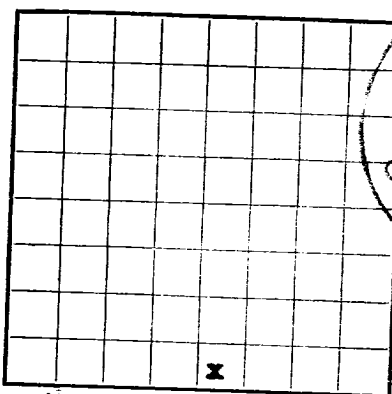
U. S. LAND OFFICE
SERIAL NUMBER **14-20-603-2198**
LEASE OR PERMIT TO PROSPECT
Navajo TribalUNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

LOCATE WELL CORRECTLY:

Company ~~Pan American Petroleum Corporation~~ Address ~~Box 480, Farmington, New Mexico~~
Lessor or Tract ~~Navajo Tribal~~ Field ~~Cha Cha Gallup~~ State ~~New Mexico~~
Well No. ~~15~~ Sec. ~~23~~ T. ~~23N~~ R. ~~14W~~ Meridian ~~N.M.P.M.~~ County ~~San Juan~~
Location ~~510~~ ft. ~~N~~ of ~~6~~ Line and ~~2190~~ ft. ~~W~~ of ~~2~~ Line of ~~Section 23~~ Elevation ~~5516~~ (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 ~~P. M. Bauer, Jr.~~ ORIGINAL SIGNED BY ~~P. M. Bauer, Jr.~~Date ~~September 12, 1961~~Title ~~Senior Petroleum Engineer~~

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

Commenced drilling ~~July 27~~, 19~~61~~ Finished drilling ~~August 22~~, 19~~61~~

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from ~~5126~~ to ~~5133~~ 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"	22.7#	3 1/2"	CP&I	200'	Guide				Seal
4-1/2"	9.5#	8RT	CP&I	5275'	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"	214'	180	Halliburton	1 plug	
4-1/2"	5260'	200	Halliburton	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 ~~5265~~ feet, and from _____ feet to _____ feet

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

Completed as ~~Cha Cha Gallup Field~~

DATES

First new oil

Development well ~~August 22, 1961~~Put to producing ~~August 20~~, 19~~61~~The production for the first 24 hours was ~~167~~ barrels of fluid of which ~~99.9~~% was oil; _____% emulsion; _____% water; and ~~.1~~% sediment.Gravity, °Bé. ~~40.1~~° API

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

Rock pressure, lbs. per sq. in. ~~350 (GPF)~~

EMPLOYEES

~~Gene B. Sanderfer~~, Driller ~~Bert W. Harris~~, Driller
~~Jackie White~~, Driller ~~Pete Estes~~, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	1060	1060	Undifferentiated sands and shales.
1060	1200	140	Pictured Cliffs sands and shales.
1200	2000	800	Lewis shale.
2000	3870	1870	Mesaverde sands, shales, and coals.
3870	4765	895	Mancos shale.
4765	5087	322	Gallup sands and shales.
5087	5265	178	Gallup pay sands.

(Tops from "E" log)

LOG OF OIL OR GAS WELL

drop.
Performed water gelling with 6 shots per foot 5126-5131. Sand oil tracked
with 29,000 gallons of cementing material as compared to the record of 17,000 gallons
and 20,000 pounds sand. Resources were:
breakdown 1200 psi; maximum treating
pressure 2990 psi. Average
water loss 2900 gal.

The information given between brackets was obtained from all available records
as far as can be determined from the available records.

Total depth 5265'. Pink rock depth 5212'. Completed at 5 pm July Field
development well August 22, 1961. Potential test August 22, 1961 flowed 187
barrels of oil per day at 32/66 inches. Treating pressure flowing 15 psi and
casing pressure flowing 350 psi. Estimated allowable 164 barrels of oil per
day at casing pressure August 13, 1961.

LOG OF OIL OR GAS WELL

Packed 12-1/4" hole to 215' on July 27, 1961. Set 8-5/8" casing at 214' with
 180 sacks of cement containing 2 pounds calcium chloride. Circulated 20
 sacks of cement. Waited on cement 12 hours. Tested casing with 450 psi for
 15 minutes, which held with no indication of pressure drop. Reduced hole to
 7-7/8" at 215'.
 Core No. 1 5105-5137 - Recovered 2' as follows: 1'
 sand and medium grained with fair porosity and permeability, gas bleeds and
 vertically fractured; 1' shaly sand with vertical fractures; 2' sand, medium
 grained with good porosity and permeability; 2' shaly sand; 2' sandy shale; 5'
 black shale.
 (Denote core by G)
 Core No. 2 5137-5191 - Recovered 6' as follows: 2' black shale; 5' shaly
 sand; 1' black shale.
 Set 7-1/2" casing at 5260' with 125 sacks cement containing 6 percent gel with
 1-1/2 pounds per bag. Waited on cement 12 hours. Tested casing with 450 psi for
 15 minutes, which held with no indication of pressure drop. Reduced hole to
 7-7/8" at 5260'.

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 "backpacked" or left in the well, give name, 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.

HISTORY OF OIL OR GAS WELL

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