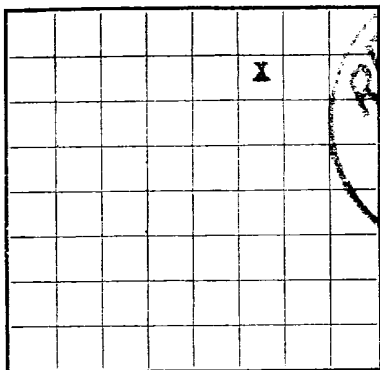




LOCATE WELL CORRECTLY

Santa Fe
U. S. LAND OFFICE
SERIAL NUMBER **SF-077382**
LEASE OR PERMIT TO PROSPECTUNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company **Pan American Petroleum Corporation** Address **Box 487, Farmington, New Mexico**
Lessor or Tract **USA Hargraves "H"** Field **Angels Peak Dakota** State **New Mexico**
Well No. **1** Sec. **9** T. **27N** R. **10W** Meridian **N.M.P.M.** County **San Juan**
Location **729** ft. **S.** of **N.** Line and **1230** ft. **W.** of **E.** Line of **Section 9** Elevation **6093** (RDB)
(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 **E. M. Sauer, Jr.**Date **September 17, 1959** Title **Area Engineer**

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

Commenced drilling **August 13, 1959** Finished drilling **August 25, 1959**

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from **64.61** to **697 (G)** 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		Purpose
							From—	To—	
8-5/8"	21	8RT	National	995	Guide				Surface
(4-1/2"	9.5	8RT	National	6395	Guide				Oil String)
(4-1/2"	11.6	8RT	National	248	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"	364'	225 sacks cement	Halliburton 1 plug		
4-1/2"	6600'	750 sacks cement	Baker 2-stage		

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 _____ feet to **6600** feet, and from _____ feet to _____ feet
Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

DATES

Completed as shut in gas well Angels Peak **Dakota Field September 6, 1959** Put to producing **Shut in for pipeline connection September 6, 1959**
Preliminary Test **4261 MCPPD**

The production for the first 24 hours was _____ barrels of fluid of which _____ % was oil; _____ % emulsion; _____ % water; and _____ % sediment. Gravity, °Bé. _____

If gas well, **MCFT** per 24 hours _____ Gallons gasoline per 1,000 cu. ft. of gas _____Rock pressure, lbs. per sq. in. **4261****1956** Shut in casing pressure 8 days.

EMPLOYEES

_____, Driller **Lee Naylor** _____, Driller **Clair Wildon**
_____, Driller **R. J. Schmidt** _____, Driller **Glen Sanford**

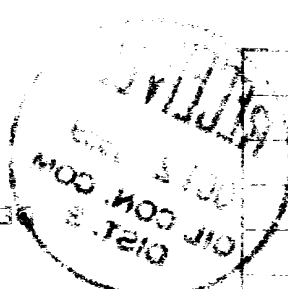
FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	365	365	Surface sands & shales.
365	965	600	Animas sands & shales.
965	1100	135	Ojo Alamo sands.
1100	1690	590	Kirtland-Farmington sands & shales.
1690	1975	285	Fruitland sands, shales & coals.
1975	2025	50	Pictured Cliffs sands & shales.
2025	3485	1460	Lewis shales & sands.
3485	4640	1155	Mesaverde sands, shales & coals.
4640	5495	855	Mancos shale.
5495	6280	785	Gallup sands & shales.
6280	6340	60	Greenhorn shale.
6340	6400	60	Graneros shales & sands.
6400	6457	57	Dakota sands, shales & coals.
6457	6600	143	Dakota pay sands, shales & coals.

(Tops from B log)

Potential Test 9-25-59 flowed 3116 MCPPD through 3/4" choke after 3 hours. Absolute potential 3633 MCPPD.

1. The first of these is the fact that the Government has not yet decided whether it will accept the offer of the United States to provide a loan of \$100 million to the Government of the Republic of China for the purpose of financing the construction of a new airport at Taichung.



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

100 OF OUT OF CARS WEST

DOUGLAS W. COBBETT

1. Name of the person or organization: _____
2. Address: _____
3. City: _____ State: _____ Zip: _____
4. Telephone: _____
5. E-mail: _____

Completed as shown in Gas well number 1774
 Located in Section 6, T19N, R10E, S12E

London 24 January 1961

barrels per minute.

Pressure 1500 psi, average treating pressure 2850 psi, average injection rate 32 gpm
sand and water flowed in 30,000 gallons water and 50,000 pounds sand. Breakdown

[illegible]

Moved in completion, unit. Spotted 250 gallons H₂O. Tested casing with 300 psi for

two stage cement tool and plug to 6561. Released rotary rig on August 27, 1959.

Followed by 100 sacks neat cement. Good results throughout. Tested both stages with 1000 psi. 15 minutes soaking and with no indication of pressure drop. Dried.

4-1/2" casing was set 2600' with two stage cement foot at 2340'. Cemented first stage with 400 sacks 6% gel cement containing 1-1/2 pounds Tuf Plug per sack,

URGENT 06-11-79 0100Z
FM JCRC
TO DIA
SUBJ: IMPROVED WATER SANDS
INFO: DIA
REF: DIA
CITE: DIA

with 1050 psi for 30 minutes, which held with no indication of pressure drop.

casting was set at 364 feet with 225 sacks of cement containing 2% calcium chloride. After waiting on cement for 10 minutes and water shut off, were tested.

~~USA HARRY S. TRUMAN LIBRARY~~

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.

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 "mashed," or left in place well, give date, size and location. The well has been dynamited, give date, size, position, and depth. Number

U. S. GOVERNMENT PRINTING OFFICE 16-54904-2

HISTORY OF OIL OR GAS WELL.

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

FROM—	TO—	TOTAL FEET	FORMATION
100.00	100.00	0.00	Surface sand & gravel.
99.50	100.00	0.50	Gravel sand & gravel.
99.00	100.00	1.00	Gravel sand & gravel.
98.50	100.00	1.50	Gravel sand & gravel.
98.00	100.00	2.00	Gravel sand & gravel.
97.50	100.00	2.50	Gravel sand & gravel.
97.00	100.00	3.00	Gravel sand & gravel.
96.50	100.00	3.50	Gravel sand & gravel.
96.00	100.00	4.00	Gravel sand & gravel.
95.50	100.00	4.50	Gravel sand & gravel.
95.00	100.00	5.00	Gravel sand & gravel.
94.50	100.00	5.50	Gravel sand & gravel.
94.00	100.00	6.00	Gravel sand & gravel.
93.50	100.00	6.50	Gravel sand & gravel.
93.00	100.00	7.00	Gravel sand & gravel.
92.50	100.00	7.50	Gravel sand & gravel.
92.00	100.00	8.00	Gravel sand & gravel.
91.50	100.00	8.50	Gravel sand & gravel.
91.00	100.00	9.00	Gravel sand & gravel.
90.50	100.00	9.50	Gravel sand & gravel.
90.00	100.00	10.00	Gravel sand & gravel.
89.50	100.00	10.50	Gravel sand & gravel.
89.00	100.00	11.00	Gravel sand & gravel.
88.50	100.00	11.50	Gravel sand & gravel.
88.00	100.00	12.00	Gravel sand & gravel.
87.50	100.00	12.50	Gravel sand & gravel.
87.00	100.00	13.00	Gravel sand & gravel.
86.50	100.00	13.50	Gravel sand & gravel.
86.00	100.00	14.00	Gravel sand & gravel.
85.50	100.00	14.50	Gravel sand & gravel.
85.00	100.00	15.00	Gravel sand & gravel.
84.50	100.00	15.50	Gravel sand & gravel.
84.00	100.00	16.00	Gravel sand & gravel.
83.50	100.00	16.50	Gravel sand & gravel.
83.00	100.00	17.00	Gravel sand & gravel.
82.50	100.00	17.50	Gravel sand & gravel.
82.00	100.00	18.00	Gravel sand & gravel.
81.50	100.00	18.50	Gravel sand & gravel.
81.00	100.00	19.00	Gravel sand & gravel.
80.50	100.00	19.50	Gravel sand & gravel.
80.00	100.00	20.00	Gravel sand & gravel.
79.50	100.00	20.50	Gravel sand & gravel.
79.00	100.00	21.00	Gravel sand & gravel.
78.50	100.00	21.50	Gravel sand & gravel.
78.00	100.00	22.00	Gravel sand & gravel.
77.50	100.00	22.50	Gravel sand & gravel.
77.00	100.00	23.00	Gravel sand & gravel.
76.50	100.00	23.50	Gravel sand & gravel.
76.00	100.00	24.00	Gravel sand & gravel.
75.50	100.00	24.50	Gravel sand & gravel.
75.00	100.00	25.00	Gravel sand & gravel.
74.50	100.00	25.50	Gravel sand & gravel.
74.00	100.00	26.00	Gravel sand & gravel.
73.50	100.00	26.50	Gravel sand & gravel.
73.00	100.00	27.00	Gravel sand & gravel.
72.50	100.00	27.50	Gravel sand & gravel.
72.00	100.00	28.00	Gravel sand & gravel.
71.50	100.00	28.50	Gravel sand & gravel.
71.00	100.00	29.00	Gravel sand & gravel.
70.50	100.00	29.50	Gravel sand & gravel.
70.00	100.00	30.00	Gravel sand & gravel.
69.50	100.00	30.50	Gravel sand & gravel.
69.00	100.00	31.00	Gravel sand & gravel.
68.50	100.00	31.50	Gravel sand & gravel.
68.00	100.00	32.00	Gravel sand & gravel.
67.50	100.00	32.50	Gravel sand & gravel.
67.00	100.00	33.00	Gravel sand & gravel.
66.50	100.00	33.50	Gravel sand & gravel.
66.00	100.00	34.00	Gravel sand & gravel.
65.50	100.00	34.50	Gravel sand & gravel.
65.00	100.00	35.00	Gravel sand & gravel.
64.50	100.00	35.50	Gravel sand & gravel.
64.00	100.00	36.00	Gravel sand & gravel.
63.50	100.00	36.50	Gravel sand & gravel.
63.00	100.00	37.00	Gravel sand & gravel.
62.50	100.00	37.50	Gravel sand & gravel.
62.00	100.00	38.00	Gravel sand & gravel.
61.50	100.00	38.50	Gravel sand & gravel.
61.00	100.00	39.00	Gravel sand & gravel.
60.50	100.00	39.50	Gravel sand & gravel.
60.00	100.00	40.00	Gravel sand & gravel.
59.50	100.00	40.50	Gravel sand & gravel.
59.00	100.00	41.00	Gravel sand & gravel.

FORMATION RECORD—Continued
