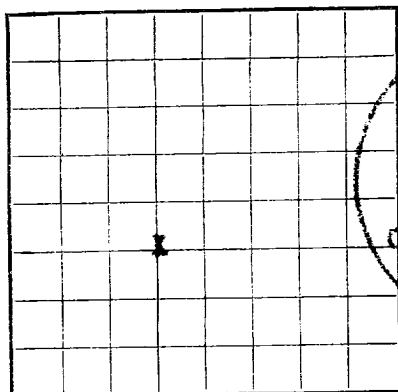
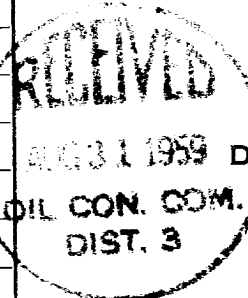


U. S. LAND OFFICE Santa Fe
SERIAL NUMBER SF 081299A
LEASE OR PERMIT TO PROSPECT _____

LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company Pan American Petroleum Corporation Address Box 487, Farmington, New Mexico
Lessor or Tract J. J. Lemmori "A" Field Horseshoe Gallup State New Mexico
Well No. 5 Sec. 13 T. 30N R. 16E Meridian N.M.P.M. County San Juan
Location 1980 ft. N. of S. Line and 1980 ft. E. of W. Line of Section 13 Elevation 5398 (HDB)
(Denote gas by G)

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 R. M. Bauer, Jr.
Date August 27, 1959 Title Area Engineer

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

Commenced drilling July 31, 1959 Finished drilling August 12, 1959

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 3802 to 3841 No. 4, from 3841 to 3841
No. 2, from 3924 to 3927 No. 5, from 3927 to 3927
No. 3, from 3927 to 3927 No. 6, from 3927 to 3927

IMPORTANT WATER SANDS

No. 1, from 3802 to 3841 No. 3, from 3841 to 3841
No. 2, from 3924 to 3927 No. 4, from 3927 to 3927

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From—	To—	
<u>8-5/8</u>	<u>22.7</u>	<u>50</u>	<u>Joint Arrow</u>	<u>206</u>	<u>Guide</u>				<u>Oil String</u>
<u>5-1/2</u>	<u>14</u>	<u>80</u>	<u>National</u>	<u>4024</u>	<u>Guide</u>				

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
<u>8-5/8</u>	<u>212</u>	<u>160 sacks cement</u>	<u>B. J. Service</u>	<u>1 plug</u>	
<u>5-1/2</u>	<u>4004</u>	<u>130 sacks cement</u>	<u>B. J. Service</u>	<u>2 plug</u>	

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 _____ feet, and from _____ feet to _____ feet
Cable tools were used from 0 feet to 4015 feet, and from _____ feet to _____ feet

DATES

Completed as pumping oil well Horseshoe Gallup Field August 24, 1959 Date first new oil produced: August 24, 1959
Put to producing _____ of fluid of which _____% was oil; _____% emulsion; _____% water; and _____% sediment. Gravity, °Bé. 40.9 degrees API
If gas well, cu. ft. per 24 hours _____ Gallons gasoline per 1,000 cu. ft. of gas _____
Gas oil ratio not yet available.
Rock pressure, lbs. per sq. in. _____

EMPLOYEES

_____, Driller J. W. Jernigan, Driller
Cotton Gibson, Driller E. O. Shersold, Driller
B. E. McClain

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
<u>0</u>	<u>805</u>	<u>805</u>	<u>Surface sands & shales & Lewis shale.</u>
<u>805</u>	<u>2613</u>	<u>1808</u>	<u>Mesaverde sands, shales & coals.</u>
<u>2613</u>	<u>3759</u>	<u>1146</u>	<u>Mancos shale.</u>
<u>3759</u>	<u>3800</u>	<u>41</u>	<u>Gallup sands & shales.</u>
<u>3800</u>	<u>3900</u>	<u>100</u>	<u>Verde Gallup pay sands & shales.</u>
<u>3900</u>	<u>4015</u>	<u>115</u>	<u>Horseshoe Gallup pay sands & shales.</u>
			<u>(Tops from electric log)</u>

(OVER)

FORMATION RECORD—CONTINUED

FORMATION RECORD—Continued[illegible]

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.

J. J. Lomardi "A" well No. 5 was spudded on July 31, 1959, and 8-5/8" casing was set at 212' with 160 sacks cement containing 2% calcium chloride. Circulated cement. After waiting on cement, casing and water shut off were tested with 450 pounds for thirty minutes, which held with no indication of pressure drop. Reduced hole to 7-7/8" at 215' and continued drilling.

5-1/2" casing was set at 4,004' with 80 sacks 6% gel cement containing 1-1/2 pounds Tuf-Plug per sack followed by 50 sacks neat cement. Good returns thruout. Released rotary rig. Moved in completion unit and tested casing with 3000 psi for thirty minutes which held with no indication of pressure drop. Resumed completion operations.

Spotted 250 gallons MCA, perforated lower Gallup with two shots per foot 3904-3927. Sand-oil fracked with 37,700 gallons oil and 45,000 pounds sand. Breakdown pressure 2100 psi, average treating pressure 1900 psi, average injection rate 52 barrels per minute. Perforated Upper Gallup with two shots per foot 3902-3941. Ran Baker retrievable bridge plug and set at 3860'. Sand oil fracked with 29,400 gallons oil and 30,000 pounds sand. Breakdown pressure 2550 psi, average treating pressure 2000 psi, average injection rate 45 barrels per minute. Retrieved bridge plug and cleaned out to plug back depth of 3969'. Landed 2" tubing at 3845'. Ran rods and pump.

Completed as pumping oil well Horseshoe Gallup Field August 24, 1959. Potential test pumped 64 barrels oil in 8 hours.

POC CE OIT OB CUE ALETT

GEORGIOFF SPBAER
DIRECTOR OF THE INSTITUTE
OF THE UNITED STATES

1. THE UNITED STATES OF AMERICA
 2. DO HEREBY DECLARE THAT THE UNITED STATES OF AMERICA
 3. DO NOT RECOGNIZE THE GOVERNMENT OF THE PEOPLES REPUBLIC OF CHINA
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