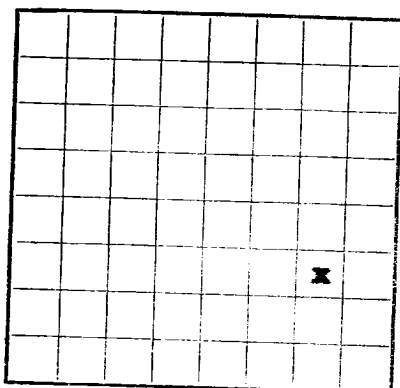




LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYU. S. LAND OFFICE
SERIAL NUMBER 14-20-603-2200
LEASE OR PERMIT TO PROSPECT
Navajo Tribal "G"

LOG OF OIL OR GAS WELL

Company Pan American Petroleum Corporation Address Box 480, Farmington, New Mexico
Lessor or Tract Navajo Tribal "G" Field Cha Cha Gallup State New Mexico
Well No. 5 Sec. 18 T. 29N R. 14W Meridian N.M.P.M. County San Juan
Location 1830 ft. N. of E. Line and 889 ft. W. of E. Line of Section 18 Elevation 5182 (RDB)
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

R. M. Bauer, Jr.

Date March 16, 1961Title Senior Petroleum Engineer

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

Commenced drilling February 22, 1961 Finished drilling March 6, 1961

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 4526 to 4535 No. 4, from _____ to _____
No. 2, from 4568 to 4576 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—	
<u>8-5/8"</u>	<u>207</u>	<u>8PT</u>	<u>I-52</u>	<u>190</u>					<u>Surface</u>
<u>4-1/2"</u>	<u>9.58</u>	<u>8PT</u>	<u>I-55</u>	<u>4578</u>					<u>Oil string</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>207</u>	<u>190</u>	<u>Halliburton</u>	<u>1 plug</u>	
<u>4-1/2"</u>	<u>4664</u>	<u>200</u>	<u>Halliburton</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 0 feet to 4668 feet, and from _____ feet to _____ feet
Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

DATES

Completed as flowing oil well Cha Cha Gallup Field March 13, 1961 Put to producing March 12, 1961
Date first new oil produced

The production for the first 24 hours was 165 barrels of fluid of which 99.9 % was oil; _____ %
emulsion; _____ % water; and .1 % sediment. Gravity, °Bé. 41.8°

If gas well, cu. ft. per 24 hours _____ Gallons gasoline per 1,000 cu. ft. of gas _____

Rock pressure, lbs. per sq. in. _____

EMPLOYEES

R. H. Wisener, Driller Donald Coleman, Driller
Jackie White, Driller Pete Estes, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
<u>0</u>	<u>210</u>	<u>210</u>	<u>Surface sands and shales.</u>
<u>210</u>	<u>428</u>	<u>218</u>	<u>Fruitland and Farmington Sands and Shales.</u>
<u>428</u>	<u>865</u>	<u>437</u>	<u>Pictured cliffs sands and shales.</u>
<u>865</u>	<u>1390</u>	<u>525</u>	<u>Lewis sand and shale.</u>
<u>1390</u>	<u>1430</u>	<u>40</u>	<u>Cliff house sand and shale.</u>
<u>1430</u>	<u>3260</u>	<u>1830</u>	<u>Manefee sand and shales.</u>
<u>3260</u>	<u>4165</u>	<u>905</u>	<u>Mancos shale.</u>
<u>4165</u>	<u>4500</u>	<u>335</u>	<u>Gallup sand and shales.</u>
<u>4500</u>	<u>4610</u>	<u>110</u>	<u>Gallup pay zone.</u>

(Tops from E log)

[illegible]

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG ON OIL OR GAS WITH

[illegible]

performed balling with six shots per foot. 4500-4531. Fracked with 33.80 gallon oil containing 1500 pounds admixite Mark II and 30,000 pounds sand. Breakdown pressure 1700 psi, minimum treating pressure 6000 psi, maximum creating pressure 7500 psi, average injection rate 31 barrels per minute. Completed as flowing gas lift well. Field well March 13, 1961. Potential test 165 barrels of oil per day on 20/64" choke. tubing pressure flowing 200 psi, casing pressure flowing 500 psi.

Core Number 1 45201-45801 Gailup. Recovered 60' as follows: 10' shale to slightly sandy shale with occasional thin shaly sand partings; 1' shaly sand with shaly partings; 4' light sand with occasional thin shale partings good porosity and permeability; strong odor; 1' lighter sand and shale laminations; 33' shale to sandy shale with occasional sand laminations; 9' thin shaly sand with occasional shale nodules and partings good bleed and odor 4573'-4576' 2' sandy shale to shale. Finished drilling March 6, 1961. Total depth 4629'. Set 4-1/2" casing at 4664' with 125 sacks 6 per cent oil cement and 1-1/2 pounds curing per sack followed by 75 sacks neat cement. The slurry on this core is for the condition of the well at above depth. Displaced with 65 barrels oil and 300 gallons BDA. Tested casing with 9500 psi for 30 minutes. Test ok. Released 18 March 6, 1961.

Added 7-4/8" hole on February 22, 1961 and drilled to 100'. Reamed and drilled 1 1/4" hole to 210'. Set 8-5/8" casing with 190 sacks cement containing 2 per cent calcium chloride. Circulated 80 sacks cement. After waiting on cement, tested 8-5/8" casing with 500 psi for 30 minutes, which held with no indication of pressure drop. Reduced hole to 7-4/8" at 210' and resumed drilling operations. Elevation Ground Level 5172, RTB 5162'. IMPORTANT WATER BANDS

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of recoupling, 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 pigs or bridges were put in to test for water, state kind of material used, position, and results of pumping or testing.

HISTORY OF OIL OR GAS WELL

U.S. GOVERNMENT PRINTING OFFICE: 1965-4-1094-2

FROM	TO	TOTAL FEET	FORMATION
10	100	90	Shale and sandstone
100	200	100	Shale and sandstone
200	300	100	Shale and sandstone
300	400	100	Shale and sandstone
400	500	100	Shale and sandstone
500	600	100	Shale and sandstone
600	700	100	Shale and sandstone
700	800	100	Shale and sandstone
800	900	100	Shale and sandstone
900	1000	100	Shale and sandstone