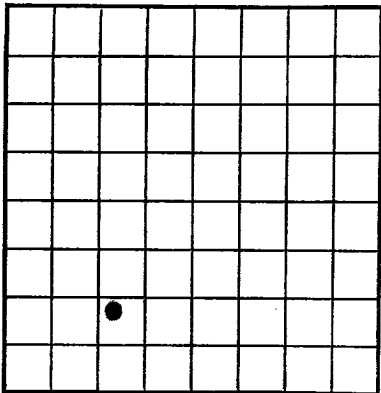


U. S. LAND OFFICE New Mexico
SERIAL NUMBER 02191
LEASE OR PERMIT TO PROSPECT _____



LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company Southern Union Gas Company Address 1104 Burt Bldg., Dallas, Texas
Lessor or Tract Whitley Field Blanco-LaPlata State New Mexico
Well No 4-3 Sec. 25 T. 30N R. 7W Meridian N.M.P.M. County Rio Arriba
Location 940 ft. {N.} of 8 Line and 1750 ft. {E.} of W Line of Section 25 Elevation 6280
(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 Van Thompson
Date October 25, 1952 Title Manager Exploration Dept.

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

Commenced drilling June 18, 1952, 19____ Finished drilling September 23, 19 52

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

No. 1, from 4900 to 5010 G No. 4, from _____ to _____
No. 2, from 5320 to 5490 G 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		Purpose
							From—	To—	
<u>9 5/8</u>	<u>36</u>		<u>H-40</u>	<u>183</u>					<u>Surface</u>
<u>5 1/2</u>	<u>15.5</u>		<u>H-40</u>	<u>4660</u>					<u>Production</u>
<u>2 1/2</u>	<u>4.77</u>		<u>H-40</u>	<u>5750</u>					

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
<u>9 5/8</u>	<u>183'</u>	<u>100</u>	<u>Halliburton</u>		
<u>5 1/2</u>	<u>4660'</u>	<u>200</u>	<u>"</u>		

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
		<u>Nitro Glycerine</u>	<u>1640 G</u>	<u>9/22</u>	<u>4900-5741'</u>	<u>To TD- 5750'</u>

TOOLS USED

Rotary tools were used from 0 feet to 4660 feet, and from _____ feet to _____ feet
Cable tools were used from 4660 feet to 5750 feet, and from _____ feet to _____ feet

DATES

October 24, 1952, 19____ Put to producing _____, 19____

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 4790 MCF Gallons gasoline per 1,000 cu. ft. of gas _____

Rock pressure, lbs. per sq. in. 10225 - 81-728 hrs.

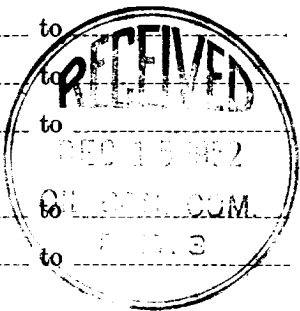
EMPLOYEES

Fleeger-Riley Drilling Co. Driller Rotary Contractor
Total Drilling Company Driller Cable Tool Contractor

FORMATION RECORD

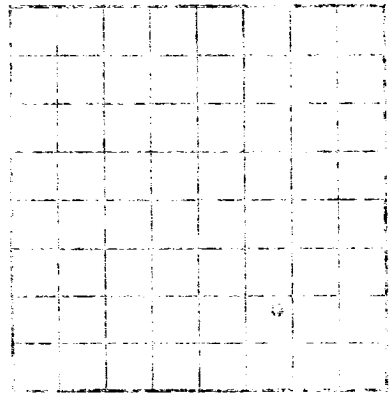
FROM—	TO—	TOTAL FEET	FORMATION
<u>0</u>	<u>237</u>	<u>237</u>	<u>Surface</u>
<u>237</u>	<u>3035</u>	<u>2798</u>	<u>Sand and shale</u>
<u>3035</u>	<u>3125</u>	<u>28</u>	<u>Brown shale and coal</u>
<u>3125</u>	<u>3153</u>	<u>28</u>	<u>Blue shale</u>
<u>3153</u>	<u>3935</u>	<u>782</u>	<u>Sand and shale - TOP PICTURED CLIFFS 3160'</u>
<u>3935</u>	<u>4029</u>	<u>94</u>	<u>Shale and sandy shale</u>
<u>4029</u>	<u>4119</u>	<u>90</u>	<u>Shale</u>
<u>4119</u>	<u>4165</u>	<u>46</u>	<u>Sand and shale</u>
<u>4165</u>	<u>4265</u>	<u>100</u>	<u>Gray & brown shale</u>
<u>4265</u>	<u>4324</u>	<u>59</u>	<u>Shale</u>
<u>4324</u>	<u>4900</u>	<u>176</u>	<u>Sand and shale</u>
<u>4900</u>	<u>4605</u>	<u>105</u>	<u>Sand and sandy shale</u>
<u>4605</u>	<u>4660</u>	<u>55</u>	<u>Sand and shale - Changed to cable tools</u>
<u>4660</u>	<u>4703</u>	<u>43</u>	<u>Sand</u>
<u>4703</u>	<u>4865</u>	<u>162</u>	<u>Sand and shale</u>
<u>4865</u>	<u>4905</u>	<u>20</u>	<u>Coal - Top CLIFF HOUSE FORMATION 4900'</u>
<u>4905</u>	<u>4925</u>	<u>20</u>	<u>Sand and shale</u>
<u>4925</u>	<u>4930</u>	<u>5</u>	<u>Sand</u>
<u>4930</u>	<u>4960</u>	<u>30</u>	<u>Sand and shale</u>
<u>4960</u>	<u>4980</u>	<u>20</u>	<u>Sand</u>
<u>4980</u>	<u>4990</u>	<u>10</u>	<u>Sand and shale</u>
<u>4990</u>	<u>4993</u>	<u>3</u>	<u>Shale</u>
<u>4993</u>	<u>5174</u>	<u>181</u>	<u>Sand and shale</u>
<u>5174</u>	<u>5285</u>	<u>111</u>	<u>Coal, sand and shale</u>
<u>5285</u>	<u>5750 T.D.</u>	<u>465</u>	<u>Sand & shale - TOP POINT LOOKOUT 5320'</u>

FOLD MARK



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL



Location of well, State, County, Township, Range, Section, and other data.
The information given here is for the purpose of recording the location of the well and all work done thereon.
The information given here is for the purpose of recording the location of the well and all work done thereon.

OIL OR GAS SANDS OR ZONES

From	To	Thickness	Remarks
10.0	10.5	0.5	
10.5	11.0	0.5	
11.0	11.5	0.5	
11.5	12.0	0.5	
12.0	12.5	0.5	
12.5	13.0	0.5	
13.0	13.5	0.5	
13.5	14.0	0.5	
14.0	14.5	0.5	
14.5	15.0	0.5	

PERMANENT WELLHEAD SANDS

From	To	Thickness	Remarks
15.0	15.5	0.5	
15.5	16.0	0.5	
16.0	16.5	0.5	
16.5	17.0	0.5	
17.0	17.5	0.5	
17.5	18.0	0.5	
18.0	18.5	0.5	
18.5	19.0	0.5	
19.0	19.5	0.5	
19.5	20.0	0.5	

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 the 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.

HISTORY OF OIL OR GAS WELL

FROM	TO	TOTAL FEET	FORMATION
0.0	0.5	0.5	Shale
0.5	1.0	1.0	Shale
1.0	1.5	1.5	Shale
1.5	2.0	2.0	Shale
2.0	2.5	2.5	Shale
2.5	3.0	3.0	Shale
3.0	3.5	3.5	Shale
3.5	4.0	4.0	Shale
4.0	4.5	4.5	Shale
4.5	5.0	5.0	Shale
5.0	5.5	5.5	Shale
5.5	6.0	6.0	Shale
6.0	6.5	6.5	Shale
6.5	7.0	7.0	Shale
7.0	7.5	7.5	Shale
7.5	8.0	8.0	Shale
8.0	8.5	8.5	Shale
8.5	9.0	9.0	Shale
9.0	9.5	9.5	Shale
9.5	10.0	10.0	Shale
10.0	10.5	10.5	Shale
10.5	11.0	11.0	Shale
11.0	11.5	11.5	Shale
11.5	12.0	12.0	Shale
12.0	12.5	12.5	Shale
12.5	13.0	13.0	Shale
13.0	13.5	13.5	Shale
13.5	14.0	14.0	Shale
14.0	14.5	14.5	Shale
14.5	15.0	15.0	Shale
15.0	15.5	15.5	Shale
15.5	16.0	16.0	Shale
16.0	16.5	16.5	Shale
16.5	17.0	17.0	Shale
17.0	17.5	17.5	Shale
17.5	18.0	18.0	Shale
18.0	18.5	18.5	Shale
18.5	19.0	19.0	Shale
19.0	19.5	19.5	Shale
19.5	20.0	20.0	Shale
20.0	20.5	20.5	Shale
20.5	21.0	21.0	Shale
21.0	21.5	21.5	Shale
21.5	22.0	22.0	Shale
22.0	22.5	22.5	Shale
22.5	23.0	23.0	Shale
23.0	23.5	23.5	Shale
23.5	24.0	24.0	Shale
24.0	24.5	24.5	Shale
24.5	25.0	25.0	Shale
25.0	25.5	25.5	Shale
25.5	26.0	26.0	Shale
26.0	26.5	26.5	Shale
26.5	27.0	27.0	Shale
27.0	27.5	27.5	Shale
27.5	28.0	28.0	Shale
28.0	28.5	28.5	Shale
28.5	29.0	29.0	Shale
29.0	29.5	29.5	Shale
29.5	30.0	30.0	Shale
30.0	30.5	30.5	Shale
30.5	31.0	31.0	Shale
31.0	31.5	31.5	Shale
31.5	32.0	32.0	Shale
32.0	32.5	32.5	Shale
32.5	33.0	33.0	Shale
33.0	33.5	33.5	Shale
33.5	34.0	34.0	Shale
34.0	34.5	34.5	Shale
34.5	35.0	35.0	Shale
35.0	35.5	35.5	Shale
35.5	36.0	36.0	Shale
36.0	36.5	36.5	Shale
36.5	37.0	37.0	Shale
37.0	37.5	37.5	Shale
37.5	38.0	38.0	Shale
38.0	38.5	38.5	Shale
38.5	39.0	39.0	Shale
39.0	39.5	39.5	Shale
39.5	40.0	40.0	Shale
40.0	40.5	40.5	Shale
40.5	41.0	41.0	Shale
41.0	41.5	41.5	Shale
41.5	42.0	42.0	Shale
42.0	42.5	42.5	Shale
42.5	43.0	43.0	Shale
43.0	43.5	43.5	Shale
43.5	44.0	44.0	Shale
44.0	44.5	44.5	Shale
44.5	45.0	45.0	Shale
45.0	45.5	45.5	Shale
45.5	46.0	46.0	Shale
46.0	46.5	46.5	Shale
46.5	47.0	47.0	Shale
47.0	47.5	47.5	Shale
47.5	48.0	48.0	Shale
48.0	48.5	48.5	Shale
48.5	49.0	49.0	Shale
49.0	49.5	49.5	Shale
49.5	50.0	50.0	Shale
50.0	50.5	50.5	Shale
50.5	51.0	51.0	Shale
51.0	51.5	51.5	Shale
51.5	52.0	52.0	Shale
52.0	52.5	52.5	Shale
52.5	53.0	53.0	Shale
53.0	53.5	53.5	Shale
53.5	54.0	54.0	Shale
54.0	54.5	54.5	Shale
54.5	55.0	55.0	Shale
55.0	55.5	55.5	Shale
55.5	56.0	56.0	Shale
56.0	56.5	56.5	Shale
56.5	57.0	57.0	Shale
57.0	57.5	57.5	Shale
57.5	58.0	58.0	Shale
58.0	58.5	58.5	Shale
58.5	59.0	59.0	Shale
59.0	59.5	59.5	Shale
59.5	60.0	60.0	Shale
60.0	60.5	60.5	Shale
60.5	61.0	61.0	Shale
61.0	61.5	61.5	Shale
61.5	62.0	62.0	Shale
62.0	62.5	62.5	Shale
62.5	63.0	63.0	Shale
63.0	63.5	63.5	Shale
63.5	64.0	64.0	Shale
64.0	64.5	64.5	Shale
64.5	65.0	65.0	Shale
65.0	65.5	65.5	Shale
65.5	66.0	66.0	Shale
66.0	66.5	66.5	Shale
66.5	67.0	67.0	Shale
67.0	67.5	67.5	Shale
67.5	68.0	68.0	Shale
68.0	68.5	68.5	Shale
68.5	69.0	69.0	Shale
69.0	69.5	69.5	Shale
69.5	70.0	70.0	Shale
70.0	70.5	70.5	Shale
70.5	71.0	71.0	Shale
71.0	71.5	71.5	Shale
71.5	72.0	72.0	Shale
72.0	72.5	72.5	Shale
72.5	73.0	73.0	Shale
73.0	73.5	73.5	Shale
73.5	74.0	74.0	Shale
74.0	74.5	74.5	Shale
74.5	75.0	75.0	Shale
75.0	75.5	75.5	Shale
75.5	76.0	76.0	Shale
76.0	76.5	76.5	Shale
76.5	77.0	77.0	Shale
77.0	77.5	77.5	Shale
77.5	78.0	78.0	Shale
78.0	78.5	78.5	Shale
78.5	79.0	79.0	Shale
79.0	79.5	79.5	Shale
79.5	80.0	80.0	Shale
80.0	80.5	80.5	Shale
80.5	81.0	81.0	Shale
81.0	81.5	81.5	Shale
81.5	82.0	82.0	Shale
82.0	82.5	82.5	Shale
82.5	83.0	83.0	Shale
83.0	83.5	83.5	Shale
83.5	84.0	84.0	Shale
84.0	84.5	84.5	Shale
84.5	85.0	85.0	Shale
85.0	85.5	85.5	Shale
85.5	86.0	86.0	Shale
86.0	86.5	86.5	Shale
86.5	87.0	87.0	Shale
87.0	87.5	87.5	Shale
87.5	88.0	88.0	Shale
88.0	88.5	88.5	Shale
88.5	89.0	89.0	Shale
89.0	89.5	89.5	Shale
89.5	90.0	90.0	Shale
90.0	90.5	90.5	Shale
90.5	91.0	91.0	Shale
91.0	91.5	91.5	Shale
91.5	92.0	92.0	Shale
92.0	92.5	92.5	Shale
92.5	93.0	93.0	Shale
93.0	93.5	93.5	Shale
93.5	94.0	94.0	Shale
94.0	94.5	94.5	Shale
94.5	95.0	95.0	Shale
95.0	95.5	95.5	Shale
95.5	96.0	96.0	Shale
96.0	96.5	96.5	Shale
96.5	97.0	97.0	Shale
97.0	97.5	97.5	Shale
97.5	98.0	98.0	Shale
98.0	98.5	98.5	Shale
98.5	99.0	99.0	Shale
99.0	99.5	99.5	Shale
99.5	100.0	100.0	Shale