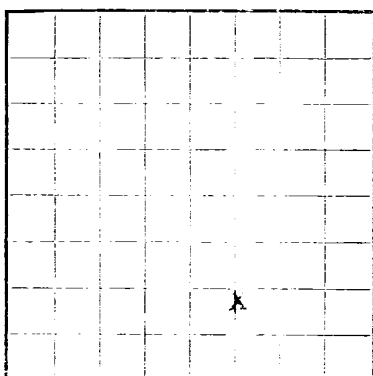


U. S. LAND OFFICE **NM**
SERIAL NUMBER **048567**
LEASE OR PERMIT TO PROSPECT
Frontier Pool UnitUNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOCATE WELL CORRECTLY

LOG OF OIL OR GAS WELL

Company **El Paso Natural Gas Products Co.** Address **Box 1560, Farmington, New Mexico**
Lessor or Tract **Frontier Pool Unit "E"** Field **Undealtg. Clp. and** State **New Mexico**
Well No. **1-E** Sec. **4** T. **27N** R. **11W** Meridian **NMPM** County **San Juan**
Location **790** ft. **N** of **S** Line and **1850** ft. **W** of **E** Line of **Section 4** Elevation **6191'**
(Bench mark 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 **ORIGINAL SIGNED BY: JOHN J. STROJEK**

Date **September 22, 1960** Title **Petroleum Engineer**

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

Commenced drilling **May 23**, 19**60** Finished drilling **June 9**, 19**60**

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from **5897'** to **5919'** No. 4, from _____ to _____
No. 2, from **5968'** to **5993'** No. 5, from _____ to _____
No. 3, from **6545'** to **6587'** 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"	36.0*	8 Rd.	J-55	215'	Tex. Pat.				Surf. Csg.
7"	23.0*	8 Rd.	J-55	6730'	Tex. Pat.		5897	5919	Prod. Csg.
			J-55	5438'	N-80	(1292')	5968	5993	
							6545	6587	

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
9-5/8"	228'	200	Circulated Pump and plug		
7"	6756'	1st stage - 200 2nd stage - 100			

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 _____ feet to **6753** feet, and from _____ feet to _____ feet
Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

DATES

_____ June 28, 19**60** Put to producing _____ August 26, 19**60**
The production for the first 24 hours was **95.8** barrels of fluid of which **100** % was oil; _____ %
emulsion; _____ % water; and _____ % sediment. Gravity, °Bé. **xxx** API **41.7°**
The ~~object of the production~~ hours **ACF 4909 MCF** Gallons gasoline per 1,000 cu. ft. of gas
~~xxxxxx~~
Rock pressure, lbs. per sq. in. _____

EMPLOYEES

_____, Driller _____, Driller
_____, Driller _____, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	857	857	Interbedded ss and shale.
857	950	93	Ojo Alamo: White, coarse grained sand.
950	1774	824	Kirtland: Gy. sh. inbd. w/tight gy. FG ss.
1774	1968	194	Fruitland: Gy. carb. sh., scat. coals, coals & gy. tight FG ss.
1968	2132	164	Pictured Cliffs: Gy. FG, tight, varicolored soft ss.
2132	2900	768	Lewis: Gy. to white ds. sh. w/silty to shaly ss. breaks.
2900	4472	1572	Mesa Verde: Gy., FG, ds. silty ss., carb. shale and coal.
4472	4684	212	Point Lookout: Gy., v/fn. silty ss. w/freq. shale breaks.
4684	5557	873	Mancos: Gy. carb. shale.
5557	6028	471	Gallup: Lt. gy. to brn. calc. carb. micaceous glauconitic. V/fn. to med. gr. ss. w/irreg. inbd. shale.
6028	6396	368	Sanastee: Dk. gy. calc. v/fn. to fn. gy. ss. w/calc. veins, w/irreg. inbd. dk. gy. sd.
6396	6443	47	Greenhorn: highly calc. gy. sh. w/thin ls.
6443	6548	105	Graneros: Dk. gy. sh., fossil & carb. w/pyrite inclusion.
6548	6753	205	Dakota: Lt. to dk. gy. fess. carb. sl/calc. sl/silty ss w/pyrite incls., thin sh. bands clay & sh. brk

(OVER)

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 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

Core #1, 5885'-5916', Rec. 1005.
Core #2, 5959'-5989', Rec. 30'aving 24' sand and 6' shale.

Fractured 6545' - 6581' perforations with 40,000 gals. oil and 50,000# sand. Flashed with 14,450 gals. oil. Injection rate: 35.4 BPM. Maximum treating pressure--1250 psi. Average treating pressure--2100 psi. Breakdown pressure 1600 psi. Injected 84 balls halfway through treatment. 150 psi increase.

Fractured 5968-5993 with 25,500 psi. 61 and 50,000 psi. Finished
with 5,000 psi. ml. Injection Rate: 17.3 gpm. Maximum casing
pressure: 1500 psi. Breakdown pressure: 1400 psi. Average casing
pressure: 2300 psi. Dropped 25 balls. Sanded off.

RECORDED 568-5907 WITH 48.452 gals. oil and 58.000 gal. water
WELL TO 500 yds. oil. Injection rate: 10.7 BWT. Maximum working pressure--2800 psi. Average lifting pressure--2400 psi. Breakdown pressure--2800 psi. Dropped 40 balls one time, 100 psi increase.

Pressure--2200 psi. Dropped 22 balls one time with 150 psi. increase.