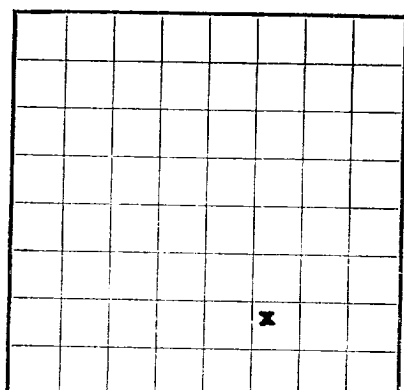


U. S. LAND OFFICE Santa Fe
SERIAL NUMBER 078477
LEASE OR PERMIT TO PROSPECT

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



LOCATE WELL CORRECTLY

LOG OF OIL OR GAS WELL

Company Western Natural Gas Company Address 823 Midland Tower Bldg., Midland, Tex.

Lessor or Tract Nordhaus-Federal Field Undesignated State New Mexico

Well No. 4 Sec. 17 T. 25N R. 7W Meridian N.M. PM County Rio Arriba

Location **990** ft. $\left\{ \begin{smallmatrix} \text{N.} \\ \text{S.} \end{smallmatrix} \right\}$ of **S** Line and **1650** ft. $\left\{ \begin{smallmatrix} \text{E.} \\ \text{W.} \end{smallmatrix} \right\}$ of **E** Line of **Sec. 17** Elevation **6431.01**
(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 W. A. S. Hopper

Date **February 14, 1957** Title **Office Manager**

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

Commenced drilling 12-3-, 1956 Finished drilling 12-11-, 1956

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 2190 to 2220 No. 4, from _____

No. 2, from _____ to _____ No. 5, from _____

No. 3, from _____ to _____

IMPORTANT WATER SANDS

No. 1, from _____ to _____

No. 2, from 2 January 1968 to 1 June 1968. No. 49 from 1 June 1968 to 1 June 1969.

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From—	To—	
8 5/8	24	8		109.8					Surface Production
5 1/2	16.5	8		225	Baker Float				

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
8-5/8	119	90	Pump & plug	8.6	
5 1/2	2265	150	Pump & plug	9.8	

PLUGS AND ADAPTERS

Heaving plug—Material Length Depth set

Adapters—Material _____ Size _____

SHOOTING RECORD

[illegible]

TOOLS USED

Rotary tools were used from 0 feet to 2266 feet, and from _____ feet to _____ feet.

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

DATES

-----**12-30**-----, 19--**56** Put to producing ----- 19

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 ----- Gallons gasoline per 1,000 cu. ft. of gas

Rock pressure, lbs. per sq. in. _____ **Absolute potential - 4185.12 MCFPD - 3/4"**

Seven day shut in pressure -636.3 ^{psig.} EMPLOYEES

_____, Driller _____, Driller

_____, Driller _____, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	1630	1630	Sand with shale breaks
1630	2015	385	Shale with thin sand stringers
2015	2147	132	Sand, shale, & coal, broken
2147	2266	119	Sand with thin shale breaks (Pictured Cliffs)
			Top Pictured Cliffs - 2147'

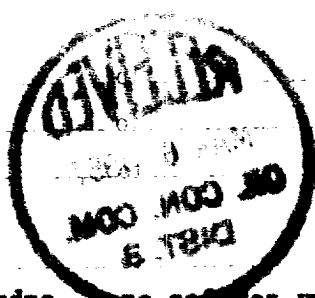
[OVER]

16-43094-3

IDENTIFICATION RECORDS—Continued

1997-1998

010 90 272 2042 20 272



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, size, 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 bailing.

HISTORY OF OIL OR GAS WELL

U. S. GOVERNMENT PRINTING OFFICE 16-43094-2

[illegible]