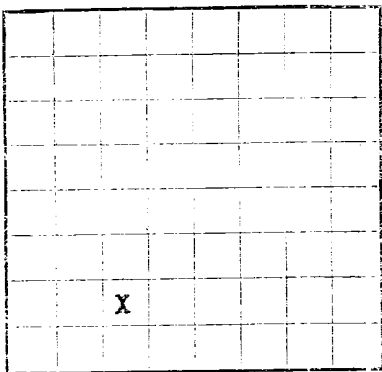


Santa Fe
U. S. LAND OFFICE
SERIAL NUMBER **SF 077382**
LEASE OR PERMIT TO PROSPECT



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 **USA Margrave "A"** Field **Angels Peak Dakota** State **New Mexico**
Well No. **1** Sec. **3** T. **27N** R. **10W** Meridian **S.M.P.M.** County **San Juan**
Location **790** ft. **N** of **3** Line and **1050** ft. **E** of **W** Line of **Section 3** Elevation **6128**
(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.
ORIGINAL SIGNED BY
Signed **R M. Bauer, Jr.**

Date **August 19, 1959** Title **Area Engineer**
The summary on this page is for the condition of the well at above date.

Commenced drilling **June 17**, 19 **59** Finished drilling **July 23**, 19 **59**

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

No. 1, from **654.2** to **659.6 (G)** 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—	
9-5/8	32.9	8RT	National 363	Guide					Surface
(4-1/2)	11.6	8RT	National 230	Guide					Oil string
(4-1/2)	9.5	8RT	National 6575	Guide					Oil String

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
9-5/8	369	200 sacks cement	Halliburton 1 plug		
4-1/2	6785	700 sacks 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 _____ feet, and from _____ feet to _____ feet
Cable tools were used from **301** feet to **6790** feet, and from **0** feet to **301** feet

DATES

Completed as shut in **Angels Peak Dakota** Put to producing **Shut in for pipeline connection**
field well August 9, 59 barrels of fluid of which **August 9, 59**
Preliminary test 5526 MCF/D The production for the first 24 hours was _____ % was oil; _____ %
emulsion; _____ % water; and _____ % sediment. Gravity, °Bé. _____

If gas well, cu. ft. per 24 hours _____ Gallons gasoline per 1,000 cu. ft. of gas _____
Rock pressure, lbs. per sq. in. **5526**

1998 EMPLOYEES in casing pressure 9 days.

_____, Driller _____, Driller
Lee Naylor, Driller **Clair Wildson**, Driller
T. G. Gage **Glen Sanford**

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	1047	1047	Surface sands & shales, including Animas sand & shale.
1047	1190	143	Ojo Alamo sand.
1190	1767	577	Kirtland shales & sands, including Farmington sand.
1767	2025	258	Fruitland sands, shales & coals.
2025	2145	120	Pictured Cliffs sands & shales.
2145	3573	1428	Lewis shales & sands.
3573	4710	1137	Mesaverde sands & shales.
4710	5566	856	Mancos Shale.
5566	6353	787	Gallup sands & shales.
6353	6415	62	Greenhorn sandy shale.
6415	6480	65	Granger shale & sand.
6480	6536	56	Dakota sands & shales.
6536	6725	189	Dakota pay sands & shales.
6725	6790 (D)	65	Morrison shales & sands.
			(Tops from E log)

FORMATION RECORD—Continued

[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 balling.

HISTORY OF OIL OR GAS WELL

U. S. GOVERNMENT PRINTING OFFICE 16-43094-2

USA HATHAWAY #4 Well No. 1. 13-1/2" hole was spudded on June 17, 1959 with cable tool and drilled to 301'. Moved in rotary tools and drilled 12-1/4" hole from 301' to 369'. 9-5/8" casing was set at 369' with 200 sacks cement containing 2% calcium chloride. After waiting on cement, casing and water shut off were tested with 800 pounds pressure for thirty minutes, which held with no drop in pressure. Reduced hole to 8-3/4" at 369' and resumed drilling operations.

Ran electric log and sonic log. 7-1/2" casing was set at 6785' with 2-stage cement tool at 2263'. Cemented first stage with 400 sacks 6 1/2 gal cement with second stage with 200 sacks 4 1/2 gal cement. Received 800 returns thruout both stages. Tested casing with 2500 pounds after each stage which held with no drop in pressure. After waiting on cement, drilled 2-stage tool and cleaned out to plug back depth of 6752'. Tested casing with 1350 pounds for thirty minutes which held with no drop in pressure. Released rig on July 23, 1959.

Completed as shot in Anglo Peak Dakota field well. Preliminary test 5526 MCFFD.