

EL PASO NATURAL GAS COMPANY
OPEN FLOW TEST DATADATE April 30, 1958

Operator El Paso Natural Gas		Lease Sunray No. 2-F	
Location 1850N, 1000E, 1-29-10		County San Juan	State New Mexico
Formation Pictured Cliffs		Pool Undesignated	
Casing: Diameter 7-5/8"	Set At: Feet 2539	Tubing: Diameter 1-1/4	Set At: Feet 2386
Pay Zone: From 2390	To 2426	Total Depth: 2549	Shut-in 4/18/58
Stimulation Method Sand Water Frac		Flow Through Casing X	Flow Through Tubing

Choke Size, Inches .75		Choke Constant: C 12.365			
Shut-In Pressure, Casing, PSIG 911	+ 12 = PSIA 923	Days Shut-In 12	Shut-In Pressure, Tubing PSIG 911	+ 12 = PSIA 923	
Flowing Pressure: P PSIG 170	+ 12 = PSIA 182		Working Pressure: P _w PSIG 179	+ 12 = PSIA 191	
Temperature: T °F 61	n 85		F _{pv} (From Tables) 1.017	Gravity .647	

CHOKE VOLUME = $Q = C \times P_r \times F_r \times F_g \times F_{pv}$

$$Q = 12.365 \times 182 \times .9990 \times .9645 \times 1.017 = 2205 \text{ MCF/D}$$

$$\text{OPEN FLOW : } Aof = Q \left(\frac{P_c^2}{P_c^2 - P_w^2} \right)^n$$

$$Aof \left(\frac{851929}{815448} \right)^n = (1.0447)^{.85} \times 2205 = 1.379 \times 2205 =$$

$$Aof = 2289 \text{ MCF/D}$$

TESTED BY Jess Goodwin

WITNESSED BY _____

Checked By H. L. Kendrick

Lewis D. Galloway
L. D. Galloway

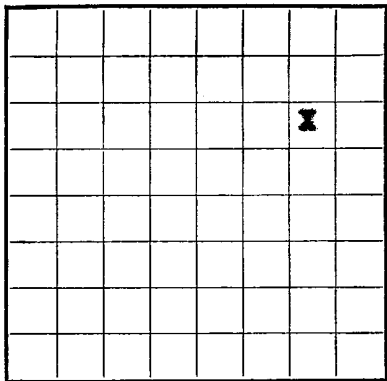
OIL CONSERVATION COMMISSION

AZTEC DISTRICT OFFICE

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U. S. LAND OFFICE Santa Fe
SERIAL NUMBER 080751
LEASE OR PERMIT TO PROSPECT _____

LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED

MAY 13 1958
U. S. GEOLOGICAL SURVEY
FARMINGTON

LOG OF OIL OR GAS WELL

Company El Paso Natural Gas Company Address Box 927, Farmington, New Mexico
Lessor or Tract Sunray Field Astee P.C. Ext. State New Mexico
Well No. 2-7 Sec. 1 T. 29N R. 10W Meridian N.M.P.M. County San Juan
Location 1850 ft. N of N Line and 1000 ft. W of N Line of Section 1 Elevation 5865'
(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 B.H. MEANSDate May 8, 1958 Title Petroleum Engineer

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

Commenced drilling 2-22, 1958 Finished drilling 3-3, 1958OIL OR GAS SANDS OR ZONES
(Denote gas by G)No. 1, from 2380 to 2472 (G) 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 _____ to _____ No. 3, from _____ to _____
No. 2, from _____ to _____ No. 4, from _____ to _____

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Anticorrosion	Kind of pipe	Cut and pulled from	Perforated	Purpose
10 3/4"	30.75	8	3-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2
7 5/8"	25.9	8	3-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2
1 1/4"	2.44	8	3-1/2	1-1/2	1-1/2	1-1/2	1-1/2	1-1/2

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
10 3/4"	170'	150	circulated		
7 5/8"	2549'	150	single 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

TOOLS USED

Rotary tools were used from 0 feet to 2572 feet, and from _____ feet to _____ feet
Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

DATES

4-9, 1958 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 2,205,000 Gallons gasoline per 1,000 cu. ft. of gas _____Rock pressure, lbs. per sq. in. 983 A.O.F.--2289 MCF/D

EMPLOYEES

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

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	1193	1193	2m to gry cr-grn ss interbedded w/gry sh.
1193	1298	105	Ojo Alamo ss. White cr-grn s.
1298	2130	832	Kirtland form. Gry sh interbedded w/tight gry fine-grn ss.
2130	2380	250	Fruitland form. Gry carb sh, scattered coals, coals and gry, tight, fine-grn ss.
2380	2472	92	Pictured Cliffs form. Gry, fine-grn, tight, varicolored soft ss.
2472	2572	80	Louis formation. Gry to white dense sh w/silty to shaly ss breaks.

THE UNIVERSITY OF CHICAGO

087-1001 SIGNED B H MEANS

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

POLYMER LETTERS

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of reworking, 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 added or removed, 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 flowing.

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