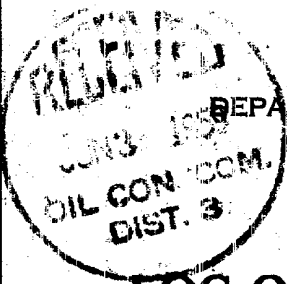
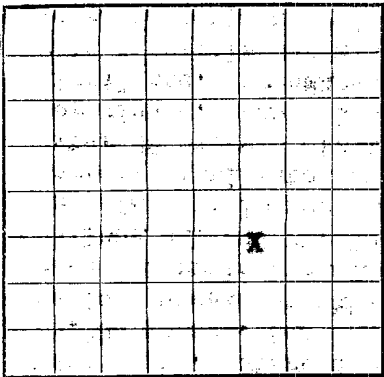


Santa Fe
U. S. LAND OFFICE
SERIAL NUMBER
LEASE OR PERMIT TO PROSPECT



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

LOCATE WELL CORRECTLY

Company Pan American Petroleum Corporation Address Box 447, Farmington, New Mexico
Lessor or Tract C. A. McAdams "B" Field Angel Peak Gallup State New Mexico
Well No. 1 Sec. 28 T. 27N R. 18W Meridian N.M.P.M. County San Juan
Location 1890 ft. N. of 3 Line and 1650 ft. E. of E. line of Section 28 Elevation 6109
(Derrick foot 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 R. M. BAUER, Jr.
Signed _____
Date May 28, 1959 Title Area Engineer

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

Commenced drilling December 4, 19 58 Finished drilling December 21, 19 58

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 5704 to 5738 (O) No. 4, from _____ to _____
No. 2, from 6362 to 6402 (O) No. 5, from _____ to _____
No. 3, from 6419 to 6459 (G) 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>9-5/8"</u>	<u>32.3</u>	<u>8RT</u>	<u>National</u>	<u>495</u>	<u>Guide</u>				<u>Surface</u>
<u>7"</u>	<u>20</u>	<u>8RT</u>	<u>National</u>	<u>6601</u>	<u>Guide</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>9-5/8"</u>	<u>495</u>	<u>350 sacks of cement</u>	<u>Halliburton No. 1 Plug</u>		
<u>7"</u>	<u>6601</u>	<u>700 sacks of cement</u>	<u>Baker 2 Stage Tool</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 6602 feet, and from _____ feet to _____ feet
Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

Well fully completed as shut in Gas well DATES Date first new oil produced: _____
Angel Peak Dakota and pumping oil well Put to producing _____, 19 59
Angel Peak Gallup May 23 The production for the first 24 hours was 56 barrels of fluid of which 99.7 % was oil; _____ %
emulsion; _____ % water; and .3 % sediment. Gravity, °Bé. 42.9 API
If gas well, 66 ft. per 24 hours Gallons gasoline per 1,000 cu. ft. of gas _____
Rock pressure, lbs. per sq. in. 2723
1981 Shut in tubing pressure Dakota

EMPLOYEES

C. A. Hays, Driller Alton Buntyn, Driller
Elmer Sperry, Driller John Hoyt, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
<u>0</u>	<u>495</u>	<u>495</u>	<u>Surface sands & shales.</u>
<u>495</u>	<u>1510</u>	<u>1015</u>	<u>Kirtland-Farmington sands & shales.</u>
<u>1510</u>	<u>1830</u>	<u>320</u>	<u>Fruitland shale and coal.</u>
<u>1830</u>	<u>1870</u>	<u>40</u>	<u>Pictured Cliffs sand & shale.</u>
<u>1870</u>	<u>3420</u>	<u>1550</u>	<u>Lewis sand & shale.</u>
<u>3420</u>	<u>3490</u>	<u>70</u>	<u>Cliffhouse sand & shale.</u>
<u>3490</u>	<u>4250</u>	<u>760</u>	<u>Menefee shale.</u>
<u>4250</u>	<u>4503</u>	<u>253</u>	<u>Point Lookout sand & shale.</u>
<u>4503</u>	<u>5350</u>	<u>847</u>	<u>Mancos shale.</u>
<u>5350</u>	<u>6192</u>	<u>842</u>	<u>Gallup sand & shale.</u>
<u>6192</u>	<u>6250</u>	<u>58</u>	<u>Greenhorn sand & shale.</u>
<u>6250</u>	<u>6310</u>	<u>60</u>	<u>Graneros shale.</u>
<u>6310</u>	<u>6602</u>	<u>292</u>	<u>Dakota sand & shale.</u>
			(Tops from E log)

FORMATION RECORD—Continued[illegible]

HISTORY OF OIL OR GAS WELL

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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.

C. A. McAdams #3" well No. 1 - Spudded 12 1/2" hole on November 4, 1958, and on December 6, 1958, 9-5/8" casing was landed at 495' with 350 sacks of cement, and after waiting on cement for 24 hours casing and water shut off were tested with 870 pounds pressure for thirty minutes, which held with no drop in pressure. Redrilled hole to 8-3/4" at 498' and resumed drilling operations.

7" casing was set at 6601' with stage tool at 6661'. Cemented first stage with 100 sacks 6 1/2 gal cement with 2 ~~units~~ ^{bags} ~~per sack~~ ^{per sack} followed by 100 sacks neat cement. Started losing partial returns during last 100 sacks displacement and lost full returns with last 50 sacks. Maximum cement pressure 1800 pounds. Casing was tested with 2500 pounds pressure which held ok. Cemented second stage with 200 sacks 4 1/2 gal cement with full returns. One-half maximum cement pressure 800 pounds. Casing was tested with 2800 pounds which held with no drop in pressure. Released rotary rig.

Moved in completion unit January 18, 1959, spotted 600 gallons breakdown acid over Dakota zone to be perforated. Perforated two shots per foot 6362-6432, 6419-6459. Sand-water fracked with 58,000 gallons water and 57,500 pounds sand. Formation broke at 1900 pounds, treating pressure 1650 pounds to 2300 pounds. Injection rate 43 barrels per minute. Injected 40 rubber ball sealers after 600 barrels and 40 rubber ball sealers after 900 barrels. Flushed at 2800 pounds. Well blew in at estimated 7000 MCFD and after 9 hours, gauged 1065 MCFD. Killed well with mud. Cleaned out frac sand to 6554'. Set bridge plug at 5782 and tested with no drop in pressure. Displaced well with oil and spotted 600 gallons breakdown acid over Gallup. Perforated Gallup with four shots per foot 5764-5738. Attempted sand-oil frac with 30,000 gallons oil and 30,000 pounds sand. Formation broke at 1800 pounds. After pumping 15,000 gallons oil and 15,000 pounds sand, treating pressure 1800-1600 pounds showed sharp increase to 2600 pounds and sanding off. Average injection rate 49 barrels per minute. Estimated 5000 pounds sand in formation. Ran tubing and found top of sand at 5300'. Circulated out sand to plug back depth. Started second frac and pumped in oil at 4 barrels per minute with 28,000 pounds. Ran RTTS packer and set at 5474'. Additional perforations with 1000 gallons breakdown acid with steady treating pressure 1200-1500 pounds and injection rate 3 barrels per minute. Installed tubing and packer. Sand-oil fracked with 27,700 gallons oil and 22,500 pounds sand. Treating pressure 2600 pounds. Average injection rate 24 barrels per minute. After sanding 1000 barrels, attempted to frac with 400 barrels distillate and no sand, using 24,000 gallons free flow in first 2000 gallons oil. After 38 barrels distillate into formation pressured up to 2800 pounds with 4 barrels per minute. Ran HRC packer set at 5418. Pumped 2500 lbs tubing with 300 barrels distillate. Breakdown pressure 4500 pounds, treating pressure 4500, average injection rate 4 barrels per minute. Pilled packer. Ran 2" Gallup tubing set at 5789'. Set rods and pump and released completion unit.

(See attachment)

(see attachment)