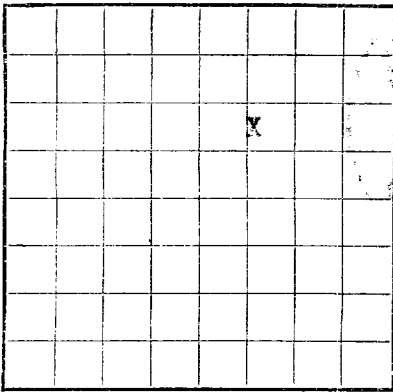


U. S. LAND OFFICE **Santa Fe**SERIAL NUMBER **SF-046563**

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 **Fred Fennel "J"** Field **Angels Peak Dakota** State **New Mexico**
Well No. **1** Sec. **34** T. **28N** R. **10W** Meridian **N.M.F.M.** County **San Juan**
Location **1850** ft. **S.** of **N** Line and **1850** ft. **W.** of **E** Line of **Section 34** Elevation **5926 (RDB)**
(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. ORIGINAL SIGNED BY

Signed **R. M. Bauer Jr.**Date **September 4, 1959**Title **Area Engineer**

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

Commenced drilling **July 24**, 19**59** Finished drilling **August 10**, 19**59**

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from **6374** to **6420 (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	353	Guide				Surface
(4-1/2"	9.5	8RT	National	6316	Guide				Oil String)
(4-1/2"	11.6	8RT	National	250	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"	361	150 sacks of cement	Halliburton 1 plug		
4-1/2"	6540	750 sacks of cement	Baker 2 stage		

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 _____ feet to **6540** feet, and from _____ feet to _____ feet

DATES

Completed as shut in **Angels Peak Dakota Gas Well** Shut in for pipeline connection:
August 22, 1959. Pre primary test Put to producing **August 22**, 19**59**
4260 MCF Production for the first 24 hours was _____ barrels of fluid of which _____ % 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. **4260****1991** shut in casing pressure **11 days**

EMPLOYEES

_____, Driller _____, Driller
Jim Babcock _____, Driller **R. C. Cary** _____, Driller
J. G. Binkley _____ **John D. Roe** _____

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	875	875	Surface sands & shales & Animas sands & shale
875	1016	141	Ojo Alamo sands.
1016	1652	636	Kirtland (including Farmington) sands & shale
1652	1888	236	Frutland sands, shales & coals.
1888	1978	90	Pictured Cliffs sand.
1978	3461	1483	Lewis shales & sands.
3461	4574	1113	Mesaverde sands, shales & coals.
4574	5418	844	Manos shale.
5418	6194	776	Gallup sands & shales.
6194	6257	63	Greenhorn shale.
6257	6310	53	Graneros sands & shales.
6310	6370	60	Dakota sands & shales.
6370	6540	170	Dakota pay sands & shales.

(OVER) (Tops from electric log)

Worked in completion unit. Spotted 200 gallons mud cement agent. Treated 7-1/2" casing with 3000 psi for 15 minutes, which held with no indication of pressure drop. Perforated Dakota with two shots per foot 6374-6420. Attempted to sand-water frac Dakota. Formation breakdown pressure 1100 psi with initial treating pressure 2550 psi. Started sand at one pound per gallon and treating pressure went to 3000 psi with injection rate 12 barrels per minute. Stopped sand after 5000 pounds and finished into formation. Cleaned out sand 6418-6470. Spotted 200 gallons mud cement agent. Sand-water fracked Dakota with 40,000 gallons water and 40,000 pounds sand. Average treating pressure 2800 psi. Average injection rate 34 barrels per minute. Cleaned out to 6470 feet. Set 2" tubing at 6139'. Released unit on August 19, 1959. Completed as shut-in angle leak Dakota gas well August 2, 1959.

4-1/2" casing was set at 6541 feet with 2 stage cement tool at 2159'. Cemented first stage with 400 sacks 6% gel cement containing 1-1/2 pounds Tuf-Ring per sack, followed by 100 sacks neat cement. Good returns thruout. Tested with 3000 psi which held with no indication of pressure drop. Cemented second stage with 250 sacks 4% gel cement. Good returns thruout. Tested with 3000 psi which held with no indication of pressure drop. After setting on cement, drilled a cold stage cement tool and cleaned out to drop.

Fred Fogel, Jr. Well No. 1 was spudded on July 24, 1959 and 9-5/8" casing was set at 361' with 150 sacks cement with 3% calcium chloride. Circulated cement. 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"

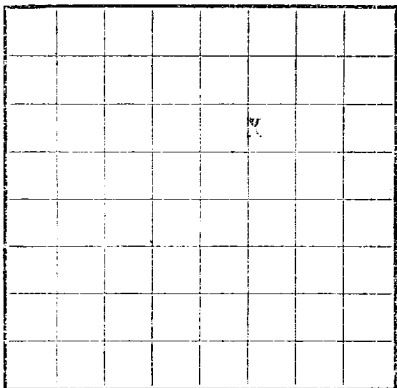
It is of the greatest importance to have a complete history of the well. Please state in detail the dates of reworking, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was added, removed, or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If things or bridges were put in to test for water, state kind of material used, position, and results, and reasons for putting or pulling.

HISTORY OF OIL OR GAS WELL

16-48094-2 U. S. GOVERNMENT PRINTING OFFICE

[illegible]

U. S. LAND OFFICE Santa Fe
SERIAL NUMBER SF-046563
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 Fred Feasel "J" Field Angels Peak Dakota State New Mexico
Well No. 1 Sec. 34 T. 28N R. 10E Meridian N.M.P.M. County San Juan
Location 1850 ft. S. of N. Line and 1850 ft. E. of E. Line of Section 34 Elevation 5926 (RDB)
(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.
ORIGINAL SIGNED BY
Signed R. M. Bauer, Jr.

Date September 4, 1959 Title Area Engineer
The summary on this page is for the condition of the well at above date.

Commenced drilling July 24, 1959 Finished drilling Aug. 10, 1959

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

No. 1, from 6374 to 6420 (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—	
<u>9-5/8"</u>	<u>32.3</u>	<u>8RT</u>	<u>National</u>	<u>353</u>	<u>Guide</u>				<u>Surface</u>
<u>(4-1/2)</u>	<u>9.5</u>	<u>8RT</u>	<u>National</u>	<u>6316</u>	<u>Guide</u>				<u>Oil string</u>
<u>(1-1/2)</u>	<u>11.6</u>	<u>8RT</u>	<u>National</u>	<u>750</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>361</u>	<u>150 sacks of cement</u>	<u>Halliburton 1 plug</u>		
<u>4-1/2"</u>	<u>6540</u>	<u>750 sacks of cement</u>	<u>aker 2 stage</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 _____ feet to _____ feet, and from _____ feet to _____ feet
Cable tools were used from 0 feet to 6540 feet, and from _____ feet to _____ feet

DATES

Completed as shut in Angels Peak Dakota Gas well Shut in for pipeline connection:
August 22, 1959. Pre primary test Put to producing August 22, 1959
4260 The production for the first 24 hours was _____ barrels of fluid of which _____ % 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. 4260

1991 EMPLOYEES Shut in casing pressure 11 days

_____, Driller _____, Driller
Jim Babcock, Driller H. C. Cary
J. G. Binkley John D. Roe

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
<u>0</u>	<u>875</u>	<u>875</u>	<u>Surface sands & shales & Animas sands & shale</u>
<u>875</u>	<u>1016</u>	<u>141</u>	<u>Ojo Alamo sands.</u>
<u>1016</u>	<u>1652</u>	<u>636</u>	<u>Kirtland (including Farmington) sands & shale</u>
<u>1652</u>	<u>1888</u>	<u>236</u>	<u>Frutland sands, shales & coals.</u>
<u>1888</u>	<u>1978</u>	<u>90</u>	<u>Pictured Cliffs sand.</u>
<u>1978</u>	<u>3461</u>	<u>1483</u>	<u>Lewis shales & sands.</u>
<u>3461</u>	<u>4574</u>	<u>1113</u>	<u>Mesoverde sands, shales & coals.</u>
<u>4574</u>	<u>5418</u>	<u>844</u>	<u>Sanoma shale.</u>
<u>5418</u>	<u>6194</u>	<u>776</u>	<u>Callao sands & shales.</u>
<u>6194</u>	<u>6257</u>	<u>63</u>	<u>Cremhorn shale.</u>
<u>6257</u>	<u>6310</u>	<u>53</u>	<u>Graneros sands & shales.</u>
<u>6310</u>	<u>6370</u>	<u>60</u>	<u>Dakota sands & shales.</u>
<u>6370</u>	<u>6540</u>	<u>170</u>	<u>Dakota pay sands & shales.</u>

(OVER) (Tops from electric log)

[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.

at 361' and resumed drilling operations. For thirty minutes, which held with no drop in pressure. waiting on cement, casing and water shut off were tested with 800 pounds pressure. After at 361' the 150 sacks cement with 3% calcium chloride. Circulated cement. After at 361' and 9-5/8" casing was set and 24" 1959 and 9-5/8" casing was set. Reduced hole to 8-3/4"

4-1/2" casing was set at 6541 feet with 2 stage cement tool at 2159'. Cemented first stage with 400 sacks of 61 cement containing 1-1/2 pounds of -ing per sack, followed by 100 sacks neat cement. Good returns throughout. Tested with 3000 psi which held with no indication of pressure drop. Cemented second stage with 250 sacks of 61 cement. Good returns throughout. Tested with 3000 psi which held with no indication of pressure drop. After waiting on cement, drilled second stage cement tool and cleaned out to 6799'. Released rotary rig on August 12, 1959.

Moved in completion unit. Spotted 200 gallons mud cement agent. Tested 7-1/2" casing with 3000 psi for 15 minutes, which held with no indication of pressure drop. Perforated Dakota with two shots per foot 6374-6420. Attempted to sand-water frac Dakota. Formation breakdown pressure 1100 psi with initial treating pressure 2550 psi. Started sand at one pound per gallon and treating pressure went to 3000 psi with injection rate 12 barrels per minute. Stopped sand after 5000 pounds and flushed into formation. Cleaned out sand 6418-6470'. Spotted 200 gallons mud cement agent. Sand-water fracked Dakota with 40,000 gallons water and 40,000 pounds sand. Average treating pressure 2800 psi, average injection rate 3 1/2 barrels per minute. Cleaned out to 6470 feet. Set 2" tubing at 6391'. Released unit on August 19, 1959. Completed as shut-in Angels Peak Dakota gas well August 20, 1959. Preliminary test 4260 MCF per day.