

CASE 6425: T. B. KNOX ESTATE FOR EX-
CEPTION TO ORDER NO. R-111-A, EDDY
COUNTY, NEW MEXICO

CASE NO.

6425

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,
ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
31 January 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of T. B. Knox Estate for) CASE
exception to Order No. R-111-A, Eddy) 6425
County, New Mexico.)

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Lynn Teschendorf, Esq.
Legal Counsel for the Division
State Land Office Building
Santa Fe, New Mexico 87501

For the Applicant: Joel Carson, Esq.
LOSEE, CARSON & DICKERSON
Artesia, New Mexico

SALLY WALTON BOYD
CERTIFIED SHOOTING AND REPORTER
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I N D E X

PAUL WHITE

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MR. STAMETS: We'll call next Case 6425.

MS. TESCHENDORF: Case 6425. Application of
T. B. Knox Estate for exception to Order No. R-111-A, Eddy
County, New Mexico.

MR. STAMETS: Call for appearances in this
case.

MR. CARSON: Mr. Examiner, my name is Joel
Carson, Losee, Carson, and Dickerson, P. A., Artesia, New
Mexico, appearing on behalf of the Applicant, T. B. Knox
Estate. I'll have one witness.

MR. STAMETS: I'd like to have him stand and
be sworn.

Are there any other appearances in this case?

(Witness sworn.)

PAUL WHITE

being called as a witness and having been duly sworn upon
his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. CARSON:

Q Would you state your name, please?

A Paul White.

Q And, Mr. White, by whom are you employed?

A I'm employed as Vice President of Production

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1 for Summit Energy, Incorporated, and in this case I have
2 been retained as consulting petroleum engineer to represent
3 T. B. Knox Estate.

4 Q Mr. White, have you previously testified
5 before this Commission?

6 A Yes, sir.

7 Q And have your qualifications been accepted?

8 A Yes, sir, they have.

9 MR. CARSON: Are his qualifications acceptable,
10 Mr. Examiner?

11 MR. STAMETS: They are.

12 Q (Mr. Carson continuing.) Mr. White, would
13 you state the purpose of this application?

14 A The purpose of the application is to seek
15 an exception to the Commission's Rule 111-A, which applies
16 to casing and cementing rules in the potash/oil area.
17 The estate of T. B. Knox seeks to drill the Lucia Brookes
18 Well No. 2, which is located in this oil/potash area in
19 Unit K of Section 14, Township 18 South, Range 30 East,
20 Eddy County, New Mexico.

21 The Estate of T. B. Knox would like to set
22 surface casing and circulate cement, eliminate the salt
23 protection string, and not circulate cement on the production
24 casing.

25 Q Now, Mr. White, I'm going to hand you what's

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1 been marked as Applicant's Exhibit Number One and ask you
2 to identify that exhibit.

3 A This is a plat showing the location in red
4 of the Lucia Brookes No. 2, which is the well which the
5 estate of T. B. Knox plans to drill in the area. The well
6 marked in blue in Section 15, 18, 30, is a well that is
7 being drilled right now by LaRue and Muncy, the Federal FR
8 No. 1, and this well, the LaRue and Muncy Federal FR No. 1
9 was granted an exception to Rule 111-A in the oil and
10 potash area.

11 Q It's your contention that their situation
12 and your situation are similar.

13 A Yes, sir, that's my contention.

14 Q Now, Mr. White, is there any fresh water to
15 be found in this -- in the area to be encountered by this
16 salt protection string?

17 A No, sir, to my knowledge there is not.

18 Q Okay. Is the potash in this area to be
19 found in commercial quantities?

20 A No, sir. We have a letter and also statements
21 saying that this potash in this area is not commercial.

22 Q Mr. White, I'm going to refer you to Appli-
23 cant's Exhibit Number Two and ask you to identify that
24 letter.

25 A This is a letter which we got from Duval Cor-

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1 poration. Duval Corporation has the potash leased in this
2 area. And this is a letter signed by Mr. Magraw, Superin-
3 tendent for Duval Corporation, saying that in the letter,
4 that he has no objection to the drilling of this well in
5 this area, and this indicates that the potash is noncommer-
6 cial.

7 Q Mr. White, have you taken this matter up
8 with the Mining Division of the USGS as well as the Oil and
9 Gas Division of the United States Geological Survey?

10 A Yes, sir. I talked on January 24th, 1979,
11 to Mr. John Burleson in Carlsbad, New Mexico. Mr. Burleson
12 is the Mining Supervisor for the United States government,
13 and he had no objection to the drilling of this well and
14 casing it in the manner that the estate of T. B. Knox
15 wishes to case it in; run the two strings of pipe instead
16 of three.

17 I talked to Mr. Jim Knauf with the United
18 States Geological Survey on the same date and Mr. Knauf
19 had no objection to running the two strings of casing in-
20 stead of the three strings.

21 This was on January 24th, 1979.

22 Q Mr. White, I hand you Applicant's Exhibit
23 Number Three and ask you to identify that.

24 A Okay. This first page shows a mailing list
25 of all of the offset operators to this Lucia Brookes No. 2

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1 Well, which the estate of T. B. Knox wishes to drill.

2 This is a list of waiver letters all signed
3 and dated by offset operators showing that they have no
4 objection to this request for the exception to R-111-A.

5 Q I hand you Applicant's Exhibit Number Four
6 and ask you if that exhibit was prepared by you or under
7 your supervision?

8 A Yes, sir, I did prepare this.

9 Q Would you explain to the Examiner what that
10 exhibit purports to show?

11 A Exhibit Number Four shows a diagrammatic
12 sketch of the T. B. Knox Estate Lucia Brookes No. 2 Well,
13 which shows the approximate depth to which surface casing
14 would be set, which is just into the top of the salt at
15 approximately 600 feet. Cement would be circulated on
16 that string of casing to the surface.

17 The other string of casing, this 5-1/2-inch,
18 and it shows this to be set at approximately 3750. That
19 will be the approximate total depth of the well.

20 We want to calculate 100 percent capacity
21 for the hole between the pipe and the hole on the 5-1/2-inch
22 casing and use that much cement on this 5-1/2.

23 Q Mr. White, I hand you Applicant's Exhibit
24 Number Five and ask you to identify that.

25 A This is an authorization for expenditure for

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1 a drilling cost estimate on the Lucia Brookes No. 2. I
2 felt it would be well to have some economics and so I pre-
3 pared this exhibit and Exhibit Number Five shows the com-
4 pleted well costs on the last page.

5 If we run two strings of casing, if we run
6 the 8-5/8ths inch casing and circulate cement and then
7 run the 5-1/2 inch casing, and the total is \$130,292 if
8 we drill and complete the well in that manner.

9 Dry hole cost, total expenditure, \$77,063
10 on that exhibit.

11 Q Now, let me have this one, a copy of the
12 one that shows the --

13 A Okay.

14 MR. STAMETS: I think you've got those two
15 exhibits backwards.

16 MR. CARSON: What, has that got the --
17 show \$150,000? \$154,329 on the last page?

18 MR. STAMETS: Right. Number Five shows that
19 and Exhibit Number Six shows \$130,292.

20 A We have got them backwards, then, Mr.
21 Examiner.

22 MR. STAMETS: Okay, we'll change the numbers,
23 then.

24 MR. CARSON: Number Five shows the \$154,000?

25 MR. STAMETS: Yes.

1 MR. CARSON: Okay.

2 MR. STAMETS: So we'll change Number Five
3 and label it the Number Six and we'll change Number Six
4 to be Number Five.

5 And now I believe Mr. White's testimony is
6 accurate as to the exhibits as renumbered.

7 A. Yes, sir, that is correct.

8 MR. CARSON: The only one who's confused is
9 me. Which one is Number Six?

10 A. Six is \$154,000.

11 MR. CARSON: Okay.

12 Q. (Mr. Carson continuing.) Mr. White, I hand
13 you what's been marked as Applicant's Exhibit Number Six
14 and ask you to identify that, please.

15 A. I prepared this authorization for expendi-
16 ture to show an estimate of well costs if we drilled the
17 well and followed the R-111-A rule and equipped the well
18 with a surface string of casing and then ran an intermediate
19 salt protection string and then ran the 5-1/2 inch casing,
20 and this total is, for a completed well, is \$154,329 and
21 for a dry hole estimate, \$101,100.

22 And these two exhibits are interrelated in
23 that they, Five and Six, in that they show the difference
24 in the well cost as related to the different casing pro-
25 grams.

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1 Q Mr. White, is your proposal in accordance
2 with sound engineering practice?

3 A Yes, sir, that's right.

4 Q And do you feel that it's necessary to have
5 three strings of casing in this particular area?

6 A No, sir. Since there's a lack of fresh
7 water and the potash is not commercial, I do not feel that
8 in this particular area of the oil and potash country that
9 it is necessary to have three strings.

10 Q And is it your professional opinion that to
11 require the three strings would just cause you to incur an
12 unnecessary expense?

13 A Yes, sir, that's right.

14 MR. CARSON: I'd like to move the intro-
15 duction of Exhibits, Mr. Examiner.

16 MR. STAMETS: These exhibits will be ad-
17 mitted.

18 MR. CARSON: We have no further questions
19 of this witness.

20
21 CROSS EXAMINATION

22 BY MR. STAMETS:

23 Q Mr. White, the area that you are drilling in
24 is one of those that has been subject to water flow, not
25 necessarily the exact location you've got there, but the

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1 general vicinity, the Shugart area, I think, down in the
2 North Benson, Benson waterflow. If you discovered a water-
3 flow below the salt in this well, what would the conse-
4 quences of that be?

5 A. If we had a strong waterflow, if we had a
6 weak waterflow below the base of the salt, Probably our
7 decision would be, providing that the Commission would
8 grant this, would be to go ahead and drill the well down
9 and log it and get the pipe run and circulate, be sure and
10 circulate cement up over the oil string into the surface
11 pipes.

12 If we had a strong waterflow we would have
13 to deal with that in a different way and we probably would
14 run intermediate casing.

15 Q. Would you be willing to report any such
16 flow both to the -- any flow, strong or weak, to the USGS
17 and the Division?

18 A. Yes, sir, Mr. Examiner, it's a matter of
19 concern to all of us. In fact, the -- we have equipped
20 wells in this area for an intensive examination to be made
21 by your representatives in the district, and we would re-
22 port any flow that we encountered.

23 Q. Okay. Now, getting back to Exhibit Number
24 Two, I don't see here that you have advised the Duval Cor-
25 poration of your intention to just set a single string of

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1 pipe through the salt.

2 A No, sir, we did not advise them in that --
3 in that manner. We did not tell the Duval Corporation we
4 would just set one string of pipe.

5 Q I wonder if they would have been so willing
6 to approve your location had they known.

7 A I feel certain that they would, Mr. Examiner,
8 because we have talked to them about this on the phone,
9 even though they have not been notified of such by letter,
10 but in our application for intention to drill the well, all
11 of the documents were furnished to Duval Corporation and
12 they had an opportunity to object to anything in the in-
13 tention. They are all aware of the fact that we do want
14 to set two strings of casing, a production and surface
15 string, and there has been no objection to that.

16 I feel that Duval Corporation in their ad-
17 mission that the potash is not commercial in the area is
18 really not worried about it there. To the south of this
19 they are.

20 Q They have been given a copy of your applica-
21 tion to drill and they could look at that and tell what
22 you're proposing.

23 A No, sir. On our application to drill, we
24 filed it according to R-111-A and they were furnished a
25 copy of that, but that would indicate we would run three

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1 strings, and they've only been talked to, Mr. Magraw on
2 the phone, as to the change in casing program.

3 He had no objection. He felt like this was
4 between the Oil Commission and the Energy Department, the
5 Oil Commission and the operator and he had no objection to
6 it.

7 Q Okay. I believe R-111-A does provide that
8 you will have to furnish them with a copy of the application
9 to drill, which will show them two strings of pipe instead
10 of three.

11 A We felt this way about that, Mr. Examiner,
12 if we are successful in the hearing, we would revamp the
13 intention to drill to the USGS, showing the two strings
14 would be set instead of three, and we would send in a cor-
15 rected intention to drill and casing program, and then at
16 that time furnish the Duval Corporation with all the docu-
17 ments.

18 Q Okay, and that would still provide them an
19 opportunity to object, if they so chose.

20 A Yes, sir.

21 Q Okay. What's the base of the potash in this
22 area?

23 A It's about 1300 feet, I believe, Mr. Examiner.

24 Q Is that the potash or the salt?

25 A That's the salt, pardon me, the salt.

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1 Q Okay, that's what I wanted. I said potash
2 but I meant salt.

3 A Salt, I'm sorry.

4 Q All right. If the cement does not circulate,
5 would you be willing to take a temperature survey to deter-
6 mine the cost?

7 A Yes, sir, we would.

8 Q And report that to the USGS and the Division
9 and circulate it if it's required?

10 A Yes, sir.

11 Q Very good.

12 MR. STAMETS: Any other questions of the
13 witness? Mr. Ramey.

14
15 CROSS EXAMINATION

16 BY MR. RAMEY:

17 Q Mr. White, do you intend to drill this well
18 in accordance with R-111-A except for the one string, the
19 salt protection string?

20 A Yes, sir, that's right.

21 Q Are you going to use brine water to drill
22 through the salt section?

23 A Yes, sir.

24 MR. STAMETS: Any other questions? The
25 witness may be excused.

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Santa Fe, New Mexico 87501

Anything further in this case?

MR. CARSON: No, Mr. Examiner.

MR. STAMETS: The case will be taken under
advisement.

(Hearing concluded.)

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Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY
 CERTIFY that the foregoing and attached Transcript of
 Hearing before the Oil Conservation Division was reported
 by me; that said transcript is a full, true, and correct
 record of the hearing, prepared by me to the best of my
 ability, knowledge, and skill, from my notes taken at the
 time of the hearing.

Sally W. Boyd C.S.R.
 Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is
 a true and correct transcript of the hearing
 held on 4-31-79 at 6425
Richard L. Hamm
 Oil Conservation Division, Chairman

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 CERTIFIED SHORTHAND REPORTER
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NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

Hearing Date JANUARY 31, 1979 Time: 9:00 A.M.

NAME	REPRESENTING	LOCATION
Elmer Startz	Cities Service Co.	Midland, Tex
Tom Kellahan	Kellahan & Kellahan	Santa Fe
John F. Eckel	EPN	Santa Fe, TX
E.R. Manning	EPMG	El Paso, TX
Gordon D. Ryan	Rmoco Prod. Co.	Denver, Colo
Charles Verquer	Caulkins Oil Co.	Farmington, N.M.
Joel Carson	Losie Carson & Dickerson	Artesia NM
Paul G White	Estate of T.B. Knox	Artesia, N.M.
Jarvis Nelson	Zia Energy, Inc.	Hobbs, NM
Virgil Henry	Zia Energy, Inc.	Hobbs, NM
George H. Hunter	Marvin Gross & Co. Trainer	Roswell, N.M.
Marvin Gross		
AR Hendrick		Artesia
Raymond Parker	NMG Oil Co	Midland, TX
John A. Mate	NMG Oil Co	Midland, TX
JEROME D WEBER	HELTON ENGLER SERV	DENVER COLO

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
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Artesia, New Mexico

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7 Q And have your qualifications been accepted?

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15 an exception to the Commission's Rule 111-A, which applies
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5 estate of T. B. Knox plans to drill in the area. The well
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25 A This is a letter which we got from Duval Cor-

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1 poration. Duval Corporation has the potash leased in this
2 area. And this is a letter signed by Mr. Magraw, Superin-
3 tendent for Duval Corporation, saying that in the letter,
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5 this area, and this indicates that the potash is noncommer-
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Santa Fe, New Mexico 87501

1 a drilling cost estimate on the Lucia Brookes No. 2. I
2 felt it would be well to have some economics and so I pre-
3 pared this exhibit and Exhibit Number Five shows the com-
4 pleted well costs on the last page.

5 If we run two strings of casing, if we run
6 the 8-5/8ths inch casing and circulate cement and then
7 run the 5-1/2 inch casing, and the total is \$130,292 if
8 we drill and complete the well in that manner.

9 Dry hole cost, total expenditure, \$77,063
10 on that exhibit.

11 Q Now, let me have this one, a copy of the
12 one that shows the --

13 A Okay.

14 MR. STAMETS: I think you've got those two
15 exhibits backwards.

16 MR. CARSON: What, has that got the --
17 show \$150,000? \$154,329 on the last page?

18 MR. STAMETS: Right. Number Five shows that
19 and Exhibit Number Six shows \$130,292.

20 A We have got them backwards, then, Mr.
21 Examiner.

22 MR. STAMETS: Okay, we'll change the numbers,
23 then.

24 MR. CARSON: Number Five shows the \$154,000?

25 MR. STAMETS: Yes.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2020 Plaza Blanca (S-06) 411-2462
Santa Fe, New Mexico 87501

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MR. CARSON: Okay.

MR. STAMETS: So we'll change Number Five and label it the Number Six and we'll change Number Six to be Number Five.

And now I believe Mr. White's testimony is accurate as to the exhibits as renumbered.

A. Yes, sir, that is correct.

MR. CARSON: The only one who's confused is me. Which one is Number Six?

A. Six is \$154,000.

MR. CARSON: Okay.

Q (Mr. Carson continuing.) Mr. White, I hand you what's been marked as Applicant's Exhibit Number Six and ask you to identify that, please.

A. I prepared this authorization for expenditure to show an estimate of well costs if we drilled the well and followed the R-111-A rule and equipped the well with a surface string of casing and then ran an intermediate salt protection string and then ran the 5-1/2 inch casing, and this total is, for a completed well, is \$154,329 and for a dry hole estimate, \$101,100.

And these two exhibits are interrelated in that they, Five and Six, in that they show the difference in the well cost as related to the different casing programs.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3610 Park Blasen (008) 411-2463
Santa Fe, New Mexico 87501

1 Q Mr. White, is your proposal in accordance
2 with sound engineering practice?

3 A Yes, sir, that's right.

4 Q And do you feel that it's necessary to have
5 three strings of casing in this particular area?

6 A No, sir. Since there's a lack of fresh
7 water and the potash is not commercial, I do not feel that
8 in this particular area of the oil and potash country that
9 it is necessary to have three strings.

10 Q And is it your professional opinion that to
11 require the three strings would just cause you to incur an
12 unnecessary expense?

13 A Yes, sir, that's right.

14 MR. CARSON: I'd like to move the intro-
15 duction of Exhibits, Mr. Examiner.

16 MR. STAMETS: These exhibits will be ad-
17 mitted.

18 MR. CARSON: We have no further questions
19 of this witness.

20 CROSS EXAMINATION

21 BY MR. STAMETS:

22 Q Mr. White, the area that you are drilling in
23 is one of those that has been subject to water flow, not
24 necessarily the exact location you've got there, but the
25

1 general vicinity, the Shugart area, I think, down in the
2 North Benson, Benson waterflow. If you discovered a water-
3 flow below the salt in this well, what would the conse-
4 quences of that be?

5 A. If we had a strong waterflow, if we had a
6 weak waterflow below the base of the salt, Probably our
7 decision would be, providing that the Commission would
8 grant this, would be to go ahead and drill the well down
9 and log it and get the pipe run and circulate, be sure and
10 circulate cement up over the oil string into the surface
11 pips.

12 If we had a strong waterflow we would have
13 to deal with that in a different way and we probably would
14 run intermediate casing.

15 Q. Would you be willing to report any such
16 flow both to the -- any flow, strong or weak, to the USGS
17 and the Division?

18 A. Yes, sir, Mr. Examiner, it's a matter of
19 concern to all of us. In fact, the -- we have equipped
20 wells in this area for an intensive examination to be made
21 by your representatives in the district, and we would re-
22 port any flow that we encountered.

23 Q. Okay. Now, getting back to Exhibit Number
24 Two, I don't see here that you have advised the Duval Cor-
25 poration of your intention to just set a single string of

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3116 Penn Plaza (955) 471-4162
Santa Fe, New Mexico 87501

1 pipe through the salt.

2 A No, sir, we did not advise them in that --
3 in that manner. We did not tell the Duval Corporation we
4 would just set one string of pipe.

5 Q I wonder if they would have been so willing
6 to approve your location had they known.

7 A I feel certain that they would, Mr. Examiner,
8 because we have talked to them about this on the phone,
9 even though they have not been notified of such by letter,
10 but in our application for intention to drill the well, all
11 of the documents were furnished to Duval Corporation and
12 they had an opportunity to object to anything in the in-
13 tention. They are all aware of the fact that we do want
14 to set two strings of casing, a production and surface
15 string, and there has been no objection to that.

16 I feel that Duval Corporation in their ad-
17 mission that the potash is not commercial in the area is
18 really not worried about it there. To the south of this
19 they are.

20 Q They have been given a copy of your applica-
21 tion to drill and they could look at that and tell what
22 you're proposing.

23 A No, sir. On our application to drill, we
24 filed it according to R-111-A and they were furnished a
25 copy of that, but that would indicate we would run three

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
308 Palm Beach, U.S.A. 71-4462
Santa Fe, New Mexico 37391

1 strings, and they've only been talked to, Mr. Magraw on
2 the phone, as to the change in casing program.

3 He had no objection. He felt like this was
4 between the Oil Commission and the Energy Department, the
5 Oil Commission and the operator and he had no objection to
6 it.

7 Q Okay. I believe R-111-A does provide that
8 you will have to furnish them with a copy of the application
9 to drill, which will show them two strings of pipe instead
10 of three.

11 A We felt this way about that, Mr. Examiner,
12 if we are successful in the hearing, we would revamp the
13 intention to drill to the USGS, showing the two strings
14 would be set instead of three, and we would send in a cor-
15 rected intention to drill and casing program, and then at
16 that time furnish the Duval Corporation with all the docu-
17 ments.

18 Q Okay, and that would still provide them an
19 opportunity to object, if they so chose.

20 A Yes, sir.

21 Q Okay. What's the base of the potash in this
22 area?

23 A It's about 1300 feet, I believe, Mr. Examiner.

24 Q Is that the potash or the salt?

25 A That's the salt, pardon me, the salt.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3030 Plaza Blanca (SE) 471-2462
Santa Fe, New Mexico 87101

1 Q Okay, that's what I wanted. I said potash
2 but I meant salt.

3 A Salt, I'm sorry.

4 Q All right. If the cement does not circulate,
5 would you be willing to take a temperature survey to deter-
6 mine the cost?

7 A Yes, sir, we would.

8 Q And report that to the USGS and the Division
9 and circulate it if it's required?

10 A Yes, sir.

11 Q Very good.

12 MR. STAMETS: Any other questions of the
13 witness? Mr. Ramey.

14 CROSS EXAMINATION

15 BY MR. RAMEY:

16 Q Mr. White, do you intend to drill this well
17 in accordance with R-111-A except for the one string, the
18 salt protection string?
19

20 A Yes, sir, that's right.

21 Q Are you going to use brine water to drill
22 through the salt section?

23 A Yes, sir.

24 MR. STAMETS: Any other questions? The
25 witness may be excused.

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
30302 12th Street (S.W.) 4714-463
San Francisco, New Mexico 87101

Anything further in this case?

MR. CARSON: No, Mr. Examiner.

MR. STAMETS: The case will be taken under
advisement.

(Hearing concluded.)

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
3930 Peach Bluffs (605) 471-4463
Suite 31, New Mexico 87501

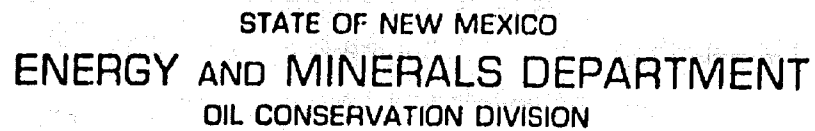
REPORTER'S CERTIFICATE

I, SALLY WALTON BOYD, a Court Reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 6425 heard by me on 1-31-1979.
Richard L. Hunt Examiner
Oil Conservation Division

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2020 Plaza Blanca (SOS) 411-4462
Santa Fe, New Mexico 87502



February 21, 1979

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

Mr. Joel M. Carson
Losee, Carson & Dickerson
Attorneys at Law
Post Office Drawer 239
Artesia, New Mexico 88210

Re: CASE NO. 6425
ORDER NO. R-5918

Applicant:

T. B. Knox Estate

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC x

Artesia OCC x

Aztec OCC

Other

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 6425
Order No. R-5918

APPLICATION OF T. B. KNOX ESTATE FOR
EXCEPTION TO ORDER NO. R-111-A,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on January 31, 1979, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 20th day of February, 1979, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, T. B. Knox Estate, seeks an exception to the casing/cementing rules for the Oil-Potash Area as promulgated by Order No. R-111-A to permit its Lucia Brookes Well No. 2 located in Unit K of Section 14, Township 18 South, Range 30 East, Eddy County, New Mexico, to be completed with a string of surface casing set and circulated with cement at a depth of approximately 600 feet and a production casing string set at a depth of approximately 3750 feet with a volume of cement calculated to be sufficient to circulate.

(3) That the evidence presented indicates that there are no potash mining operations nor deposits of commercial potash ore in proximity to the proposed well and that the proposed method of completion will not result in endangerment of potash resources nor operations.

-2-

Case No. 6425
Order No. R-5918

(4) That the applicant should report the following both to the district office of the Division and the U.S.G.S. and may be required to circulate cement to the surface around the production casing:

- (a) Any water flows encountered;
- (b) The top of the cement around the production casing as determined by temperature survey if such cement does not circulate.

(5) That approval of the subject application will protect correlative rights, will prevent waste and will not cause the waste of potash.

(6) The application should be approved.

IT IS THEREFORE ORDERED:

(1) That the applicant, T. B. Knox Estate, is hereby authorized an exception to the casing/cementing rules for the Oil-Potash Area as promulgated by Order No. R-111-A to permit its Lucia Brooks well No. 2 located in Unit K of Section 14, Township 18 South, Range 30 East, Eddy County, New Mexico, to be completed with a string of surface casing set and circulated with cement at a depth of approximately 600 feet and a production casing string set at a depth of approximately 3750 feet with a volume of cement calculated to be sufficient to circulate.

PROVIDED HOWEVER, that the applicant shall report the following, both to the district office of the Division and the U.S.G.S.:

- (a) Any water flows encountered; and
- (b) The top of the cement around the production casing as determined by temperature survey if such cement does not circulate.

PROVIDED FURTHER, that the applicant may be required to re-cement the production casing to the surface if cement on said casing did circulate to the surface.

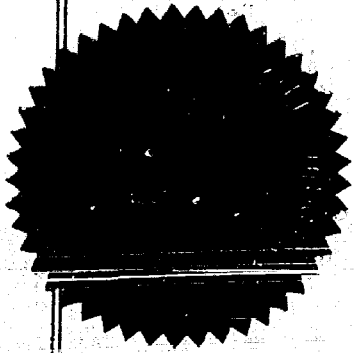
(2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

-3-

Case No. 6425
Order No. R-5918

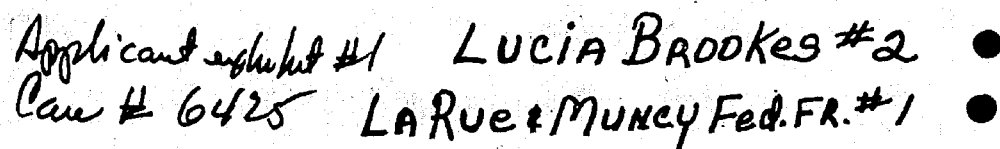
DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



Joe D. Ramey
JOE D. RAMEY
Director

fd/



December 19, 1978

Duval Corporation
P.O. Box 115
Carlsbad, N.M. 88240

Attn: Mr. John Mc Graw

Dear Mr. Mc Graw:

T. B. Knox Estate plans to drill the Lucia Brooks #2 well, located 1980' FSL and 1980' FWL, Section 14, T18S-R30E, Eddy County, New Mexico.

Duval Corporation still has active mining leases in this area. We have discussed this location with Mr. John Burleson, the Federal Mining Supervisor, and he has no objection to the drilling of the well.

Would you please check this location and if in agreement, we respectfully request that you sign this letter as a waiver to any objections to the drilling of this prospect.

Sincerely,

Paul G. White
Paul G. White
Engineer

PGW/gb

Signed

Date:

JWS Magraw
12-20-78

Applicant	
MINER STATEMENTS	
OIL CONSERVATION DIVISION	
EXHIBIT NO. <u>2</u>	
CASE NO.	<u>6425</u>
Submitted by	<u>Applicant</u>
Hearing Date	

MAILING LIST

1. LaRue & Muncy ✓
P.O. Box 196
Artesia, N.M. 88210
2. Marbob Energy, Corp.
P.O. Box 304
Artesia, N.M. 88210
3. Yates Petroleum Corp. ✓
207 S. 4th
Artesia, N.M. 88210
4. Featherstone Development ✓
1717 W. 2nd
Roswell, N.M. 88201
5. Texaco, Inc. ✓
P.O. Box 728
Hobbs, N.M. 88240
6. Kersey and Co. ✓
808 W. Grand
Artesia, N.M. 88210
7. Holly Energy, Inc. ✓
Box 726
Artesia, N.M. 88210
8. Pennzoil Co. ✓
5th Floor Wall Towers West
Drawer 1828
Midland, Texas 79701

BEFORE THE INDEPENDENT
OIL COMMISSION DIVISION
FILE NO. 3
CASE NO. Applicant
Submitted by 6425
Hearing Date

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: January 24, 1979

SIGNED: *[Signature]*

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1990' PSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: 1-24-79

SIGNED: *Mark C. Chan*

JAN 18 1979 yjc

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(1) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: Jan 22, 1979 SIGNED: *[Signature]*

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We) (I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: January 19, 1979 SIGNED:

Featherstone Development Corp

Charles W. Fisher

Vice-President

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: 1-18-79

SIGNED: *J. Hannon*

TEXACO Inc.

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/4" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: 1/18/79

SIGNED: *Harold Kersey*

January 17, 1979

REC-111-25-79

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: 1-24-79

SIGNED:

J. H. [Signature]
Holly Energy INC

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: 1-18-79

SIGNED:

E. H. Foret

E. H. Foret

Pennzoil Company

DIAGRAMATIC WELL SKETCH

T. B. KNOX ESTATE - LUCIA BROOKS NO 2

1980' FSL 1980' FWL SECTION 14 - T18S - R30E

EDDY COUNTY, NEW MEXICO



Cement Circulated ✓

Centralizer at 570' ^{Top}
8 $\frac{5}{8}$ " - 20' - Casing 600' ^{5" H}

Cement Calculated To Circulate
ON 5 $\frac{1}{2}$ " Casing ✓

1300 BX

Centralizer at 3630

Centralizer at 3720

5 $\frac{1}{2}$ " - 14' - Casing 3750'

BEFORE E. A. MINER, ATTORNEY
CIL CONT. VAIL. N. M. SECTION

EXHIBIT NO. 4

CASE NO.

6425

Submitted by

Applicant

Hearing Date

AFE DRILLING COST ESTIMATE

LEASE: LUCIA BROOKES REGULATORY PERMIT NUMBER --
 AREA/FIELD: Leo Queen Grayburg, Eddy County, N.MEX. 2 (14-T18S-R30E)
 TYPE: Wildcat Straight LOCATION: Onshore X
Development X Directional Inland/Bay
Offshore

INTANGIBLE DRILLING COST ESTIMATE

LOCATION

Surface Damages (Patented Land)	<u> </u>
Surveyors & Equipment	<u>400</u>
Rig/Location preparations (Includes Road)	<u>13,178</u>
Road Construction/easements	<u> </u>
	<u>Incl. w/location</u>

ABANDONMENT

Cut Off/back off casing	<u> </u>
Cement (Equipment & Services)	<u> </u>
Crop Damages	<u> </u>

RIG

Footage <u>3700</u> Ft. @ \$ <u>9.75</u> /Ft.	<u>36,075</u>
W/DP <u>1</u> Days @ \$ <u>2,600</u> /day	<u>2,600</u>
W/O DP <u>1</u> days @ \$ <u>2,600</u> /day	<u>2,600</u>

SURFACE CASING SERVICES (8 5/8")

Inspection of pipe	<u> </u>
Casing Crew/Equipment	<u>1,200</u>
Tong Operator/Equipment	<u> </u>
Float Equipment Incl. in Cement	<u> </u>
Centralizers/Incl. in Cement	<u> </u>
Cement (Equipment & Services)	<u>3,500</u>

FIRST INTERMEDIATE CASING SERVICES

Inspection of pipe	<u> </u>
Casing Crew/Equipment	<u> </u>
Tong Operator/Equipment	<u> </u>
Float Equipment	<u> </u>
Centralizers/Scratchers	<u> </u>
Cement (Equipment & Services) with one pump truck	<u> </u>

SECOND INTERMEDIATE CASING SERVICES

Inspection of pipe	<u> </u>
Casing Crew/Equipment	<u> </u>
Tong Operator/Equipment	<u> </u>
Float Equipment	<u> </u>
Centralizers/Scratchers	<u> </u>
Cement (Equipment & Services)	<u> </u>

THIRD INTERMEDIATE CASING SERVICES

Inspection of pipe	<u> </u>
Casing Crew/Equipment	<u> </u>
Tong Operator/Equipment	<u> </u>
Float Equipment	<u> </u>
Centralizers/Scratchers	<u> </u>
Cement (Equipment & Services)	<u> </u>

INTERMEDIATE LINER SERVICES

Inspection of pipe	<u> </u>
Casing Crew/Equipment	<u> </u>
Tong Operator/Equipment	<u> </u>
Liner/Float Equipment	<u> </u>
Centralizers/Scratchers	<u> </u>
Cement (Equipment & Services)	<u> </u>

MUD (Weight, Chemicals, Oil, Water & Services)	<u>6,000</u>
--	--------------

BITS

<u> </u> of <u> </u>	OD @ <u> </u> /bit
<u> </u> of <u> </u>	OD @ <u> </u> /bit
<u> </u> of <u> </u>	OD @ <u> </u> /bit
<u> </u> of <u> </u>	OD @ <u> </u> /bit

BEFORE EXAMINER STAMETS
 OIL CONSERVATION DIVISION
 CASE NO. 6425
 Approved by
 Secy. Date

TRANSPORTATION _____ days @ \$ _____ /day
 FUEL _____ days @ \$ _____ /day
 LABOR & SUPPLIES _____ days @ \$ _____ /day
 COMPANY SUPERVISION 5 days @ \$ 200 /day

1,000

RENTALS

Work String Assembly
 Rotating head _____ days @ \$ _____ /day
 Separator _____ days @ \$ _____ /day
 P.V.T. Flow line sensor & pump _____ days @ \$ _____ /day
 D-Gasser _____ days @ \$ _____ /day
 Choke _____ days @ \$ _____ /day
 TOTCO CDR Recorder
 Other

OTHER

TOTAL

66,553

INTANGIBLE FORMATION EVALUATION COST ESTIMATE

ELECTRIC LOGS

POROSITY LOGS

Gamma Ray/Neutron

4,000

DIPMETER LOGS

CALIPER LOGS

DRILL STEM TESTS

Test 1 @ _____ /ft
 Test 2 @ _____ /ft
 Test 3 @ _____ /ft
 Test 4 @ _____ /ft

MUD LOGGING

No. of days _____
 Equipment/Services @ \$ _____ /day
 TRANSPORTATION _____ days @ \$ _____ /day
 FUEL _____ days @ \$ _____ /day

LABOR & SUPPLIES _____ days @ \$ _____ /day
 COMPANY SUPERVISION _____ days @ \$ _____ /day

RENTALS

Work String Assembly
 Other

OTHER - Contract geologist

1,500

TOTAL

5,500

INTANGIBLE COMPLETION COST ESTIMATE

RIG/WEEL SERVICE UNIT

W/DP 6 days @ \$ 720 /day
 W/O DP _____ days @ \$ _____ /day

4,320

PRODUCTION CASING

Inspection of pipe
 Casing Crew/Equipment
 Tong Operator/Equipment
 Float Equipment (Incl in Cement)
 Centralizers/Scratchers (Incl. in Cement)
 Cement (Equipment & Services) w/stand-by truck

1,200

3,000

PRODUCTION TUBING SERVICES

Inspection
Internal coating
Tong Operator/Equipment
Pressure Testing

MUD/COMPLETION FLUID

BITS

TRANSPORTATION _____ days @ \$ _____ /day

FUEL _____ days @ \$ _____ /day

LABOR & SUPPLIES _____ days @ \$ _____ /day

COMPANY SUPERVISION _____ 6 days @ \$ 200 /day

RENTALS

Work String Assembly

Other

COMPLETION/PRODUCTION LOGGING

G-Ray _____ G-Ray/N _____ G-Ray/N/CBI/Signature

NLL _____ NLL/G-Ray _____ NNL/N _____ NLL/G-Ray/N

G-Ray/CBI/Signature _____ NLL/G-Ray/N/CBI/Signature

PERFORATING

SQUEEZE CEMENTING (Equipment Material & Services)

WIRELINE WORK (To set WLPs, BPs, SCs, etc.)

TREATING (Acidize, frac, gravel/Plastic pack, etc.)

PRODUCTION TESTING (Equipment & Services)

OTHER BHP Surveys

TOTAL

25,420

TANGIBLE DRILLING COST ESTIMATE

CONDUCTOR CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

SURFACE CASING

600 Ft 8 5/8" OD 20 #/Ft H40 GR8RD THDST&C CPL\$ 5.85 /Ft 3,510

FIRST INTERMEDIATE CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

SECOND INTERMEDIATE CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

THIRD INTERMEDIATE CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

INTERMEDIATE LINER CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

SURFACE CASING HEAD or Casing head spool w/valves, S & S assemblies

INTERMEDIATE CASING HEAD, w/Valves, slip & seal assemblies 1,500

OTHER

TOTAL

5,010

TANGIBLE COMPLETION COST ESTIMATE

PRODUCTION CASING

3700 Ft 5 1/2" OD 14 #/Ft K GR 8RD THDST&C CPL\$ 4.57 /Ft 16,909

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

PRODUCTION TUBING

3700 Ft 2 3/8" OD 4.7 #/Ft 8RD GR EVE THD -- CPL\$ 2.00 /Ft 7,400

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft

TUBING HEAD w/valves				
CHRISTMAS TREE	Single	Dual	Triple	2,000
SUB-SURFACE EQUIPMENT (packers, seal assemblies, landing nipples, BPs, storm chokes, blast joints, flow couplings)				1,500
* OTHER				
TOTAL				27,809

AFE COST ESTIMATE SUMMARY

	DRY HOLE	COMPLETED
INTANGIBLE	66,553	66,553
	5,500	5,500
		25,420
TOTAL	72,053	97,473
TANGIBLE	5,010	5,010
		27,809
TOTAL	5,010	32,819
TOTAL EXPENDITURE	77,063	130,292

PREPARED BY: Paul G. White

DATE: January 25, 1979

NON-OPERATORS APPROVAL:

*AFE Does not include Rods, Pump, Pumping unit, Motor, Flowlines or Tank Battery.

AFE DRILLING COST ESTIMATE

LEASE: LUCIA BROOKES REGULATORY PERMIT NUMBER --

AREA/FIELD: Leo Queen Grayburg, Eddy County, N.M. WELL: 2 (14-T18S-R30E)

TYPE: Wildcat Straight LOCATION: Onshore X

Development X Directional Inland/Bay

Offshore

INTANGIBLE DRILLING COST ESTIMATE

LOCATION

Surface Damages (Patented Land)	_____
Surveyors & Equipment	_____ 400
Rig/Location preparations (Includes Road)	_____ 13,178
Road Construction/easements	_____ Incl.w/ location

ABANDONMENT

Cut Off/back off casing	_____
Cement (Equipment & Services)	_____
Crop Damages	_____

RIG

Footage <u>3700</u> Ft. @ \$ <u>9.75</u> /Ft.	_____ 36,075
W/DP <u>2</u> Days @ \$ <u>2600</u> /day	_____ 5,200
W/O DP <u>2</u> days @ \$ <u>2600</u> /day	_____ 5,200

SURFACE CASING SERVICES (10 3/4")

Inspection of pipe	_____
Casing Crew/Equipment	_____ 1,200
Tong Operator/Equipment	_____
Float Equipment Incl. in Cement	_____
Centralizers/Incl. in Cement	_____
Cement (Equipment & Services)	_____ 3,500

FIRST INTERMEDIATE CASING SERVICES (8 5/8")

Inspection of pipe	_____
Casing Crew/Equipment	_____ 1,200
Tong Operator/Equipment	_____
Float Equipment	_____
Centralizers/Scratchers	_____
Cement (Equipment & Services) with one pump truck	_____ 2,000

SECOND INTERMEDIATE CASING SERVICES

Inspection of pipe	_____
Casing Crew/Equipment	_____
Tong Operator/Equipment	_____
Float Equipment	_____
Centralizers/Scratchers	_____
Cement (Equipment & Services)	_____

THIRD INTERMEDIATE CASING SERVICES

Inspection of pipe	_____
Casing Crew/Equipment	_____
Tong Operator/Equipment	_____
Float Equipment	_____
Centralizers/Scratchers	_____
Cement (Equipment & Services)	_____

INTERMEDIATE LINER SERVICES

Inspection of pipe	_____
Casing Crew/Equipment	_____
Tong Operator/Equipment	_____
Liner/Float Equipment	_____
Centralizers/Scratchers	_____
Cement (Equipment & Services)	_____

MUD (Weight, Chemicals, Oil, Water & Services) _____ 6,000

BITS

_____ of _____ " OD @ _____ /bit	_____
_____ of _____ " OD @ _____ /bit	_____
_____ of _____ " OD @ _____ /bit	_____
_____ of _____ " OD @ _____ /bit	_____

BEFORE EXAMINER INITIALS	
OIL CONSERVATION DIVISION	
EXHIBIT NO. <u>6</u>	
CASE NO. <u>6425</u>	
Submitted by <u>Applicant</u>	
Hearing Date _____	

1.200

Work String Assembly

TOTAL.

75,153

ELECTRIC LOGS

Gamma Ray/Neutron

4,000

Test 1 @ _____ /ft
Test 2 @ _____ /ft
Test 3 @ _____ /ft
Test 4 @ _____ /ft

No. of days

Equipment/Services @ \$ /day

TRANSPORTATION days @ \$ /day

FUEL	days @ \$	/day
------	-----------	------

LABOR & SUPPLIES days @ \$ /day

COMPANY SUPERVISION days @ \$ /day

Work String Assembly

Other

OTHER - Contract geologist

1.500

TOTAL

5,500

RIG/WELL SERVICE UNIT

W/DP 6 days @ \$ 720 /day

4,320

W/O	DP	days	@ \$	/day
-----	----	------	------	------

Inspection of pipe

1,200

Casing Crew/Equipment 7"

Tong Operator/Equipment

Float Equipment (Incl in Cement)

Centralizers/Scratchers (Incl. in Cement

Cement (Equipment & Services) w/stand-by truck

3.000

PRODUCTION TUBING SERVICES

Inspection
Internal coating
Tong Operator/Equipment
Pressure Testing

MUD/COMPLETION FLUID

BITS

TRANSPORTATION _____ days @ \$ _____ /day

FUEL _____ days @ \$ _____ /day

LABOR & SUPPLIES _____ days @ \$ _____ /day

COMPANY SUPERVISION 6 days @ \$ 200 /day

RENTALS

Work String Assembly

Other

COMPLETION/PRODUCTION LOGGING

G-Ray G-Ray/N G-Ray/N/CBL/Signature

NLL NLL/G-Ray NNL/N NLL/G-Ray/N

G-Ray/CBL/Signature NLL/G-Ray/N/CBL/Signature

PERFORATING

SQUEEZE CEMENTING (Equipment Material & Services)

WIRELINE WORK (To set WLPs, BPs, SCs, etc.)

TREATING (Acidize, frac, gravel/Plastic pack, etc.)

PRODUCTION TESTING (Equipment & Services)

OTHER BHP Surveys

TOTAL

25,420

TANGIBLE DRILLING COST ESTIMATE

CONDUCTOR CASING

Ft "OD #/Ft GR THD CPLG\$/Ft

SURFACE CASING

600 Ft 10 3/4"OD 40.5 #/Ft H-40 GR8RD THDST&C CPLG\$ 13.53/Ft 8,118

FIRST INTERMEDIATE CASING

1300 Ft 8 5/8"OD 24 #/Ft K GR 8RD THDST&C CPLG\$ 8.33 /Ft 10,829

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

SECOND INTERMEDIATE CASING

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

THIRD INTERMEDIATE CASING

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

INTERMEDIATE LINER CASING

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

SURFACE CASING HEAD or Casing head spool w/valves, S & S assevbles

INTERMEDIATE CASING HEAD, w/Valves, slip & seal assemblies

OTHER

1,500

TOTAL

20,447

TANGIBLE COMPLETION COST ESTIMATE

PRODUCTION CASING

3700 Ft 5 1/2"OD 14# #/Ft K GR 8RD THDST&C CPLG\$ 4.57 /Ft 16,909

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

PRODUCTION TUBING

3700 Ft 2 3/8"OD 4.7 #/Ft 8 RD GR EVE THD -- CPLG\$ 2.00 /Ft 7,400

Ft "OD #/Ft GR THD CPLG\$/Ft

Ft "OD #/Ft GR THD CPLG\$/Ft

TUBING HEAD w/valves				
CHRISTMAS TREE	Single	Dual	Triple	2,000
SUB-SURFACE EQUIPMENT (packers, seal assemblies, landing nipples, BPs, storm chokes, blast joints, flow couplings)				1,500
* OTHER				
TOTAL				27,809

AFE COST ESTIMATE SUMMARY

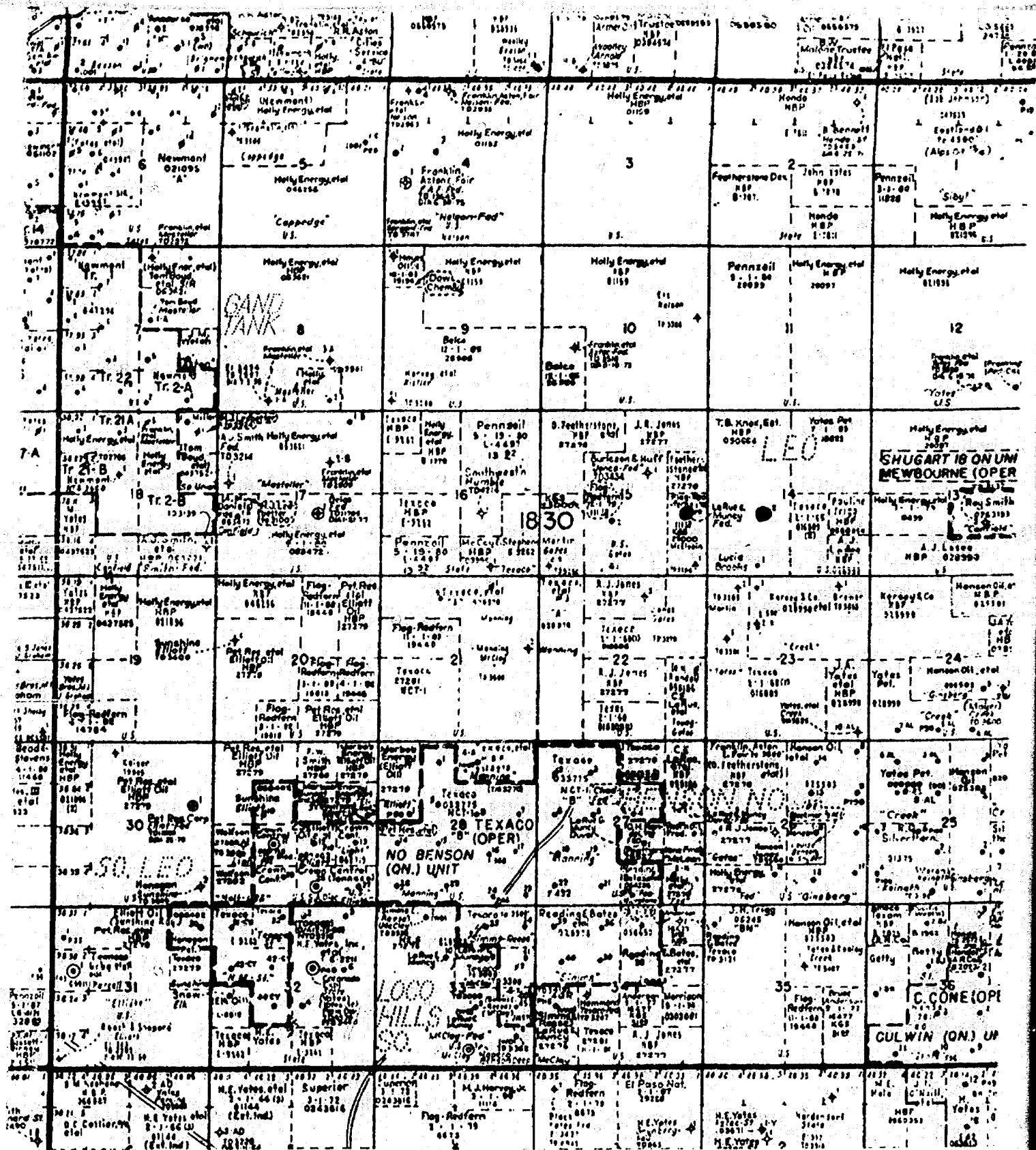
	DRY HOLE	COMPLETED
INTANGIBLE	75,153	75,153
	5,500	5,500
		25,420
TOTAL	80,653	106,073
TANGIBLE	20,447	20,447
		27,809
TOTAL	20,447	48,256
TOTAL EXPENDITURE	101,100	154,329

PREPARED BY: Paul G. White

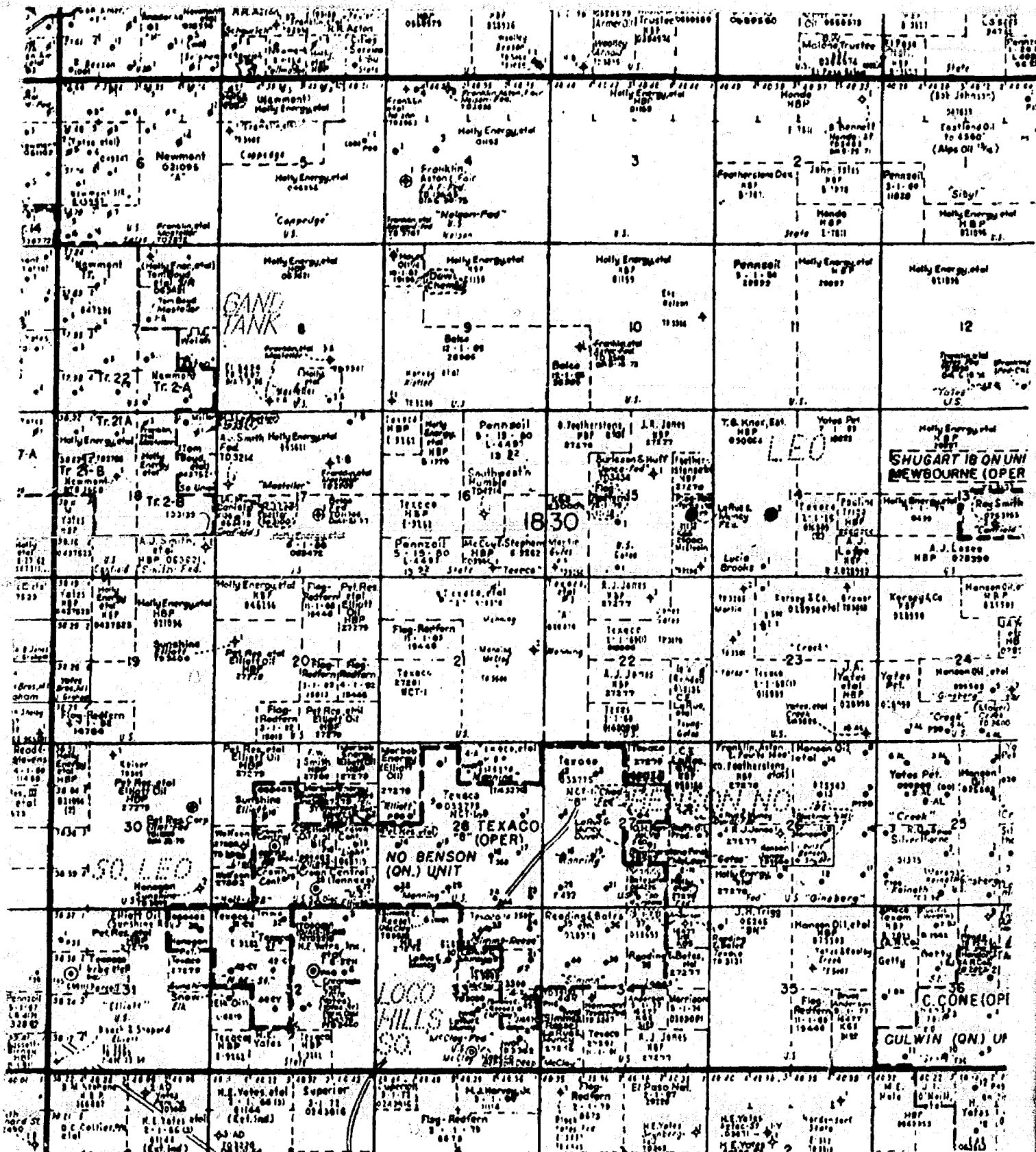
DATE: January 25, 1979

NON-OPERATORS APPROVAL:

*AFE Does not include Rods, Pump, Pumping Unit, Motor, Flowlines or Tank Battery.



Applicant Exhibit 1 LUCIA BROOKES #2 ●
 Case NO 6425 LA RUE & MUNCY Fed. FR. #1 ●



Applicant exh. int #1 LUCIA BROOKES #2
 Case NO 6425 LA RUE & MUNCY Fed. FR. #1

December 19, 1978

Duval Corporation
P.O. Box 115
Carlsbad, N.M. 88240

Attn: Mr. John Mc Graw

Dear Mr. Mc Graw:

T. B. Knox Estate plans to drill the Lucia Brooks #2 well, located 1980' FSL and 1980' FWL, Section 14, T18S-R30E, Eddy County, New Mexico.

Duval Corporation still has active mining leases in this area. We have discussed this location with Mr. John Burleson, the Federal Mining Supervisor, and he has no objection to the drilling of the well.

Would you please check this location and if in agreement, we respectfully request that you sign this letter as a waiver to any objections to the drilling of this prospect.

Sincerely,

Paul G. White
Paul G. White
Engineer

PGW/gb

Signed: *J. W. Magraw*

Date: *12-20-78*

*Applicant #2
Case NO 6425*

MAILING LIST

1. LaRue & Muncy
P.O. Box 196
Artesia, N.M. 88210
2. Marbob Energy, Corp.
P.O. Box 304
Artesia, N.M. 88210
3. Yates Petroleum Corp.
207 S. 4th
Artesia, N.M. 88210
4. Featherstone Development
1717 W. 2nd
Roswell, N.M. 88201
5. Texaco, Inc.
P.O. Box 728
Hobbs, N.M. 88240
6. Kersey and Co.
808 W. Grand
Artesia, N.M. 88210
7. Holly Energy, Inc.
Box 726
Artesia, N.M. 88210
8. Pennzoil Co.
5th Floor Wall Towers West
Drawer 1828
Midland, Texas 79701

BEFORE EXAMINER STAMEN
OIL CONCESSION DIVISION

EXHIBIT NO. 3

CALL TO

6425

Submitted by

Applicant

Hearing Date

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: January 22, 1979

SIGNED: *[Signature]*

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: 1-24-79

SIGNED: *Mark C. Chasen*

JAN 18 1979 yk

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: Jan 22, 1979 SIGNED: *[Signature]*

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1080' PSL, 1080' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: January 19, 1979 SIGNED:

Featherstone Development Corp
Charles W. Ticks
Vice - President

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: 1-18-79

SIGNED: *J. Hannon*

TEXACO Inc.

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: 1/18/79

SIGNED: Harold Kersey

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: 1-24-79

SIGNED: *J. H. [Signature]*

Holly Energy INC

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: 1-18-79

SIGNED:

E. H. Foret
Pennzoil Company

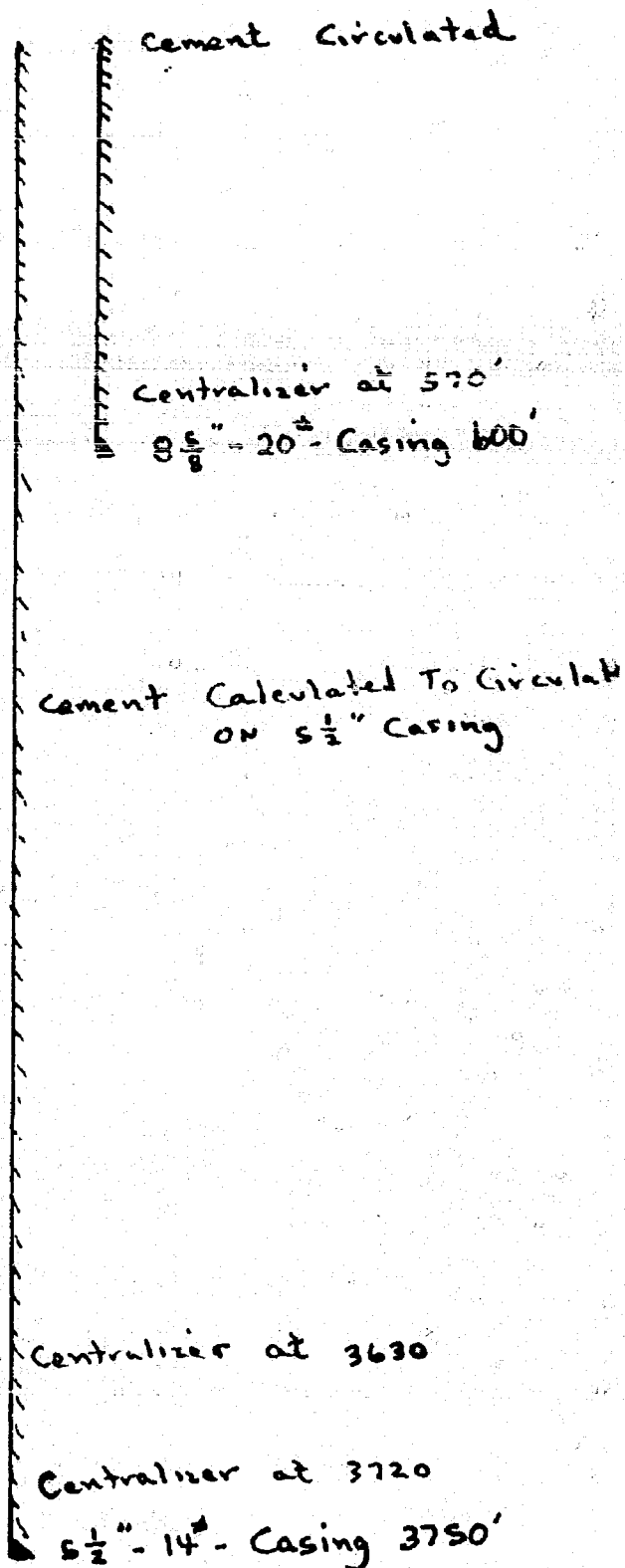
E. H. Foret

DIAGRAMATIC WELL SKETCH

T. B. KNOX ESTATE - LUCIA BROOKS NO 2

1980' FSL 1980' FWL SECTION 14-T18S-R30E

EDDY COUNTY, NEW MEXICO



BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION

EXHIBIT NO. 4

CASE NO. 6425

Submitted by Applicant

Hearing Date _____

AFE DRILLING COST ESTIMATE

LEASE: LUCIA BROOKES REGULATORY PERMIT NUMBER

AREA/FIELD: Leo Queen Grayburg, Eddy County, N.M. WELL: 2 (14-T18S-R30E)

TYPE: Wildcat Straight LOCATION: Onshore X

Development X Directional Inland/Bay

Offshore

INTANGIBLE DRILLING COST ESTIMATE

LOCATION

Surface Damages (Patented Land)	<u>400</u>
Surveyors & Equipment	<u>13,178</u>
Rig/Location preparations (Includes Road)	<u> </u>
Road Construction/easements	<u> </u>
	<u>Incl. w/location</u>

ABANDONMENT

Cut Off/back off casing	<u> </u>
Cement (Equipment & Services)	<u> </u>
Crop Damages	<u> </u>

RIG

Footage <u>3700</u> Ft. @ \$ <u>9.75</u> /Ft.	<u>36,075</u>
W/DP <u>1</u> Days @ \$ <u>2,600</u> /day	<u>2,600</u>
W/O DP <u>1</u> days @ \$ <u>2,600</u> /day	<u>2,600</u>

SURFACE CASING SERVICES (8 5/8")

Inspection of pipe	<u> </u>
Casing Crew/Equipment	<u>1,200</u>
Tong Operator/Equipment	<u> </u>
Float Equipment Incl. in Cement	<u> </u>
Centralizers/Incl. in Cement	<u> </u>
Cement (Equipment & Services)	<u>3,500</u>

FIRST INTERMEDIATE CASING SERVICES

Inspection of pipe	<u> </u>
Casing Crew/Equipment	<u> </u>
Tong Operator/Equipment	<u> </u>
Float Equipment	<u> </u>
Centralizers/Scratchers	<u> </u>
Cement (Equipment & Services) with one pump truck	<u> </u>

SECOND INTERMEDIATE CASING SERVICES

Inspection of pipe	<u> </u>
Casing Crew/Equipment	<u> </u>
Tong Operator/Equipment	<u> </u>
Float Equipment	<u> </u>
Centralizers/Scratchers	<u> </u>
Cement (Equipment & Services)	<u> </u>

THIRD INTERMEDIATE CASING SERVICES

Inspection of pipe	<u> </u>
Casing Crew/Equipment	<u> </u>
Tong Operator/Equipment	<u> </u>
Float Equipment	<u> </u>
Centralizers/Scratchers	<u> </u>
Cement (Equipment & Services)	<u> </u>

INTERMEDIATE LINER SERVICES

Inspection of pipe	<u> </u>
Casing Crew/Equipment	<u> </u>
Tong Operator/Equipment	<u> </u>
Liner/Float Equipment	<u> </u>
Centralizers/Scratchers	<u> </u>
Cement (Equipment & Services)	<u> </u>

MUD (Weight, Chemicals, Oil, Water & Services)

6,000

BITS

<u> </u> of <u> </u> " OD @ <u> </u> /bit	<u> </u>
<u> </u> of <u> </u> " OD @ <u> </u> /bit	<u> </u>
<u> </u> of <u> </u> " OD @ <u> </u> /bit	<u> </u>
<u> </u> of <u> </u> " OD @ <u> </u> /bit	<u> </u>

BEFORE EXAMINER STAMPS	
OIL CONSERVATION DIVISION	
EXHIBIT NO. <u>5</u>	
CASE NO. <u>6425</u>	
Submitted by <u> </u>	
Hearing Date <u> </u>	

TRANSPORTATION _____ days @ \$ _____ /day
 FUEL _____ days @ \$ _____ /day
 LABOR & SUPPLIES _____ days @ \$ _____ /day
 COMPANY SUPERVISION 5 days @ \$ 200 /day

1,000

RENTALS

Work String Assembly
 Rotating head _____ days @ \$ _____ /day
 Separator _____ days @ \$ _____ /day
 P.V.T. Flow line sensor & pump _____ days @ \$ _____ /day
 D-Gasser _____ days @ \$ _____ /day
 Choke _____ days @ \$ _____ /day
 TOTCO CDR Recorder
 Other

OTHER

TOTAL

66,553

INTANGIBLE FORMATION EVALUATION COST ESTIMATE

ELECTRIC LOGS

POROSITY LOGS

Gamma Ray/Neutron

4,000

DIPMETER LOGS

CALIPER LOGS

DRILL STEM TESTS

Test 1 @ _____ /ft
 Test 2 @ _____ /ft
 Test 3 @ _____ /ft
 Test 4 @ _____ /ft

MUD LOGGING

No. of days _____
 Equipment/Services @ \$ _____ /day

TRANSPORTATION _____ days @ \$ _____ /day

FUEL _____ days @ \$ _____ /day

LABOR & SUPPLIES _____ days @ \$ _____ /day

COMPANY SUPERVISION _____ days @ \$ _____ /day

RENTALS

Work String Assembly
 Other

OTHER - Contract geologist

1,500

TOTAL

5,500

INTANGIBLE COMPLETION COST ESTIMATE

RIG/WEEL SERVICE UNIT

W/DP 6 days @ \$ 720 /day
 W/O DP _____ days @ \$ _____ /day

4,320

PRODUCTION CASING

Inspection of pipe
 Casing Crew/Equipment
 Tong Operator/Equipment
 Float Equipment (Incl in Cement)
 Centralizers/Scratchers (Incl. in Cement)
 Cement (Equipment & Services) w/stand-by truck

1,200

3,000

PRODUCTION TUBING SERVICES

Inspection
 Internal coating
 Tong Operator/Equipment
 Pressure Testing
 MUD/COMPLETION FLUID
 BITS
 TRANSPORTATION _____ days @ \$ _____ /day
 FUEL _____ days @ \$ _____ /day
 LABOR & SUPPLIES _____ days @ \$ _____ /day
 COMPANY SUPERVISION .6 days @ \$ 200 /day
 RENTALS

Work String Assembly
 Other

COMPLETION/PRODUCTION LOGGING

G-Ray G-Ray/N G-Ray/N/CBL/Signature
 NLL NLL/G-Ray NLL/N NLL/G-Ray/N
 G-Ray/CBL/Signature NLL/G-Ray/N/CBL/Signature

PERFORATING

SQUEEZE CEMENTING (Equipment Material & Services)
 WIRELINE WORK (To set W.P.s, BPs, SCs, etc.)
 TREATING (Acidize, frac, gravel/Plastic pack, etc.)
 PRODUCTION TESTING (Equipment & Services)
 OTHER BHP Surveys

TOTAL

25,420

TANGIBLE DRILLING COST ESTIMATE

CONDUCTOR CASING

Ft "OD #/Ft GR THD CPLG\$ /Ft

SURFACE CASING

600 Ft 8 5/8" OD 20 #/Ft H40 GR 8RD THD ST&C CPLSS 5.85 /Ft 3,510

FIRST INTERMEDIATE CASING

Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft

SECOND INTERMEDIATE CASING

Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft

THIRD INTERMEDIATE CASING

Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft

INTERMEDIATE LINER CASING

Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft

SURFACE CASING HEAD or Casing head spool w/valves, S & S assemblies

INTERMEDIATE CASING HEAD, w/Valves, slip & seal assemblies

OTHER

1,500

TOTAL

5,010

TANGIBLE COMPLETION COST ESTIMATE

PRODUCTION CASING

3700 Ft 5 1/2" OD 14 #/Ft K GR 8RD THD ST&C CPLSS 4.57 /Ft 16,909

Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft

PRODUCTION TUBING

3700 Ft 2 3/8" OD 4.7 #/Ft 8RD GR EVE THD -- CPLSS 2.00 /Ft 7,400

Ft "OD #/Ft GR THD CPLSS /Ft
 Ft "OD #/Ft GR THD CPLSS /Ft

TUBING HEAD w/valves				
CHRISTMAS TREE	Single	Dual	Triple	2,000
SUB-SURFACE EQUIPMENT (packers, seal assemblies, landing nipples, BPs, storm chokes, blast joints, flow couplings)				1,500
* OTHER				
TOTAL				27,809

AFE COST ESTIMATE SUMMARY

	DRY HOLE	COMPLETED
INTANGIBLE	66,553	66,553
	5,500	5,500
		25,420
TOTAL	72,053	97,473
TANGIBLE	5,010	5,010
		27,809
TOTAL	5,010	32,819
TOTAL EXPENDITURE	77,063	130,292

PREPARED BY: Paul G. White DATE: January 25, 1979

NON-OPERATORS APPROVAL:

*AFE Does not include Rods, Pump, Pumping unit, Motor, Flowlines or Tank Battery.

AFE DRILLING COST ESTIMATE

LEASE: LUCIA BROOKES REGULATORY PERMIT NUMBER --

AREA/FIELD: Leo Queen Grayburg, Eddy County, N.M. WELL: 2 (14-T18S-R30E)

TYPE: Wildcat Straight LOCATION: Onshore X

Development X Directional Inland/Bay

Offshore

INTANGIBLE DRILLING COST ESTIMATE

LOCATION

Surface Damages (Patented Land)	
Surveyors & Equipment	400
Rig/Location preparations (Includes Road)	13,178
Road Construction/easements	
	<u>Incl. w/ location</u>

ABANDONMENT

Cut Off/back off casing	
Cement (Equipment & Services)	
Crop Damages	

RIG

Footage <u>3700</u> Ft. @ \$ <u>9.75</u> /Ft.	36,075
W/DP <u>2</u> Days @ \$ <u>2600</u> /day	5,200
W/O DP <u>2</u> days @ \$ <u>2600</u> /day	5,200

SURFACE CASING SERVICES (10 3/4")

Inspection of pipe	
Casing Crew/Equipment	1,200
Tong Operator/Equipment	
Float Equipment Incl. in Cement	
Centralizers/Incl. in Cement	
Cement (Equipment & Services)	3,500

FIRST INTERMEDIATE CASING SERVICES (8 5/8")

Inspection of pipe	
Casing Crew/Equipment	1,200
Tong Operator/Equipment	
Float Equipment	
Centralizers/Scratchers	
Cement (Equipment & Services) with one pump truck	2,000

SECOND INTERMEDIATE CASING SERVICES

Inspection of pipe	
Casing Crew/Equipment	
Tong Operator/Equipment	
Float Equipment	
Centralizers/Scratchers	
Cement (Equipment & Services)	

THIRD INTERMEDIATE CASING SERVICES

Inspection of pipe	
Casing Crew/Equipment	
Tong Operator/Equipment	
Float Equipment	
Centralizers/Scratchers	
Cement (Equipment & Services)	

INTERMEDIATE LINER SERVICES

Inspection of pipe	
Casing Crew/Equipment	
Tong Operator/Equipment	
Liner/Float Equipment	
Centralizers/Scratchers	
Cement (Equipment & Services)	

MUD (Weight, Chemicals, Oil, Water & Services)	6,000
--	-------

SITS

<u> </u> of <u> </u> " OD @ <u> </u> /bit	
<u> </u> of <u> </u> " OD @ <u> </u> /bit	
<u> </u> of <u> </u> " OD @ <u> </u> /bit	
<u> </u> of <u> </u> " OD @ <u> </u> /bit	

TRANSPORTATION	_____ days @ \$ _____/day	_____
FUEL	_____ days @ \$ _____/day	_____
LABOR & SUPPLIES	_____ days @ \$ _____/day	_____
COMPANY SUPERVISION	6 days @ \$ 200 /day	1,200
RENTALS		
Work String Assembly		_____
Rotating head	_____ days @ \$ _____/day	_____
Separator	_____ days @ \$ _____/day	_____
P.V.T. Flow line sensor & pump	_____ days @ \$ _____/day	_____
D-Gasser	_____ days @ \$ _____/day	_____
Choke	_____ days @ \$ _____/day	_____
TOTCO CDR Recorder		_____
Other		_____
OTHER		_____
TOTAL		75,153

INTANGIBLE FORMATION EVALUATION COST ESTIMATE

ELECTRIC LOGS	_____	_____
_____		_____
_____		_____
POROSITY LOGS		
Gamma Ray/Neutron		4,000
_____		_____
_____		_____
DIPMETER LOGS	_____	_____
_____		_____
_____		_____
CALIPER LOGS	_____	_____
_____		_____
_____		_____
DRILL STEM TESTS		
Test 1 @ _____/ft		_____
Test 2 @ _____/ft		_____
Test 3 @ _____/ft		_____
Test 4 @ _____/ft		_____
MUD LOGGING		
No. of days _____		_____
Equipment/Services @ \$ _____/day		_____
TRANSPORTATION _____ days @ \$ _____/day		_____
FUEL _____ days @ \$ _____/day		_____
LABOR & SUPPLIES _____ days @ \$ _____/day		_____
COMPANY SUPERVISION _____ days @ \$ _____/day		_____
RENTALS		
Work String Assembly		_____
Other		_____
OTHER - Contract geologist		1,500
TOTAL		5,500

INTANGIBLE COMPLETION COST ESTIMATE

RIG/WELL SERVICE UNIT		
W/DP 6 days @ \$ 720 /day		4,320
W/O DP _____ days @ \$ _____/day		_____
PRODUCTION CASING		
Inspection of pipe		1,200
Casing Crew/Equipment 7"		_____
Tong Operator/Equipment		_____
Float Equipment (Incl in Cement)		_____
Centralizers/Scratchers (Incl. in Cement)		_____
Cement (Equipment & Services) w/stand-by truck		3,000

PRODUCTION TUBING SERVICES

Inspection
Internal coating
Tong Operator/Equipment
Pressure Testing

MUD/COMPLETION FLUID

BITS

TRANSPORTATION _____ days @ \$ _____ /day

FUEL _____ days @ \$ _____ /day

LABOR & SUPPLIES _____ days @ \$ _____ /day

COMPANY SUPERVISION 6 days @ \$ 200 /day

RENTALS

Work String Assembly

Other

COMPLETION/PRODUCTION LOGGING

G-Ray _____ G-Ray/N _____ G-Ray/N/CBL/Signature _____

NLL _____ NLL/G-Ray _____ NNL/N _____ NLL/G-Ray/N _____

G-Ray/CBL/Signature _____ NLL/G-Ray/N/CBL/Signature _____

PERFORATING

SQUEEZE CEMENTING (Equipment Material & Services)

WIRELINE WORK (To set WLPs, BPs, SCs, etc.)

TREATING (Acidize, frac, gravel/Plastic pack, etc.)

PRODUCTION TESTING (Equipment & Services)

OTHER BHP Surveys

TOTAL

25,420

TANGIBLE DRILLING COST ESTIMATE

CONDUCTOR CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

SURFACE CASING

600 Ft 10 3/4" OD 40.5 #/Ft H-40 GR8RD THDST&C CPLG\$ 13.53/Ft 8,118

FIRST INTERMEDIATE CASING

1300 Ft 8 5/8" OD 24 #/Ft K GR 8RD THDST&C CPLG\$ 8.33 /Ft 10,829

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

SECOND INTERMEDIATE CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

THIRD INTERMEDIATE CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

INTERMEDIATE LINER CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

SURFACE CASING HEAD or Casing head spool w/valves, S & S assemblies

INTERMEDIATE CASING HEAD, w/Valves, slip & seal assemblies

OTHER

1,500

TOTAL

20,447

TANGIBLE COMPLETION COST ESTIMATE

PRODUCTION CASING

3700 Ft 5 1/2" OD 14# #/Ft K GR 8RD THDST&C CPLG\$ 4.57 /Ft 16,909

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

PRODUCTION TUBING

3700 Ft 2 3/8" OD 4.7 #/Ft 8 RD GR EVE THD -- CPLG\$ 2.00 /Ft 7,400

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

TUBING HEAD w/valves				
CHRISTMAS TREE	Single	Dual	Triple	2,000
SUB-SURFACE EQUIPMENT (packers, seal assemblies, landing nipples, BPs, storm chokes, blast joints, flow couplings)				1,500
* OTHER				
TOTAL				27,809

AFE COST ESTIMATE SUMMARY

	DRY HOLE	COMPLETED
INTANGIBLE	75,153	75,153
	5,500	5,500
		25,420
TOTAL	80,653	106,073
TANGIBLE	20,447	20,447
		27,809
TOTAL	20,447	48,256
TOTAL EXPENDITURE	101,100	154,329

PREPARED BY: Paul G. White DATE: January 25, 1979

NON-OPERATORS APPROVAL:

*AFE Does not include Rods, Pump, Pumping Unit, Motor, Flowlines or Tank Battery.

December 19, 1978

Duval Corporation
P.O. Box 115
Carlsbad, N.M. 88240

Attn: Mr. John Mc Graw

Dear Mr. Mc Graw:

T. B. Knox Estate plans to drill the Lucia Brooks #2 well, located 1980' FSL and 1980' FWL, Section 14, T18S-R30E, Eddy County, New Mexico.

Duval Corporation still has active mining leases in this area. We have discussed this location with Mr. John Burlison, the Federal Mining Supervisor, and he has no objection to the drilling of the well.

Would you please check this location and if in agreement, we respectfully request that you sign this letter as a waiver to any objections to the drilling of this prospect.

Sincerely,

Paul G. White

Paul G. White
Engineer

PGW/gb

Signed

Date:

JW Magraw
12-20-78

BEFORE EXAMINER STARTS	
OIL CONSERVATION DIVISION	
EXHIBIT NO.	<i>2</i>
CASE NO.	<i>6425</i>
Submitted by	<i>Applicant</i>
Hearing Date	

MAILING LIST

1. LaRue & Muncy
P.O. Box 196
Artesia, N.M. 88210
2. Marbob Energy, Corp.
P.O. Box 304
Artesia, N.M. 88210
3. Yates Petroleum Corp.
207 S. 4th
Artesia, N.M. 88210
4. Featherstone Development
1717 W. 2nd
Roswell, N.M. 88201
5. Texaco, Inc.
P.O. Box 728
Hobbs, N.M. 88240
6. Kersey and Co.
808 W. Grand
Artesia, N.M. 88210
7. Holly Energy, Inc.
Box 726
Artesia, N.M. 88210
8. Pennzoil Co.
5th Floor Wall Towers West
Drawer 1828
Midland, Texas 79701

BEFORE EXAMINER STATES	
OIL CONFIRMATION DIVISION	
CASE NO.	6425
Submitted by	Appl. Cant
Hearing Date	

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: January 22, 1979

SIGNED: *[Signature]*

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

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T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

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Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: 1-24-79 SIGNED: *Mark C. Olson*

JAN 18 1979 ypc

January 17, 1979

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Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

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R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

The well will be drilled at a location 1980' FSL, 1980' FWL, Section 14-T18S-R30E, Eddy County, New Mexico. Well designation is the Lucia Brookes No. 2.

It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: January 19 1979 SIGNED:

Featherstone Development Corp
Charles W. Tischer
Vice - President

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

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Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: 1-18-79

SIGNED: *J. Lannon*

TEXACO Inc.

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

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Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: 1/18/79

SIGNED: *Harold Kersey*

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

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It would assist us with our success at the hearing if you will please sign one copy of this letter which will waive any objection you have to our request.

Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: 1-24-79

SIGNED:

[Signature]
Holly Energy INC

January 17, 1979

Re: Hearing for Exception to R-111A, State of New Mexico

Gentlemen:

T.B. Knox Estate has set for hearing before the Department of Energy & Minerals, Oil Conservation Division, a request for an exception to R-111A as pertains to casing requirements in the Potash Mining area.

R-111A requires three strings of casing in the Potash Area. T.B. Knox Estate will request that 8 5/8" casing be set at 600' with cement circulated and 5 1/2" casing will be set at approximately 3750' with a calculated cement return to surface.

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Sincerely,

Paul G. White

Paul G. White
Representative of T.B. Knox Estate

PGW/gb

(We)(I) the undersigned have no objection to the request by T.B. Knox Estate for exception to Rule 111-A as pertains to casing and cementing program.

DATED: 1-18-79

SIGNED: *E. H. Foret*

E. H. Foret

Pennzoil Company

DIAGRAMATIC WELL SKETCH

T. B. KNOX ESTATE - LUCIA BROOKS NO 2

1980' FSL 1980' FWL SECTION 14 - T18S - R30E

EDDY COUNTY, NEW MEXICO



Cement Circulated

Centralizer at 570'
8 $\frac{5}{8}$ " - 20' - Casing 600'

Cement Calculated To Circulate
ON 5 $\frac{1}{2}$ " Casing

Centralizer at 3630

Centralizer at 3720
5 $\frac{1}{2}$ " - 14' - Casing 3750'

PERFORATED PIPE
CHECKED BY

6425-4

Applicant

SURVEYED BY

HOODING 1-80

AFE DRILLING COST ESTIMATE

LEASE: LUCIA BROOKES REGULATORY PERMIT NUMBER - -
 AREA/FIELD: Leo Queen Grayburg, Eddy County, N.M. WELL: 2 (14-T18S-R30E)

TYPE: Wildcat Straight LOCATION: Onshore X
 Development X Directional Inland/Bay
 Offshore

INTANGIBLE DRILLING COST ESTIMATE

LOCATION

Surface Damages (Patented Land)
 Surveyors & Equipment
 Rig/Location preparations (Includes Road)
 Road Construction/easements

400
13,178
Incl. w/location

ABANDONMENT

Cut Off/back off casing
 Cement (Equipment & Services)
 Crop Damages

RIG

Footage 3700 Ft. @ \$ 9.75/Ft.
 W/DP 1 Days @ \$ 2,600/day
 W/O DP 1 days @ \$ 2,600/day

36,075
2,600
2,600

SURFACE CASING SERVICES (8 5/8")

Inspection of pipe
 Casing Crew/Equipment
 Tong Operator/Equipment
 Float Equipment Incl. in Cement
 Centralizers/Incl. in Cement
 Cement (Equipment & Services)

1,200
3,500

FIRST INTERMEDIATE CASING SERVICES

Inspection of pipe
 Casing Crew/Equipment
 Tong Operator/Equipment
 Float Equipment
 Centralizers/Scratchers
 Cement (Equipment & Services) with one pump truck

SECOND INTERMEDIATE CASING SERVICES

Inspection of pipe
 Casing Crew/Equipment
 Tong Operator/Equipment
 Float Equipment
 Centralizers/Scratchers
 Cement (Equipment & Services)

THIRD INTERMEDIATE CASING SERVICES

Inspection of pipe
 Casing Crew/Equipment
 Tong Operator/Equipment
 Float Equipment
 Centralizers/Scratchers
 Cement (Equipment & Services)

INTERMEDIATE LINER SERVICES

Inspection of pipe
 Casing Crew/Equipment
 Tong Operator/Equipment
 Liner/Float Equipment
 Centralizers/Scratchers
 Cement (Equipment & Services)

6,000

MUD (Weight, Chemicals, Oil, Water & Services)

BITS

642 bit
Applicant
 of " OD @ /bit
 of " OD @ /bit
 of " OD @ /bit
 of " OD @ /bit

TRANSPORTATION	_____ days @ \$ _____ /day	_____
FUEL	_____ days @ \$ _____ /day	_____
LABOR & SUPPLIES	_____ days @ \$ _____ /day	_____
COMPANY SUPERVISION	5 days @ \$ 200 /day	1,000
RENTALS		
Work String Assembly	_____	_____
Rotating head	_____ days @ \$ _____ /day	_____
Separator	_____ days @ \$ _____ /day	_____
P.V.T. Flow line sensor & pump	_____ days @ \$ _____ /day	_____
D-Gasser	_____ days @ \$ _____ /day	_____
Choke	_____ days @ \$ _____ /day	_____
TOTCO CDR Recorder	_____	_____
Other	_____	_____
OTHER		_____
TOTAL		66,553

INTANGIBLE FORMATION EVALUATION COST ESTIMATE

ELECTRIC LOGS		_____
_____		_____
_____		_____
_____		_____
POROSITY LOGS		_____
Gamma Ray/Neutron		4,000
_____		_____
_____		_____
DIPMETER LOGS		_____
_____		_____
_____		_____
CALIPER LOGS		_____
_____		_____
_____		_____
DRILL STEM TESTS		_____
Test 1 @	_____ /ft	_____
Test 2 @	_____ /ft	_____
Test 3 @	_____ /ft	_____
Test 4 @	_____ /ft	_____
MUD LOGGING		_____
No. of days	_____	_____
Equipment/Services @	\$ _____ /day	_____
TRANSPORTATION	_____ days @ \$ _____ /day	_____
FUEL	_____ days @ \$ _____ /day	_____
LABOR & SUPPLIES	_____ days @ \$ _____ /day	_____
COMPANY SUPERVISION	_____ days @ \$ _____ /day	_____
RENTALS		_____
Work String Assembly	_____	_____
Other	_____	_____
OTHER - Contract geologist		1,500
TOTAL		5,500

INTANGIBLE COMPLETION COST ESTIMATE

RIG/WEEL SERVICE UNIT		_____
W/DP	6 days @ \$ 720 /day	4,320
W/O DP	_____ days @ \$ _____ /day	_____
PRODUCTION CASING		_____
Inspection of pipe	_____	_____
Casing Crew/Equipment	_____	1,200
Tong Operator/Equipment	_____	_____
Float Equipment (Incl in Cement)	_____	_____
Centralizers/Scratchers (Incl. in Cement)	_____	_____
Cement (Equipment & Services) w/stand-by truck	_____	3,000

PRODUCTION TUBING SERVICES

Inspection
Internal coating
Tong Operator/Equipment
Pressure Testing

MUD/COMPLETION FLUID

BITS

TRANSPORTATION _____ days @ \$ _____ /day

FUEL _____ days @ \$ _____ /day

LABOR & SUPPLIES _____ days @ \$ _____ /day

COMPANY SUPERVISION _____ days @ \$ 200 /day

RENTALS

Work String Assembly

Other

COMPLETION/PRODUCTION LOGGING

G-Ray _____ G-Ray/N _____ G-Ray/N/CBL/Signature _____

NLL _____ NLL/G-Ray _____ NNL/N _____ NLL/G-Ray/N _____

G-Ray/CBL/Signature _____ NLL/G-Ray/N/CBL/Signature _____

PERFORATING

SQUEEZE CEMENTING (Equipment Material & Services)

WIRELINE WORK (To set WLPs, BPs, SCs, etc.)

TREATING (Acidize, frac, gravel/Plastic pack, etc.)

PRODUCTION TESTING (Equipment & Services)

OTHER BIIP Surveys

TOTAL

25,420

TANGIBLE DRILLING COST ESTIMATE

CONDUCTOR CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLG\$ _____ /Ft _____

SURFACE CASING

600 Ft 8 5/8" OD 20 #/Ft H40 GR8RD THDST&C CPLSS\$ 5.85 /Ft 3,510

FIRST INTERMEDIATE CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

SECOND INTERMEDIATE CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

THIRD INTERMEDIATE CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

INTERMEDIATE LINER CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

SURFACE CASING HEAD or Casing head spool w/valves, S & S assemblies

INTERMEDIATE CASING HEAD, w/Valves, slip & seal assemblies

1,500

OTHER

TOTAL

5,010

TANGIBLE COMPLETION COST ESTIMATE

PRODUCTION CASING

3700 Ft 5 1/2" OD 14 #/Ft K GR 8RD THDST&CCPLSS\$ 4.57 /Ft 16,909

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

PRODUCTION TUBING

3700 Ft 2 3/8" OD 4.7 #/Ft 8RD GR EVE THD -- CPLSS\$ 2.00 /Ft 7,400

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPLSS\$ _____ /Ft _____

TUBING HEAD w/valves			
CHRISTMAS TREE	Single	Dual	Triple
SUB-SURFACE EQUIPMENT (packers, seal assemblies, landing nipples, BPs, storm chokes, blast joints, flow couplings)			
* OTHER			
			2,000
			1,500
	TOTAL		27,809

AFE COST ESTIMATE SUMMARY

	DRY HOLE	COMPLETED
INTANGIBLE	66,553	66,553
	5,500	5,500
		25,420
TOTAL	72,053	97,473
TANGIBLE	5,010	5,010
		27,809
TOTAL	5,010	32,819
TOTAL EXPENDITURE	77,063	130,292

PREPARED BY: Paul G. White DATE: January 25, 1979

NON-OPERATORS APPROVAL:

*AFE Does not include Rods, Pump, Pumping unit, Motor, Flowlines or Tank Battery.

APP DRILLING COST ESTIMATE

LEASE: LUCIA BROOKES REGULATORY PERMIT NUMBER

AREA/FIELD: Leo Queen Grayburg, Eddy County, N.M. WELL: 2 (14-T18S-R30E)

TYPE: Wildcat Straight LOCATION: Onshore X

Development X Directional Inland/Bay

Offshore

INTANGIBLE DRILLING COST ESTIMATE

LOCATION

Surface Damages (Patented Land)	<u>400</u>
Surveyors & Equipment	<u>13,178</u>
Rig/Location preparations (Includes Road)	<u>Incl. w/ location</u>
Road Construction/easements	

ABANDONMENT

Cut Off/back off casing	
Cement (Equipment & Services)	
Crop Damages	

RIG

Footage <u>3700</u> Ft. @ \$ <u>9.75</u> /ft.	<u>36,075</u>
W/DP <u>2</u> Days @ \$ <u>2600</u> /day	<u>5,200</u>
W/O DP <u>2</u> days @ \$ <u>2600</u> /day	<u>5,200</u>

SURFACE CASING SERVICES (10 3/4")

Inspection of pipe	
Casing Crew/Equipment	<u>1,200</u>
Tong Operator/Equipment	
Float Equipment Incl. in Cement	
Centralizers/Incl. in Cement	
Cement (Equipment & Services)	<u>3,500</u>

FIRST INTERMEDIATE CASING SERVICES (8 5/8")

Inspection of pipe	
Casing Crew/Equipment	<u>1,200</u>
Tong Operator/Equipment	
Float Equipment	
Centralizers/Scratchers	
Cement (Equipment & Services) with one pump truck	<u>2,000</u>

SECOND INTERMEDIATE CASING SERVICES

Inspection of pipe	
Casing Crew/Equipment	
Tong Operator/Equipment	
Float Equipment	
Centralizers/Scratchers	
Cement (Equipment & Services)	

THIRD INTERMEDIATE CASING SERVICES

Inspection of pipe	
Casing Crew/Equipment	
Tong Operator/Equipment	
Float Equipment	
Centralizers/Scratchers	
Cement (Equipment & Services)	

INTERMEDIATE LINER SERVICES

Inspection of pipe	
Casing Crew/Equipment	
Tong Operator/Equipment	
Liner/Float Equipment	
Centralizers/Scratchers	
Cement (Equipment & Services)	

MUD (Weight, Chemicals, Oil, Water & Services) 6425 App 1 count 6,000

BITS

<u> </u> of <u> </u> " OD @ <u> </u> /bit	
<u> </u> of <u> </u> " OD @ <u> </u> /bit	
<u> </u> of <u> </u> " OD @ <u> </u> /bit	
<u> </u> of <u> </u> " OD @ <u> </u> /bit	

TRANSPORTATION	_____ days @ \$ _____ /day	_____
FUEL	_____ days @ \$ _____ /day	_____
LABOR & SUPPLIES	_____ days @ \$ _____ /day	_____
COMPANY SUPERVISION	6 days @ \$ 200 /day	1,200
RENTALS		
Work String Assembly		_____
Rotating head	_____ days @ \$ _____ /day	_____
Separator	_____ days @ \$ _____ /day	_____
P.V.T. Flow line sensor & pump	_____ days @ \$ _____ /day	_____
D-Gasser	_____ days @ \$ _____ /day	_____
Choke	_____ days @ \$ _____ /day	_____
TOTCO CDR Recorder		_____
Other		_____
OTHER		_____
TOTAL		<u>75,153</u>

INTANGIBLE FORMATION EVALUATION COST ESTIMATE

ELECTRIC LOGS	_____
_____	_____
_____	_____
POROSITY LOGS	_____
Gamma Ray/Neutron	4,000
_____	_____
_____	_____
DIPMETER LOGS	_____
_____	_____
_____	_____
CALIPER LOGS	_____
_____	_____
_____	_____
DRILL STEM TESTS	_____
Test 1 @ _____ /ft	_____
Test 2 @ _____ /ft	_____
Test 3 @ _____ /ft	_____
Test 4 @ _____ /ft	_____
MUD LOGGING	_____
No. of days _____	_____
Equipment/Services @ \$ _____ /day	_____
TRANSPORTATION _____ days @ \$ _____ /day	_____
FUEL _____ days @ \$ _____ /day	_____
LABOR & SUPPLIES _____ days @ \$ _____ /day	_____
COMPANY SUPERVISION _____ days @ \$ _____ /day	_____
RENTALS	_____
Work String Assembly	_____
Other	_____
OTHER - Contract geologist	1,500
TOTAL	<u>5,500</u>

INTANGIBLE COMPLETION COST ESTIMATE

RIG/WEEL SERVICE UNIT	
W/DP 6 days @ \$ 720 /day	4,320
W/O DP _____ days @ \$ _____ /day	_____
PRODUCTION CASING	_____
Inspection of pipe	1,200
Casing Crew/Equipment 7"	_____
Tong Operator/Equipment	_____
Float Equipment (Incl in Cement)	_____
Centralizers/Scratchers (Incl. in Cement)	_____
Cement (Equipment & Services) w/stand-by truck	3,000

PRODUCTION TUBING SERVICES

Inspection	
Internal coating	
Tong Operator/Equipment	
Pressure Testing	
MUD/COMPLETION FLUID	1,500
BITS	
TRANSPORTATION _____ days @ \$ _____ /day	
FUEL _____ days @ \$ _____ /day	
LABOR & SUPPLIES _____ days @ \$ _____ /day	
COMPANY SUPERVISION 6 _____ days @ \$ 200 /day	1,200
RENTALS	
Work String Assembly	
Other	
COMPLETION/PRODUCTION LOGGING	
_____ G-Ray _____ G-Ray/N _____ G-Ray/N/CBL/Signature	
_____ NLL _____ NLL/G-Ray _____ NLL/N _____ NLL/G-Ray/N	
_____ G-Ray/CBL/Signature _____ NLL/G-Ray/N/CBL/Signature	
PERFORATING	3,200
SQUEEZE CEMENTING (Equipment Material & Services)	
WIRELINE WORK (To set WLPs, BPs, SCs, etc.)	
TREATING (Acidize, frac, gravel/Plastic pack, etc.)	9,000
PRODUCTION TESTING (Equipment & Services)	2,000
OTHER BHP Surveys	
TOTAL	25,420

TANGIBLE DRILLING COST ESTIMATE

CONDUCTOR CASING	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
SURFACE CASING	
600 Ft 10 3/4" OD 40.5 #/Ft H-40 GR 8RD THD ST&C CPL\$ 13.53 /Ft	8,118
FIRST INTERMEDIATE CASING	
1300 Ft 8 5/8" OD 24 #/Ft K GR 8RD THD ST&C CPL\$ 8.33 /Ft	10,829
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
SECOND INTERMEDIATE CASING	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
THIRD INTERMEDIATE CASING	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
INTERMEDIATE LINER CASING	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
SURFACE CASING HEAD or Casing head spool w/valves, S & S assemblies	
INTERMEDIATE CASING HEAD, w/Valves, slip & seal assemblies	1,500
OTHER	
TOTAL	20,447

TANGIBLE COMPLETION COST ESTIMATE

PRODUCTION CASING	
3700 Ft 5 1/2" OD 14 #/Ft K GR 8RD THD ST&C CPL\$ 4.57 /Ft	16,909
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
PRODUCTION TUBING	
3700 Ft 2 3/8" OD 4.7 #/Ft 8 RD GR EVE THD -- CPL\$ 2.00 /Ft	7,400
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	
Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____	

TUBING HEAD w/valves			
CHRISTMAS TREE	Single	Dual	Triple
SUB-SURFACE EQUIPMENT (packers, seal assemblies, landing nipples, BPs, storm chokes, blast joints, flow couplings)			
* OTHER			
			2,000
			1,500
	TOTAL		27,809

AFE COST ESTIMATE SUMMARY

	DRY HOLE	COMPLETED
INTANGIBLE	75,153	75,153
	5,500	5,500
		25,420
TOTAL	80,653	106,073
TANGIBLE	20,447	20,447
		27,809
TOTAL	20,447	48,256
TOTAL EXPENDITURE	101,100	154,329

PREPARED BY: Paul G. White

DATE: January 25, 1979

NON-OPERATORS APPROVAL:

*AFE Does not include Rods, Pump, Pumping Unit, Motor, Flowlines or Tank Battery.

AFE DRILLING COST ESTIMATE

LEASE: LUCIA BROOKES REGULATORY PERMIT NUMBER --

AREA/FIELD: Leo Queen Grayburg, Eddy County, N.M. WELL: 2 (14-T18S-R30E)

TYPE: Wildcat Straight LOCATION: Onshore X

Development X Directional Inland/Bay

Offshore

INTANGIBLE DRILLING COST ESTIMATE

LOCATION

Surface Damages (Patented Land)	
Surveyors & Equipment	400
Rig/Location preparations (Includes Road)	13,178
Road Construction/easements	Incl. w/ location

ABANDONMENT

Cut Off/back off casing	
Cement (Equipment & Services)	
Crop Damages	

RIG

Footage <u>3700</u> Ft. @ \$ <u>9.75</u> /Ft.	36,075
W/DP <u>2</u> Days @ \$ <u>2600</u> /day	5,200
W/O DP <u>2</u> days @ \$ <u>2600</u> /day	5,200

SURFACE CASING SERVICES (10 3/4")

Inspection of pipe	
Casing Crew/Equipment	1,200
Tong Operator/Equipment	
Float Equipment Incl. in Cement	
Centralizers/inci. in Cement	
Cement (Equipment & Services)	3,500

FIRST INTERMEDIATE CASING SERVICES (8 5/8")

Inspection of pipe	
Casing Crew/Equipment	1,200
Tong Operator/Equipment	
Float Equipment	
Centralizers/Scratchers	
Cement (Equipment & Services) with one pump truck	2,000

SECOND INTERMEDIATE CASING SERVICES

Inspection of pipe	
Casing Crew/Equipment	
Tong Operator/Equipment	
Float Equipment	
Centralizers/Scratchers	
Cement (Equipment & Services)	

THIRD INTERMEDIATE CASING SERVICES

Inspection of pipe	
Casing Crew/Equipment	
Tong Operator/Equipment	
Float Equipment	
Centralizers/Scratchers	
Cement (Equipment & Services)	

INTERMEDIATE LINER SERVICES

Inspection of pipe	
Casing Crew/Equipment	
Tong Operator/Equipment	
Liner/Float Equipment	
Centralizers/Scratchers	
Cement (Equipment & Services)	

MUD (Weight, Chemicals, Oil, Water & Services) 6,000

BITS

<u> </u> of <u> </u> " OD @ <u> </u> /bit	
<u> </u> of <u> </u> " OD @ <u> </u> /bit	
<u> </u> of <u> </u> " OD @ <u> </u> /bit	
<u> </u> of <u> </u> " OD @ <u> </u> /bit	

App #6
6425

TRANSPORTATION _____ days @ \$ _____ /day
 FUEL _____ days @ \$ _____ /day
 LABOR & SUPPLIES _____ days @ \$ _____ /day
 COMPANY SUPERVISION 6 days @ \$ 200 /day

1,200

RENTALS

Work String Assembly
 Rotating head _____ days @ \$ _____ /day
 Separator _____ days @ \$ _____ /day
 P.V.T. Flow line sensor & pump _____ days @ \$ _____ /day
 D-Gasser _____ days @ \$ _____ /day
 Choke _____ days @ \$ _____ /day
 TOTCO CDR Recorder
 Other

OTHER

TOTAL

75,153

INTANGIBLE FORMATION EVALUATION COST ESTIMATE

ELECTRIC LOGS

POROSITY LOGS

Gamma Ray/Neutron

4,000

DIPMETER LOGS

CALIPER LOGS

DRILL STEM TESTS

Test 1 @ _____ /ft
 Test 2 @ _____ /ft
 Test 3 @ _____ /ft
 Test 4 @ _____ /ft

MUD LOGGING

No. of days _____
 Equipment/Services @ \$ _____ /day

TRANSPORTATION _____ days @ \$ _____ /day

FUEL _____ days @ \$ _____ /day

LABOR & SUPPLIES _____ days @ \$ _____ /day

COMPANY SUPERVISION _____ days @ \$ _____ /day

RENTALS

Work String Assembly
 Other

OTHER - Contract geologist

1,500

TOTAL

5,500

INTANGIBLE COMPLETION COST ESTIMATE

RIG/WEEL SERVICE UNIT

W/DP 6 days @ \$ 720 /day

4,320

W/O DP _____ days @ \$ _____ /day

PRODUCTION CASING

Inspection of pipe
 Casing Crew/Equipment 7"
 Tong Operator/Equipment
 Float Equipment (Incl in Cement)
 Centralizers/Scratchers (Incl. in Cement)
 Cement (Equipment & Services) w/stand-by truck

1,200

3,000

PRODUCTION TUBING SERVICES

Inspection
Internal coating
Tong Operator/Equipment
Pressure Testing

MUD/COMPLETION FLUID

BITS

TRANSPORTATION _____ days @ \$ _____ /day

FUEL _____ days @ \$ _____ /day

LABOR & SUPPLIES _____ days @ \$ _____ /day

COMPANY SUPERVISION 6 days @ \$ 200 /day

RENTALS

Work String Assembly

Other

COMPLETION/PRODUCTION LOGGING

G-Ray _____ G-Ray/N _____ G-Ray/N/CBL/Signature _____

NLL _____ NLL/G-Ray _____ NNL/N _____ NLL/G-Ray/N _____

G-Ray/CBL/Signature _____ NLL/G-Ray/N/CBL/Signature _____

PERFORATING

SQUEEZE CEMENTING (Equipment Material & Services)

WIRELINE WORK (To set WLPs, BPs, SCs, etc.)

TREATING (Acidize, frac, gravel/Plastic pack, etc.)

PRODUCTION TESTING (Equipment & Services)

OTHER BHP Surveys

TOTAL

25,420

TANGIBLE DRILLING COST ESTIMATE

CONDUCTOR CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

SURFACE CASING

600 Ft 10 3/4" OD 40.5 #/Ft H-40 GR 8RD THD ST&C CPL\$ 13.53 /Ft 8,118

FIRST INTERMEDIATE CASING

1300 Ft 8 5/8" OD 24 #/Ft K GR 8RD THD ST&C CPL\$ 8.33 /Ft 10,829

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

SECOND INTERMEDIATE CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

THIRD INTERMEDIATE CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

INTERMEDIATE LINER CASING

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

SURFACE CASING HEAD or Casing head spool w/valves, S & S assemblies

INTERMEDIATE CASING HEAD, w/Valves, slip & seal assemblies

OTHER

TOTAL

20,447

TANGIBLE COMPLETION COST ESTIMATE

PRODUCTION CASING

3700 Ft 5 1/2" OD 14 #/Ft K GR 8RD THD ST&C CPL\$ 4.57 /Ft 16,909

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

PRODUCTION TUBING

3700 Ft 2 3/8" OD 4.7 #/Ft 8 RD GR EVE THD -- CPL\$ 2.00 /Ft 7,400

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

Ft _____ "OD _____ #/Ft _____ GR _____ THD _____ CPL\$ _____ /Ft _____

TUBING HEAD w/valves			
CHRISTMAS TREE	Single	Dual	Triple
SUB-SURFACE EQUIPMENT (packers, seal assemblies, landing nipples, BPs, storm chokes, blast joints, flow couplings)			
* OTHER			
			2,000
			1,500
	TOTAL		27,809

AFE COST ESTIMATE SUMMARY

	DRY HOLE	COMPLETED
INTANGIBLE	75,153	75,153
	5,500	5,500
		25,420
TOTAL	80,653	106,073
TANGIBLE	20,447	20,447
		27,809
TOTAL	20,447	48,256
TOTAL EXPENDITURE	101,100	154,329

PREPARED BY: Paul G. White DATE: January 25, 1979

NON-OPERATORS APPROVAL:

*AFE Does not include Rods, Pump, Pumping Unit, Motor, Flowlines or Tank Battery.

Dockets Nos. 5-79 and 6-79 are tentatively set for hearing on February 14 and 28, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 31, 1979

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

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

- CASE 6422: In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Helton Engineering & Geological Services, Inc., Travelers Indemnity Company, and all other interested parties to appear and show cause why the Brent Well No. 1 located in Unit M of Section 29 and the Brent Well No. 3 located in Unit G of Section 19, both in Township 13 North, Range 6 East, Sandoval County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.
- CASE 6415: (Continued from January 17, 1979, Examiner Hearing)
Application of Yates Petroleum Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp thru Devonian formations underlying the W/2 of Section 20, Township 14 South, Range 36 East, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6419: (Continued from January 17, 1979, Examiner Hearing)
Application of Yates Petroleum Corporation for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Lanning JC Well No. 1 located in Unit B of Section 7, Township 18 South, Range 26 East, Eagle Creek Field, Eddy County, New Mexico, to produce gas from the Strawn formation through the casing-tubing annulus and from the Morrow formation through tubing.
- CASE 6423: Application of Yates Petroleum Corporation for an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Jackson AT Well No. 9 located 660 feet from the South and West lines of Section 13, Township 17 South, Range 25 East, Eddy County, New Mexico, to test the Wolfcamp, Pennsylvanian, and Mississippian formations, the S/2 of said Section 13 to be dedicated to the well.
- CASE 6424: Application of Yates Petroleum Corporation for an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Superior Fed. KJ Well No. 1 located 990 feet from the North and West lines of Section 7, Township 20 South, Range 29 East, Eddy County, New Mexico, to test the Wolfcamp and Pennsylvanian formations, the N/2 of said Section 7 to be dedicated to the well.
- CASE 6425: Application of T. B. Knox Estate for exception to Order No. R-111-A, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the casing/cementing rules for the Oil-Potash Area as promulgated by Order No. R-111-A to permit its Lucia Brookes Well No. 2 located in Unit K of Section 14, Township 18 South, Range 30 East, Eddy County, New Mexico, to be completed in the following manner: set surface casing and circulate cement; eliminate salt protection string; and do not circulate cement on production casing.
- CASE 6426: Application of C. W. Trainer for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be located 660 feet from the North and West lines of Section 24, Township 20 South, Range 32 East, South Salt Lake-Morrow Pool, Lea County, New Mexico, the N/2 of said Section 24 to be dedicated to the well.
- CASE 5427: Application of Caribou Four Corners, Inc., for an unorthodox well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Caribou/Kirtland Well No. 1 to be located 1214 feet from the North line and 650 feet from the East line of Section 13, Township 29 North, Range 15 West, Cha Cha-Gallup Pool, San Juan County, New Mexico, the E/2 NE/4 to be dedicated to the well.
- CASE 6428: Application of Mobil Oil Corporation for the amendment of Order No. R-5801, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-5801 to delete the requirements for lined tubing in injection wells in the North Vacuum Abo East Pressure Maintenance Project, Lea County, New Mexico.

- CASE 6429:** Application of Zia Energy, Inc., for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of its Elliott State Well No. 2 to be located in Unit B of Section 34, Township 20 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well, and further seeks approval of a waiver of existing well-spacing requirements.
- CASE 6430:** Application of Phoenix Resources Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for its Buckhorn Canyon Unit Area comprising 23,009 acres, more or less, of Federal and state lands in Township 19 South, Ranges 19 and 20 East, Chaves County, New Mexico.
- CASE 6431:** Application of HNG Oil Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the N/2 of Section 35, Township 23 South, Range 28 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6432:** Application of John Yuronka for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Langlie Mattix Pool underlying the NE/4 NW/4 and the SE/4 NW/4 of Section 29, Township 24 South, Range 37 East, Lea County, New Mexico, to form two 40-acre units, each to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the wells and a charge for risk involved in drilling said wells.
- CASE 6433:** Application of Cities Service Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formations underlying the S/2 of Section 8, Township 23 South, Range 28 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6434:** Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of its State "O" Well No. 5 to be located in Unit H of Section 30, Township 19 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well, and further seeks approval of a waiver of existing well-spacing requirements.
- CASE 6435:** Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of its W. A. Weir "B" Well No. 3 located in Unit B of Section 26, Township 19 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well, and further seeks approval of a waiver of existing well-spacing requirements.
- CASE 6436:** Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of its State "U" Gas Com Well No. 2 to be located in Unit C of Section 32, Township 19 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well, and further seeks approval of a waiver of existing well-spacing requirements.
- CASE 6437:** Application of Curt Little for approval of infill drilling and a non-standard proration unit, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of a well to be located 1085 feet from the South line and 285 feet from the West line of Section 12, Township 28 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well. Applicant further seeks rescission of Order No. R-4556 and approval of a 344.36-acre non-standard gas proration unit comprising all of Section 11, and Lot 4 and the SW/4 SW/4 of Section 12 for said well.
- CASE 6438:** Application of Caulkins Oil Company for dual completions and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Breech Well No. 812 located in Unit N of Section 18, Township 26 North, Range 6 West, and its Breech Well No. 224-A located in Unit B of Section 13, Township 26 North, Range 7 West, Rio Arriba County, New Mexico, to produce gas from the Dakota formation through a separate string of tubing and to commingle Chacra and Mesaverde production in the wellbores of said wells.

- CASE 6439: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Mesaverde and Dakota production in the wellbore of its Breech A Well No. 229 located in Unit D of Section 17, Township 26 North, Range 6 West, Rio Arriba County, New Mexico.
- CASE 6440: Application of Caulkins Oil Company for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Breech F Well No. 8 located in Unit A of Section 34, Township 27 North, Range 6 West, Rio Arriba County, New Mexico, to produce gas from the Pictured Cliffs formation through a separate string of tubing and to commingle Mesaverde and Dakota production in the wellbore of said well.
- CASE 6441: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs and Mesaverde production in the wellbore of its Breech F Well No. 12 located in Unit A of Section 35, Township 27 North, Range 6 West, Rio Arriba County, New Mexico.
- CASE 6442: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs, Chacra and Mesaverde production in the wellbore of its Breech E Well No. 109 located in Unit M of Section 3, Township 26 North, Range 6 West, Rio Arriba County, New Mexico.
- CASE 6443: Application of Caulkins Oil Company for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Breech B Well No. 220-R located in Unit B of Section 14, Township 26 North, Range 7 West, to produce gas from the Dakota formation through a separate string of tubing and to commingle Pictured Cliffs, Chacra and Mesaverde production in the wellbore of said well.
- CASE 6444: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs, Mesaverde, Chacra and Greenhorn production in the wellbore of its Breech Well No. 224 located in Unit A of Section 13, Township 26 North, Range 7 West, Rio Arriba County, New Mexico.

December 27, 1978

Department of Energy and Minerals
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico 87501

DEC 29 1978

Re: T. B. Knox Estate, Lucia Brookes No. 2
1980' FSL, 1980' FWL, Sec. 14-T18S-R30E
Eddy County, New Mexico

Case 6425

Gentlemen:

T. B. Knox Estate, Operator, intends to drill a 3700' Lovington test at the proposed location. The well will be located in the Potash-Oil Area of Eddy County, New Mexico.

The potash in the area is non-commercial and for this reason, T. B. Knox Estate requests approval of an exception to Rule R111-A, as the rule pertains to casing and cementing requirements.

We request approval to set surface casing and circulate cement according to R111-A. We request a hearing before the Commission for exception to running a salt protection string of casing and an exception to the circulation of cement on the production casing if such be run.

Would you please schedule the hearing as soon as possible and please notify the operator's representative, Mr. Paul G. White, 112 N. First Street, Artesia, New Mexico 88210?

Thank you,

Paul G. White

Paul G. White
Engineer

PGW/gb

cc: Mr. Jack Knox

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 6405-6425
Order No. R-5888
R-5918

T.B. Knox Estate
APPLICATION OF ~~LARUE AND MUNCY~~ FOR
EXCEPTION TO ORDER NO. R-111-A,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

sf
This cause came on for hearing at 9 a.m. on ~~December 7,~~ ^{January 31,} 1978, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this ~~29th~~ day of ~~December,~~ 1978, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

T.B. Knox Estate
(2) That the applicant, ~~Larue and Muncy~~, seeks an exception to the casing/cementing rules for the Oil-Potash Area as promulgated by Order No. R-111-A to permit its *Lucia Brooks* Well No. 2 located in Unit K of Section 14, Township 18 South, Range 30 East, Eddy County, New Mexico, to be completed with a string of surface casing set and circulated with cement at a depth of approximately 600 feet and a production casing string set at a depth of approximately 3750 feet with a volume of cement calculated to be sufficient to circulate.

(3) That the evidence presented indicates that there are no potash mining operations nor deposits of commercial potash ore in proximity to the proposed well and that the proposed method of completion will not result in endangerment of potash resources nor operations.

(4) That the applicant should report the following both to the district office of the Division and the U.S.G.S. and may be required to circulate cement to the surface around the production casing:

- (a) Any water flows encountered;
- (b) The top of the cement around the production casing as determined by temperature survey if such cement does not circulate.

(5) That approval of the subject application will protect correlative rights, will prevent waste and will not cause the waste of potash.

(6) The application should be approved.

IT IS THEREFORE ORDERED:

(1) That the applicant, ^{T.B. Knox Estate} ~~Enloe and Muney~~, is hereby authorized an exception to the casing/cementing rules for the Oil-Potash Area as promulgated by Order No. R-111-A to permit its ~~Lucia Briscoe~~ Well No. 2 located in Unit K of Section 14 Township 18 South, Range 30 East, Eddy County, New Mexico, to be completed with a string of surface casing set and circulated with cement at a depth of approximately 600 feet and a production casing string set at a depth of approximately 3750 feet with a volume of cement calculated to be sufficient to circulate.

PROVIDED HOWEVER, that the applicant shall report the following, both to the district office of the Division and the U.S.G.S:

- (a) Any water flows encountered; and
- (b) The top of the cement around the production casing as determined by temperature survey if such cement does not circulate.

PROVIDED FURTHER, that the applicant may be required to re-cement the production casing to the surface if cement on said casing did circulate to the surface.

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

Done etc