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RECEIVED
MAY 10 1961

U. S. LAND OFFICE Santa Fe
SERIAL NUMBER BF 078911-B
LEASE OR PERMIT TO PROSPECT _____

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company Tenneco Corporation Address P. O. Box 1714, Durango, Colorado
 Lessor or Tract USA Glenn H. Callow Field Total State New Mexico
 Well No. 17 Sec. 28 T. 29 N R. 13 W Meridian N.M.P.M. County San Juan
 Location 330 ft. [N.] of S Line and 2160 ft. [E.] of W Line of Section 28 Elevation 5750 GL
(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 L. B. Flumb L. B. Flumb

Date May 4, 1961 Title District Production Supt.

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

Commenced drilling April 1, 1961 Finished drilling April 10, 1961

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 5573 to 5576 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 ~~None~~ to _____ No. 3, from _____ to _____
No. 2, from _____ to _____ No. 4, from _____ to _____

CASING RECORD

[illegible]

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
9-5/8"	170'	125	Two Plug	--	--
4-1/2"	5536'	240	Two Plug	--	--

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 5536 feet, and from _____ feet to _____ feet
Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

DATES Potential test - 4-16-61: F/195 DO in 24
hours on 18/64" choke, GOR 945
Put to producing April 15, 1961

The production for the first 24 hours was 195 barrels of fluid of which 100% 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. -----

EMPLOYEES

_____, Driller _____, Driller
_____, Driller _____, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	12	12	KB to ground level
12	842	830	Shale and sand stringers
842	1512	670	Brown shale
1512	1661	149	Sandstone
1661	3035	1374	Black shale with occasional sand stringers
3035	4258	1223	Sandstone and shale
4258	5450	1192	Black shale
5450	5636	186	Shaly and silty sands with shale
<u>Electric Log Tops</u>			
			Hirtland 190
			Farmington Sands 270
			Fruitland Shale 830
			Pictured Cliffs 1515
			Lewis Shale 1665
			Mesa Verde 2475
			Mancos Shale 4300
			Gallup 5200
			Total Depth 5636

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.

Well spudded 3:00 p.m. 4-1-61. Drilled 12 1/4" hole to 172' and 7-7/8" hole to 550'. Ran 8-5/8" 24# J 55 casing set at 172'. Cemented with 125 sacks regular cement. Circulated cement to surface. WOC 8 hours. Pressure tested casing to 800 pounds for 30 minutes. Pressure held o.k. Drilled 7-7/8" hole to 5636. Ran 8-5/8" induction log and Minilog. Ran 4-1/2" 9.5# J 55 casing set at 5636. Stage collar set at 1725 and cemented in two stages. First stage: cemented with 140 sacks 6% gel and 50 sacks 2% gel. Plug down on first stage 11:15 p.m. 4-9-61. Second stage: cemented with 50 sacks 1:1 Poromix 6% gel. Plug down on second stage 11:45 p.m. 4-9-61. WOC 24 hours. Pressure tested casing to 3000 pounds. Pressure held o.k. Potentiostat test: Flowed 195 barrels oil in 24 hours on 18/64" choke, IP 200, CP 375, GOR 945.

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1. *Chlorophyll a* (Chl *a*)

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$\frac{1}{\sqrt{\pi}} \int_{-\infty}^{\infty} f(x) e^{-x^2} dx = \frac{1}{\sqrt{\pi}} \int_{-\infty}^{\infty} f(x) e^{-x^2} dx$

— *Journal of the American Medical Association*, 1997

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Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains.

ANALYST: J. A. J. VAN DER VEGT

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