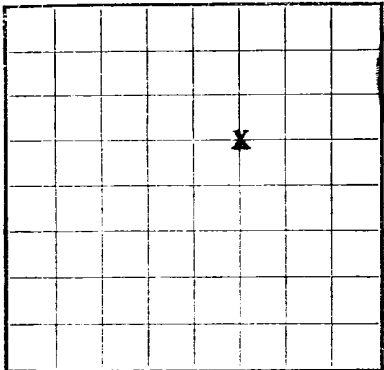
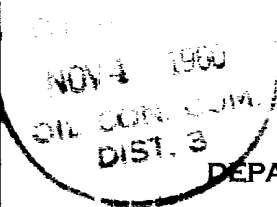




LOCATE WELL CORRECTLY



U. S. LAND OFFICE **SF**
SERIAL NUMBER **080382-A**
LEASE OR PERMIT TO PROSPECT

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company **El Paso Natural Gas Products Co.** Address **Box 1560, Farmington, New Mexico**
Lessor or Tract **Frontier** Field **Undesignated** State **New Mexico**
Well No. **4-C** Sec. **5** T. **27N** R. **11W** Meridian **NMPM** County **San Juan**
Location **1980** ft. **xx** of **N** Line and **1980** ft. **xx** of **E** Line of **Section 5** Elevation **6091'**
(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.

ORIGINAL SIGNED BY: JOHN J. STR

Date **November 1, 1960** Title **Petroleum Engineer**

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

Commenced drilling **July 25**, 19**60** Finished drilling **August 7**, 19**60**

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

No. 1, from **5812** to **5828** No. 4, from to
No. 2, from **5882** to **5902** 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—	
9-5/8"	36.00#	8 Rd.	J-55	161	For. Pat.				Surf. Cag.
5-1/2"	15.50#	8 Rd.	J-55	5174	For. Pat.		5812	5944	Prod. Cag.

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
9-5/8"	173'	150	Pump & Plug		
5-1/2"	5985'	200-1st stage	Pump & Plug		
		100-2nd stage with 2-stage collar at 2170'			

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
			See "Well History"			

TOOLS USED

Rotary tools were used from **0** feet to **5986** feet, and from feet to feet
Cable tools were used from feet to feet, and from feet to feet

DATES

August 13, 19**60** Put to producing **September 30**, 19**60**
The production for the first 24 hours was **200** barrels of fluid of which **100** % was oil; %
emulsion; % water; and % sediment. Gravity, °Bé. **41.4** **xx** **API**
If gas well, cu. ft. per 24 hours Gallons gasoline per 1,000 cu. ft. of gas
Rock pressure, lbs. per sq. in.

EMPLOYEES

, Driller , Driller
, Driller , Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	730	730	Inbd. sandstone and shale.
730	810	80	Ojo Alamo: White, cse. grained sand.
810	1672	862	Kirtland: Gy. sh. inbd. w/tight gy. FG ss.
1672	1870	198	Fruitland: Gy. carb. sh., scat. coals, coals & gy. tight FG ss.
1870	2020	150	Pictured Cliffs: Gy., FG, tight Varicolored soft ss
2020	2800	780	Lewis: Gy. to white ds. sh. w/silty to shaly ss. breaks.
2800	4100	1300	Mesa Verde: Gy., FG, ds. silty ss., carb. shale and coal.
4100	4590	490	Point Lookout: Gy., v/fn. silty ss. w/freq. sh. brks
4590	5466	876	Mancos: Gy. carb. shale.
5466	5944	478	Gallup: Lt. gy. to brn. calc. carb. micac. glauco. Very fn. to med. gr. ss. w/irreg. inbd. sh.
5944	5986	42	Sanastee: Dk. gy. calc. v/fn. to fn. gy. ss. w/calc. veins, w/irreg. inbd. dk. gy. sd.
			TOPS ARE FROM ELECTRIC LOGS AND RADIOACTIVITY LOGS.

FORMATION RECORD—Continued

[illegible]

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of reworking, 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

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

CORES	
8-5-60	5794'-5811'
8-6-60	5811'-5826'
8-7-60	5866'-5900'
	Recovered 34'
	Rec. 14' sand and 3' shale
	Rec. 6' sand and 9' shale

SANDBOIL FRACATURE

SOF perfs. 5882'-5902' w/48,426 gals. oil and 50,000# sand
Flush with 6,000 gals. oil. Injection Rate: 50.0 bpm
Breakdown Pressure--2000 psi Average Treating Pressure--
2250 psi. Maximum Treating pressure--2300 psi. Dropped
40 balls one time.

8-12-60

Bridge Plug at 5840'. SOF peris. 5812'-5828' with 49,970
gals. oil and 42,000# sand; flush with 5,850 gals. oil.
Injection Rate: 46.0 bpm. Breakdown Pressure--1400 psi.
Average Treating Pressure--3600 psi. Maximum Treating
Pressure--2650 psi. Dropped 32 balls one time. 678

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