Form 9-330

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

U. S. LAND OFFICE Santa Fe
SERIAL NUMBER 077968
LEASE OR PERMIT TO PROSPECT

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JUL 31 1958
OIL CON COM.
DIST. 3

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

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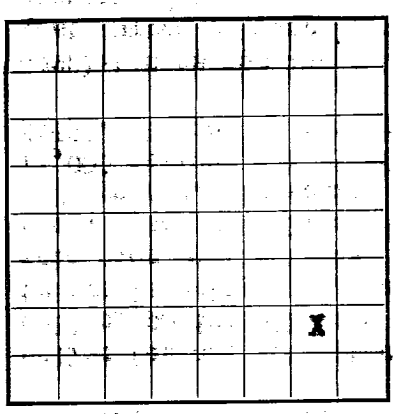

LOCATE WELL CORRECTLY

LOG OF OIL OR GAS WELL

Company Pan American Petroleum Corporation Address Box 487, Farmington, New Mexico
Lessor or Tract USA C. J. Holder Field Undesignated Gallup State New Mexico
Well No. 1 Sec. 21 T. 28N R. 13W Meridian N.M.P.M. County San Juan
Location 990 ft. {N. / S.} of S Line and 990 ft. {E. / W.} of E Line of Section 21 Elevation 6019 (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 [signature]

Date July 28, 1958 Title Field Superintendent

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

Commenced drilling February 15, 19 58 Finished drilling March 4, 19 58

OIL OR GAS SANDS OR ZONES

(*Denote gas by G*)

No. 1, from 5335' to 5420' No. 4, from ____ to ____
No. 2, from 5508' to 5685' 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"	22.7	Slip Joint	Armco	492	Guide				Surface
5-1/2"	14	8 RT	National	6402	Guide				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"	495	400 sacks Halliburton	No. 1 plug		
5-1/2"	6381	210 sacks Halliburton	No. 2 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 6381 feet, and from ____ feet to ____ feet
Cable tools were used from ____ feet to ____ feet, and from ____ feet to ____ feet

DATES

Completed as pumping oil well Undesignated Gallup Field July 27, 19 58
Put to producing July 14, 19 58
The production for the first 24 hours was 95 barrels of fluid of which 99.7% was oil; .3% emulsion; ____% water; and ____% sediment.
Date first new oil to tanks July 14
Gravity, °Bé. ____
If gas well, cu. ft. per 24 hours ____ Gallons gasoline per 1,000 cu. ft. of gas ____
Pumping oil well: 95 barrels oil per day, 14-48" strokes per minute, gas-oil ratio 350.
Rock pressure, lbs. per sq. in. ____

EMPLOYEES

J. H. Milligan, Driller G. A. Roye, Driller
E. G. Irwin, Driller L. J. Hathorn, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	500	500	Surface sand & shale.
500	685	185	Ojo Alamo sand & shale.
685	1255	570	Kirtland-Farmington.
1255	1600	345	Fruitland- shale & coal.
1600	1735	135	Pictured Cliffs sand & shale.
1735	3133	1398	Lewis sand & shale.
3133	3189	56	Cliffhouse sand & shale.
3189	4082	893	Menefee sand & shale.
4082	4350	268	Point Lookout sand & shale.
4350	5233	883	Mancos shale.
5233	5300	67	Gallup sand & shale.
5300	6070	770	Gallup sand.
6070	6146	76	Greenhorn sand & shale.
6146	6200	54	Graneros sand & shale.
6200	6381	181	Dakota sand & shale.
			(Tops from E log.)

[OVER]

16—43094-4

FOLD | MARK

AT THE END OF COMPLETE DRILLER'S LOG, ADD GEOLOGIC TOPS. STATE WHETHER FROM E. OR SAMPLES

FORMATION RECORD—Continued

FROM—	TO—	TOTAL FEET	FORMATION

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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.

USA C. J. Holder Well No. 1 was spudded on February 15, 1958, and on February 16, 1958, 8-5/8" casing was set at 495' with 400 sacks of cement. After waiting on cement for 24 hours, casing and water shut-off were tested with 500 pounds pressure for thirty minutes, which held with no drop in pressure.

5-1/2" casing was set at 6381' with 160 sacks 6% gel cement and followed by 50 sacks neat cement. Top cement at 4875' by temperature survey. After waiting on cement, casing was tested to 2500 pounds pressure for thirty minutes, which held with no drop in pressure.

Perforated two shots per foot 6296-6336. Spotted 1000 gallons mud cut acid on bottom and sand-fracked with 25,000 gallons water and 25,000 pounds sand. Used 25 gallons Hyflo in first 100 barrels of frac. Formation broke at 2600 pounds. Average injection rate 38 barrels per minute. After testing, showed t is zone to be non-commercial, Baker cast iron retainer was set at 6268' and squeezed perforations 6296-6336 with 150 sacks of cement. Perforated four shots per foot 6200-6209, 6239-6246. Sand-water fracked with 15,000 gallons water and 15,000 pounds sand. Formation broke at 2000 pounds. Average injection rate 30 barrels per minute.

After extensive testing, the Dakota formation proved to be non-productive. This well was plugged back to a total depth of 6150' and completion was attempted in the Gallup formation.

Perforated Gallup with two shots per foot 5508-5685. Spotted 500 gallons 15% mud cut acid over perforations. Sand-oil fracked with 80,000 gallons oil and 80,000 pounds sand. Formation broke at 2700 pounds, average injection rate 38 barrels per minute. Injected 150 rubber balls in 6 stages of 25 each during frac for selective treatment. 2" tubing landed at 5681'. Ran rods and pump.

Pulled tubing, attempted to perforate but well started flowing by heads. Killed well by pmping oil down casing. Perforated with two shots per foot 5335-5420. Retrievable bridge plug on tubing set at 5455'. Spotted 500 gallons 15% mud cut acid over perforations. Sand-oil fracked with 40,000 gallons oil and 40,000 pounds sand. Used 25 gallons Hyflo in first 100 barrels treatment. Formation broke at 2000 pounds. Injection rate 40 barrels per minute. Injected 25 ball sealers after 13,000 gallons and 25 after 26,000 gallons. Pulled retrievable bridge plug set at 5455'. Landed 2" tubing at 5681'.

Completed as pumping oil well, Undesignated Gallup Field, July 27, 1958. Potential test pumped 95 barrels oil per day, 14-48" strokes per minute. Gas-oil ratio 350, gravity 40.4° API.