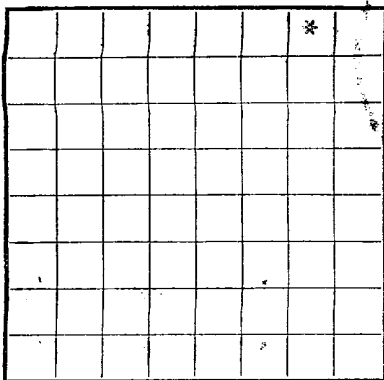


U. S. LAND OFFICE Santa FeSERIAL NUMBER 079021

LEASE OR PERMIT TO PROSPECT



LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company PLYMOUTH OIL COMPANY Address 330 Silver State Building, Denver, ColoLessor or Tract _____ Field Undesignated State New MexicoWell No. 1 Sec. 14 T 22N R 6W Meridian N.M. County SandovalLocation 790 ft. N of N Line and 1850 ft. E of E Line of Sec. 14 Elevation 7093
(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

Date February 28, 1958Title Regional Supervisor

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

Commenced drilling July 27, 1957 Finished drilling August 21, 1957

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 5299 to 5308 No. 4, from _____ to _____No. 2, from 5367 to 5397 No. 5, from _____ to _____No. 3, from 5431 to 5437 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 -	
10 3/4	32.75	8 Rd.	Mission	393.92	Baker				
5 1/2	14	8 Rd.	Mission	5505	Baker		5299	5308	
							5367	5397	
							5431	5437	

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
10 3/4	393.92	400	Pump		
5 1/2	5500	200	Pump		

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 Surface feet to 5500 feet, and from _____ feet to _____ feet

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

DATES

_____ 19____ Put to producing February 21, 1958The production for the first 24 hours was 62 barrels of fluid of which 100% was oil; _____% emulsion; _____% water; and _____% sediment. Gravity, °Bé. 42

If gas well, cu. ft. per 24 hours _____ Gallons gasoline per 1,000 cu. ft. of gas _____

Rock pressure, lbs. per sq. in. _____

EMPLOYEES

_____Brown_____, Driller _____Burch_____, Driller_____Sherry_____, Driller _____, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	1293	1293	Tertiary
1293	1444	151	OJO Alamo
1444	1861	417	Kirtland-Fruitland
1861	1950	89	Pictured Cliffs
1950	3306	1356	Lewis
3306	3338	32	Cliff House
3338	4114	776	Menefee
4114	4257	143	Point Lookout
4257	5175	918	Mancos
5175	5500	325	Gallup

[OVER]

15-43094-4

FORMATION RECORD - CONTINUED

FROM-	TO-	FORMATION
		CORE SUMMARY AND DRILL STEM RECORD

Core No. 1: 4075' - core bbl. jammed, rec. 28' alternating sandstone, shale, siltstone and coal. No shows of hydrocarbons.

Core No. 2: 4081' - core bbl. jammed, rec. 6' laminated sand and shale. No shows.

Core No. 3: 4095' - core bbl. jammed, rec. 15' laminated shale and sand and coal.

Core No. 4: 4114' - rec. 31', lost 18' 4114' - rec. 31', lost 18'

4' laminated sand and shale - no shows
3' argillaceous sand - no shows
6' argillaceous sand - good odor, fluor., stain & cut
9' siltstone w/shale inclusions and shale
3' laminated sand and shale - no shows
2' sand - good odor, cut & fluor
3' argillaceous sand - no shows

Core No. 5: 5204' - core bbl. jammed, rec. 11' 10' 8" laminated shale and siltstone

Core No. 6: 5219' - core barrel jammed, rec. 13' laminated shale and siltstone

Core No. 7: 5265' - rec. 46' 46' laminated shale and siltstone

Core No. 8: 5316 - rec. 50' 5316 - rec. 50'

5266-71' - laminated shale and siltstone - good fluor. in siltstone
5271-92' - very fine grained argillaceous sandstone w/pp to spotty fluor.
5292-5301' - fine to medium grained silty, argillaceous calcareous sand-
stone w/good fluor., stain & cut 5301-5311 - shale

Core No. 9: 5371' - rec. 50' 5371' - rec. 50'

5358-66' - very argillaceous sandstone - no shows
5366-71' - argillaceous sandstone - scattered good fluor., stain & cut

Core No. 10: 5421' 5421' - argillaceous sandstone w/good spotty fluor., cut
5371-73' - argillaceous sandstone w/good spotty fluor., cut
5373-75' - very argillaceous and calcareous sandstone w/medium crystalline
brown limestone in sand and along small fractures - oil in fractures and
in medium crystalline limestone.
5375-79' - very argillaceous sandstone with shale inclusions - good spotty
fluor., stain and cut
5379-84' - argillaceous sandstone - good fluor., stain & cut
5384-93' - same w/spotty good fluor., stain & cut
5393-5395' - shale
5395-5420' - argillaceous sandstone - no shows
5420-5421' - same w/spotty fluor., stain & cut

HISTORY OF OIL OR GAS WELL

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.

8/21/57: Reached TD 5500' Driller. Ran Schj. Induction-Litec. Log and Micro-Latterlog. Layed down drillpipe and ran 175 joints (5505') J-55, 5 1/2 inch casing with Baker float collar and shoe and cemented with 200 sx. regular cement.

8/23/57: Ran B & R Temp. Survey. Top cement at 4700'. Nipped up.
8/24/57: Ran P.G.A.C. Radiation Log. Perforated 5 1/2 inch casing with 6 jet shots per foot from 5299' to 5308'; 5367' to 5397', and 5431' to 5437'. (Shooting with reference to P.G.A.C. Gamma Ray-Neutron. K. B. zero 8.60' above 900 series 10 3/4" casing flange.)
8/25/57: Nipped up and washed perforations with 500 gals. of lowell mud-acid and reversed out. Hole did not appear to take fluid before or after washing perforations.

8/26/57: Displaced water with oil. Pulled tubing. Frased through casing with a total of 14 1/4 barrels oil and 45,000 lbs. of 20/40 mesh sand. Used 100 nylon core balls. Maximum treating pressure 2700 lbs., minimum treating pressure 2000 lbs. Average rate of injection 46 bbls. per min. Well shut in from 4:00 p. m. to 12:00 a.m.
8/27/57: Well shut in from 12:00 a.m. to 5:30 a.m. Opened well and started flowing load oil back through casing at 5:30 a.m. Casing pressure 700 lbs. at 4:00 p.m. - had 610 lbs. on casing. At 12:00 a.m. had 375 lbs. on casing.

8/28/57: Flowing well through casing.
8/29/57: Well died at 5:30 a.m. Ran tubing in hole with packer on 3rd stand from bottom. Swabbed well from 4:00 p.m. to 8:00 p.m. 8:00 p.m. to 12:00 a.m. - waiting on daylight to swab.
8/30/57: Swabbing.
8/31/57: Swabbing.

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

CORE SUMMARY AND DRILL STEM RECORD
(Cont'd)

-2-

Core No. 11:

5421-71' - rec. 50' :
5421-23' - argillaceous sandstone - no shows
5423-29' - argillaceous sandstone - good fluor., stain and cut
5429-57' - shale w/sandstone inclusions
5457 $\frac{1}{2}$ -64' - fossiliferous shale
5464-70' - shale w/sandstone inclusions
5470-71' - fossiliferous shale

DST No. 1: 4102-4145' - tool open 1 hr., shut in 30 mins. Good blow throughout test. Rec. 350' heavy oil and gas cut mud. IHP - 2105#, IFP - 83#, FFP - 300#, SIP - 1363#.

DST No. 2: 5144-79' - tool open 2 hrs., shut in 30 mins., very weak blow. Dead in one hr. 44 mins., rec. 5' very slightly gas cut mud. IHP - 2760#, IFP - 50#, SIP - 50#, FFP - 50#.

DST No. 3: 5270-5316' - tool open 1 hr., shut in 30 mins., very weak blow. Dead in 30 mins. Rec. 5' very slightly gas and oil cut mud. IHP - 2618#, IFP - 60#, FFP - 60#, SIP - 60#, FHP - 2572#.

DST No. 4: 5360-5421' - tool open 1 hr. 45 mins., shut in 30 mins. fair blow, decreasing after 30 mins., dead in 1 hr. 45 mins. Rec. 5' very slightly oil and gas cut mud. IHP - 2692#, IFP - 84#, FFP - 78#, SIP - 88#, FHP - 2666#.