CASE 2302: Application of ATLANTIC RFG. CO. for an oil-oil-oil triple completion of CARLSON FED. "A" Well No. 1, in Unit I.

-258/10.

2302

pplication, Transcript,

mall Exhibits, Etc.

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. 2302
Order No. R-2006

APPLICATION OF THE ATLANTIC REFINING
COMPANY FOR AN OIL-OIL-OIL TRIPLE
COMPLETION, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on June 7, 1961, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 22nd day of June, 1961, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, 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, The Atlantic Refining Company, is the owner and operator of the Carlson Federal "A" Well No. 1, located in Unit I, Section 23, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That the applicant seeks authorization to complete said Carlson Federal "A" Well No. 1 as a triple completion (conventional) in such a manner as to permit the production of oil from the Paddock formation adjacent to the Justis-Paddock Pool, the production of oil from the Justis-Blinebry Pool, and the production of oil from the Justis Tubb-Drinkard Pool, through parallel strings of 2-inch tubing.

(4) That the mechanics of the proposed triple completion are feasible and in accord with good conservation practices.

(5) That approval of the subject application will neither cause waste nor impair correlative rights.

IT IS THEREFORE ORDERED:

That the applicant, The Atlantic Refining Company, is hereby authorized to complete its Carlson Federal "A" Well No. 1, located in Unit I, Section 23, Township 25 South, Range 37 East, NMPM, Lea County, New Mexico, as a triple completion (conventional), in such a manner as to permit the production of oil from the Paddock formation adjacent to the Justis-Paddock Pool, the production of oil from the Justis-Blinebry Pool, and the production of oil from the Justis Tubb-Drinkard Pool, through parallel strings of 2-inch tubing.

PROVIDED HOWEVER, That the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A.

PROVIDED FURTHER, That the applicant shall take packer-leakage tests upon completion and annually thereafter during the Annual Gas-Oil Ratio Test Period for the Justis Tubb-Drinkard Pool, or at such other times as the Secretary-Director of the Commission may prescribe.

IT IS FURTHER ORDERED:

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

EDWIN L. MECHEM, Chairman

E. S. WALKER, Member

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

esr/

GOVERNOR
EDWIN L. MECHEM
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
E. S. JOHNNY WALKER
MEMBER

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

P. O. BOX 871
SANTA FE

June 22, 1961

Mr. Clarence Hinkle
Hervey, Dow & Hinkle
Box 10
Roswell, New Mexico

Re: CASE NO. 2302
ORDER NO. R-2006
APPLICANT:
Atlantic Refining Company

Dear Sir:

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

Very truly yours,

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

ir/

Carbon copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC

OTHER

THE ATLANTIC REFINING COMPANY
INCORPORATED 1870
PETROLEUM PRODUCTS

DOMESTIC PRODUCING DEPARTMENT

June 8, 1961

ADDRESS REPLY TO:
P. O. BOX [illegible] 1978
ROSWELL, NEW MEXICO

File

New Mexico Oil Conservation Commission
Post Office Box 871
Santa Fe, New Mexico

ATTENTION: Mr. Dan Nutter

Re: ~~NMOCC~~ Case No. 2302
Concerning Atlantic's
Application for Triple
Completion of Our Carlson
Federal "A" No. 1 Well,
Justis Paddock, Justis Blinebry, and Justis Tubb/Drinkard
Pools, Lea County, New Mexico

Gentlemen:

Here is the information that you requested at the hearing yesterday concerning oil gravities, gas-oil ratios, and bottom hole pressures for the wells adjacent to our Carlson Federal "A" No. 1. There are no Paddock offsets to our well so I included information on the three Paddock completions in the Justis Pool although the nearest one is approximately 5140' away from our Carlson Federal "A" No. 1 Well.

The data you requested is as follows:

PADDOCK OFFSETS	DIRECTION	BHP	GOR	OIL GRAVITY
Westates Carlson B-26 No. 7	5140' SSW	BHP never obtained. Well was put on pump immediately after completion.	1623	39°
Gulf McBuffington No. 5	6100' NE	2099 psi (6-59)	7824	38°
Western Pet. Co. Carlson B-13 No. 5	7200' NE	1765 psi (24 hr SITHP) (5-58) BHP never obtained.	1752	39°

BLINEBRY OFFSETS	DIRECTION	BHP	GOR	OIL GRAVITY
Texas Pacific C&O Wimberly No. 3	990' N	T.P.C.&O. records indicate BHP was never obtained.	736	39°
Amerada Wimberly No. 11	990' E	1980 psi (5-61)	2943	36°
Amerada Wimberly No. 13	1800' SE	1802 psi (5-61)	487	35°
Union Texas Nat. Gas Carlson "B" No. 1	1320' S	1101 psi (6-60)	2811	37°
Skelly Las Cruces "C" No. 1	1900' NW	New completion. BHP not yet obtained.	610	37°

TUBB/DRINKARD OFFSETS				
Texas Pacific C&O Wimberly No. 3	990' N	T.P.C.&O. records indicate BHP was never obtained.	1092	38°
Western Nat. Gas Co. Wimberly No. 4	1900' NE	2192 psi (6-60)	4318	38°
Amerada Wimberly No. 3	1320' E	2199 psi (6-60)	573	36°
Amerada Wimberly No. 4	1850' SE	2124 psi (6-60)	2795	36°
Union Texas Nat. Gas Carlson "B" No. 1	1320' S	2423 psi (6-60)	1935	39°
Skelly Las Cruces "C" No. 1	1900' NW	New completion. BHP not yet obtained. DST pressure 2040 psi.	752	37°

If you need any additional information concerning this case, please give me a call.

Yours very truly,

J. R. Allen

JRA:pam

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 6/8/61

CASE 2302 Hearing Date 9am 6/7/61 DSN @ SF

My recommendations for an order in the above numbered cases are as follows:

Enter an order approving the triple completion (conventional) of Atlantic's Carlson Federal, No. 1 for in unit I S 23, T 25 S, R 37 E to produce oil from the Paddock thru the adj to the Justis Paddock, the Justis Bl, and the Justis Tb-Dr thru parallel strings of 2-inch tubing.

* Hold order until we receive the GOR, BHP, and grav. info on all three zones and the brochure on the retrievable packer

Dan Nutter

ATLANTIC

THE ATLANTIC REFINING COMPANY
INCORPORATED 1870
PETROLEUM PRODUCTS

June 12, 1961

DOMESTIC PRODUCING DEPARTMENT

ADDRESS REPLY TO:
P. O. BOX 1038
DENVER CITY, TEXAS

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Carlson Federal "A" Well No. 1
Justis (Paddock),
Justis (Blinebry),
Justis (Tubb-Drinkard) zone.
Lea County, New Mexico

Gentlemen:

On May 17, 1961, we submitted an application to triple complete the above mentioned subject well. This well is to be known as the Carlson Federal "A" No. 1 UT (Justis Paddock, upper tubing), Carlson Federal "A" No. 1 MT (Justis Blinebry, middle tubing), and the Carlson Federal "A" No. 1 LT (Justis Tubb-Drinkard, lower tubing).

We are now submitting copies of the diagrammatic sketch.

Very truly yours,

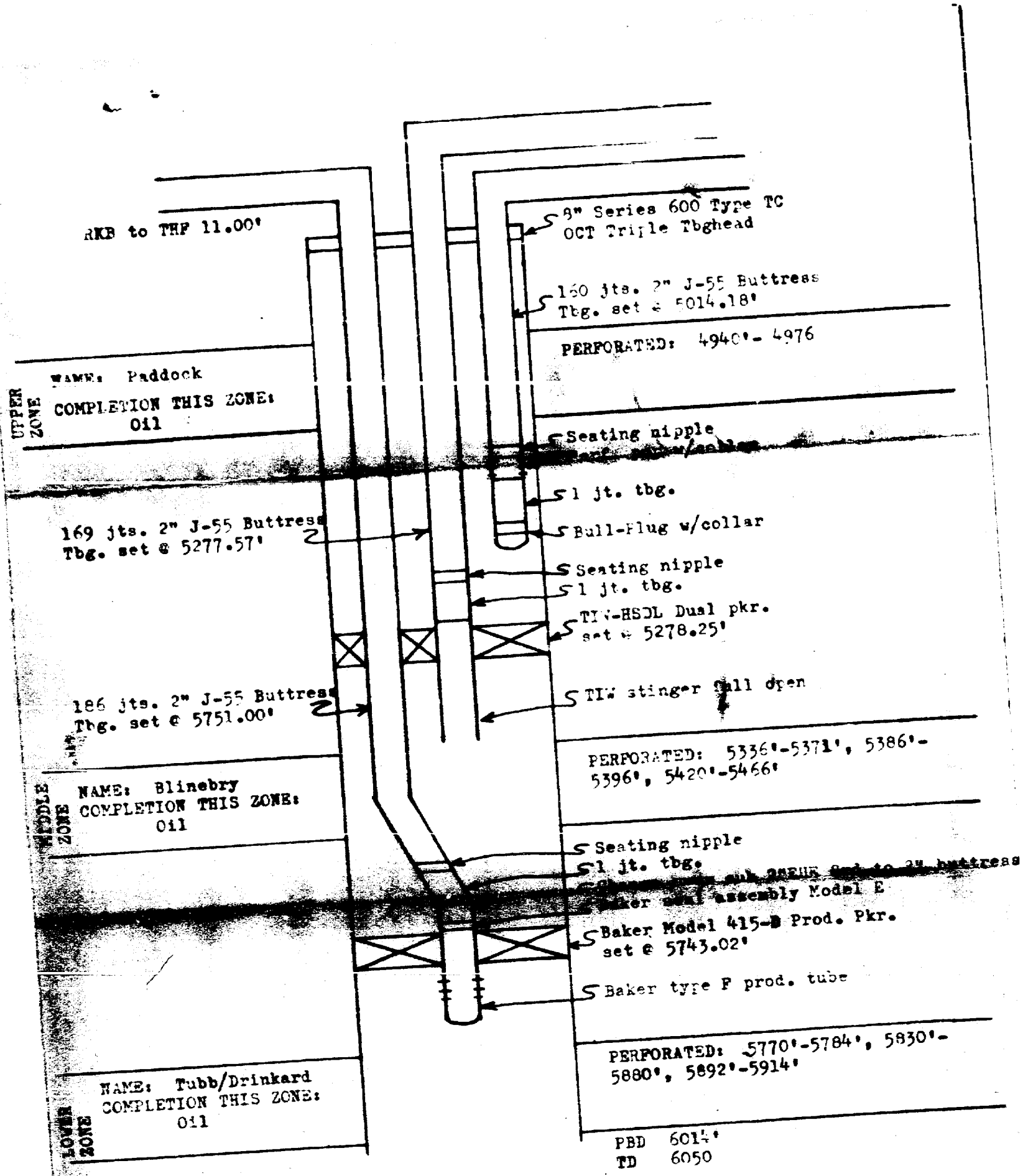
L. C. Hudry

LCH:lc
Enclosure:

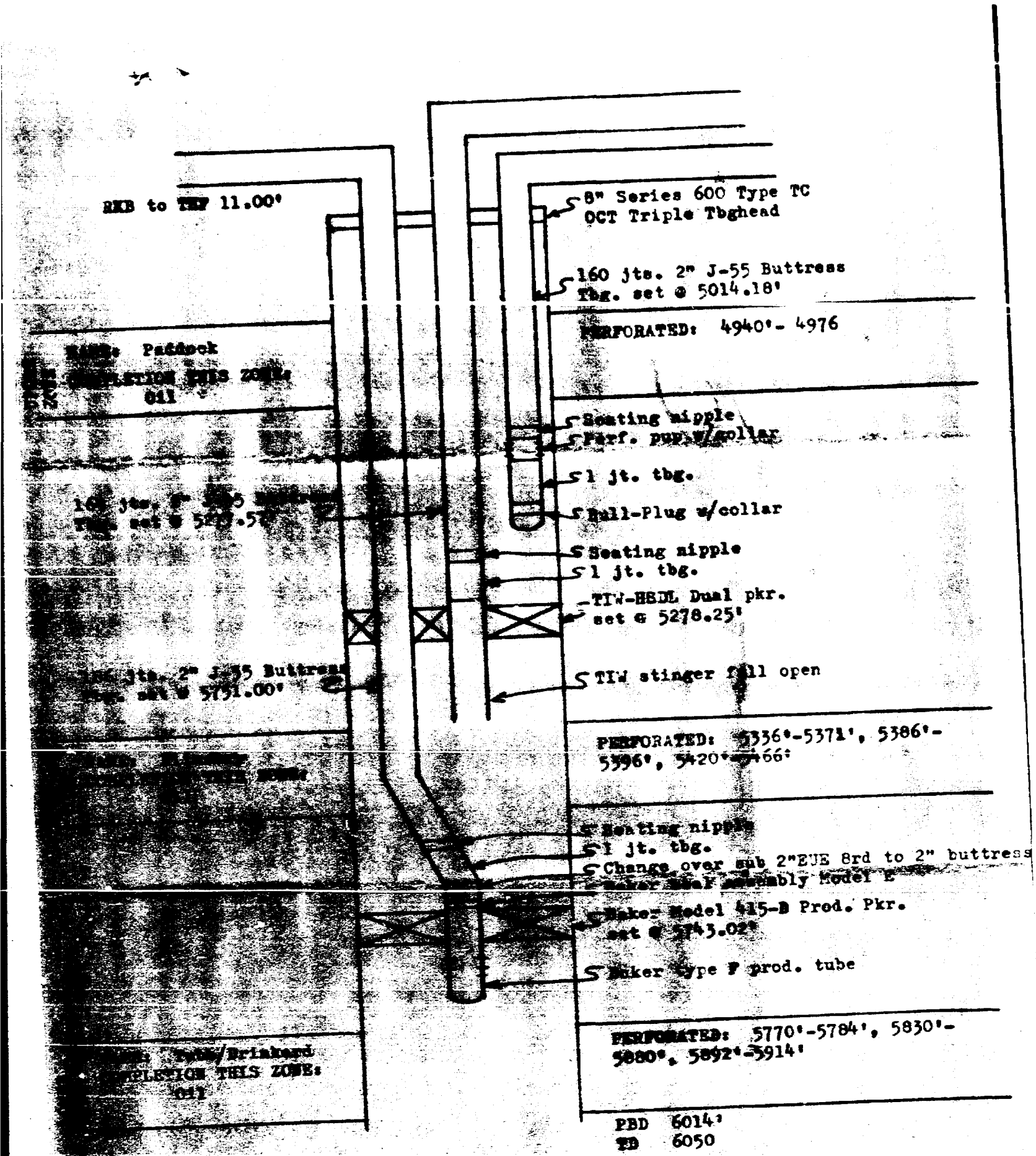
L. C. Hudry
District Production Engineer

cc: New Mexico Oil Conservation Commission
P. O. Box 2045
Hobbs, New Mexico

U. S. G. S.
P. O. Box 1838
Hobbs, New Mexico



THE ATLANTIC REFINING COMPANY
Atlantic Carleon Federal "A" No. 1 Well
Justis (Paddock, Blinebry, Tubb/Drinkard) Field
June 12, 1961



THE ATLANTIC REFINING COMPANY
Atlantic Carlson Federal "A" No. 1 Well
Justis (Paddock, Blinebry, Tubb/Drinkard) Field
June 12, 1961

ATLANTIC

THE ATLANTIC REFINING COMPANY
INCORPORATED 1870
PETROLEUM PRODUCTS

DOMESTIC PRODUCING DEPARTMENT
WEST TEXAS-NEW MEXICO REGION
R. T. COX, MANAGER
P. E. FLETCHER, OPERATIONS MANAGER
MARVIN L. MILLS, DRILLING SUPERINTENDENT
S. L. SMITH, EXPLORATION MANAGER
CLAUDE WILLIAMS, LAND MANAGER

June 12, 1961

MIDLAND SAVINGS & LOAN BLDG.
MAILING ADDRESS
P. O. BOX 1610
MIDLAND, TEXAS

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Attention: Mr. Dan Nutter

Re: Case 2302

Dear Mr. Nutter,

Attached is an evaluation of TIW dual string retrievable packers. This is information you requested at the Hearing for Case 2302 on June 8, 1961.

The attached evaluation was prepared by our Staff Group in Dallas. The HSDL packer, which was used in our Carlson Federal "A" No. 1, is not mentioned in the report. However, the HSDL is similar to the HDSL except that it is run on the long string and set with the short string. It has a hydraulic holddown, lead seal rings, and is full opening through the long string side.

I am also enclosing a copy of our Exhibit 2 which was picked up by mistake.

Yours very truly,

Neal McCaskill

HTF/ba

Neal McCaskill

No. 16-61

DOCKET: EXAMINER HEARING - WEDNESDAY, JUNE 7, 1961

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 Elvis A. Utz, as alternate examiner:

CASE 2297: Application of Pan American Petroleum Corporation for two non-standard oil proration units and two unorthodox oil well locations, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a 46.74-acre non-standard oil proration unit in the Cha Cha-Gallup Oil Pool consisting of the E/2 NE/4 SE/4 of Section 17, Township 29 North, Range 14 West, San Juan County, New Mexico, plus 20.73 acres in Lot 8 of said Section 17 and 6.01 acres lying North of the mid-channel of the San Juan River and along the South boundary of that portion of said Lot 8 included in the unit. Said unit is to be dedicated to the Frank L. Wood Well No. 1 at an unorthodox location 990 feet from the South line and 660 feet from the East line of said Section 17. Applicant further seeks the establishment of a 57.31-acre non-standard oil proration unit in said pool consisting of Lots 3, 4 and 5 of said Section 17 plus the S/2 of that portion of the San Juan River channel lying in the W/2 of said Section 17 and along the North boundary of Lots 3, 4 and 5. Said unit is to be dedicated to the Navajo Tribal "G" Well No. 8 at an unorthodox location 1415 feet from the South line and 335 feet from the West line of said Section 17.

CASE 2298: Application of Chambers & Kennedy for a gas-oil dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Monument State Well No. 1, located in Unit J, Section 34, Township 19 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the Eumont Gas Pool and the production of oil from the Eunice-Monument Pool through the 5½-inch by 2½-inch casing-tubing annulus and through 2½-inch tubing respectively.

CASE 2299: Application of Newmont Oil Company for an amendment of Orders Nos. R-1110 and R-1110-A, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Orders Nos. R-1110 and R-1110-A, which authorized a pilot waterflood

project in the Square Lake Pool, Eddy County, New Mexico, to permit the expansion of said waterflood project to include lands in Sections 27, 28, 32, 33, and 34, all in Township 16 South, Range 31 East, Eddy County, New Mexico, and to further define the horizontal limits of said project. Applicant also seeks the establishment of special rules governing the expansion of said waterflood and providing for capacity allowables therein.

CASE 2300: Application of Southwest Production Company for a non-standard gas proration unit, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a 321-acre non-standard gas proration unit in the Basin-Dakota Gas Pool consisting of the NE/4 NE/4 of Section 27 and all of the E/2 of Section 22, Township 30 North, Range 12 West, San Juan County, New Mexico, excepting from the E/2 of said Section 22 a 13-acre and a 26-acre tract owned by Dwight L. Millett, Gladys L. Millett, Julian Coffey and Pan American Petroleum Corporation. In the alternative, applicant seeks the establishment of a 281-acre non-standard gas proration unit in said pool consisting of all of the E/2 of said Section 22 excepting therefrom the aforesaid 13-acre and 26-acre tracts.

CASE 2301: Application of the Murphy Corporation for approval of the Northwest Caprock Unit Agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Northwest Caprock Unit Agreement, which unit embraces approximately 1525 acres of State land in Townships 11 and 12 South, Range 32 East, Lea County, New Mexico.

CASE 2302: Application of Atlantic Refining Company for an oil-oil-oil triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the triple completion of its Carlson Federal "A" Well No. 1, located in Unit I, Section 23, Township 25 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Paddock formation adjacent to the Justis-Paddock Pool, the production of oil from the Justis-Blinebry Pool and the production of oil from the Justis Tubb-Drinkard Pool, through parallel strings of 2-inch tubing.

CASE 2303: Application of Redfern & Herd, Inc. for an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks permission to locate its

Airport Well No. 1 at an unorthodox gas well location in the Basin-Dakota Gas Pool at a point 200 feet from the North line and 500 feet from the East line of Section 8, Township 29 North, Range 13 West, San Juan County, New Mexico.

CONTINUED CASES

CASE 2286: Application of Aztec Oil & Gas Company for an exception to Rule 309 (a), San Juan County, New Mexico. Applicant, in the above-styled cause, seeks permission to commingle the Totah-Gallup Pool production from the following-described leases, all in Township 29 North, Range 13 West, San Juan County, New Mexico.

Federal Lease No. SF 079065 in Sections 19, 20 and 29.

State Lease B-11017-23 comprising in pertinent part the SW/4 NW/4 of Section 20.

State Lease B-11017-21 comprising in pertinent part the NW/4 NW/4 of Section 20.

Smith-Eaton Lease comprising in pertinent part the NE/4 SE/4, SE/4 NE/4 and the E/2 NW/4 of Section 20.

Applicant proposes to commingle said production in a common tank battery located on the SW/4 of said Section 20 after separately metering the production from the State and fee leases only.

CASE 2287: Application of Aztec Oil & Gas Company for an exception to Rule 309 (a), San Juan County, New Mexico. Applicant, in the above-styled cause, seeks permission to commingle the Totah-Gallup Pool production from five separate fee leases, all located in Section 18, Township 29 North, Range 13 West, San Juan County, New Mexico.

Case 2302

J. M. HERVEY 1874-1953
HIRAM M. DOW
CLARENCE E. HINKLE
W. E. BONDURANT, JR.
GEORGE H. HUNKER, JR.
HOWARD C. BRATTON
S. B. CHRISTY IV
LEWIS C. COX, JR.
PAUL W. EATON, JR.
CONRAD E. COFFIELD

LAW OFFICES
HERVEY, DOW & HINKLE
HINKLE BUILDING
ROSWELL, NEW MEXICO

TELEPHONE MAIN 2-6510
POST OFFICE BOX 10

May 16, 1961

Mr. A. L. Porter, Jr.
Secretary-Director
N. M. Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

Enclosed herewith please find, in triplicate, the Application of Atlantic Refining Company for a triple completion in the Justis-Paddock, Justis-Blinebry and Justis-Tubb/Drinkard Pools in Atlantic's Federal Carlson A No. 1 Well, Lea County, New Mexico. Please set this application down for hearing at the first available Examiner hearing, which we understand to be on June 7, 1961.

If there are any questions about this application, please call Mr. Tomlinson in Atlantic's office as we are anxious to have it heard on the June 7 docket.

Thanking you for your attention to this matter, we are,

Very truly yours,

HERVEY, DOW & HINKLE

By Howard C. Bratton

HCB:bc
Enc.

Received 5/26/61

Mac 2302

NEW MEXICO OIL CONSERVATION COMMISSION

SANTA FE, NEW MEXICO 7-3-58

APPLICATION FOR TRIPLE COMPLETION

Field Name		County	Date
Justis Paddock (Undesignated), Justis Blinebry, & Justis Tubb/Drinkard		Lea	May 17, 1961
	Lease		Well No.
The Atlantic Refining Company	Carlson Federal "A"		1

Location of Well	Unit	Section	Township	Range
	I	23	25 South	37 East

1. Has the New Mexico Oil Conservation Commission heretofore authorized the triple completion of a well in these same pools or in the same zones within one mile of the subject well? YES _____ NO X

2. If answer is yes, identify one such instance: Order No. _____ ; Operator, Lease, and Well No.:

3. The following facts are submitted:	Upper Zone	Middle Zone	Lower Zone
a. Name of reservoir	Justis Paddock (Undesignated)	Justis Blinebry	Justis Tubb/Drinkard
b. Top and Bottom of Pay Section (Perforations)	4940-4976' (Approx.)	5336-5466' (Approx.)	5770-5919' (Approx.)
c. Type of production (Oil or Gas)	oil	oil	oil
d. Method of Production (Flowing or Artificial Lift)	flowing	flowing	flowing

4. The following are attached. (Please mark YES or NO)

Yes a. Diagrammatic Sketch of the Dual Completion, showing all casing strings, including size and setting, top of cement, perforated intervals, tubing strings, including diameters and setting depth, location and type of packers and side door chokes, and such other information as may be pertinent.

Yes b. Plat showing the location of all wells on applicant's lease, all offset wells on offset leases, and the names and addresses of operators of all leases offsetting applicant's lease.

No c. Waivers consenting to such dual completion from each offset operator, or in lieu thereof, evidence that said offset operators have been furnished copies of the application.*

No d. Electrical log of the well or other acceptable log with tops and bottoms of producing zones and intervals of perforation indicated thereon. (If such log is not available at the time application is filed, it shall be submitted as provided by Rule 112-A.)

5. List all offset operators to the lease on which this well is located together with their correct mailing address.

Texas Pacific Coal & Oil Co, Box 1688, Hobbs, New Mexico

Amerada Petroleum Corporation, Drawer D, Monument, New Mexico

Western Natural Gas Company, Box 1860, Jal, New Mexico

Union Texas Natural Gas Corporation, A-P Division, Box 196, Midland, Texas

El Paso Natural Gas Company, Box 1384, Jal, New Mexico

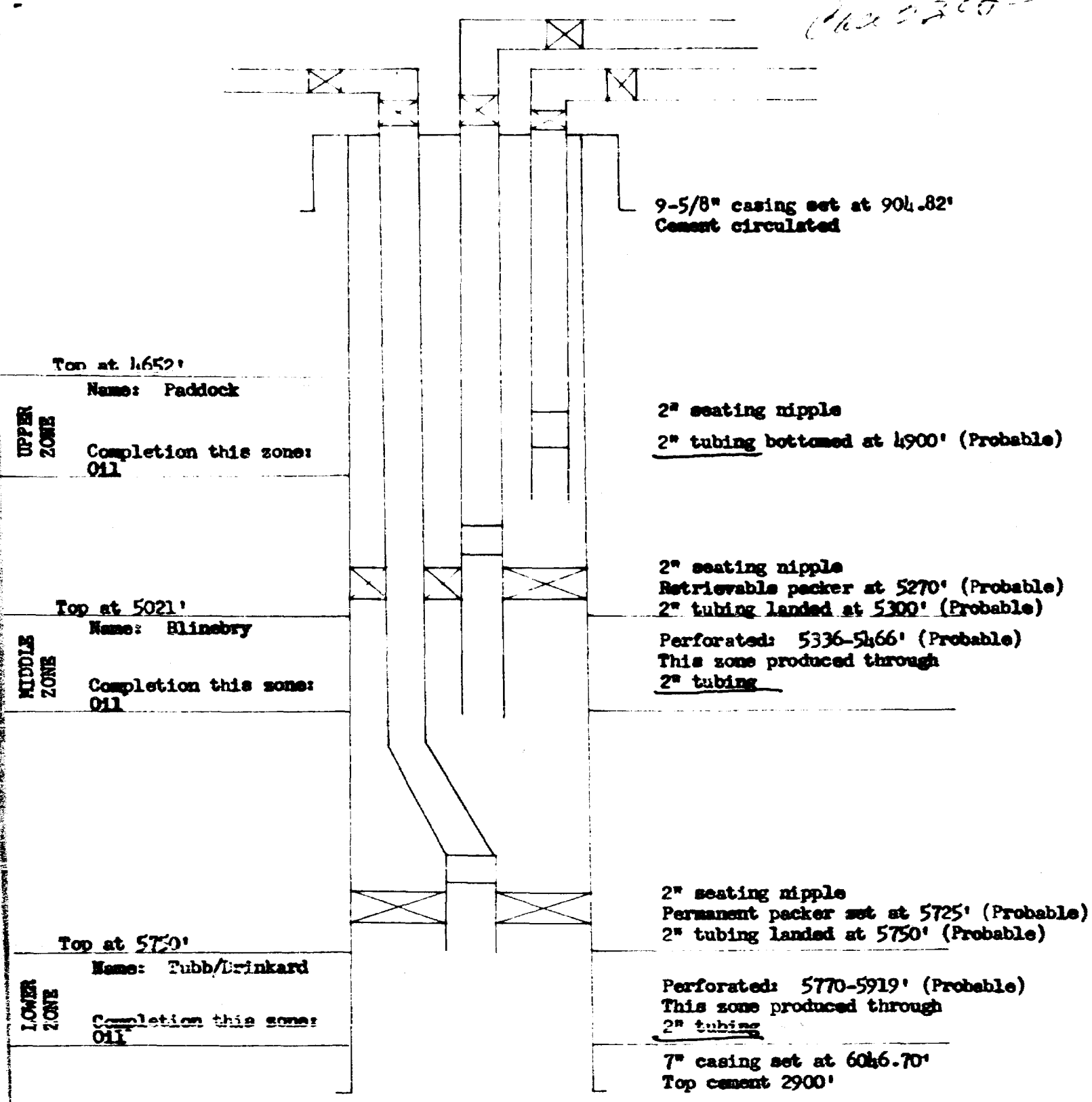
6. Were all operators listed in Item 5 above notified and furnished a copy of this application? YES X NO ____. If answer is yes, give date of such notification May 17, 1961.

CERTIFICATE: I, the undersigned, state that I am the District Reservoir Engineer of the Atlantic Refining Company (company), and that I am authorized by said company to make this report; and that this report was prepared under my supervision and direction and that the facts stated therein are true, correct and complete to the best of my knowledge.

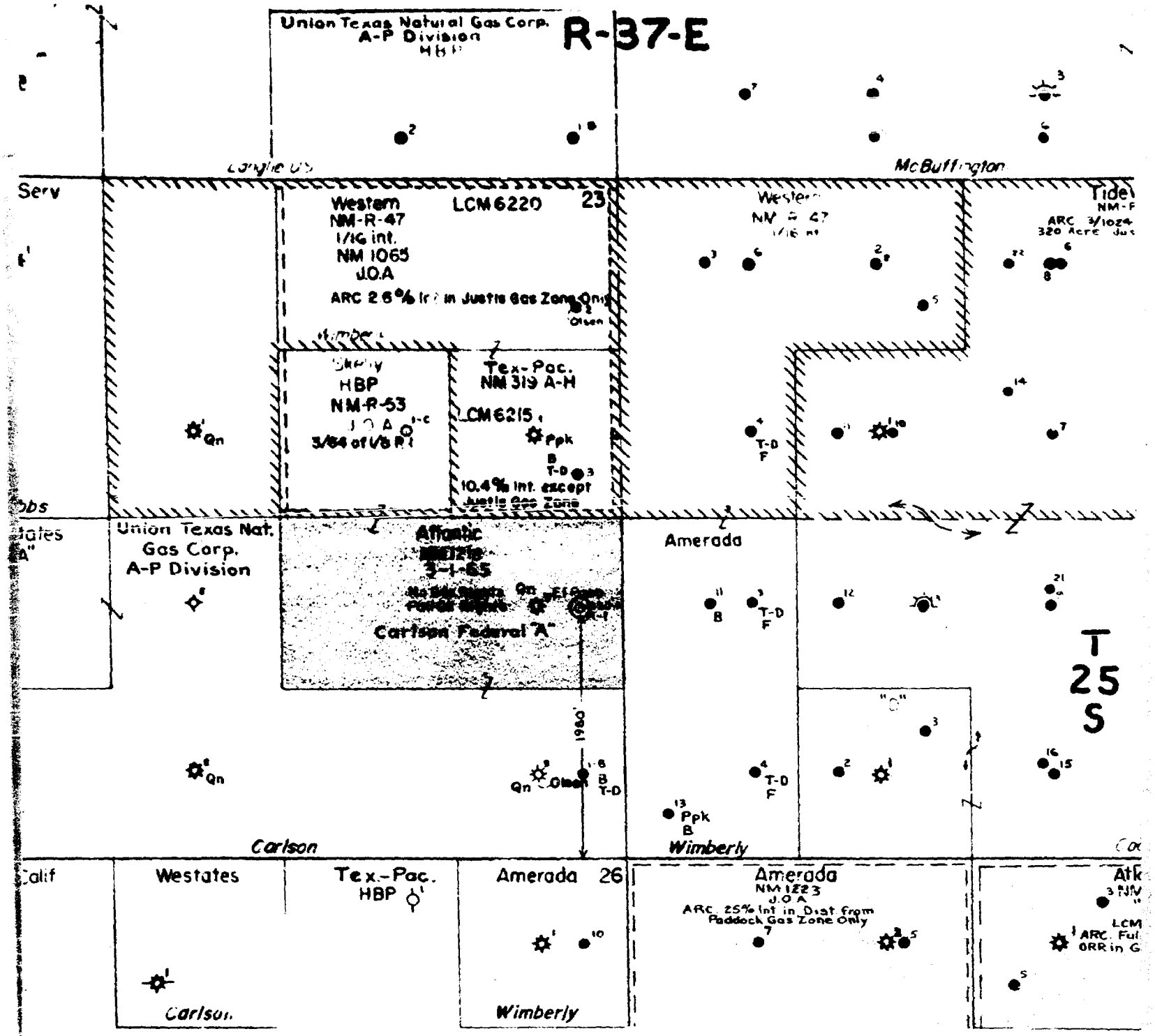
W. P. Tomlinson
W. P. Tomlinson Signature

* Should waivers from all offset operators not accompany an application for administrative approval, the New Mexico Oil Conservation Commission will hold the application for a period of twenty (20) days from date of receipt by the Commission's Santa Fe office. If, after said twenty-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

NOTE: If the proposed dual completion will result in an unorthodox well location and/or a non-standard proration unit in either or both of the producing zones, then separate application for approval of the same should be filed simultaneously with this application.



COMPANY: THE ATLANTIC REFINING COMPANY
LEASE : Carlson Federal "A" No. 1
FIELD : Justis (Paddock Undesignated), Justis (Blinebry) and Justis (Tubb/Drinkard)
DATE : May 17, 1961



THE ATLANTIC REFINING COMPANY
WEST TEXAS-NEW MEXICO REGION

JUSTIS PADDOCK (UNDESIGNATED), JUSTIS BLINEBRY
AND JUSTIS TUBB/DRINKARD POOLS

SCALE: 1"=1000'

LEGEND:
Qn - Queen
Ppk - Paddock
B - Blinebry
T-D - Tubb/Drinkard
F - Fusselman

TO ACCOMPANY APPLICATION FOR OIL/OIL/OIL TRIPLE COMPLETION OF ATLANTIC CARLSON FEDERAL "A" NO. 1

ATLANTIC EXHIBIT
CASE NO.

Case 2302

D-3

June 25, 1957

To: M. T. FROST
MIDLAND

Subject: EVALUATION OF TEXAS IRON WORKS
DUAL STRING RETRIEVABLE PACKERS -
"HOOKWALL PIN" SERIES

Our Company is in need of a wider selection of dual string packers, both upper and lower, in both the retrievable and non-retrievable types. To this end, we have been working with a number of manufacturers to encourage the development of these tools to fit our needs.

The first set of successful shop tests, as part of this overall program, has been completed on the Texas Iron Works "Hookwall Pin" dual packers. The results of this testing, drawings, and descriptions of this series of packers are covered in the attached memorandum prepared by Mr. W. V. Braddick of the Production Engineering Group.

The four versions of the "Hookwall Pin" series of retrievable packers offered by T.I.W. with our recommendations for their application are as follows:

1. Type "DS" - A normal duty upper packer for service where low pressure differentials across the packer are likely to be encountered and where it would not be detrimental to have the tubing in compression.

2. Type "HDS" - A normal duty upper packer with hold-down for service where a minimum amount of compression is required in the tubing, and where low bottom-hole temperatures and pressures are expected.

3. Type "HDSL" - A heavy duty hold-down type upper packer suitable for use in all wells where a minimum amount of compression in the tubing strings is required and where pressure differentials in excess of 5000 psi pressure and bottom-hole temperatures in excess of 250°F are anticipated.

4. Type "HDSR" - A heavy duty hold-down type upper packer for installations where it would be advantageous to remove either tubing string without rotation and where bottom-hole temperatures in excess of 250°F and pressure differentials of 5000 psi are expected.

Due to successful shop tests, this "Hookwall Pin" series of T.I.W. packers is recommended for field trial use in accordance with the trial equipment procedures described under Item IV-B, page 7, of the "Regional Operating Procedures - Production Engineering."

We would appreciate any comments or questions concerning these packers. If we can be of help in the application or placement selection of these packers, please call on us.

Harry N. Stansbury

/at
Attach.

sent to: Regional Operations & Drilling Managers
Regional Petroleum Engineers
All Production Engineers
All Drilling Supervisors & Engineers
District Superintendents

cc: Messrs. T. C. Frick
V. E. Stepp
R. O. Childers

June 12, 1957

TO: Mr. Harry N. Stansbury - 732

SUBJECT: Evaluation of TIW's Dual String Hookwall Pin Packer with Lead Seal Rings and Holddown

Texas Iron Works has developed a dual string hookwall pin packer that appeared to fill our requirements for such a packer. This packer was tested in their plant at Houston, Texas, April 12-19, 1957, with successful results. The test was performed using our Standard 72-hour Test Procedure at 300° F. temperature and 6000 psi pressure differential. As a result of these tests, we recommend the TIW Dual String Hookwall Pin Packer and its component assemblies for trial field installation in accordance with our trial equipment procedures. If the field trials prove the packer to be satisfactory, it should be considered for addition to our Approved Standards Lists.

The Texas Iron Works is presently manufacturing only one basic dual string hookwall pin packer. However, with a variety of interchangeable parts, various types of packers can be assembled that will fulfill many dual string well conditions. The following types of packers can be fabricated from the basic dual string packer: (1) Type DS, Dual String Hookwall Pin Packer; (2) Type HDS, Dual String Hookwall Pin Packer with Holddown; (3) Type HDSL, Dual String Hookwall Pin Packer with Lead Seal Rings and Holddown; and (4) Type HDSR, Dual String Hookwall Pin Packer with Lead Seal Rings, Holddown and Seal Receptacle Head for Two Retrievable Tubing Strings.

Evaluation tests were performed on a TIW Type HDSL, Dual String Hookwall Pin Packer. However, due to the similarity of the four accepted versions of this packer, the test was considered adequate to determine the ability of any of the types to perform in a satisfactory manner. A brief description of the four types of dual string hookwall pin packers with recommendations for their application follows. Packer recommendations are based on Standard Production Packer Selection and Application definitions, where pressure differentials below 5000 psig and bottom-hole temperatures below 240° F. are defined as normal duty packers; and heavy duty packers are those applicable to service above 240° F. temperature and pressure differentials above 5000 psig. A heavy duty packer is also acceptable for normal duty classification.

1. Type DS, Dual String Hookwall Pin Packer: This is the basic design from which the other three types of dual string hookwall pin packers were derived. This packer is a retrievable hookwall pin packer and is designed to be run and set with the long tubing string. The short tubing string, which is run and set independently of the long string, is set in a seal nipple receptacle in top of the packer (see drawing No. WE-89). This packer is equipped with a shear pin and liner packer type slips which are designed so that they are set by the application of tubing weight on top of the packer and released by picking up on the tubing. The features of this packer are that it can be set or released without rotation and that it has slips which contact the casing wall so that the total load required to set the packer need not be transmitted to the tubing below the packer. When the pin holding the slips in their running in position is sheared with a 5000-pound tubing load, the packer slips contact the casing and

additional loading on the packer is imposed on the packer slips rather than the tubing. This feature allows wire line tools to be run to the bottom zone with less difficulty due to the minimum bending of the tubing between the packers. The packing elements consist of three packer rubbers separated by metal spacer rings. The long string or female-threaded side of the packer is full opening, which will allow wire line tools to be used on the lower zone, while the short string or seal nipple receptacle side of the packer has a restricted opening. The restricted opening on the short side of the packer is not considered too objectionable. This type packer was subjected to the 6000-pound mechanical strength test and performed satisfactorily. At the completion of the 6000-pound mechanical strength test, a pump-up test was performed on the packer to determine the amount of pressure differential necessary to unseat the packer. During this part of the test the packer was unseated with a 1000 psi pressure differential from below. The packer was reset and the 6000-pound mechanical load applied before pulling. No difficulties were encountered in unseating and pulling the packer.

The Type DS Packer is recommended as the upper packer on normal duty dual string installations where the differential pressure from below is limited to 1000 psi, where fracturing, acidizing, etc. is not anticipated, and where compression in the tubing would not be detrimental to the installation.

2. Type HDS, Dual String Hookwall Pin Packer with Hydraulic Holddown: This packer is also similar to the basic design or Type DS packer. It has a female-threaded outlet for the long tubing string, a seal nipple receptacle for the short string and three rubber packoff elements. However, a hydraulic holddown has been added to make the packer applicable for a wider variety of installations (see drawing No. WE-90). The hydraulic holddown is built into the top section of the packer and is similar in design and operation to the TIW Type H Hydraulic Holddown. This dual string holddown has four hydraulically operated piston type slips which oppose each other in pairs. The long string side of the packer is full opening while the short string side has a restricted opening. This packer, a derivative of the basic design, is capable of holding differential pressures from above and below due to the addition of the holddown.

The Type HDS Packer is recommended as the upper packer on normal duty dual string installations, where differential pressures from above or below might be encountered, such as fracturing, acidizing, etc., and where a minimum amount of tubing weight on the packer is required.

3. Type HDSL, Dual String Hookwall Pin Packer with Lead Seal Rings and Holddown: This packer, a derivative of the basic design, incorporates the use of the lead seal rings in conjunction with rubber packoff elements and has a hydraulic holddown built into the top section of the packer. The lead seal rings are placed above and below the packoff rubbers to confine the rubbers and thereby prevent rubber flow (see drawing No. WE-91). The addition of the lead seal rings improves its sealing capacity while the hydraulic holddown permits the packer to hold pressure from above and below with a minimum amount of tubing weight set on the packer. A packer of this type was tested according to our Standard 72-hour Test Procedures and successfully withstood differential pressures of 6000 psi from above and below at a temperature of 300° F. The lead seal rings did not affect the unseating and pulling of this packer. At the end of the test the packer was unseated and pulled without difficulty.

The Type HDSL Packer is recommended as the upper packer on heavy duty dual string installations where pressure differentials in excess of 5000 psi are expected from above and below, where bottom-hole temperatures in excess of 240° F are expected, and where a minumum amount of compression in the tubing would be advantageous.

4. Type HDSR, Dual String Hookwall Pin Packer with Lead Seal Rings, Hydraulic Holddown and Seal Nipple Receptacle Head: This packer also stems from the basic design. The addition of lead seal rings, hydraulic holddown and seal nipple receptacle head on this packer constitute the changes from the basic design (see drawing No. WE-92). The hydraulic holddown and lead seal rings are the same on this packer as those of the Type HDSL Packer. This dual string seal nipple receptacle head is not shown on the other packers, but can be installed on them if desired. It is installed on packers to make the packer applicable for installations where it is advantageous to remove either tubing string independently of the other without rotation. The long string on this packer is full opening while the short string has a reduced opening. The operational features of this packer are the same as those of the other three recommended types, except that the long tubing string is attached to the packer with a shear pin instead of a threaded connection. With this type of connection, the packer would have to be removed from the well by the use of a spear, should it become necessary to pull the packer after the pin had been sheared. Although pulling tests were not performed on a packer with a dual seal nipple receptacle head, it is doubtful if any difficulty would be encountered, since the other types tested pulled satisfactorily.

The Type HDSR Packer is recommended as the upper packer on heavy duty dual string installations where pressure differentials in excess of 5000 psi are expected from above and below, where bottom-hole temperatures in excess of 240° F. are expected, where compression in the tubing would not be detrimental to the operation and where either tubing string above the packer could be run or pulled independently of the other without rotation.

TEST PROCEDURE AND RESULTS:

Two tests were performed on TIW's dual string hookwall pin packers. The first test was performed on a TIW Type DS, Dual String Hookwall Pin Packer. This test was conducted according to our Standard Mechanical Strength Test with a 6000 psi pressure differential. The packer withstood this test successfully and at the end of the test was unseated with a 16000-pound pulling force and removed from the test chamber with a drag too small to measure. At the completion of the 6000 psi mechanical strength test, a pump-up test was performed on the packer to determine what differential pressure would unseat the packer. On this test the packer was unseated with a 1000 psi pressure differential from below. Inspection of the packer, upon removal from the test chamber, showed the packer to be in like new condition. However, since this packer was not subjected to the high differential pressures from above and below, nor was it tested at 300° F. temperature, the packer should normally be in good condition.

The second test was performed on a TIW Type HDSL, Dual String Hookwall Pin Packer. This test was conducted according to our Standard 72-hour High Temperature Special Packer Test with a 6000 psi pressure differential above the packer and a 5000 psi pressure differential below the packer, and with a 300° F. temperature. After obtaining 300° F. temperature and 6000 psi pressure above and below the packer, the pin holding the slips in their running in position was sheared with a 4000-pound load, the amount prescribed by the manufacturer and the test conducted according to Parallel String Packer Test Procedures developed in February, 1957.

With the packer set, alternate 12-hr pressure differentials of 6000 psi pressure above and 5000 psi pressure below the packer at 300° F. temperature were maintained throughout the 72-hour test period. During the 72-hr test period, the packer performed satisfactorily, and at the end of the test, was unseated with a 15000-pound load and removed from the test chamber with an 800-pound drag. Examination of the packer upon removal from the test chamber revealed the following:

Rubber Packer Elements	In good condition
Lead Seal Rings	In good condition
Seal Nipple Chevron Packing	In good condition
Slip Cones	No visible damage
Slips	No visible damage
Holddown Slips (piston type)	No visible damage
Inside of Casing	No visible damage

The Type HDSL, Dual String Hookwall Pin Packer, is the first retrievable dual string packer to be tested according to our Standard Packer Test Procedures, and the first of this type to be recommended for trial field installation. Prior to the testing of this packer, we were informed that the Type DS Packer had been installed in a number of wells by other operators, and at the present time are operating satisfactorily. However, before this test was performed there had not been any installations of this type packer employing the hydraulic holddown and lead seal rings.

In view of the successful employment of this tool by other companies, and its performance throughout our Mechanical Strength Test and 72-hour Special Packer Test, it is recommended that all four types of TIW's Dual String Hookwall Pin Packer be installed in Atlantic's wells on a trial basis to evaluate them under actual field conditions. If the packers perform satisfactorily in the trial field wells, it is recommended that they be considered for addition to our Company Standards Lists.

W. V. Braddick

W. V. Braddick

WVB:tcs
Attach.

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
JUNE 7, 1961

EXAMINER HEARING

IN THE MATTER OF:

CASE 2302 Application of Atlantic Refining Company for an oil-oil-oil triple completion, Lea County, New Mexico.

TRANSCRIPT OF HEARING

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
JUNE 7, 1961

EXAMINER HEARING

IN THE MATTER OF:

CASE 2302 Application of Atlantic Refining Company for an oil-oil-oil triple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the triple completion of its Carlson Federal "A" Well No. 1, located in Unit I, Section 23, Township 25 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Paddock formation adjacent to the Justis-Paddock Pool, the production of oil from the Justis-Blinebry Pool and the production of oil from the Justis Tubb-Drinkard Pool, through parallel strings of 2-inch tubing.

BEFORE:

Daniel S. Nutter, Examiner

TRANSCRIPT OF PROCEEDINGS

MR. NUTTER: We will call next Case 2302.

MR. MORRIS: Case 2302. Application of Atlantic Refining Company for an oil-oil-oil triple completion, Lea County, New Mexico.

MR. HINKLE: Clarence Hinkle, Hervey, Dow & Hinkle, Roswell, appearing on behalf of the Atlantic Refining Company in Case

2302. We have one witness, Mr. Harold Frost, Jr.

(Witness sworn)

HAROLD FROST, JR.,

called as a witness, having been first duly sworn on oath, testified as follows:

DIRECT EXAMINATION

BY MR. HINKLE:

Q State your name, please.

A Harold Frost, Jr.

Q By whom are you employed, Mr. Frost?

A I am employed by the Atlantic Refining Company.

Q In what capacity?

A As a production engineer.

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

A I have.

MR. HINKLE: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, sir. Please proceed.

Q Are you familiar with the application which has been filed by the Atlantic for a triple completion in connection with the Atlantic Carlson Federal "A" Well No. 1?

A I am.

(Whereupon, Atlantic's Exhibit No. 1 was marked for identification.)

Q Mr. Frost, I hand you Atlantic's Exhibit No. 1, and ask

you to explain what it is, and what it shows.

A This plat shows a portion of the Justis Field. Encircled in red is the location of our Carlson Federal "A" No. 1, located in the northeast of the southeast, Section 23, Township 25 South, Range 37 East.

Q Does it also show the ownership of the surrounding leases?

A Yes, sir.

Q Do you know whether or not copies of the application in this case were mailed or sent to all of the offset operators?

A Yes, sir, they were.

Q Have you had any objection from any of the operators who were sent notices?

A No, sir.

Q How deep is this well, the Carlson Federal "A?"

A The total depth is 6,050 feet.

Q Do you have logs, electrical logs of the well?

A Yes, sir.

(Whereupon, Atlantic's Exhibit No. 2 was marked for identification.)

Q I hand you Atlantic's Exhibit No. 2, and ask you to explain to the Commission what it is.

A Exhibit No. 2 is a portion of the total gamma ray neutron log run on this well. We cut out the upper portion of the log, which is above the Paddock zone. Copies of the complete log will be filed later with the completion forms. On this log we have

shown the top of each producing zone, the Paddock, which we have called the Glorieta here, the Blinebry, and the Tubb-Drinkard. We have also shown the perforated intervals in each of the three zones.

Q What is the top of your first formation there, the Justis-Paddock?

A The top of the Paddock is 4652 feet.

Q What is the base of it?

A The base of it is at the top of the Blinebry, Blinebry, or 5,024 feet.

Q What about the base of the Blinebry?

A The base of the Blinebry is at the top of the Tubb at 5,717 feet.

Q The bottom of the Tubb is what?

A That would be at the top of the Drinkard at 5,902 feet.

Q This log shows the perforations which were made in those separate formations?

A It shows the actual perforated intervals.

Q Is there anything else you would like to comment on in connection with this log?

A No, sir.

(Whereupon, Atlantic's Exhibit No. 3 was marked for identification).

Q Mr. Frost, refer to Atlantic's Exhibit 3, and explain to the Commission what it is.

A Exhibit 3 is a diagrammatic sketch of the triple completion installation. We drilled a 12¼ inch hole to 905 feet. Set 9 5/8 inch casing at 904.82. We used 5 centralizers at 551 feet, 650, 750. 839 and 900 feet. The cement was circulated and tested with 1300 pounds for 30 minutes. We drilled an 8 3/4 inch hole to 6050 feet. We set 7 inch casing at 6,047.70 feet. The top 99⅓ feet of this string is 7 5/8 casing to give us more clearance for hanging the tubing in the wellhead. 15 centralizers were used on 103 feet spacing from 4497 to 6042 feet. The top of the cement is at 2900 feet, and the casing was tested with 1500 pounds for 30 minutes.

Following completion of the well, 150 sacks of neat cement was pumped in the 7 inch 9 5/8 annulus; the bottom of the cement is circulated to 950 feet. The cement was pumped in with 700 pounds of pressure with 1500 pounds maximum pressure.

We show the Paddock zone top at 4652 feet, the perforations, 4940 to 4976 feet. The tubing string for the Paddock zone consists of 2 3/8 inch O.D. buttress thread tubing, tubing that's bottomed at 5014.18 feet with a pump seating nipple at 4977.52.

The top of the Blinebry zone at 5,024 feet, perforations, 5336 to 5371, and 5386 to 5396. The tubing string for the Blinebry zone is also 2 3/8 inch O.D. buttress thread tubing. This tubing is bottomed at 5277.57 feet. A pump seating nipple is at 5239.45. This string of tubing is set in a retrievable dual bore packer, which is set at 5278.25 feet. The tubing was set in the

packer with 7000 pounds.

The Tubb-Drinkard zone topped at 5717, perforations at 5770 to 5784, 5830 to 5880 and 5892 to 5914. The Tubb-Drinkard tubing string is 2 3/8 O.D. buttress thread tubing. Tubing is bottomed at 5751.00 feet, and a pump seating nipple at 5707.38. This string of tubing is set in a permanent type packer set at 5743.02 feet. The tubing was set in the packer with 5000 pounds load.

Q Are all of these packers production type packers?

A Yes, sir.

Q In your opinion, will they efficiently prevent communication between the zones?

A In my opinion, they will.

Q Did you make any tests of the casing to determine that no leaks exist?

A Yes, we tested the casing with 1500 pounds for 30 minutes with no leaks prior to drilling out the plug. Now, wait a minute, I'll back up. That was after the plug was drilled.

Q In your opinion, will this type of installation prevent commingling of hydrocarbons between the separate strata involved?

A Yes, sir.

Q Are you familiar with the Rules and Regulations of the Oil Conservation Commission requiring certain tests to be made after this type of completion is complete and filed with the Commission?

A Yes, sir.

Q Did you run a cement bond log?

A Yes, sir. We ran a cement bond log following cementing of the oil string.

(Whereupon, Atlantic's Exhibit No. 4 was marked for identification).

Q I hand you Atlantic's Exhibit 4, which purports to be a cement bond log, and ask you to explain what it shows.

A This cement bond log shows the top of cement at 2900 feet. It also indicates the effectiveness of the bond between the cement and the casing. We have also indicated on this log the top of each producing zone, and the perforated intervals, the same as on the gamma ray neutron log.

Q Does it show that you got a good cement job in connection with this completion?

A It appears to be a good cement job.

Q By this triple completion, will you be able to determine the reservoir pressure in connection with each separate zone or strata invclved?

A Yes, sir, we can. Each tubing string has a full bore to the bottom of the tubing or to the pump seating nipple, which will allow bottom hole pressure work.

Q Will this triple completion permit the measurement of oil and gas produced from each one of these reservoirs?

A Yes, sir.

Q Will it also permit you to determine the gas-oil ratio in connection with each strata involved?

A Yes, sir, with proper surface equipment.

Q Do you know whether or not these zones are flowing at the present time through the tubing?

A I'm not positive. The installation was just completed on June 4th, and I'm not positive that all three zones are flowing. The last report I had on Monday morning, they were preparing to swab in the lower zone.

Q In the event one or more of these zones do not flow, can you pump each zone separately, or arrange for the production separately by artificial means?

A Yes, sir. We can install subsurface hydraulic pumping equipment, conventional installation in each tubing string.

Q Will you explain briefly to the Commission how your hydraulic lift works or pumps?

A The hydraulic pump is a fluid driven production pump for producing a well which won't flow.

Q Do you insert a string of tubing inside of the tubing in each instance?

A Yes, sir. The pump will be run on a string of 3/4-inch tubing inside the 2-inch.

Q Is there anything unusual in regard to this completion, or is it more or less standard practice, as far as triple completions are concerned?

A I consider this about the same as a dual completion, except we have one more string of tubing in here.

Q There's no complications because of that?

A I don't think so.

MR. HINKLE: I believe that's all.

MR. NUTTER: Are there any questions of Mr. Frost?

CROSS-EXAMINATION

BY MR. NUTTER:

Q Mr. Frost, you are probably aware that a while back there was some questions raised as to the proper top of the Blinebry Pool in this area?

A I have heard something about that.

Q Is the perforated interval within the Blinebry zone in this well outside of the zone that was under question at that time?

A It's outside that zone.

Q So there is no problem as to where this well is perforated in the Blinebry?

A I don't think so.

Q Do you have the bottom hole pressure on the Paddock in this well?

A No. We have not run pressures,as yet.

Q Do you have bottom hole pressures on any Paddock wells that are in the near vicinity?

A No, sir, I don't.

Q How about GOR's? Do you have that on the well yet?

A No. We do -- we have tested each zone; however, I don't think the tests are representative. They were swab tests after the

zones were treated, and on those tests, I'm not sure how they obtained any of the gas measurements.

Q I was going to ask you about the bottom hole pressure, the GOR and the gravity of each of the three zones, but I presume that you don't have the information.

Q Not on this well, we do not.

Q Could you furnish us with a letter stating what the GOR's, the gravities and the bottom hole pressures are on these three zones in the immediate area --

A Yes, sir.

Q -- on your return home?

A Yes.

Q What kind of a packer is this upper retrievable packer, Mr. Frost?

A T-i-w-h-s-d-l packer. It's run on the number one string or the long string, and is set when weight is applied by the second string.

Q It's hanging from the long string with the setting activated by the weight of the intermediate string?

A That's right.

Q And you stated that you set that with 7000 pounds?

A Yes, sir.

Q Is there any possibility that artificial lift or any other mechanical action might occur which would cause that packer to unseat?

A With the hydraulic pumps, there's very little bottom hole movement of the tubing, and I don't think that will affect the setting of the packer or the seals.

Q And you do anticipate,in the event artificial lift is necessary, it will be hydrsulic lift?

A Yes, it will.

Q Now, the lower packer is what?

A Baker 415-D permanent packer.

Q I'm not acquainted with this T-i-w-h-s-d-1 retrievable packer. I wonder if you could send me some literature on that packer when you return home.

A Sure will.

MR. NUTTER: Are there any other questions of Mr. Frost? He may be excused.

(Witness excused)

MR. HINKLE: I would like to offer in evidence Exhibits 1 to 4, inclusive.

MR. NUTTER: Exhibits 1 through 4 will be offered in evidence.

(Whereupon, Atlantic's Exhibits 1 through 4 were received in evidence).

MR. NUTTER: Do you have anything further, Mr. Hinkle?

MR. HINKLE: No, that's all.

MR. NUTTER: Does anyone have anything further to offer in Case 2302? We will take that case under advisement.

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in machine shorthand and reduced to typewritten transcript under my personal supervision, and that the same is a true and correct record, to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this, the 12th day of June, 1961, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Ada Dearnley
NOTARY PUBLIC

My Commission expires:

June 19, 1963

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2302, heard by me on 6/7, 1961.

..., Examiner
New Mexico Oil Conservation Commission

THE ATLANTIC REFINING COMPANY
INCORPORATED - 1870
PETROLEUM PRODUCTS

June 28, 1965

NORTH AMERICAN PRODUCING DEPARTMENT
NEW MEXICO - ARIZONA DISTRICT
S. L. SMITH, DISTRICT MANAGER
JACK BIARD, DISTRICT LANDMAN
E. P. DOUGLAS, DISTRICT GEOLOGIST
A. D. FLOKIN, DISTRICT DRLG. & PROD. SUP'T.
V. D. ROBERTS, DISTRICT GEOPHYSICIST
W. P. TOMLINSON, DISTRICT ENGINEER
B. R. WARE, DISTRICT ADMINISTRATIVE SUP'V.

SECURITY NATIONAL BANK BLDG.
MAILING ADDRESS
P. O. BOX 1978
ROSWELL, NEW MEXICO

Case 2302

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

Attention: Mr. A. L. Porter

Re: Carlson Federal "A" No. 1
Justis (Blinebry-UT) Field
Justis (Tubb/Drinkard-LT) Field
Lea County, New Mexico

Gentlemen:

This well was originally triple completed. We submitted and received approval to complete as a triple completion well on June 22, 1961, Case 2302, Order No. R-2006. We have recently plugged and abandoned the Paddock Zone and have recompleted this well as a dual completion. The dual completion still consists of the original Blinebry zone and Drinkard zone. We are submitting the Packer-Setting Affidavit since we have reset a Baker 415-D above the old packer. We are also submitting a diagramatic sketch of the equipment that is in the well.

If further information is required, please advise.

Yours very truly,

L. R. Cammack

for W. P. Tomlinson

LCH:jcb

cc: Mr. Joe Ramey
New Mexico Oil Conservation Commission
P. O. Box 1980
Hobbs, New Mexico

U. S. G. S.
P. O. Box 1638
Hobbs, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

6-1-56

PACKER-SETTING AFFIDAVIT
(Dual Completions)

STATE OF New Mexico)
)
County of Lea)

T. E. Sheets, being first duly sworn according to law, upon his oath deposes and says:

That he is of lawful age and has full knowledge of the facts herein below set out.

That he is employed by The Atlantic Refining Company in the capacity of Drilling Engineer and as such is its authorized agent.

That on April 18, 19 65, he personally supervised the setting of a Baker Model 415-D (Make and Type of Packer) in The Atlantic Refining Company (Operator)'s Carlson Federal "A" (lease) Well No. 1, located in Unit Letter I, Section 23, Township 25-S, Range 37-E, NMPM, Lea County, New Mexico.

That said packer was set at a subsurface depth of 5731 feet, said depth measurement having been furnished by Wire line.

That the purpose of setting this packer was to effect a seal in the annular space between the two strings of pipe where the packer was set so as to prevent the commingling, within the well-bore, of fluids produced from a stratum below the packer with fluids produced from a stratum above the packer. That this packer was properly set and that it did, when set, effectively and absolutely seal off the annular space between the two strings of pipe where it was set in such manner as that it prevented any movement of fluids across the packer.

The Atlantic Refining Company
(Company)

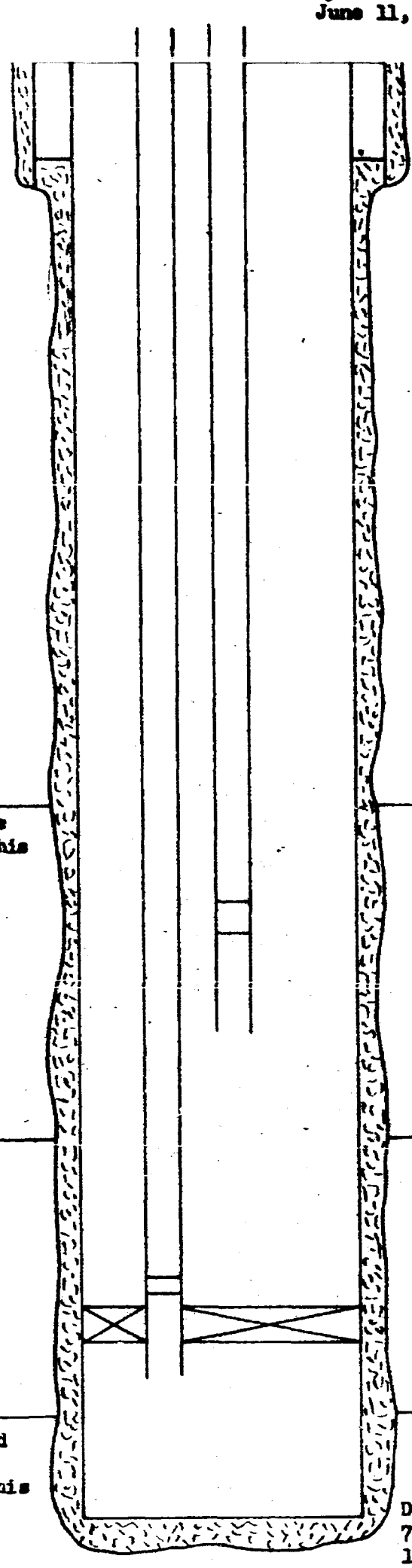
T E Sheets
(its Agent)

Subscribed and sworn to before me this the 21 day of June, AD, 1965.

C. Paul Green
Notary Public in and for the County of Lea.

My Commission Expires 2-14-69.

The Atlantic Refining Company
Carlson Federal A-1
Justis Blinebry & Justis Tubb-Drinkard
June 11, 1965



Drilled 12-1/4" hole to 905
9-5/8" casing set @ 905.82
Centrallisers @ 551, 650, 740, 839 & 900
Cement circulated
Tested to 1300# - O.K.

Blinebry zone
Completion this zone - Oil

Perforations: 5336 - 5466

Tubing string: 2-3/8" O.D. J-55 buttress with Kobe seating shoc. tubing bottomed @ 5331.79

Baker 415 D Production Packer set @ 5731

Perforations 5770 - 5914
Tubing string: 2-3/8" O.D. J-55 Buttress with Kobe seating shoc. tubing bottomed @ 5740.10

Tubb-Drinkard zone
Completion this zone - Oil

Drilled 8-3/4" hole to 6050
7" casing set @ 6047.70 (top 3 jts 7-5/8)
15 Centrallizers from 4497 - 6042
Top cement 2900'
Tested to 1500# - O.K.