

LOG OF OIL OR GAS WELL

LOCATE WELL CORRECTLY

Company Tennessee Gas Transmission Co. Address P. O. Box 1772, Casper, Wyoming
 Lessor or Tract USA-W. O. Berger Field West Huerfano Area State New Mexico
 Well No. 1 Sec. 21 T. 26N R. 11W Meridian NMPM County San Juan
 Location 660 ft. S. of N Line and 1900 ft. W of N Line of Section 21 Elevation 6250.10' KB

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.

Date February 27, 1998 Signed Barbara K. Lay
Title District Superintendent

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

Commenced drilling June 28, 1957 Finished drilling July 23, 1957

OIL OR GAS SANDS OR ZONES
(Denote gas by G)

No. 1, from 5045 to 5380 No. 4, from 5380 to 5400
No. 2, from 5380 to 5400 No. 5, from 5400 to 5420
No. 3, from 5400 to 5420 No. 6, from 5420 to 5440

IMPORTANT WATER SANDS

No. 1, from _____ 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"	202.6	245	1 plug		
5-1/2"	5376.6	100	2 plug		

PLUGS AND ADAPTERS

Heaving plug—Material _____ Length _____ Depth set _____
Adapters—Material _____ Size _____

SHOOTING RECORD

[illegible]

TOOLS USED

Rotary tools were used from 12 feet to 5380 feet, and from _____ feet to _____ feet.

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

DATES

February 27, 1938 Put to producing February 1, 1938
 The production for the first 24 hours was 10 barrels of fluid of which 100% was oil; 0%
 emulsion; 0% water; and 0% sediment. Gravity, P.Bé. 38
 If gas well, cu. ft. per 24 hours Gallons gasoline per 1,000 cu. ft. of gas
 Rock pressure, lbs. per sq. in.

EMPLOYEES

EMPLOYEES		EMPLOYEES	
Moore	Driller	Barnwell	Driller
Phillips	Driller	Malins	Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
<u>Electric Survey Top</u>		<u>Pictured Cliffs</u>	1482'
		Mass Yards	2384'
		Point Look Out	3990'
		Masses shale	4207'
		Gallop	5042'
6	12	12	K.B. to ground level
12	458	446	Shale with sand stringers
458	590	132	Sand with ool shale breaks
590	970	380	Shale with sand breaks & stringers
970	1482	512	Shale with ool hard sandy streaks
1482	1498	16	Coal and shale
1498	1605	107	Sand stone with shale stringers
1605	2384	779	Shale with streaks of sandy shale
2384	3990	1706	Sandy shale w/streaks ss and coal
3990	4207	219	Sand w/shale streaks
4207	5042	835	Shale w/ool liny streaks
5042	5380	338	Shale w/sand & sandy shale streaks

FORMATION RECORD—Continued

FROM—	TO—	TOTAL FEET	FORMATION
CORE DESCRIPTIONS:			
CORE NO. 1 - 5065'-5077' (17') Recovered 10-1/2' Gallup formation.			
5065'-5068'	(8')		Shale, hard, grey, with sand & lime partings. Vertical fractures throughout. N.S.
5068'-5074'	(6')		Not recovered
5074'-5077'	(3')		Shale, hard, grey with sand & lime partings. No apparent show.
CORE NO. 2 - Gallup formation - 5077'-5103', cut 26', recovered 26'			
5077'-5084'	(7')		Shale, dk. grey to black w/ thin partings calc ss. 1 vertical fracture. No apparent show.
5084'-5091'	(7')		Shale as above w/ no vertical fractures. No show.
5091'-5103'	(12')		Shale as above w/ 1 vertical fracture entire length.
CORE NO. 3 Gallup formation - 5103'-5153' Cut 50', Recovered 30'			
5103'-5140'	(37')		Shale, black, carb, sandiferous with thin ss lenses, spotty show in lenses.
5140'-5144'	(4')		Shale as above w/ 1 vertical fracture entire length. Spotty show in ss
5144'-5153'	(9')		Shale as above. No fractures. Slight odor on fresh break.
CORE NO. 4 - Gallup formation - 5153'-5187' (34') recovered 33'			
5153'-5154'	(1')		Shale, black, carb. foss, silty spotty show
5154'-5156'	(2')		Shale as above with thin lenses of very fine grain ss. 1 vertical fracture. No show.
5156'-5164'	(8')		Shale as above w/ thin laminations of very fine grain ss. 1 vertical fracture. Tight spotty show.
5164'-5170'	(6')		As, very fine grain to silty w/ thin laminations and parts of shale. 1 vertical fracture bleeding oil & gas along bedding planes. Good stain and odor (40% shale)
5170'-5179'	(9')		As above without vertical fracture & w/ increase in sandstone. Bleeding oil & gas.
5179'-5181'	(2')		As above. No vertical fracture. Gas odor.
5181'-5184'	(3')		Shale, silty w/ 2 vertical fractures 5181-5183, 4 vertical fractures 5183-5186, odor w/ gas.
5186'-5187'	(1')		Not recovered.
CORE NO. 5 - 5187'-5215' (27') recovered 15' as follows:			
5187'-5194'	(7')		Siltstone w/ shale lenses & partings. 90% shale. Bleeding gas along bedding planes.
5194'-5203'	(9')		Shale, hard, black, carbonaceous w/ silt & lime partings.
5203'-5215'	(12')		Not recovered.
CORE NO. 6 5215'-5225' (10') Recovered 8'. Gallup formation.			
5215'-5223'	(8')		Shale, black, carb. calc w/ 1 vertical fracture entire length of core. No apparent show.
5223'-5225'	(2')		Not recovered.
CORE NO. 7 5225'-5248' (23') Shale, blk, hard, w/ silt & lime partings. 1 vertical fracture			
5225'-5238'	(13')		Bleeding gas throughout.
5238'-5248'	(10')		Len. sand & mudstone, as very fine grain hard, the, bleeding oil & gas along fracture & bedding planes.
5248'-5249'	(1')		Shale black, hard w/ sand & lime partings. 1 to 2 vertical fractures throughout. Bleeding gas.
5249'-5250'	(1')		Not recovered.
CORE NO. 8 - 5248'-5267' (19') Recovered 17'. Gallup formation.			
5248'-5257'	(9')		Recovered 17'.
5257'-5267'	(10')		Shale, black, hard w/ streaks siltstone & lime. Vertical fractures 5249-50', 5250-51', 5256-62', 5261-66'. Bleeding gas throughout.
5267'-5268'	(1')		Not recovered.
See attached page.			

HISTORY OF OIL OR GAS WELL

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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 the well has been plugged, give date, size, position, and results of pumping or hauling.

Run 5" 11-40 steel B7C casing. Cemented casing at 282.61'. Cemented to surface with 100 sacks. WOC 29 1/2 hours. Pressure tested casing & BOP w/ 500 psi for 30 minutes. Pressure held. Drilled 7-7/8" hole to 5060'. Cored w/ 7-3/4" x 3-1/2" Diamond Corehead from 5060' to 5340'. Rmmed core hole and drilled 7-7/8" hole from 5340' to 5380'. Took drill stem tests of the following intervals. DST #1 5050'-5103', ISI 33 minutes. Open 1 hour SI 39 minutes. IHP 2596 psi, FHP 2596 psi, ISIP 69 psi, IFP 37 psi, FFP 37 psi. FSIP 30 psi. Recovered 30' slightly gas cut mud. DST #2 - 5132'-5125'. ISI 30 minutes. Open 1 hour. Closed in 30 minutes. 5/8" bottom choke 1" top choke. IHP 2649 psi FHP 2649 psi, ISIP 2534 psi, IFP 245 psi, YFP 391 psi, FSIP 1632 psi, Gas to surface in 14 minutes. Gauged 70 MCFD decreasing to 43 MCFD at end of test. Recovered 960' highly gas cut mud. DST #3 - 5197'-5267' Mixture. DST #4 - 5197'-5267'. Mixture. Ran Schlumberger Electric Survey 5377'-285' & Microlog from 5373-4990', 4310-3088', 2944-1892', 988-670'. Ran 5-1/2" 14 1/2 J-55 C70H B&S casing to 5376', cemented with 100 sacks. MORT. MURCT. Cleaned out to 5338'. Perforated 5290'-5325', with 4 jets per foot. Sand frac w/ 20,000# sand in 20,000 gallons crude. Gauged 1,545 MCF gas per day. Set Baker Magnesium Bridge Plug at 5213'-5216'. Perforated 5221'-5260'. Sandfrac with 20,000# sand in 20,000 gallons lease crude blended with 1/4 gallon addmte. Set bridge plug 5216-5218' with Calseal cap 5213-5216. Perforated 5152-5202' w/ 2 shots per foot. Sandfrac with 14,732# sand in 22,532 gallons lease crude. Treated with 500 gallons mud acid. Ran tubing, sand frac with 50,000# sand in 22,848 gallons gelled crude treated with 1,400# addmte. Sand frac with 23,500# sand in 23,500 gallons lease crude. Drilled bridging plug and calseal 5213-5218' and cleaned out to 5276'. Ran 2" tubing, put on production. Recovered load oil 2/1/58. Potential test 2/13/58, flowed to BOP, 0 water through 1" choke. GOR 51,500 ft³/bbl

TOP OF OIL OR GAS WELL

GEOLOGICAL SURVEY

U. S. DEPARTMENT OF THE INTERIOR

BUREAU OF LAND MANAGEMENT

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