ILLEGIBLE

Form 9-330

Budget Bureau No. 42-R355.4.
Approval expires 12-31-60.

U. S. LAND OFFICE [illegible]
SERIAL NUMBER [illegible] 151
LEASE OR PERMIT TO PROSPECT [illegible]

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

LOCATE WELL CORRECTLY

Company Humble Oil & Refining Company Address Box 1189, Houston, Texas
Lessor or Tract Jicarilla Apache Tr. Ind. "K" Field Blanco Mesa Verde State New Mexico
Well No. 6 Sec. 4 T. 26N R. 5W Meridian - County Rio Arriba
Location 807 ft. [S] of S Line and 1354 ft. [W] of E Line of Section 4 Elevation 6556
(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 Russell M. Lilly
Russell M. Lilly
Date July 18, 1956 Title District Superintendent

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

Commenced drilling April 21, 1956 Finished drilling July 2, 1956

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from G 3220 to 3244 PC
No. 2, from G 4464 to 4900 MV
No. 3, from G 4920 to 4960 MV
No. 4, from G 5400 to 5410 MV
No. 5, from G 5420 to 5444 MV
No. 6, from G 5460 to [illegible] MV

IMPORTANT WATER SANDS

No. 1, from to
No. 2, from to
No. 3, from to
No. 4, from to

RECEIVED JUL 19 1956 OIL CON. COM. DIST. 3

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforations From—	To—	Purpose
10-3/4	40	8	Nat'l.	306	Ute	—	3220	3244	Prod. PC
5-1/2	14	8	Nat'l.	5590	Ute	—	4464	4900	Prod. MV
							4920	4960	Prod. MV
							5420	5444	Prod. MV
							5460	5410	Prod. MV

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
10-3/4	316	275	Pumped		
5-1/2	5586	1250	Pumped		

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 5590 feet, and from feet to feet
Cable tools were used from feet to feet, and from feet to feet

DATES

July 2, 1956 Put to producing Well shut in, no pipeline conn. 19

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 1654 PC Gallons gasoline per 1,000 cu. ft. of gas
Rock pressure, lbs. per sq. in. 775 PC S-1FP

EMPLOYEES

A. B. Clark, Driller L. B. Morris, Driller
Augustus Thompson, Driller , Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	3226	3226	Sand and shale
3226	3255	29	Sand
3255	5590 TD	2335	Sand and shale
			Top of Mesa Verde formation 4464'
			Top of Pictured Cliffs formation 3220'

FOLD | MARK

FORMATION RECORD—Continued

FROM—	TO—	TOTAL FEET	FORMATION

HISTORY OF OIL OR GAS WELL

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

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.

See attached sheet.

LOG OF OIL OR GAS WELL

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

U. S. LAND OFFICE
SERIAL NUMBER
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Revised December 15-31-60
Budget Bureau No. 42-R355.4

FORM 9-330

LOG OF OIL OR GAS WELL
HISTORY OF OIL OR GAS WELL

This well was drilled to a total depth of 5590', w/completion depths of 4960 and 5540' in the Mesa Verde formation and 3264' in the Pictured Cliffs formation.
Set 298' of 10-3/4" casing at 310' w/275 sks. regular neat cement.
Core #1 3185 - 3190' Cut 5', recovered 5'. 1-1/2' shale, 3-1/2' sand.
Core #2 3190 - 3196' Cut 6', recovered 3', 3' sand.
Core #3 3196 - 3216' Cut 20', recovered 8'. 5' dark gray shaly tight sand, 3' dark gray black shale w/coal inclusions.
Core #4 3226 - 3255' Cut 29', recovered 29'. Light gray, fine tight sand, scattered gas odors.
Core #5 4872 - 4904' Cut 32', recovered 32'. 20' light gray fine tight sand, slightly bleeding gas, no odor. 12' light gray fine tight sand, w/thin dark gray shale partings, slightly bleeding gas, no odor.
Core #6 5343 - 5393' Cut 50', recovered 49'. 17' black shale, gray fine sandstone, siltstone and coal. 24' light gray, fine to medium sandstone, slightly bleeding gas and slight gas odor, slight porosity. 8' gray, fine to medium grained sandstone, w/a few 6" black shale and coal zones, slight porosity, fair gas odor.
Core #7 5393 - 5433' Cut 40', recovered 40'. 2' gray fine shaly sand, 1' dark gray shaly sand, 2-1/2' gray fine shaly sand, 1' coal, 2-1/2' gray fine to medium sand, fair gas odor, slight porosity, 4' black rotten shale, 7' light gray fine to medium sand, fair gas odor, slight to fair porosity, 7' light gray, fine to medium sand, w/occasional thin coal and shale partings, fair gas odor, trace of porosity, 13' light gray medium sand, fair gas odor and porosity.
Core #8 5433 - 5483' Cut 50', recovered 50'. 8' light gray fine tight sand, slight gas odor, 5' light gray fine tight sand, slight gas odor, 6' light gray fine tight sand, slight gas odor, 3' gray shaly tight sand, slight gas odor, 1' light gray fine tight sand, slight gas odor, 2' gray sand, w/thin black shale partings, 2' gray fine sand, slight gas odor, 2' gray fine sand, w/thin black shale partings, 5' gray fine tight sand, slight gas odor, 4' gray fine tight crushed sand, 4' gray fine tight sand, slight gas odor, 1' gray shaly sand, 7' gray fine tight sand, slight gas odor.
Core #9 5483 - 5512' Cut 29', recovered 29'. 5' gray fine tight sand, slightly bleeding gas, 8-1/2' black shale, 1-1/2' light gray tight sand, slightly bleeding gas and light yellow-green oil, fair odor, 2' light gray, tight sand, hard, 3' light gray tight sand, slightly bleeding gas, and light yellow-green oil, fair odor, 2-1/2' dark gray shaly sand, 1-1/2' light gray tight hard sand, slightly bleeding oil, 5' black shale.

Set 5574' of 5-1/2" csg. at 5586', w/250 sks. 10% gel and 1000 sks. reg. neat cmt.
Perf. csg. 5-1/2" from 5513-5518', and from 5522-5524' w/6 Lane Wells bullet shots/ft.
Ran tubing to 5539' w/packer set at 5503'. Swabbed well dry. Dowell acidized w/500 gals. mud acid. Avg. inj. rate 1-1/2 bbls/min. at 600#, followed with 25 bbls. water. Swabbed well 6-1/2 hours. Recovered acid water. Swabbed well dry w/slight show of gas w/trace of oil. Dowell sanfraced w/4050 gals. #2 Diesel Oil and 3000# sand. Avg. inj. rate 8 bbls/min. at 4900#.
Heran tubing to 5497' w/packer set at 5462'. Swabbed well dry. On 18 hour test, produced 2-1/2 bbls. fluid (1 bbl load oil, 1 bbl water, 1/2 bbl BS).
Set bridge plug at 5507' w/1 sack of cmt. on top of plug.
Perf. 5-1/2" csg. from 5402-5418', 5424-5428', 5436-5444', and from 5460-5484' w/6 Lane Wells bullet shots/ft. Aquafraced w/40,500 gals. water and 30,000# sand. BD press. 2000#, broke to 1600#. Avg. inj. rate 50.7 bbls/min at 1600#. SIP after 15 min 400#. Swabbed well in, produced at rate of 384 MCF/day.
Heran tubing and set Baker Magnesium Bridge plug at 4960'. Perf. 5-1/2" csg. from 4864-4900' and from 4920-4940' w/6 Lane Wells bullet shots per foot. Aquafraced through perfs. w/39,480 gal. water, and 30,000# sand. BD press. 1600#, avg. inj. rate 51 bbls. per min. at 1600#. Shut in press. 750# after 4 min. Shut in 4 hours, was on small vacuum when opened.
Heran tbg. to 4864' w/Sweet packer and holddown set at 4820'. Swabbed well 10 hours, well started flowing, produced at rate of 1004 MCF/day.
Ran bit and drilled Magnesium plug at 4969', drilled on to 5501'.
Set Baker Magnesium bridge plug at 3264'. Perf. 5-1/2" csg. from 3220-3244' w/6 Lane Wells bullet shots/ft. Aquafraced w/45,360 gal. water and 40,000# sand. BD press. 2400#, broke to 1100#. Avg. inj. rate 51 bbls/min. at 1200#. Shut in press. after 5 min. 400#. Produced at rate of 561 MCF/day.
Ran tubing to 3221' w/Sweet packer set at 3183'. Swabbed well in, produced at rate of 385 MCF/day.
Drilled bridge plug at 3264', broke loose and pushed to 5446', drilled out plug and on to 5558'.
Ran 5472' of 2" tbg. w/Sweet packer and holddown at 5481'. Packer set at 3275'. Swabbed well dry. Tested Pictured Cliffs formation through csg. and produced at rate of 349 MCF/day.
Set 5439' of 2" tbg. at 5448' w/packer set at 3272'. Well kicked off. Produced at rate of 1104 MCF/day from Pictured Cliffs formation.
Swabbed Mesa Verde section in. Kicked off, produced at rate of 2424 MCF/day.
Flowing gas well from perf. in Pictured Cliffs formation from 3220-3244, and perfs. in Mesa Verde section from 4864-4900', 4920-4940, 5402-5418', and 5424-5444', 5460-5484'.
Dual completion well.
Well shut in.