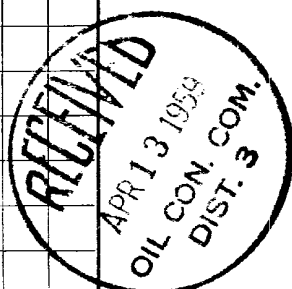


U. S. LAND OFFICE **Santa Fe**  
SERIAL NUMBER **SF 078476**  
LEASE OR PERMIT TO PROSPECT



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

## LOG OF OIL OR GAS WELL

## LOCATE WELL CORRECTLY

Company Western Natural Gas Address 211<sup>1</sup>/<sub>2</sub> West Main  
 Lessor or Tract Oxnard Field So. Blanco P.C. State New Mexico  
 Well No. 4 Sec. 14 T. 27N R. 8W Meridian NMPM County San Juan  
 Location 1644 ft. (N) of N Line and 800 ft. (E) of W Line of Section 14 Elevation 5979 G.L.  
 (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 Calvin M. Rayes

Date 4-8-59 Title Petroleum Engineer

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

Commenced drilling 3-7, 19 59 Finished drilling 3-23, 19 59

**OIL OR GAS SANDS OR ZONES**  
(Denote gas by G)

No. 1, from 2211 to 2292 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 655 to 684      No. 3, from 1020 to 1150'  
No. 2, from 804 to 831      No. 4, from 1450 to 1488'

### CASING RECORD

[illegible]

## MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
8-5/8"	97.40'	73 w/1 sk CaCl <sub>2</sub>	Pump & Plug	- - -	- - -
5-1/2"	2313'	150	Pump & Plug	- - -	- - -

## PLUGS AND ADAPTERS

Heaving plug—Material ..... Length ..... Depth set .....

Adapters—Material ..... Size .....

## SHOOTING RECORD

<b>Size</b>	<b>Shell used</b>	<b>Explosive used</b>	<b>Quantity</b>	<b>Date</b>	<b>Depth shot</b>	<b>Depth cleaned out</b>

## TOOLS USED

Rotary tools were used from 0 feet to 2314 feet, and from \_\_\_\_\_ feet to \_\_\_\_\_ feet

Cable tools were used from \_\_\_\_\_ feet to \_\_\_\_\_ feet, and from \_\_\_\_\_ feet to \_\_\_\_\_ feet

## DATES

-----, 19----- 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 open flow-8,187 MCFPD on 3 hr. flow  
across 3/4" choke.

Fifteen day pressure build-up was \_\_\_\_\_ across 3/4" choke.  
833 psig \_\_\_\_\_, Driller \_\_\_\_\_, Driller \_\_\_\_\_  
\_\_\_\_\_, Driller \_\_\_\_\_, Driller \_\_\_\_\_

## FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	2098	2098	Sand and shale
2098	2211	113	Sand and shale w/coal stringers
2211	2292	81	Sand w/shale stringers
2292	2314	22	Shale

## FORMATION RECORD—Continued

[illegible]

### HISTORY OF OIL OR GAS WELL

**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.**

Perforated 5 $\frac{1}{2}$ " casing from 2215-44' & 2256-72' w/4 jet shots/ft. Treated well w/60,000# of 20-40 mesh sand & 33,450 gals water in two stages w/200 gals mud acid ahead as follows:

1st Stage - 32,000# sd @ 1.8#/gal: Broke down form w/2750#. Treated @ 1600-1700#.

Injected 87 ball sealers.

2nd Stage - 28,000# - sd @ 1.8#/gal: Broke down form w/3250#. Treated @ 1550-1800#. Flushed w/2400 gals water. Overflushed w/210 gals water. Average injection rate was 59.9 BPM.

After flowing and cleaning well approx 39 hours, measured volume w/pitot tube @ 3,006.4 MCFPD. Ran 89 jts of 1" nominal 1.7# 11½ thd line pipe and 1¼" X 1" landing joint plus perforated joint on btm w/3 jet nipples in string. Landed 1" siphon line @ 2257'. Jet nipples run on 2nd, 8th & 16th jts from bottom.

Shut-in well for 15 days before conducting Initial Potential test on 4-7-59. Well was potentialled for an absolute open flow of 8,187 MCFPD. Well shut-in waiting on pipe line connection.

