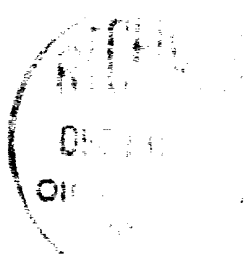


	X				



U. S. LAND OFFICE
SERIAL NUMBER **I-147-Ind-8465**
LEASE OR PERMIT TO PROSPECT

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL.

LOCATE WELL CORRECTLY

Company El Paso Natural Gas Company Address Box 990, Farmington, New Mexico
Lessor or Tract Blanco Development 27-9 Field Blanco M.V. Ext. State New Mexico
Well No. 4-12 Sec. 12 T. 27-N R. 9-W Meridian N.M.P.M. County San Juan
Location 1090 ft. N. of 8 Line and 990 ft. E. of W Line of Section 12 Elevation 6001

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.

Date **December 12, 1960** Title **Petroleum Engineer**

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

Commenced drilling 10-5-60 1960 Finished drilling 10-17- 1960

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

(Denote gas by G)

No. 1, from <u>2040</u> to <u>2120 (G)</u> No. 2, from <u>3665</u> to <u>3735 (G)</u> No. 3, from <u>3735</u> to <u>4302 (G)</u>	No. 4, from <u>4302</u> to <u>4498 (G)</u> No. 5, from _____ to _____ No. 6, from _____ to _____
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IMPORTANT WATER SANDS

No. 1, from _____ to _____

No. 2, from _____ to _____

No. 3, from _____ to _____

No. 4, from _____ to _____

CASING RECORD

Size ending	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From—	To—	
9 5/8"	32.50	8 Rd.	J-55	161	None				surface
7"	20	8 Rd.	J-55	400	Shoe				intermediate
5 1/2"	15.5	8 Rd.	J-55	329	Shoe				prod liner
2"	4.7	8 Rd.	J-55	4493					prod tubing

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
9 5/8"	173	120	circulated		
7"	4200	346	single stage		
5 1/2"	4223-4552	147	single stage		

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 4283 feet, and from 4283 feet to 4558 feet.

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

DATES

DATES

10-24-....., 1960 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 ~~4,332,000~~ Gallons gasoline per 1,000 cu. ft. of gas _____

Rock pressure, lbs. per sq. in. ----- 1098 ----- A.O.F. 6723 MCF/D

EMPLOYEES

....., Driller: Driller

..... Driller: Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	1053	1053	Tan to gry cr-grn ss interbedded w/gry sh.
1053	1197	144	Ojo Alamo ss. White cr-grn s.
1197	1685	488	Kirtland form Gry sh interbedded w/tight gr./fine-grn ss.
1685	2040	355	Fruitland form. Gry carb sh, scattered coals, coals and gry, tight, fine-grn ss.
2040	2120	80	Pictured Cliffs form. Gry, fine-grn, tight, varicolored soft ss.
2120	3665	1545	Lewis form. Gry, fine-grn, dense sil ss.
3665	3735	70	Cliff House ss. Gry, fine-grn, dense sil ss.
3735	4302	567	Menefee form. Gry, fine-grn s, carb sh & coal.
4302	4498	196	Paint Lickout form. Gry very fine sil ss w/frequent sh breaks.
4498	4552	54	Mancos form. Gry carb sh.

[OVER]

10-48004-4

FORMATION RECORD—Continued

[illegible]

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. If in or of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together

1600 #. IN 42 BARS. 100% GAL. Shipped & sets of 18
 2500 #. MAX PR 3000 #. SET TO PR 600-1000-1000-1000
 2500 #. MAX PR 3000 #. SET TO PR 600-1000-1000-1000

HISTORY OF OIL OR GAS WELL

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

Spec Joint Location w/ 28-530 gal water & 60,000 ft. casing.
 3500 ft. max pr 3000 ft., max tr pr 600-1000-1500-2000-
 1600 ft. in 42 hours. 100 gal. dropped & sets of 18
 balls - 5 stages.

2012 SEP 17 PM 1:00:00

10. $\frac{1}{2} \log 2$

SECRET NO 30-44-100 NO 110

1. What is the purpose of the document?
 2. What are the main findings of the study?
 3. What are the implications of the findings?
 4. What are the limitations of the study?
 5. What are the conclusions of the study?

[illegible]

1000 1000 1000 1000 1000

1959-1960

Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains.