

Union Oil Company of California
500 N. Marienfeld, Midland, Texas 79701
Telephone (915) MU 2-9731

ST 11 15



Midland District

March 31, 1970

WFX - 336

20 waiting /

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico

Dear Mr. Porter:

Expansion of Waterflood Project
South Caprock Queen Unit, Chaves
County, New Mexico (case 2032,
Order R-1729 and R-1729-A)

Union Oil Company of California, as operator of the South Caprock Queen Unit in Chaves County, hereby requests administrative approval to convert 8 Waterflood project area wells to water injection service. This request is submitted pursuant to the provisions of Rule 701 of the Rules and Regulations of the New Mexico Oil Conservation Commission.

The 8 proposed injection wells are as follows: See attached list.

The 8 proposed injection wells are located within an area of said unit which has been shut in due to having reached the secondary economic limit. The proposed conversions are requested in order that a pilot "Cross Flood" may be initiated. If successful, this "Cross Flood" could recover a significant amount of oil which would otherwise remain trapped in the unswept areas of the waterflood, and would extend the life of this project which is currently very near the economic limit.

In support of this application, the following are attached:

- Exhibit I: A plat of the South Caprock Queen Unit showing the location of all injection and producing wells. There are no off-set operators who will be affected by the conversion since this is a unit operation.
- Exhibit II: Commission Form C-116 showing production test for the 8 wells to be committed and for offsetting producing wells which are to be returned to a production status.

Exhibit III: A table showing the casing programs of the wells to be committed to injection.

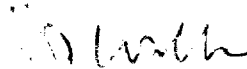
Exhibit IV: Dragiamatic sketch of the 8 proposed injection wells, showing casing string details, cement tops, and open hole sections.

All 8 of the proposed injection wells are completed in the Queen Sand through perforations or open hole. Injection water will be either fresh water produced from the Ogalla or produced Queen Sand Brine.

Water injection at the South Caprock Queen Unit commenced on May 23, 1961, into ten wells located along the gas-oil contract in the central portion of the unit. As of February 1, 1970, 65,560,330 barrels of water have been injected into 92 wells. Conversion of the subject wells is recommended to evaluate the potential benefits from "Cross Flooding" in this and other similar reserviors.

By copy of this application, Mr. Gray, of the State Engineer Office is being advised of the proposed well conversions. A copy of the transmittal letter to Mr. Gray is attached. Three copies of this letter and supporting data are transmitted herewith, as outlined in Rule 701. Please contact me if any additional data is required in support of this application.

Very truly yours,



H. R. Willis
Acting District Operations Manager

HRW/MG:sl
Attachments

cc: Mr. D. E. Gray
State Engineer Office

Union Oil Company of California

500 N. Marienfeld, Midland, Texas 79701

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Midland District

March 31, 1970

Mr. D. E. Gray
Chief of Water Rights Division
State Engineer Office
State Capitol Building
Santa Fe, New Mexico

Dear Mr. Gray:

Casing Data on Proposed 6 Water
Injection Wells, South Caprock
Queen Unit, Chaves County, New
Mexico.

Attached please find a copy of an application submitted by the Union Oil Company of California to the New Mexico Oil Conservation Commission requesting administrative approval to convert eight wells in the South Caprock Queen Unit to water injection service. This application is submitted in accordance with the provisions of Rule 701 of the Rules and Regulations of the New Mexico Oil Conservation Commission.

Exhibit III of the attached application is a table of casing information on the proposed injection wells. The wells will be completed with 2 3/8" or 2 7/8" tubing with tension packer on bottom. The packer will be set just above the perforated section in the Queen Sand. The annulus between the oil string and the tubing will be filled with an inhibited water for protection against corrosion. The maximum anticipated surface injection pressure for the well will be about 1300 psig. Included in Exhibit III are data on the age, grade, and condition of the casing strings in these wells.

If you are in agreement with this proposal, we would appreciate your so notifying the Secretary-Director of the New Mexico Oil Conservation Commission as soon as possible. Thank you for your consideration of this matter.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "H. R. Willis".

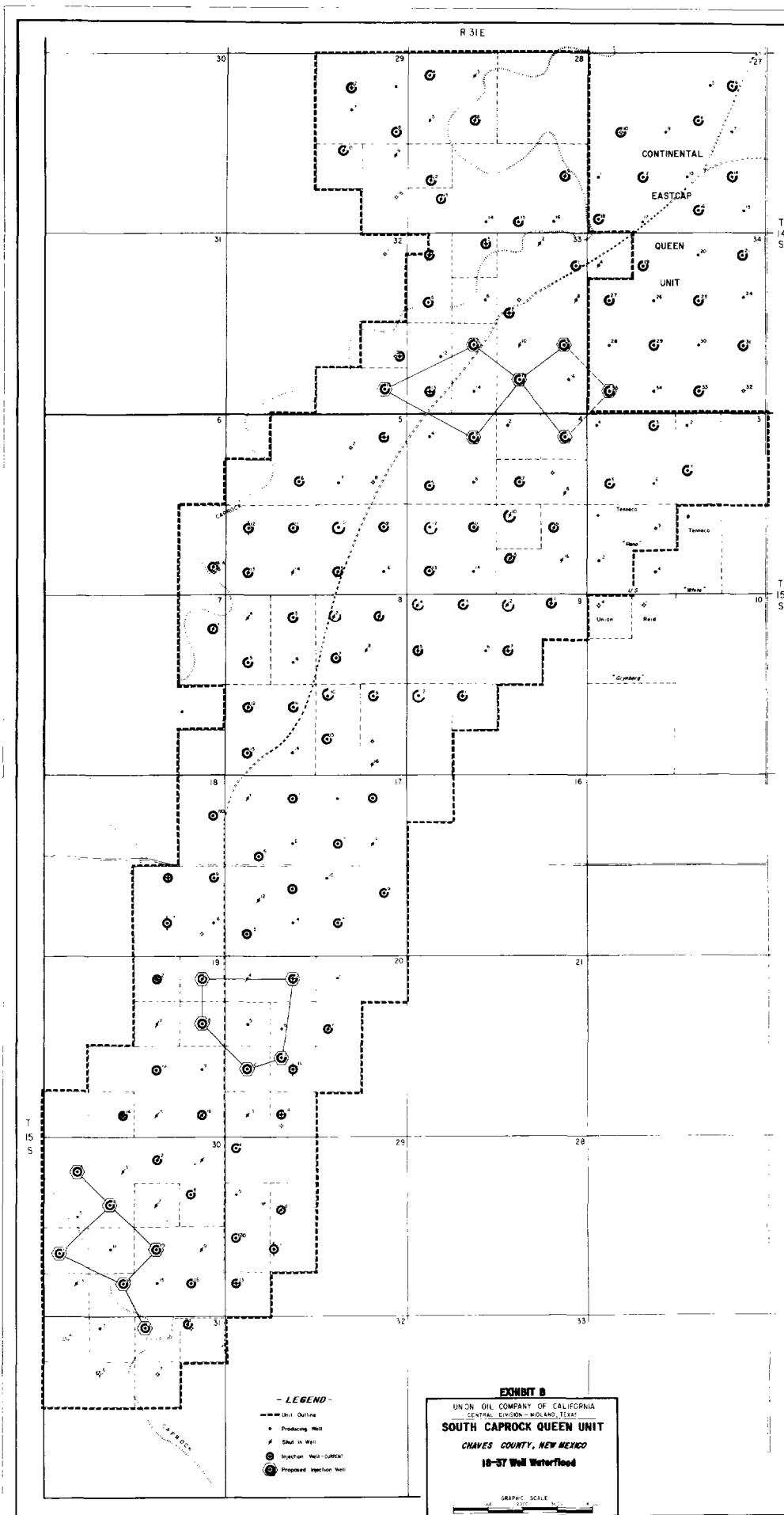
H. R. Willis
Acting District Operations Manager

HRW/NG:sl
Attachments

cc: Mr. A. L. Porter, Jr. (#)

INJECTION WELLS

TRACT	WELL	TD	ETD	PERFORATIONS	LOCATION
8	12-4	3162'	3162'	Open hole 3146-3162'	NW/4 of the SW/4 (Unit L) Section 4, Township 15 South, Range 31 East NMPM.
8	10-5	3143'	3143'	Open hole 3122-3143'	NW/4 of the SE/4 (Unit J) Section 5, Township 15 South, Range 31 East NMPM.
10	2-9	3177'	3177'	3165-3175'	NW/4 of the NE/4 (Unit B) Section 9, Township 15 South, Range 31 East NMPM.
10	4-9	3198'	3161'	3145-3158'	NW/4 of the NW/4 (Unit D) Section 9, Township 15 South, Range 31 East NMPM.
3	2-8	3146'	3146'	3122-3146 Open hole	NW/4 of the NE/4 (Unit B) Section 8, Township 15 South, Range 31 East NMPM.
57	10-8	3135'	3135'	Open hole 3122-3135'	NW/4 of the SE/4 (Unit J) Section 8, Township 15 South, Range 31 East NMPM.
58	12-9	3235'	3176'	3166-3171'	NW/4 of the SW/4 (Unit L) Section 9, Township 15 South, Range 31 East NMPM.
30	10-4	3163'	3163'	3128-3139'	NW/4 of the SE/4 (Unit J) Section 4, Township 15 South, Range 31 East NMPM.



C-116
Revised 1-1-65

* Producing wells continuing to be produced or returned to pumping status.

SURFACE CASING

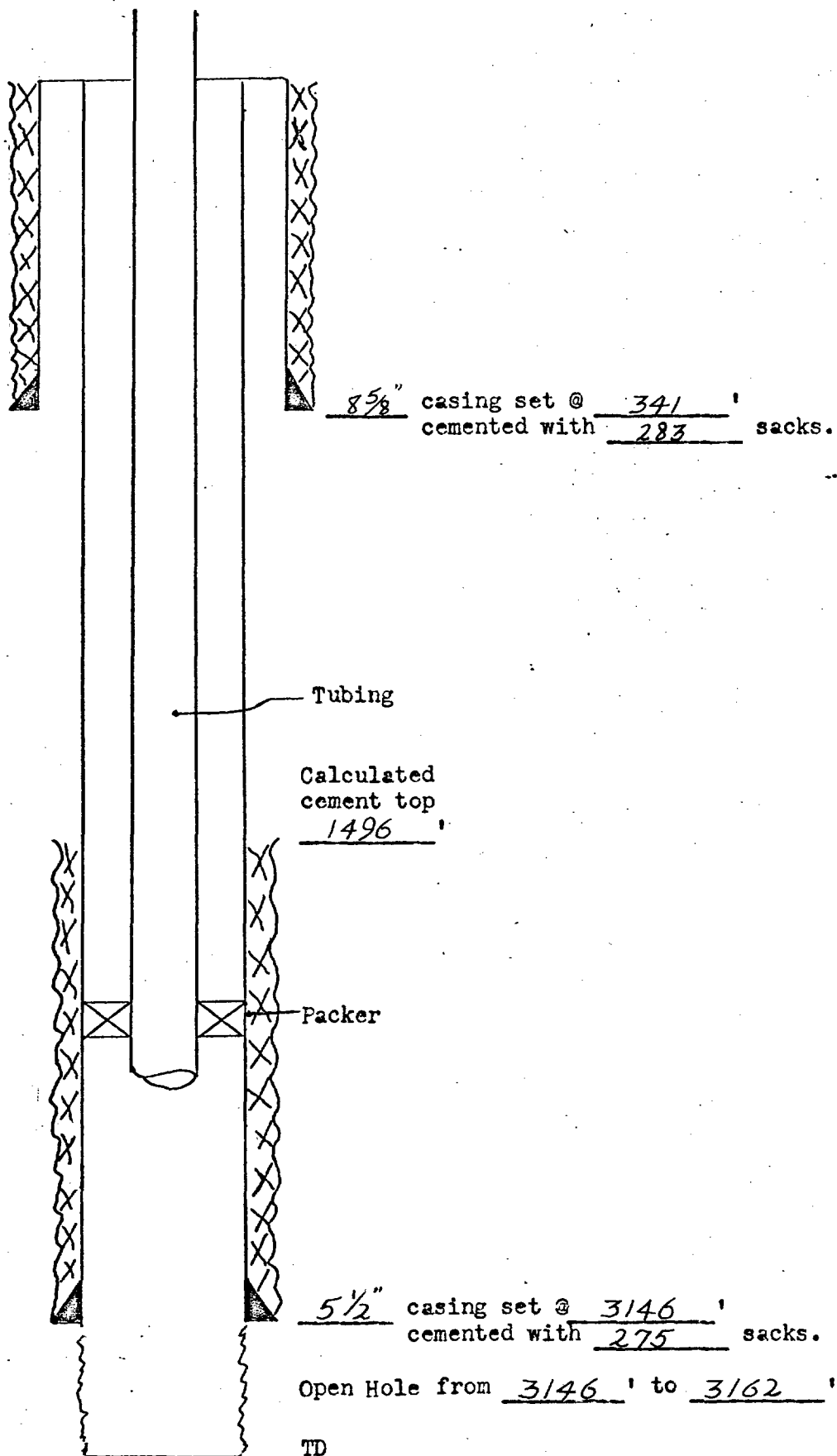
Exhibit III

TRACT	WELL	SIZE	SETTING DEPTH	CEMENT SKS.	CIRC.	GRADE PIPE	WEIGHT LB/FT	AGE YEARS	CONDITION
8	12-4	8 5/8	341	283	YES	J-55	24	15	NEW
8	10-5	8 5/8	345	275	YES	J-55	24	15	NEW
10	2-9	8 5/8	338	200	YES	J-55	24	15	NEW
10	4-9	8 5/8	315	225	YES	J-55	24	15	USED
3	2-8	8 5/8	312	250	YES	J-55	24	15	USED
57	10-8	9 5/8	325	175	YES	J-55	40	15	USED
30	10-4	8 5/8	200	150	YES	J-55	24	15	USED
58	12-9	8 5/8	332	225	YES	J-55	24	10	NEW

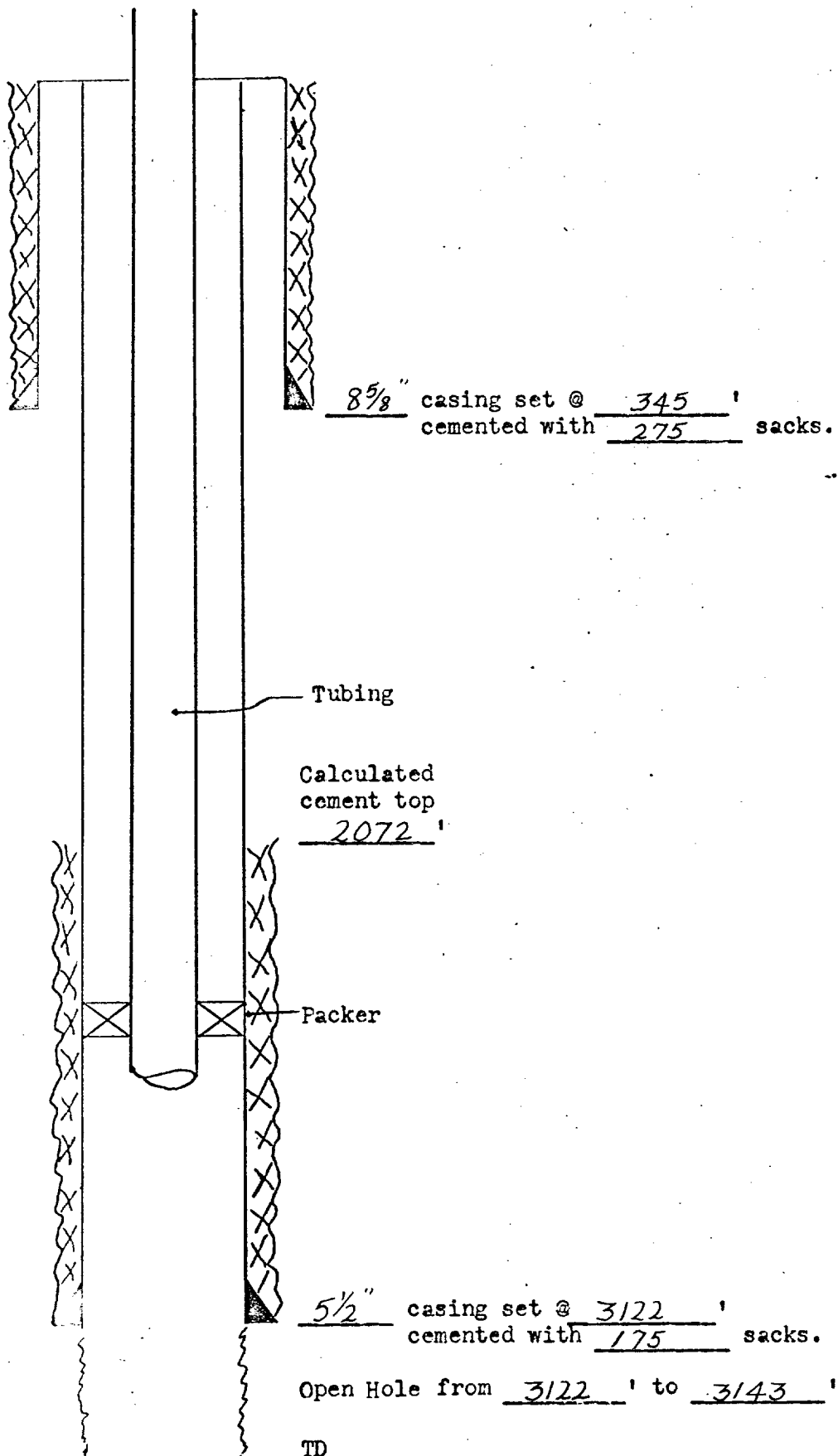
OIL STRING

TRACT	WELL	SIZE	SETTING DEPTH	CEMENT SKS.	GRADE PIPE	WEIGHT LB/FT	AGE YEARS	CONDITION	CALC. CMT. TOPS
8	12-4	5 1/2	3146'	275	J-55	14	15	NEW	1496'
8	10-5	5 1/2	3122'	175	J-55	14,17,20	15	NEW	2072'
10	2-9	5 1/2	3176'	175	J-55	14	15	USED	2126'
10	4-9	5 1/2	3197'	175	J-55	14	15	USED	2147'
3	2-8	5 1/2	3122'	250	J-55	17	15	NEW & USED	1622'
57	10-8	5 1/2	3122'	100	J-55	17	15	USED	2080'
30	10-4	5 1/2	3050'	100	J-55	14	15	NEW	2010'
58	12-9	4 1/2	3234'	250	J-55	9.5	10	NEW	2134'

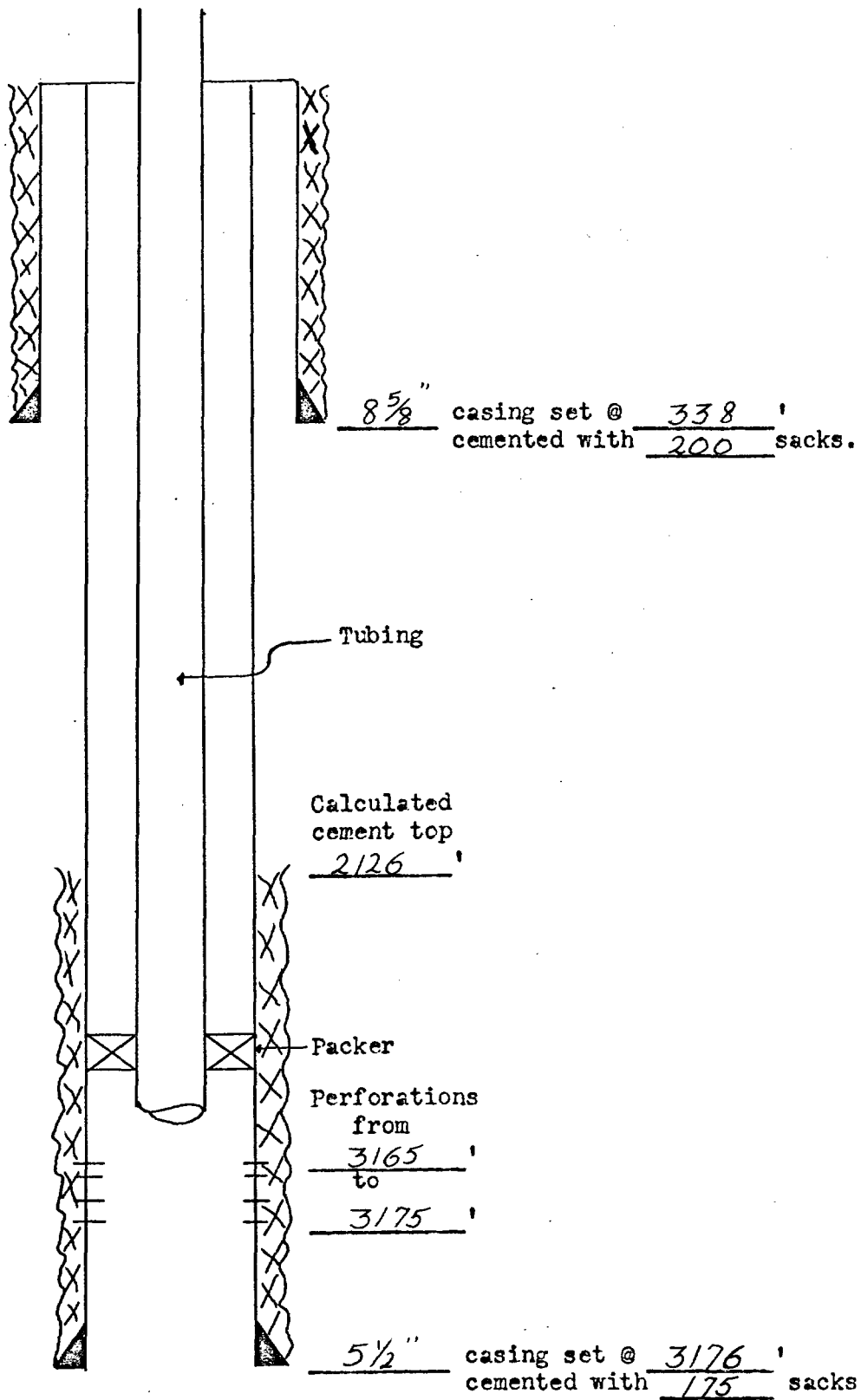
Well No. 12-4



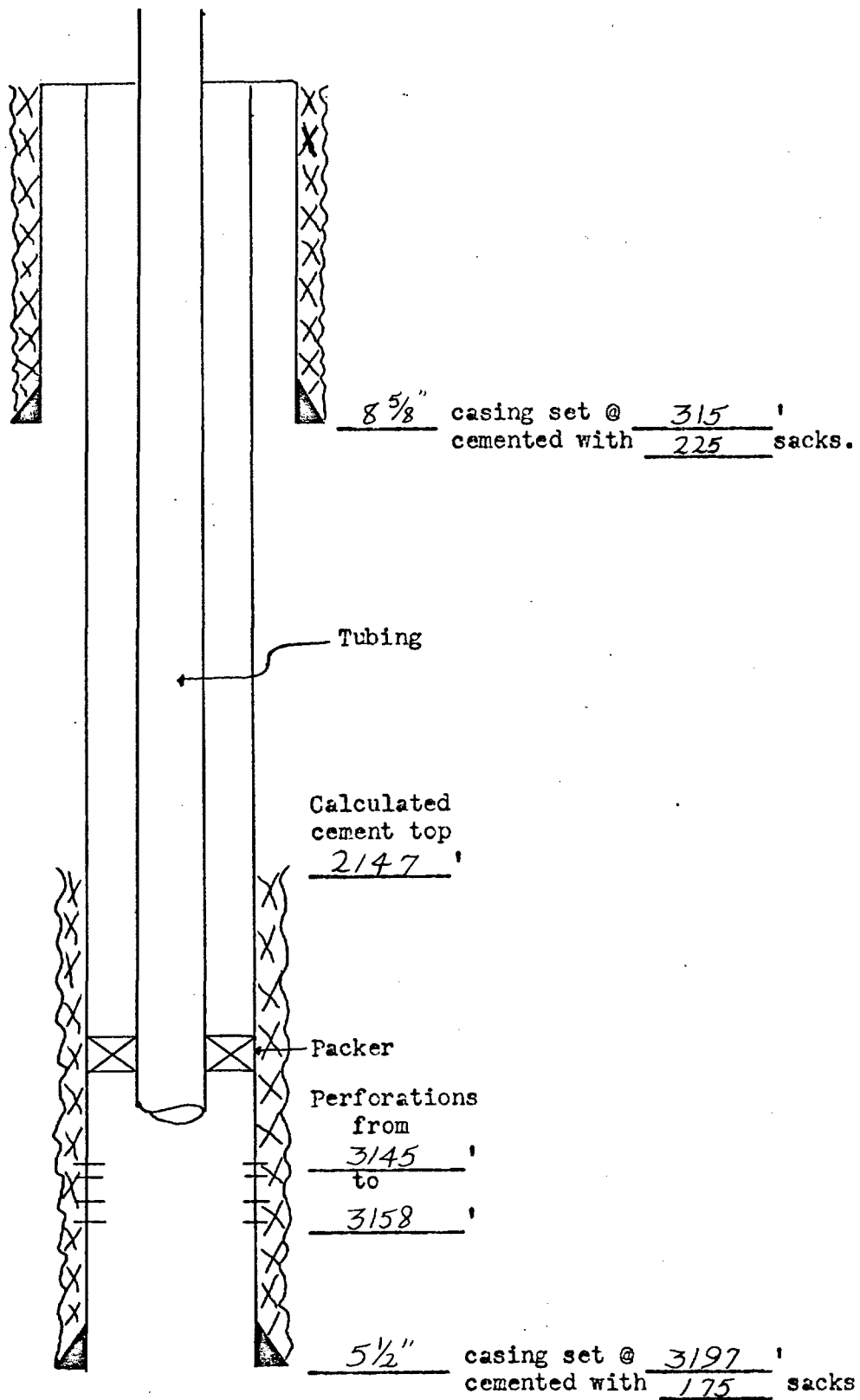
Well No. 10-5



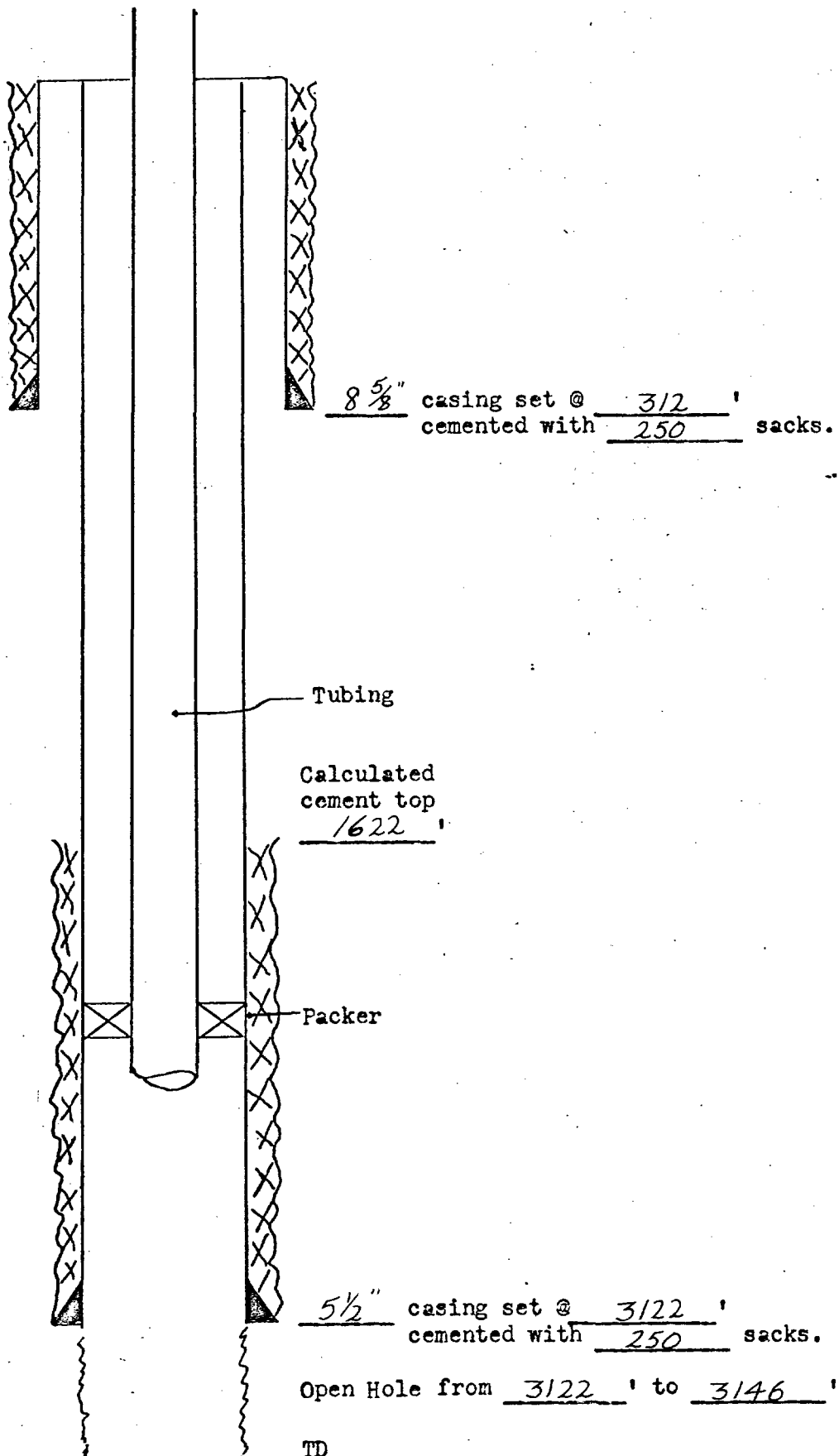
Well No. 2-9



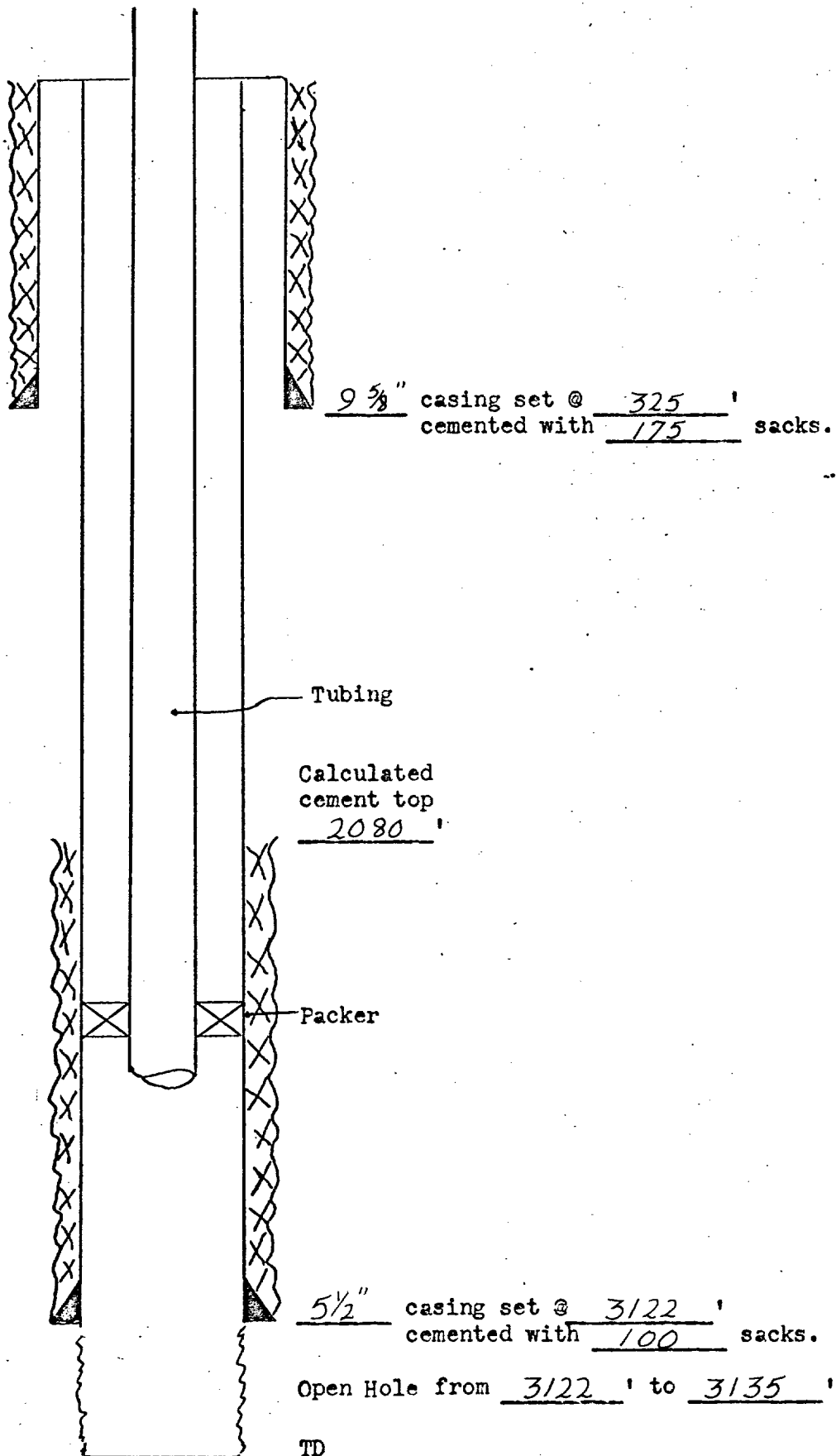
Well No. 4-9



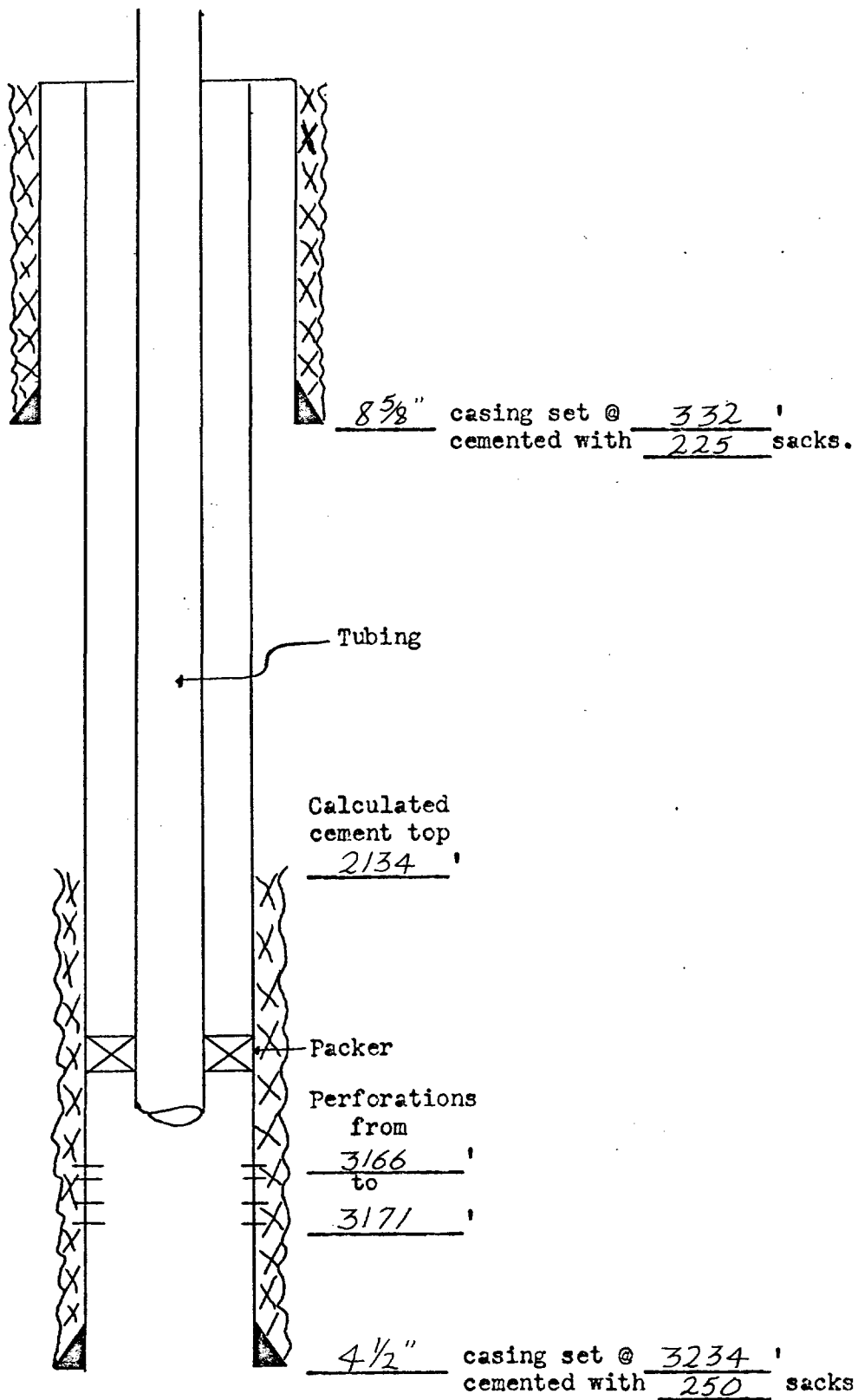
Well No. 2-8



Well No. 10-8



Well No. 12-9



Well No. 10-4

