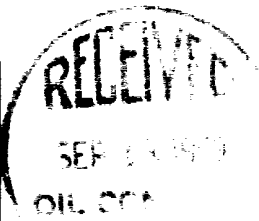


6 - U.S.G.S.
2 - E.P.N.G.-Farm. - Oberley
1 - W. G. Cutler
Form 9133a File

Budget Bureau No. 42-R355.4.
Approval expires 12-31-60.

U. S. LAND OFFICE **Window Rock**
SERIAL NUMBER _____
LEASE OR PERMIT TO PROSPECT
I-149-Ind-8465

| | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|
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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

LOCATE WELL CORRECTLY
Company **Pacific Northwest Pipeline Corp.,** Address **418 1/2 West Broadway - Farmington -**
Lessor or Tract **Blanco 27-9** Field **Blanco -** State **New Mexico**
Well No. **2-12** Sec. **12** T. **27N 9W** Meridian **N.M.P.M.** County **San Juan**
Location **1503** ft. **XX** of **N** Line and **1750** ft. **XX** of **E** Line of **Sec. 12** Elevation **5922**
(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 **L. F. Stone**
Date **9-18-59** Title **Drilling Superintendent**

The summary on this page is for the condition of the well at above date.
Commenced drilling **8-20-59**, 19____ Finished drilling **8-30-**, 19**59**

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

No. 1, from **1997** to **2130 - G** No. 4, from _____ to _____
No. 2, from **4272** to **4533 - 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— | |
| 10 3/4 | 32.75 | 8Rd | Lone St. | 202.43 | Tex. Pat. | | | | Surface |
| 7 5/8 | 26.4 | 8Rd | C.P. KI | 2139.93 | Guide | | | | Intermed. |
| 7 5/8 | 24.0 | 8Rd | Re-Run | 5907 | - | | | | Intermed. |
| 5 1/2 | 17.0 | 8Rd | - | 462.56 | Float Shoe | 4276 | 4461 | | Prod. Liner |
| 5 1/2 | 15.5 | 8Rd | - | 1444.73 | | | | | Prod. Liner |
| 5 1/2 | 14.0 | 8Rd | - | 464.73 | | | | | Prod. Liner |
| 1 1/2 | 2.4 | 10Rd-EUE | - | 4415 | Part Nipple | 4412 | 4415 | | Prod. Tbg. |

MUDDING AND CEMENTING RECORD

| Size casing | Where set | Number sacks of cement | Method used | Mud gravity | Amount of mud used |
|-------------|-----------|------------------------|-------------|-------------|--------------------|
| 10 3/4 | 214 | 200 | Pump Plug | | |
| 7 5/8 | 2210 | 200 | Pump Plug | | |
| 5 1/2 | 4533 | 200 | Pump Plug | | |
| 1 1/2 | 4426 | Prod. Tubing | | | |

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 **4533** feet, and from _____ feet to _____ feet
Cable tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet

DATES

9-11-, 19**59** Put to producing **Not Connected**, 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 **2011 I.P.** Gallons gasoline per 1,000 cu. ft. of gas _____
Rock pressure, lbs. per sq. in. **5858 CAOP**
1079 psig

EMPLOYEES

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

FORMATION RECORD

| FROM— | TO— | TOTAL FEET | FORMATION |
|-------|------|------------|-----------------------|
| 0 | 1116 | 1116 | Surface |
| 1116 | 1176 | 60 | Ojo Alamo |
| 1176 | 1737 | 561 | Kirtland |
| 1737 | 1997 | 260 | Fruitland |
| 1997 | 2130 | 133 | Pictured Cliffs |
| 2130 | 3648 | 1518 | Lewis |
| 3648 | 3678 | 30 | Cliff House |
| 3678 | 4272 | 594 | Menefee |
| 4272 | 4533 | 261 | Point Lookout |
| 4533 | | | Total Depth |
| 4528 | | | Plug Back Total Depth |

[OVER]

FORMATION RECORD—Continued[illegible]

HISTORY OF OIL OR GAS WELL

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

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.

Perforated W/2 Shots Per Foot:

4461-57; 4431-26; 4396-94; 4387-82; 4372-69; 4365-61; 4352-38; 4332-
4295; 4289-85; 4281-76)

Frac W/84, 340 Gals. Wtr. 50,000# 40-60 Sand. B.P. 1500#. Max. Press. 1400#. Avg. Press. 1400#. I.R. 64 B.P.M. Dropped 300 rubber balls.

C.O. Gauge, 5,000 MCF.

Run 139 Joints 1 1/2" Tubing - T.E. 4415 - Set @ 4426. Shut in Well
9-2-59

OLD 76-146 07512 15 12/60/67

1992, 1993, 1994, 1995, 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, 26

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1. *Chlorophyll a* and *Chlorophyll b* were determined by the method of Arar and Collins (1971).

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