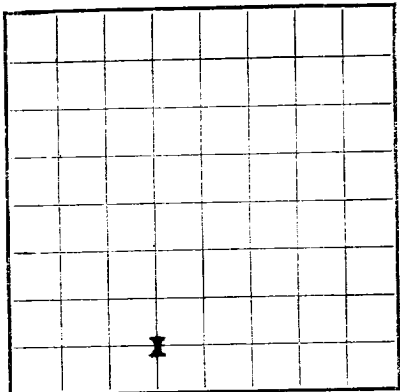
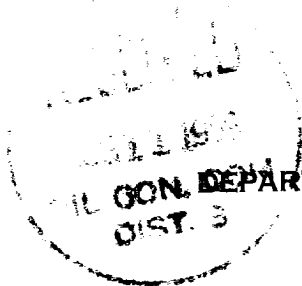


Form 9-330

U. S. LAND OFFICE **New Mexico**
SERIAL NUMBER **NM-05839**
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 **L. W. Smartz** Field **Horseshoe Gallup** State **New Mexico**
Well No. **2** Sec. **13** T. **36S** R. **16W** Meridian **N.M.P.M.** County **San Juan**
Location **660** ft. **N.** of **2** Line and **1922** ft. **E.** of **1** Line of **Section 13** Elevation **5411**
(Derrick base 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 **R. M. Bauer, Jr.**

Date **August 7, 1959** Title **Area Engineer**
The summary on this page is for the condition of the well at above date.
Commenced drilling **July 11**, 19**59** Finished drilling **July 22**, 19**59**

OIL OR GAS SANDS OR ZONES
(Denote gas by G)

No. 1, from **3846** to **3882** No. 4, from _____ to _____
No. 2, from **3939** to **3972** 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—	
5-1/2" 14	8RT	8RT	CP&I	4068	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"	216	160 sacks of cement	Halliburton	1 plug	
5-1/2"	4047	130 sacks of cement	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 _____ feet to **4048** 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 **Horseshoe Gallup Field** August **6**, 19**59** Put to producing Date first new oil produced: August **5**, 19**59**
Potential test pumped **70** barrels of fluid of which _____ % was oil; _____ % emulsion; _____ % water; and _____ % sediment. Gravity, °Bé. **99.8**
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
_____, Driller **M. O. Ebersold**, Driller
Cotton Gipson
B. R. McClain

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	216	216	Surface sand & shales.
216	680	464	Lewis shale.
680	2595	1915	Mesaverde sands, shales & coals.
2595	3805	1210	Mancos shale.
3805	3842	37	Gallup shales & sands.
3842	3936	94	Verde Gallup pay sands & shales.
3936	4048	112	Horseshoe Gallup pay sands & shales.
			(Tops from E log)

FROM—	TO—	TOTAL FEET	FORMATION
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—OL

TOTAL FEET

FORMATION

U. S. GOVERNMENT PRINTING OFFICE

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 "added", 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.

L. W. Swartz Well No. 2 was spudded on July 11, 1959 and 203 feet of 8-5/8" casing was landed at 216 feet. Cemented casing with 160 sacks cement with 2% calcium chloride circulated cement. After waiting on cement, tested casing and water shut off with 400 pounds pressure, which held with no drop in pressure. Reduced hole to 7-7/8" at 216 feet and continued drilling operations.

5-1/2" casing was set at 4047 feet with 80 sacks 6 gal cement containing 1-1/2 pounds
Tul-Fing per sack followed by 90 sacks neat cement. Released rig and moved in com-
pletion unit and tested casing with 3000 pounds pressure for thirty minutes which held
with no drop in pressure.

Spotted 250 gallons breakdown seal on bottom. Perforated lower callup with two shots per foot 399-3971. Sand-oil tracked with 30,200 gallons oil and 45,000 pounds sand. Put 10,000 gallons at one pound per gallon with remainder at 1-3/4 pounds per gallon. Breakdown pressure 2090 pounds. Treating pressure 2000-1700 pounds. Injection rate 54 barrels per minute. Perforated lower callup with 2 shots per foot 3846-3882. Set bridge plug at 3910'. Sand-oil tracked with 29,000 gallons oil and 30,000 pounds sand. Breakdown pressure 2850-2700 pounds. Treating pressure 1500-2000 pounds. Injection rate 46 barrels per minute. 2" tubing landed at 3995'. New pump and rods. Completed as horseshoe callup pumping oil well. Potential rate pumped 70 barrels oil in 8 hours with 16-1/2 strokes per minute with 1-7/8" pump, or at rate of 210 barrels oil per day. Gas oil ratio not yet established. Gravity 40.8 degrees API.