

1365: Cabot Carbon Co. Application for
well dual in King-Devonian & King-Devonian
pools of H. L. Love well #1.

Case No.

1365

Application, Transcript,
Small Exhibits, Etc.

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

April 29, 1958

C
O
P
Y

Mr. S. B. Christy, IV
Hervey, Dow & Hinkle
P.O. Box 547
Roswell, New Mexico

Dear Mr. Christy:

On behalf of your client, Cabot Carbon Company, we enclose two copies of Order R-1126-A issued April 28, 1958, by the Oil Conservation Commission in Case 1365, which was last heard on April 16th at Roswell.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

bp
Encls.

*2 copies of Order
Mailed to:
Martin D. Linger, Jersey Oil, Midland
Paul J. Linger, Atlantic, Fort Worth
11-87-58
BJS*

BEFORE THE
OIL CONSERVATION COMMISSION
Roswell, New Mexico
April 16, 1953

CASE NO. 1365

TRANSCRIPT OF PROCEEDINGS

DEARNLEY - MEIER & ASSOCIATES
INCORPORATED
GENERAL LAW REPORTERS
ALBUQUERQUE, NEW MEXICO
3-6691 5-9546

BEFORE THE
OIL CONSERVATION COMMISSION
Roswell, New Mexico
April 13, 1933

IN THE MATTER OF:

CASE D. 1365: Application of Cabot Carbon Company for:
a hearing de novo before the Oil Con- :
servation Commission of New Mexico on :
its application for a dual completion. :
Applicant, in the above-styled cause, :
seeks an order authorizing the dual com- :
pletion of its H.L. Lowe "B" Well No.1, :
located 467 feet from the South line :
and 850 feet from the East line of Sec- :
tion 26, Township 13 South, Range 37 :
East, Lea County, New Mexico, in such a :
manner as to permit the production of :
oil from both the King-Devonian Pool :
and King-Wolfcamp Pool through parallel :
strings of 1½" tubing. :

BEFORE:

Mr. A. L. Porter
Mr. Murray Morgan
Honorable Edwin L. Mechem

TRANSCRIPT OF PROCEEDINGS

MR. PORTER: Next case to be considered will be Case 1365.

MR. PAYNE: Application of Cabot Carbon Company for a
hearing de novo before the Oil Conservation Commission of New Mexico
on its application for a dual completion.

MR. CHRISTY: Sims Christy of Hervey, Dow & Hinkle,
appearing for the Applicant, Cabot Carbon Company. This is an
application before the Commission in connection with an oil-oil

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dual completion. The application is in the King Field in Lea County. The request for the hearing is a de novo hearing, which is not in the nature of a quarrel with the Commission's ruling, but the fact that new and additional evidence has been uncovered which I believe may merit a reconsideration of the Commission's determination in the prior case. We have two witnesses, and if there are some additional questions which I don't feel that these witnesses are qualified to answer, I have other men present who may be able to, but for the moment, on direct examination, we have two witnesses.

(Witnesses sworn)

JOE M. DANIELS, JR.

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

DIRECT EXAMINATION

BY MR. CHRISTY:

Q Would you state your name and address, please?

A Joe M. Daniels, Jr. of Pampa, Texas.

Q By whom are you employed and in what capacity?

A I am employed by Cabot Carbon Company as their senior petroleum engineer.

Q Have you previously testified before the New Mexico Oil Conservation Commission as a mechanical and reservoir engineer in the matters which are the subject of this application?

A Yes, sir.

Q Are you familiar with the application filed in this matter?

A Yes, sir.

Q Do you consider all the facts stated in this application to be true and correct to the best of your knowledge?

A Yes, sir.

Q Will you please explain to the Commission the purpose of the application?

A The application is to dually complete as an oil-oil well the Cabot Carbon Company's H. L. Lowe "B" Well No. 1, which is located 467 feet from the south line and 850 feet from the east line of Section 26, Township 13 South, Range 37 East, N.M.P.M. Lea County, New Mexico, and is located in the King Pool.

We propose to perforate the five and a half inch casing opposite the Wolfcamp formation from 10,220 feet to 10,234 feet, and conduct production tests through straddle packers. If this interval is not productive, it will be squeezed off.

We then propose to test the Wolfcamp formation from 10,178 feet to 10,185 feet by perforating the five and one-half inch casing and conducting production tests through straddle packers.

If the Wolfcamp intervals are productive, we propose to set a temporary bridging plug at approximately 10,300 feet to separate the Devonian and Wolfcamp formation in the well bore. The Wolfcamp intervals will be produced until the equipment for the dual completion can be obtained.

After arrival of the dual completion equipment, we propose to set packers at approximately 10,300 feet and a packer at 10,100 feet and produce each zone through inch and a half tubing.

Q Have you conducted tests on the subject well?

A Yes, sir.

Q Please explain the manner of completion of the well and the tests taken and the results obtained.

A The subject well has five and a half inch casing set at 12,320 feet and cemented with 700 sacks. The top of the cement was found to be 8,995 feet. The well was then drilled to a total depth of 12,437 feet and was later plugged back to 12,310 feet. The casing was perforated from 12,277 feet to 12,307 feet, and the well was potentialled.

The subject well was placed on production from the Devonian reservoir on August the 12th, 1957. On the initial potential test taken August the 9th, 1957, the well flowed 312 barrels of 47 degree API corrected gravity oil in twelve hours on a one-half inch choke.

On a drill stem test taken June the 26th, 1957, in the Wolfcamp formation from 10,115 feet, 10,191 feet, the tool was open for 100 minutes with gas to the surface in 7 minutes and oil to the surface in 55 minutes. The well flood 23 barrels of oil in 30 minutes. Reversed out all oil and gas and recovered below the circulating sub 300 feet of salty sulphur water. The initial flow pressure was 1,010 PSI; the final flowing pressure was 3160 PSI; and the 30-minute shut-in pressure was 3920 PSI.

Q Have the tests which you have taken indicate that the well is susceptible to production of oil in more than one zone?

A Yes, sir. The subject well was completed in and is still producing from the Devonian horizon. The Wolfcamp horizon was indicated to be productive by the previously mentioned drill stem test. The well to the east of the subject well has been producing from the Wolfcamp for several years. The east offset is the Forrest Oil Corporation H. L. Lowe Well No. 1, which was completed in October, 1951 in the Wolfcamp pay. The Forrest Well has a cumulative production of 179,895 barrels of 38 degree API oil as of February the 1st, 1958. In January, 1958, this well produced 694 barrels of oil, 1035 barrels of water with a gas-oil ratio of 268 cubic feet per barrel.

Q Will this proposed dual completion permit you to meet offset and protect obligations and protect correlative rights, and, if so, how?

A Yes, sir, it will. This is the subject well, and it is presently completed in the Devonian formation. This well is the Forrest Well and it is completed in the Wolfcamp. If we do not produce this, our subject well from the Wolfcamp, the Cabot Carbon Company, will suffer drainage from the Forrest Well. Should we abandon our Devonian pay in this well and produce from the Wolfcamp, then the royalty owners on this tract will suffer drainage from these Devonian wells down here. Therefore, this location should be producing from both the Devonian and the Wolfcamp.

Q Would you please identify Exhibit 1 and explain it briefly?

A Exhibit No. 1 is a plat of the area showing the location of our subject well and all offset wells. As I have said, the Forrest Well over here is completed in the Wolfcamp; our subject well H. L. Lowe "B" Well No. 1 is completed in the Wolfcamp. Recently we have completed the Lowe "C" 1 over here and it is producing from the Wolfcamp. All the wells south of here are producing from the Devonian with the exception of "C" 2 which is in the process of being completed in the Wolfcamp. It was formerly a Devonian well.

Q Now, will you please identify Exhibit No. 2 and explain it?

A Exhibit 2 is a diagrammatic sketch showing the proposed mechanical completion of the well in question. We propose to set a Baker Model "D" permanent type packer between two formations which will be approximately 10,300 feet. After this packer is set on a wire line well, we propose to make up some 2,000 feet of tail pipe which will be two-inch tubing above that well. We will have our seating element to set into the Baker Model "D" packer. Above that packer we will have approximately 200 feet of two-inch NU tubing which will be externally wrapped with fiber glass and plastic to serve as abrasion joint. This externally wrapped joint -- these joints will be opposite the Wolfcamp perforations and then we will -- on that first string of tubing we will then run above the 200 feet of tubing the Baker Model "C" packer which is a retrievable type packer, and above that we will have some 10,100 feet of inch and a

half tubing. This whole string and the two and the top packer will be run originally. Then when we run the second string of inch and a half tubing, it will seal into the upper packer of the Baker Model "C." All the tubing will be internally coated with plastic for paraffin control.

Q Are the two reservoirs in question separated in the subject well behind the pipe?

A Yes, sir. We have cement behind the five and half inch casing up to 3,995 feet. This cement top was found by a temperature survey.

Q How about the fresh water zones, are they protected in the other possible producing zones?

A Yes, sir. The cement behind the 3 5/8 intermediate casing was circulated to the surface. Its intermediate was set at 4,615 feet. The cement behind the 381 feet of 13 3/8 inch surface pipe was also circulated to the surface.

Q In your opinion, do you feel that there is a possibility of communication or migration of fluids between the Wolfcamp and Devonian in the annulus between the casing and the well bore?

A No, sir. As stated before, we have cement behind the producing string of casing and its top is some 1200 feet above the proposed Wolfcamp completion interval.

Q In your opinion, is the proposed dual completion installation in accordance with good engineering practices and principles?

A Yes.

Q Is it the type of dual completion customarily used in the Lea County area?

A I understand that there are quite a few dual string installations in Lea County. However, there are no installations using $1 \frac{1}{8}$ inch tubing.

Q Has this type of installation proven successful in actual field tests in other areas?

A Yes, sir, there are numerous dual string installations using $1 \frac{1}{2}$ inch tubing in the Gulf Coast area.

Q Why has Cabot Carbon proposed using two strings of $1 \frac{1}{2}$ inch tubing when other operators use two-inch tubing?

A It is a matter of clearance. In wells with seven-inch casing, it is possible to use two strings of two-inch tubing, but it is a physical impossibility to get two strings of two-inch tubing in $5 \frac{1}{2}$ inch casing.

Q Then why did Cabot Carbon use $5 \frac{1}{2}$ inch casing in the King Pool rather than the seven-inch casing?

A When the subject well was commenced, all the wells in the area were producing from the Devonian with the exception of the Forrest-Lowe Well to the East, which was producing from the Wolfcamp. We did not expect to encounter this Wolfcamp production in the subject well, and as a consequence, the well was scheduled solely as a Devonian test. It is customary in the industry, and in accordance with good drilling practices, to drill a well for $5 \frac{1}{2}$ inch casing and in accordance with the drilling pattern, $3 \frac{5}{8}$ inch casing was set

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at 4,015 foot and thereafter we were limited to the size of the casing that we could use, which was 5 1/2, since 7-inch casing will not pass through 8 5/8-inch casing.

Q As I understand, before you encountered this Wolfcamp production at 10,000 you were already limited by your setting a pipe at 4600 level?

A That is correct.

Q Will you please identify Exhibit No. 3 and explain it briefly?

A Exhibit 3 is a tabulation of the clearance --

Q Excuse me, Mr. Daniels. I believe Exhibit 3 contains four pages, is that correct?

A That's correct.

Q Please proceed.

A Exhibit 3 is a tabulation of the clearances between 5 1/2 inches and twenty-three pound casing and various combinations of tubing sizes, plus a picture showing the meaning of clearance. Attached to this Exhibit are photostats giving manufacturers' dimensions of gas-lift valves and tubing joints. The 5 1/2 inch twenty-three pound casing is used in this tabulation because it is the heaviest casing in our well and is located in the top 372 feet of our long casing string. All tubing run into this casing must pass through this heavy casing. The outside diameter of all 5 1/2 inch casing is the same and heavier weight casings have greater wall thickness, and therefore, the heavier casings have a reduction in

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inside diameter. The API has required all manufacturers of casing to guarantee a certain minimum inside diameter, called drift diameter. In other words, all casing of a certain size and weight has an inside diameter that can be no less than the prescribed minimum. For 5½-inch twenty-three pound per foot casing this inside drift diameter is 4.545 inches.

Various combinations of tubing are used to give the clearance available when running the second string of tubing into the hole after the first string is already in place. It must be pointed out that the collars on the second string of tubing must pass the collars on the first string of tubing already in the well when running the second string into the hole. This is when you have minimum clearance between the two collars and the casing.

I would like to demonstrate our problems here. I have two rods here and this is taped on here to represent the collars on our tubing joint, and as I have pointed out, we have our heaviest casing in the top 372 feet of our casing string, and there will be approximately 29 joints or tubing joints in the top 379 feet. On 72 feet of our first string there will be that many joints, so when we start our second string of tubing in the hole, there is a possibility that 29 joints will ultimately be passing each other simultaneously, and before we reach 10,100 feet, these possible 29 tubing joints will be passing simultaneously 307 times until we get the second string of tubing down to our packer at 10,100 feet, so you can see that we have to have clearance for our collars and not

the size of the tubing itself. But it is the collars of the tubing that are important.

Q I believe that is graphically demonstrated at Page 2 of Exhibit 3?

A Yes.

Q Could you use one string of 2-1/16 outside diameter string tubing and one string of 1 1/8-inch tubing instead of two strings of one and a half tubing?

A We could run a string of two and a 16th inch tubing, which has an internal diameter of 1.75 inches, to the Devonian, and a string of inch and a half tubing, which has an internal diameter of 1.61 inches, to the Wolfcamp. This installation would be satisfactory as long as both zones were flowing and would give a clearance of 0.102 inches. Now, you can note that on Case 5 on the first page of Exhibit 3 we have a clearance of 0.102 inches; but when it becomes necessary to artificially lift the fluid from the Wolfcamp or the Devonian, we would have to remove both strings of tubing and replace them with inch and a half tubing in order to run gas lift valves. It is our opinion that the Wolfcamp formation will require artificial lift in the reasonable near future. Exhibit 3 shows -- Page 1 -- shows a total of five variation possibilities and we believe it, together with other exhibits, which I will discuss, will show that the most efficient and effective tubing combinations under the existing physical possibilities, is as outlined in this application.

Q Now, will you please identify and briefly explain exhibits 4, 5 and 6?

A Exhibits 4 and 5 are a series of curves showing the comparison of the total pressure loss in various tubing -- various sizes of tubing, while producing various volumes of oil with a constant gas-oil ratio from various depths against zero surface pressure.

Exhibit 4 is for a depth of 10,000 feet and Exhibit 5 is for 12,000 feet of tubing.

Exhibit 6 is a tabulation of the data presented on the two sets of curves, plus the effect of changing the producing gas-oil ratio from 1000 to 1200 cubic feet per barrel.

Exhibits 4 and 5 are based upon a gas-oil ratio of 1,000 to 1, since this is approximately the GOR encountered in the subject well.

Q Now, will you explain to us these curves and the table and give the source of the information you have used in preparing Exhibits 4, 5 and 6?

A The physical principle involved in lifting vertically gas-liquid mixture such as oil and gas is complicated because the intake pressure must be sufficient not only to overcome flow resistance in the tubing and the surface choke, but must, in addition, be sufficient to support the total weight of the compressible mixture in the tubing.

The types of flow occurring in tubing when lifting a gas-

liquid mixture can best be described as follows, when starting at surface: At the lowest pressure, which will be at the surface mist flow will predominate and modified progressively by an upwardly moving oil film which clings to the inside surface of the pipe and increases in thickness and with depth. This film of liquid combined with mist flow in the center of the pipe has been described as annular flow. As depth increases, the film becomes so thick and wavy that it occasionally bridges across the tubing, resulting in slug flow. At still greater depths, slug flow merges into foam flow, and this flow merges into a single phase flow at the pressure beyond which all of the gas is in solution.

It has been found that for any constant gas-liquid ratio there is a rate of flow which requires minimum intake pressure for any tubing size.

The pressure loss in the tubing between inlet and outlet for two-phase flow is largely the result of the interaction of the flow resistance and slippage of gas through the oil, the resistance factor being least important when slippage is greatest and vice versa.

The term friction is often mentioned in these matters, and friction is a collective term including both resistance and slippage. Also column pressure, which is the weight of the mixture, is greatest at low gas-liquid ratios. Therefore, for any gas-liquid ratio and depth, there is a rate which requires minimum pressure, with lifting pressure with lower rates requiring more lifting pressure

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because of slippage, and higher rates requiring more lifting pressure because of resistance.

Now, if you will please refer to Exhibit 4, you will note that inch and a half tubing is more effective in lifting gas and oil than two-inch tubing until the flow rate reaches 150 barrels per day. Above the flow rate of 150 barrels per day, two-inch tubing becomes more efficient to the extent of requiring some 100 pounds less inlet tubing pressure than the inch and a half tubing when lifting 275 barrels of oil per day, and the 275 barrels of oil per day is used because this has been the maximum allowable experienced in the King Pool.

Exhibit 5 shows the same trend as Exhibit 4.

This discussion on two-phase flow was obtained from an American Petroleum Institute paper prepared by Mr. W. E. Gilbert entitled "Flowing and Gas-Lift Well Performance." Mr. Gilbert is an engineer with Shell Oil Company, and he is located at the Hague. The summary of this two-phase flow can be noted in Exhibits 4 and 5, and as pointed out by Mr. Gilbert, and I quote:

"In general, the smaller tubing sizes offer the advantage of lower intake pressure at comparatively low rates of flow, and therefore tend to prolong the flowing life of low gas-liquid ratio wells. The smaller tubing, however, limits rates of flow, especially for the higher gas-liquid ratios."

Q Do you have a copy of Mr. Gilbert's article for the Commission?

A Yes, sir, it is marked Exhibit 7.

Q Now, how do you propose to lift these fluids in the event artificial lifts become necessary?

A We propose to gas lift the oil. Gas lift valves are available for inch and a half tubing. Therefore, we will be able to artificially lift the oil from either pay or both pays with gas-lift. We will obtain our gas from the King Field Gasoline Plant. We have obtained assurances from gas lift manufacturers that we can lift large volumes of fluid from these pay depths when and if necessary.

Q Well now, have you considered using rod pumps as a method of lifting artificially?

A Yes, but it will require two and a half inch tubing to lift the required volume from this pay depth. The two and a half inch tubing would mean that only one zone could be produced at a time.

Q Will the surface equipment be so designed and installed that the reservoirs will be separately produced and their fluids separately tanked and gauged for absolutely no comingling?

A Yes, sir. Each producing zone will have its own separator and storage facilities.

Q Is this dual completion technique which you have requested in the application recognized and accepted in general by the oil industry and by other state regulatory bodies?

A Yes, sir. In Oklahoma, Texas and Louisiana, and I believe possibly Mississippi.

Q Do you feel that corrosion would be a possible objection

to your proposed manner of dual completion?

A No, sir. We have observed no corrosion in the King Pool.

Q Does this dual completion technique possess any more possibility for leakage or communication of the reservoirs than any other accepted method?

A No, sir.

Q Will Cabot Carbon be willing to make packer leakage tests, separation tests and other tests which might be required by the Commission to determine if there is any comingling or leakage?

A Yes, sir.

Q Under the proposed method of dualing, is it possible to make bottom hole pressures on each separate zone, and if so, will you please explain how?

A A bottom hole pressure bomb can be run to the bottom of the long string of tubing, or within 50 feet of the Devonian formation. A bomb can be run to the top of the upper packer in the short string of tubing, or within some 50 to 100 feet of the Wolfcamp formation.

Q Please briefly explain the proposed method to be used in running packer leakage tests.

A We are prepared to run any type of test as may be required by the Commission, either by running surface pressure determinations tests which is the general procedure for packer leakage tests in New Mexico or by conducting tests using a bottom hole pressure bomb.

Q Would it be possible to check for leakage across the packer separating the two pays at frequent intervals?

A Yes, sir. As we have stated before, we have separate facilities for each pay. The Wolfcamp pay has an oil gravity of 33 degrees API and the Devonian pay has an oil gravity of 47 degrees API. This 9 degree difference in gravity will provide a daily check for leakage, because any change in gravity will be noted by operating personnel and/or the pipeline gauger.

Q Have you made an estimate of oil reserves which will be recovered from the Wolfcamp?

A Yes, sir. I believe the recoverable oil reserves to be in the order of some 50,000 to 70,000 barrels.

Q What would it cost to drill a twin well to the Lowe "B" of the subject well to the Wolfcamp?

A Approximately \$175,000.00.

Q And what will it cost to dually complete the Lowe "B" Well No. 1?

A Approximately \$58,000.00.

Q Now, what are the economics involved when you compare the expected recovery of oil reserves with the cost of obtaining this oil from the Wolfcamp?

A The value of one barrel of oil to us, after royalty and tax, is \$2.20 per barrel. If we assume 40 cents per barrel for lifting cost, which is reasonable, the revenue to be received from our expected oil reserves in the Wolfcamp is some \$90,000.00 to

\$126,000.00. If we drill a twin well, we will not get our money back. If we are permitted to dual the subject well, a reasonable profit may be expected.

Q Don't you think the ultimate recovery of the oil in the Devonian will be reduced as a result of dual completion?

A No, sir. The ultimate oil recovery from the Devonian will not be affected as a result of dual completion. I base this on two facts: (1) the producing efficiency using small tubing will improve flowing life of both pays and when necessary we can artificially produce either or both zones to depletion; (2) it is expected that the Wolfcamp will have a shorter producing life than the Devonian. Therefore, when necessary, we will plug off the Wolfcamp and produce the Devonian by any approved method.

Q Now, if this application for dualing is not approved, how could correlative rights that you mentioned before --

A Only by drilling a twin well on the same 40-acre tract, which would not be economical.

Q Were Exhibits 1 through 6 with the exception of 3 and 4 of Exhibit 3 prepared by you or under your supervision?

A Yes, sir.

Q And I believe Pages 3 and 4 of Exhibits 4 and 5 are photostats -- actual reproductions of the subjects you have mentioned?

A Yes.

Q Do you have a log of the well?

A Yes, sir. It is identified as Exhibit 8.

MR. CHRISTY: That's all we have. We offer in evidence Applicant's Exhibits 1 through 8 inclusive.

MR. PORTER: Without objection, Applicant's Exhibits 1 through 8 will be admitted.

Does anyone have a question of Mr. Daniels? Mr. Nutter.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Daniels, did I understand you correctly to say that you estimate the reserves under your proposed Wolfcamp completion to be 75,000 barrels?

A Yes, sir.

Q And the reserves under the Forrest Well to the east are some 180,000 barrels?

A They have recovered that much so far, yes, sir.

Q In other words, you estimate that the -- oh, they have recovered that much?

A Yes, sir, they have already recovered practically, I believe it was 179,800 barrels, roughly 180,000.

Q How much remaining oil is underneath that Forrest Well?

A Well, it is rather hard to say. Possibly 20 to 30,000 barrels.

Q So ultimate recovery will be in the range of 200,000?

A Yes.

Q So that the Forrest Well to the east will have ultimate

production of some three times, three to four times what you expect to recover from your well?

A Yes.

Q Did Forrest Oil Company have any difficulty in completing their well in the Wolfcamp formation?

A Yes, sir, they did. I believe that they would perforate in the Wolfcamp and after they would acidize, the well would make water and oil and they would squeeze it off and reperforate it and the same thing would happen, and finally they came up to the top of this interval, porous interval to complete in.

Q Do you think that you will have any difficulty in completing your well in the Wolfcamp?

A There is a possibility that our lower sets of perforations will produce water, and if they do, we will squeeze that off and come up to the upper set of perforations, which have been drill stem tested.

Q Your estimate of reserves, fifty to seventy-five thousand barrels, is based on both sets of perforations?

A Yes, sir.

Q How much oil do you think there might be in the upper set of perforations that you propose?

A Possibly in the order of twenty to thirty thousand barrels.

Q Mr. Daniels, I note on your Exhibit No. 2 that you have proposed a two-inch tail pipe from the Wolfcamp formation on down --

A Yes, sir.

Q -- in the Devonian completion. Why have you used two-inch pipe in that tail pipe?

A Well, we have to -- above the upper packer we have to use two-inch in order to make it stiff, have stiff enough pipe in order that we can set our upper packer, and below there, we could very easily use inch and a half, but since we had, we would hate to go from inch and a half to two-inch and then back to inch and a half, but it is possible to do.

Q You are not using two-inch pipe in the tail pipe because it is more efficient to flow this type of flow through?

A No, sir.

Q What did you say was the source of the information that you derived the curves on Exhibit No. 4 and 5?

A They are from Mr. Gilbert's paper entitled "Flowing and Gas-Lift Well Performance," and it was presented at an API meeting, I believe, in 1954 out in Los Angeles, California.

Q Now, Mr. Gilbert in his paper presented the data that you drew these curves on?

A Yes, sir.

Q Where did Mr. Gilbert get the data that he presented?

A From actual tests in the field, and I believe there is one or two fellows that have done some basic research, and he used their information in conjunction with his actual field test.

Q Well now, I note that you show performance for various

rates of production in four different sizes. Did Mr. Gilbert, in his field tests, test all of these four sizes of tubing?

A I believe he did, yes, sir. I might add that this is the only article that I found or have been able to find of vertical lift on two-phase flow.

Q Mr. Daniels, I have read this paper that Mr. Gilbert wrote, and it is my understanding that he had data on one size of tubing by actual field test and the others were extrapolated from theoretical formulas, for the other sizes of tubing, is that correct?

A I don't know. I would have to look at the -- I have read it, but it has been several weeks ago. Yes, sir, you are correct.

Q And what size of tubing did Mr. Gilbert use in these field tests?

A I believe two-inch or two and a half inch.

Q He frequently refers to 2.67 five-inch tubing.

A That's two and a half inch tubing.

Q And he doesn't have any field performance on two-inch or one and a half, or one and a quarter inch tubing, does he?

A No, sir, it is all based upon his comparison with his larger size tubing.

Q Have you read any other articles on this subject of any authority, Mr. Daniels?

A This is the only article I have been able to find in the literature.

Q So you don't know whether other articles might indicate that the smaller size tubing might be less efficient?

A No, sir, I do not. All my testimony is based on the curves presented in this article.

MR. NUTTER: I believe that's all. Thank you.

MR. PORTER: Anyone else have a question? Mr. Utz.

QUESTIONS BY MR. UTZ:

Q Mr. Daniel, comparing gas lift recovery with annual pump recovery, what is the efficiency comparing the two?

A I don't believe I can answer that right off.

Q You do not know, then, whether you will get as much oil by gas-lift as you can by pump?

A I believe we can get as much oil by gas-lifting as we could by rod pump.

Q Just as much?

A Yes, sir.

Q You do not even consider pumping these wells?

A No, sir.

Q Mr. Daniel, are there any other wells or locations in the King Pool which you anticipate that you might dually complete?

A Yes, sir.

Q And what are those wells?

A This well, the Lowe "C" 1, is presently completed in the Wolfcamp.

Q What is the location?

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A This one location east of the subject well is the Lowe
"3" 1. I do not have the location on this plat.

Q Is that a completed well?

A Yes, sir, it is completed in the Wolfcamp, completed some
two or three weeks ago, and then that well will possibly force this
well, and this, our State --

MR. PORTER: By "this well," you are referring to Well
No. 4?

A Yes, sir. No. 4. And we are in the process of complet-
ing in the Wolfcamp our State of New Mexico "C" 2, and that will
force our Reed No. 2 to be a Wolfcamp, and then there are several
other possibilities further south.

Q You lost me on that second well. I have the first one.
The No. 4.

A And the second one will be the J. R. Reed Well No. 2 lo-
cated right south of the subject well of this application.

Q You are in the process of completing that well now?

A No, sir, we are in the process of completing in the Wolf-
camp Our State of New Mexico "C" 2.

Q What section is that in?

A 36.

Q There are three other wells which you anticipate which
you might want to dual?

A There is the subject well for this application, and pos-
sibly these two, and then maybe later on we will have -- can find

some more somewhere.

Q The No. 4 Reed, is that a completed well?

A Yes, sir, it is completed in the Devonian.

Q When did you complete that well?

A Reed 4 was completed in November, 1957.

Q And your No. 2 Reed, is that a completed well?

A Yes, sir, it was completed in November, 1956, in the Devonian.

Q And you have not completed your 2 "C"?

A Our State 2 "C" is in the process of being completed in the Wolfcamp at the present time. It was originally a Devonian well.

Q Did you have a completion date on your 1 "B," Cabot 1 "B" or Lowe 1 "B?"

A Our Lowe "B" 1 was completed, it was placed on production on August the 12th, 1957, from the Devonian.

Q What size casing did you use in the No. 4 Well?

A Five and a half inch.

Q The No. 2 Well?

A The Reed 2, five and a half inch.

Q Are you using five and a half in the 2 "C?"

A Yes, sir, it has five and a half inch casing.

Q Therefore, you are in a position where none of these other three wells can be completed with any larger tubing than inch and a half?

A Inch and a half, yes, sir.

Q Why did you go ahead and complete the No. 4 and the No. 2 with five and a half inch casing?

A Our drilling program was set up to set up five and a half inch casing, and we were not sure that we would encounter any pay except the Devonian, and if we were going to have only one pay in the field, we thought it would be more economical to place five and a half inch casing, and by the time we reached -- the Wolfcamp was productive, we already had our intermediate casing set, and that would limit the size of the pipe that we could set thereafter, and we have always set eight and five-eighths intermediate casing and you can't run anything but five and a half standard casing.

Q Your answer is that you were too far along with these other completions before you knew whether the Wolfcamp was productive?

A That's right.

Q One final question. I believe you stated that the Cabot Carbon Company would have a net profit, was it, of two dollars and twenty cents a barrel?

A Yes, sir, after taxes and royalty. We have some twenty-five percent royalty to pay.

Q What was the gross price of the oil when you made that calculation?

A Three dollars and eight cents a barrel.

MR. UTZ: That's all.

QUESTIONS BY MR. PORTER:

Q Mr. Daniel, I believe you testified that according to your belief your flow efficiency would be as great or greater in the inch and a half tubing as it would be in the two-inch tubing --

A Yes, sir.

Q -- down to this depth of 10,000 feet?

A Yes, sir.

Q And the expected allowable for that?

A Yes, sir, our Wolfcamp, using 33 barrels per unit, will have an allowable of around 154 barrels per day.

Q Also you testified that when you have to resort to artificial lift, that you propose to use gas-lift?

A Yes, sir.

Q Now, is it expected that -- first, let me ask you, can you gas-lift both zones simultaneously?

A Yes, sir, we can.

Q Do you expect to have to do this to lift them both at the same time, or do you expect the Wolfcamp to be depleted before --

A I expect that we will have to artificially lift the Wolfcamp and possibly the Devonian will still be flowing, and that the Wolfcamp will be abandoned -- will have to be plugged out before the Devonian.

MR. PORTER: Thank you. Anyone else have a question of the witness?

QUESTIONS BY MR. FISHER:

Q Mr. Daniel, do you know what the producing mechanism of the Wolfcamp formation is?

A In the Wolfcamp?

Q Yes, sir.

A I believe it is a water drive.

Q What about the Devonian?

A It is a water drive.

Q Do you know the highest producing gas-oil ratio of any Wolfcamp oil well in that field?

A I believe around 990 to 1, to the best of my knowledge. The Forrest Well now has a ratio of around 260 or 70 cubic feet per barrel.

Q Do you have any idea how high the gas-oil ratio might be from your studies of the Wolfcamp in that particular pool?

A Well, this is pure speculation, but I would say somewhere between 1000 to 1200.

Q Then the gas-oil ratio wouldn't appreciably change these curves?

A No, sir.

MR. FISHER: That is all.

MR. PORTER: Anyone else have a question?

REDIRECT EXAMINATION

BY MR. CHRISTY:

Q Mr. Nutter asked you if this article was not based on actual field tests with the one and a half and one-quarter inch tub-

ing, but I believe you have testified that there have been actual field tests in other states; Texas, Oklahoma and Louisiana?

A I don't know about tests of flow rates, but they are using inch and a half tubing.

Q Two sets of them?

A Two sets of them.

Q Now, Mr. Utz asked you concerning rod pumps. I believe you previously testified that you could not use rod pumps and artificial lift for both zones?

A That is correct.

Q Why?

A Because it will take two and a half inch tubing.

Q So if you use rod pumps you could only lift one?

A Yes, sir, that's right.

MR. CHRISTY: That is all.

MR. PORTER: Any further questions? Witness may be excused.

(Witness excused)

WALTER F. G. STEIN

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

DIRECT EXAMINATION

BY MR. CHRISTY:

Q Would you please state your name and address?

A My name is Walter F. G. Stein, and I am from Pampa, Texas.

Q By whom are you employed and in what capacity and how many years have you been employed in your present position?

A I am employed by the Cabot Carbon Company as chief petroleum engineer and have been in that capacity for the last ten years.

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

A No, sir, I have not.

Q Would you please state your professional qualifications as an engineer?

A I was graduated in 1929 in Germany after studying at the University of Berlin in the majors of physics and chemistry. After graduation, I was employed by the United Gas Company for approximately two years and then by Magnolia Petroleum for about six years in the Natural Gas and Gasoline Department. Then for three years I was petroleum engineer for the Texas Railroad Commission statewide and resided in Austin and Corpus Christie. Two years thereafter I operated out of Corpus Christie as a consultant and service engineer as a partner of the Stein-Henderson Engineering Company. After that I went to the Army for about six years, and except for those six years in the Army, I have been in the oil and gas business for twenty-nine years.

Q Are you a registered professional petroleum and chemical engineer?

A I am a registered petroleum and chemical engineer, and I have previously testified as an engineer before the Texas Railroad

Commission and the Oklahoma Corporation Commission, and the Kansas Corporation Commission.

MR. CHRISTIE: Does the Commission have questions concerning his qualifications?

MR. PORTER: We consider him well qualified as an expert.

Q Are you acquainted with the King Field in Lea County and the particular problems which Cabot Carbon Company has encountered with the operation of this field?

A Yes, sir. As chief petroleum engineer, I am assistant to the vice president in charge of oil-gas and gasoline operations, and I am presently responsible for the economic analysis of ventures in those three fields. I am acquainted with the problem in the King Field not only from the oil and gas production standpoint, but also from the -- with the problems that we encounter in the gasoline plant operation in the King Field.

Q Now, would you please tell us what installations Cabot has in this field?

A Well, sir, besides our investment in the oil wells and the producing facilities which we have to produce oil and gas from those wells, we have built a gasoline plant in this field far ahead of the full development of the field, shortly after our Fleet No. 1 which was our first well, was completed. We have built a gasoline plant for actually one reason only, and that is to eliminate waste in this field, so we would not waste either gas or liquid hydrocarbon which are contained in the gas.

Q Where is this plant located and what is its capacity?

A This plant is located in Section 35, and I believe the gentleman had a copy of this Exhibit. It is located right here on the Fleet lease in Section 35.

Q That would be in the south half of the southeast of Section 35?

A Yes, sir.

Q What is its capacity?

A The plant has an ultimate overall capacity of eight million, seven hundred five cubic feet. The refrigeration facilities which we have, and this is a refrigeration plant, is designed for six million cubic feet of gas per day. However, the compression facilities which we have installed at the present time are only for three million eight hundred thousand cubic feet per day.

Q Now, could you tell us a little about the operating problem which you have encountered in the plant with relation to the King Field?

A Yes, sir. As I mentioned before, as soon as our Fleet No. 1 Well was drilled, we contemplated the building of this gasoline plant. At that time the geological indications were such that we would have 16 Devonian wells. There was no mention of Wolfcamp except that we did have the Forrest Well in the field. The estimates made by other geological departments, engineering departments, were considerably higher. However, we felt reasonably sure that if we built a plant sufficient to handle the production of gas from 16

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wells, that we would have a plant large enough to take care of the gas produced in the field now and at a future date when gas-oil ratio become greater. The drilling history of the field, however, shows that we only have 12 or possibly 13 Devonian wells, which is short of our estimate. Now, if we had had those 16 Devonian wells, and at that time the oil allowable was 275 barrels per day, these 16 wells would have yielded about four million four hundred thousand cubic feet per day, that is, assuming a gas-oil ratio of approximately 1000 cubic feet per barrel. We expected a cutback, however, saw the handwriting on the wall, and decided to reduce the initial capacity of the plant, which is limited by the compression facility, to three million eight hundred thousand cubic feet, and that is what we have in the plant now, three million eight hundred thousand feet. The expected reduction of production allowables throughout 1957 and 1958 did produce a gas allowable -- I mean gas volume available to the plant far below the \$3,800,000 we needed to make the gasoline plant a successful venture. Eleven of the Devonian wells now have an allowable of 223 barrels against the estimated 250 and against the original allowable of 275 barrels, which is a considerable cut. One of the Devonian wells has an allowable of 163 barrels.

This gives us a maximum gas volume per day, 2,500,000 cubic feet per day, which is 1,300 MCF less than our anticipated daily throughput for which we designed compression facilities. That is about 33 per cent less than estimated originally. Now the pipelines to which we are connected to, one is El Paso Gas line and the other

one in Phillips' product line, are capable of taking all the products from the plant, the dry gas and the liquid hydrocarbon, from the processing of 6,750,000 cubic feet per day. I might say, in kind of a summary, a volume which would guarantee the successful operation of this gasoline plant over an extended period of time should be equal to the present compressor facilities of 3,800,000 cubic feet. The plant cost, including a small gathering system which extends to all the wells except the northeast one, was \$865,000.00 and the plant now produces approximately 300 barrels of liquid hydrocarbons per day and gives permanent employment to five people in the plant.

Q Now, how much is your gas throughput at the present time?

A We started operations December, 1957, and have passed on an average of slightly over 2,250 MCF per day. For continued operation, of course, this volume is too small, insufficient, and we can't continue to operate and maintain the plant from the revenue we derived from the small volume.

Q Now, if no more gas is found or produced, what would be the result as to the continuation of gas extraction and processing operations in the field?

A Well, if this plant does not receive a large amount of gas, the operation of the plant, as I pointed out, is uneconomical and the plant would have to be shut down in a rather short time. Cabot has made a strenuous effort in trying to obtain additional gas around the King Field and hoped that the development in the immediate

area would be much more favorable and yield additional volumes.

However, our hopes have not been fulfilled at all.

Q Mr. Stein, is there any gas in this area which could be presently made available to the plant so as to guarantee its continued operation?

A Yes, sir. From geological and engineering evidence, of which part was presented today, we know that there is a considerable amount of gas contained in the Wolfcamp pay, which at the present time is held behind the pipe in some of Cabot's wells. The total amount of Wolfcamp gas reserves is not known to me and I wouldn't be able to calculate it at the present time. However, we believe were this gas made available to the plant, it is probable that the amount is sufficient to supply the additional needed volumes for a successful operation of this plant. That would guarantee that the plant would more or less, and I think more so, operate until both the oil and gas in the Wolfcamp and in the Devonian is depleted, or in other words, the plant would operate for a lifetime of the field.

Q Now, Mr. Stein, is there any of the gas or liquid hydrocarbon being now produced in the field or to be produced from the subject well, are any of them being wasted?

A No, sir. The Cabot Carbon Company has connected its gathering system temporarily to every one of the batteries in the King Field with the exception of the Forrest Lowe Well. This well showed, at the beginning, on the instigation of the plant, that it was depleting in production, and right now I think that the latest

tests show there is only about 6,000 cubic feet of gas available at that well, which is very little above the fuel requirement of that well. The gas which we receive and process is sold to El Paso Natural Gas Company, with the exception of fuel which we return to the leases for their operation. Some of the returned fuel was used in the development of the King Field by being used as cleaning rig fuel. Now, we have installed our return system in such a way that the gas on the 850 pound pressure can be returned to the leases for gas-lift purposes. The gas that is processed in the plant has a hydrocarbon liquid content, including propane, from propane on up of about 6.7 gallons. We recover approximately 32 gallons of the liquid from the gas. The remaining in there is propane, and the total production of the plant is sold directly to Phillips Petroleum Company by a pipeline, and there is no flaring or burning of the liquids because both companies that buy from us have a hundred percent take contract and there is no flaring or burning of either gas or liquid in the field.

Q Now, Mr. Stein, would you briefly summarize for us what your testimony is with relation to the potential waste of the subject well in the field and the economic factors involved with Cabot in this plant in connection with the subject well and the field?

A Well, sir, we believe that the King Field is the first field in New Mexico in which the elimination of waste of both oil and gas was made totally effective before the field was ever completely defined. We made provisions in the early life of the field

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to erect sufficient equipment to eliminate all waste, and this was done with an expenditure of a large amount of money, as I mentioned before on the part of Cabot Carbon Company wherein the company took a great risk as to the possibility of ever regaining its plant investment cost. Unfortunate circumstances such as we have experienced in the last year, the reduction of oil allowables and then the fact that the field was disappointing, that we didn't get the 16 Devonian locations, resulted in this lesser gas volume of which I spoke a while ago, and if it is not possible to gain additional gas for this plan, then economic and satisfactory operation of the plant is out of question. To abandon the plant now would immediately cause a waste in all the gas and liquid hydrocarbons that we now recover and put to use and would be flared, since the pipeline company could not use the sour -- the gas is sour -- could not use the sour nondehydrated and liquid-containing gas for normal pipeline requirement. The only, the one and only solution that I can see now, after having reviewed the field is this, to continue to prevent waste, would be that the Commission would allow Cabot to proceed with the dual completion of wells, which would solve this question of not having sufficient gas, and do that wherever it is indicated and possible.

MR. CHRISTY: No further questions.

MR. PORTER: Anyone have a question of Mr. Stein? Mr. Cooley.

CROSS EXAMINATION

BY MR. COOLEY:

Q Mr. Stein, has Cabot Carbon made any effort to procure gas from sources other than the King Field to run the plant?

A Yes, sir, I had a survey made of the Blanco Field, the Gladiola, north Gladiola, and Sinclair beat me to it, they got the gas.

Q To your knowledge, all available sources have now been taken up?

A As they show now, yes, sir.

MR. COOLEY: That's all.

MR. PORTER: How about the Blanco Field?

A It is being connected now to Sinclair's plant in the Gladiola.

MR. PORTER: Anyone else have a question?

MR. COOLEY: One question.

QUESTIONS BY MR. COOLEY:

Q Do you feel that if all the gas which is available in the King Field in both the Devonian and Wolfcamp were made available to this plant that it would then be economic to proceed and --

A Yes, sir. The difference in the plant which would make it from an uneconomic to economic venture is a million cubic feet, or million four, closer to a million four, and, of course, I figured it this way, that eventually the gas-oil ratios are going to become larger in the Devonian to some extent. Those fields are not going to have big ratios because of the water features of the reservoirs, and we will be able to add compressors too, but at this time we almost

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have to have the three million eight, or a figure near it to continue operating the plant.

MR. COOLEY: Thank you.

MR. PORTER: Mr. Stein, I believe you testified that your plant at present has approximately 300 barrels per day liquid output. Did you say who you are selling this to?

A Phillips Petroleum Company. It is sold as an S D product, a mixture of hydrocarbon and an extract of 65 percent propane, and that goes to Phillips Petroleum Company. Of course, they invested quite a bit of money in building the product line to our plant, too.

MR. PORTER: Any further questions?

MR. CHRISTY: That is all the applicant has.

MR. PORTER: I don't have any questions, but I would like to say I like to hear you talk. I don't believe I have ever heard a blend of German accent with a Texas drawl.

The witness may be excused.

(Witness excused)

MR. CHRISTY: That is all for the applicant. I laid down in front of the Commission this recent article which is on the gasoline plant which Mr. Stein has testified to. That is all the applicant has.

MR. PORTER: Does anyone else have any testimony to present in the case? Any statement concerning the case?

MR. DEHLINGER: Martin Dehlinger, with the Forrest Oil Corporation.

The Forrest Oil Corporation is interested in this case in view of their offsetting well to the subject well, and it is their opinion that they concur with the ideas of the Cabot Carbon Company and believe that the proposal for the dual completion of this well will be the most feasible way to protect the correlative rights and stop underground waste of the mineral resources of the state that has yet been suggested.

MR. TOMLINSON: W. P. Tomlinson with Atlantic Refining Company. Atlantic is an owner of an interest in this well. We support Cabot in this matter. There are two features of Cabot's plan for operation that appeal to us. One is its feasibility from a mechanical standpoint and producing standpoint, and, second, it is desirable from the economy and conservation standpoint to divert this gas through a gasoline plant at this time. We are concerned that we might not have a market for it at a later date, and certainly would like to see it developed. We, therefore, ask for your favorable consideration.

MR. PORTER: Anyone else have a statement? Anything further in the case?

MR. CHRISTY: I might state that Gulf, which is the only other offset owner, was notified and we have a registered receipt from Atlantic, Gulf and four of the offset operators.

MR. PORTER: Anything else? We will take the case under advisement.

At this time we will recess the hearing until 1:15, and I

believe the case will be considered immediately after noon will be
 1958.

C E R T I F I C A T E

STATE OF NEW MEXICO)
 : ss
 COUNTY OF BERNALILLO)

I, J. A. TRUJILLO, Notary Public 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 stenotype 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 8th day of May, 1958
 in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Joseph A. Trujillo
 Notary Public

My commission expires:
 October 5, 1960.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 1365
Order No. R-1126-A

APPLICATION OF CABOT CARBON COMPANY
FOR AN OIL-OIL DUAL COMPLETION IN
THE KING-DEVONIAN POOL AND KING-
WOLFCAMP POOL IN LEA COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on January 7, 1958, at Santa Fe, New Mexico before Daniel S. Nutter, Examiner duly appointed by the New Mexico Oil Conservation Commission in accordance with Rule 1214 of the Commission Rules and Regulations, and Order No. R-1126 was entered denying the subject application, and this cause came on for hearing de novo at 9 o'clock a.m. on April 16, 1958, at Roswell, New Mexico, before the Oil Conservation Commission of New Mexico hereinafter referred to as the "Commission."

NOW, on this 28th day of April, 1958, the Commission, a quorum being present, having considered the application and the evidence adduced 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, Cabot Carbon Company, is the owner and operator of the H. L. Lowe "B" Well No. 1, located 467 feet from the South line and 850 feet from the East line of Section 26, Township 13 South, Range 37 East, NMPM, Lea County, New Mexico.
- (3) That the said H. L. Lowe "B" Well No. 1 is presently completed in and producing from the King-Devonian Pool.
- (4) That the applicant proposes to dually complete the said H. L. Lowe "B" Well No. 1 in such a manner as to permit the production of oil from the King-Devonian Pool and King-Wolfcamp Pool through parallel strings of 1 1/2-inch Hydril "CS" Joint tubing.
- (5) That the applicant proposes to gas lift the production from either or both of the above-described producing horizons in the event that either or both of said zones require the use of artificial lift.

(6) That the applicant has proved that it is, in this particular instance, mechanically feasible to dually complete the subject well as proposed and that such a completion would not cause waste.

(7) That approval of the subject application will not violate the correlative rights of any other operator of either of the above-described pools.

(8) That the subject application should be approved.

IT IS THEREFORE ORDERED:

That the applicant, Cabot Carbon Company, be and the same is hereby authorized to dually complete its H. L. Lowe "B" Well No. 1, located 467 feet from the South line and 850 feet from the East line of Section 26, Township 13 South, Range 37 East, NMPM, Lea County, New Mexico, in such a manner as to permit the production of oil from the King-Devonian Pool and King Wolfcamp Pool through parallel strings of 1 1/3-inch Hydril "CS" Joint tubing.

PROVIDED HOWEVER, That subject well shall be completed and thereafter produced in such a manner that there will be no commingling within the well-bore, either within or outside the casing, of gas, oil and gas, or oil produced from either or both of the separate strata,

PROVIDED HOWEVER, That prior to the actual dual completion the operator shall make pressure tests of the casing to prove that no casing leaks exist. In the event a casing leak is apparent the operator shall take appropriate steps to adequately repair the leak. The results of these tests shall be reported to the Commission on Form C-103.

PROVIDED FURTHER, That upon the actual dual completion of such subject well applicant shall submit to the appropriate District Office of the Commission copies of Oil Conservation Commission Form C-103, Form C-104, Form C-110, and Form C-122, outlining the information required on those forms by existing Rules and Regulations, and two copies of the electric log of the well.

PROVIDED FURTHER, That said subject well for dual completion and production shall be equipped in such a way that reservoir pressures may be determined separately for each of the two specified strata, and further, be equipped with all necessary connections required to permit recording meters to be installed and used at any time as may be required by the Commission or its representatives, in order that natural gas, oil, or oil and gas from each separate stratum may be accurately measured and the gas-oil or gas-liquid ratio thereof determined, and

PROVIDED FURTHER, That the operator shall make any and all tests, including segregation and packer-leakage tests upon completion and annually thereafter during the Annual Gas-Oil Ratio Test Period for the King-Devonian Pool, commencing in the year 1959, and whenever the packer is disturbed, but not excluding any other tests

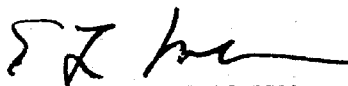
and/or determinations as deemed necessary by the Commission; the original and all subsequent tests shall be witnessed by representatives of offset operators if any there be at their election, and the results of each test, properly attested to by the applicant herein and all witnesses, shall be filed with the Commission within fifteen (15) days after the completion of such tests, and further, that applicant shall file with the Commission in duplicate a packer-setting affidavit, which affidavit shall be due within fifteen (15) days of the dual completion or whenever the packer is disturbed, and

PROVIDED FURTHER, That upon the actual dual completion of such subject well, applicant shall submit to the Commission a diagrammatic sketch of the mechanical installation which was actually used to complete and produce the seal between the strata, and a special report of production, gas-oil ratio or gas-liquid ratio, and reservoir pressure determination for each producing zone or stratum immediately following completion.

IT IS FURTHER ORDERED, That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order after proper notice and hearing the Commission may terminate the authority hereby granted and require applicant or its successors and assigns to limit its activities to regular single-zone production in the interests of conservation.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION



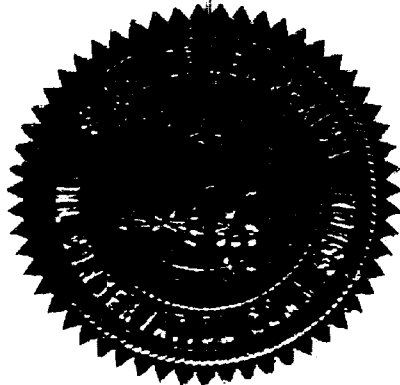
EDWIN L. MECHEM, Chairman



MURRAY E. MORGAN, Member



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



BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE NO. 1365
Order No. R-1126

APPLICATION OF CABOT CARBON COMPANY
FOR AN OIL-OIL DUAL COMPLETION IN
THE KING-DEVONIAN POOL AND KING-
WOLF CAMP POOL IN LEA COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on January 7, 1958, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the New Mexico Oil Conservation Commission, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 12th day of February, 1958, 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, Cabot Carbon Company, is the owner and operator of the H. L. Lowe "B" Well No. 1, located 487 feet from the South line and 850 feet from the East line of Section 26, Township 13 South, Range 37 East, NMPM, Lea County, New Mexico.
- (3) That the said H. L. Lowe "B" Well No. 1, is presently completed in and producing from the King-Devonian Pool.
- (4) That the applicant proposes to dually complete the said H. L. Lowe "B" Well No. 1 in such a manner as to permit the production of oil from the King-Devonian Pool and King-Wolfcamp Pool through parallel strings of 1 1/2 inch tubing.
- (5) That the applicant proposes to utilize gas-lift in the event either or both of the above-described producing horizons require the use of artificial lift.
- (6) That the use of 1 1/2 inch diameter tubing in the proposed dual completion would impair the flow efficiency of both producing horizons, thereby necessitating the premature use of artificial lift equipment.

-2-
Case No. 1365
Order No. R-1126

(7) That it would not be mechanically feasible to artificially lift the production from both zones simultaneously in the manner proposed by the applicant.

(8) That the proposed dual completion would be impractical and inefficient, and that the subject application should, therefore, be denied.

IT IS THEREFORE ORDERED:

That the application of Cabot Carbon Company in Case No. 1365, be and the same is hereby denied.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

E. L. Nechem

EDWIN L. NECHEN, Chairman

M. E. Morgan

MURRAY E. MORGAN, Member

A. L. Porter, Jr.

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

ir/

16 10142-152 gas, 3140. 210' free oil
No surf. 270' free oil
450' gas + 200' mud. 180' water

acquiring & above zone
10152-162 + 10195

17 10152-162 + 10195
gas 11' + 10' H gas 45'
min + 10' oil
5850 O + G w/ 25% water

2 10152-10160
acc 27 BF 3hr 45% H₂O

squeeze 152-162
refurf 10151-10159

18 10154-10159 at 1/2 tank oil
2070 O + G out w/ water 80' clean oil

perf 10126-10136 clean
10154-10159 open, no log
10126-10136 water and kicking
WSP made 165 BO in 10 hrs

DST 7 miles from H 1

1 9099-9258 wk bl No 5000

2 9295-9426

3 9772-9820 wk bl inc to string
gas 100 min 1450
oil cut w/ water + mud

4 9835-9900 fair bl 6' free oil

5 9898-9952 wk bl No 5000

6 9952-10005 wk bl 30' O + 60' mud

7 10131-10180 string bl 5000' O + 60' mud

8 10126-10180 string bl 50 BO in 1 hr

9 10180-10220 string bl 100 BO in 70 min

10 10603-10622 wk bl No 5000

11 10785-10821 gas 15' free oil
1410 gas cut + 50' O + 5' mud

12 11038-11079 gas 600' sl G cut
water + mud

13 12237-12264 fair bl died in 41 min.

14 13088-13145 wk bl died in 22 min

15 ~~10404~~ perf
10142-10152 gas 30 min mud 120 at 125'
18 BO in 3 hr

acquiring above zone, slt water;
squeeze above zone, refurf;

EXAMINER HEARING
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 8, 1958

IN THE MATTER OF: Case No. 1365

TRANSCRIPT OF PROCEEDINGS

DEARNLEY, MEIER & ASSOCIATES
INCORPORATED
GENERAL LAW REPORTERS
ALBUQUERQUE, NEW MEXICO
3-6691 5-9546

EXAMINER HEARING
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 8, 1958

IN THE MATTER OF:

Application of Cabot Carbon Company for an oil-oil dual completion in the King-Devonian Pool and King-Wolfcamp Pool in Lea County, New Mexico. Applicant, in the above-styled cause seeks an order authorizing the dual completion of its H. L. Lowe "B" Well No. 1, located 467 feet from the South line and 850 feet from the East line of Section 26, Township 13 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from both the King-Devonian Pool and King-Wolfcamp Pool through parallel strings of 1½ inch tubing.

Case 1365

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF PROCEEDINGS

MR. NUTTER: We will take up next Case 1365.

MR. COOLEY: Case 1365: Application of Cabot Carbon Company for an oil-oil dual completion in the King-Devonian Pool and King-Wolfcamp Pool in Lea County, New Mexico.

MR. CHRISTY: S. B. Christy of Hervey, Dow and Hinkle, for the Applicant, Cabot Carbon Company. Mr. Examiner, we have one slight amendment in the application, in paragraph No. 2, line two, strike the word "then". The application in paragraph 2 is that further drilling was after the cement, and it should be it was drilled.

The offset owners to this application are Atlantic, Forrest,

and Gulf. We have given them notice. We have registered return receipts from them of November 25th and 26th. We have one witness in connection with the application.

(Witness sworn.)

JOE M. DANIEL

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

DIRECT EXAMINATION

By MR. CHRISTY:

Q Would you please state your name and address and occupation?

A I am Joe M. Daniel, Jr., of Pampa, Texas, and I am employed by the Cabot Carbon Company in the capacity of senior petroleum engineer.

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

A No, sir.

Q Will you please tell us what forms of higher education and learning you have in the field of petroleum engineering?

A I am a graduate of the University of Texas, finishing in January, 1949, with the degree in Petroleum Engineering.

Q What have you done since then in connection with petroleum engineering work, Mr. Daniels?

A I was employed by The Texas Company from February, 1949, to August the 15th, 1957, with the following capacities: First, I was a roustabout engineer at Jal, New Mexico, for one year; following

that, I was a field engineer at Jal. New Mexico, for one year. My duties as a field engineer were to prepare workover requests and assist in performing the workovers, maintaining production and cost records, and assisting in drilling and completing oil wells. I was then made a reservoir engineer at Midland, Texas, where I stayed two years. There I prepared basic reservoir studies, prepared secondary recovery project reports, and recommended production practices based on reservoir performance. I was then transferred to Pampa, Texas, and made District Reservoir Engineer, in which I spent three years. There I prepared annual reserve reports, made property evaluations, supervised in an engineering capacity six secondary recovery projects, and performed radioactive and electrical log interpretations, and assisted in determining completion methods and intervals. Also helped set up a program to obtain adequate reservoir data in all new areas of development, and I recommended all field development wells for the drilling of oil field development wells. Then I was transferred to El Campo, Texas, where I had the title of Assistant District Engineer. I spent two years there, and while there I assisted in supervising nine field engineers and five reservoir engineers; prepared casing and mud programs for all wells drilled in that district; assisted in preparing completion practices, handled all Texas Railroad Commission work concerning gas wells, designed small compressor stations, gathering systems, and gas handling equipment. Also handled all special engineering projects that arose in the district, such as automation of tank

batteries and directional drilling.

Q Have you ever testified before any other regulatory bodies?

A Yes, sir.

Q Which one?

A The Oklahoma Oil Conservation Commission.

Q Are you familiar with application 1365 before the New Mexico Oil Conservation Commission?

A Yes, sir.

Q Are you familiar with the area involved in that application and the wells and their drilling and producing history?

A Yes, sir.

MR. CHRISTY: Does the Commission have any questions concerning the witness's qualifications?

MR. BUTTER: No, the witness is qualified as an expert.

Q Will you please explain to the Examiner the purpose of application 1365?

A The application is to dually complete Cabot Carbon Company H. L. Lowe "B" Well No. 1, located 467 feet from the south line, 850 feet from the east line of Section 26, Township 13 South, Range 37 East, Lea County, New Mexico. It is located in the King Pool. We propose to perforate the five and a half inch casing opposite the Lower Wolfcamp formation from 10,220 feet to 10,234 feet and conduct productivity tests through straddle packers. If not productive, the interval will then be squeezed off. We then propose to test the Lower Wolfcamp formation from 10,178 feet to 10,185 feet by

perforating the five and a half inch casing and conducting productivity tests through straddle packers. If these intervals are productive, we propose to set a temporary bridging plug at approximately 10,300 feet to separate the Devonian and Wolfcamp formations in the well bore. The Wolfcamp interval will be produced until the equipment for dual completion can be obtained. After arrival of the dual completion equipment, we propose to set a packer at approximately 10,300 feet and 10,100 feet and produce each zone through one and a half inch tubing.

Q Have you conducted tests on this well?

A Yes.

Q Would you please explain the manner of completion of the well and the tests taken and your results?

A The subject well had five and a half inch casing set at 12,320 feet, and cemented with 700 sacks. The top of the cement was 8995 as determined by temperature survey. The well was drilled to a total depth of 12,437 feet, and later plugged back to 12,310 feet. The casing was perforated from 12,277 feet to 12,307 feet. The well was potentialized. The subject well was placed on production from the Devonian reservoir on August 12, 1957. On the initial potential test taken August 9, 1957, the well flowed 312 barrels of 47 degree A.P.I. corrected gravity oil in 12 hours on a half-inch choke. On a drill stem test taken June 26, 1957, in the Lower Wolfcamp formation from 10,115 feet to 10,191 feet, the tubing was opened for 100 minutes with gas to the surface in 7 minutes

and oil to the surface in 55 minutes. The well flowed 23 barrels of oil in 30 minutes, reversed out all oil and gas recovered below the circulating sub 300 feet of salty sulphur water. The initial flowing pressure was 1,010 psi. The final flowing pressure was 3160 psi and the thirty-minute shut-in pressure was 3920 psi.

Q Will this proposed dual completion permit you to offset present production on adjacent land and protect the correlative rights of the owners in the area?

A Yes, sir.

(Applicant's Exhibit No. 1
marked for identification.)

Q I hand you what has been marked Applicant's Exhibit 1 and ask you if you will please identify it.

A Exhibit 1 is a plat showing the location of our H. L. Lowe "B" Well No. 1 and further shows the offset wells and offset operator owners.

Q The tests which you have made on the well indicated that the well is susceptible of production of oil in more than one zone?

A Yes. The Devonian was proven productive on completion. It had an initial potential of 312 barrels of oil in 12 hours. Since it is a one well lease, each day has been a test; a recent test on its production was 259 barrels of oil in 24 hours with a GOR of 7870 on an 11/64 choke, and has a tubing pressure of 600 psi. The Devonian has a bottom hole pressure of 4653 psi and produces 47 gravity oil. Cumulative production has amounted to

5,000 barrels. While drilling the well, a porous Wolfcamp zone was noted which was equivalent to the Wolfcamp producing interval in the offset well, the Forrest Oil Company's Lowe No. 1. A drill stem test was conducted and the results have previously been given in this testimony. The electric log run on the subject well showed that the oil from the drill stem test came from an interval at 10,178 feet to 10,185 feet. Also the log showed a porous zone from 10,220 feet to 10,234 feet. The Forrest Oil Company's well is currently producing 500 barrels of oil per month or 17 barrels per day, and has a cumulative oil recovery of 178,000 barrels. The oil gravity in the Forrest Lowe well is 38 degree A.P.I. oil.

(Applicant's Exhibit No. 2
marked for identification.)

Q I hand you what has been marked as Applicant's Exhibit No. 2 and ask you to please identify it and explain it.

A Exhibit 2 is a diagrammatic sketch showing the proposed mechanical completion of the well in question. We propose to set a lower packer at approximately 10,300 feet. It will be a Brown Type RS-1 packer. Below this packer we will have 1900 feet of tailpipe. This tailpipe will be two-inch non-upset tubing. Above this lower packer will be approximately 200 feet of two-inch external upset tubing and the tubing, this 200 feet of E.U.E. tubing tubing will be externally wrapped with fiberglass. This will serve as an abrasive protection should the perforations in the Wolfcamp have any cutting action on our tubing. The upper packer will be

set at approximately 10,100 feet and it will be a Brown type DS-3 packer. Above the upper packer we will run approximately 10,100 feet of inch and a half tubing with high drill CS couplings. This inch and a half tubing will be internally coated with plastic for paraffine control. This will permit the Devonian production to be produced through one string. The second string of tubing will then be run to produce the Wolfcamp interval. It also will be inch and a half tubing with high drill CS couplings and internally coated with plastic for paraffine control.

The second string that will be run, that will produce the Wolfcamp formation, will have a landing nipple immediately above the upper packer and immediately above the landing nipple will be a circulating valve. This will permit us to change the fluid in the annulus above the upper packer.

Initially we propose to fill this annulus with salt water. When either of these zones require artificial lift, we can displace the salt water out of the annulus above the upper packer and run flow valves, gas lift valves in either or both strings and lift either zone or both with gas, using the annulus as the supply for the gas lift valves, and we can obtain our gas for the gas lift from our gasoline plant located in the King Field.

Q In your opinion, do you feel that there is a possibility of communication or migration of the fluids between the Wolfcamp and the Devonian in the annulus between the casing and the well bore?

A No, sir.

Q Are all of the fresh water zones and other producing horizons protected?

A Yes, sir. We have intermediate casing set at 4615 feet and cement was circulated to the surface and we used 450 sacks of cement in this operation. Therefore I feel that all producing zones and fresh water zones are protected behind the casing in this well.

Q In your opinion, is the proposed dual completion installation in accordance with good engineering practices and principles?

A Yes, sir.

Q Is it one of the types of dual completion standardly used in the Lea County area?

A Yes, sir, with the exception we propose to use inch and a half tubing.

Q Why do you propose to use inch and a half instead of two inch?

A Two strings of inch and a half tubing are the largest size tubing that we can run in five and a half inch casing.

Q But your technique is standard?

A Yes, sir.

Q Has this type of dual operation proven successful in actual field tests in the area?

A Yes.

Q Will the surface equipment be so designed and installed

that the reservoirs will be separately produced and their fluid separately tanked and gauged for absolutely no commingling?

A Yes, sir. Each producing zone will have its own separator and storage facilities. In other words, we will have a twin tank-battery installation.

Q Is the dual completion technique requested in the application recognized and accepted in general by the oil industry and other state regulatory bodies?

A Yes, sir. In the last three years over two thousand dual completions of this type have been performed in the industry.

Q Do you feel that corrosion would be a possible objection to your proposed manner of dual completion?

A No, sir, we have observed no evidence of corrosion in this field.

Q Is this sour or sweet crude?

A It is sweet.

Q Does this dual completion technique possess any more possibility for leakage or communication of the reservoirs than any other accepted method?

A No.

Q Will Cabot Carbon be willing to make packer leakage tests, separation tests and other tests required by the Commission to determine if there is any commingling or leakage?

A Yes, sir.

Q Under this proposed method of dualling, is it possible to

make bottomhole pressures on each separate zone and if so, explain how?

A Yes, sir. If you will refer back to Exhibit 2, you can see that the Devonian production will come through the long string of tubing and there will be no restriction in that tubing, and we will be able to run a bottomhole pressure bomb to the bottom of the two inch non-upset tubing below the second packer or lower packer which will be approximately 12,200 feet. So we will be able to get almost to the perforations in the Devonian, and in the Wolfcamp we will be able to run a bottomhole pressure bomb to within five or ten feet above the upper packer located at 10,100 feet.

Q Will you please explain to the Examiner the proposed method to be used in running these packer leakage tests you agreed to take?

A We will run the official five-day packer leakage tests which consists of using pressure recording device on the surface that has been calibrated with a dead-weight tester. The first day both zones will be shut-in. The second day one zone will be produced and at the end of the second day that zone will be shut-in and both zones will remain shut-in for an additional twenty-four hours. On the fourth day, the zone that has not been produced will be opened and produced for twenty-four hours. After this twenty-four hour test on the second zone, both zones will be shut-in for an additional twenty-four hours. By the pressure recorded at the surface, any leakage can be detected. In addition, we will have a daily check on possible leakage in that we will have two tank-

batteries and the difference in gravity of the two zones is approximately 9 degrees.

Q As to the economics involved, what would be saved by this dual completion if it is approved, as compared to the cost of drilling a twin well?

A Well, it is estimated that it would amount to a saving of some \$117,000.

Q If this application is not approved, how could your correlative rights in this instance be protected?

A Only by drilling an additional well on the same forty-acre tract, which we do believe to be uneconomically feasible under the known facts.

Q Do you have an electric log on this well?

A Yes, sir, I do.

(Applicant's Exhibit No. 3
marked for identification.)

Q I hand you what has been marked Applicant's Exhibit 3 and ask you if that is the electric log on the well in question?

A Yes, it is.

Q Were the three exhibits which you have testified about and identified made by you or under your supervision?

A Yes, sir, except the electric log, which is run by a service company.

MR. CHRISTY: We offer in evidence Applicant's Exhibits 1, 2, and 3.

MR. NUTTER: Without objections, Cabot's Exhibits 1, 2, and 3 will be admitted.

MR. CHRISTY: We have no further questions from this witness.

MR. NUTTER: Does anyone have a question of Mr. Daniel?
Mr. Porter.

CROSS EXAMINATION

By MR. PORTER:

Q Mr. Daniel, do you know what the initial production tests on the Forrest Oil Company well, the offset that you referred to, were?

A Yes, sir, I believe it was 384 barrels.

Q 384 barrels?

A 384 barrels per day on half-inch choke.

Q Do you remember when that well was completed?

A It was completed in October, 1951.

Q In the Wolfcamp pay?

A Yes, sir, from an interval of 10,126 feet to 10,136 feet.

Q Do you know what the present productivity of that well is?

A Yes, sir, it is making approximately 17 barrels a day by artificial lift.

Q 17 barrels a day by artificial lift?

A Yes, sir.

Q It looks like an allowable reduction is in order. The proration schedule shows the latest test to be 119 barrels. Of course, I don't have the date of that test.

A We contacted Forrest Oil Company, and that is the data that they gave us.

Q Well, our production records will give us the information we need on that.

MR. PORTER: That's all I have at this time.

MR. NUTTER: Any further questions? Mr. Cooley.

By MR. COOLEY:

Q Mr. Daniel, would you consider that the well which Mr. Porter just question you about, the Forrest No. 1 --

A Yes.

Q -- to have been economically successful? Do you have the cumulative production on the well?

A It is 178,000 barrels.

Q Is that sufficient production to pay out the well?

A Well, it appears that this well was drilled to test the Devonian and it was drilled to approximately 13,142 feet. I would say that it's right at the break-even stage right now.

Q Had the well been drilled to the Wolfcamp formation only as a Wolfcamp test, rather than a Devonian test, it would have already paid out?

A I would say it would have.

Q What is it then that makes you feel that your immediate offset on the subject lease would not be an economic success in the Wolfcamp formation?

A Well, we have two zones that we desire to perforate, one

of which was from 10,220 feet to 10,234 feet and this zone has not been tested. We are not sure that it will be all productive. The other zone is only from 10,178 feet to 10,185 feet, is only seven feet thick, and we do not feel that seven feet of net pay would justify spending approximately \$175,000.00 to drill a well.

Q Are both the zones to which you just referred open in the Forrest well?

A No, sir.

Q Which zone is not open?

A It would be equivalent to the upper zone.

Q The one which has not been tested?

A Which has been tested by a drill stem test.

Q How do the pay thickness's compare between your well and the Forrest well?

A They have approximately thirty-five feet of net pay in their well, even though they have only perforated ten feet. We have seven feet of net pay.

MR. COOLEY: That's all the questions I have. Thank you.

MR. NUTTER: Any further questions? Mr. Utz.

By MR. UIZ:

Q Mr. Daniel, what weight casing have you run in this well?

A Our long string, we had N-80 new pipe, and we had three weights, the heaviest was 23 pounds, and we used some 20 and some 17.

Q Where was the heaviest, up at the top?

A The heaviest was on the top. We had 871 feet of 23 pound pipe on top.

Q How much of each weight did you have?

A Then we had 1550 feet of 20 pound, then we had 7709 feet of 17 pound, and then we used 2170 feet of 20 pound on the bottom.

Q Now I believe you stated that it would be impossible for you to run two-inch tubing joint with high drill. What was the reason for your making that statement?

A Well, the drift diameter of five and a half inch casing weighing 23 pounds per foot is 4.545 inches. That is the drift diameter, and inch and a half tubing with high drill CS coupling has a joint O.D. of 2.113. That would give us a minimum clearance of .319 inches inside the casing.

Q Would there be enough clearance to run two and a sixteenth high drill in your 17 pound casing?

A Just a second, I would have to look it up. I believe we checked into it and it would not, but I do not know the O.D. of a two-inch tubing joint with high drill. If I have a high drill book here, I can probably find it. Two and one-sixteenth inch will have a joint O.D. of 2.330.

MR. NUTTER: What type of tubing is that?

A This is two and a-sixteenth inch tubing with a high drill C.S. coupling. That is the O.D. of the joint.

Q What is the I.D. of the 17 pound?

A The 17 pound? I do not have anything here that will give

me the I.D. Yes, I do have it, 17, the drift diameter is 4.767 inches. That is the drift I.D. of 17 pounds.

Q Then you would have a clearance of the difference between 767 and 660, is that correct, at .107 clearance on two and one-sixteenth O.D. high drill inside the five and a half inch 17 pound?

A I haven't checked it, but that sounds reasonable.

Q It is pretty close fit?

A Yes, sir, it certainly is.

Q Would you say that with that close a fit you could run two and a sixteenth O.D. in five and a half inch 17 pound at any depth?

A No, I wouldn't, but see, we have 23 pounds and 23 pound pipe, and that is our restriction on this case. Since that is on top, we have to go through that; therefore we had to decide on inch and a half tubing.

Q Would it be possible, Mr. Daniel, for you to run two and a sixteenth inch string to the Devonian and one and a half to the Wolfcamp?

A Well, I would have to do a little addition here to see. We felt like that using two strings of the same size it would permit each zone to have the same friction loss being produced up through the tubing. There will not be a lot of difference in the allowable, currently the Devonian has an allowable of 250 barrels a day and the Wolfcamp should have an allowable of 173 barrels a day. We feel like that inch and a half tubing, we can produce both zones through inch and a half tubing without excessive friction loss.

Q Well, you are going to have a different friction loss, anyway, because of the length of the flow stringers?

A That is true.

Q As a matter of fact, you will have 2177 feet more in the Devonian flow string?

A It will be two-inch tubing.

Q Up to 10,100?

A Yes, sir.

Q You are still going to have some friction loss in the two-inch, am I right?

A Yes, sir, but it does not amount to very much.

Q Mr. Daniel, have you made any study as to how efficiently you can pump the inch and one-half high drill strings at this depth?

A No, not pump, because if artificial lifting is required we will use gas lift, and so I have not done any study on pumping efficiency.

Q Do you feel that by using gas lift you can recover as much oil as by pumping?

A Yes, sir.

Q You have the gas available?

A We have the gas available as we have a gasoline plant located in the King Field.

MR. NUTTER: Mr. Porter.

By MR. PORTER:

Q Mr. Daniel, in this test information that you got from

Forrest, you probably gave the gas-oil ratio. I don't recall what it was.

A No, sir, I didn't. I believe it was 300 to 1.

Q The gas-oil ratio in the Wolfcamp --

A (Interrupting) Yes, from the Forrest well.

Q It has never been excessive?

A No, sir.

MR. UTZ: One other question.

By MR. UTZ:

Q Have you had any experience, Mr. Daniel, with pumping one and a half inch high drill tubing?

A No, sir, not pumping.

Q So you have no idea of how efficiently you can pump it at any depth?

A No, sir, I have not.

MR. NUTTER: Any further questions?

By MR. NUTTER:

Q Mr. Daniel, I missed it when you gave the top of the cement on your five and a half inch pipe.

A 8995 feet.

Q 8995, that is about 9,000 feet?

A Yes, sir.

Q So the top of the cement is well above the top of the Wolfcamp, isn't it?

A Yes, sir.

Q Referring to your Exhibit No. 1 there, Mr. Daniel, would you tell me which of those wells on that exhibit are completed in the Wolfcamp formation?

A There is only one well.

Q The Forrest well is the only Wolfcamp?

A Yes, sir, it is the only Wolfcamp well.

Q Everything else shown there is completed in the Devonian?

A In the Devonian, yes, sir.

Q How many wells does Cabot Carbon have in the pool?

A Let's see, I believe eleven wells, and we are drilling.

Q All completed in the Devonian?

A Yes, sir.

Q What size casing is in those wells?

A Five and a half.

Q What size tubing have you run?

A Two-inch.

Q I also missed your bottomhole pressure in the Devonian.

A The Devonian bottomhole pressure taken on November 4, 1957, was 4653 pounds, at a datum of minus 600.

Q What is the bottomhole pressure in the Wolfcamp formation?

A From the drill stem test, 30-minute shut-in pressure, 3920 pounds was recorded.

Q 3920?

A Yes, sir.

Q What does Forrest Oil report for their bottomhole in their

well?

A I do not know.

Q What is the gravity of the oil in the Wolfcamp?

A 38.

Q As compared to --

A (Interrupting) To 47 in the Devonian. That is 9 degrees.

Q You don't anticipate any problem as far as corrosion is concerned?

A No, sir, we have observed no corrosion.

Q Is the oil in both of these wells sweet oil?

A Yes, sir.

Q Do the oils in either zones contain paraffine?

A Yes, sir. I know that the Devonian contains -- we have had some paraffine problems.

Q Have you met those problems by plastic coating the tubing?

A We have not plastic coated any of our two-inch tubing, but using inch and a half on this well, we will plastic coat it, internally plastic coat it.

Q Mr. Daniel, in the use of gas lift, would there be some external valve on the tubing that would have to fit into the casing as well as the two strings --

A (Interrupting) We would have to pull our tubing strings and install our gas lift valve.

Q Do those take up much space as far as the tubing, casing annulus is concerned?

A I have some information on that. I do not have O.D. of the gas lift mantle but this circular here says that you can run wire line retrievable gas lift valves inside of five and a half inch casing on inch and a half tubing, but it does not tell you the O.D.

Q It doesn't tell you that you can run those if you have another string of inch and a half in the hole, does it?

A Yes, sir. It says permits running two strings of tubing equipped with wire line retrieving gas lift valves inside five and a half inch O.D. casing, and it's a type, this brand here, Garrett is the type SS-1 for inch and a half tubing, so it is possible, and we plan on doing it if necessary to run gas lift valves.

Q You don't know if those gas lift valves will fit in the annulus if you have a string of inch and a half and a string of two and one-sixteenth CS joint tubing?

A No, sir, I don't believe that you could run it then.

Q Mr. Daniel, have you ever run or seen run inch and a half tubing to a depth of 10,134 feet, and then support two one-inch tubing below that?

A Yes, sir, I have. There are several cases on the Gulf Coast and the lower packer will support that 1900 feet of tailpipe below the lower packer. We only have to have something like 6,000 pounds pressure of the tubing and 6,000 pounds compression to hold the packers in place.

Q While we are on these packers, is that Brown DS-3 a permanent

type packer?

A No, sir, it is a type that can be retrieved. It has a hydraulic hold-down feature; as soon as you relieve the tension, the weight of the tubing on it, it will release.

Q How about the Brown RS-1?

A The RS-1, it is a stringer-type packer which permits you to retrieve your tubing, the tailpipe, and will leave the outer shell of the packer seated, but you can go in with a retrieving sub and recover the outside portion of that packer. So it is not a permanent type. It is recoverable.

Q Isn't this something new, to be using recoverable packers in this type of dual completion?

A No, sir. There have been quite a few of them used this technique.

Q You know of any in the State of New Mexico?

A No, I don't.

Q I think the use of a retrievable packer in a dual completion in New Mexico is rather unique. Now, you stated that there have been 2,000 duals of this type in the past three years. Do you mean using inch and a half strings?

A That and seven inch.. I don't have a breakdown on that, but using this type of recoverable lower packer and retrievable lower and upper packer is what I am referring to. I have an article here that was presented to the American Society of Mechanical Engineers telling about this type, and it states, this paper was given at one

of their meetings in Oklahoma City on September 22nd, September 25, 1957; it was accepted by that society and it tells that this type of technique has been used in the industry only three years, yet some 2,000 wells have been dually completed using this type.

Q But some percentage of those were with seven inch casing?

A Yes, sir, they were.

Q And probably two strings of two-inch tubing?

A Yes, sir, but I do not have a breakdown.

Q How would you gas lift the Devonian formation, if necessary?

A We would have to gas lift it from above the upper packer.

Q You would be assuming that the fluid level would stand above the upper packer?

A Yes, sir, but with 4650 pounds bottomhole pressure, it may be somewhat less than that later on, but it will, certainly should raise the fluid high enough above 10,100 feet or approximately 2200 feet above that.

Q You would have to have a column of --

A (Interrupting) Yes, 2200 feet or more in the Devonian, in order to gas lift it.

Q Approximately what pressure would be required to support a column of fluid 2200 feet?

A About 11 to 1200 pounds bottomhole pressure. That is a column of salt water, if oil, it would be somewhat less.

Q Mr. Daniel, you stated that all your eleven wells in the King-Devonian Pool are completed with two-inch tubing. Why did you

use two-inch tubing in those wells? Wouldn't one and a half inch tubing be cheaper?

A Possibly, but we buy our equipment and tubular goods and two-inch is standard for our operations in most cases, and we have not carried any inch and a half tubing in stock in our stock. Inch and a half would be cheaper, we hadn't thought about it, considered it.

Q Would there be any more friction loss in inch and a half string than two-inch?

A Oh, there would possibly be some. I made some calculations. Using two-inch tubing for flowing approximately 270 barrels of oil a day with a GOR of 1200, I figured that the friction loss using two-inch tubing, and this would be about 10,000 feet of two-inch tubing, there would be approximately six pounds friction loss; while using inch and a half tubing that was internally coated with plastic, our friction loss would amount to only 15 pounds in 10,000 feet; so that is very little difference.

Q You think that the difference in friction loss is negligible?

A Yes.

Q But it is standard practice to use two-inch tubing strings?

A Yes, sir.

Q Mr. Daniel, I wonder if you could find out for us and send the information in as to the clearance that's available for use of two and one-sixteenth inch CS joint high drill tubing, and one and a half inch string of CS joint tubing with the gas lift valves?

A All right.

Q If that is at all possible.

A Yes, sir, I will.

Q Also the amount of clearance that is available for running the gas lift valves with the two parallel strings of inch and a half.

A All right.

MR. NUTTER: Mr. Porter.

By MR. PORTER:

Q I believe you testified that your company owns eleven wells in the pool?

A Yes, sir. I just counted them on the plat there.

Q Did drill stem tests indicate the presence of the Wolfcamp in the other wells or any other wells?

A No, sir, there seems to be no porosity development in the wells south of the Lowe well, that's the subject of this application.

Q In other words, it would be apparent now that the Wolfcamp would be limited to these two northernmost wells?

A Yes.

Q The one owned by you and one by Forrest Oil Corporation?

A Yes, sir.

MR. PORTER: Thank you.

MR. NUTTER: Any further questions? Mr. Utz.

By MR. UTZ:

Q Mr. Daniel, when you projected this well, was it intended to dually complete it, or was this something that came up after you

had set up the well?

A This was after the well was completed that we decided that we would like to dual complete it.

Q Is that why you ran five and a half inch?

A Yes, sir, because originally we had not planned on making a dual out of it.

Q Had you planned on making a dual of it before you drilled it, would you have run seven inch?

A Possibly, yes, sir.

MR. NUTTER: Well, you knew that Wolfcamp development was there, and had taken a drill stem test before you ran your pipe, though?

A Yes, sir, but it was only seven feet thick and we didn't at the time realize that we may want to produce that zone, and they went ahead and set five and a half and then after a study was made, it was decided that it would possibly be desirable to dual complete it.

Q When was Forrest Oil Company's Wolfcamp well completed?

A In the latter part of 1951.

MR. NUTTER: Any further questions of Mr. Daniel?

MR. CHRISTY: Mr. Examiner.

MR. NUTTER: Mr. Christy.

MR. CHRISTY: A question was asked a few minutes ago by Mr. Cooley. The Forrest well was the subject of extended litigation, which I happened to be in. It was drilled to the Devonian

salt water, in the Devonian back up in the Wolfcamp. During that litigation, we had a number of figures. It is my remembrance that that well will pay out, on that well alone, in about 1958. However, the lease itself won't pay out until about 1980, the whole lease under that well.

MR. COOLEY: Thank you.

MR. CHRISTY: One other thing, Mr. Daniel, would you recount those wells? Are you including these two Kerr-McGee wells? Don't count those, now.

A Eleven.

MR. CHRISTY: Thank you.

MR. NUTTER: Is that No. 4 well down there completed?

MR. CHRISTY: It is not completed.

A It is not completed.

MR. CHRISTY: That is a correction in the record. There are only ten completed wells.

A There are ten wells and one being drilled.

MR. NUTTER: If no further questions of Mr. Daniel, he may be excused.

(Witness excused.)

MR. CHRISTY: We have nothing else in support of the application.

MR. NUTTER: Does anyone else have anything else they wish to offer in Case 1365? If nothing further, we will take the case under advisement.

C E R T I F I C A T E

STATE OF NEW MEXICO)
) ss
 COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Notary Public 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 stenotype 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 17th day of February, 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Ada Dearnley
 NOTARY PUBLIC

My commission expires:

June 19, 1959.

I do hereby certify that the foregoing is a complete record of the proceedings in the hearing of Case No. 1365 heard by me on 1-8, 1958.

James, Examiner
 New Mexico Oil Conservation Commission

No. 11-58

SUPPLEMENTAL DOCKET: REGULAR HEARING APRIL 16, 1958

Oil Conservation Commission 9 a.m., Elks Club, 200 North Richardson Avenue

ROSWELL, NEW MEXICO

CASE 1424: Application of Humble Oil and Refining Company for an unorthodox well location. Applicant, in the above-styled cause, seeks an order authorizing an unorthodox oil well location for its Federal-North Kirtland Unit Well No. 1 at a point 1230 feet from the North line and 998 feet from the East line of Section 19, Township 30 North, Range 14 West, San Juan County, New Mexico, said well to be drilled as a wildcat to the Dakota formation.

April 3, 1958

ga

DOCKET: REGULAR HEARING APRIL 16, 1958

Oil Conservation Commission 9 a.m., Elks Club, 200 North Richardson Avenue

ROSWELL, NEW MEXICO

- ALLOWABLE: (1) Consideration of the oil allowable for May, 1958.
- (2) Consideration of the allowable production of gas for May, 1958, for six prorated pools in Lea County, New Mexico; also consideration of the allowable production of gas from six prorated pools in San Juan and Rio Arriba Counties, New Mexico, for May, 1958.

NEW CASES

CASE 1365:

Application of Cabot Carbon Company for a hearing de novo before the Oil Conservation Commission of New Mexico on its application for a dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its H. L. Lowe "B" Well No. 1, located 467 feet from the South line and 850 feet from the East line of Section 26, Township 13 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from both the King-Devonian Pool and King-Wolfcamp Pool through parallel strings of 1½" tubing.

CASE 1419:

Application of Standard Oil Company of Texas for the creation of the Atoka-Pennsylvanian Gas Pool and for the adoption of temporary special pool rules for said pool. Applicant, in the above-styled cause, seeks an order creating the Atoka-Pennsylvanian Gas Pool, Township 18 South, Range 26 East, Eddy County, New Mexico, and adopting temporary special pool rules for said pool providing for 320-acre spacing with fixed well locations and such other rules as the Commission may deem proper.

CASE 1420:

Application of Caulkins Oil Company to amend the Special Pool Rules for the South Blanco-Tocito Oil Pool. Applicant, in the above-styled cause, seeks an order amending the Special Pool rules in the South Blanco-Tocito Oil Pool in Rio Arriba County, New Mexico to provide for the transfer of allowables within its water injection project in said pool and to provide credit against gas-oil ratio limitations for water injected under said program.

CASE 1421:

In the matter of the hearing called by the Oil Conservation Commission of New Mexico on its own motion to amend Rule 309 of the Commission Rules and Regulations to permit the production of as many as sixteen units into a common tank battery and to permit the production of oil from separate contiguous oil and gas leases into a common tank battery under certain conditions.

CASE 1422:

Southeastern New Mexico nomenclature case calling for an order for the creation of new pools and the extension of existing pools in Lea, Eddy and Roosevelt Counties, New Mexico.

(a) Create a new oil pool for Grayburg production, designated as the South Leo-Grayburg Pool, and described as:

Township 18 South, Range 30 East
Section 31: NW/4

(b) Create a new oil pool for San Andres production, designated as the Seven Rivers Hills-San Andres Pool, and described as:

Township 20 South, Range 26 East
Section 29: NE/4

(c) Extend the Eumont Gas Pool to include:

Township 20 South, Range 36 East
Section 32: NE/4

(d) Extend the Fowler-Devonian Pool to include:

Township 24 South, Range 37 East
Section 16: NE/4

(e) Extend the Gladiola-Wolfcamp Pool to include:

Township 12 South, Range 38 East
Section 8: E/2
Section 17: N/2
Section 18: N/2

(f) Extend the Grayburg Jackson Pool to include:

Township 17 South, Range 31 East
Section 10: SW/4

(g) Extend the West Henshaw-Grayburg Pool to include:

Township 16 South, Range 30 East
Section 3: Lot 13
Section 4: Lots 13 & 14
Section 17: NE/4

(h) Extend the Langlie-Mattix Pool to include:

Township 26 South, Range 37 East
Section 4: NW/4 & N/2 SW/4

- (i) Extend the Maljamar Pool to include:

Township 17 South, Range 33 East
Section 18: E/2 NE/4

- (j) Extend the Milnesand-Pennsylvanian Pool to include:

Township 8 South, Range 35 East
Section 18: SE/4

- (k) Extend the Saladar-Yates Pool to include:

Township 20 South, Range 28 East
Section 33: SW/4 SE/4

- (l) Extend the Tatum-Wolfcamp Pool to include:

Township 13 South, Range 36 East
Section 6: NE/4

- (m) Extend the Welch-Delaware Pool to include:

Township 26 South, Range 27 East
Section 16: SW/4

CASE 1423:

Northwestern New Mexico nomenclature case calling for an order for the creation of new pools and the extension of existing pools in San Juan and Rio Arriba Counties, New Mexico.

- (a) Create a new gas pool for Gallup production, designated as the Angel's Peak-Gallup Pool and described as

Township 26 North, Range 10 West
Section 2: NW/4
Section 3: N/2
Section 4: NE/4

Township 27 North, Range 10 West
Section 26: SW/4
Section 27: S/2
Section 28: SE/4
Section 33: E/2
Section 34: All
Section 35: W/2

- (b) Create a new oil pool for Gallup production, designated as the Escrito-Gallup Oil Pool and described as:

Township 24 North, Range 7 West
Section 16: SW/4
Section 17: S/2
Section 18: SE/4
Section 19: NE/4

Township 24 North, Range 7 West (Continued)

Section 20: N/2
Section 21: N/2 & SE/4
Section 22: S/2
Section 23: S/2
Section 26: N/2 & SW/4
Section 27: All

(c) Extend the South Blanco-Pictured Cliffs Pool to include:

Township 27 North, Range 7 West

Section 5: NW/4
Section 6: NE/4

Township 28 North, Range 7 West

Section 30: SW/4
Section 31: NW/4

Township 28 North, Range 8 West

Section 25: S/2
Section 36: N/2

(d) Extend the Blanco Mesaverde Pool to include:

Township 26 North, Range 2 West

Section 19: All
Section 20: W/2

Township 32 North, Range 13 West

Section 35: S/2

(e) Extend the Bisti-Lower Gallup Oil Pool to include:

Township 24 North, Range 9 West

Section 7: NW/4 & S/2
Section 8: S/2

Township 24 North, Range 10 West

Section 1: W/2
Section 2: N/2
Section 3: NE/4
Section 12: N/2

Township 25 North, Range 10 West

Section 35: SE/4

(f) Extend the Verde-Lower Gallup Oil Pool in San Juan County, New Mexico, to include therein:

Township 31 North, Range 14 West

Section 29: NW/4
Section 30: NE/4

Township 31 North, Range 15 West

Section 11: N/2

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The Flame



February
1958



Employee Publication of the Gabot Industries

Boys and Girls!

How Would You Like to Have an Overseas Pen Pal?

HOW would you like to have a pen pal in another country? Wouldn't it be fun to correspond with other boys and girls whose families also work for the Cabot organization in other parts of the world?

We received this letter from Alan Bowen who lives in England and wants a pen pal. Why don't *you* write to him? The Flame will send a new ball-point pen to each of the writers of the first five letters that are sent to Alan.

So sit down, pull out your pen and paper and start writing. As soon as you have mailed your letter, send a postcard to The Flame, Godfrey L. Cabot, Inc., 77 Franklin Street, Boston 10, Massachusetts, telling us that you have done so. And, if you are one of the first five to notify us, we will send you the pen to help you with your future letter-writing.

Alan Bowen



18, Maytree Avenue,
Vicaro Cross
Chester, England
8/12/1957

Dear Editor,

My father has worked at Cabot, Stanlow for the past three years and my mother, father, sister and I live in Chester, which is nine miles from the plant.

I am 12 years old and I should like to write to a boy in America of about my own age.

My birthplace was Edinburgh and I first went to school there. Before my father worked at Cabot, he was in the navy and we travelled around many places, one of them being Malta where my young sister was born. We stayed in Malta two years.

After coming to Chester, I went to a primary school for two years and then on to the private school, which I now attend, called Normain College.

I like school work quite a lot, especially French and science, but most of all, I enjoy athletics and swimming. Unfortu-

nately, the playing grounds at school are not very large and so I am waiting for the Company sports ground to be opened so that I can practice my running. I have always liked the school sports and I want to continue practicing long jump and springing after I finish school. So far, in swimming, I can only swim straight to the bottom, but I hope very soon to be able to swim along the top of the water!

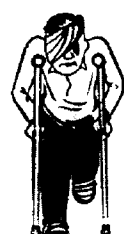
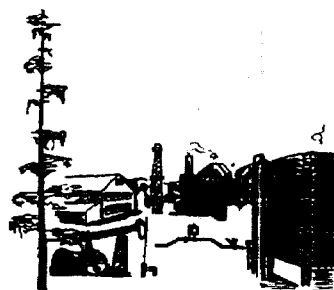
The City of Chester is very old, and there is a wall running round it which dates back to Roman times. The Cathedral has many famous people buried in it, and there is a flag which Wolfe captured on the Heights of Abraham in Canada. There is not much of the flag left now.

The River Dee runs through Chester and it is famous for its salmon. There is also a lot of boating, mostly in the summer. My father would like to have a boat of his own.

I wish everybody a Happy New Year and hope to hear from someone soon.

Yours sincerely,
Alan Bowen

HOURS WORKED AND LOST REPORT



MONTH OF DECEMBER, 1957

ACCUMULATED 10-1-57 THROUGH 12-31-57

Divisions	Hours Should Have Worked	Hours Lost Due To Inj.	Percent Lost Time	Hours Should Have Worked	Hours Lost Due To Inj.	Percent Lost Time
SOUTHWESTERN	278,211	600	.22	837,951	1,432	.17
APPALACHIAN	48,704	16	.03	146,550	42	.03
CAMBRIDGE R&D	20,669	0	0	59,386	0	0
CABOT MINERALS	4,670	0	0	14,960	0	0
STANLOW	43,302	128	.29	131,195	128	.10
SARNIA	17,854	0	0	54,140	8	.01
FLORIDA	25,201	0	0	73,818	0	0
TOTAL	438,611	744	.17	1,317,100	1,610	.12

OUR HONOR ROLL

NO LOST TIME THIS YEAR

Plant	Hours Worked Since Oct.	Hrs. Worked Since Last Lost Time Injury	Plant	Hours Worked Since Oct.	Hrs. Worked Since Last Lost Time Injury
WALTON	25,462	1,175,946	R&D	34,762	134,631
PAMPA OFFICE	86,230	835,743	RETORT CHEMICAL	73,818	132,117
ESTES	17,003	810,292	GRANTSVILLE	16,732	91,012
SCHAFER	49,446	566,696	SUMMERS	2,382	85,598
DIXON	45,293	502,717	CABOT ENG.	39,689	65,392
CAMBRIDGE R&D	59,386	483,684	OIL DEPARTMENT	12,308	53,439
KERMIT	17,423	461,369	PN	21,543	44,433
CANAL	108,643	344,296	GAS DEPT.	6,502	28,059
CABOT MINERALS	14,960	250,104	SPECIAL CREW	6,223	10,512
MACHINE SHOP	67,545	199,146	KING	1,760	1,760
AUK	31,191	191,664	PENNSYLVANIA	1,395	1,700
FAYETTE	13,383	155,120			

ON OUR ROLL

BUT HAVE LOST TIME THIS YEAR

Plant	Hours Should Have Worked Since Oct.	Hrs. Worked Since Last Lost Time Injury	Hrs. Lost Due To Inj.	Plant	Hours Should Have Worked Since Oct.	Hrs. Worked Since Last Lost Time Injury	Hrs. Lost Due To Inj.
VILLE PLATTE	88,885	57,805	240	SARNIA	54,140	30,017	8
FRANKS SHOP	34,122	45,861	528	FABRICATING	97,931	22,547	288
PAMPA	57,587	38,964	56	SOUTHERN	41,575	21,933	26
STANLOW	131,195	34,642	128	CHARLESTON	18,349	4,899	16
FRANKS SERVICE	29,468	31,434	184	SHOPS TRK. DRV.	10,769	1,570	136

TIME LOST THIS MONTH FROM PREVIOUS INJURIES

O



What Was the MOST UNFORGETTABLE MOMENT Of Your Life?

WE all have had moments and experiences in our lifetimes that we have never forgotten. Year after year, they stick in our minds as vividly as they did when they had just happened. Happy, sad, terrifying, humorous or embarrassing, these moments usually make good reading.

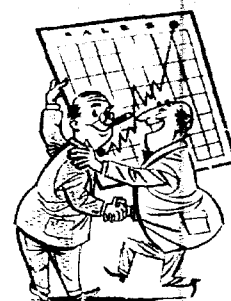
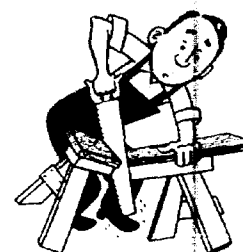
The Flame would like any of you who'd care to share "The Most Unforgettable Moment of My Life" with other readers of the magazine to send them to us for publication. Entries should be not longer than 250 words and should be addressed to:

The Editor
The Flame
Godfrey L. Cabot, Inc.
77 Franklin Street
Boston 10, Massachusetts.

The 20 most interesting entries received from employees of the Cabot industries or members of their families will be published in a later issue of The Flame. Winning entries will be selected by a panel of judges and each person submitting one of the winning entries will receive a nice, crisp silver dollar.

The deadline is March 31, 1958, so put on your thinking caps and jot down "the most unforgettable moment in my life". Please include your name, address and the name of the plant, district or office where you work. If you are not an employee of the Company, please include the name of the employee to whom you are related and plant address as well as his or her relationship to you.

Mail your entry to The Flame as soon as possible . . . and good luck!



The Flame

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VOLUME XI

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NUMBER 3

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OUR COVER

Our cover photograph this month shows two skiers getting ready to start down the Intervale Ski Slope in New Hampshire.

"Let's Give It Back to the Indians"

IF you haven't said it yourself, chances are you have heard others say of our homeland—"Let's give it back to the Indians!" It's a standard joke and it pops out when the problems and complexities of modern living seem to pile up on us.

But just suppose for a moment that we really meant it. What would we be letting ourselves in for?

Well, broadly, it would mean the biggest backward step in the whole history of the human race. During all of the centuries before the white man arrived in America, the coal and minerals had been in the ground, the soil had been just as fertile, the source of fibers and building materials had been just as available. But the total population never got higher than one and one-half million Indians. They lived in hovels, shivered in the cold and went hungry. The Indians just weren't doing it right. They were "loners"—every man for himself.

When we came along, we began to change things around. We not only sought to do for ourselves, but also to do for others, and to make it profitable for others to do for us. We split up the main job of making a living, and learned to fit ourselves into a lot of related parts of that job. So, in the same land, with the same natural resources, we built a population 110 times greater than the Indians had achieved and went on to provide this population with the highest standard of living mankind has ever known.

Instead of a society of "loners", we created a society of co-operators. Obviously, before we could do it the right way, we had to be inclined to work together. And in this process, we worked at being fair with each other. We demonstrated that the looting and pillaging of the possessions of others, as the Indians were so prone to do, didn't make sense—that the real way to get ahead was to produce more, to respect the rights and property of others and to insist upon the same rights and protection for ourselves.

Even in this day of enlightenment, there remain traces of the Indian "loner" philosophy which express themselves in a variety of forms and are in direct conflict with the principles of fair play.

Some familiar examples: the reckless road hog on our highways, laws which discriminate in favor of special pressure groups, the use of physical force and violence in labor disputes, cheating a customer, tax dodging.

Our economic way of life is built on moral foundations. It will reward us in the future, as it has in the past, if we don't lose sight of the difference between right and wrong, no matter where the question arises. And, to make it work, that's where you come in.

1957: Year of Venture and Adventure

From the desk of
Thomas D. Cabot

THE completion of 75 years of continuing Cabot operations provides an appropriate occasion for contemplation of the past, the present and the future. During 1957, your Company established a new record of total sales. While earnings were not at record level, they were completely satisfactory. The general slump in business during the past year has demonstrated the importance of building a pattern of Cabot activity within the limits of a diversification program appropriately adjusted to our skills and abilities and yet one which provides adequate insulation from the inevitable ups and downs of individual production and sales situations.

During the past year, three important production facilities were placed on stream. The Texas Butadiene and Chemical Corporation's plant went into production early in the year. In October, Cabot France produced its first carbon black in our new plant near Marseilles and, in November, the King gasoline plant in Lea County, New Mexico, commenced the extraction and delivery of natural gas liquids from the casinghead gas in that area. Drilling activities have continued to increase and this has again been a successful year in building up both production and reserves from our Southwestern oil and gas properties. The principal disappointment of the year has been the decline in the sales of oil field pumping and well servicing equipment by Cabot Shops, Inc.

We are especially proud to be celebrating the three-quarters-of-a-century mark in our history. Stemming from Godfrey L. Cabot's modest entry into business in 1882, and with practically no additional equity financing thereafter, we are now a company of 3,000 people, serving several industries through a world-wide organization.

Our early development was largely the result of putting wasted natural gas to useful service. At first, we utilized this gas to make carbon black. Later, we also found markets for it as a valuable fuel. Thus, we have been part of the natural gas industry since its early beginning, part of an industry which has played an important role in supplying the energy requirements of an expanding nation.

The rapid development of automotive transportation over the past 40 years gave further impetus to our growth. Because of the unique ability of carbon blacks to give today's tires their necessary strength and durability, we have been privileged to participate in making this great evolution possible.

Running throughout our development has always been the conviction that we should dedicate our energies to the service of mankind. We have sought out activities for which there appeared to be real need, constantly studying our customers' advancing requirements and setting high standards of quality for the products and services we furnish.

As we look ahead to the future, this policy continues to

hold its significance. We are in a time of great contrasts and differences. With one automobile for every 2½ people in the United States and only one for every 47 people in the rest of the free world, there are clearly needs and opportunities outside our own borders for service based on the skills we have developed.

We are clearly in an era of explosive technological change. We can expect rapid obsolescence of old products and tremendous opportunities for new approaches and new products. This will require energetic attention to the fast-changing needs of our present customers and a still greater research program dedicated to meeting their requirements of tomorrow. It also indicates a policy of diversification along lines which broaden our market base, yet employ the particular skills and knowledge which are the Company's competitive strengths.

We can expect that the world's ever-faster technological change will have direct repercussions on our economic, social and perhaps political ways of life. To meet these challenges will require alert management and receptiveness to new ideas. For these, our best assurance must be a strong group of capable, imaginative men and women. It is my conviction that only a growing company can provide the opportunities which will attract such personnel. Continued vigorous growth, then, should be one of our prime objectives. This means placing a high value on building future strength and accepting new opportunities. It means viewing financial profit not just as a measure of success but more especially as the ladder for climbing to these objectives.



Dollars and Sense



ALTHOUGH investment and reinvestment during 1957 did not reach the level at which it had been budgeted, your Company continued to grow. During the year, capital expenditures in the amount of \$3,000 per employee were made in providing more facilities, more tools and more equipment with which to work.

Average annual income per employee continues to climb. Modification of fringe benefit programs during the period has been accomplished to even further strengthen your position in respect to retirement, health and life insurance.

just about enough for two good suppers with sweet taters 'n cornbread. Mmm-m-m-m.

PAMPA OFFICE PATTER

PAMPA OFFICE

Pampa, Texas

by Clotille Thompson

We are always glad to see one of our own flock do well, particularly when it's a young man whom we have watched grow up in our midst, as we have Melvin Romines, who is the son of Leona Taylor of IBM. Melvin graduated from Pampa High School in 1956 and worked that summer at Pampa Plant before going to



Patty and Kathy Spelman, ages four years and 1½ years, are the nieces of Ellen Keough of the Pampa accounting department and the daughters of Mr. and Mrs. Pat J. Spelman.

Oklahoma State University in the fall. Later he was accepted by the U. S. Naval Academy at Annapolis, Maryland, and is now a midshipman there. After seeing a uniform like this, a girl on the sunny side of 20 could learn to hate Elvis.

We have a personal acquaintance with some plutocrats who have winter vacations and go south. Rosemary Schaffer in purchasing recently returned from a trip to South Texas. It only took her a month to get over it, but she's looking better every day now.

Our Glenna Clay in accounting is now Glenna Penley since the big event on January 10 and we extend our very best wishes to this nice couple. Evelyn Carlton, who left us January 4, is now living



Melvin Romines, son of Leona Taylor of the Pampa IBM department, is now a midshipman at the naval academy at Annapolis, Maryland.

in Amarillo. Our newest employee is Irma Dean McKee in accounting and our luckiest employee is Valta Trusty, who just moved into a brand-new house.

All our office crew managed to scramble through the holiday season in pretty good shape except this reporter, who developed a severe case of laryngitis which resulted in a complete loss of voice. Friend husband kindly offered to call the doctor if the voice hadn't returned in a month or two! Laryngitis doesn't affect your typing; so you readers didn't get off as lightly as the listeners.

Terrell Rufe Jones is the nine-week-old son of Marie Jones of the purchasing department at Pampa.



PAMPA PARTICIPATING

PAMPA PLANT

Pampa, Texas

by Nyle Franklin

Well, here I go again. With several of the units being shut down temporarily, I was not sure who would be left to write about whom.

Several of the engineers, including our own Bob Boyd, are making plans for the engineers' meeting in Canada.

One of our co-workers has studied journalism and worked on a newspaper for several years. I am always interested in her comments and criticisms. I asked her how she liked the way the last column started and she said, "I have not read it. Why, I have not even read the jokes yet!" Deflation occurred right there.

Joy Perilloux had to make two trips to the hospital before Pep could decide on just what he wanted. He finally chose a cute, dark-haired girl. He made a wise choice. Lori Gail joined the Perrilloux family on December 31 and she is about the cutest little girl we have seen lately. We think she made a wise choice of parents, too.

Jack Clark had it all figured out. He had a boy ordered so, sure enough, at 3 a.m. on January 22 his boy arrived. At this writing, a name for the youngest member of the Clark family is still under discussion. Jack's decision is Jeffrey Freeman, but so far Jerry has not given her okay, so we shall see how it is before the next issue.

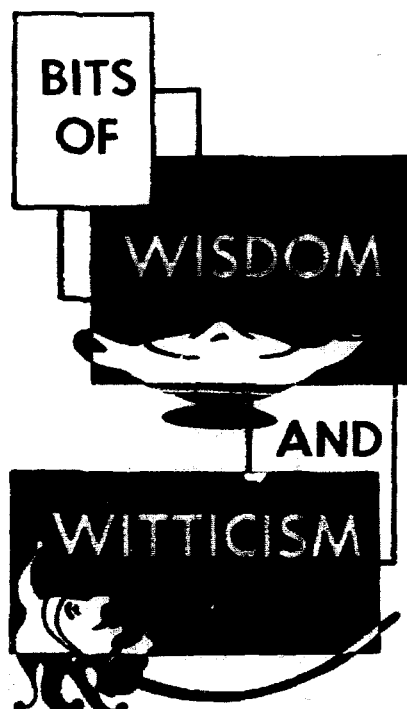
Not satisfied with smashing his thumb, J. T. Ray smashed his Olds. It only took about \$1,000 to repair all the damages. We have taken all hammers away from him; now what are we going to do about cars?

Billie Klager is in the hospital having a small cerebral clot dissolved. She plans to go home soon. We are happy to report that she is doing very well.

D. W. Swain spent some time in the hospital. He had pneumonia. He is back on the job as talkative as ever, so I guess pneumonia didn't damage any of his vocal cords.

I saw a man whom I thought might be Tully Marlowe until he removed his hat. This man had some hair.

Deepest sympathy to the T. J. Rogerses. T. J.'s father died recently and, only a few weeks later, T. J.'s wife Betty's father died.



Gallup finds that only 14 per cent of Americans know who said, "The world must be made safe for democracy," but 60 per cent know who said, "Come up and see me some time."

The boosters of Myrtle Beach, South Carolina, after a nation-wide search for a human symbol, discovered a Mrs. Beach in Iowa who has three children, Sandy, Marshy and Rocky.

The fight for last place in the Manhattan telephone directory is bitter and continuous. Current title holder is the Zzyzy Stamp Ztudioz, which zells postage ztampz.

"Stand behind your lover, false woman," thundered the Scotsman, "I'm going to shoot you both."

A little boy who went to the ballet for the first time with his father watched the girls dance around on their toes and then asked, "Why don't they just get taller girls?"

Television is a wonderful thing, but it will never replace the old-fashioned keyhole.

Unimportance is the sensation that comes when you make a mistake and nobody notices it.

A woman went to a doctor to complain about her husband's delusion. "It's terrible, doctor," she said. "All the time he thinks he's a refrigerator."

"Well," consoled the medical man, "that isn't too bad. Quite a harmless delusion. I'd say."

"The delusion I don't mind, doctor," she explained, "but when he sleeps with his mouth open, the little light keeps me awake."

Julius came bursting into the kitchen crying bitterly. "The kids beat me up, Ma; they said I have a big head."

"Now, Julius, just don't believe them. It's not true that you have a big head."

So, partly convinced, Julius calmed down. "Now, Julius, run down to the store and get me ten pounds of potatoes."

"Okay, Ma, gimme a bag to carry 'em in," replied Julius.

"A bag? what do you need a bag for?" asked his mother. "Carry them in your cap."

Parting thought: If it's such a small world, why does it take so much of our money to run it?

Keeping a secret from some people is like trying to smuggle daylight past a rooster.

"Have I told you about my grandchildren?"

"No, and I appreciate it."

A lot of enterprising young engineers are spending much of their valuable time tinkering with misses in their motors.

Neurotic: A relatively stable individual with both feet planted firmly in mid-air.

One of the greatest mysteries of life is how the boy who wasn't good enough to marry the daughter can be the father of the smartest grandchild in the world.

Deep Etch: Where it's difficult to scratch.

Among the slugs collected from parking meters in Wilmington, Delaware, was a woman's wedding ring.

The Spanish dancer Jose Greco has insured the right thumbnails of his guitar players for \$5,000. He is also protected in the amount of \$10,000 from the consequences of having his tight pants split on the stage.

A quick-thinking employee came up with a new one when his foreman demanded, "How come you're sleeping on the job?"

"Goodness," replied the employee, "can't a man close his eyes for a minute of prayer?"

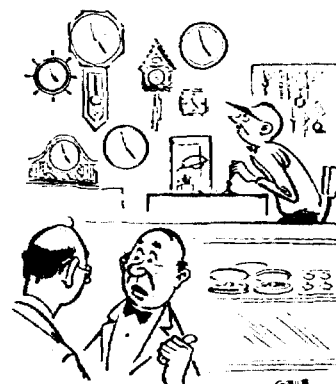
Johnny's mother was telling him about the good times she had when she was a little girl -- riding a pony, sliding down haystacks, wading at his grandfather's farm. "Mother," sighed little Johnny, "I wish that I had met you earlier."

The Clairvoyant Society will not have its usual meeting this week due to unforeseen circumstances.

Sing Sing prison receives several requests each year from people who want to be put to death in the electric chair.

Perfectionist: One who takes infinite pains and often gives them to other people.

A conference is a group of people who individually can do nothing, but who meet collectively and agree that nothing can be done.



"I'm disappointed in that new man. He's a clock-watcher!"



How Firm a Foundation

CARBON black operations, which still represent more than half of our total business volume have, through expansion of our world-wide production and sales operations, continued to grow and our position of leadership in this industry has become stronger and attained a new peak in 1957. In spite of the price improvement in the late spring, which in effect simply re-established those prices which prevailed prior to the reductions reported last year, the spiral of rising costs has presented a challenge which you in the carbon black division, embracing the research and development and technical departments as well as production and sales, have met both forthrightly and well.

Increasing use of the 14-inch tire, the continuing horsepower race among automobile manufacturers and the steady building of high-speed highways have posed new problems for the tire manufacturers. Necessary accompanying modifications in rubber compounding and an ever-firmer shift toward synthetic rubber have had their effects on our markets for the different grades of carbon black which we manufacture and have presented problems of production scheduling and development of qualities of black peculiarly suited to the current requirements of the great rubber industry which we are so proud to serve. The fact that, during 1957 Cabot shipments reached an historic high, is the best evidence of the success with which you in the carbon black division have adapted your performance to a period of developing technology.

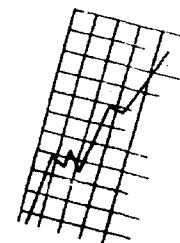
U. S. automotive industry predictions for new car production during 1958 suggest a reduced demand for tires for new equipment. Again, we fall back on our old friend, the replacement demand, and foresee a level of carbon black business in 1958 that may be materially, but not disastrously below that which we enjoyed last year.

Outside the U. S. Cabot again strengthened its position, not only in Canada and in England, but now with our new facility in France. Cabot's program to join with the United Carbon Company in the construction and operation of a plant in Australia has already been announced and construction should be underway in the early months of 1958.

The U. S. carbon black industry set a new record during 1957 in the volume of its exports but this was not enough to eliminate the problem of over-capacity which domestic producers are facing. It is evident that competition during the coming year will remain at a keen, high level both in price and in service, with the outlook of further changes in the industry's distribution pattern. This we can meet by remaining alert and ready to adapt ourselves to whatever the future holds.



Of Peaks, Fools and Pipelines



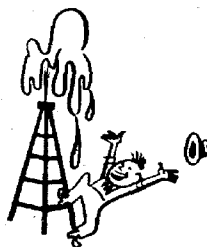
IT becomes increasingly difficult to find substantial new reserves in the Appalachian area. New reserves developed by drilling in 1957 were less than production for the year. However, reworking of old wells and improved production practice resulted in an upward revision of recoverable reserves remaining at the end of the year.

We completed 12 new wells in West Virginia, of which five were dry and seven were producers. In Pennsylvania, two wells were drilled and both were completed as producers. A work-over program increased production of several older wells. One of these reworked wells has been in production for more than 50 years.

A wildcat well drilled on our large acreage block in Tennessee was unsuccessful and we are considering turning over some of this acreage to others for further testing.

Since in the State of West Virginia we are essentially a regulated natural gas utility, we found it necessary to meet our customers' gradually-increasing requirements in the face of diminishing local supplies with gas brought in from the Southwest.

These gas purchase contracts call for deliveries at a relatively-constant rate and, since the demand for gas is highly seasonal, we must store gas while sales are low in the summer in order to meet our customers' peak requirements in the winter. To this end we completed arrangements in 1957 for use of a large new underground storage pool and have made plans to develop another storage area in 1958.



To Drill, Perchance to Strike

OUR Southwestern oil and gas division had another excellent year with the completion of 37 oil wells and 22 gas wells. While no new pools or areas were discovered, the drilling of development wells and semi-wildcats was particularly successful and material additions to reserves of both oil and gas were chalked up during the period.

In spite of operating our oil properties during 1957 under conditions of a soft market and drastic proration, total sales reached a new all-time high during that year.



As the Oil Industry Goes . . .

THE outstanding feature of the Shops' activity during 1957 was the abandonment of the Franks Division operation at Tulsa and its transfer to Pampa in a brand-new shop specifically designed and erected for the purpose. The transfer of equipment and personnel was completed in November and we expect that in 1958 we will begin to reap the inevitable benefits of the consolidation.

Early last year a new Franks Division service shop was erected and put into operation at Odessa, Texas, setting up a truly adequate sales and service facility in an area in which over 400 Franks' rigs are presently in operation.

As the oil industry goes, so goes the oil well equipment industry.

The Shops' pumping unit business declined about 27 per cent from the all-time high of 1956. This was a result of more conservative exploration and development programs by domestic oil companies, attributable largely to cuts in allowable oil production following the reopening of the Suez Canal and this year's disappointing demand for oil products in the U. S.

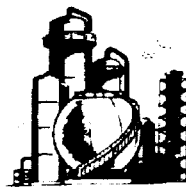
Our pumping unit line continues to expand. In addition to our hydraulic unit, we now have installed and on test the first of a new line of air-balanced units for deep well application. Thus, we remain competitive and in shape to maintain or improve our sales position in the industry in which we are an important factor.



Mines and Markets

OUR new CAB-O-SIL plant near Tuscola, Illinois, will be ready to operate by March of 1958. This plant for the production of finely-divided silica will provide a domestic supply for those markets which we have developed over a period of years through the sale of material of German manufacture. The markets served are various and provide a reassuring hedge against the ever-present threat of a loss of any single market through the development of a competitive material.

Wollastonite, a non-metallic white mineral which is mined and processed at Willsboro, New York, is finding a gradually-increasing market acceptance, especially in the ceramic industry. The patient and persistent efforts of the members of the White Pigments Division to introduce this entirely-new material into a well-established industry are beginning to pay off and we foresee a year of increasing acceptance and greater volume.



Pine Tars and Petrocarb



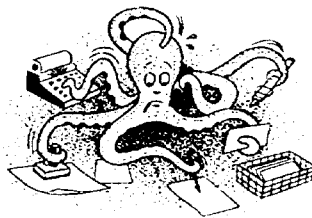
In 1957 marked the first complete year in which Retort Chemical was a dual pine tar-charcoal briquet operation. The growth of the briquet business offset to a large extent the effects of a depressed year in the pine tar industry.

Charcoal briquets contributed 60 per cent of the division's sales. Marketing operations were expanded all along the East Coast and some business was done in the Middle West. The expanding briquet business has attracted many new companies into the field, but we are now one of the major producers in the industry and with the advantages of a tandem pine tar-lump charcoal operation we feel we are in a good competitive position.

Pine tar sales were down from 1956. This product, used primarily as a softener in natural rubber, experienced a major loss in position last year to inexpensive petroleum-based extenders. The price of pine tar was reduced in early September by about 17 per cent. Although prices of extenders were subsequently reduced also, we narrowed the differential between the two materials and have already noted improvement in our pine tar demand.

Since Cabot acquired complete ownership of Petrocarb Equipment, Inc., in the spring of 1956, this engineering firm has expanded its work for the Cabot companies and also maintained sales of its services to outside clients. In 1957 Petrocarb's billings for services to Cabot amounted to somewhat over 50 per cent of its total business. This compares with only five per cent in 1956.

The Petrocarb engineering staff specializes in the design of high temperature processes, solids handling systems and industrial carbon processing other than carbon black. Its current work for Cabot includes design of the silicon tetrachloride production facility for our new CAB-O-SIL plant. In outside work, Petrocarb recently completed a cooperative project with other engineering firms which involved the design, erection and start-up of the American Gilsonite refinery and coke plant at Fruita, Colorado. A second completed project was the engineering of a small, but complete coal carbonization retort pilot plant for the Bureau of Mines Experimental Station at Schuylkill Haven, Pennsylvania.



Developments in Diversification

Ann Flynn, Hanna Friedenstein and Barbara Davis are eagerly awaiting the completion of the construction and moving work so that they may move bag and books to their "penthouse headquarters".

Hope next time we meet, temperatures will have climbed, snow will be gone for good, except in New Hampshire ski country, and we'll be looking straight into spring. 'Bye until March!



SHOPS CASTINGS
CABOT SHOPS, INC.

Pampa, Texas

by Audrey Robison

H. A. Layne, Jr., son of the Hugh Laynes, and Donna Trussell, daughter of the C. L. Trussells, were married in Mary Ellen and Harvester Church of Christ on January 5 by Jon Jones, minister. After their honeymoon trip, they will live at 1115 Charles Street in Pampa. H. A. is employed by Welox Jet Service, Inc.

We wish to welcome Irma Robertson, who is the new stenographer in service. Her family consists of husband Jay, who is a salesman for Rich Plan Company and two daughters Sandy, two years, and Debbie, four months. The welcome mat is out to the new member of the engineering department Jim Seymour. He came from San Antonio, Texas.

Susie Huff and Deny Spoonmore were married since the last writing of this column. Susie is our radiant bride and is still having showers given for her. We wish them many years of happiness.

The new year has brought us news of several new babies. Congratulations are in order for the O. C. Qualls on a son Steve Warren born November 15, the Teddy R. Lewises on a son Stephen Allan born November 15, the Kenneth Suitses on a daughter born December 2 and the D. F. Ridings on a daughter Anita Kay born December 27. Our shops' new year baby is the new son of Melvin and Mary Ann Bailey born January 22. At this writing, the young fellow is not yet named.

We enjoyed having a former employee Betty Roberts back at work for two weeks during her holiday from Texas Tech. We miss Jim Schuneman, who resigned to return to Texas Tech. Our little red-headed Italian Jonanna Teeters left us recently, so that she and her husband could move to Lubbock to attend school.

We really go for Dave Freeman's crew



Mr. and Mrs. H. A. Layne, Jr., were married in Pampa on January 5. He is the son of Mr. and Mrs. Hugh Layne and she is the former Donna Trussell.

hair cut. Like Maxine Buchannon's new hair style, also.

Faye Holt was certainly missed while she was in the hospital. We are very sorry to hear that George Clark's mother is ill. Berton Doucette's grandmother is sick and we hope she recovers soon.

Shops employees extend their sympathy to W. B. Woody whose mother recently died.

Several Franks families are putting down permanent roots in Pampa; in other words, they are building new homes. The Jamie Deals, Ray Welches, Tom Pattons and A. C. Hourigans are busily planning and building homes. The Don Forshas, Don Browns, E. E. Eatons, A. J. Edwards, H. E. Butlers and George Burgess have recently moved into new homes.

Our sympathy goes to R. E. Thomas whose father died recently in Ohio and also to Don Brown whose mother died in Tulsa.

In closing, our get-well wishes go to Mrs. O. O. "Bud" Plunk, who is ill, and to P. A. "Penny" Pendergraft, who is in Amarillo for surgery.



**TEXAS
TECHNICALITIES**
PAMPA DIVISION, R&D DEPT.

Pampa, Texas

by Curt Beck

News is a little scarce at R&D this month. It's been too cold for vacations and too close to Christmas for any car trades and we don't have any births,

marriages or other vital statistics to report.

The big excitement has centered around the five new offices opened in the engineering building. Jack Florence and Joe Rogers finally seem to have gotten theirs warm enough for Jack to take off his overcoat.

We do have two vacations to report. John Hardy is back from Boston and left his cat Pardo behind. Pardo spent two weeks at the vet's recovering from the trip from the sun-drenched west to the icy wastes of New England. Abe Wallace is also back from his honeymoon in Miami, Florida. Abe reports it rained most of the time but this didn't bother him too much.

Wimpy Powell had a run of bad luck recently. He lost two 50-cent bets with his son Kenny "Tiger" Powell in the Golden Gloves boxing tournaments. Wimpy bet Tiger he'd lose his bouts. Wimpy almost lost a boxing match himself at one of the Golden Gloves exhibitions. Apparently a drunk mistook a spilled Coca Cola on a chair for tobacco juice and wanted to bring Wimpy to task for the mess. Luckily, Bryce Hubbard was also there to back up Wimpy's story that it wasn't tobacco. C. T. Rasco also just lost a dollar bet when he mistook Bryce's daughter-in-law for Bryce's wife.

While talking about car trades, we had a question put to us in the rubber lab. Why does someone drive a pickup to work when he has a new car at home getting 22-25 miles per gallon?

The Jack Maceys are sadder but wiser now. In the future, Jack will take notice of the restaurant signs "watch your hat and coat", especially when his coat has the car keys in the pocket.

Did anyone notice the newspaper item on the large piles of maize in the streets of Panhandle, Spec Lawson's hometown? The maize (which is an important cattle food) was wet and there weren't any other drying facilities in Panhandle, so the main street was pressed into temporary service.

Finally, Bob Norton now thinks he can tell the difference between two people crossing the highway and a horse. After six or seven years in Texas, you would think that Bob could tell the difference, even at night. He was able to miss the horse, but several engineers, including Ray Newton, Jack Florence, Otto Specht and Bob Dingman got a good scare out of it.

This might be termed a P.S. to Curt's article, but he obviously left out one small item which the R&D group felt

should be included. The other day Curt reported late for work with his left eye bandaged. He reportedly had four stitches taken in his eyebrow. Curt claims that he didn't completely get into his automobile before he closed the door. Results—one black eye and damaged forehead. In view of Curt being a comparatively new bridegroom, we wonder!

MOUNTAIN ECHOES

FAYETTE & SUMMERS

Oak Hill, West Virginia
by Rose Duda

The wedding of Shirley Davis, daughter of Mr. and Mrs. Clifton Lee Davis of Columbia, South Carolina, and Miles Herbert Martin, Jr., son of Mr. and Mrs. M. H. Martin of Oak Hill, West Virginia, took place on December 29 in the Kilbourne Park Baptist Church of Columbia. The Rev. Leslie V. Edwards officiated, using the double-ring ceremony. Following a wedding trip to Daytona Beach, Florida, the couple will make their home in Durham, North Carolina. The bride is a graduate of the Duke University school of nursing and will receive her B.S. in nursing education from Duke University in June. She is presently on the faculty of the Duke school of nursing. The bridegroom will receive his A.B. degree in religion from Duke in June. He plans to enter Duke medical school in September. He is a recipient of a Godfrey L. Cabot, Inc., scholarship from the Appalachian

Married on December 29 in Columbia, South Carolina, were Mr. and Mrs. M. H. Martin, Jr. Mr. Martin is the son of Mr. and Mrs. M. H. Martin of Oak Hill, West Virginia.



Division and is employed by Liggett and Myers research laboratory. The wedding and reception were attended by about 400 guests, including his parents and John F. Jones of Oak Hill, who served as best man, and Lois Martin Bales of Knoxville, Tennessee.

Mr. and Mrs. Raymond Lokant proudly announce the birth of a girl at the Oak Hill Hospital on December 8. They have named her Debra Darleen. She weighed 8½ lb.

Clarise DeQuasie, student at Morris Harvey College, spent a recent week end with her parents Glenn and Hilda DeQuasie. Clarise is a member of the Morris Harvey choir and glee club.



CANAL CATCHES

Franklin, Louisiana
by Eloi Segura

It's time again to report from Canal and, with the holiday season gone and very little hunting time left, there isn't much to say.

The fishing season hasn't gotten off to a start yet, so no catches are in sight for the time being. This section of the country is experiencing one of its worst winters in a long time with cold and rain raging around, leaving everything damp and messy.

Three cheers to Thomas "Stack" Hasten for keeping such a good check on all fire equipment.

A summer wedding is being planned by Jules Landry and we hope that all his Canalian friends will be invited.

Joe Jaques is proud to announce a new addition to his family. On December 2 a daughter Virginia Lee, weighing 7 lb. 9 oz., was born to Mr. and Mrs. Jaques.

Reports are that Mrs. Thomas Zimmerman is doing fine in a New Orleans hospital after undergoing an eye operation.

Christmas cards have been received from Clarence LeBlanc, who is also in the hospital; all we Canalias wish him a speedy recovery. Francis Soprano is back to work after a short illness and is doing fine.

Paulton Hebert is another one of those Canalias that ran off and got himself married. Congratulations to Mr. and Mrs. Hebert with all our best wishes.

Carl Miller visited Boston for the holidays and, according to him, it was a family reunion for Mrs. Miller, whose

folks hail from Portugal. Relatives from the old country were also in Boston and many festivities were held.

Joe Johnson spent the holidays in North Texas and the Lee Cosseys visited their relatives in Pampa, Texas.



KEYSTONE and WALTON VAPOR

KEYSTONE & WALTON

Kermit, Texas
by Lois Wilson

Doris and Riley Bickerstaff are a new mommy and daddy now that Kimberly is here. This event on January 18 gave them another income tax deduction and four-year-old Bryan a new playmate.

The new 1958 calendar brought a shout of delighted surprise from Mrs. Lott, "Why, there's my twin sis!" Sure enough, there on January's page, pictured beneath the Iwo Jima statue in Washington, D.C., was her sister and her family, including children and grandchildren.

Another picture, this one in the Winkler County News, showed Betty Stuard and Thelma Osman as they took part in the Arbor Day observance by planting a mulberry tree in one of Kermit's parks; Thelma was shown holding the shovel. As members of the Green Thumb Garden Club, their interest in growing things is an important factor in making our city a nicer place to live.

Lady Luck always picks on Jim Graves, like the time she hit him with \$170 at a movie drawing. Jim didn't reveal where all that money went, but he did look as though he might be planning a spree of some kind.

Headed back to school at Abilene Christian College, Don Perry took the well wishes of all his fellow employees with him. He spent last semester working at Walton and caught the spring semester as it came around.

It seems rather unseasonal for vacation talk right now, but Purdy Hays, never one to put something off, has begun work on his vacation trailer. On the road behind the car it will measure a mere four feet wide by eight feet long; set up on their camp site, however, it will be an eight-foot-square cabin to house the six Hayeses comfortably. A very ingenious trick indeed!

Hunters one and all, Don Cofer, Troy Daugherty and the rest of the field gang bagged a bunch of cotton-tails out of the pipe pile as they were laying a pipeline. Eleven in one day was an average haul,

CABOT Engineering has spent another busy year on our construction projects. Additions at Stanlow, construction of the French plant and work at Tuscola on the CAB-O-SIL facility were carried through in record time, in spite of an engineering work load in connection with our Australian venture and the continuing responsibility of translating research developments into commercial reality at our existing plants in the Southwest.



Your Place in the Picture

IN tune with the environment in which we are doing our business living, our expenditures for research, development and technical service reached a new high in 1957. As usual, the largest share of our expenditures was devoted to carbon black with particular attention to the maintenance of a full knowledge of the problems of the industry that we serve. The design section has been busy with the CAB-O-SIL plant reactor project and the mechanics of carbon black-reinforced and cross-linked polyethylene compounds.

A pilot plant for compounding, molding, extruding and curing CAB-XL materials has been installed in Watertown, Massachusetts, and has just gone into operation. The Fundamental Research and the Organic and Polymer sections have reached a point from which we can see many prospects of interesting commercial developments. The Technical Service group has been especially busy this past year and prospectively so in 1958 in meeting and anticipating the technological changes that are either underway or in prospect. We look forward to an exciting and interesting 1958.

Our principal outside investment, Texas Butadiene and Chemical Corporation, has been launched as an operating unit. After some early mechanical difficulty with some compressor equipment, the plant operated smoothly and efficiently in the production of high quality butadiene and aviation gasoline.

In this area of our business interest, we have received the full impact of the recession of 1957. As a result of Defense Department budget difficulties and a terrific over-expansion of butadiene facilities, the market for both butadiene and avgas is definitely soft and the demand has declined.

ALTHOUGH the phenomenal safety records of the Canal and Schafer A Plants were upset by lost-time injuries during 1957, your overall record is outstanding in respect to hours worked versus hours lost. The Walton Plant group is to be especially congratulated in having completed its 16th year of operation with no lost-time accidents. It takes 3,000 of us to set a record and only one to spoil it. Let us do everything within the bounds of reason to maintain the eminent safe-working position that we presently hold in those industry groups of which we are members.

Previously-announced plans for a new home office building in Boston were changed during the year when the promoters of the building failed to obtain financing during the period specified. We have, therefore, found it necessary to arrange for a long-term lease in another building to be constructed in the downtown Boston area. Occupancy is offered by April 1, 1959.

IN closing, may I express a deep appreciation for the work and dedication of every employee and associate, past and present. May I also express a firm confidence in the future. In so doing, however, I cannot fail to recognize the present danger to the free world in which our society may be directly threatened. Our system of individual choice is being challenged by a system of state compulsion. The one responsibility which must transcend in importance all other objectives of all of us is to maintain the strength and leadership of the free world. In this we must be resolute, being fully prepared to sacrifice whatever it takes and following only that leadership which clearly distinguishes the important from the less important and puts first things first.

The Cancer Crusade

Contribute to the American Cancer Society's April Crusade.

Remember the Seven Danger Signals.

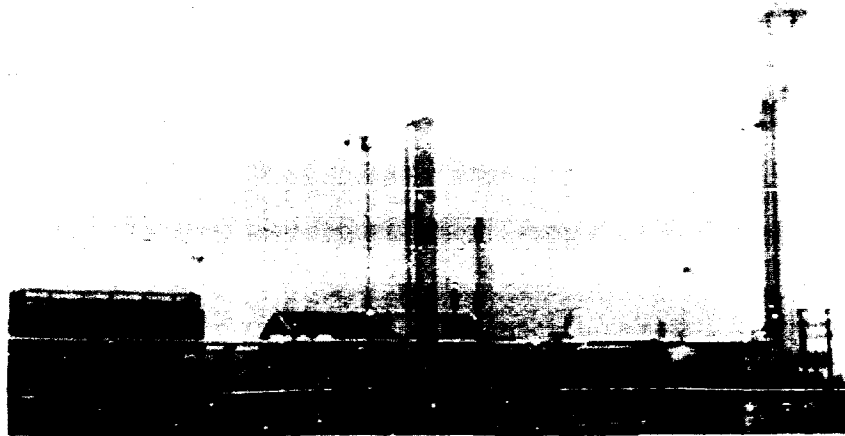
Urge your friends to join the Cancer Crusade.

Serve as an ACS volunteer.

Act promptly if a danger signal lasts more than two weeks.

Devote the necessary time each year for your annual health checkup.

Educate all the family on the life-saving cancer facts.



An over-all view of the new King Plant in Lea County, New Mexico.

NEW PLANT IN NEW MEXICO

by Lois Wilson

A CHANGE from wilderness to wonderland occurred in Lea County, New Mexico, when the new King Gasoline Plant first went into production on December 15. A tremendous undertaking in its field, this gas refrigeration recovery system is relatively new in the gasoline industry and the first of its kind to be set up by the Cabot industries.

With a handful of men to solve the problems of automation inch by inch through a maze of lines and connections, the plant was built in only six months and started production on the first day after the construction was completed, a record

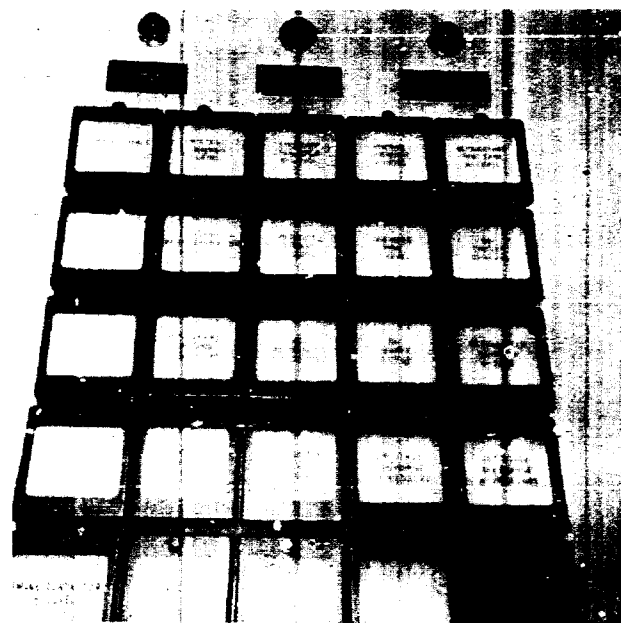
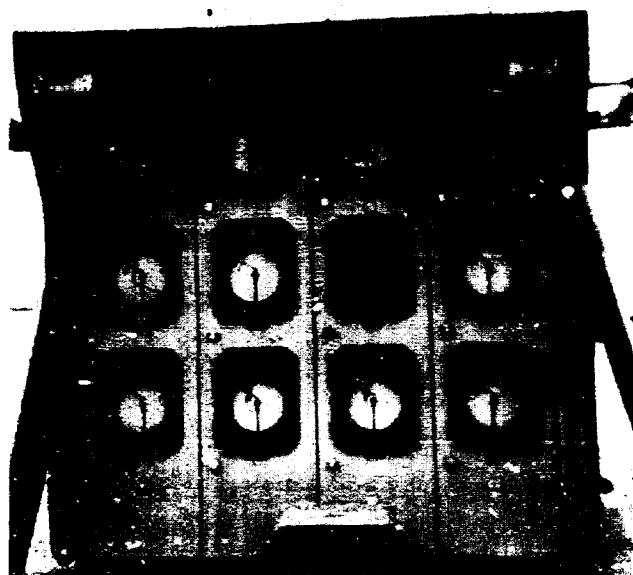
since it usually takes from three to five days to get things "rolling" after the building is finished. The "bugs" were worked out of each process by hand control and then each part, in turn, was put on automatic action.

To arrive at the King Plant, one turns off the Lovington highway onto a 19-mile crushed rock road. It is said that each rock has its own say in that road—an undisputed statement. The first view of the plant is an unprepossessing one: a far-papered tool shack fronted by two large make-shift signs reading "Private Road" and "Do Not Hit Livestock".

Completely unprepared for what he is about to see, the visitor follows the road around the shack and there it is! Unadorned, stark and gleaming, even on a sunless day, the plant control and chart boards set close beside the office building somehow speak of the compactness and efficiency that characterize the plant itself.

Served by its own water wells, the plant with its camp has sufficient water for all needs. The cooling tower, of the latest design, has two giant fans set in the top to pull hot air up through the tower and out. The main building encloses the offices, sleeping quarters, bath annex and

The left photo shows the control panel which keeps the plant personnel informed when there is trouble anywhere on the line. The right photo shows the chart board for the plant.



for Don Conley. We were treated to a banquet by the safety department with our own Frank Walker in charge. We will tell you more about that as soon as our pictures come back.

The lab crew, which includes Paul Mayeux, Roger Fontenot, Tally Deville, Representative Howard B. Fontenot, Matus Fontenot and Wallace Fontenot, had their big social get-together of the year, the duck supper that comes at the close of each hunting season. They had as special guest Cecil Pouncey. Of course, after each of these suppers, there is that card game and they try to pick their guests by the ones they think would be the easiest clipped. But this year, we understand, it backfired. Pouncey has got a lot better with a deck of cards since last year, so chances are he will be scratched from their list of suckers.

Rapheal Soileau is back from France and we have been pouring the questions to him about his trip and experiences. Guess he has been asked every kind of question you could think of and we got some pretty straight-sounding answers on most things, except about all the night life you hear about in Paris. He pretends he knows nothing about it, but in all the inquiries we thought Tally, the wonder boy of the lab, came up with the most logical question we ever heard asked. He wanted to know if there were any Frenchmen in France.

Those on vacation last month were Garland James, Tanzy Aguiard, Henry

Deville, Chester Fontenot, Fenrick Fontenot, Howard Fontenot, Melvin Fontenot, Avie Granger, Thomas Israel, Calvin Leger, Abel McCauley, Alcide Ortego, Curtley Ortego, Calvin Soileau, Vernel Vidrine, Alvin Bordelon, Henry Brown, Mayner Fontenot, David Fontenot, Maxzille Fontenot, Ebra Fontenot, Lionel Fontenot, Ozema Fontenot, Claude Guillory, Adam Guillory, Levi Guillory, Louis Horn, Dudley Lafleur, Marius Ortego, Arthur Ortego, Pershing Roberie, Raymond Rozas, Milton Soileau, Milton Soanier, Elridge Thibodeaux, Prosper Thibodeaux and Hewitt Vidrine.



WOLLASTONITE SCRATCHES

CABOT MINERALS DIVISION

Willsboro, New York

by Walter Blanchard

Ole Man Winter came a-calling here recently and left us with about a foot of snow. This was quite a change from the weather before Christmas when it was nice and the ground was bare. There is good skiing now around here as, no doubt, Art and Roy can testify. We hear they've been trying out the new ski runs at Lake Placid and Whiteface mountain.

The good weather before Christmas brought out most of the men and their wives to our Christmas party at the Airport Inn. A turkey and ham supper was served buffet style with the usual liquid

refreshments as befits the holiday season. After the lunch, a short talk was given by Roy and then Norm presented him with a very nice men's accessory set from the employees.

After this, our committee chairman Al Lee, in behalf of Art Hall, who was away on business, presented all the wives with the gifts of bottles of cocktail wine and received a kiss under the mistletoe in return. Some guys are just born lucky or something, I guess!

Dancing and more repasts were then enjoyed by all, with many stops under the mistletoe, until the wee hours of the morn. Several couples stopped at Phil Redmond's house for coffee at Phil's invitation. Did your wife keep you in the doghouse all week, Phil? All in all though, everyone had a very good time.

Now the parties are all over and everyone has settled down to a new year, figuring income taxes, shoveling snow and waiting for summer to get here. No youngsters have been born recently but, from all reports, we have a couple of prospects for this summer, including another tax deduction for Herb and Bernie.

Chuck Pratt has been prospecting, too, and bought another car after just recently trading with Herb Jacques. Please, Chuck, stick with the Chevis and not another Hudson!

Midnite and Jack are back smelt-fishing again and say they're biting pretty well, providing one can stand the cold and rough water. Don't worry, though, it'll soon freeze and we can all go ice-fishing.

The Willsboro gang's Christmas party at the Airport Inn was a howling success as these photos testify. At left, a group chats during the cocktail party held preceding the dinner and, at right, Roy opens his gifts from the employees while Alf and Phil wait to pass out wine to the wives as a gift from Art.



Don Oliver and his family enjoyed a week end in New York City recently and got back to find their drains all plugged up. Boy, he says, that ground is "shore" hard — on the back.

We had visits recently from George Murray and Dave Munsell and his wife from the Boston Office and Cambridge R&D. Dave did a little skiing and renewed some acquaintances from a couple of years ago when he spent the summer working here with us.

That's all for now and we'll see you next month with more news, we hope!



DIXON DOIN'S

DIXON PLANT

Big Spring, Texas

By Marvin B. Wooldridge

Congratulations to the E. I. Petty family! Estil just recently acquired another income tax exemption. His boy was born a little late for 1957, but will help out considerably in the future. Joel Bruce Petty was born January 11 and weighed in at 6 lb. 9 oz.

Boy, did you ever get a couple of engineers ready to take a trip? It's sure a busy place around here now. Owen Gee and E. W. McCrea are getting their reports ready for the engineers' meeting in Sarnia. Hope they have a very pleasant trip.

It looks as though L. D. Martin and his crew are making their home at Dixon Plant again. They are overhauling unit two. Don't know what they are doing exactly, but you can bet it's worthwhile, as they have really been getting after it recently.

On January 8 we had our annual dinner at the Settles Hotel. The dinner was fine and everyone seemed to have a good time with the exception of Jimmie McCune; we think he was in a big sweat to get back to Pampa. Suppose they were having a basketball game or possibly he was afraid he would miss out on another free dinner! Hope he made it back okay.

We seemed to be quite popular last month; we had several visitors from Pampa: N. D. Steele, Reno Stinson, W. S. Dixon, Don Conley, Jay Meador, Jimmie McCune, Ralph Prock, Charley Mullican and J. T. Tatum. Other visitors were Paul Ritzenhouse and, from Midland, Mick Rafferty. We were glad to have all these visitors and we hope they will all come back real soon.

Guess I will finish with a poem given me by Noah Perkins. Noah said this

poem was written by his mother-in-law Mrs. Gladys Brock.

Lonely

No books lying here and there,
No coats hanging on the chair,
No rushing in through the door
With no children here anymore.
They have all left, one by one.
Now cooking isn't any fun.
It's just as quiet as a mouse;
Don't even like to clean the house.
I am sitting all alone
Since they've all left home.
Some have gone to a distant land,
Others are here close at hand,
But, gee, I'm as lonesome as can be;
Wish some of my children were here with me.



LAB GAB

CAMBRIDGE DIVISION, R&D DEPT.

Cambridge, Massachusetts

by Ava McNeil

Lots of people in the news this month! Good thing, too, what with these cold winter evenings. The Flame may while away some time.

First, sincere thanks from myself and my family for the many kindnesses shown by good lab friends.

'Way back on December 1 Tony Testa left his job at the lab for a six-month stint with Uncle Sam, after a luncheon at Simeone's. He dropped in at Christmas time on leave from Fort Dix and, confidentially, we think he likes Ken Loftman as a "top sergeant" better.

Another Christmas time visitor was Jeanne White Odams, who came in just as "Santa Claus" George Dirago was passing out the grab-bag gifts to the gals. Jeanne is now living in Jacksonville, Florida, where her husband Bob is still in the navy air force. Seems, too, that there will be a new little Odams come summer!

News came from Marlene diMilla of her baby girl born in January. Nancy and Mom are doing fine!

Dick Sawyer changed his status in two ways before the holidays. He switched from his co-op job to a permanent technician's job with the carbon black applications research section. And there's a Mrs. Sawyer now, too. Dick and the former Sally Worth were married Thanksgiving week end and Sally changed her home from New Jersey to Newton.

Myrtle Perkins retired to domesticity in Braintree Highlands at the end of the year. A very enjoyable luncheon was

held at the Faculty Club in Myrtle's honor and we hear that our little gift will be invested in an enlarger to further the Perkins' photography hobbies. The note received at the lab makes Myrtle sound very domestic indeed, what with cookie-making, snow-shovelling, etc. Here's to lots of happiness, Myrtle and Bill!

Our sympathy to Shirley Azack and her family in Whitman on the death of her grandmother Christmas week.

Shirley, Barbara O'Neil and Fern Church are most welcome additions to the staff, as are the members of the technical committee Fred Amon, Harry Collyer and Tom Bolt, who recently moved into new headquarters at the lab. It's good to know that Frank Oster has recovered from his illness at holiday time.

We have a lot of new folks to welcome to the laboratory over the past few weeks. In the maintenance group is Tony Caeran and in the shipping room Bob Simpson, who was recently transferred from the Boston Office.

Philip Goulston and Ed Hagopian are two newcomers to the carbon black research section. Phil is a Tufts graduate with degrees in chemistry and lives in Peabody. He'll be working in the special blacks technical service group. Ed Hagopian will be working in the research group and is living in Cambridge. Both new additions are bachelors, by the way!

Don Knight and Bruce Ostar, too, joined the lab as technicians, the former in the rubber lab and the latter in the applied research section. And James Trinchera and Myles Beers are now working in the organic and polymer research section as chemist and technician, respectively.

It seems that, though we're "gaining" two bachelors, we are losing one to the ever-present bonds of matrimony. Lou Belknap and Judy Leavitt of Boston and East Bridgewater became engaged at New Year's and are planning to be married soon.

Cele Downs had the first and, I hope, only accident of the year, skidding on ice on one of those very slippery days. Luckily, no one was injured, though Cele naturally was shaken up.

Speaking of being shaken up, George Engelson, we're willing to bet, would be among the last to volunteer for navy duty. George feels he has taken his "cruise" for the year. He needn't worry though; they tell me the oceans are rare around Tuscola, Illinois, where George and some of his friends will be wintering!

the laboratory. Four houses for personnel stand in a neat row to one side, shinningly new. The occupants of these houses have begun their pioneer life with the traditional spirit, however, as is evidenced by the tricycles and puppies in the front yards and a washing or two flapping merrily in the back.

Housed in an all-steel building are the two 550 horsepower engines which bring approximately 2½ thousand cubic feet of gas per day into the plant at ten pounds pressure, after which it is processed and delivered to the buyer at 900 pounds. One of the most often-repeated stories of the plant's first days occurred shortly after production started. The stock tanks had been filling steadily and it was decided to "let 'er go". Valves were opened and gauges watched closely but it soon became apparent that nothing was going anywhere. The operation was quickly stopped and a search revealed that the check valve on the buyer's end of the line had been installed backward. The offending piece was soon righted and the delivery was on.

Focal point for the questions, asked about 100 times daily, about "how we're doin'" is the laboratory which is well-stocked with tubes, bottles, Bon Ami, Cheez-its, donuts and coffee. During the first weeks of operation, a portable gas analyzer was constantly in use, making analyses of the product as several samples per hour were taken from strategic points. Allowed one per cent ethane by the Natural Gas Association of America standards, the first test showed a .9625 count. The product is of excellent quality and, moreover, the customer is protected from



Two of the Company houses located at the new King Plant site.

receiving impurities by the automatic performances. If hydrogen sulfide of .2 grains shows in the residue gas, it is immediately kicked out of the customer's line into the flare line by a sensitive control.

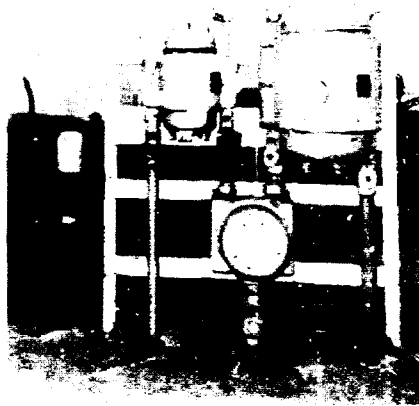
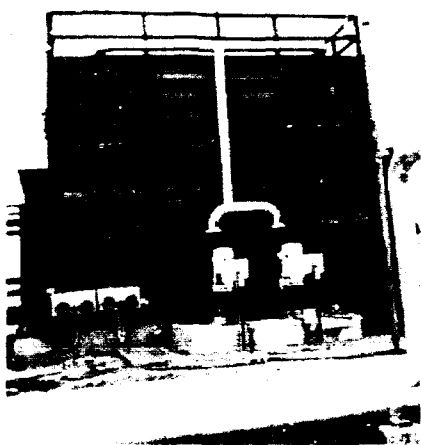
Automation at its finest can be seen at the King Plant. Every process is set for the correct operation and then connected, by wires, through a central conduit to the control board. In the event that anything goes wrong at any point, a horn automatically sounds to notify the operator. He goes directly to the board and turns off the horn which lights the panel, indicating the point of trouble. Necessary measures can be taken without delay. Even the stock tanks are included in this remarkable set-up; when a tank is full, the tell-tale horn calls the operator to the control board. A push of the clearance button lights the stock tank panel

and the operator knows that he should switch the production into another tank.

Sometimes the plant operations right themselves after a disruption. In such an instance, the horn automatically stops and the board clears itself. The first time that this happened during the plant's operation was at 3 a.m. The horn blared and the men arose and ran, clothes in hand. Just as they reached the board, the horn automatically stopped, leaving them "up in the air" as to the cause of the signal. They never did find out.

In viewing this work of modern industrial art, one thinks of its builders' hours of endless days and sleepless nights spent on grueling details in a raw, cold wind, with only devotion to duty to keep them warm. The entire accomplishment should be respectfully captioned, "See what they have wrought".

Left photo, the cooling tower at the new plant site is one of the most modern of its kind. Center photo, the conduit is located at the right of the control panel. Right photo, this is one of the big engines which runs the new plant.





Washington . . .

Lincoln . .



G. Washington

THE MEN

A. Lincoln

TO us of the twentieth century, George Washington and Abraham Lincoln are military heroes and superb statesmen. Posterity has made them so . . . and rightly. Heroes, statesmen, inspirational Presidents, monumental figures of American history they most certainly are.

But behind every hero is a man; and the greatness or meanness, the courage or weakness, the thoughtfulness or conceit, the endurance or laziness mark that man and tell us what he was and why his name sounds loud in our minds centuries or decades after he has "perish(ed) from the earth".

So let us say "happy birthday" to these two beloved men by calling to mind their lives and characters which innately and inevitably made them leaders in crucial moments of our American heritage.

MANY stories have been passed on to us of the child Washington—honest, willing, curious and straightforward. The excellent military strategy which he was later to show in practice in the field of war was the outcome of the theories drilled into him in boyhood by his hero, the Dutchman Jacob von Braam, who schooled him in the manual of arms and sword-exercise and taught him fortification and engineering.

Washington's athletic skill, often thought to be an exaggeration of the truth, was truly amazing. During a surveying expedition, he visited the Natural Bridge in Virginia and, standing almost directly under it, he tossed a stone on top, a distance of about 200 feet. He sealed the rocks and carved his name far above the others and he was never more

at home than when he was in the saddle. An amusing and typical comparison of youth and old age are to be found in Washington's two statements, the first after his first battle: "I heard the bullets whistle about me; and, believe me, there is something charming in the sound"; and the other after he had learned the horrors of war: "I said that when I was young."

Punctuality was one of Washington's strong points, one sometimes deplorable to his more fashionable guests. When company was invited for dinner, he made an allowance of only five minutes for variation in watches. If the guests came late, he would say: "We are too punctual for you. I have a cook who does not ask if the company has come, but if the hour has come." His temper,

too, was something to be reckoned with. Stuart, the painter, once remarked to Robert E. Lee that Washington had a tremendous temper, but that he held it under wonderful control. This controlled temper often manifested itself in a disdainful coldness as was evidenced when a would-be wag of a Philadelphian, waging with friends that he could approach Washington cordially, slapped the President on the back and said: "Well, old fellow, how are you this morning?" In a freezing tone he was asked: "Sir, what have I ever said or done which induces you to treat me in this manner?"

On the other hand, Washington often gave the way to popular opinions that he never laughed, for he often laughed most heartily with a joyous and extravagant spirit. When news came from Franklin



A gang of his co-workers and a couple of admirers take a few minutes off to wish good luck to Bob Simpson, who has been transferred from the Boston mailroom over to the Cambridge R&D laboratory.

there, you did get "service with a smile" from Bob Simpson, the supervisor. Bob was a first-rate person, never too busy to help you out. He knew everyone and vice versa. So there's no doubt we're going to miss him now that he's been transferred over to the lab in the shipping department. The crowd that gathered at his farewell showed that it wasn't just his co-workers who were sorry to see him go. The whole office chipped in to buy him a cashmere sweater and a cupful of money with which to add records to his hi-fi collection. George Corbeels made the presentation by stating, "People have been leaving here lately to get married or

have a baby. You're not doing either, but we still have a little remembrance for you. When you finish opening it up, I'll give you a half-hour to go around and kiss all the girls good-bye!" And to think Bob didn't take him up on that!

During all this rainy weather around here, the halls have been full of open umbrellas. It's taking your life in your hands to go as far as the water-cooler. There have been pretty umbrellas, big umbrellas, striped umbrellas, polka-dot umbrellas and, oh, so many other kinds. But there was one that defied description. It was a very dainty white one with ruffles and could belong to nobody except Elsie

"Oh, heavens," says Susie Vignoni, as her shower gift is presented to her. "I hope that this isn't an indication of what the future holds for me!"



Kruhmin. Its uniqueness was so startling that one member of the foreign operations staff wondered if somebody hadn't lost a piece of their "intimate apparel".

And with that, my story comes to a close. If I don't get strung up by the heels for some of these revelations, I'll see you next month.



CHESHIRE CHAT

STANLOW PLANT

Ellesmere Port, Cheshire

by Denis Cowling

Once more we have news of an "all-Stanlow" romance. Last month Tom Conde, shipping clerk, and Eileen Nesbitt, copy typist, were married at the Welsh Chapel, Ellesmere Port. Among the top shows they saw on their London honeymoon was a comedy called "The Lovebirds". Enough said!

The happiest man at the plant on Christmas was undoubtedly John Clarke, furnace platform operator. A few days before Christmas John's wife Nora presented him with a son. Congratulations to the proud parents.

As usual the employees' dinner went off with a "bang". We were all pleased to learn from George Cash in his "How Are We Doing?" speech of the activities of the Company during the past year. At the dinner we had three guests, George Raymond of our Paris Office, Len MacQueen, our sales manager, and Ed Cheetnam who is our northern area sales representative.

The Cabot band gave an excellent performance and thanks are due to them for the fine job they so willingly do on these occasions. There were quite a few soloists during the evening, but the star performer was our office boy John Rose, who gave a number of rock and roll items. Talk about "I'm All Shook Up"!

Five-year safety awards were presented to the following: B. Barrack, D. Cowling, S. Cullis, A. Dilworth, G. Duggan, W. Evans, J. H. Fawson, W. F. Fearnley, W. V. Gillard, A. R. Grindley, J. A. Hearn, W. Hegarty, G. E. Howcroft, J. Hurley, W. S. Jones, Mrs. L. M. Lamport, Mrs. E. M. Lloyd, H. E. Maddocks, S. Marland, D. E. O'Mulloy, P. A. Read, J. I. Roberts, J. Rutter, R. Sandon, L. Walters, S. Watson, B. G. Gould and W. Dodd.

A welcome visitor to Stanlow at Christmas was our old friend Bob Blake, vacationing in the "old country" with wife



Left photo, Ann Read is presented with her five-year award by George Cash. Right photo, Wilf Gillard makes the presentation to Sammy Marland.

Mary and daughter Pat. Although the Stanlow Plant and personnel have grown considerably in the few years since Bob left for Sarnia, he was able to find many familiar faces around the place.

A new feature of the Christmas celebrations was the organization by the social committee of a visit to a pantomime at the Empire Theatre, Liverpool, for the older children. However, the annual Christmas party was still held for the younger ones and, needless to say, Santa Claus put in an appearance with lovely presents for one and all.

Mr. and Mrs. Tom Conde, both employees at the Stanlow Plant, were married recently at Ellesmere Port. Mrs. Conde is the former Eileen Nesbitt.



After an absence of a month, in which time he has been putting his affairs in order for his transfer to Stanlow, we are pleased to welcome James Satterfield and his wife. Although the actual day of their arrival was blessed with sunshine, the succeeding four days have been a mixture of snow, rain, ice, etc.

Two new members of the Stanlow staff are Jill Tanner and John Budd. Jill succeeded Edna Robinson as secretary to John Hewson and John is our new office junior.

Our warehouse section has said goodbye to one of their most popular packers Sammy Marland. Sammy and his family emigrated to Canada and, at a farewell party in their honour, Sammy and his wife received gifts presented by colleague Bob Gillard on behalf of all the warehouse personnel.



LES NOUVELLES de VILLE PLATTE VILLE PLATTE PLANT

Ville Platte, Louisiana
by Francois Gabriel Gaston Pierre
Rene de La Salle V

Well, we will tell you to start off that the weather in the has-been-sunny south is lousy. We sure wish you folks up north would shut your southern doors and cut out the draft; we are about to freeze. This time last year we were cutting grass down here and now we are cutting ice and sometimes it ain't too thin. A few days ago, we got up and the sun was shining bright and it looked just like

spring was here for sure. Everybody rushed outside to get a breath of spring air and hear the birds sing. The birds were in the trees all right, but they were just sitting there looking at one another with a worried expression and not a peep; they all have the croup.

We have some more bad news. Due to a gas shortage and a cutback in operations it was necessary to lay off 14 of the regular employees. They were John Hadley, Thomas Israel, J. V. Johnson, Adam Vidrine, R. L. Luther, Edwin Ortego, Sylvian Ardoin, Earl Sinitiere, Huey Foret, Vernel Fontenot, Allen Monier, Stafford Fuselier, John Ardoin and Jimmie Brou. Of course, we all hope and pray that this is just a temporary thing and that all these boys will be called back in the near future and, in the meantime, we wish them lots and lots of luck.

There was a farewell party and supper held at the Methodist Church honoring the R. L. Luther family. They were presented with a gift from the church for the fine work they have done in the Sunday School and church while living at Ville Platte. They were also presented an automatic electric skillet by the residents of the camp to show their appreciation for the fine neighbors they have been while living among us. Of course, we are not dead serious about this, but it seems it might be better to give a man, who has just lost his job and has to move away, some meat to put in his old skillet instead of a new skillet and no meat. Now we said that just to try to be cute, and we all know that R. L. is a first class barber. In fact, he went right to work in that field and, it's for sure, people are always going to have their hair cut unless things get to a point where they will pull it all out.

We have had a lot of sickness lately. Wilson Fontenot has just come out of the hospital from an operation and Elvin Johnson is still in the hospital in Mamou. David Usher, who is the youngest son of Floyd and Juanita Usher, has just been released from a ten-day stretch in the hospital. Harrison Lafleur's baby daughter has been real sick but Mrs. Lafleur told us she is much better. Hewitt Vidrine, Edmond Tate and Clarence Vidrine went to the intra-coastal canal on a two-day fishing trip. Hewitt got real sick but seems to be okay now. He says it was Edmond's cooking that done him up.

Up to now everything we have told you about sounds gloomy, but there have been a few bright spots. For one thing, we were honored with a visit from Dudley Steele of Pampa and our safety direc-

in France that help was promised from that country. General Washington waved his cocked hat, broke into a laugh and said to his officers, "The day is ours!"

Comrades, friends, family and guests attested to the thoughtfulness of the man. After Washington's retirement from the Presidency, for example, a guest at Mount Vernon had a serious cold and coughed severely after he went to bed. Suddenly he heard the curtains of his bed being drawn aside and looked up to see Washington standing at his service with a huge bowl of steaming herb tea, a reliable recipe for heavy coughs at that time.

Another very pleasant side of Washington's character is revealed in his relations with his stepchildren, whom he indulged with toys and dolls and books. His extreme modesty is also an outstanding feature of his personality. Upon one occasion, when the speaker of the assembly thanked Colonel Washington in glowing terms for his services, Washington was so embarrassed when he arose that he could not speak. "Sit down, Mr. Washington," said the speaker, "your modesty equals your valor, and that surpasses the power of any language which I possess." Washington's favorite quotation was Addison's "Tis not in mortals to command success", but he frequently quoted Shakespeare. His tastes in literature bent toward the biographies and autobiographies, history, military campaigns and treatises on revolutions and upheavals. He once wrote to his step-grandson, "Light reading (by this I mean books of little importance) may amuse for the moment, but leaves nothing behind."

Although he is often supposed to have been something of a dandy, he was in fact only very meticulous in his dress. He had this to say about men's clothing: "Do not conceive that fine clothes make fine men any more than fine feathers make fine birds. A plain, genteel dress is more admired and obtains more credit than lace or embroidery in the eyes of the judicious and sensible."

Washington combined within himself the qualities of straightforwardness and diplomacy. He was once asked by Volney, a French revolutionist, for a letter of recommendation to the American people. While this request put him in an awkward position because he had good reasons not to give it, he also did not wish to refuse. He therefore wrote: "C. Volney needs no recommendation from . . . George Washington."

A LINCOLN, as almost always signed his name, has become to us more than a man—his life is legend, his deeds are folklore and his face inspires the coldest hearts. Lincoln himself would not have wished this in all his humility and gentleness. Indeed, even in the soaring words of his gem-like oration at Gettysburg, he said "The world will little note, nor long remember, what we say here, but it can never forget what they did here". And yet, despite his prophecy, we do remember his words and the fullness of his meaning almost 100 years after they were spoken. What manner of man could so inspire us?

It is interesting to note that, not once in his Gettysburg address, did Lincoln ever use the pronoun "I". Although we know better, he would perhaps have attributed this fact to his very humble beginnings. Orphaned by the death of their mother two years after they had moved to the wilderness of Indiana, Abe and his sister Sarah were joined the following year by three other orphans, children of their stepmother. When another unfortunate child found his way to the Lincoln cabin to make three groups of orphans under one roof, it may be that the first Indiana orphanage was established.

The stories of Lincoln's humble birth and childhood in Kentucky, his experiences as a prairie lawyer in Illinois, his freeing of the slaves and the saving of the Union are episodes in his life well known to every American youth. The adventures of Lincoln during his boyhood days in Indiana, where he spent fourteen years, have not been emphasized in comparison to their intense interest and very great importance in his life's story. When Lincoln arrived in Indiana from Kentucky, he was a small lad but seven years old; when he drove his father's oxen, hitched to a covered wagon, from Indiana to Illinois at the time of the family migration, he was 21 and was six feet, four inches tall. A friend who knew Lincoln well talked with him about his early life in Indiana and claimed, "There was nothing sad or pinched, and nothing of want, and no allusions to want, in any part of it. Lincoln's own description of his youth was that of a joyous, happy boyhood".

In the fall of 1863 when Lincoln stopped at Hanover, Pennsylvania, on his way to Gettysburg to dedicate the National Cemetery there, he was described as being "a tall, lanky man

... (wearing) a black, high silk hat. He had a pretty strong voice—what you'd term high".

Lincoln is famed as a humorist not only because of his ability to draw upon an inexhaustible store of anecdotes but also because of his natural sense of quaint and pleasing humor which often found expression in tense and serious situations. His willingness to laugh at himself is also an endearing quality which brightened the day-to-day grintiness of the struggles and trivialities of the period. Well-known to his friends but not to strangers was the fact that Lincoln neither drank nor smoked. However, a fellow traveler from Kentucky on a voyage to the west tried to be friendly by first offering Lincoln a chew of tobacco twist, only to be answered, "No, sir, thank you, I never chew". Later in the day he offered Lincoln a cigar which was politely declined with the remark that he never smoked. At dinnertime that night, the affable Kentuckian took a flask from his satchel with the remark, "Well, stranger, seeing you do not smoke or chew, perhaps you'll take a little French brandy". Again Lincoln found it necessary to decline this last best evidence of Kentucky hospitality. When they finally parted, the Kentuckian shook Lincoln's hand warmly and said, good humoredly, "See here, stranger, you're a clever, but strange companion. I may never see you again, and I don't want to offend you, but I want to say this: My experience has taught me that a man who has no vices has very few virtues!" Many times later in his career, Lincoln was to refer with much merriment to his Kentucky friend, with some statement about the stranger hitting the nail on the head.

Lincoln was forever granting pardons and showing clemency when the lives of condemned men were at stake. Such an order was this: "Colonel Mulligan, if you haven't shot Barney D..... yet, don't". From such small occurrences we learn of the humanity of the man Lincoln.

Few of us know that it was Lincoln who proclaimed the first annual national Thanksgiving Day. For these many years, Thanksgiving has brought good cheer into our homes, quickened our patriotic impulses, and given the nation an unusual opportunity to reaffirm its loyalty to "the beneficent Creator and Ruler of the Universe", as Lincoln wrote.



Thomas F. Urbanosky



Harold D. Oltmann
Tommy G. Priddy



Scholarships

Awarded

to

Six

in

Southwest

SCHOLARSHIPS offered by the Cabot Foundation, Inc., during last fall were awarded to students at six southwestern colleges and universities. These scholarships were for students at the junior level.

Three chemical engineering majors were among the six scholarship recipients. They are Harold W. Gourgues, Jr., who is at present attending Louisiana State University; George Walter Lowe, who is a student at the University of Texas, and Harold D. Oltmann, a junior student at The Rice Institute.

The other three scholarships went to mechanical engineering students, including the following: Tommy G. Priddy, who is a student at Texas Technological College; Walter B. Sturek, a junior at the Oklahoma Agricultural and Mechanical College, and Thomas F. Urbanosky, who attends the Agricultural and Mechanical College of Texas.

These students will be given the opportunity to become employees of the Cabot industries during the summer months this year.

Under this scholarship program, which is in its second year at the present time, scholarships are open to students in certain designated fields at each college. The scholarships are open to renewal for the senior year. Winners are selected by committees at each school on the bases of scholastic record, personal qualifications and financial need.



George Walter Lowe



Walter B. Sturek

Harold W. Gourgues, Jr.



geologists Billy Morrison came in with a tall tale, even for a Texan, of the country being overrun with rattlesnakes. Since this was in the middle of November, Billy was subjected to a considerable razzing, so a few days later he brought in the accompanying picture to prove his point. During the drilling of the well, there were more than 100 snakes killed on or near the location, the largest measuring over 60 inches in length. Because everyone walked so carefully, there were no snake bite victims.

John Maddux, junior engineer for this district, reported to the army for active duty on February 12 at Seattle, Washington. We will miss John and wish him the best of luck.

Howard Mauk, field foreman in the Lovington area, recently had a two-week spell of the flu, as did Freda Thompson. Freda came back to work for two days and then had a relapse. She said that this brand of flu, Asian or not, made her sicker than she had ever been before.

Freda, who is T. Stall's secretary, has been with us six months. She has been very active in the oil business for a number of years, working as a secretary and as an accountant. Freda is one of the busiest gals in town; for the past two years she has been going to Odessa College two nights a week to study geology and accounting. On holidays and week ends, she goes rock-hunting, fishing or to see the nearest football game. Freda is an active member of the Desk and Derrick Club and was decoration committee chairman for the oil parade this year. She lives alone with the company of two wire fox terriers, Lazy Bones and Mr. Bones, whose antics and care complete a very interesting daily schedule.

The Company barbecue was held in Odessa on November 9, 1957, with the largest gathering of personnel from the oil and gas department of this district that we have ever seen. Five-year pins were awarded to Archie Cockburn, Howard Mauk and Evelyn Clay. The presentations were made by N. Dudley Steele of the Pampa Office. In spite of the cold weather, the event was most successful.

We have two new employees in the Midland Office. Jimmy Murphy Horton, geologist, and Mildred Douglas, clerk-typist. Mr. and Mrs. Horton are the parents of four young daughters. "Murph" came to us from the Frank Waters Oil Company and reported to work just in time for well duty on the coldest night of the year. Mildred's husband is a salesman for Swift and Com-

pany and she has one son, aged 16, who is in junior college. We are happy to welcome these newcomers to the Midland Office.

The Billy Morrisons are the parents of a baby girl Virginia Lee, born on January 4 and weighing 5 lb. 5 oz.; mother and daughter are doing fine.

Wanda Felts, draftsman, resigned February 1 to be married. We wish her every happiness and will miss her very much.

KEYHOLE EVIDENCE

CHARLESTON OFFICE

Charleston, West Virginia

by Lenna Yoak

This month we welcome to the Charleston branch of the Cabot family Fred Radford, staff engineer. Mr. Radford is a native Charlestonian and a graduate of West Virginia University where he obtained a degree in geology. He is also a recent bridegroom, having been married during the Christmas holidays, so it's welcome and congratulations, Fred!

On January 18 in the chapel of the First Presbyterian Church in Charleston, Laura Lee Smith, daughter of Mr. and Mrs. Willard P. Smith, became the bride of Ralph Newell Parks, Jr. Laura Lee is a graduate of Stonewall Jackson High School and attended Morris Harvey and Marshall Colleges. At the time of her marriage, she was employed by the Kuhn Construction Company. Ralph is the son of Mr. and Mrs. Ralph N. Parks,



Phyllis Yates of the billing department and William J. Hollenbeck were married on December 27 and are now living in Charleston.

also of Charleston, and is a graduate of Charleston High School and Rensselaer Polytechnic Institute. He served three years with the navy air force and is at present employed in the electric design department of the Newport News Shipbuilding and Drydock Company. Ralph's father is a retired vice president of United Fuel Gas Company. After a wedding trip to Fort Lauderdale, Florida, Laura Lee and Ralph are living in Hampton, Virginia.

On December 27 in the chapel of the First Presbyterian Church, Phyllis Yates,

Left photo, Laura Lee Smith and Ralph N. Parks, Jr., were married in the First Presbyterian Church in Charleston on January 18. Right photo, after the ceremony, the couple is pictured with the bride's parents, W. P. Smith, far left, and Mrs. Smith, far right.





Helen Duduit, left photo, and Stanley Moore, right photo, were the lucky winners of door prizes at the Charleston Office Christmas party held at the Daniel Boone Hotel.

an employee in the billing department, became the bride of William J. Hollenbeck. Mr. Hollenbeck, a graduate of North Carolina State College is employed as an engineer for Carbide and Carbon Chemicals Company at South Charleston. Mr. and Mrs. Hollenbeck are now living on Franklin Avenue in Charleston.

We extend our best wishes for long and happy married lives to both the Hollenbecks and the Parks.

January was a popular birthday month in our office since we received treats from John Jones, Joe Walker, Ben Rubrecht, Athalee Caldwell, Bill Smith and Frances Stamper.

The girls gather around the punch bowl at the party held by the Charleston Office force on the day before Christmas.



On December 21 our annual Christmas party was again held at the Daniel Boone Hotel and a grand party it was — beautiful corsages for the ladies, wonderful music by Milt Corey's orchestra, delicious hors d'oeuvres and a marvelous dinner!

There were many "hello's", "good to see you's" and similar greetings around the punch bowl and a general feeling of good will and good fellowship during the evening. Charlie Uber arranges these parties and it seems as though they get better every year.

On the morning of December 24 the office force also held a party in the reception room which was a lot of fun.

And now we wish you a belated, but heartfelt "Happy New Year".



BOSTON BANTER

BOSTON OFFICE

Boston, Massachusetts

by Pat Kepner

We at the Boston Office have a hero. Because he is an unsung hero (due to his humble modesty), he has not yet been acclaimed or feted by a tickertape parade. However, since this courageous act consumed "blood, sweat and tears", you readers must also work a little for the reward of reading about it. Somewhere in the following items is this not-yet-publicly-related tale of bravery and honor beyond the call of duty.

As always, there are a few new faces seen around the office. Mary Squatrito has recently joined the foreign operations

department as secretary to Ron Holder. The accounting department also has a new employee in the person of Catherine Simons. Hope she's got a good sense of humor; she'll need it to work with those jokers, among whom Charlie Alsterlund carries off top honors. At Susie Vignoni's shower, Charlie donned a frilly bonnet, grabbed a bottle (of milk), curled up serenely in a baby carriage and was wheeled out with great ceremony to be presented to the recipient of all this gaiety. What a disappointment for Susie when she discovered that only the carriage was hers!

Joyce Mitchell is the newest member of the public relations department. It's a sure bet that eventually she'll fall into the pattern of the department — get engaged, married and leave to have a baby. The standing joke around here is that if a gal seems stymied in that area of life, she need only to arrange a transfer to Tubby's department. Just sit in that magic chair for awhile and things will start to pop! "The hand of the master," says Tubby.

Though she doesn't actually work right in the public relations department, Chris Carney apparently is located in close enough proximity to take advantage of its reputation, for that sure is a handsome diamond that's been on her finger these past few weeks. Chris says they'll be married as soon as her fiancé gets out of the service. Since that will be September 10, look for news of the wedding on the 11th.

And now for that saga of heroism and unselfishness. One night George McGonigle climbed on a bus to go home — a routine he's been following unceremoniously for some time. This was a night like any other, except the bus driver ran out of cigarettes. So he parked the bus on a hill and went in a drugstore to make his purchase. The bus suddenly started to roll down the hill. From his seat in the back leaped a quick-thinking man, who ran up and grabbed the brakes to bring the runaway vehicle to a stop. The "hero of the hour" was none other than George. A garland of roses for that man! And hereafter address him with a noticeable trace of respect.

Whenever an employee here in the office ventured down to the mailroom, he could expect "most anything. One rainy damp miserable day, the boys down there even had a contest to guess my age. The lucky winner got to do an errand which involved going out in that ghastly weather. I keep telling myself they made such bad guesses only to escape the job! Anyway, no matter what you got when you screwed up your courage to go in

49 Canalians Cited for Safety

by Eloi Segura

CANAL Plant employees were honored at the sixth annual safety banquet which was held at the new American Legion hall in Franklin, Louisiana, on January 15.

Presentation of the individual safety awards, safety tokens and door prizes were the highlights of the evening and refreshments were served.

Frank Walker of the safety department was in charge of the event and did his usual fine job in making the arrangements.

Con Paulsen, district superintendent, was toastmaster and Don Conley, safety director, and Henry "Hank" Ayres, plant superintendent, presented the safety awards. Out-of-town guests

included Reno Stinson, industrial relations director; Don Conley, safety director, and Dudley Steele, general superintendent of carbon black.

The honored guests were 49 Cabot Carbon Company employees who have worked for periods of five or more years on the job without lost-time injuries.

Those men, not included in the pictures, who won safety plaques, were the following: Ferdie Bertrand, Wilson Brown, Sylvia Hoy, Raymond Ruskoski, Wallace Lancen, Clarence LeBlanc, Kaufman LeBlanc, Earl Mayer, Milton Picard, Samuel Soprano and Andrew Vilcan.



Left photo, five-year award recipients included, left to right, Allen Hunley, Daniel St. Germain, Owen Stansbury, Harold LeBlanc, Aurelius Kidder, Arthur Lalumandier, Harold Naquin, Charles Louviere, Delain Hardy, Joseph Jaques and Budley Hebert. Below, left photo, Johnnie Miller receives his 15-year safety plaque from Safety Director Don Conley. Below, right photo, five-year safety awards also went to, left to right: Andrew Bailey, Wilbert Ardenaux, James Elliot, Robert Bouton, Percy Breaux, John Brescher, Leroy Broussard, Elwood Boudreaux and George Dugas.



Photo at left, more recipients of five-year awards were, left to right: George Bonin, Forrest Boudreaux, Roland Bergeron, Beverly Clements, Joseph Culotta, Raymond Boudreaux, Lawrence Dooley and Clifford Broussard. Photo below, other five year awards were presented to, left to right: Oray Rogers, Anatole Naquin, Ray Hoover, Rodney LeBlanc, John Luke, Elmer Walden, Ralph Miques, Joseph Robicheaux and Oscar Talbot.





"Ebenezer Howe", a still life by Elinor Case Nadherny, wife of Ferd Nadherny of the Boston Office, was awarded the third prize of \$25 in the contest for oil paintings sponsored by the Ralph Bradley Art Prizes.

First place in the oil painting contest was presented to Mrs. Bunt Jones, wife of Bunt Jones of the Dixon Plant. For her painting "Lonesome Road", below, she received \$100. The special merit prize of \$25 was given to Olive E. Bertrand of the Boston Office for the workmanship exhibited in the five paintings she submitted in the contest. At the right is one of her paintings entitled "Early Morning".



CARAVAN OF

IT'S fascinating, it's exciting and it's coming your way. What? The caravan of Cabot art, naturally. Once again, it's time for the traveling exhibit of the masterpieces of several of our more talented colleagues to make its circuit of Cabot offices and plants. When it arrives, you'll have a chance to view the originals of the winning paintings shown here along with 14 others which won honors at the judging of the Ralph Bradley Oil Painting Contest on January 16.

The art contest was restricted to oil paintings this year. Cabot employees and retirees, as well as the members of their immediate families, were invited to participate. Each entrant could submit up to five paintings. When the entries were assembled in the Boston office, there were a total of 50 oil compositions representing submissions from 16 artists.

The contest committee secured the services of three able judges to make the final decisions in awarding all prizes. The panel included Bartlett Hayes, director of the Addison Gallery of American Art at Phillips Academy, Andover, Massachusetts. Mr. Hayes is a trustee of the Museum of Fine Arts, the American Federation of Arts and the Society for the Preservation of New England Antiquities and is associated with numerous other art organizations. William M. Jewel, professor of fine arts and chairman of the department of fine arts at the college of liberal arts, Boston University, was the second member. The third judge, an artist and architect in his own right, was Russell



THE FLAME



"Waiting for the doctor can sure be a tiresome business!" Frankie Loan, left, and Laura Lee, right, daughters of Jack T. Mitchell of the fabricating shops, refuse to get upset about a little thing like paying a visit to the doctor. Even the flash of a bulb failed to elicit any interest on the girls' parts as they refused to be moved by any of the activities in Pampa's Hughes Building one day recently.



James Malcolm Hamilton is the 11-month-old son of Mack and Lina Hamilton. Mack, who works in Southern District, is sure a "proud papa" of his only child.

A Sad Note

Another opinion on the result of Northern Ontario expansion was noted in the Alchem News, the company publication of Alchem Limited, Burlington, Ontario.

It seems that some Indians from the Sagamuk Reserve visited Gore Bay recently and were questioned as to how the uranium boom was helping them.

Their chief, the spokesman for the group, replied, "Indian never get anything from white man. Two or three hundred years ago, white man first come to North Shore. He take all fur and give Indian a few strings of beads. Then a few years later he build saw mills at Culter, Spragge and Blind River. Cut down all big trees. He burn mills and go away. Few years later he come back, cut down small trees, build paper mill. Nothing left on North Shore but rock. Now, by gosh, he come back for rock!"



**SOUTHERN
COMFORT**

SOUTHERN DISTRICT

Pineville, West Virginia

by Ann England

Oh, me, the due date is here, so I had better get real busy and see what has happened in Southern District recently.

December 31, 1957, was a dreary day around our district, for that was the day we said "farewell" to Jacob L. Peck as he was transferred to Glasgow. Jake, well-liked by all and a handyman at any job, did mechanical work in our district for several years. We will miss Jake around here, but, too, we are real pleased for him to be closer to his home so that he may be with his family, who live in Charleston. We take this opportunity to wish Jake and his family the best of happiness in their newly-purchased home and new surroundings.

We are sorry to hear that Mrs. Creed Echard of Bradley Station has been ill. Mrs. Echard was confined to the Wyoming General Hospital for several days. We wish her a very speedy recovery.

Hysel Litton of our office has been ill for a few days and confined to the Charleston General Hospital for a minor operation to his nose, which was injured in an automobile accident last year. Hysel is back to work, feeling much better, but the doctor's orders are for him to return to the hospital shortly for another operation. We do hope he soon feels tip-top again.

Mr. and Mrs. Freddie J. Wilson of Sophia announce the birth of a son Charles Wayne on January 8, weighing 8 lb. 4 oz., at a hospital in Beckley, West Virginia. This is their second child. We congratulate the Wilsons. Freddie is a driller at our Beaver no. 32 well in Raleigh County.

Mr. and Mrs. Dye Bennett and their daughter Sandra Kay of Vienna, West Virginia, recently spent several days at the home of Mrs. Bennett's parents Mr. and Mrs. Eugene Peninger of Bradley Station.

The flu bug has been flying around in our district. Several employees have been absent from work, but all seem to be back on the job again, feeling much better. This bug sure is an unwelcome guest.

On January 15, Godfrey and Doris Smith were informed that they were grandparents for the fourth time. Their daughter and son-in-law Mr. and Mrs. Tommy Hawley of Charlottesville, Virginia, announced the arrival of a son. They have two other children, both girls. This is the Smith's fourth grandchild, but only grandson. We congratulate them!



TORTS en RETORTS
RETORT CHEMICAL DIVISION

Gainesville, Florida

by Shirley Blodgett

We wish the cold weather we are having around here was as scarce as the news is. The temperatures have dipped down to the 20's a few times. If a tourist were touring through Florida a few days ago, he would have sworn he was touring the Antarctic.

Despite the cold weather, the old stork was still flying and paid a visit to Lula



Everything grows bigger in West Virginia! For example, the left photo shows French "Fat" Jarvis, a meter reader in Auk District; the center photo shows Don Wiley trying on French's overalls, just for size, and the right photo shows Don and James G. Hudnall wearing Jarvis' overalls.

Mae and Willie Hines on December 11, 1957, and presented them with a 9 lb. baby boy. His name is Jim Wilson Hines. Congratulations, Lula Mae and Willie.

We are glad to hear that Martha Ann, daughter of J. T. Brown, Jr., payroll clerk, was not hurt seriously, other than a few cuts and bruises, when she was in an automobile accident last month.

Shirley Wilson is recuperating from an illness at home after spending several days in the hospital. Best wishes for a speedy recovery, Shirley.

Employees at Retort have not yet got accustomed to being paid by check. We got our first pay by check January 24.

In January, L. W. Mims, plant manager, was a guest of the Union Bag-Camp Paper Company and spent several days at their hunting lodge at Palmetto Bluff, South Carolina.

Recent visitors from the Boston Office were R. M. Muldowney and Charles Flynn. We enjoyed their visit very much.

Winners in the January woods contest were Richard Gooding, Lee Williams and David Gordon. Each won \$20.

We would like to extend a welcome to all of the new employees at the plant.

AUK SQUAWKS

AUK DISTRICT

Glasgow, West Virginia
by Glada Samples

It seems that we have had our share of winter even though January isn't over yet at this writing. Everyone here is looking

forward to spring so he can get outside and enjoy the fresh spring air.

We welcome back to work Doris Stone, clerk in the Glasgow Office, who has been absent from work after undergoing surgery in a Charleston Hospital. Doris is getting along fine. Her mother-in-law Mrs. Hazel Stone has been visiting them during her convalescence.

Mr. and Mrs. Orville Barnette of Grantsville spent a few days visiting his parents Mr. and Mrs. J. S. Barnette of Glasgow. Orville spent one day in the Charleston Office on business.

Mr. and Mrs. Joseph E. Hutchinson are the proud parents of a baby boy born January 11. They call him J. E., Jr.

Mr. and Mrs. Jimmy Ray Pell of Newark, Ohio, have a new addition to their family. Joseph Robert Pell saw the light of day December 3. Jimmy is the son of Joe Pell, assistant superintendent, and his wife Sue is a former receptionist in the Charleston Office.

Jacob L. Peck, who has been working in Southern District for the past several years, has been transferred to Auk District. We are very happy to have Jake with us. He is living in Charleston.

Fred Radford, a new employee from the Charleston Office, visited us for a couple of days during the month of January. We welcome Fred to the Cabot organization and wish him much success in his new job.

Sylvester L. Childers has been promoted to meter engineer to fill the place vacated by Edgar Rutledge, recently retired.

Eugene and Helena Rader of Victoria,

Texas, are the proud parents of a baby girl born on January 19. Mrs. Rader is the sister of Edna Pell. This is quite an event for Edna's mother since she has nine grandchildren, but this is the first granddaughter.

SWABBING AND FLOWING MIDLAND OFFICE

Midland, Texas
by Wanda Kimble

While we were drilling a wildcat in Andrews County, Texas, one of our

Eight rattlesnakes represent one day's kill for the men who recently drilled a wildcat well in Andrews County, Texas.



THE FLAME

CABOT ART

Smith, head of the School of the Museum of Fine Arts and chairman of the fine arts department at Tufts University. It was no easy task, even for these qualified experts, to select the most deserving canvasses. They considered each individual work for expression, technique and tone. After careful deliberation, their decisions were reached.

First place award of \$100 went to Mrs. "Bunt" Jones, wife of Bunt Jones of Dixon Plant, for her somber Texas landscape entitled "Lonesome Road". Second place and a cash prize of \$50 was awarded to Martha Conway, wife of D. W. Conway, Dixon Plant, for "Louisiana Washday". The \$25 third place award went to Elinor Case Nadherny, wife of Ferd Nadherny of the Boston Office, for her execution of a nostalgic still life called "Ebenezer Howe".

A \$25 special merit prize was awarded to Olive E. Bertrand of the Boston Office. This prize was "judged and awarded on the basis of the greatest total artistic merit and highest quality of workmanship shown as represented by all of the entries of any one artist". Olive submitted five paintings and the consistent excellence of her work well deserved such an honor.

Ten other oil paintings were given honorable mentions: "Spring" by Johanna E. Boonstra-Leekma, wife of B.B. S. T. Boonstra of Cambridge R&D; a still life by Mrs. Louis W. Cabot of Boston; "Desert Shadows" by Wanda Carter, wife of C. L. Carter, Pampa R&D; "The Tilted Basket" by Martha



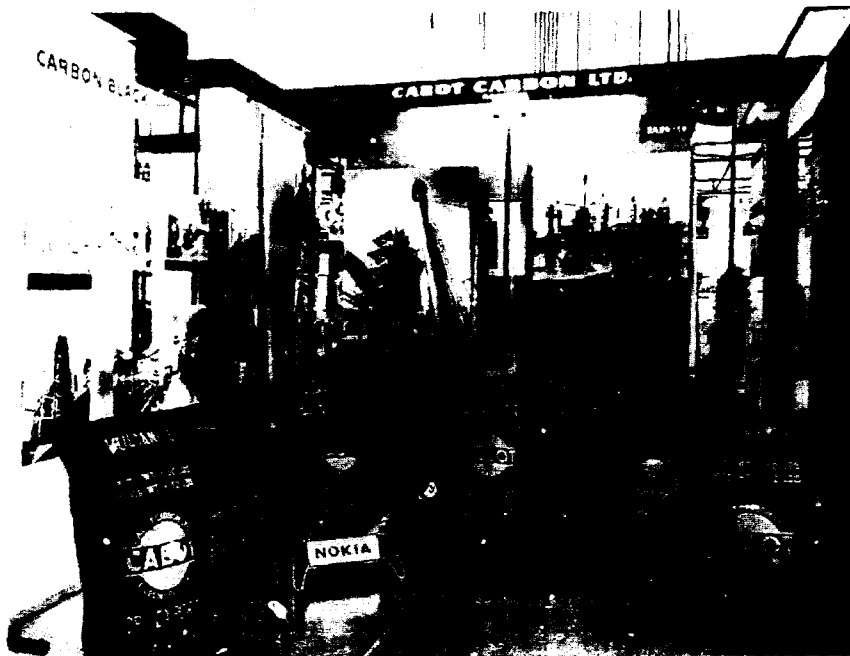
Martha Conway, wife of D. W. Conway of the Dixon Plant, was awarded the second prize of \$50 for her painting "Louisiana Washday" which, with the rest of the winning pictures, will go on traveling exhibit.

Conway; "Old Mexico" by Dorothy Dixon, wife of A. L. Dixon of Kermit Plant; "Columbian Gorge, Northwest Pacific" by Edward P. Duffy of Dixon Plant; "The Fire Escape" by Mary N. Jevdet, sister of Elizabeth Jevdet of the Boston Office; "Ruffnecking" by Bunt Jones; "Fall Flight" by Eiten J. Louviere of Canal Plant and "Solitude" by Betty Roberts of Cabot Shops.

These 18 paintings compose the traveling exhibit which will soon be en route to you. So make a mental note right now to get a first-hand look at the caravan of Cabot art!

Caught in a reflective moment during the judging on January 16 were contest committee members Ralph Bradley, director, Godfrey L. Cabot, Inc., Larry Johnson and Jack Whitham of the Boston Office and judges William M. Jewel, Russell Smith and Bartlett Hayes.





Bang & Co., Cabot representatives in Finland, recently exhibited this display of our products in that country.

Cabot Carbon Black Displayed By Representatives in Finland

Finland, despite its difficult geographical location, is very much interested in maintaining close economic ties with countries of the Western world.

A large part of its international trade is conducted with the United Kingdom and, among the various commodities imported into Finland, is carbon black.

Cabot Carbon Limited supplies a large percentage of this black and, when British manufacturers recently held an exhibition of their goods in Finland, Cabot participated.

The accompanying photograph shows the display arranged by Cabot representatives Bang & Co. of Cabot products.

Reporter of the Month

Tom Chisholm is our newest addition to the safety and insurance department.

Tom was born in Pennsylvania, but the Chisholm family moved to Texas in the early '30's, so he is practically a native Texan. He attended elementary and high school in Pampa and was graduated from Notre Dame in 1952 with a major in economics. He is an ardent football follower and has been rooting for the "Fighting Irish" since seeing "Knute Rockne, All American" as a youngster. He lettered in boxing three years at Notre Dame which, according to Tom, accounts for the glazed expression when questioned on matters pertinent to safety.



Tom Chisholm,
Pampa Office

He lost no time in utilizing his economics background, since the two years after his graduation were spent in the marines driving a bulldozer. After his discharge, he worked a year in the Cabot ordnance plant and a year in the fabricating shop and is now completing a year in the safety and insurance department, which Tom states is an education within itself.

He has no particular hobbies other than a keen interest in the Civil War and a very complete library on that subject. He would like nothing better than to discuss things like Lee's "mistakes" at Antietam or dwell on such personalities as Generals Leonides Polk or Dan Sickles. He hedges on loyalties but does



I never knew what a pool loset was

until the missus went on a diet.

I don't know much about the speed of light except it comes too early in the morning.

The trouble with an open mind is that it's often open at both ends.

Young men today don't leave footprints on the sands of time—just tire tracks.

Cupid gets a lot of credit that rightfully belongs to the girl's mother.

state that Texas had much Federal "horse" (cavalry) that gave the Rebels considerable trouble, especially the Army of Tennessee.

Tom is chancellor in the Frank Kein Council Knights of Columbus at present. His pet theory is that the "Irish" will be back in 1958 and surely beat Oklahoma, but until then he will avoid as much as possible making bets with Shops' Clyde Neal, Charlie Beard and Irving L. Williams. He hopes to continue his work in safety so long as gun permits are required in and around Pampa.

Ten Years Ago This Month

by Elsa Plants

Hugh "Buck" Burdette, having served as vice-president of Cabot Carbon Company for a number of years, has been elected president of Texas Elf Carbon Company, one of the Cabot Companies. He is general manager of Cabot's Southwestern Division and probably knows and is known by more employees than any other man in the Company.

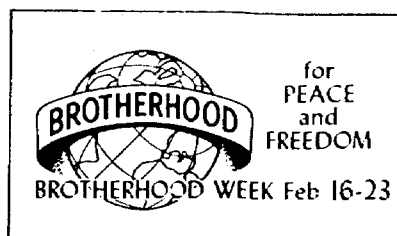
Cabot Carbon Company's newest vice-president is E. L. Green, Jr. "Gene" is head of the Southwestern Division's natural gas and gasoline department.

Kenneth W. Brown, a graduate of Harvard Law School, has joined Godfrey L. Cabot, Inc., in Boston to serve as advisor on patents under D. D. Cochrane, chief engineer.

Dorothy and Lee Cisneros have a brand new little one. They named him Kenneth for Ken Reeves, who is godfather.

Visitors from Pampa for a big party at Armstrong were Mr. and Mrs. C. D. Herring and Mr. and Mrs. Bert Arney.

Lunch the other day at the Schneider Hotel in Pampa looked like old home week for the Cabot organization. At various places around the dining room were Andy Stokes, Russ Allen, Louis Cabot, Ralph Bradley, Randy Antonsen, Larry Johnston and Art Dobbin.



February, 1958



David H. Litter is sworn in by Mayor Robert Wagner of New York City as a member of the New York City Commission on Intergroup Relations. Mr. Litter has been active in intergroup and interfaith work for 17 years.

David H. Litter Appointed To New York Commission

David H. Litter was recently appointed as a member of the New York City Commission on Intergroup Relations, known as COIR, continuing the intergroup and interfaith work in which he has been engaged for 17 years, on an authoritative, rather than voluntary basis. Mr. Litter is president of D. H. Litter Co., Inc., Cabot representatives for the sale of Wollastonite in the paint and allied industries in eastern New York, northern New Jersey and New England.

The commission has wide powers, including the power of subpoena, and

works not only with all types of private organizations but with all city departments, a few of which include the housing department, police department, fire department, welfare board and the board of education, with the objective of making New York "an open city". The commission not only attempts to relieve tensions after they have developed, but primarily attempts to ascertain why certain attitudes develop into tensions and, through educational processes, tries to correct them. The group also tries to get employees in all city departments to cooperate toward this end.

Page 17



Sigle Shafer looks to see who's watching as he makes his final inspection of a pumping unit for watering wells, left photo. The handshake is a cordial one as Mr. Pell presents "Sig" with his first retirement check and wishes him the best of luck in the center photo. In the right photo Sig poses with the new Skil Saw presented to him by his fellow employees on his retirement.

Sigle Shafer Says Farewell to PN

by John Groves

(Photos by Manard Ball)

January 3 found the employees of PN District honoring one of their fellow workers who, after having performed the many tasks assigned to him during his 17 years with the Company, was retiring.

Having reached his 65th birthday in December, Sigle Shafer was a retiree as of January 1. Not having had an opportunity to wish each and every fellow employee the best of luck for the New Year and for the years to come, "Sig" was back to attend the safety meeting held later in the Cabot recreation hall so that he might have the opportunity to express his gratitude to all.

The employees took advantage of the occasion to present Sig with a power saw as a token of their affection and friendship, after which management took over and presented him with his first retirement check from the Company. The presentation of the check was made by Harlan Pell, district superintendent.

Through the years, many events took place that led up to this climax. Sigle Shafer began working for Cabot as a casual laborer on the construction of pipelines. After becoming a regular employee, he was assigned to walking the lines and later took on the task of tending wells. He received the classification

of pipeline walker-well tender, which title he held for 13 years.

Walking pipelines may sound monotonous, but there are times when it can be real exciting. Gasoline from the gas passing through the lines will collect in the low places along them. Drips are installed at these points and a blow-off is attached to the drip for draining off this liquid. If there is a lot of gasoline at a certain point, the blow-off is generally connected to a tank; if there is not too much, it is blown into a small dug pit and then burned. One day Sig blew a drip on the line he was walking and there was more gasoline than usual. The pit overflowed into a creek below. When he lighted the gasoline in the pit, there was a "poof" and the whole world seemed to be on fire. With a sudden reflex, Sig found himself "goin' round the mountain". He wasn't burned or hurt; there was no real damage except that some of the grass was scorched, but Sig learned that a little gasoline can go a long way.

Experience is a great teacher and Sig was a much more safety-conscious line-walker than he had been 13 years before as he made his last inspection of lines and equipment on December 31, 1957, and turned the job over to his successor. It was just another working day for this veteran and he was there.

A smart secretary can move an inkwell or lay a pencil down in a manner to make her boss wince.

Getting out this magazine is no picnic.

If we print jokes, people say we are silly.

If we don't, they say we are too serious.

If we stick close to the office all day, we ought to be around hunting material.

If we go out and try to hustle, we ought to be on the job in the office.

If we don't print contributions, we don't appreciate genius.

And if we do print them, the paper is full of junk!

If we edit the other fellow's stuff, we're too critical.

If we don't, we're asleep.

If we clip things from other magazines, we are too lazy to write them ourselves.

Now, like as not, some guy will say we copied this from some magazine. We did.

At six cents a mile, the trip around the moon will cost \$28,680,000.

* * *

I have never killed a man, but I have read a lot of obituaries with pleasure.

* * *

Ever notice how dogs win friends and influence people without reading books?

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.
ROBERT C. BLEUSOE

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

March 10, 1958

April Hearing
TELEPHONE MAIN 2-6510
POST OFFICE BOX 547

Case 1365

New Mexico Oil Conservation Commission
Capitol Building
Santa Fe, New Mexico

Re: Case No. 1365
Application of Cabot Carbon Company
Our No. 118-40

Attention: Mr. Pete Porter, Secretary

Gentlemen:

In connection with the above case, which is the subject matter of Order No. R-1126, we enclose herewith in triplicate application for hearing de novo before the commission, pursuant to Rule 1220.

We would thank you to set this matter down for hearing at the Commission's earliest convenience.

Respectfully,

HERVEY, DOW & HINKLE

By *S. B. Christy IV*

SBC:tw
Encs.

*April hearing
Cabot
Carbon
309 (amend)*

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

IN THE MATTER OF THE APPLICATION :
OF CABOT CARBON COMPANY FOR A :
PERMIT TO DULY COMPLETE AS AN :
OIL-OIL WELL CABOT CARBON COMPANY'S :
H. L. LOWE "B" WELL NO. 1, KING- :
DEVONIAN AND KING-WOLFCAMP POOLS :
IN SECTION 26, TOWNSHIP 13 SOUTH, :
RANGE 37 EAST, N.M.P.M., LEA COUNTY, :
NEW MEXICO: :

CASE NO. 1365

APPLICATION FOR HEARING DE NOVO BEFORE THE COMMISSION

COMES NOW Cabot Carbon Company, and hereby makes application
for the following:

1. For a permit to duly complete as an oil-oil well
Cabot Carbon Company's H. L. Lowe "B" Well No. 1,
King-Devonian and King-Wolfcamp Pools, in Section
26, Township 13 South, Range 37 East, N.M.P.M.,
Lea County, New Mexico.

And in support of the application states:

1. That on January 7, 1958 at Santa Fe, New Mexico before
Daniel L. Nutter, Examiner duly appointed by the New Mexico Oil
Conservation Commission, the matter involved in this application was
examined; and that thereafter on February 12, 1958, upon the
recommendations of the Examiner, the Commission denied the application,
as more fully set forth in Order No. R-1126. That within 30 days
from the date such order was rendered the undersigned adversely
affected party, pursuant to Rule 1200 of the New Mexico Rules of Civil
Procedure, hereby makes application to have such matter or proceeding
heard de novo before the Commission.

2. Cabot Carbon Company's H. L. Lowe "B" Well No. 1 is
located 467' from South line and 850' from East line of Section 26,
Township 13 South, Range 37 East, Lea County, New Mexico.

3. The subject well has 5-1/2" casing set at 12,320' and
cemented with 700 sacks. Top of cement at 8995'. The well was
drilled to a total depth of 12,437' and was later plugged back to
12,310'. The casing was perforated from 12,277' to 12,307' and the
well was potentialled.

4. The subject well was placed on production from the Devonian reservoir on August 12, 1957. On the initial potential test taken August 9, 1957, the well flowed 312 barrels of 47° API corrected gravity oil in 12 hours on a 1/2" choke.

5. On a drill stem test taken June 26, 1957, in the Lower Wolfcamp formation from 10,115' to 10,191', the tool was open 100 minutes with gas to the surface in seven minutes and oil to the surface in fifty-five minutes. The well flowed 23 barrels of oil in thirty minutes. Reversed out all oil and gas. Recovered below the circulating sub 300' of salty sulphur water. The initial flow pressure was 1010 psi; the final flow pressure was 3160 psi; and the 30-minute shut-in pressure was 3920 psi.

6. The applicant proposes to perforate the 5-1/2" casing opposite the Lower Wolfcamp formation from 10,220' to 10,234', and conduct production tests through straddle packers. If not productive, the interval will be squeezed off.

7. The applicant then proposes to test the Lower Wolfcamp formation from 10,178' to 10,185' by perforating the 5-1/2" casing and conducting production tests through straddle packers.

8. If the Wolfcamp intervals are productive, applicant proposes to set a temporary bridging plug at approximately 10,300' to separate the Devonian and Wolfcamp formations in the well bore. The Wolfcamp interval will be produced until the equipment for dual completion can be obtained.

9. After arrival of dual completion equipment, applicant proposes to set packers at approximately 10,300' and 10,100' and produce each zone through 1-1/2" tubing.

10. There is attached to the original application herein a plat showing the acreage to be dedicated to the well, well location, and offset ownership.

11. There is also attached to the original application a diagrammatic sketch showing the proposed mechanical completion of the well.

12. It is the opinion of the applicant that the manner

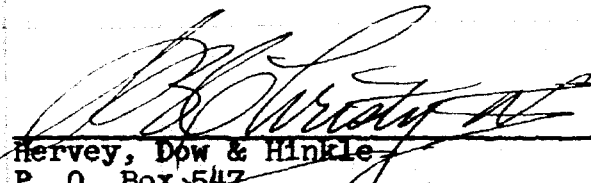
and method proposed for the dual completion of this well is mechanically feasible and practical, and is in the interest of conservation and the protection of correlative rights.

13. The applicant will comply with all rules and regulations of the New Mexico Conservation Commission to maintain separation of production from the two producing pay zones.

14. By copy of this application, all offset operators are notified of the proposed dual completion.

Respectfully submitted,

Cabot Carbon Company



Hervey, Dow & Hinkle
P. O. Box 547
Roswell, New Mexico
(Attorneys for Applicant)

cc: Gulf Oil Corporation
Atlantic Refining Company
Forest Oil Corporation

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

February 14, 1958

Mr. S. B. Christy, IV
Harvey, Dow & Hinkle
Box 547
Roswell, New Mexico

Dear Mr. Christy:

On behalf of your client, Cabot Carbon Company, we enclose two copies of Order R-1126 issued February 12, 1958, by the Oil Conservation Commission in Case 1365, which was heard on January 7th at Santa Fe.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

bp
Encls.

C
O
P
Y

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date 2-11-58

CASE 1365

Hearing Date 1-7-58 9am SF, DSN

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

Enter an order in the subject case denying the authority sought by the applicant to finally complete the well in question as a WC-Dev dual.

My reasons for this recommendation are as follows:

1. The $1\frac{1}{2}$ " diam. tbg proposed by the applicant will impair the flowing efficiency of both zones (particularly in view of the depths and high allowances in the pools) to a point where artificial lift ~~would be~~ would be required sooner than would be required with larger tbg (2" or $2\frac{3}{8}$ " as is standard in wells of this depth.)
2. It would be mechanically infeasible ~~to~~ if not ^{impractical} to artificially lift both zones simultaneously. Even with the gas lift operation proposed by the operator, it is doubtful whether both zones could be lifted simultaneously.

San Miller
Staff Member
Examiner

OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

Date _____

CASE _____

1365 cont

Hearing Date _____

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

3. With the proposed system as outlined by the applicant, it would be physically impossible to lift ^{or otherwise artificially lift} the Devonian section if and when the Devonian fluid level should fall below 10,100'


4. In summary I believe it could reasonably be said that the proposed system would be inefficient, that it is impractical, that it is undesirable because of the difficulty to work over either zone without killing the other due to the small size of the tubing, and that it is mechanically infeasible to ~~go~~ artificially lift both zones simultaneously.

Jan Tuttle
Staff Member
Examiner

CABOT CARBON COMPANY

TELEPHONE NO. 4-2591

P.O. BOX 1101 PAMPA, TEXAS

 Carbon Black - Oil and Gas - Oil Field Pumping Equipment

January 14, 1958

Re: OCC Case No. 1365 -
Cabot Carbon Company's Application
to Dual Complete H. L. Lowe "B"
Well No. 1, Lea County, New Mexico

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

Attention: Mr. A. L. Porter

Gentlemen:

Attached are the data and information requested by Mr. D. S. Nutter during the January 8, 1958 hearing of Case No. 1365 "Application for Permit to Dually Complete Cabot Carbon Company's H. L. Lowe "B" Well No. 1".

Listed below are the Outside Diameters of the several tubing sizes and the auxiliary equipment:

<u>Item</u>	<u>Joint O.D. or Largest O.D. of Equip.</u>
*1½" Tubing with Hydril CS couplings	2.113"
*2-1/16" Tubing with Hydril CS couplings	2.330"
1½" API non-upset tubing	2.054"
1½" API non-upset tubing	2.200"
1½" API external upset tubing	2.200"
1½" API external upset tubing	2.500"
*1½" Garrett Oil Tools, Inc. Type SSC-1½" gas lift mandrel	2.250"
2-1/16" Garrett Oil Tools, Inc. Type SSC- 2-1/16" gas lift mandrel	not available
2-1/16" Camco gas lift valve mandrels	not available

*Attachments I and II are photostats of the data sheets furnished by Hydril Company and Garrett Oil Tool, Inc., giving dimensions of their equipment. The remaining tubing data was obtained from Spang's "Engineering Data Book".

Attachment III is a summary of clearances that would be available using various sizes of tubing and gas lift valves or mandrels, and the number of times this clearance would be required in running the tubing into the well bore. It is believed that Attachment III will show that we are using the largest tubing possible and yet providing a minimum safe clearance. Also, using a combination dual string, one string of 1½" tubing with Hydril CS joints and the other string of 2-1/16" tubing with Hydril CS joints, we would be unable to run mandrels on the 1½" or 2-1/16" tubing strings. See Part 3 & 4 of Case IV on Attachment III.

To: New Mexico Oil Conservation Commission

Page 2

Regarding your question "why 7" casing was not used in Cabot's H. L. Lowe "B" Well No. 1 instead of 5½" casing", our previously drilled wells in the King Field had not encountered the Lower Wolfcamp as being productive. The drilling program therefore was planned for the use of 5½" casing as the oil string. On the Lowe "B" No. 1 we set 13-3/8" casing at 381', drilled out using a 11" bit, set 8-5/8" casing (32#/ft. and 24#/ft.) at 4615', and drilled to 12,320' with a 7-7/8" bit. At the time the Lower Wolfcamp was determined to be productive we had some 5700' of 7-7/8" hole drilled, which would not permit us to run 7" casing. The coupling OD of 7" casing is 7.656". The clearance between the walls of the well bore and the coupling's outside diameter was only 0.219".

I do hope that the attached data and information will be adequate to permit the Commission to review our application with all necessary data at hand.

Yours very truly,

Joe M. Daniel, Jr.
Joe M. Daniel, Jr.
Senior Petroleum Engineer

JMD:mn
Encls.

8 5/8 32 # ID 7.921

HYDRIL "CS" TUBING JOINT

(Patented)



Fig. 59
Hydril "CS"
Tubing Joint

The Hydril "CS" tubing joint was first introduced to the industry in 1947. Since then this joint has proved its merits so conspicuously that most oil and gas producers now prefer Hydril "CS" tubing strings wherever the producing conditions require better tubing. Hydril "CS" tubing strings are now in use in most of the high-pressure producing fields of the country.

This tubing joint is as strong as is needed in the deepest of wells. High pressure is sealed off positively at every joint by three separate sealing surfaces. In torque capacity (to resist over-tonging) this "CS" joint far exceeds the collared type tubing joints.

In corrosive gas or gas-distillate fields the need for flush-bore tubing joints is extreme. Hydril "CS" tubing provides streamline flow

through the joints, there being no shoulders to cause eddying in the flow of the corrosive fluid at the joints.

All these advantages combine in the Hydril "CS" tubing joint to make it uniquely suited to solving problems encountered in difficult producing fields. There are many fields where all these advantages are required. The gas-distillate fields generally are deep, and usually are characterized by high pressure and corrosive conditions. In these areas the producing problems can be solved with economy by using tubing equipped with Hydril "CS" joints. It is the excellent performance record of this joint under all these adverse conditions that testifies most graphically to the merit of the Hydril "CS" tubing joint.

ELEVATORS

Hydril "CS" tubing strings can be run on standard tubing elevators using elevator plugs to provide a lifting shoulder equivalent to a tubing collar. When tubing is to be round-tripped several times, time is saved by

providing an elevator plug for each stand.

Or, if desired, the elevator plugs can be eliminated and the string handled on slip-type elevators, available for rental for 2 3/8", 2 7/8" and 3 1/2" "CS" tubing.

HOW THE JOINT MAKES UP

As the pin is stabbed into the box, guiding bevels bring the joint into the full stabbed position and land it on two full starting threads. At this position the joint is loose-fitting to permit free stabbing and easy starting of the threads. During spinning up of the joint, both threads engage so that only a few turns are required for full make-up. The first seating occurs on the 14° internal seal. This contact usually stops free spinning. Moderate further make-up preloads this internal seal, and then the outside shoulder seats. This double seating can usually be achieved by

torque application equivalent to that of hand tubing tong make-up. As the joint is further tonged up with power tools (to the make-up torque shown in Table No. 18) the bore shoulder seats, forming a final positive stop. In this made-up position the 14° inside seal and the 30° outside seal both are properly preloaded to establish pressure seals against both low and high pressures. The bore shoulder itself is, of course, a third pressure seal as well as a third and final stop to the make-up of the joint.

Table No. 18
HYDRIL "CS" JOINT FOR EXTERNAL UPSET TUBING

Size O.D. & Weight Nominal	Wall Thick.	TUBING				JOINT				TENSION—(Pipe) (Joint is Stronger than Pipe)			Recommended Make-Up Torque	
		I.D. Nominal	Drift Diam. A.P.1	Pin Length	O.D. Std.	O.D. Special	I.D. Bored	Efficiency	J-55	N-80	P-105	J-55	N-80	
									Min. Yield	Min. Yield	Min. Yield	1000 Lbs.	1000 Lbs.	
Inches Lbs.	Inches	Inches	Inches	Inches	Inches	Inches	Inches	Percent	1000 Lbs.	1000 Lbs.	1000 Lbs.	1000 Lbs.	1000 Lbs.	
1 1/2 - 13.50 D. - 11.8	1.33	1.04	.855	2.187	2.187	2.187	1.70	115	47	40	52	400	400	
1 1/2 - 13.50 D. - 12.4	1.40	1.10	1.28	2.187	2.187	2.187	1.80	114	47	40	52	400	400	
1 1/2 - 13.50 D. - 12.9	1.45	1.10	1.316	2.187	2.187	2.187	1.90	110	44	37	50	300	300	
2 1/4 - 3.4	1.56	1.750	1.636	2.187	2.187	2.187	1.70	109	51	43	55	800	1100	
2 1/4 - 4.7	1.60	1.905	1.801	2.222	2.222	2.222	1.85	106	52	44	56	1300	1800	
2 1/4 - 5.1	1.75	1.905	1.815	2.272	2.272	2.272	1.90	105	51	43	55	1300	1800	
2 1/4 - 6.5	2.17	2.411	2.347	2.338	2.338	2.338	2.15	102	100	115	140	1700	2300	
2 1/4 - 9.0	2.54	2.962	2.897	2.745	2.745	2.745	2.40	103	112	127	155	2500	3400	
2 1/4 - 10.3	2.89	2.922	2.797	2.745	2.745	2.745	2.45	101	160	175	200	2500	3400	
3 - 11.75	2.62	3.476	3.351	2.787	2.787	2.787	2.65	105	160	175	200	3500	4500	
3 - 12.75	2.71	3.958	3.833	2.830	2.830	2.830	2.85	105	198	213	235	4500	5500	

See Table No. 31, Page 206 for
Joint and Collar Ratings of Pipe

* Pipe Tension Strength Calculated on: J-55 = 55,000 Yield and 92,000 Ultimate; N-80 = 80,000 Yield and 105,000 Ultimate; P-105 = 105,000 Yield and 120,000 Ultimate.
Hydril "A" and "CA" and "CS" threads are interchangeable.
Hydril 4 1/2" O.D. type "A" and "CS" and "EU" (reamer) threads are interchangeable.

MANDRELS FOR RETRIEVABLE VALVES

These mandrels accommodate the gas lift valves described on the opposite page. Both types contain the GOT Sliding Sleeve Valve, through which communication between the casing and tubing may be opened or shut off with wire line tools. The sliding sleeve, which serves as the receiver for the gas lift valve, is fitted with snap rings that engage when the sleeve valve is in full open or fully closed position and thus secure the sleeve against accidental movement. A direct thrust load of 3200 pounds is required to unseat the snap ring from its groove. O-Rings supported by Teflon back-up rings provide the pressure seal around the sleeve. The mandrels are made of high tensile, corrosion-resistant materials, and are designed to outlast the tubing under all conditions.

The sleeve valve is closed on upward movement of the sliding sleeve, and opened on downward movement. The design of the mandrels and the gas lift valves which they accommodate is such that the sleeve valve is shifted to open position when a gas lift valve is installed, and shifted to closed position when the valve is retrieved. When circulation between casing and tubing is desired, any of all sleeve valves may be shifted by wire line tools without using gas lift valve.

Coupled with the features of the Type "S" Gas Lift Valve, this design provides these advantages:

1. The gas lift valve may be installed or retrieved in one run of the wire line.
2. Undesired communication between the casing and tubing never exists.
3. Gas lift valves may be installed or retrieved without equalizing pressures.
4. Concentric mounting of the gas lift valve facilitates engagement of the fishing tool.
5. Turbulence, erosion and deposits of sand and silt are minimized.
6. All types of valves of the same size are interchangeable in mandrels of the same size.
7. Welding has been eliminated from the mandrels.

TYPE "SSC" MANDREL

This mandrel is designed especially for dual completions and slim holes. It permits two strings of 1½" upset tubing equipped with wire line retrievable gas lift valves to be run inside 5½" O.D. casing, or two strings of 2" upset to be run inside 7" O.D. casing, without clamping. The flow of fluid is through the gas lift valve.

Circulation between casing and tubing is provided by a series of drilled ports in the body of the mandrel, and slots in the sliding sleeve. The total area of the ports and slots is equal to the inside area of the tubing, as a result of which a Type "SSC" Mandrel serves as a full capacity circulating valve that may be opened or closed with wire line tools, and in which a gas lift valve may be installed whenever desired.

DIMENSIONS AND WEIGHTS

Type	Tubing Size	Outside Diameter	Inside Diameter	Length	Weight
SSC	1½"	2.250"	1 11/16"	30 3/4"	19 1/2 lbs.
SSC	1 1/2"	2.375"	1 7/8"	30 3/4"	21 lbs.
SSC	2"	2.916"	1 7/8"	27"	22 lbs.
SSC	2"	3.000"	1 7/8"	27"	23 lbs.
SSC	2 1/2"	3.750"	2 1/8"	29"	26 1/4 lbs.

TYPE "V-2" MANDREL

The sliding sleeve in this mandrel contains a fluid by-pass with a flow capacity equal to that of the tubing. The gas inlet port is large enough to pass any required volume of injection gas, and provides for emergency circulation between casing and tubing.

DIMENSIONS AND WEIGHTS

Type	Tubing Size	Outside Diameter	Inside Diameter	Length	Weight
V-2	2"	4.125"	1 7/8"	48"	72 lbs.
V-2	2 1/2"	4.750"	2 1/8"	48"	90 lbs.

FIGURE 1
Type "SSC"
Mandrel with
Type "S-O"
Gas Lift Valve
Installed.
Sliding sleeve
valve is in
open position.
Fluid flows
through the
gas lift
valve.

FIGURE 2
Type "V-2"
Mandrel with Type
S-O Gas Lift Valve
Installed. Fluid
flows through by-
pass in sliding
sleeve, and
through the gas
lift valve.

Assumptions: (To be the same in all cases)

1. Each tubing joint length = 30'; Range 7 coupling is 20' to 32' in length.
2. First string of tubing already in place.

Note: All cases are based on what happens in the top 872' of the casing string since this is the interval with the smallest drift diameter.

CASE I

Assume: Dual string of 1 1/2" tubing with Hydril CS couplings, the joint OD = 2.113", and the bottom of second tubing string has reached a depth of 872' while being run into the well bore.

Results: 1. There will be 29 joints ($\frac{872'}{30'} = 29$) passing each other simultaneously with a clearance of 0.319" [$4.545" - 2(2.113") = 0.319"$] as each additional joint is run into the well bore.
2. This passing simultaneously of 29 joints in the top 872' of the well will occur until the second string of tubing reaches its seat in the upper packer at 10100' or 307 times; that is $[(10100' - 871')/30'] = 307.6$.

CASE II

Assume: Dual string of 1 1/2" tubing with Hydril CS couplings, the joint OD = 2.113", and several 2.250" OD gas lift mandrels run on second tubing string with the mandrels spaced greater than 872' apart.

Results: A mandrel will pass 29 joints of the first string while being lowered into the well with a clearance of 0.182", [$4.545" - (2.250" + 2.113") = 0.182"$].

CASE III

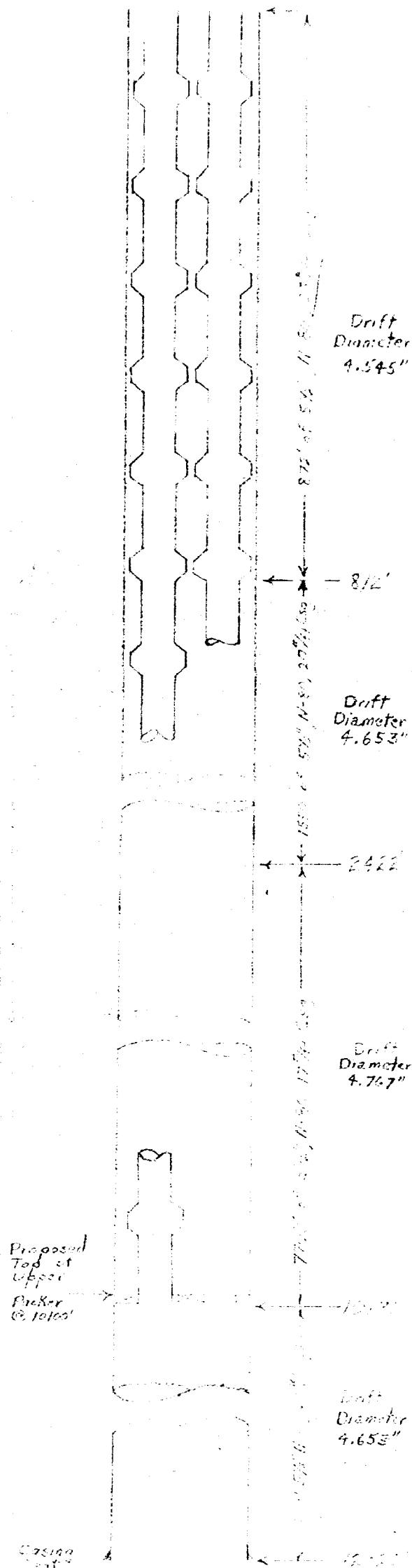
Assume: Dual string of 2-1/16" tubing with Hydril CS couplings, the joint OD = 2.330".

Results: There will be no clearance since $(2)(2.330")$ is greater than 4.545" by the amount of 0.115".

CASE IV

Assume: Dual strings, one string of 1 1/2" tubing with Hydril CS couplings, joint OD = 2.113"; other string of 2-1/16" tubing with Hydril CS couplings, joint OD = 2.330"; and bottom of second tubing string has reached a depth greater than 872'.


Results: 1. There will be 29 joints passing each other simultaneously in the 238'/ft. casing interval with a clearance of 0.102", [$4.545" - (2.113" + 2.330") = 0.102"$].
2. This passing simultaneously of 29 joints in the top 872' of the well will occur 307 times while running the second string to 10100'.
3. If a gas lift mandrel is run on the 1 1/2" tubing string, there would be no clearance since $[4.545" - (2.330" + 2.250") = -0.035"]$.
4. Mandrels are not available in the 2-1/16" size and would prevent gas lifting the zone or zones.



CABOT CARBON COMPANY

TELEPHONE NO. 4-2561

P.O. BOX 1101 PAMPA, TEXAS

 Carbon Black • Oil and Gas • Oil Field Pumping Equipment

November 22, 1957

Re: Application for Permit to Dually
Complete as an Oil-Oil Well
Cabot Carbon Company's H. L. Lowe
"B" Well No. 1, King Devonian and
King Wolfcamp Pools, Section 26,
Township 13 South, Range 37 East,
Lea County, New Mexico

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

Gentlemen:

By this letter, Cabot Carbon Company respectfully requests a hearing to consider this our application for permission to dually complete H. L. Lowe "B" Well No. 1 in such a manner that the Devonian and Wolfcamp reservoirs may be produced through parallel strings of tubing, and in support thereof states as follows:

1. Cabot Carbon Company's H. L. Lowe "B" Well No. 1 is located 467' from South line and 850' from East line of Section 26, Township 13 South, Range 37 East, Lea County, New Mexico.

2. The subject well has 5-1/2" casing set at 12,320' and cemented with 700 sacks. Top of cement at 8995'. The well was ~~then~~ drilled to a total depth of 12,437' and was later plugged back to 12,310'. The casing was perforated from 12,277' to 12,307' and the well was potentialized.

3. The subject well was placed on production from the Devonian reservoir on August 12, 1957. On the initial potential test taken August 9, 1957, the well flowed 312 barrels of 47° API corrected gravity oil in 12 hours on a 1/2" choke.

4. On a drill stem test taken June 26, 1957, in the Lower Wolfcamp formation from 10,115' to 10,191', the tool was open 100 minutes with gas to the surface in seven minutes and oil to the surface in fifty-five minutes. The well flowed 23 barrels of oil in thirty minutes. Reversed out all oil and gas. Recovered below the circulating sub 300' of salty sulphur water. The initial flow pressure was 1010 psi; the final flow pressure was 3160 psi; and the 30-minute shut-in pressure was 3920 psi.

5. We propose to perforate the 5-1/2" casing opposite the Lower Wolfcamp formation from 10,220' to 10,234', and conduct production tests through straddle packers. If not productive, the interval will be squeezed off.

6. We then propose to test the Lower Wolfcamp formation from 10,178' to 10,185' by perforating the 5-1/2" casing and conducting production tests through straddle packers.

7. If the Wolfcamp intervals are productive, we propose to set a temporary bridging plug at approximately 10,300' to separate the Devonian and Wolfcamp formations in the well bore. The Wolfcamp interval will be produced until the equipment for dual completion can be obtained.

8. After arrival of dual completion equipment, we propose to set packers at approximately 10,300' and 10,100' and produce each zone through 1-1/2" tubing.

9. We are attaching a plat showing the acreage to be dedicated to the well, well location, and offset ownership.

10. Also attached is a diagrammatic sketch showing the proposed mechanical completion of the well.

11. It is the opinion of the applicant that the manner and method proposed for the dual completion of this well is mechanically feasible and practical, and is in the interest of conservation and the protection of correlative rights.

12. The applicant will comply with all rules and regulations of the New Mexico Conservation Commission to maintain separation of production from the two producing pay zones.

13. By copy of this letter of application, all offset operators are notified of the proposed dual completion.

Respectfully submitted,

CABOT CARBON COMPANY

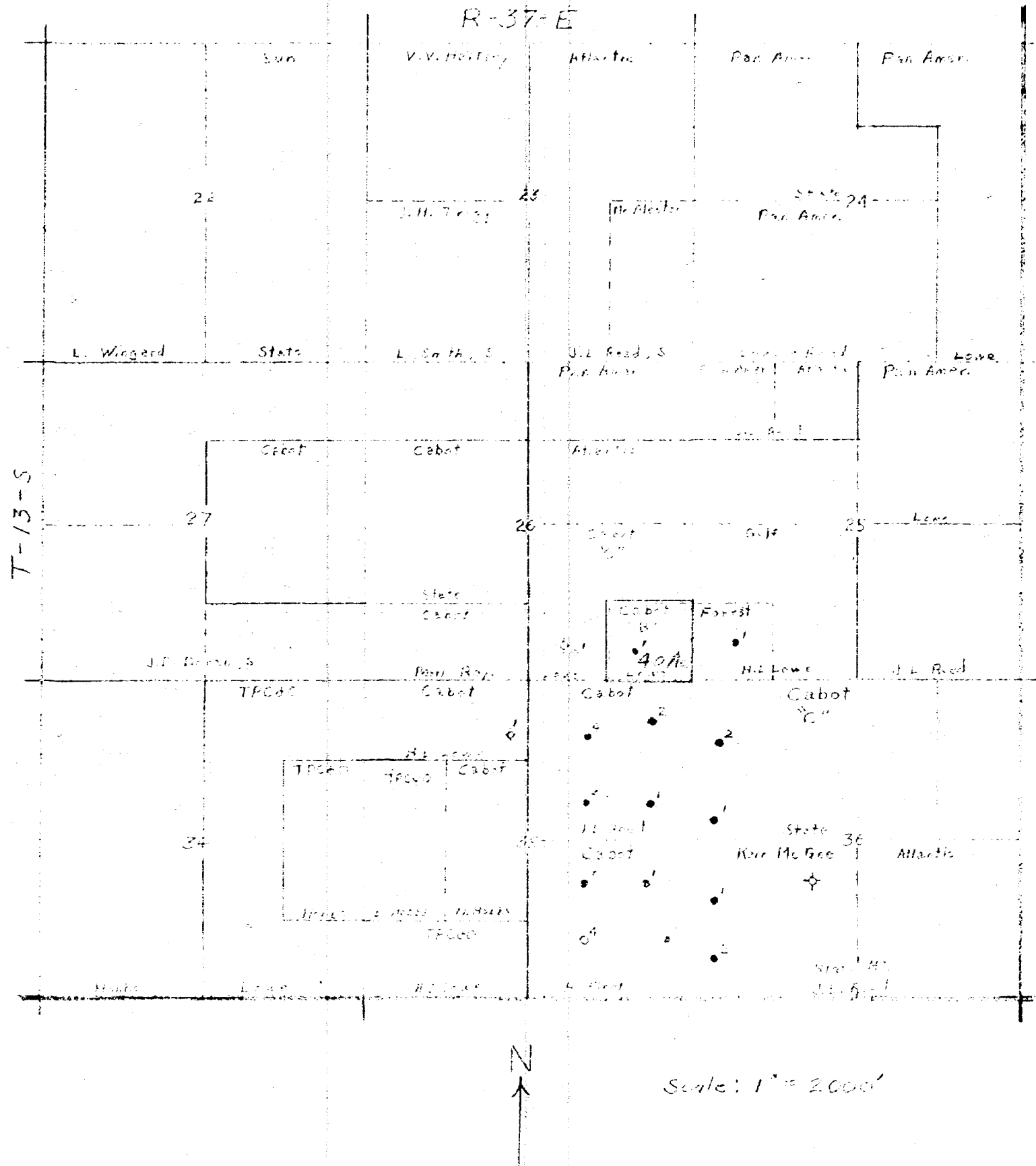


Harvey, Dow & Hinkle
P. O. Box 547
Roswell, New Mexico
(Attorneys for Applicant)

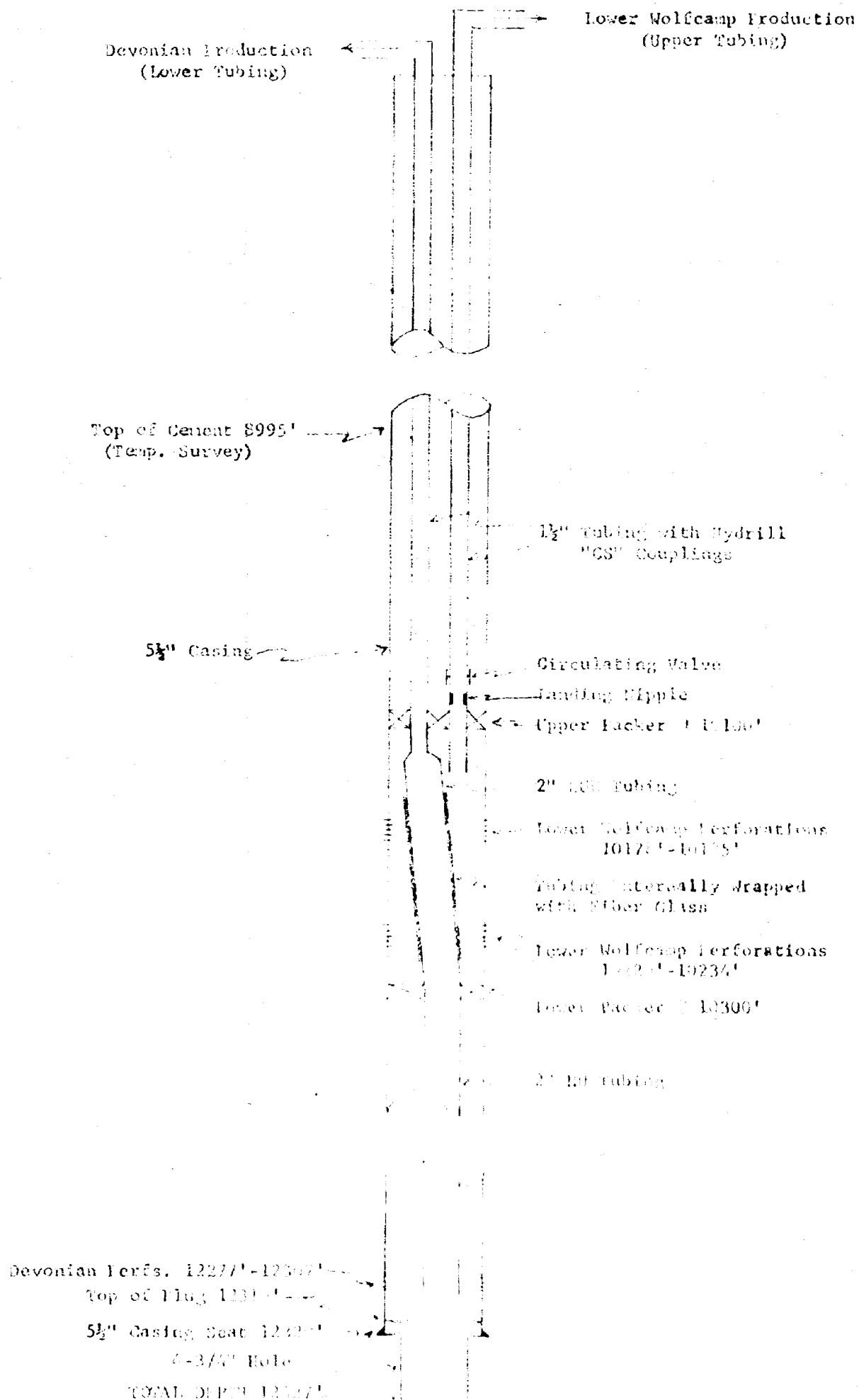
Enclosures: Pool Plat
Diagrammatic Sketch

cc: Gulf Oil Corporation
Atlantic Refining Company
Forrest Oil Corporation

R-37-E



DIAGRAMMATIC SKETCH
of
DUAL STRING COMPLETION
Proposed for
CARBOT CARBON COMPANY'S H. L. LOWE "B" WELL NO. 1
Section 26, Township 13, Range 37 East
Lea County, New Mexico



DOCKET: EXAMINER HEARING JANUARY 7, 1958

Oil Conservation Commission 9 a.m. Mabry Hall, State Capitol, Santa Fe, NM

The following cases will be heard before Daniel S. Nutter, Examiner:

- CASE 1356: Application of Cities Service Oil Company for permission to institute a pilot water flood project in Township 14 South, Range 31 East, Caprock-Queen Pool, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks permission to institute a pilot water flood project in the Caprock-Queen Pool, Chaves County, New Mexico, by injecting water into the Queen formation through the following intake wells:
- Government "B" No. 5, NW/4 NE/4 Section 10;
Government "B" No. 6, SE/4 SE/4 Section 3;
Government "B" No. 10, NE/4 SE/4 Section 3;
Government "B" No. 14, SE/4 SW/4 Section 3,
- all in Township 14 South, Range 31 East.
- CASE 1357: Application of Standard Oil Company of Texas for an order authorizing the production into a common tank battery of all oil produced from five leases in the Atoka Pool, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the production into a common tank battery of all oil produced from the Atoka Pool from the following described leases: SW/4 SE/4, NW/4 NW/4, NW/4 SE/4, SE/4 NW/4, and SW/4 NE/4 of Section 12, Township 18 South, Range 26 East, Eddy County, New Mexico.
- CASE 1358: Application of Magnolia Petroleum Company for an order cancelling Order R-984, and granting authority to commingle the liquid hydrocarbons produced from the Pictured Cliffs and Mesaverde formations into central tank batteries located on certain leases in the Blanco Mesaverde Gas Pool, Tapacito-Pictured Cliffs Gas Pool and certain undesignated Pictured Cliffs and Mesaverde gas pools in Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an order cancelling Order No. R-984, and granting authority to commingle the liquid hydrocarbon production from the Pictured Cliffs and Mesaverde formations into central tank batteries located on certain of the applicant's leases in Township 26 North, Range 2 West; Township 26 North, Range 3 West; Township 27 North, Range 2 West, and Township 27 North, Range 3 West, in Rio Arriba County, New Mexico.
- CASE 1359: Application of El Paso Natural Gas Company for an order extending the time allowed for making annual deliverability and shut-in pressure tests, and requesting allowables for 237 gas wells in certain prorated, non-prorated, and undesignated gas pools in San Juan and Rio Arriba Counties, New Mexico. Applicant, in the above-styled cause, seeks an

CASE 1359 continued

order extending the time allowed for making annual deliverability and shut-in pressure tests, and requesting allowables for 237 gas wells in the Blanco Mesaverde, Fulcher Kutz-Pictured Cliffs, West Kutz-Pictured Cliffs, Aztec-Pictured Cliffs, South Blanco-Pictured Cliffs, Ballard-Pictured Cliffs, Otero, Canyon Largo, East Companero Dakota, Tapacito, West Kutz-Fruitland, North Los Pinos-Fruitland, and South Los Pinos-Fruitland Gas Pools and in undesignated Fruitland, Pictured Cliffs, and La Ventana gas pools in San Juan and Rio Arriba Counties, New Mexico.

CASE 1360:

Application of Gulf Oil Corporation for an order suspending the cancellation of underage accrued to eight gas wells in the Eumont, Jalmat, Tubb, and Blinebry Gas Pools, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order suspending the cancellation on January 1, 1958, of the underage accrued to the following gas wells in the Eumont, Jalmat, Tubb, and Blinebry Gas Pools:

Eumont Pool

Bell-Ramsay St. "C" No. 1, NW/4 SE/4 Section 34,
Township 20 South, Range 37 East

Jalmat Pool

Arnott-Ramsay "E" No. 2, SW/4 SE/4 Section 16,
Township 25 South, Range 37 East

Arnott-Ramsay "E" No. 5, SW/4 NW/4 Section 16,
Township 25 South, Range 37 East

J. R. Holt "A" No. 2, SE/4 SW/4 Section 16,
Township 24 South, Range 37 East

Tubb Pool

Hugh No. 7, NE/4 NW/4 Section 14, Township 22
South, Range 37 East

Harry Leonard "E" No. 4, NE/4 NE/4 Section 16,
Township 21 South, Range 37 East

Blinebry Pool

J. N. Carson "A" No. 4, SW/4 SE/4 Section 28,
Township 21 South, Range 37 East

H. Leonard "E" No. 4, NE/4 NE/4 Section 16,
Township 21 South, Range 37 East

all in Lea County, New Mexico.

CASE 1361: Application of The Texas Company for an order suspending the cancellation of underage accrued to two gas wells in the Eumont Gas Pool and Jalmat Gas Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order suspending the cancellation on January 1, 1958, of the underage accrued to the following gas wells in the Eumont and Jalmat Gas Pools:

Texas Company Riddel Well No. 2, NE/4 NE/4
Section 12, Township 21 South, Range 36 East;

Texas Company State of New Mexico "B" (NCT-2)
Well No. 3, NW/4 NW/4 Section 16, Township 23
South, Range 36 East;

all in Lea County, New Mexico.

CASE 1362: Application of Schermerhorn Oil Corporation for an order suspending the cancellation of underage accrued to one well in the Eumont Gas Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order suspending the cancellation on January 1, 1958, of the underage accrued to the following named gas well in the Eumont Gas Pool:

Schermerhorn Oil Corporation Gulf-State
No. 1 Well, SE/4 SW/4 Section 31, Township
18 South, Range 37 East,

Lea County, New Mexico.

CASE 1363: Application of J. C. Watson Drilling Company for an order authorizing the use of vacuum pumps on certain wells in the Roberts Pool in Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the use of vacuum pumps on its Trimble No. 1 Well located in the NE/4 NE/4 Section 11, Township 17 South, Range 32 East, and its Trimble No. 2 Well located in the SE/4 NE/4 of said Section 11, in the Roberts Pool, Lea County, New Mexico.

CASE 1364: Application of Cities Service Oil Company for an oil-oil dual completion in the Vacuum Pool and Vacuum-Seven Rivers Pool in Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its State "K" No. 2 Well located 1980 feet from the North line and 660 feet from the East line of Section 27, Township 17 South, Range 35 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Vacuum Pool through one inch tubing and oil from the Vacuum-Seven Rivers Pool through two inch tubing.

CASE 1365:

Application of Cabot Carbon Company for an oil-oil dual completion in the King-Devonian Pool and King-Wolfcamp Pool in Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its H. L. Lowe "B" Well No. 1, located 467 feet from the South line and 850 feet from the East line of Section 26, Township 13 South, Range 37 East, Lea County, New Mexico, in such a manner as to permit the production of oil from both the King-Devonian Pool and King-Wolfcamp Pool through parallel strings of 1½ inch tubing.

CASE 1366:

Application of Signal Oil and Gas Company for an oil-gas dual completion in the Skaggs Pool and an undesignated Drinkard gas pool in Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its Fred Turner No. 1 Well located 660 feet from the South line and 560 feet from the East line of Section 6, Township 20 South, Range 38 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Skaggs Pool and gas from an undesignated Drinkard gas pool through parallel strings of tubing.

CASE 1367:

Application of Felmont Oil Corporation for approval of its Etcheverry Unit Agreement in Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order approving its Etcheverry Unit Agreement embracing 1,920 acres, more or less, of State of New Mexico lands consisting of S/2 Section 32, S/2 Section 33, Township 14 South, Range 34 East, and all of Sections 4 and 5, Township 15 South, Range 34 East, Lea County, New Mexico.

CASE 1368:

Application of Ambassador Oil Corporation for an order granting approval of applicant's proposed pilot water flood project in the Square Lake Pool in Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of its proposed pilot water flood project for the purpose of secondary recovery in which water will be injected into the Grayburg and San Andres formations through six injection wells located in the SW/4 NW/4, SW/4 SW/4, NE/4 SW/4, and SW/4 SE/4 of Section 29, and NE/4 SE/4 of Section 30, and the NE/4 NW/4 of Section 32, Township 16 South, Range 31 East, Square Lake Pool, Eddy County, New Mexico.

NEW MEXICO
OIL CONSERVATION COMMISSION
P. O. Box 871
Santa Fe, New Mexico

Date November 25, 1957

S. B. Christy, IV
Hervey, Dow & Hinkle
P.O. Box 547
Roswell, New Mexico

Gentlemen:

Your application for Cabot Carbon Company dual completion

dated November 23, 1957 has been received, and has been tentatively
scheduled for hearing before an Examiner on
January 7, 1958

A copy of the docket will be forwarded to you as soon as the matter is
advertised.

Very truly yours,


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

ga

J. M. HERVEY 1874-1953

HIRAM M. DOW

CLARENCE E. HINKLE

W. F. BONDURANT, JR.

GEORGE H. HUNKER, JR.

HOWARD C. BRATTON

S. B. CHRISTY, IV

J. PENROD TOLES

LEWIS C. COX, JR.

PAUL W. EATON, JR.

LAW OFFICES

HERVEY, DOW & HINKLE

FIRST NATIONAL BANK BUILDING

27 ROSWELL, NEW MEXICO

November 23, 1937.

TELEPHONE MAIN 2-6510
POST OFFICE BOX 547

New Mexico Oil Conservation Commission,
Capital Building,
Santa Fe, New Mexico.

Re: Application of Cabot Carbon Company
to dually complete its H. L. Lowe "B"
No. 1 well in the King Pool, Lea
County, New Mexico.

Attention: Mr. Porter, Secretary.

Gentlemen:

We enclose herewith in triplicate on behalf of
Cabot Carbon Company, whose address is Box 1101, Pampa,
Texas, an Application for Permit to Dually Complete as an
Oil - Oil Well its H. L. Lowe "B" Well No. 1 in the King
Pool as to Devonian and Wolfcamp production, said well
being located in the SE $\frac{1}{4}$ SE $\frac{1}{4}$, Section 26, Township 13 South,
Range 37 East, N.E.P.M., Lea County, New Mexico.

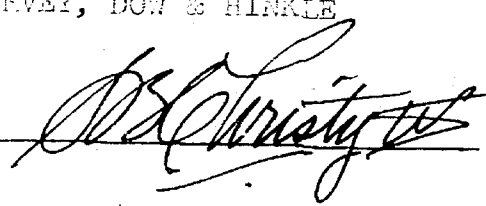
If at all possible, it is requested that the
Application be heard before an Examiner at Santa Fe, New
Mexico, at the December Hearing. Proper notice has been
made to all off-set operators, proof of which will be made
at the hearing.

We thank you in advance for your courtesies
in connection with the above, we are

Respectfully,

HERVEY, DOW & HINKLE

By



SBC/xi

cc - Cabot Carbon Company,
Pampa, Texas.

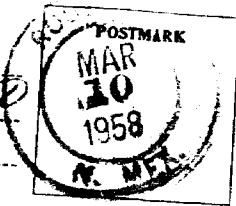
Attention: Mr. Walter Stein.

cc - Cabot Carbon Company,

Attention: Mr. Homer Johnson.

REGISTERED NO. 4866

Value \$ NV Spec. del'y fee \$
 Fee \$ 50 Ret. receipt fee \$
 Surcharge \$ Rest. del'y fee \$
 Postage \$ 6 ☒ Airmail



Postmaster, By

From *Al*
 To *Atlantic Ref Co.*
Box 871, Midland Tex
 POD Form 3806
 May 1954

c9-16-70493-1

REGISTERED NO. 4863

Value \$ NV Spec. del'y fee \$
 Fee \$ 50 Ret. receipt fee \$ 10
 Surcharge \$ Rest. del'y fee \$
 Postage \$ 6 ☒ Airmail

POSTMARK

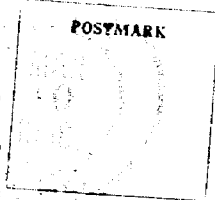
Postmaster, By

From *Al*
 To *Forest Oil Corp*
Box 2066, Midland Tex
 POD Form 3806
 May 1954

c9-16-70493-1

REGISTERED NO. 4867

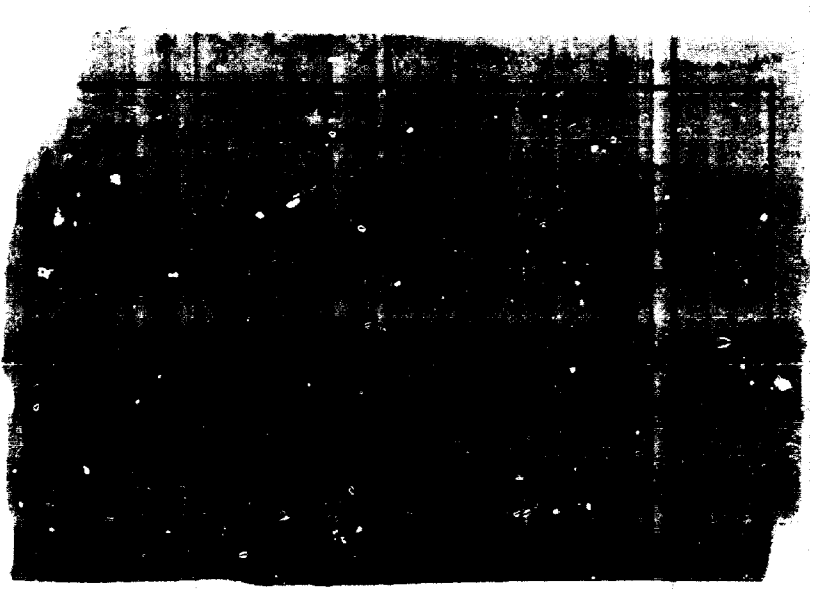
Value \$ NV Spec. del'y fee \$
 Fee \$ 50 Ret. receipt fee \$ 10
 Surcharge \$ Rest. del'y fee \$
 Postage \$ 3 ☐ Airmail



Postmaster, By

From *Harvey Dent Sample*
547
 To *Forest Oil Corp*
669 Form 11
 POD Form 3806
 May 1954

c9-16-70493-1

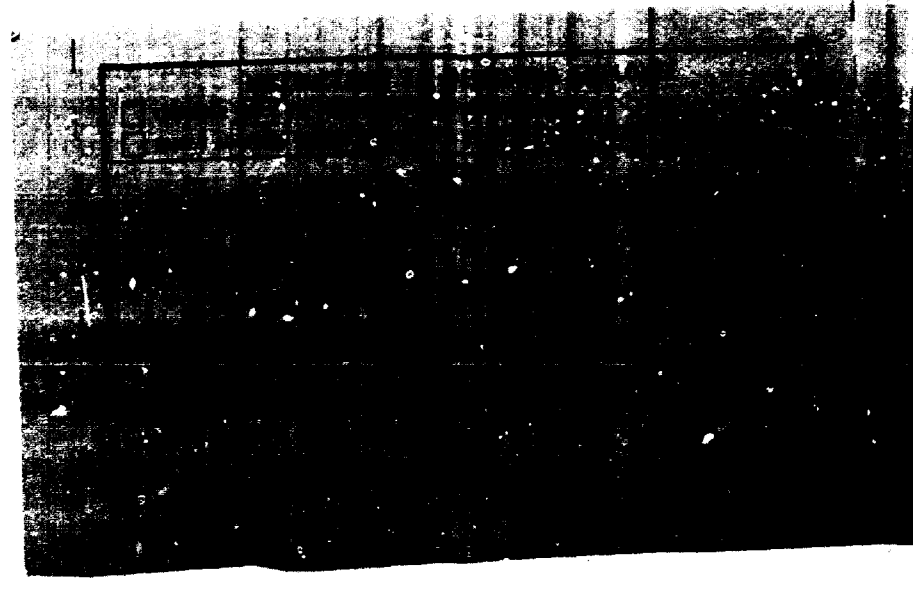


The sender is not required to pay a registration fee providing for full indemnity coverage (up to the limit of \$1,000). However, if the actual value of the matter mailed exceeds \$25, the sender must pay a fee of at least 55 cents. The 30-cent registration fee applies only to matter having no intrinsic value and does not provide for indemnification. Some matter having no intrinsic value, so far as the registry service is concerned, may involve considerable cost to duplicate if lost or destroyed. The sender is privileged to pay a higher than minimum registration fee for insurance against costs of duplication if desired.

Domestic registered mail is subject to surcharge when the declared value exceeds the maximum indemnity covered by the fee paid by \$1,000 or more. Claims must be filed within 1 year from date of mailing.

Consult postmaster as to fee chargeable on registered parcel post packages addressed to foreign countries.

GPO 9-16-7013-1

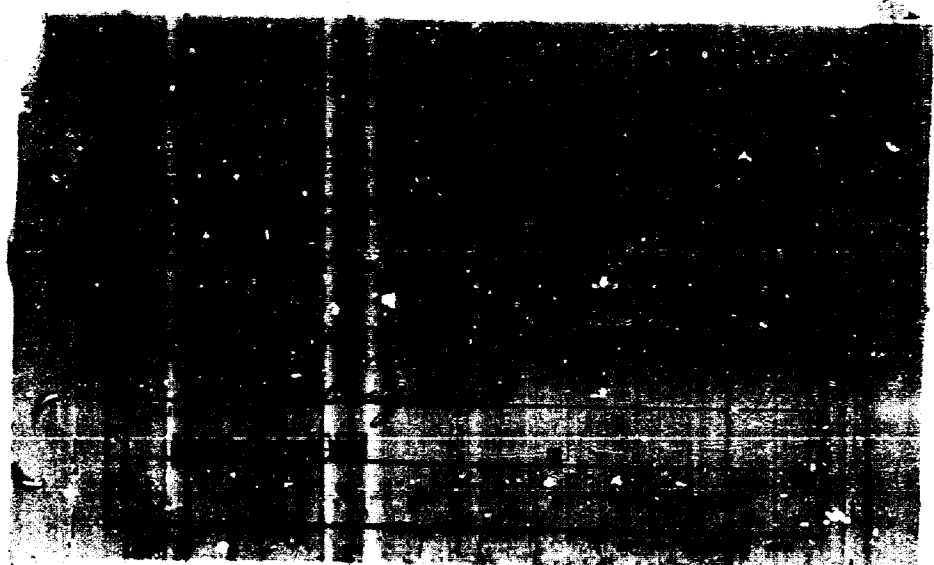


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GPO 9-16-7013-1



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