

CASE 3816: Application of HUMBLE  
OIL & RFG. CO. FOR SALT WATER  
DISPOSAL, LEA COUNTY, N. MEX.

Case Number

3816

Application  
Transcripts.

Small Exhibits

ETC.

State of New Mexico  
Oil Conservation Commission



STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

**August 1, 1968**

Re: Case No. 3816  
Order No. R-3464  
Applicant:  
  
HUMBLE OIL & REFINING CO.

Enclosed herewith are two copies of the above-referenced Commission order recently entered in the subject case.

*A. L. Porter, Jr.*  
A. L. PORTER, Jr.  
Secretary-Director

Carbon copy of order also sent to:

Other \_\_\_\_\_ State Engineer Office

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 3816  
Order No. R-3464

APPLICATION OF HUMBLE OIL & REFINING  
COMPANY FOR SALT WATER DISPOSAL, LEA  
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on July 24, 1968,  
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 1st day of August, 1968, the Commission, a  
quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

(1) That due public notice having been given as required by  
law, the Commission has jurisdiction of this cause and the subject  
matter thereof.

(2) That the applicant, Humble Oil & Refining Company, is  
the owner and operator of the H. A. Townsend Well No. 6, located  
1980 feet from the North line and 1980 feet from the East line  
of Section 9, Township 16 South, Range 35 East, NMPM, Townsend-  
Wolfcamp Pool, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to  
dispose of produced salt water into the Wolfcamp formation, with  
injection into the perforated interval from approximately 10,199  
feet to 10,530 feet.

(4) That the injection should be accomplished through  
2 3/8-inch plastic-lined tubing installed in a packer set at  
approximately 10,150 feet; that the casing-tubing annulus

-2-

CASE No. 3816  
Order No. R-3464

should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus or the annulus left open at the surface in order to determine leakage in the tubing or packer.

(5) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

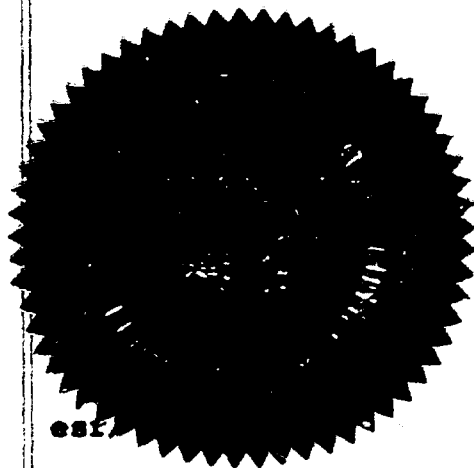
(1) That the applicant, Humble Oil & Refining Company, is hereby authorized to utilize its H. A. Townsend Well No. 6, located 1980 feet from the North line and 1980 feet from the East line of Section 9, Township 16 South, Range 35 East, NMPM, Townsend-Wolfcamp Pool, Lea County, New Mexico, to dispose of produced salt water into the Wolfcamp formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 10,150 feet, with injection into the perforated interval from approximately 10,199 feet to 10,530 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus left open at the surface in order to determine leakage in the tubing or packer.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*David F. Cargo*  
DAVID F. CARGO, Chairman

*Guyton B. Hays*  
GUYTON B. HAYS, Member

*A. L. Porter, Jr.*  
A. L. PORTER, Jr., Member & Secretary

Docket No. 22-68

DOCKET: EXAMINER HEARING - WEDNESDAY - JULY 24, 1968

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,  
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or  
A. L. Porter, Jr., Alternate Examiner:

CASE 3809: Application of Solar Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Travis Well No. 2 located in Unit J of Section 21, Township 23 South, Range 37 East, Lea County, New Mexico, to produce oil from the Teague-Blinebry and undesignated Tubb-Drinkard pools through parallel strings of tubing.

CASE 3810: Application of Bronco Oil Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Saltmount Well No. 2 located in Unit O of Section 21, Township 23 South, Range 37 East, Lea County, New Mexico, to produce oil from the Teague-Blinebry and undesignated Tubb-Drinkard pools through parallel strings of tubing.

CASE 3811: Application of Charles B. Read for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill his Marathon State Well No. 1 at a location 1980 feet from the South line and 660 feet from the West line of Section 7, Township 19 South, Range 35 East, Scharb-Bone Springs Pool, Lea County, New Mexico, in exception to the pool rules which require the first well drilled on a unit to be located in the NE/4 or the SW/4 of the quarter section.

CASE 3812: Application of Tenneco Oil Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Southwest Henshaw (Premier) Unit Area comprising 1720 acres, more or less, of Federal lands in Township 16 South, Range 30 East, West Henshaw-Grayburg Pool, Eddy County, New Mexico.

CASE 3813: Application of Tenneco Oil Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Southwest Henshaw (Premier) Unit Area by the injection of water into the Premier sand through nine injection wells in Sections 7, 8, 17, 18 and 19, Township 16 South, Range 30 East, West Henshaw-Grayburg Pool, Eddy County, New Mexico.

CASE 3814: Application of Humble Oil & Refining Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Penrose zone of the Queen formation in the perforated interval from 3818 feet to 3838 feet in its New Mexico "G" State Well No. 17 located 330 feet from the South line and 1850 feet from the West line of Section 23, Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico. If said Penrose zone does not prove satisfactory, then the applicant proposes to deepen said well and dispose into the San Andres formation.

CASE 3815: Application of Humble Oil & Refining Company for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Abo formation in the interval from 5670 feet to 6030 feet in its Chalk Bluff Draw Unit (A) Well No. 19 located 990 feet from the South line and 1650 feet from the West line of Section 16, Township 18 South, Range 27 East, Empire Abo Pool, Eddy County, New Mexico.

CASE 3816: Application of Humble Oil & Refining Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Wolfcamp formation in the interval from 10,199 feet to 10,530 feet in its H. A. Townsend Well No. 6 located 1980 feet from the North and East lines of Section 9, Township 16 South, Range 35 East, Townsend Wolfcamp Pool, Lea County, New Mexico.

CASE 3817: Application of Continental Oil Company for reinstatement of cancelled underproduction, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the general rules and regulations for prorated gas pools of Southeastern New Mexico promulgated by Order No. R-1670, as amended, to permit the reinstatement of underproduction accumulated by its Stevens A-35 Well No. 2 located in Unit J of Section 35, Township 23 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico, cancelled December 31, 1967. Applicant requests that its Stevens A-35 Well No. 1 located in Unit L and its Stevens A-35 Well No. 2 located in Unit J, both in the aforesaid Section 35 and dedicated to the same non-standard gas proration unit, be permitted to produce the aforesaid cancelled underproduction.

- CASE 3818: Application of Continental Oil Company for an exception to Rule 506, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the statewide limiting gas-oil ratio of 2,000 feet of gas per barrel of oil as promulgated by Commission Rule 506 for its Warren Unit Well No. 11, located in Unit A of Section 35, Township 20 South, Range 38 East, Warren-Drinkard Pool, Lea County, New Mexico.
- CASE 3819: Application of Cities Service Oil Company for the institution of gas prorationing in the Buffalo Valley-Pennsylvanian Gas Pool, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the limitation of gas production from the Buffalo Valley-Pennsylvanian Gas Pool in Chaves County, New Mexico, to reasonable market demand and to the capacity of gas transportation facilities, and that the subject pool be governed by the general rules and regulations for the prorated gas pools of Southeastern New Mexico insofar as said general rules and regulations are not inconsistent with the special rules and regulations governing the subject pool. Further, the applicant proposes that the allowable production from the pool be allocated among the wells in the pool on a 100% surface acreage basis.
- CASE 3820: Application of El Paso Natural Gas Company for an unorthodox gas well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Harvey "A" Well No. 3 at a point 890 feet from the South line and 1650 feet from the East line of Section 32, Township 27 North, Range 7 West, Blanco-Mesaverde Pool, Rio Arriba County, New Mexico, in exception to the pool rules which require locations to be in either the Northeast or Southwest quarter of the section.
- CASE 3821: Application of Marathon Oil Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp formation underlying the SE/4 of Section 22, Township 20 South, Range 35 East, Lea County, New Mexico. Said acreage to be dedicated to a well to be drilled 660 feet from the South and East lines of said Section 22, and within one mile of the Southeast Lea-Wolfcamp Gas Pool.



Case 3822: Application of Aztec Oil & Gas Company for commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle San Andres production from its State "AJ" lease comprising the SW/4 and the W/2 NE/4 of Section 1 and its Amerada State lease comprising the N/2 NW/4 of Section 12, all in Township 18 South, Range 36 East, Arkansas Junction-San Andres Pool, Lea County, New Mexico, allocating production to each lease on the basis of periodic well tests.

CASE 3805: CONTINUED FROM THE JULY 10, 1968, EXAMINER HEARING

Application of Benson-Montin-Greer Drilling Corporation and Lloyd B. Taylor for Pressure Interference Tests and Back Allowable, San Juan County, New Mexico. Applicants, in the above-styled cause, seek authority to extend for an additional 60-day period from July 8, 1968, the shut-in test period authorized for one well in the La Plata Gallup Oil Pool, San Juan County, New Mexico, by Commission Order No. R-3399 and to also extend the back allowable make-up period for said well. Applicants further seek authority to drill three additional La Plata oil wells in Section 6 of Township 31 North, Range 13 West, and Sections 31 and 32, Township 32 North, Range 13 West, and to shut said wells in immediately after recovery of load oil and the establishment of initial potentials, for a period of up to 180 days for the purpose of conducting pressure interference tests, and to make-up the production lost during said test period at a later date. Applicants further seek a provision for administrative extension of the shut-in test period and the make-up period.

# HUMBLE OIL & REFINING COMPANY

P. O. Box 1600  
Midland, Texas 79701

*Case 3816*

22-5: Townsend Area  
Proposed Salt Water Disposal Well

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr., Secretary-Director

03 JUN 25 AM 0 46

Dear Sir:

Humble Oil and Refining Company respectfully requests a Hearing before the Commission to consider its application to convert H. A. Townsend 6, Townsend Wolfcamp Pool, to a salt water disposal well. It is located in Unit G, Section 9, T-16-S, R-35-E, Lea County, New Mexico.

H. A. Townsend 6 was originally completed in 1954 in the Wolfcamp pay from 10,464 to 10,530 feet. By June, 1964 it was 100 percent water. Recompletion in the upper Wolfcamp stringers from 10,199 to 10,357 feet resulted in marginal production. In September, 1966 the well was temporarily abandoned and shut in.


It is proposed to inject produced water from the H. A. Townsend lease into the present perforated interval. If it fails to take sufficient water on vacuum, we also propose to reopen the lower interval from 10,464 to 10,530 feet for water injection.

In addition to Humble's two H. A. Townsend wells, which produce 11 barrels of water per day, we request permission to dispose of produced water from our neighboring leases. These leases are as follows:

1.	N. M. "AH" State	Townsend Wolfcamp Pool	1 Well	11 Bbls. Water Per Day
2.	N. M. "AN" State	Townsend Wolfcamp Pool	1 Well	14 Bbls. Water Per Day
3.	F. J. Danglade	Townsend Wolfcamp Pool	1 Well	0 Bbls. Water Per Day
4.	N. M. "BB" State	Kemnitz Lower Wolfcamp	1 Well	0 Bbls. Water Per Day
5.	N. M. "AJ" State	Dean Permo Penn Pool	2 Wells	0 Bbls. Water Per Day
6.	N. M. "AP" State	Dean Permo Penn Pool	1 Well	0 Bbls. Water Per Day

Yours very truly,

HUMBLE OIL & REFINING COMPANY

  
L. H. Byrd

BKB/mcb

DOCKET MAILED

Date 7-11-68

NEW MEXICO OIL CONSERVATION COMMISSION  
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR Humble Oil & Refining Company		ADDRESS P. O. Box 2100, Hobbs, New Mexico 88240	
LEASE NAME H. A. Townsend	WELL NO. 6	FIELD Townsend Wolfcamp	COUNTY Lea
LOCATION UNIT LETTER <u>G</u> WELL IS LOCATED <u>1980</u> FEET FROM THE <u>North</u> LINE AND <u>1980</u> FEET FROM THE <u>East</u> LINE, SECTION <u>9</u> TOWNSHIP <u>16-S</u> RANGE <u>35-E</u> NMPM.			

CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	10-3/4"	434'	300	Surface	-
INTERMEDIATE	7-5/8"	4600'	1800	Surface	-
LONG STRING	5-1/2"	10,569'	540	1920	Temperature Survey
TUBING	2"	10,150'	NAME, MODEL AND DEPTH OF TUBING PACKER Retrievable hookwall packer at 10,150'.		
NAME OF PROPOSED INJECTION FORMATION Wolfcamp		TOP OF FORMATION 9,580		BOTTOM OF FORMATION 10,530	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Tubing		PERFORATIONS OR OPEN HOLES Perforations		PROPOSED INTERVAL(S) OF INJECTION 10,199-10,359'; 10,464-10,530'	
IS THIS A NEW WELL DRILLED FOR DISPOSAL? No		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Oil		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? No	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH Lower zone 10,464-10,530' of proposed interval is now isolated by bridge plug.					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 132		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA None		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA None	
ANTICIPATED DAILY INJECTION VOLUME (BBLs.) 36	MINIMUM 150 Est.	OPEN OR CLOSED TYPE SYSTEM Closed		IS INJECTION TO BE BY GRAVITY OR PRESSURE? Gravity	APPROX. PRESSURE (PSI) 700
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - Yes		WATER TO BE DISPOSED OF Yes		NATURAL WATER IN DISPOSAL ZONE Yes	ARE WATER ANALYSES ATTACHED? Yes
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) E. L. Harrod, 1018 W. Ave. J, Lovington, New Mexico 88260					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL					
Gulf Oil Corporation, P. O. Box 670, Hobbs, New Mexico 88240					
J. R. Cone, P. O. Box 871, Lubbock, Texas 79408					
Cenard Oil and Gas Company, Box 446, 2020 Republic National Bank Building, Dallas, Texas 75221					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?		SURFACE OWNER		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	
Yes		Yes		Yes	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)?		PLAT OF AREA		ELECTRICAL LOG	
Yes		Yes		Yes	
				THE NEW MEXICO STATE ENGINEER	
				-	
				DIAGRAMMATIC SKETCH OF WELL	
				Yes	

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

[Signature] District Superintendent 6/21/68  
(Signature) (Title) (Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

[illegible]

[illegible]

Case 3816

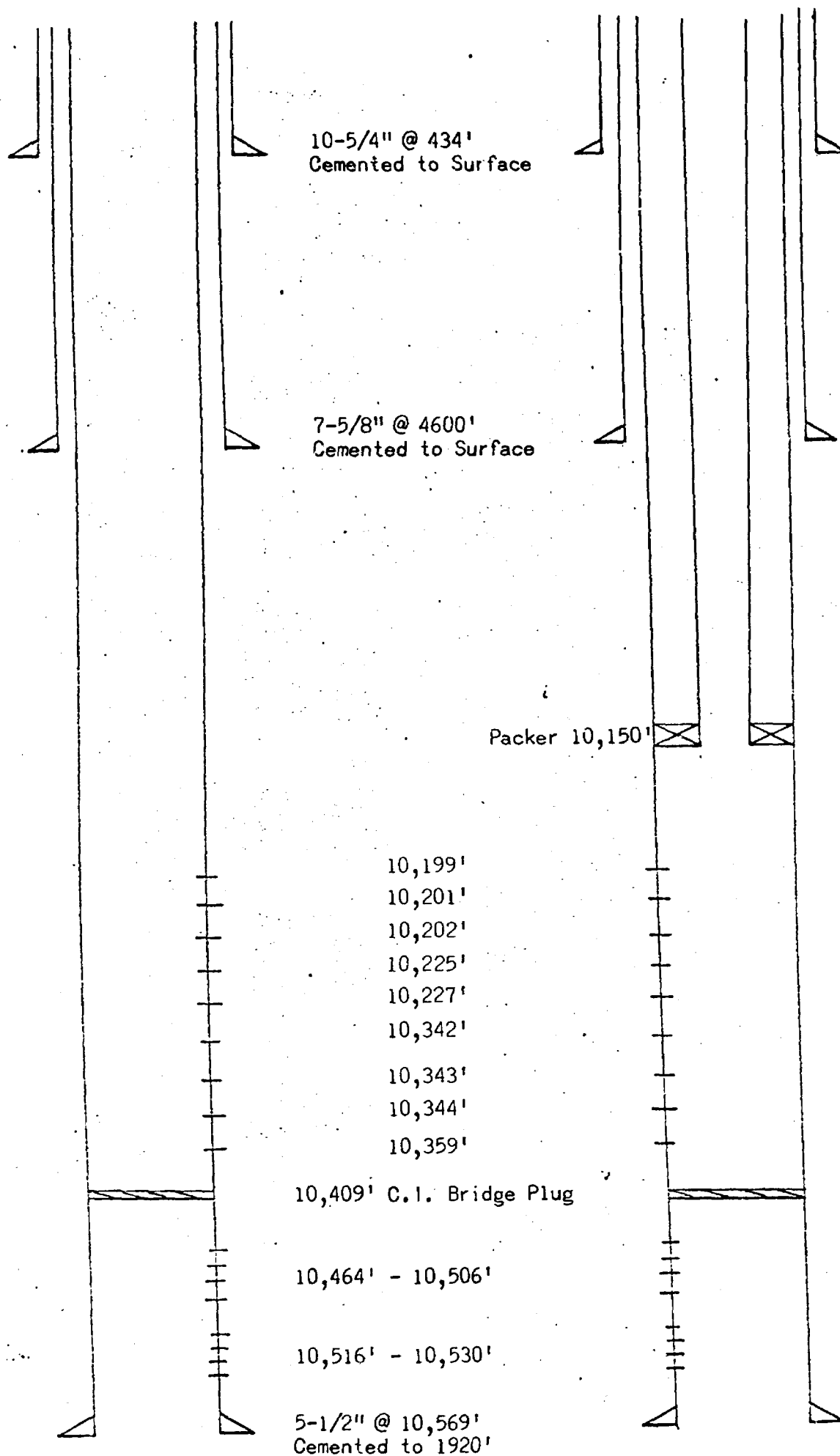
HUMBLE OIL AND REFINING COMPANY

H. A. TOWNSEND NO. 6

TOWNSEND WOLFCAMP POOL

PRESENT COMPLETION

PROPOSED COMPLETION



HUMBLE OIL & REFINING COMPANY

TOWNSEND WOLFCAMP POOL

WATER ANALYSIS

Source: H. A. Townsend Battery 1

	<u>Parts Per Million</u>
Sodium	31,762
Calcium	3,614
Magnesium	905
Chloride	57,600
Sulfate	464
Bicarbonate	234
Carbonate	None
Hydrogen Sulfide	None
Iron	33
Specific Gravity	1.066 @ 74° F
pH	5.8

*Case 3816*

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMAS BLDG. • P. O. BOX 1092 • PHONE 243-4491 • ALBUQUERQUE, NEW MEXICO



BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
July 24, 1968

EXAMINER HEARING

IN THE MATTER OF:

Application of Humble Oil & Refining  
Company for salt water disposal,  
Lea County, New Mexico.

Case No. 3816

BEFORE: Daniel S. Nutter  
Examiner

TRANSCRIPT OF HEARING



MR. NUTTER: We'll call Case Number 3816.

MR. HATCH: Case 3816. Application of Humble Oil & Refining Company for salt water disposal, Lea County, New Mexico.

MR. HINKLE: Clarence Hinkle, Hinkle, Bondurant and Christy of Roswell appearing on behalf of Humble in Case 3816. We have one witness, Mr. Bob Bevell, who has been previously sworn in Case Number 3814.

(Whereupon, Applicant's Exhibits 1, 1A, 2, 3 and 4 were marked for identification.)

B. K. BEVELL

called as a witness, having been previously sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. HINKLE:

Q State your name, by whom you are employed and in what capacity.

A B. K. Bevell, Humble Oil & Refining Company, Senior Production Engineer.

Q Where do you reside?

A Hobbs, New Mexico.

Q Have you previously testified before the New Mexico Oil Conservation Commission?

A Yes, sir, I have.

Q Your qualifications as a petroleum engineer are a matter of record before the Commission?

A Yes, sir.

Q Are you familiar with the application of Humble in Case Number 3816?

A Yes, sir.

Q What is Humble seeking by this application?

A Humble is requesting permission to convert its HA Townsend Number 6 in the Townsend Wolfcamp Pool to a salt water disposal well.

Q Have you prepared certain exhibits for introduction in this case?

A Yes, sir.

Q Refer to Exhibit 1 and 1A of Humble and explain what these show.

A Exhibit Number 1 is in two parts. They're plats. The first sheet, encircled in red is the subject well in our HA Townsend Lease in the Townsend Pool. Approximately four miles to the east is our New Mexico State BB Lease with one well which we request be allowed to dispose of water into this well --

MR. NUTTER: Where is that lease, Mr. Bevell?

THE WITNESS: To the west. It's not shown in yellow

on yours?

MR. NUTTER: Yes, sir. Only you said to the east at first, and I went to the east and couldn't find the lease. Over here in Section 22 of 16-34.

THE WITNESS: My navigation is a little bad. And to the north are three enclosed leases in yellow; our New Mexico State AH, AN and our FJ Dangrade Leases which we request permission to dispose water from into this well.

Now, on the next sheet, over in the Dean Pool, there's our New Mexico State AJ and AP Leases which we request permission to dispose of water into this well.

Q (By Mr. Hinkle) Is the subject well that is proposed as injection well a producing well at the present time?

A No, sir. It has been abandoned since 1966.

Q What is the status of the well?

A It's temporarily shut in.

Q It has not been plugged?

A No, sir.

Q How do you propose to transport the water from the other leases you've testified to for injection into this well?

A By hauling.

Q How much water do the respective leases make at the present time including the one on which the injection well is located?

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, 2680, 26

now is a cast iron bridge plug which separates the lower part of the Wolfcamp Pay from the upper stringers which are producing right now. The lower Wolfcamp Pay watered out, oh, I believe in 1964, and it was recompleted in the upper stringers which have watered out as of now. The well was abandoned in 1966.

On the right, shows how we propose to arrange the well. We have two and three-eighths inch tubing with a packer at 10,150 feet approximately. And if the perforations shown on the chart do not take water sufficiently on a gravity, we propose to knock out the bridge plug at 10,409 feet and inject into the entire Wolfcamp Zone.

Q Now, refer to Exhibit 3 and explain what this shows.

A Exhibit 3 is an electric log of the subject well.

Q Is this the same log which was filed with the application?

A Yes, sir, it is.

Q In filing the application, did you also file Form C-108 with the Commission?

A Yes, sir, we did.

Q Now, refer to Exhibit Number 4.

A Exhibit Number 4 is a water analysis taken from our HH Townsend Battery Number 1 which will be typical of water from the Wolfcamp that will be reinjected into this well.

Q In your opinion, if the injection well is completed in the manner in which you've testified to, will it effectively confine the injected water to the Townsend Wolfcamp Pools?

A Yes, sir.

Q Is there any other water being injected into the Townsend Wolfcamp Pools at the present time, to your knowledge?

A Not that I know of at present. There has been a pilot project in the past which proved unsuccessful and then abandoned long since.

Q In your opinion, will the completion of the injection well in the manner in which you've testified be in the interest of conservation and prevention of waste?

A Yes, sir.

MR. HINKLE: We'd like to offer in evidence Exhibits 1 through 4.

MR. NUTTER: Applicant's Exhibits 1 through 4 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 1 through 4 admitted in evidence.)

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Bevell, turning to your Exhibit Number 2, what size tubing is this, please?

A Two and three-eighths.

Q Plastic lined?

A Plastic lined.

Q And the annulus will be loaded with an inhibited fluid?

A Inhibited fluid.

Q And left open or equipped with a gauge?

A Yes, sir.

Q Five and a half cemented, intermediate surface pipe.

Okay. Now, on Exhibit Number 1, Mr. Revell, in the case of the other wells in the first two cases, they were edge wells on the boundary, outer boundary of the pool, but it appears here that there are some wells in the southeast quarter of Section 9 with a little symbol "WO" by them. What does that mean?

A That means "Work Over".

Q Are those producing from the Wolfcamp?

A Yes, sir. Well, only Wells Number 9 and 7 are producing at present. The rest of them are either abandoned or temporarily abandoned.

Q Number 7 would be in Unit K and Number 9 in Unit M of Section 9, is that right?

A That's right.

Q And everything else in this section has been abandoned?

A Either abandoned or temporarily abandoned.

Q How about over here in Section 8? Looks like everything is pretty well shut down over there, too, doesn't it?

A I believe everything is.

Q And what is the status of the Gulf Wells here in Unit Letters I and J of Section 9? Have they plugged them or just shut them --

A I believe they have one producer. I'm not positive of that, but I think they have one well still producing.

Q Here in the Southeast Quarter of Section 9?

A I believe that's right. I'm not positive.

Q How about this well up here in the Northeast Northeast of Section 9? Whose is that well?

A I believe that's operated by J. R. Cone. I'm sorry I --

MR. HINKLE: Like Simmons, Markum and Cone.

A I think we had an allowable schedule. I guess there's one in here, but we can find out very easily.

Q Well, in the event of production in offsetting wells, isn't there a danger of watering down, Mr. Bevell?

A We don't think so. Most of the wells have -- are in the extreme advanced stage of depletion right now and we don't think we will hurt anybody. As a matter of fact, would possibly hurt -- possibly help.

Q Although this previously attempted waterflood in here



or pressure maintenance program was not successful then?

A It could never get fill-up.

Q Was that the one that was operated by Shell?

A Shell. That's the one. And if you'll notice, in Well Number 6 -- I mean, well, it was in Section 8 and we recompleted a well in Section Number 16 as a water well but after several years of injection, never getting any fill-up, I think they re-ran their numbers through the machine and found out that the pool had already rendered somewhere in the neighborhood of 40%, which is extremely high recovery, initial recovery.

Q I think they had some water breakthrough, too, on some of those injection wells, premature water breakthrough.

A They may have. I'm not totally familiar with that project.

Q It's been a long time ago, but as I recall, a TP Well that was offsetting one of those injection wells was flooded out.

A Possibly so. The Townsend Pool is in a pretty sad state of affairs. It's very much in the advanced stage of depletion. Of course, we're trying to hang on as long as we can, profitably.

Q Well, now, are these classified as Townsend wells up

here on your AN and AH Leases?

A Yes, sir.

Q That's the same pool? What pool is this over here to the west where your BB is?

A That's the Kemnitz Pool. That's an extreme east edge well in the Kemnitz Pool. So far, it does not produce any water now, but we presume that it might at some later date.

MR. NUTTER: Does anyone have any further questions of Mr. Bevell? He may be excused. Do you have anything further in Case Number 3816, Mr. Hinkle?

MR. HINKLE: Nothing else.

MR. NUTTER: Does anyone have anything else to offer in Case Number 3816? We'll take the case under advisement.

I N D E X

<u>WITNESS</u>	<u>PAGE</u>
B. K. BEVELL	
Direct Examination by Mr. Hinkle	2
Cross Examination by Mr. Nutter	7

E X H I B I T S

<u>Number</u>	<u>Marked for Identification</u>	<u>Received in Evidence</u>
Applicant's Exhibits 1, 1A, 2, 3, & 4	2	7

STATE OF NEW MEXICO )  
 ) ss.  
COUNTY OF BERNALILLO )

I, CHARLOTTE MACIAS, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Witness my Hand and Seal this 16th day of September,  
1968.

Charlott Macias  
Notary Public

My Commission Expires:  
February 10, 1971.

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Szaziner hearing of Case No. 3816  
heard by me on 7/24 1968.

*Arthur* . Examiner  
New Mexico Oil Conservation Commission



[illegible]

BEFORE EXAMINER NUTTER  
FEDERAL BUREAU OF INVESTIGATION  
EXHIBIT NO. 1a  
CASE NO. 3816

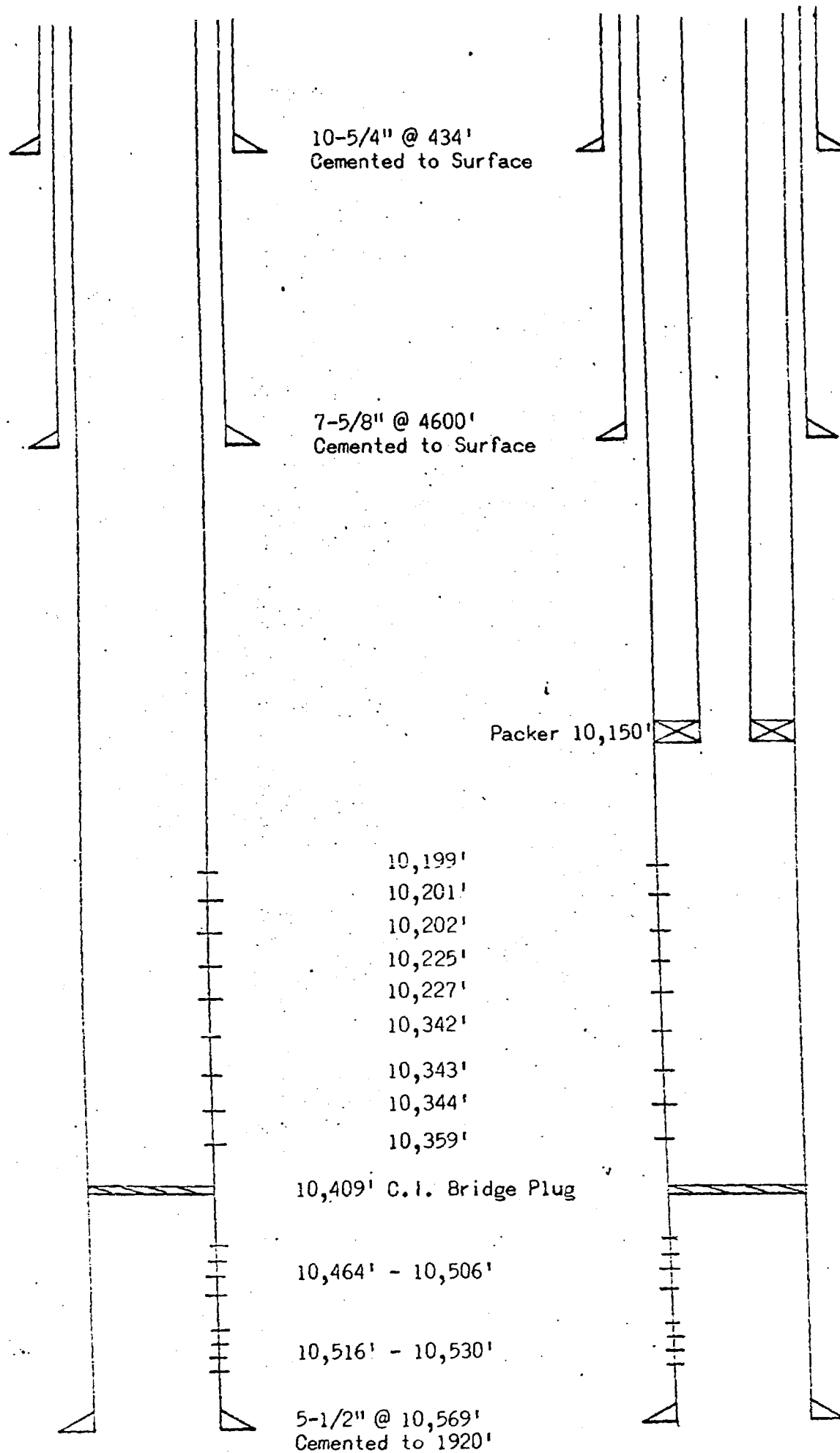
HUMBLE OIL AND REFINING COMPANY

H. A. TOWNSEND NO. 6

TOWNSEND WOLFCAMP POOL

PRESENT COMPLETION

PROPOSED COMPLETION





HUMBLE OIL & REFINING COMPANY

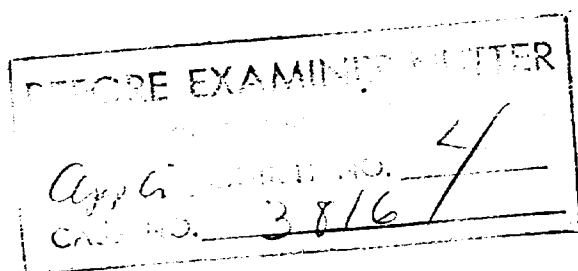
TOWNSEND WOLFCAMP POOL

WATER ANALYSIS

Source: H. A. Townsend Battery 1

Parts Per Million

Sodium	31,762
Calcium	3,614
Magnesium	905
Chloride	57,600
Sulfate	464
Bicarbonate	234
Carbonate	None
Hydrogen Sulfide	None
Iron	33
Specific Gravity	1.066 @ 74° F
pH	5.8



4