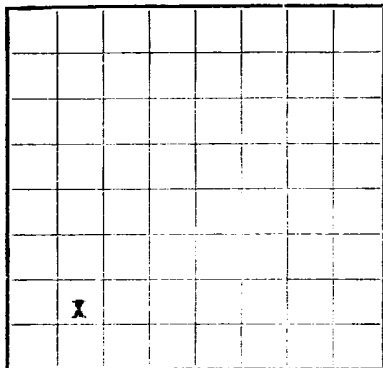


U. S. LAND OFFICE Santa FeSERIAL NUMBER SF 077382LEASE OR PERMIT TO PROSPECT
Hargrave Gas UnitUNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOCATE WELL CORRECTLY

LOG OF OIL OR GAS WELL

Company Par American Petroleum Corporation Address Box 480, Farmington, New MexicoLessor or Tract Hargrave Gas Unit Field Basin Dakota State New MexicoWell No. 1 Sec. 4 T. 27N R. 10E Meridian N.M.P.M. County San JuanLocation 990 ft. N. of 3 Line and 790 ft. E. of W. Line of Section 4 Elevation 6005 (alt.)
(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 D. W. RoperDate February 27, 1961 Title Senior Petroleum Engineer

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

Commenced drilling January 15, 1961 Finished drilling February 5, 1961

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 6389 to 6395 No. 4, from _____ to _____No. 2, from 6440 to 6444 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>8-5/8"</u>	<u>20</u>	<u>8RT</u>	<u>J-57</u>	<u>3%</u>	<u>Halliburton</u>	<u>Surface</u>			<u>Surface</u>
<u>4-1/2"</u>	<u>9.85</u>	<u>8RT</u>	<u>J-55</u>	<u>6317</u>	<u>Guide</u>	<u>Oil String</u>			<u>Oil String</u>
<u>4-1/2"</u>	<u>11.6</u>	<u>8RT</u>	<u>J-55</u>	<u>272</u>	<u>Guide</u>	<u>Oil String</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>8-5/8"</u>	<u>347</u>	<u>205 sacks of cement</u>	<u>Halliburton 1 Plug.</u>		
<u>4-1/2"</u>	<u>6565</u>	<u>525 sacks of cement</u>	<u>Baker 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 6565 feet, and from _____ feet to _____ feet

Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

Completed February 17, 1961 as Shut In DATES (Shut In for pipeline connection)
Basin Dakota Field Development Gas Well. Put to producing February 17, 1961

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

Test Relinquish, on 27 ft. per 24 hours 3205 Gallons gasoline per 1,000 cu. ft. of gas _____Rock pressure, lbs. per sq. in. potential test will be filed on Sundry Notice when

EMPLOYEES

STATE OF OHIO
SHERIFF OF CUYAHOGA COUNTY
COLUMBUS, OHIO

[illegible]

1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1971).

The work done by D-271 - located 500 yards from
with 6 holes per foot. Sandwater tracked with 40,000 gallons with 1 percent
collected chlorine by water with lime solution 3.90 per 1000 gallons water and 40,000
pounds sand. Trackdown pressure 2300 psi, average treating pressure 2350 psi.
average injection rate 46 barrels per minute. Loaded 2-3/8 tubing at 5377.
Completed February 17, 1967 as Spent in Basin Dakota Field Development Well.
Retest February 20, 1967 per day. Top pay Dakota 6379'.

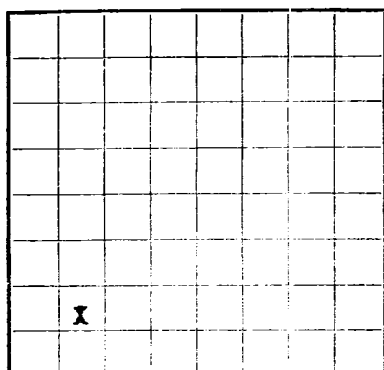
SEPARATING FOR CONVICTION OPERATIONS.

348, and resumed drilling operations.

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 pins of bridges were put in forest for water, state kind of material used, position, and results of pumping or drilling. Spudded 12-1/4" hole on January 15, 1961, and drilled to 345'. Set 8-5/8" casing.

U. S. GOVERNMENT PRINTING OFFICE: 1964-4-28-2

[illegible]

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Signed _____

Date February 27, 1961Title Senior Petroleum Engineer

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(Denote gas by G)

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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>8-5/8"</u>	<u>20</u>	<u>8PT</u>	<u>J-52</u>	<u>336</u>	<u>Reamer</u>	<u>Surface</u>			<u>Surface</u>
<u>4-1/2"</u>	<u>9.3</u>	<u>8PT</u>	<u>J-55</u>	<u>6317</u>	<u>Reamer</u>	<u>6317</u>			<u>Oil String</u>
<u>4-1/2"</u>	<u>11.6</u>	<u>8PT</u>	<u>J-55</u>	<u>272</u>	<u>Reamer</u>	<u>6317</u>			<u>Oil String</u>

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Test Preliminary, cu. ft. per 24 hours 3205 Gallons gasoline per 1,000 cu. ft. of gas _____Rock pressure, lbs. per sq. in. _____
Potential test will be filed on Sundry Notice when available.

EMPLOYEES

/s/ Steve Carter, Driller /s/ Donald Coleman, Driller/s/ George Deal, Driller /s/ R. H. Wisener, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	650	650	Surface sands and shales.
650	1030	380	Kirtland sands and shales including Farmington sands.
1030	1625	595	Fruitland sands, shales, and coals.
1625	1995	370	Pictured Cliffs sand.
1995	3409	1414	Lewis shale.
3409	4570	1161	Mesaverde sands and shales.
4570	5410	840	Mancos shale.
5410	6200	790	Gallup sands and shales.
6200	6250	50	Greenhorn sands and shales.
6250	6315	65	Graneros sands and shales.
6315	6380	65	Dakota sands and shales.
6380	6565	185	Dakota pay sands and shales.
			(Tops from "D" Log)

