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U. S. LAND OFFICE Jicarilla Indians
SERIAL NUMBER Contract No. 39

SERIAL NUMBER _____ CONTRACT NO. _____
LEASE OR PERMIT TO PROSPECT _____
Co. #163112

UNITED STATES

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

LOCATE WELL CORRECTLY

Company Humble Oil & Refining Company Address Box 2347, Hobbs, New Mexico

Lessor or Tract Jicarilla Apache Tribe of Field Wildcat State New Mexico

Well No. 1 Sec. 4 T. 23 N. R. 5 W. Meridian NMPM County Rio Arriba

Location 814 ft. N of S Line and 951 ft. E of W Line of Section 4 Elevation 6646

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 July 25, 1955 Signed [Signature] Title Agent

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

Commenced drilling April 14, 19 55 Finished drilling May 24, 19 55

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from (C) 2080 to 2110 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 None No. 3, from None to None DIST. 3

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	
13-3/8	48	3rd	Unk.	415.36	Baker	-	-	-	Surface
9-5/8	36	3rd	Unk.	2151.73	Baker	-	2050	2110	Intermediate
5-1/2	14-15.5	3rd	Jap 4 unk.	6632.20	Baker	Surface-2294	-	-	Production
5-1/2" casing was cut and pulled and plugged off; production is through 9-5/8" casing.									

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
13-3/8	430.96	425	Pump & plug		
9-5/8	2164.00	800	"		
5-1/2	6644.00	900	"		

PLUGS AND ADAPTERS

Heaving plug—Material _____ Length _____ Depth set _____

Adapters—Material	Size
1. Adapter A	1/8"
2. Adapter B	1/4"
3. Adapter C	3/8"
4. Adapter D	1/2"
5. Adapter E	5/8"
6. Adapter F	3/4"
7. Adapter G	7/8"
8. Adapter H	1"
9. Adapter I	1 1/8"
10. Adapter J	1 1/4"
11. Adapter K	1 3/8"
12. Adapter L	1 1/2"
13. Adapter M	1 3/4"
14. Adapter N	1 7/8"
15. Adapter O	2"
16. Adapter P	2 1/8"
17. Adapter Q	2 1/4"
18. Adapter R	2 3/8"
19. Adapter S	2 1/2"
20. Adapter T	2 3/4"
21. Adapter U	2 7/8"
22. Adapter V	3"
23. Adapter W	3 1/8"
24. Adapter X	3 1/4"
25. Adapter Y	3 3/8"
26. Adapter Z	3 1/2"
27. Adapter AA	3 3/4"
28. Adapter AB	3 7/8"
29. Adapter AC	4"
30. Adapter AD	4 1/8"
31. Adapter AE	4 1/4"
32. Adapter AF	4 3/8"
33. Adapter AG	4 1/2"
34. Adapter AH	4 3/4"
35. Adapter AI	4 7/8"
36. Adapter AJ	5"
37. Adapter AK	5 1/8"
38. Adapter AL	5 1/4"
39. Adapter AM	5 3/8"
40. Adapter AN	5 1/2"
41. Adapter AO	5 3/4"
42. Adapter AP	5 7/8"
43. Adapter AQ	6"
44. Adapter AR	6 1/8"
45. Adapter AS	6 1/4"
46. Adapter AT	6 3/8"
47. Adapter AU	6 1/2"
48. Adapter AV	6 3/4"
49. Adapter AW	6 7/8"
50. Adapter AX	7"
51. Adapter AY	7 1/8"
52. Adapter AZ	7 1/4"
53. Adapter BA	7 3/8"
54. Adapter BB	7 1/2"
55. Adapter BC	7 3/4"
56. Adapter BD	7 7/8"
57. Adapter BE	8"
58. Adapter BF	8 1/8"
59. Adapter BG	8 1/4"
60. Adapter BH	8 3/8"
61. Adapter BI	8 1/2"
62. Adapter BJ	8 3/4"
63. Adapter BK	8 7/8"
64. Adapter BL	9"
65. Adapter BM	9 1/8"
66. Adapter BN	9 1/4"
67. Adapter BO	9 3/8"
68. Adapter BP	9 1/2"
69. Adapter BQ	9 3/4"
70. Adapter BR	9 7/8"
71. Adapter BS	10"
72. Adapter BT	10 1/8"
73. Adapter BU	10 1/4"
74. Adapter BV	10 3/8"
75. Adapter BW	10 1/2"
76. Adapter BX	10 3/4"
77. Adapter BY	10 7/8"
78. Adapter BZ	11"
79. Adapter CA	11 1/8"
80. Adapter CB	11 1/4"
81. Adapter CC	11 3/8"
82. Adapter CD	11 1/2"
83. Adapter CE	11 3/4"
84. Adapter CF	11 7/8"
85. Adapter CG	12"
86. Adapter CH	12 1/8"
87. Adapter CI	12 1/4"
88. Adapter CJ	12 3/8"
89. Adapter CK	12 1/2"
90. Adapter CL	12 3/4"
91. Adapter CM	12 7/8"
92. Adapter CN	13"
93. Adapter CO	13 1/8"
94. Adapter CP	13 1/4"
95. Adapter CQ	13 3/8"
96. Adapter CR	13 1/2"
97. Adapter CS	13 3/4"
98. Adapter CT	13 7/8"
99. Adapter CU	14"
100. Adapter CV	14 1/8"
101. Adapter CW	14 1/4"
102. Adapter CX	14 3/8"
103. Adapter CY	14 1/2"
104. Adapter CZ	14 3/4"
105. Adapter DA	14 7/8"
106. Adapter DB	15"
107. Adapter DC	15 1/8"
108. Adapter DD	15 1/4"
109. Adapter DE	15 3/8"
110. Adapter DF	15 1/2"
111. Adapter DG	15 3/4"
112. Adapter DH	15 7/8"
113. Adapter DI	16"
114. Adapter DJ	16 1/8"
115. Adapter DK	16 1/4"
116. Adapter DL	16 3/8"
117. Adapter DM	16 1/2"
118. Adapter DN	16 3/4"
119. Adapter DO	16 7/8"
120. Adapter DP	17"
121. Adapter DQ	17 1/8"
122. Adapter DR	17 1/4"
123. Adapter DS	17 3/8"
124. Adapter DT	17 1/2"
125. Adapter DU	17 3/4"
126. Adapter DV	17 7/8"
127. Adapter DW	18"
128. Adapter DX	18 1/8"
129. Adapter DY	18 1/4"
130. Adapter DZ	18 3/8"
131. Adapter EA	18 1/2"
132. Adapter EB	18 3/4"
133. Adapter EC	18 7/8"
134. Adapter ED	19"
135. Adapter EE	19 1/8"
136. Adapter EF	19 1/4"
137. Adapter EG	19 3/8"
138. Adapter EH	19 1/2"
139. Adapter EI	19 3/4"
140. Adapter EJ	19 7/8"
141. Adapter EK	20"
142. Adapter EL	20 1/8"
143. Adapter EM	20 1/4"
144. Adapter EN	20 3/8"
145. Adapter EO	20 1/2"
146. Adapter EP	20 3/4"
147. Adapter EQ	20 7/8"
148. Adapter ER	21"
149. Adapter ES	21 1/8"
150. Adapter ET	21 1/4"
151. Adapter EU	21 3/8"
152. Adapter EV	21 1/2"
153. Adapter EW	21 3/4"
154. Adapter EX	21 7/8"
155. Adapter EY	2

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out
See "Well History" for acidizing and fracturing record.						

TOOLS USED

Rotary tools were used from ~~Surface~~----- feet to -----664----- feet, and from ----- feet to ----- feet.

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

DATES

----- July ~~26~~ 11, 1955 ----- Put to producing ----- Shut-in -----, 19-----

The production for the first 24 hours was ~~1,775~~ barrels of fluid of which ----- % was oil; ----- % emulsion; ----- % water; and ----- % sediment. Gravity, °Bé. -----

If gas well, cu. ft. per 24 hours 1,740 Gallons gasoline per 1,000 cu. ft. of gas 4

Rock pressure, lbs. per sq. in. ----- 200 -----

EMPLOYEES

EMPLOYEES

----- J. R. Hale -----, Driller ----- Jeff Copeland -----, Driller

-----, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	4980	4980	Sand & shale
4980	5094	114	Sand, shale, & lime
5094	6040	946	Sand & shale
6040	6281	241	Shale
6281	6491	210	Shale, lime shells, & sand
6491	6644	153	Shale & sand
			Formation tops:
			Ojo Alamo 1570
			Kirtland-Fruitland 1710
			Pictured Cliffs 2087
			Mesa Verde 3607
			Mancos 4496
			Hospah 5302
			Tocito 5904
			Sanabates 6068
			Greenhorn 6284
			Dakota 6493
			Morrison 6606

[OVER]

16-43094-3

FORMATION RECORD—Continued

FROM—		TO—		TOTAL FEET		FORMATION				
						DRILL STEM TESTS				
Date	Type Test	Formation Tested		Choke Size	Tool Open Min.	Formation Press.		Recovery—Feet		
		From	To			Flow	Shut-in	Oil	Water	Mud
4-22-55	OH	2076	2138	1 3/4	75	0	820			23
5-4-55	OH	4298	4320	1 3/4	60	0	1020			100
5-6-55	OH	4316	4371	1 3/4	60	0	1325			105
5-10-55	OH	5290	5370	1 3/4	45	0	0			20
5-13-55	OH	5379	5423	1 3/4	60	0	0			15
5-19-55	OH	5538	5588	1 3/4	45	0	0			10
5-20-55	OH	6480	6514	1 3/4	60	0	0			10
5-22	OH	6511	6566	1 3/4	90	0	700	1		120

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.

The well was drilled to total depth of 6644 feet at which point 5-1/2-inch casing was set and cemented, the cement returning to 2400 feet. The casing was perforated from 6514 to 6522 feet and treated with 500 gallons of mud acid followed by 2800 gallons of Diesel oil and 2100 pounds of sand. A cast iron cement retainer was set at 6507 feet and a bridging ball dropped to seal the retainer; a three-hour pressure test at 3000# indicated no drop in pressure.

The casing was then perforated from 6492 to 6502 feet with 60 bullets and the formation was treated with 500 gallons of mud acid and 5210 gallons of Diesel oil and 4000 pounds of sand. A cast iron bridge plug was set at 6485 feet and two sacks of cement dumped above. A second bridge plug was then set at 6125 feet and two sacks of cement dumped above.

Bullet perforations were then made in the 5-1/2 casing from 6055 to 6085 feet and the section was treated with 500 gallons of mud acid and fractured with 1760 gallons of Diesel oil and 1408 pounds of sand. A cast iron bridge plug was set at 5440 feet and two sacks of cement dumped above.

The casing was then perforated from 5380 to 5400 feet with 80 bullets. The interval was treated with 500 gallons of mud acid and 4000 gallons of Diesel fuel and 3100 pounds of sand. A bridge plug was run and set at 5345 feet, with 2 sacks of cement dumped above. Another plug was set at 4360 feet and 2 sacks of cement were dumped on top.

The interval from 4296 to 4328 feet was perforated with 128 bullets and treated with 500 gallons of mud acid and 4000 gallons of Diesel and 4000 pounds of sand. A cast iron cement retainer was run and set at 4235 feet and the perforations squeezed with 138 sacks of cement at 1600 psi.

The 5-1/2-inch casing was cut with a jet outter at 2294 feet and 73 joints of pipe were pulled. A 200-foot plug was spotted across the top of the remaining 5-1/2-inch casing from 2194 to 2394 feet. A cast iron bridge plug was set at 2110 and 15 feet of cement was dumped above. The 9-5/8-inch casing was then perforated from 2080 to 2110 feet with 180 bullets. The interval was treated with 500 gallons of mud acid followed by 15,000 gallons of Diesel fuel and 20,000 pounds of sand. The well was tested 15 hours through 2-inch tubing and indicated gas production at the rate of 1,954,000 cubic feet per day. The well was shut-in 24 hours; tubing pressure was 600 psi, casing pressure 700 psi. On a 5 hour test the well levelled off and produced gas at the rate of 1,750,000 cubic feet per day through a 1/2-inch choke, flowing tubing pressure 280#.

The well is now shut-in indefinitely to await pipe line connection.