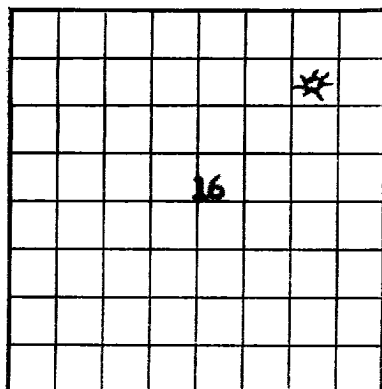


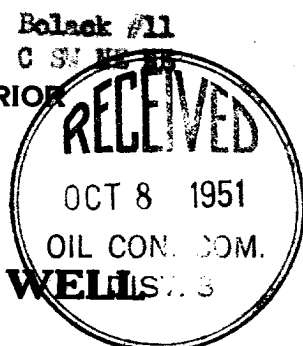
Form 9-390

U. S. LAND OFFICE SANTA FE
SERIAL NUMBER 078872-A
LEASE OR PERMIT TO PROSPECT _____



LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



LOG OF OIL OR GAS WELL

Company THE FRONTIER REFINING COMPANY Address 410 BOSTON BLDG., DENVER, COLO.
Lessor or Tract BOLACK-GOVERNMENT Field U. KUTZ CANYON State NEW MEXICO
Well No. 11 Sec. 16 T. 27N R. 11W Meridian N.M.P.M. County SAN JUAN 6270' KB
Location 990 ft. SW of N Line and 990 ft. EW of E Line of Section 16 Elevation 6261' Grd.
(Derrick floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.

Signed Norman S. Galbraith Title Norman S. Galbraith, Geologist

Date October 4, 1951

The summary on this page is for the condition of the well at above date.

Commenced drilling 7/28, 19 51 Finished drilling 7/30, 19 51

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 3044 to 2055' G No. 4, from _____ to _____
No. 2, from _____ to _____ No. 5, from _____ to _____
No. 3, from _____ to _____ No. 6, from _____ to _____

IMPORTANT WATER SANDS

No. 1, from _____ to _____ No. 3, from _____ to _____
No. 2, from _____ to _____ No. 4, from _____ to _____

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From—	To—	
<u>8-5/8"</u>	<u>13.7</u>	<u>4</u>	<u>API</u>	<u>2028'</u>	<u>API</u>	<u>2028'</u>			<u>Surface</u>
<u>5-1/2"</u>	<u>13.7</u>	<u>4</u>	<u>API</u>	<u>1978'</u>	<u>API</u>	<u>1978'</u>			<u>Production</u>
<u>1"</u>	<u>1.7</u>	<u>4</u>	<u>API</u>	<u>2028'</u>	<u>API</u>	<u>2028'</u>			<u>Production</u>

HISTORY OF OIL OR GAS WELL

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
<u>8-5/8"</u>	<u>106' KB</u>	<u>75 sacks</u>	<u>plug</u>	<u>-</u>	<u>-</u>
<u>5-1/2"</u>	<u>1978' KB</u>	<u>150 sacks</u>	<u>plug</u>	<u>-</u>	<u>-</u>

PLUGS AND ADAPTERS

Heaving plug—Material _____ Length _____ Depth set _____

Adapters—Material _____ Size _____

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out
<u>4x20</u>	<u>3</u>	<u>liquid nitro</u>	<u>160 lbs</u>	<u>8/10/51</u>	<u>1996-1961'</u>	<u>2063' KB</u>

TOOLS USED

Rotary tools were used from 0 feet to 2063' feet, and from _____ feet to _____ feet

Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

DATES

Completed 8/12, 19 51 Put to producing Shut in, 19 51

The production for the first 24 hours was _____ barrels of fluid of which _____ % was oil; _____ % emulsion; _____ % water; and _____ % sediment. Gravity, °Bé. _____

If gas well, cu. ft. per 24 hours 4,950,000 Gallons gasoline per 1,000 cu. ft. of gas _____

Rock pressure, lbs. per sq. in. 465#

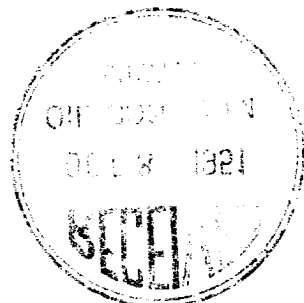
EMPLOYEES

Camden Drilling Company, Driller _____, Driller _____

English Drilling Company, Driller _____, Driller _____

FORMATION RECORD

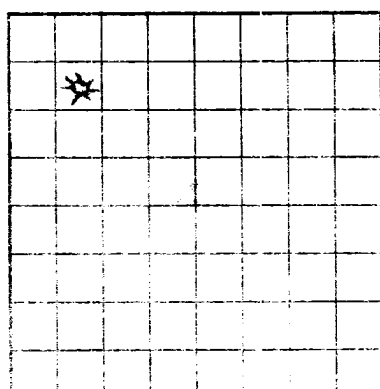
FROM—	TO—	TOTAL FEET	FORMATION
<u>0</u>	<u>878</u>	<u>878</u>	<u>Sand and shale. Top Of Alamo at 878'.</u>
<u>878</u>	<u>964</u>	<u>88</u>	<u>Sand with shale breaks. Top of Kirtland shale 964'.</u>
<u>964</u>	<u>1965</u>	<u>1001</u>	<u>Shale with few sand bodies. Top Pictured Cliffs at 1965'.</u>
<u>1965</u>	<u>2063</u>	<u>93</u>	<u>Sand with shale breaks and trace of coal.</u>
	<u>2063' KE</u>	<u>TD</u>	



(OVER)

U. S. LAND OFFICE
SERIAL NUMBER
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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Y OCATE MELL COFFECTLY

LOG OF OIL OR GAS WELLS

The information given herewith is a complete and correct record of the well and all work done thereon as far as can be determined from all available records.

Location near ft. $\left\{ \begin{array}{l} N \\ S \end{array} \right\}$ of _____ Line and _____ ft. $\left\{ \begin{array}{l} E \\ W \end{array} \right\}$ of _____ Line of _____
Well No. _____ Section T. _____ R. _____ Meridian _____ County _____ State _____

Dresser or Trust _____ Field _____ State _____

Company _____ Address _____

Date _____
Changed 7960 RCIFD at 465# SIP. Will complete as a short in gas well.
8/12/79

7/28/51 finished. Set 5 joints (97') of 8-5/8" OD, Std. Wds. 27-3/4" casing at 106' KB with 75 sacks of regular cement and circulated to surface. Plug down at 2100 f.m. Tested casing with 3000 for 30 minutes. After drilling plug, tested with 3000 for 30 minutes. KB drilled to 1535' KB 7/29/51 Drilled to 1535' KB 7/30/51 Drilled to 2063' KB TB. Drilling completed. Ran electric log from 106-2058 Top Plotted Cables at 1965'. Ran 82 joints of 5" OD, Std., 13#/ft. casing set at 1978'. KB and cemented with 150 sacks of regular cement. 7/31/51 Plug down 1:00 A.M. Moved off rotary tools. Drilled thru plug and balled hole dry down to casing shoe. Hole stood dry for 30 minutes. Cleaned out to 2061' KB. 8/10/51 Ran log quarter of 11 gauge wire from 1996-2061' KB with an 11 hour time bomb. Used 8 shells 4x20. Filled hole to 1992' KB with pea gravel. Filled with Cat Seal from 1960-1992 KB and 1992-2061 A.M. Natural gauge of 1570 MCPSD. 8/31/51 Cleaned out.

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked," or left in the well, give its size and location. If the well has been dynamited, give date, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or balling.

HISTORY OF OIL OR GAS WELL

U. S. GOVERNMENT PRINTING OFFICE 16-43041-01

[illegible]

INFORMATION RECORD—Continued

~~CONFIDENTIAL~~

OCT 8 1951
OIL CON. COM.
DIST.

OCT 8 1951

OCT 8 1951

IL CON. COM.

DIST.