

U. S. LAND OFFICE **Santa Fe**
SERIAL NUMBER **077106**
LEASE OR PERMIT TO PROSPECT

[illegible]

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company El Paso Natural Gas Company Address Box 990, Farmington, New Mexico
Lessor or Tract Lackey "B" Field Basin Dakota State New Mexico
Well No. 15 Sec. 29 T. 28-N R. 9-W Meridian N.M.P.M. County San Juan
Location 330 ft. N of N Line and 1715 ft. N of E Line of Section 29 Elevation 5972
(Direction from corner)

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 _____ Original Signed R. C. MILLER

Date August 8, 1961 Title Petroleum Engineer

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

Commenced drilling 5-6-61 Finished drilling 5-25-61

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from ----- to -----

No. 2, from ----- to -----

No. 3, from ----- to -----

No. 4, from ----- to -----

No. 5, 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

[illegible]

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
5/8"	291	320	circulated		
1/2"	6737	640	3 stages		

PLUGS AND ADAPTERS

Heaving plug—Material	Length	Depth set
Adapters—Material	Size	

SHOOTING RECORD

[illegible]

TOOLS USED

Rotary tools were used from 0 feet to 6738 feet, and from _____ feet to _____ feet
Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

DATES

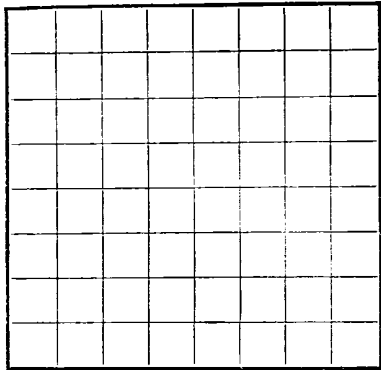
P. & A. 6-2-----, 1961 Put to producing -----, 19-----
 The production for the first 24 hours was ----- barrels of fluid of which ----- % was oil; ----- %
 emulsion; ----- % water; and ----- % sediment. Gravity, °Bé. -----
 If gas well, cu. ft. per 24 hours **P. & A.**----- Gallons gasoline per 1,000 cu. ft. of gas -----
 Rock pressure, lbs. per sq. in. -----

EMPLOYEES

_____, Driller _____, Driller
_____, Driller _____, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
Undev.	1149	1149	Ojo Alamo ss. White cr-grn s.
1149	1827	678	Kirtland form. Gry sh interbedded w/tight gry fine-grn ss.
1827	2065	238	Fruitland form. Gry carb sh, scattered coals, coals and gry, tight, fine-grn ss.
2065	2205	140	Pictured Cliffs forms. Gry, fine-grn, tight, varicolored soft ss.
2205	3730	1525	Lewis form. Gry, fine-grn, dense sil ss.
3730	3812	82	Cliff House ss. Gry, fine-grn, dense sil ss.
3812	4398	586	Menashee form. Gry, fine-grn s, carb sh & coal.
4398	4605	207	Point Lookout form. Gry, very fine sil ss w/frequent sh breaks.
4605	5596	991	Mancos form. Gry carb sh.
5596	5978	382	Gallup form. Lt gry to brn calc carb micac glauco very fine gry ss w/irreg inter bed sh.
5978	6321	343	Sanostee form. Drk gry calc very fine to fine gry ss w/calc veins w/irreg inter drk gry s.
6321	6380	59	Greenhorn form. Highly calc gry sh w/thin lmst.
6380	6500	120	Graneros form. Dk gry shale, fossil & carb w/prite oncl.
6500	6662	162	Dakota form. Lt to dk gry foss carb sl calc sl silty ss w/prite incl thin sh bands clay & shale breaks.
6662	6738	76	Morrison form. Interbed grn brn & red waxy sh & fr to cr grn sand.



LOCATE WELL CORRECTLY



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company El Paso Natural Gas Company Address Box 990, Farmington, New Mexico
Lessor or Tract Lackey "B" Field Basin Dakota State New Mexico
Well No. 15 (OWN) Sec. 29 T 28N R. 9W Meridian N.M.P.M. County San Juan
Location 330 ft. N of N Line and 1715 ft. W of E Line of Section 29 Elevation 5972
(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 ORIGINAL SIGNED R. S. OBERLY
Date February 27, 1963 Title Petroleum Engineer

The summary on this page is for the condition of the well at above date.
Commenced drilling 5-6-61; W.O. 12-17-62 Finished drilling 6-2-61; W.O. 12-22-62, 19

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from 6504 to 6508 (G) No. 4, from 6590 to 6594 (G)
No. 2, from 6548 to 6552 (G) No. 5, from _____ to _____
No. 3, from 6564 to 6568 (G) 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—	
9	5/8"	32.3	8 rd	H-40	276	HONGCO				Surface
4	1 1/2"	51.3	8 rd	J-55	6726	Haker				Prod casing
2	3/8"	4.7	8 rd	J-55	6562					Prod tubing

MUDDING AND CEMENTING RECORD

	Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
9	5/8"	291	320	circulated		
4	1 1/2"	6737	640	3 stage		

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
See Well History Attached						

TOOLS USED

Rotary tools were used from 0 feet to 6737 feet, and from _____ feet to _____ feet
Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

DATES

1-16, 1963 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 1,367,000 Gallons gasoline per 1,000 cu. ft. of gas _____

Rock pressure, lbs. per sq. in. 1,976 A.O.F. 1428 MCF/D

EMPLOYEES

_____, Driller _____, Driller
_____, Driller _____, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	1149	1149	
1149	1827	678	Kirtland
1827	2065	238	Fruitland
2065	2205	140	Pictured Cliff
2205	3730	1525	Lewis
3730	3812	82	Cliff House
3812	4398	586	Menefee
4398	4605	207	Point Lookout
4605	5596	991	Mancos
5596	5978	382	Gallup
5978	6321	343	Sanostee
6321	6380	59	Greenhorn
6380	6500	120	Graneros
6500	6662	162	Dakota
6662	6737 T.D.	75	Morrison

16-43094-2 U. S. GOVERNMENT PRINTING OFFICE

16-43094-2 U. S. GOVERNMENT PRINTING OFFICE

[illegible]

FOUO ONLY OF OR BYS NAME

1. DATE OF BIRTH _____
 2. DATE OF DEATH _____
 3. DATE OF BURIAL _____

1996, 1997, 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, 26