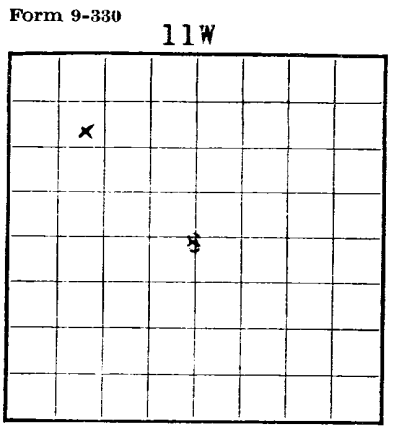
Form 9-330



LOCATE WELL CORRECTLY

RECEIVED
APR 13 1961
OIL CON. COM.
DIST. 3

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

U. S. LAND OFFICE Santa Fe
SERIAL NUMBER SF-080382-A
LEASE OR PERMIT TO PROSPECT

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company The Frontier Refining Co. Address 4040 East Louisiana Ave. Denver 22, Colorado

Lessor or Tract Frontier-Aztec Unit "A" Field Basin Dakota State New Mexico

Well No. 1-D Sec. 8 T. 27N R. 11W Meridian N.M.P.M. County San Juan

Location 990 ft. {S.} of N. Line and 990 ft. {W.} of W. Line of Section 8 Elevation 6134.5' KB (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 John L. Cornell

Date April 11, 1961 Title Petroleum Engineer

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

Commenced drilling February 25, 19 61 Finished drilling March 11, 19 61

OIL OR GAS SANDS OR ZONES

(*Denote gas by G*)

No. 1, from (G) 6445 to 6476 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 From—	Perforated To—	Purpose
8 5/8"	24	8Rd	Spang	190.73	None	-	-	-	Surface csg.
4 ½"	11.6	ST&C 8Rd	CF&I	6579.00	Howco	-	6453	6468	Prod. csg.
2 3/8"	4.7	8Rd	CF&I	6448.64		-	-	-	Tubing

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
8 5/8"	202'	200 sx + 2% caCl	circ. to surface	water	water
4 ½"	6491	300 sx 50-50 Pox.	5 plug	9.5#/gal	-

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 6606 feet, and from ____ feet to ____ feet

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

DATES

____, 19____ Put to producing April 5, 19 61

The production for the first 24 hours was 29 barrels of fluid of which 70 % was oil; 20 % emulsion; 10 % water; and ____ % sediment.

Gravity, °Bé. 55.1 @ 60° F

*If gas well, cu. ft. per 24 hours 1930 MCF Gallons gasoline per 1,000 cu. ft. of gas ____

Rock pressure, lbs. per sq. in. ____ *As measured against 500 psi back pressure, 24/64" choke, pitot uncorrected.

EMPLOYEES

J. W. Baker, Driller F. C. Seale, Driller

Doyle Castle, Driller Doc Seale, Driller

XXXX Tool Pusher

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
			From the Schlumberger Induction-Electric log.
			Kirtland 797
			Fruitland 1622
			Pictured Cliffs 1792
			Chacra 2764
			Pt. Lookout 4220
			Mancos 4578
			Gallup 5452
			Huerfano 5895
			Tocito 5924
			Greenhorn 6278
			Graneros Shale 6338
			1st Graneros S.S. 6371
			2nd Graneros S.S. 6396
			Dakota "A" 6445
			P.B.T.D. 6558.5
			T.D. 6606

(OVER)

16—48094-4

FORMATION RECORD—Continued

FROM—	TO—	TOTAL FEET	FORMATION

Spudded 1:00 AM 2-25-61.

Drilled 12 ¼" hole to 230' and set 8 5/8" casing @ 202' KB. Cemented w/200 sax regular cement plus 2% CaCl. Circulated cement.

Drilled 7 3/8" hole to 4513 ; 6 3/4" hole to 6433 ; cored (6 11/16") 6433--6605', drilled 6 3/4" hole 6605-6606', T.D.

Ran Schlumberger I-E log and Sonic-GammaRay-Caliper log, T.D. by Schlumberger 6608'.

Set 4 ½", J-55 casing (premium tested to 4900 psi.), [illegible] 6591' KB. w/HOWCO two-stage cementing tool @ 2039' KB, baffle collar @ 6558.54' KB. Cemented 1st stage w/125 sax 50-50 Pozmix S, 12½% Gilsonite 4% gel followed by 100 sax 50-50 Pozmix S, 2% gel. 2nd stage w/75 sax 50-50 Pozmix S, 4% gel. Indicated cement top 1st stage @ 4705' KB, 2nd stage @ 1700' KB. Centralizers run on joints 1,2, 3,4,5,6,7, and on joints above and below D. V. tool. Rotary scratchers run from T.D. up for 250' over Dakota section.

Moved completion rig on location 3-13-61.

Drilled D.V. tool and cleaned out to P.B.T.D. of 6558½' KB. Pressure tested casing to 4,000#, held ok. Ran P.D.C. log (McCullough) *

Broke formation down w/ 1 Dowell truck, 2000# to 1700#, all four pumps on line inject @ 30 BPM @ 3200 psi. Fraced w/4 Dowell Allison pumpers using 90 bbls water to fill casing, prime pumps, and breakdown, 1425 bbls water w/41,400# 20-40 sand, 100 bbls displace water and 75 bbls water when blender malfunctioned. Started sand @ ¼ #/gal increased to 1 #/gal. Average injection rate 34¼ BPM @ 2800 psi @ 7/10 #/gal. I.S.I.P. 1500 psi, 5 min 1300 psi. Water contained 1% CaCl, 34 # J-101/1000 gals. Ran tubing, landed @ 6457.64' KB and installed well head.

Tested 4-5-61 through 4-6-61. 24/34" choke, 500 psi back pressure to simulate deliverability. Shut-in tubing 1975 psi, shut-in casing 2080 psi. Recovery gauged 1,930 MCF/D (uncorrected pitot tube), 20.06 bbls distillate (55.1° @ 60° F) and estimated 3 bbls water and 6 bbls emulsion. Stabilized tubing pressure 560 psi, casing pressure 655 psi, Shut-in tubing and casing pressures 24 hours after test were 1750 psi and 1800 psi respectively.

Well shut-in - FPC approval and gas sales contract received. Waiting on pipeline connection.

Note: Two copies each of Schlumberger I-E log, Sonic - Gamma Ray log and core analysis are attached.

* INSERT: Perforated Dk. Sand 6453-6468 (Sonic log) w/ 3 25 gram std csg jet strip shots/ft & 3 ½" bullets/ft (McCullough)

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.