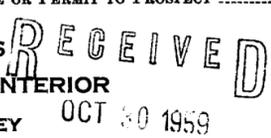


U. S. LAND OFFICE Santa Fe
SERIAL NUMBER SF 076765
LEASE OR PERMIT TO PROSPECT



UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



LOG OF OIL OR GAS WELL
 U. S. GEOLOGICAL SURVEY
 FARMINGTON, NEW MEXICO
 COMPANY: Blanco Mesas
 LESSOR OF TRACT: Blanco Mesas
 WELL NO.: 1235
 LOCATION: 1235 ft. S. of Line and 1235 W. of Line of Section 5
 COUNTY: Santa Fe
 ELEVATION: 2235 (R.B.)

The information given in this log is a complete and correct record of the well and all work done thereon so far as can be determined from all available records.
 ORIGINAL SIGNED BY: [Signature]
 Date: October 18, 1959

Commenced drilling August 20, 1959 Finished drilling September 27, 1959

OIL OR GAS SANDS OR ZONES
 No. 1, from 1235 to 1235
 No. 2, from 1235 to 1235
 No. 3, from 1235 to 1235
 No. 4, from 1235 to 1235
 No. 5, from 1235 to 1235
 No. 6, from 1235 to 1235

IMPORTANT WATER SANDS
 No. 1, from 1235 to 1235
 No. 2, from 1235 to 1235
 No. 3, from 1235 to 1235
 No. 4, from 1235 to 1235
 No. 5, from 1235 to 1235
 No. 6, from 1235 to 1235

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From-	To-	
13-3/8	23	SRT	National 13 3/8	100	Guide				Oil string
9-5/8	20	SRT	National 9 5/8	100	Guide				Oil string
7	15	SRT	National 7	100	Guide				Liner

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
13-3/8	278	275 sacks cement	Halliburton 1 plug		
9-5/8	3700	900 sacks cement	Halliburton 2 plug		
7	7710	900 sacks cement	Halliburton 2 plug		
5	8120	75 sacks cement	Halliburton 1 plug		

PEGS 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 _____ feet, and from _____ feet to _____ feet
 Cable tools were used from 0 feet to 8120 feet, and from _____ feet to _____ feet

DATES
 Completed as shut in gas well Blanco Mesas Field, October 18, 1959 to producing Shut in for pipeline connection
 Preliminary test October 18, 1959, 1235 MCF/D. 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 _____ Gallons gasoline per 1,000 cu. ft. of gas _____
 Rock pressure 1235 lbs. per sq. in.

EMPLOYEES
 _____, Driller
Jack Quinn, Driller E. C. Quinn, Driller
Ira A. Dean

FORMATION RECORD T. C. Rowland

FROM-	TO-	TOTAL FEET	FORMATION
0	4092	4092	Surface sands & shales.
4092	4106	14	Pictured Cliffs sands & shales.
4106	5344	1238	Lewis shale.
5344	5445	81	Cliffhouse sands & shales.
5445	5584	139	Mamee shale.
5584	5820	236	Point Lookout sands & shale.
5820	6912	1092	Mamee shale.
6912	7634	722	Callup sands & shales.
7634	7702	68	Greenhorn shale.
7702	7822	120	Graneros sands & shales.
7822	8110	288	Dakota pay sands & shales.
8110	8120	10	Morrison sands & shales.

(Tops from radioactivity & electric logs)

U.S. GEOLOGICAL SURVEY
DIST. DEPARTMENT OF THE INTERIOR
UNITED STATES



Grid for well location and depth

Location is a complete and correct record of the well and all work done thereon... After writing on cement, tested top of 5 1/2 inch with 1000 ft. test...

Completed drilling... 10. Finished drilling... 11. Drilling operations... 12. Cemented casing...

13-1/8 inch casing set at 275 feet... 14-1/2 inch casing set at 320 feet... 15-1/2 inch casing set at 370 feet...

Table with columns: Mark, Amount, Kind of shoe, From, To, Purpose

MIDDING AND CEMENTING RECORD table with columns: Size, Weight, Number sacks of cement, Method used, Mud gravity, Amount of mud used

SHOOTING RECORD table with columns: Size, Shell used, Explosive used, Quantity, Date, Depth shot, Depth cleaned out

TOOLS USED: Rotary tools were used from... Cable tools were used from...

DATES: Completed as per... The production for the first 24 hours was...

EMPLOYEES: Driller... Driller...

FORMATION RECORD: Trs. A. Case... Formation...

FORMATION RECORD table with columns: FROM, TO, TOTAL FEET, and detailed formation descriptions

FORMATION RECORD—Continued

FORMATION table with columns: FROM, TO, TOTAL FEET

FORMATION RECORD—Continued

FORMATION table with columns: FROM, TO, TOTAL FEET

FORMATION RECORD—Continued

FORMATION table with columns: FROM, TO, TOTAL FEET

FORMATION RECORD—Continued

FORMATION table with columns: FROM, TO, TOTAL FEET

FORMATION RECORD—Continued

FORMATION table with columns: FROM, TO, TOTAL FEET

FORMATION RECORD—Continued

FORMATION table with columns: FROM, TO, TOTAL FEET

FORMATION RECORD—Continued

Spotted 300 gallons acid on bottom of 5" liner at 8060'. Perforated 5" liner with 2 shots per foot 8020-7980 and 7970-7954. Baker full bore packer set at 7600' of 3-1/2" drill pipe. Acidized perforations with total of 1000 gallons. Breakdown pressure 3600 psi, treating pressure 2400 psi with injection rate 3 barrels per minute. Held 1000 psi on casing above packer. Attempted sand-water free on perforations 7954-7970 and 7980-8020 through 3-1/2" drill pipe with Baker full bore cementer set at 7600'. Sand water fracked with 15,200 gallons water and 10,000 pounds sand and sanding off. Breakdown pressure 4500 psi, treating pressure maximum 5500 psi, average treating pressure 4750 psi with injection rate 14.5 barrels per minute. Swabbed well in. Gaged 235 MCFPD after 8 hours. Killed well with mud and pulled packer. Cut 5" casing with Abrasijet at 8004'. Displaced mud with water and set packer at 7598'. Sand-water fracked with 30,000 pounds sand and 49,700 gallons water. Breakdown pressure 4300 psi, average treating pressure 4600 psi, maximum treating pressure 5100 psi, average injection rate 11.6 barrels per minute. Well tested 167 MCFPD. Set bridge plug at 7940'. Ran 5" packer with 63' tail pipe on 2" tubing and set packer at 7854'. Abrasijet cut at 7910' for 15 minutes using 3 jets. Attempted to acidize cut at 7910 below 5" packer set at 7854. Pumped 22 barrels acid in 7-3/4 hours. Packer appeared to be leaking. Discontinued pump and bleed off well. Spotted 20 sack cement plug 7683-7940. Perforated Mesaverde with 2 shots per foot 5600-5616, 5622-5636, 5656-5674, 5680-5684. Sand water fracked with 42,300 gallons water and 50,000 pounds sand. Dropped 140 perforated balls in 7 batches, 20 balls each at 2-1/2 - 3-1/2 minute intervals to ball off treatment. Breakdown pressure 750 psi, minimum treating pressure 500 psi, average treating pressure 1200 psi, maximum treating pressure 2900 psi, average injection rate 42 barrels per minute. Landed 1-1/4" tubing at 5692'. Completed October 19, 1959 as shut in Blanco Mesaverde Field gas well. Preliminary test October 18, 1959, 1235 MCFPD. Released rig October 19, 1959.

Pacific Northwest Pipeline Corporation assumed operations October 19, 1959.

