

COUNTY	LEA	FIELD	Vacuum	STATE	N.M.
OPR	TEXACO INC.				MAP
15 State of New Mexico "R" (NCT-3)					32-025-20950
Sec. 1, T-18-S, R-34-E					CO-ORD
487' fr S Line & 560' fr E Line of Sec.					
Spud 2-28-64					CLASS
Comp. 6-5-64 (A)					EL 3996.8
		FORMATION	DATUM	FORMATION	DATUM
CSG & SX - TUBING	LOG	Queen	3818		
13 3/8" 355'	400	SA	4547		
9 5/8" 4800'	1700	Abo	7950		
2 7/8" 10200')	2400	Abo Rf	8443		
2 7/8" 10200')		Wolfc	9095		
		Penn	10102		
LOGS EL GR RA IND HC A					
TD 10200'					

IP Abo Perfs. 8495-8706', swbd. 142 BO + 120 BW/24 hrs.
Gravity 40.4 GOR 747.
W. C. Abandoned.

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CONT. A. W. Thompson	PROP DEPTH 10,200'	TYPE
DATE		

F. R. 3-5-64.
PD 10,200' - Abo & Wolfcamp.
Contractor - A. W. Thompson.

3-3-64	Drlg. 3005' anhy.
3-9-64	Drlg. 4113' lm.
3-16-64	Drlg. 5380'.
3-23-64	Drlg. 6232' lm.
3-30-64	Drlg. 6890'.
	Set Whipstock @ 6838'.
4-6-64	Drlg. 7010'.
6-13-64	Drlg. 7067' lm.
4-20-64	Drlg. 7375'.
4-27-64	Drlg. 7975'.
5-4-64	Drlg. 9476'.
5-11-64	TD 10,200' rung. SP DST.
	SP DST 9720-9820', open 1 hr.
	Rec. 930' SO&GCM + 2580' SG&MC Salt Wtr.

- cont'd -

5-11-64 - cont'd -
30 min. ISIP 3422#, FP 692-1589#,
1 hr. FSIP 3390#.
5-18-64 TD 10,200', PB 10,195', swbg.
SP DST 9275-9415', open 1 hr.
GTS 51 mins. @ TSTM,
Rec. 500' O&GCM + 2584' GC Salt Wtr.
30 min. ISIP 3230#, FP 297-1396#,
1 hr. FSIP 3134#.
Perf. (W.C.) 9968-78' w/1 SPF.
Ac. 500 gals.
Swbd. 246 BFW/16 hrs.
5-25-64 TD 10,200', PB 10,195', prep to perf. W.C.
Sq. Perfs. 9968-78' w/200 sxs.

6-1-64 Drld. cement to 9930'.
TD 10,200', PB 10,195', swbg. Abo.
Perf. (W.C.) 9958-59' w/1 SPF.
Ac. 100 gals.
Swbd. 30 BLW/2 hrs. Set BP @ 9925'.
Perf. @ 8495-96', 8510-11', 8528-29',
8535-36', 8557-58', 8589-90', 8605-06',
8647-48', 8655-56', 8677-78', 8705-06',
w/1 SPF.
Ac. 11,500 gals.
Swbd. 215 BL & AW/16 hrs.
6-8-64 TD 10,200', PB 10,195', swbg.
Abo Completed.
Perf. (W.C.) 9852-62' w/1 SPF.
Ac. 3000 gals.
Swbd. 90 BLW + 384 BFW/32 hrs.

LEA
TEXACO INC.

Vacuum

N.M.
#15 State of New Mexico "R" (NCT-3)

Sec. 1-18S-34-E

Page #3

6-15-64 TD 10,200', PB 10,195', prep to drill out.
Sq. Perfs. 9852-62' w/300 sxs.
6-22-64 TD 10,200', PB 10,195', SI.
6-29-64 TD 10,200', PB 10,195', swbg.
Re-Perf. 9852-62' w/1 SPF.
Ac. 2000 gals., swbd 147 BFW/9 hrs.
7-6-64 TD 10,200', PB 10,195', SI.
7-13-64 TD 10200', PBD 10195', COMPLETED.
(Holding for tops)
7-20-64 TD 10200', PBD 10195', Completion Reported.

SPERRY-SUN WELL SURVEYING COMPANY

HORIZONTAL PROJECTION

T.V.D. = 6781.38

6787'

MS-3806

200

180

160

140

120

100

80

60

40

20

0

6027'

5010'

T.V.D. = 4797.44'

4800'

MS-3792

4039'

3002'

2153'

1116'

HORIZONTAL DISPLACEMENT = 198.04 FEET AT NORTH 11° 04' WEST



TEXACO INC.
STATE NCT-3 "R" WELL NO 15
VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO
MAGNETIC MULTISHOT SURVEY MS-3792
MARCH 12, 1964 354' - 4800'
MAGNETIC MULTISHOT SURVEY MS-3806
MARCH 27, 1964 4800' - 6787'
SCALE 1" = 20'

40

20

0

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TEXACO, INC.

WELL NO. 01ATE NC 1-3 N N:1-3



SHEET NO.
SURVEY
JOB NO.
SURVEY
DATE

1 OF 2
MS-3792
3-12-64

VACUUM ABO
LEA COUNTY, NEW MEXICO

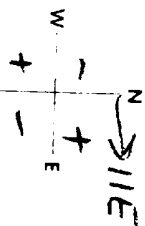
Magnetic Multishot

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SURVEY TABULATION SHEET

CUSTOMER **Texaco, Inc.**

WELL NO. STATE NCT-3 "R" N° 15



SHEET NO

SURVEY
JOB NO

2 OF 2
MS-3792

3-12-64

FIELD

LEA County, New Mexico

Magnetic Multishot

SURVEY
DATE

CORRECTED TIME		MEASURED DEPTH		VERTICAL DEPTH		ANGLE OF INCLINATION		DIRECTION OF INCLINATION				MEASURED COURSE DISPLACEMENT		TOTAL DISPLACEMENT					
		COURSE	TOTAL	COURSE	TOTAL			OBSERVED	CORR	CORRECTED	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	
1-39-40	94	3046	93.48	3095.10	1	1/4		04	11E	15	E	1.98		53		36.27		50.17	
34-40	94	3190	93.47	3189.07	1	1/2		04	11E	11	W	2.42		.47		38.69		49.70	
31-40	94	3284	93.44	3283.01	2	1/4		04	11E	12	W	3.21		.68		41.90		49.02	
26-40	95	3379	94.93	3377.94	2	1/4		04	11E	38	W	2.94		2.30		44.84		46.72	
23-20	94	3473	93.44	3471.88	2	1/4		04	11E	34	W	2.72		1.83		47.56		44.89	
20-20	94	3567	93.84	3565.77	2	3/4		04	11E	28	W	3.98		2.12		51.54		42.77	
15-40	95	3662	94.87	3660.64	2	3/4		04	11E	31	W	4.26		2.56		55.80		40.31	
12-00	94	3756	93.84	3754.53	2	3/4		04	11E	21	W	4.21		1.62		60.01		38.59	
09-00	94	3850	93.91	3848.44	2	1/2		04	11E	19	W	3.88		1.34		63.89		37.25	
05-40	94	3944	93.91	3942.35	2	1/2		04	11E	23	W	3.78		1.60		67.67		35.65	
1-02-20	95	4039	94.91	4037.26	2	1/2		04	11E	32	W	3.51		2.19		71.18		33.46	
12-59-00	94	4133	93.89	4131.15	2	3/4		04	11E	33	W	3.78		2.46		74.96		31.00	
55-00	94	4227	93.93	4225.08	2	1/4		04	11E	39	W	2.87		2.32		77.83		28.68	
49-00	94	4321	93.84	4318.97	2	3/4		04	11E	38	W	3.55		2.78		81.38		25.90	
45-40	95	4416	94.94	4413.91	2	3/4		04	11E	38	W	2.61		2.04		83.99		23.86	
37-20	94	4510	93.84	4507.80	2	3/4		04	11E	16	W	4.33		1.24		88.32		22.62	
29-40	94	4604	93.87	4601.67	2	3/4		04	11E	17	W	4.70		1.44		93.02		21.18	
25-00	95	4699	94.89	4696.56	2	3/4		04	11E	25	W	4.13		1.93		97.15		19.25	
12-20-40	101	4800	100.88	4797.44	2	3/4		04	11E	18	W	4.61		1.49		101.76		17.76	

HORIZONTAL DISPLACEMENT = 103.30 FT. AT NORTH $09^{\circ}54'$ EAST

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"Symbol of Service"

REPORT of SUB-SURFACE DIRECTIONAL SURVEY

TEXACO, INC.
COMPANY

STATE "R" WELL NO. 15

WELL NAME

VACUUM FIELD

LEA COUNTY, NEW MEXICO

LOCATION

JOB NUMBER

WT-42364

TYPE OF SURVEY

Magnetic Single Shot

DATE

April, 1964

SURVEY BY

W. B. Bingham

OFFICE

Odessa, Texas



RECORD OF SURVEY

JOB NO. WT-42364 DATE April, 1964

CHECKED BY

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES		
							NORTH	SOUTH	WEST
	73 72	6° 30'	7364 92			S 81 W	193 82	(Data from Previous Survey)	86 09
1	73 86	5° 45'			1 40	S 62 W	193 16		87 33
2	74 15	3° 00'			1 52	S 32 W	191 87		88 14
3	74 28	2° 30'			57	S 19 W	191 33		88 33
4	74 39	2° 45'			53	S 13 W	190 81		88 45
5	74 63	3° 00'	7455 75		1 26	S 14 W	189 59		88 75
6	74 78	4° 15'			1 11	S 11 E	188 50		88 54
7	75 10	4° 45'			2 65	S 16 E	185 95		87 81
8	75 40	5° 30'			2 88	S 20 E	183 24		86 83
9	75 72	5° 00'			2 79	S 20 E	180 62		85 88
10	75 99	5° 00'	7591 24		2 35	S 18 E	178 38		85 15
11	76 26	5° 30'			2 59	S 21 E	175 96		84 22
12	76 55	6° 00'			3 03	S 19 E	173 10		83 23
13	76 98	6° 45'			5 05	S 19 E	168 33		81 59
14	77 20	7° 30'			2 87	S 18 E	165 60		80 70
15	77 52	8° 45'	7743 10		4 87	S 22 E	161 08		78 88
16	77 92	9° 00'			6 26	S 21 E	155 24		76 64
17	78 53	9° 00'			9 54	S 20 E	146 28		73 38
18	79 16	9° 00'			9 86	S 21 E	137 07		69 85
19	80 10	8° 45'			14 30	S 22 E	123 80		64 49
20	81 33	9° 00'	8119 48		19 24	S 21 E	105 84		57 59
21	81 57	9° 00'			3 75	S 21 E	102 34		56 25
22	82 25	9° 00'			10 64	S 20 E	92 34		52 61



RECORD OF SURVEY

JOB NO. WT-42364 DATE April, 1964

CHECKED BY: _____

STATION	MEASURED DEPTH	DRIFT ANGLE	TRUE VERTICAL DEPTH	VERTICAL SECTION	COURSE DEVIATION	DRIFT DIRECTION	RECTANGULAR COORDINATES			
							NORTH	SOUTH	EAST	WEST
23	83 17	8° 30'			13 60	S 18 E	79 41			48 41
24	84 10	8° 15'			13 34	S 18 E	66 72			44 29
25	85 02	8° 00'	8484 47		12 80	S 20 E	54 69			39 91
26	85 94	7° 45'			12 41	S 18 E	42 89			36 08
27	86 83	7° 30'			11 62	S 18 E	31 84			32 52
28	87 70	7° 00'			10 60	S 18 E	21 76			29 24
29	88 63	6° 30'			10 53	S 18 E	11 74			25 99
30	89 56	5° 30'	8935 19		8 91	S 18 E	3 27			23 24
31	90 25	5° 15'			6 41	S 16 E		2 89		21 47
32	91 38	4° 45'			9 36	S 14 E		11 97		19 21
33	92 96	4° 30'			12 40	S 18 E		23 76		15 38
34	94 75	4° 15'			13 26	S 19 E		36 30		11 06
35	96 72	3° 45'	9649 14		12 88	S 20 E		48 40		6 66
36	97 95	3° 45'			8 04	S 21 E		55 91	6 01	3 78
37	101 54	4° 00'			25 06	S 23 E		78 98		
38	102 00	4° 15'	10175 90		3 41	S 24 E		82 10	7 40	
				CLOSURE	82.43'	SOUTH	5° 09'	EAST		

KICKOFF POINT
NORTH-193.82'
WEST-86.09'
DEPTH-7372'



PREVIOUS SURVEY

SURFACE LOCATION

82.43' S 5°

OIL CONSERVATION COMMISSION

P. O. BOX 871
SANTA FE, NEW MEXICO
AUG 11 9 51 AM '64
O.C.C.

July 31, 1964

C
O
P
Y

Texaco Inc.
Drawer 728
Hobbs, New Mexico

Attention: Mr. H. D. Raymond

Gentlemen:

Reference is made to your letter dated July 7, 1964, wherein you request authority to complete your State of New Mexico "R" (NCT-3) Well No. 15, located 487 feet from the south line and 560 feet from the east line of Section 1, Township 18 South, Range 34 East, Lea County, New Mexico, as a tubingless completion in the Vacuum (Abo Reef) Pool.

It is our understanding that 2-7/8 inch casing will be set at approximately 10,200 feet and perforated from approximately 8,495 feet to 8,706 feet in the Abo Reef formation. Sufficient cement will be used to come back into the intermediate casing string. Inasmuch as no corrosion problems are expected and adequate measures will be taken to counteract the anticipated paraffin deposition, Texaco Inc. is hereby authorized to complete the subject well in the aforesaid manner.

Very truly yours,

A. L. Porter, Jr
Secretary-Director

ALP:DSN:sg

cc: Oil Conservation Commission - Hobbs
Oil & Gas Engineering Committee - Hobbs

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF PLANT INDUSTRY
WASHINGTON, D. C.
OFFICE OF THE CHIEF, BUREAU OF PLANT INDUSTRY

1914

TO THE HONORABLE SECRETARY OF AGRICULTURE
WASHINGTON, D. C.

SIR:

I have the honor to acknowledge the receipt of your letter of the 10th inst. in relation to the matter of the proposed extension of the term of the lease of the land on which the experimental station of the Bureau of Plant Industry is situated, and in reply to inform you that the same has been referred to the proper authorities for their consideration.

I am, Sir, very respectfully,
Yours very truly,
J. H. COOPER,
Chief, Bureau of Plant Industry.

RECEIVED
BUREAU OF PLANT INDUSTRY
JAN 15 1914

OFFICE 000

1964 JUL 13 AM 7:53

July 7 1964

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico

Re: Application for Single Tubingless
Completion, State of New Mexico "R"
(NCT-3) Well No. 15, Vacuum (Abo Reef)
Pool, Lea County, New Mexico

ATTENTION: Mr. A. L. Porter, Jr.

Gentlemen:

TEXACO Inc. respectfully requests administrative approval of an exception of New Mexico Oil Conservation Commission Rule 107 (e) for its State of New Mexico "R" (NCT-3) Well No. 15. This well is a proposed Single Tubingless Completion in the Vacuum (Abo Reef) Pool, and is located 487 feet from the south line and 560 feet from the east line of Section 1, T-18-S, R-34-E, Lea County, New Mexico.

The production casing string will consist of 2-7/8" O. D. tubing set at approximately 10,200 feet in an 8-5/8" hole. Completion will be through perforations from approximately 8495' to 8706' in the Abo Reef formation. The expected production is not corrosive, however, some paraffin accumulation is expected and the top 2000 feet of casing will be internally plastic coated for paraffin.

This zone has been approved by the New Mexico Oil Conservation Commission as a tubingless completion in other single completions in this area. An instance is TEXACO's State of New Mexico "AE" Well No. 5.

Attached is a diagrammatic sketch of the proposed tubingless completion and a plat showing the location of all wells on the State of New Mexico "R" (NCT-3) Lease and all offset wells along with the name and addresses of all offset operators. A copy of this request is being sent this date to all offset operators by registered mail.

Your early consideration of this request would be greatly appreciated.

Yours very truly,

A. D. Raymond
A. D. Raymond
Assistant District Superintendent

EWD/om
cc: NMOCC, Hobbs
Offset Operators
Attachments

[illegible]

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

SKETCH SHOWING DUAL COMPLETION INSTALLATION (TUBINGLESS)

Production strings cemented with 900 sx Class "C" w/ 2% Sil, 1500 sx Class "C" w/ 4% Sil. Slurry volume calculates to be 250% of hole capacity to intermediate casing.

Wolfcamp (Z) Shut-in
Abo Reef (Oil) (Y)

13 3/8" Casing Set at 355' Cement circulated.
9 5/8" Casing set at 4800' Cemented with 1500 sx Class "C" w/ 8% Gel plus 200 sx Class "C" neat.
2 7/8" Casing set at 10,200'
2 7/8" Casing set at 10,200'

Top at 8495 Feet
Name: Abo Reef
Completion this zone: Oil
Bottom at 8706 Feet

Perforated: 8495' - 8706'

Bridge Plug set at 9925'

Top at 9963 Feet
Name: Wolfcamp
Completion this zone: Abandoned
Bottom at 9978 Feet

Perforated: 9852' to 9862'
Squeezed with 300 sx cement, drilled out and re-perforated from 9852' to 9862'.

Perforated: 9958' - 9959'.

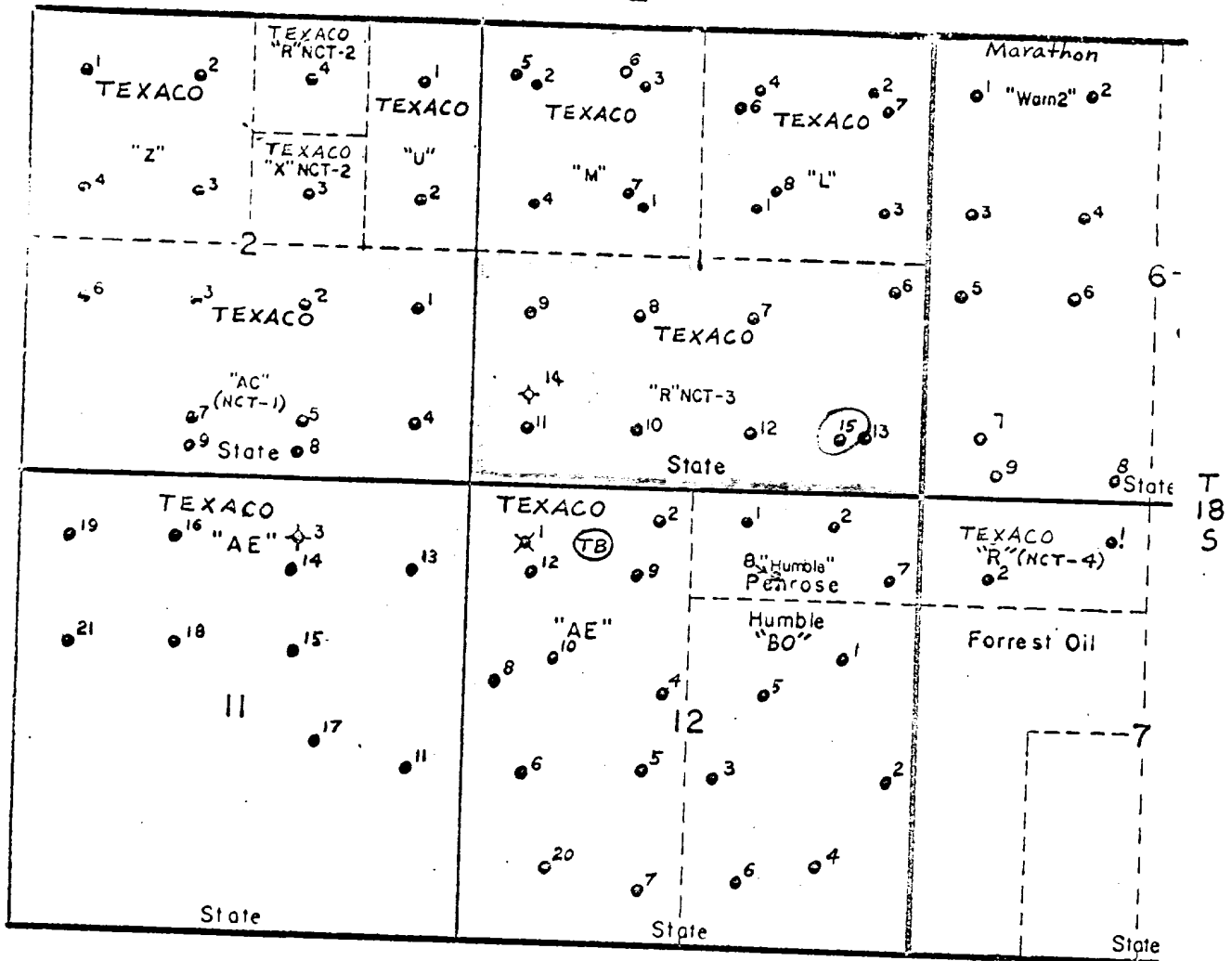
Perforated: 9968' - 9978'
Squeezed with 200 sx cement, drilled out and perforated (Z) string from 9958' to 9959'.
Set bridge plug at 9925'.

Total Depth: 10,200'.

TEXACO Inc.

LEASE: State of New Mexico "R" (NCT-3)
FIELD: Vacuum (Abo Reef)
DATE: July 6, 1964

R-34-E



TEXACO Inc.
 PLAT OF STATE OF NEW MEXICO "R"
 (NCT-3) LEASE
 Lea County, New Mexico
 Scale 1" = 2000'

OFFSET OPERATORS

Marathon Oil Company, Box 2107, Hobbs, New Mexico
 Humble Oil & Refining Company, Box 2347, Hobbs, New Mexico
 N. G. Penrose, Box 988, Eunice, New Mexico