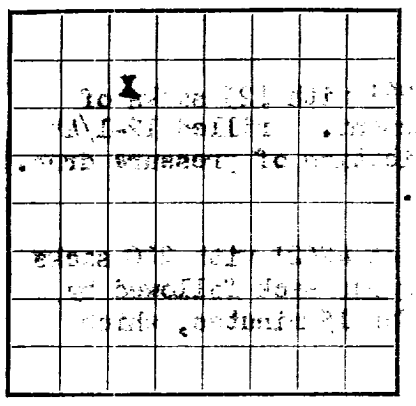
Budget Bureau No. 42-R355.4.
Approval expires 12-31-60.

Form 9-330

U. S. LAND OFFICE Jicarilla Tribal

SERIAL NUMBER

LEASE OR PERMIT TO PROSPECT



LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company Pan American Petroleum Corporation Address Box 480, Farmington, New Mexico

Lessor or Tract Jicarilla Contract 248 Field Otero Chacra State New Mexico

Well No. 14 Sec. 15 T. 25N R. 5W Meridian N.M.P.M. County Rio Arriba

Location 1050 ft. {N. / S.} of N Line and 1698 ft. {E. / W.} of W Line of Section 15 Elevation 7020'

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
Signed L. O. Speer, Jr.

Date August 22, 1961 Title Area Superintendent

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

Commenced drilling July 11, 19 61 Finished drilling July 17, 19 61

OIL OR GAS SANDS OR ZONES

(*Denote gas by G*)

No. 1, from 4084 to 4129 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 ____ 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 From—	Perforated To—	Purpose
8-5/8"	24#	8rd	[illegible]	176	Baker				Surface
4-1/2"	9.5#	8rd	[illegible]	4202	Baker				Oil String

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
8-5/8"	176	125	Halliburton Plug		
4-1/2"	4202	300	Halliburton Plug		

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

TOOLS USED

Rotary tools were used from 0 feet to 4202 feet, and from ____ feet to ____ feet

Cable tools were used from ____ feet to ____ feet, and from ____ feet to ____ feet

DATES

Completed or Shut-in Otero Chacra Well July 26, 19 61 Waiting on Pipe line connection

Put to producing July 26 19 61

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 1520 Gallons gasoline per 1,000 cu. ft. of gas ____

Rock pressure, lbs. per sq. in. 900

EMPLOYEES

T. S. Priddy, Driller Leon Vestal, Driller

Jerry Dooley, Driller D. D. Davis, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	3180	3180	Undifferentiated sands and shales
3180	3280	100	Pictured Cliffs sands and shales
3280	4084		Lewis shale
4084	4129		Chacra sand
			(Tops from "E" log)

[illegible]

[OVER]

16—48094-4

FOLD

MARK

Spudded 12-1/4" hole July 11, 1961. Set 8-5/8" casing at 176' with 125 sacks of cement containing 2 percent Calcium Chloride. Circulated cement. Drilled 12-1/4" hole to 176'. Tested 8-5/8" casing, which held with no indication of pressure drop. Tested casing with 500 psi. Reduced hole to 7-7/8" at 176'.

Total depth 4202' plug back depth 4165'. Set 4-1/2" casing at 4202' with 200 sacks 6 percent gel cement containing 1-1/2 pounds medium tuf plug per sack followed by 100 sacks neat cement. Tested 4-1/2" casing with 3000 psi for 15 minutes, which held with no indication of pressure drop.

Perforated with 6 shots per foot 4092-4096' and 4106-4110'. Sand-water fractured with 33,000 gallons of water containing 5 pounds J-98 per 1000 gallons and 1 percent Calcium Chloride and 30,000 pounds of sand. Breakdown pressure 1900 psi, maximum treating 2300 psi, minimum treating 1800 psi. Average injection rate 34 barrels per minute. Instant shut in pressure 650, 10 minute shut in pressure 350. Circulated out sand 4090-4165'. Landed 2-3/8" tubing at 4100'.

Total depth 4202' plug back depth 4165'. Completed July 26, 1961 as shut in Chacra field development well. Potential test July 26, 1961 for 22-1/2 hours. Flowed 3 hours with tubing pressure flowing 60 psi and casing pressure flowing 275 psi. Flow rate 1520 MCF per day. Top pay Chacra 4090'. Elevation ground level 7008'.