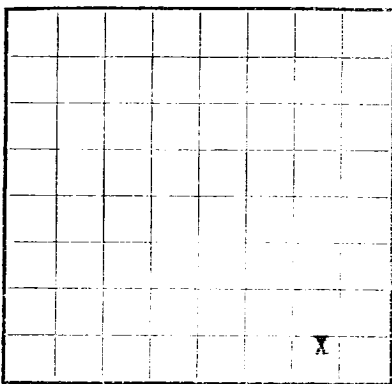




LOCATE WELL CORRECTLY

U. S. LAND OFFICE **Santa Fe**
SERIAL NUMBER **SF-077968**
LEASE OR PERMIT TO PROSPECT
C. J. HolderUNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company **Pan American Petroleum Corporation** Address **Box 480, Farmington, New Mexico**
Lessor or Tract **C. J. Holder** Field **Cha Cha Gallup** State **New Mexico**
Well No. **10** Sec. **16** T. **28N** R. **13W** Meridian **N.M.P.M.** County **San Juan**
Location **660** ft. **N.** of **Sec** Line and **810** ft. **W.** of **E.** Line of **Section 16** Elevation **6077** (HDB)
(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 **R. M. Bauer, Jr.**

Date **April 28, 1961** Title **Senior Petroleum Engineer**

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

Commenced drilling **April 1**, 19**61** Finished drilling **April 14**, 19**61**

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from **5691** to **5698** No. 4, from _____ to _____
No. 2, from **5743** to **5759** 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 foot	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From	To	
8-5/8"	20	8VT	X-52	195	Guide				Surface
4-1/2"	9.5	8RT	J-55	5859	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"	245'	135 sacks of cement	Halliburton 1 Plug.		
4-1/2"	5837'	2-0 sacks of cement	Halliburton 3 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 **5840** feet, and from _____ feet to _____ feet
Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

Completed as **flowing oil** well **Cha Cha Gallup** **Field.** **April 28**, 19**61** Date first new oil produced. **April 24**, 19**61**
Put to producing _____, 19**61**

The production for the first 24 hours was **203** barrels of fluid of which **99.8%** was oil; _____%
emulsion; _____% water; and **2**% sediment. Gravity, °Bé. **41.69** API

Flowing oil well on 32/64" choke Gallons gasoline per 1,000 cu. ft. of gas _____
If gas well, cu. ft. per 24 hours _____

Rock pressure, lbs. per sq. in. _____

EMPLOYEES

Jim Babcock _____, Driller **Earl Babcock** _____, Driller
Jim Speaker _____, Driller **Sam Kinney** _____, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	310	310	Surface sands and shales.
310	388	88	Ojo Alamo sand and shale.
388	1693	1305	Undifferentiated Kirtland-Fruitland sands, shales, and coals.
1693	1819	126	Pictured Cliffs sand and shale.
1819	2602	783	Lewis shale.
2602	2646	44	Cliffhouse sands and shales.
2646	4177	1531	Menefee sands and shales.
4177	4425	248	Point Lookout sands and shales.
4425	5336	911	Mancos shale.
5336	5685	349	Gallup sands and shales.
5685	5840	155	Gallup pay sands.

(Total from log)

FROM	TO	TOTAL FEES	FORMATION
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— 52 —

TOTAL FEET

FORMATION

FROM	TO	TOTAL FEES	FORMATION
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[illegible]

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.

Spudded 12-1/4" hole on April 1, 1961. Set 8-5/8" casing at 205' with 135 sack cement containing 2 percent calcium chloride. After waiting on cement tested pipe with 750 psi for 30 minutes. Test ok. Reduced hole to 7-7/8" at 208'.

CORE NO. T 6700-2/2C : RECOVERED BY SHS TOI 1881 IN SANDY SILT WITH OCCASIONAL VERTICALLY FRACTURED THROUGHOUT WITH OCCASIONS OF PARTINGS; 10' AREA SLEWED RIGHT AND WITH SLIGHT OIL BLEND 9475-2/46 : CORE NOTED JAMMED.

Core No. 2 5752-5761. Recovered 22' as follows: 11' very shaly sand, light and vertical fractured 5759-5761; 1' sandy shale with sand partings; 10' shale with thin sand partings and vertical traces.

Core No. 3 5776-57961. Recovery 381 ft. deep and

Total depth 5840' plug back depth 5801'. Run cotton-tation log and perforated with 6 shots per foot 5743-5759'. Sand oil leaked with 10,930 gallons oil with 25 pounds per 1000 gallons admixite Mark II and 10,000 pounds sand. No breakdown pressure. Maximum treating pressure 2500 psi, minimum treating pressure 2500 psi, average injection rate 28 barrels per minute. Run retrievable bridge plug and set at 5775'. Tested 4-1/2" casing with 300 psi for 15 minutes, which held with no indication of pressure drop. Perforated upper casing with 6 shots per foot 5611-5661'. Sand oil leaked with 20,630 gallons oil with 2 gallons G-15 and 50 pounds admixite Mark II per 1000 gallons, and 20,000 pounds sand. Spearheaded with 5 gallons G-15 and 5 gallons I-9 additives. In first 1000 gallons. Pumped in at 1400 psi with maximum treating pressure 2700 psi, minimum treating pressure 2500 psi, average treating pressure 2600 psi, average injection rate 28 barrels per minute. Retreated bridge plug. Landed 2-3/8" tubing at 5799'. Completed April 28, 1961, as flowing well in the Gallup field. Potential test April 28, 1961, flowed 203 barrels of oil in 17 hours on 32/64" choke tubing pressure flowing 150 psi, casing pressure flowing 410 psi.