  |

Remarks \_\_\_\_\_

H. A. Holton

Signed

Comments - N - to #4 C 31 NE Sec. 13-26N-14W

The Navajo #4 was drilled as a development well in an attempt to extend Bisti production northwest of its present limits.

The top of the first bench Gallup lay was encountered at 5170' +11" and a core was taken in the zone from 5170'-5200' with a recovery of 30 feet. The U. S. Bureau core analysis is for 18 feet of sand capable of commercial production, 10 of which had good permeability and is suitable for Bisti type sands.

No completion problems were encountered and the well was put on production.

The North - ( ) well #33, the Navajo #3 is currently drilling and no recommendations will be made until the evaluation of this test has been completed.

H. A. Holton