

MAR 11 1960

UNITED STATES

~~CONFIDENTIAL~~ DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

[illegible][illegible]

Well No. _____ Sec. _____ T. _____ R. _____ Meridian _____ County _____

Location of Librarians: _____

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 _____

Date March 9, 1960 Title Area Engineer

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

Completed during: October 22 Rushed during: October 22

(Dellie 9-2-50)

No. 1, from [redacted] to [redacted] No. 4, from [redacted] to [redacted]

NOTE: from [redacted] to [redacted] (Np 8, from [redacted] to [redacted])

No. 3, from _____ to _____ No. 6, from _____ to _____

No. 78-00000. THE NEW YORK STATE DEPARTMENT OF CORRECTIONS.

No. 1, from [illegible] to [illegible]
No. 2, from [illegible] to [illegible]
No. 3, from [illegible] to [illegible]
No. 4, from [illegible] to [illegible]

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From—	To—	
0.12000	11.6	SRT	1-33	237	of the	and	and	oil	oil
0.12000	9.5	SRT	1-33	237	of the	and	and	oil	oil

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
5/8"	370'	200 sacks cement	Halliburton 1 plug		
3/4"	645'	750 sacks cement	Halliburton DV tool		

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 ----- feet to ----- feet, and from ----- feet to ----- feet

Cable tools were used from 0 feet to 645 feet, and from _____ feet to _____ feet

DATES

Completed as shut in gas well	Put to producing	Shut in for pipeline con
-------------------------------	------------------	--------------------------

Angulo Peak, Dakota Field, March 3, 1960 _____ barrels of fluid of which _____ % was oil; _____ %

Gravimetric test, 1235 MCPPD
 emulsion, ----- % water, and ----- % sediment. Gravity, °Bé. -----

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

Rock pressure lbs. per sq. in. 1235

_____, Driller _____, Driller

Charles Lockhart, Driller A. C. Carey, Driller

J. C. Binkley **FORMATION RECORD J. D. Roe**

FORMATION RECORD J. D. Roe

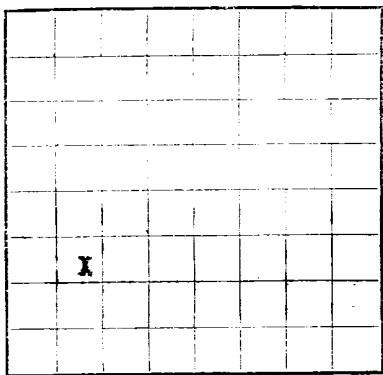
FROM—	TO—	TOTAL FEET	FORMATION
0	1040	1040	Surface sands & shales.
1040	1155	115	Ojo Alamo sand.
1155	1845	690	Kirtland shales & sands including Farmington sands.
1845	1992	147	Fruitland sands, shales & coals.
1992	2050	58	Pictured Cliffs sand.
2050	3580	1530	Lewis shale.
3580	4360	780	Mesa Verde sands & shales.
4360	5495	1135	Mameos shale.
5495	6252	757	Gallup sands & shales.
6252	6340	88	Greenhorn sandy shale.
6340	6378	38	Graneros sands & shales.
6378	6424	46	Dakota sands & shales.
6424	6645	221	Dakota pay sand.
			(Tops from E log)

LOVER

EXAMINATION RECORD—Continued

Y. Y. Y.

Form 9-239



LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company ~~Pen American Petroleum Corporation~~ Address ~~Box 467, Farmington, New Mexico~~
Lessor or Tract ~~U. S. Salt Well~~ Field ~~Angels Peak~~ State ~~New Mexico~~
Well No. ~~1~~ Sec. ~~1~~ T. ~~27N~~ R. ~~10E~~ Meridian ~~N.M.P.~~ County ~~San Juan~~
Location ~~1150~~ ft. ~~N.~~ of ~~5~~ Line and ~~990~~ ft. ~~E.~~ of ~~1~~ Line of ~~Section 1~~ Elevation ~~6261~~ (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 ~~R. M. ...~~

Date ~~March 9, 1960~~ Title ~~res. engineer~~
The summary on this page is for the condition of the well at above date.
Commenced drilling ~~October 14~~, 19~~59~~ Finished drilling ~~October 26~~, 19~~59~~

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

No. 1, from ~~6474~~ to ~~6450~~ No. 4, from _____ to _____
No. 2, from ~~6481~~ to ~~6506~~ 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—	
9-5/8"	32.3	BPT	H-40	363'	Guide				Surface
4-1/2"	11.6	H-40	J-55	237'	Guide				(all string)
4-1/2"	9.5	H-40	J-55	6434'	Guide				(all string)

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
9-5/8"	373'	230 sacks cement	all Burton 1 plug		
4-1/2"	6434'	240 sacks cement	all Burton 14 tons		

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 _____ feet to _____ feet, and from _____ feet to _____ feet
Cable tools were used from ~~0~~ feet to ~~6445~~ feet, and from _____ feet to _____ feet

DATES

~~Completed as shut in well~~ Put to producing ~~put in for trial, 19 consecutive~~
The production for the first 24 hours was ~~960~~ barrels of fluid of which ~~75%~~ was oil; ~~60%~~
Preliminary test ~~1235~~ °Bé. Gravity, °Bé. _____
If gas well, cu. ft. per 24 hours _____ Gallons gasoline per 1,000 cu. ft. of gas _____
Rock pressure, lbs. per sq. in. ~~1235~~
(Aundry report will be filed when ~~potentials~~ is taken)

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

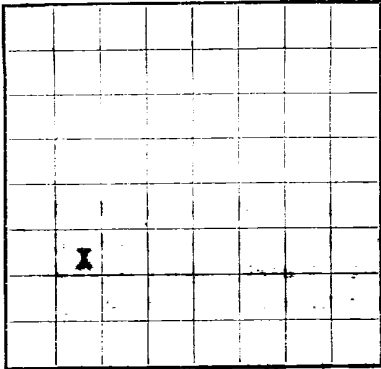
FORMATION RECORD J. C. ...

FROM—	TO—	TOTAL FEET	FORMATION
0	1040	1040	surface sands & shales.
1040	1155	115	oil shale.
1155	1945	690	oil shale & sand including
			part of sand.
1945	1972	127	fruitland sands, shales & coals.
1972	2090	58	fruitland cliffs sand.
2090	2580	1530	lewis shale.
2580	2740	780	mesaverde sands & shales.
2740	3215	1135	sanjuan shale.
3215	3252	757	oil shale.
3252	3340	88	greenhorn sandy shale.
3340	3378	38	greenhorn sands & shales.
3378	3424	46	lakota sands & shales.
3424	3645	221	lakota pay sand.
			(tops from 104)

CONCLUSIONS

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.

U. S. GOVERNMENT PRINTING OFFICE 16-58047-2



LOCATE WELL CORRECTLY

U. S. LAND OFFICE Santa Fe
SERIAL NUMBER 42-377384
LEASE OR PERMIT TO PROSPECT _____

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOG OF OIL OR GAS WELL

Company Pan American Petroleum Corporation Address Box 167, Farmington, New Mexico
Lessor or Tract N. M. Salt water Field Angala Peak State New Mexico
Well No. 1 Sec. 1 T. 27N R. 10W Meridian N.M. County San Juan
Location 1150 ft. N. of 3 Line and 990 ft. E. of 1 Line of Section 1 Elevation 6261 (ft.)
(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 R. M. Carey

Date March 9, 1960 Title Area Engineer
The summary on this page is for the condition of the well at above date.
Commenced drilling October 14, 1959 Finished drilling October 28, 1959

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

No. 1, from 6274 to 6450 No. 4, from _____ to _____
No. 2, from 6281 to 6386 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—	
<u>9-5/8"</u>	<u>32.7</u>	<u>8PT</u>	<u>N-40</u>	<u>363'</u>	<u>Guide</u>				<u>Surface</u>
<u>(4-1/2"</u>	<u>11.6</u>	<u>8PT</u>	<u>J-55</u>	<u>237'</u>	<u>Guide</u>				<u>(oil string)</u>
<u>(4-1/2"</u>	<u>9.5</u>	<u>8-1</u>	<u>J-55</u>	<u>6134'</u>	<u>Guide</u>				<u>(oil string)</u>

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
<u>9-5/8"</u>	<u>370'</u>	<u>200 sacks cement</u>	<u>Halliburton 1 plug</u>		
<u>4-1/2"</u>	<u>645'</u>	<u>750 sacks cement</u>	<u>Halliburton LV tool</u>		

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 _____ feet to _____ feet, and from _____ feet to _____ feet
Cable tools were used from 0 feet to 6645 feet, and from _____ feet to _____ feet

DATES

~~Completed as shut in gas well~~ Put to producing ~~shut in for 41 days, 10 connections~~
~~Initial production for the first 24 hours was~~ _____ barrels of fluid of which March 3 % was oil; _____ %
~~Preliminary test 1235 °CFP~~ Gravity, °Bé. _____
emulsion, _____ % water; and _____ % sediment.

If gas well, cu. ft. per 24 hours _____ Gallons gasoline per 1,000 cu. ft. of gas _____
Rock pressure, lbs. per sq. in. 1235
(Sundry report will be filed when potential test is taken)

_____, Driller _____, Driller
~~Charles Lockhart~~, Driller H. G. Carey, Driller
J. G. Binkley

FORMATION RECORD J. B. Roe

FROM—	TO—	TOTAL FEET	FORMATION
<u>0</u>	<u>1040</u>	<u>1040</u>	<u>Surface sands & shales.</u>
<u>1040</u>	<u>1155</u>	<u>115</u>	<u>Lisa Lane sand.</u>
<u>1155</u>	<u>1845</u>	<u>690</u>	<u>Kirtland shales & sands including</u> <u>Farmington sands.</u>
<u>1845</u>	<u>1992</u>	<u>147</u>	<u>Fruitland sands, shales & coals.</u>
<u>1992</u>	<u>2050</u>	<u>58</u>	<u>Disturbed Cliffs sand.</u>
<u>2050</u>	<u>2580</u>	<u>1530</u>	<u>Lewis shale.</u>
<u>2580</u>	<u>2360</u>	<u>780</u>	<u>Mesa Verde sands & shales.</u>
<u>2360</u>	<u>5495</u>	<u>1135</u>	<u>Mancos shale.</u>
<u>5495</u>	<u>6252</u>	<u>757</u>	<u>Gallup sands & shales.</u>
<u>6252</u>	<u>6340</u>	<u>88</u>	<u>Greenhorn sandy shale.</u>
<u>6340</u>	<u>6378</u>	<u>38</u>	<u>Graneros sands & shales.</u>
<u>6378</u>	<u>6424</u>	<u>46</u>	<u>Dakota sands & shales.</u>
<u>6424</u>	<u>6645</u>	<u>221</u>	<u>Dakota pay sand.</u>
			<u>(Tops from a log)</u>

FORMATION RECORD—Continued

FROM-	TO-	TOTAL FEET	FORMATION
			1. ... 2. ... 3. ... 4. ... 5. ... 6. ... 7. ... 8. ... 9. ... 10. ... 11. ... 12. ... 13. ... 14. ... 15. ... 16. ... 17. ... 18. ... 19. ... 20. ... 21. ... 22. ... 23. ... 24. ... 25. ... 26. ... 27. ... 28. ... 29. ... 30. ... 31. ... 32. ... 33. ... 34. ... 35. ... 36. ... 37. ... 38. ... 39. ... 40. ... 41. ... 42. ... 43. ... 44. ... 45. ... 46. ... 47. ... 48. ... 49. ... 50. ... 51. ... 52. ... 53. ... 54. ... 55. ... 56. ... 57. ... 58. ... 59. ... 60. ... 61. ... 62. ... 63. ... 64. ... 65. ... 66. ... 67. ... 68. ... 69. ... 70. ... 71. ... 72. ... 73. ... 74. ... 75. ... 76. ... 77. ... 78. ... 79. ... 80. ... 81. ... 82. ... 83. ... 84. ... 85. ... 86. ... 87. ... 88. ... 89. ... 90. ... 91. ... 92. ... 93. ... 94. ... 95. ... 96. ... 97. ... 98. ... 99. ... 100. ...

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 pings or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

HISTORY OF OIL OR GAS WELL

Well was spudded October 14, 1950 and 2 1/2" hole drilled to 370 feet with rotary tools. 9-5/8" casing was set at 370 feet. 11th 200 sacks cement containing 24 calcium chloride. Cement was circulated. After waiting an cement, casing was tested with 800 psi for 30 minutes with no indication of pressure drop. Reduced hole to 7-7/8" and cemented 4 1/2" open hole.

total depth 6045' shale. 7-1/2" casing was set at 6045'. Cemented first stage with 400 sacks of red cement containing 1-1/2 pounds fly-ash per sack, followed by 100 sacks wet cement. Good circulation throughout job. Tested casing with 3000 psi for fifteen minutes which held with no indication of pressure drop. Cemented second stage with tool set at 2200'. Cemented with 250 sacks 4-1/2" cement. Good returns throughout. Tested casing with 3000 psi for 15 minutes which held with no indication of pressure drop. Drilled 2-stage tool and cleaned out casing to 6101'. Released 172 and moved in a completion unit preparing for completion operations.

made jet out at 6:50. For 30 minutes with 3000 psi with injection rate 4 barrels per minute with 3/4 pounds sand per gallon water. Circulated out 45 minutes. Lowered tubing and circulated hole clean. Spotted 50 gallons W.C. Pulled jet 1001. Sand water tracked in 7,000 gallons water with 18,000 pounds sand. Breakdown pressure 1001 psi, maximum treating pressure 3000 psi, minimum treating pressure 250 psi, injection rate 35 barrels per minute. Jet bridge plug at 6:55. Cut casing at 6:10 with jet gun at 4 barrels per minute with 3000 psi using water with 1/2 pounds sand per gallon. Circulated hole clean of sand. Sand water tracked in 10,000 gallons water and 70,000 pounds sand. Breakdown pressure 2900 psi, maximum treating pressure 2900 psi, minimum treating pressure 2000 psi. Average injection rate 33 barrels per minute. Retrieved bridge plug. ended 24 hours at 4:47.

DATE: MAR 22 1970

After casing operations were completed as usual in Gas Well No. 1, I was contacted by Mr. J. H. Smith on March 3, 1960. Preliminary test results showed that the well was producing gas at a rate of approximately 1-1/2 mcf per day through the 2 1/2 inch tubing. The well was then shut in for 24 hours and casing pressure was measured at 25 psi and casing pressure flowing at 25 psi.

ACKNOWLEDGMENTS

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, 2678, 26