

CASE 3544: Application of PERRY R.
BASS, CITIES SERVICE, AGENT, FOR
CREATION OF NEW POOL & POOL RULES.

CASE No.
3544

Application,
TRANSCRIPTS,
SMALL Exhibits
ETC.

GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

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

P. O. BOX 2088
SANTA FE

March 30, 1967


Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Re: Case No. 3544
Order No. R-3212
Applicant:
PERRY R. BASS

Dear Sir:

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

Very truly yours,


A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC x

Aztec OCC

Other _____

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 3544
Order No. R-3212
NOMENCLATURE

APPLICATION OF PERRY R. BASS,
CITIES SERVICE OIL COMPANY,
AGENT, FOR CREATION OF A GAS
POOL AND SPECIAL POOL RULES,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 22, 1967,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 30th day of March, 1967, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

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

(2) That the applicant, Perry R. Bass, through his agent,
Cities Service Oil Company, seeks the creation of a new gas pool
for Morrow production and the promulgation of special rules and
regulations governing said pool, including a provision for 640-
acre spacing units.

(3) That the Perry R. Bass Big Eddy Unit Well No. 17,
located in Unit B of Section 2, Township 21 South, Range 29 East,
NMPM, Eddy County, New Mexico, has discovered a separate common
source of supply which should be designated the Tower Hill-
Morrow Gas Pool; that the vertical limits of said pool should be

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Order No. R-3212

the Morrow zone of the Pennsylvanian formation; and that the horizontal limits of said pool should be all of Lots 1 through 16, Section 2, Township 21 South, Range 29 East, NMPM, Eddy County, New Mexico.

(4) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, temporary special rules and regulations providing for 640-acre spacing units should be promulgated for the Tower Hill-Morrow Gas Pool.

(5) That the temporary special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

(6) That the special rules and regulations should be established for a temporary period to expire one year from the date that a pipeline connection is first obtained for a well in the pool; that during this temporary period all operators in the subject pool should gather all available information relative to drainage and recoverable reserves.

(7) That this case should be reopened at an examiner hearing one year from the date that a pipeline connection is first obtained for a well in the Tower Hill-Morrow Gas Pool, at which time the operators in the subject pool should appear and show cause why the Tower Hill-Morrow Gas Pool should not be developed on 320-acre spacing units.

(8) That the first operator to obtain a pipeline connection for a well in the Tower Hill-Morrow Gas Pool should notify the Commission in writing of such fact, whereupon the Commission should notify the operator of the time for reopening this case.

IT IS THEREFORE ORDERED:

(1) That a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production, is hereby created and designated the Tower Hill-Morrow Gas Pool, with vertical limits comprising the Morrow zone of the Pennsylvanian formation, and horizontal limits comprising all of Lots 1 through 16, Section 2, Township 21 South, Range 29 East, NMPM, Eddy County, New Mexico.

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(2) That temporary Special Rules and Regulations for the Tower Hill-Morrow Gas Pool are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
TOWER HILL-MORROW GAS POOL

RULE 1. Each well completed or recompleted in the Tower Hill-Morrow Gas Pool or in the Morrow zone of the Pennsylvanian formation within one mile thereof, and not nearer to or within the limits of another designated Morrow gas pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well shall be located on a standard unit containing 640 acres, more or less, consisting of a governmental section.

RULE 3. 1. The District Supervisor of the appropriate district office of the Commission shall have authority to approve a non-standard unit as an exception to the requirements of Rule 2 without notice and hearing when the unorthodox size or shape of the unit is necessitated by the variation in the legal subdivision of the United States Public Land Surveys and the non-standard unit is not less than 75% nor more than 125% of a standard unit.

2. The District Supervisor of the appropriate district office of the Commission may approve the non-standard unit by:

(a) Accepting a plat showing the proposed non-standard unit and the acreage to be dedicated to the non-standard unit, and

(b) Assigning an allowable to the non-standard unit.

3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public Land Surveys, or the following facts exist and the following provisions are complied with:

(a) The non-standard unit consists of quarter-quarter sections or lots that are contiguous by a common bordering side.

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Order No. R-3212

- (b) The non-standard unit lies wholly within a governmental section and contains less acreage than a standard unit.
- (c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the section in which the non-standard unit is situated and which acreage is not included in said non-standard unit.
- (d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well on a standard unit shall be located no nearer than 1650 feet to the outer boundary of the unit and no nearer than 330 feet to any governmental quarter-quarter section line.

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Secretary-Director has received the application.

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the Tower Hill-Morrow Gas Pool or in the Morrow zone of the Pennsylvanian formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Artesia District Office of the Commission in writing of the name and location of the well on or before April 15, 1967.

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Order No. R-3212

(2) That any operator desiring to dedicate acreage pursuant to Rule 2 to a well presently drilling to or completed in the Tower Hill-Morrow Gas Pool shall file a new Form C-102 with the Commission on or before April 15, 1967.

(3) That this case shall be reopened at an examiner hearing one year from the date that a pipeline connection is first obtained for a well in the Tower Hill-Morrow Gas Pool, at which time the operators in the subject pool may appear and show cause why the Tower Hill-Morrow Gas Pool should not be developed on 320-acre spacing units.


(4) That the first operator to obtain a pipeline connection for a well in the Tower Hill-Morrow Gas Pool shall notify the Commission in writing of such fact, whereupon the Commission shall notify the operator of the time for reopening this case.

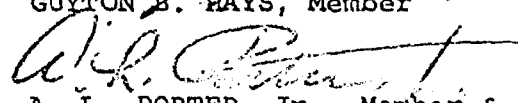
(5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman


GUYTON B. HAYS, Member


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

S E A L

esr/

Cum gratia 44

Rec. 3-22-67

Rec. 3-22-67

Nomenclature

to permit cities serving as a gas pool for
Henry R. Brown temporary pool
Rule as follows:

(a) (year after the pipeline con-
struction) Henry R. Brown Eddy emit
17 B-2-210-246.

(b) Use R-3161 as a model
order.

(c) incorporate a rule similar
to Rule 5(c) to give them
25% tolerance for non-Md
surveyed sections. (R 3168)

Smith

Establish a new pool for Monow
gas production to be named the
Tower Hill - Monow Gas Pool.

Vertical limits - monow zone
of the Penns.

Horizontal limits - Lots 1-16
Sec. 2-21-29 (621-44 A.)

EW

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 3492
Order No. R-3161
NOMENCLATURE

APPLICATION OF MIDWEST OIL CORPORATION
FOR SPECIAL POOL RULES, LEA COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 30, 1966,
at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 6th day of December, 1966, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

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

(2) That the applicant, Midwest Oil Corporation, seeks the
promulgation of special rules and regulations for the Cinta Roja-
Morrow Gas Pool, Lea County, New Mexico, including a provision
for 640-acre spacing units.

(3) That the applicant has established that one well in the
Cinta Roja-Morrow Gas Pool can efficiently and economically drain
and develop 640 acres.

(4) That the vertical limits of said pool should be defined
as the Morrow zone of the Pennsylvanian formation and the horizon-
tal limits of said pool should be extended to include the N/2 and
SE/4 of Section 9, Township 24 South, Range 35 East, NMPM, Lea
County, New Mexico.

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CASE No. 3492
Order No. R-3161

(5) That in order to prevent the economic loss caused by the drilling of unnecessary wells, to avoid the augmentation of risk arising from the drilling of an excessive number of wells, to prevent reduced recovery which might result from the drilling of too few wells, and to otherwise prevent waste and protect correlative rights, special rules and regulations providing for 640-acre spacing units should be promulgated for the Cinta Roja-Morrow Gas Pool.

(6) That the special rules and regulations should provide for limited well locations in order to assure orderly development of the pool and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the vertical limits of the Cinta Roja-Morrow Gas Pool shall be the Morrow zone of the Pennsylvanian formation and the horizontal limits of said pool shall be extended to include the N/2 and SE/4 of Section 9, Township 24 South, Range 35 East, NMPM, Lea County, New Mexico.

(2) That Special Rules and Regulations for the Cinta Roja-Morrow Gas Pool are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
CINTA ROJA-MORROW GAS POOL

RULE 1. Each well completed or recompleted in the Cinta Roja-Morrow Gas Pool or in the Morrow formation within one mile thereof, and not nearer to or within the limits of another designated Morrow gas pool, shall be spaced, drilled, operated, and produced in accordance with the Special Rules and Regulations hereinafter set forth.

RULE 2. Each well shall be located on a standard unit containing 640 acres, more or less, consisting of a governmental section.

RULE 3. The Secretary-Director of the Commission may grant an exception to the requirements of Rule 2 without notice and hearing when an application has been filed for a non-standard unit and the unorthodox size or shape of the unit is necessitated by a variation in the legal subdivision of the United States Public

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CASE No. 3492

Order No. R-3161

Lands Survey, or the following facts exist and the following provisions are complied with:

- (a) The non-standard unit consists of quarter quarter sections or lots that are contiguous by a common bordering side.
- (b) The non-standard unit lies wholly within a governmental section and contains less acreage than a standard unit.
- (c) The applicant presents written consent in the form of waivers from all offset operators and from all operators owning interests in the section in which the non-standard unit is situated and which acreage is not included in said non-standard unit.
- (d) In lieu of paragraph (c) of this rule, the applicant may furnish proof of the fact that all of the aforesaid operators were notified by registered or certified mail of his intent to form such non-standard unit. The Secretary-Director may approve the application if no such operator has entered an objection to the formation of such non-standard unit within 30 days after the Secretary-Director has received the application.

RULE 4. Each well shall be located no nearer than 1650 feet to the outer boundary of the section and no nearer than 330 feet to any governmental quarter-quarter section line.

RULE 5. The Secretary-Director may grant an exception to the requirements of Rule 4 without notice and hearing when an application has been filed for an unorthodox location necessitated by topographical conditions or the recompletion of a well previously drilled to another horizon. All operators offsetting the proposed location shall be notified of the application by registered or certified mail, and the application shall state that such notice has been furnished. The Secretary-Director may approve the application upon receipt of written waivers from all operators offsetting the proposed location or if no objection to the unorthodox location has been entered within 20 days after the Secretary-Director has received the application.

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CASE No. 3492

Order No. R-3161

IT IS FURTHER ORDERED:

(1) That the locations of all wells presently drilling to or completed in the Cinta Roja-Morrow Gas Pool or in the Morrow formation within one mile thereof are hereby approved; that the operator of any well having an unorthodox location shall notify the Hobbs District Office of the Commission in writing of the name and location of the well on or before January 1, 1967.

(2) That the operator of each well presently drilling to or completed in the Cinta Roja-Morrow Gas Pool or in the Morrow formation within one mile thereof shall receive a 320-acre allowable until a Form C-102 dedicating 640 acres to the well has been filed with the Commission.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JACK M. CAMPBELL, Chairman

GUYTON B. HAYS, Member

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

S E A L

esr/

BEFORE THE OIL CONSERVATION COMMISSION
OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF
PERRY R. BASS, CITIES SERVICE OIL
COMPANY, AGENT, FOR APPROVAL OF 640-
ACRE SPACING AND PRORATION UNITS FOR
AN UNDESIGNATED MORROW GAS POOL,
EDDY COUNTY, NEW MEXICO

Case 3544

A P P L I C A T I O N

Comes now PERRY R. BASS, by its agent, Cities Service Oil Company, and applies to the Oil Conservation Commission of New Mexico for an order establishing 640-acre spacing and proration units for production of gas from the Morrow sand, in an undesignated gas pool, from applicant's gas well located 660 feet from the North and 1980 feet from the East line of Section 2, Township 21 South, Range 29 East, N.M.P.M., Eddy County, New Mexico, and in support thereof would show:

1. Applicant Perry R. Bass, Cities Service Oil Company, agent, has completed its well Big Eddy Unit Well No. 17, at the above designated location.
2. Available evidence indicates that one well located in the undesignated pool will economically drain and develop at least 640 acres, and that closer spacing of wells will not be economically feasible.
3. Applicant proposes that 640 acre spacing and proration units be established with a suitable provision for a tolerance in the acreage to be dedicated to any well completed in the pool, on a temporary basis for a period of one year after a pipeline connection has been obtained for the discovery well.

DOCKET MAILED

Date 3-10-67

rk

4. A plat showing the location of applicant's well and adjacent lands is attached hereto and made a part of this application.

WHEREFORE, applicant prays that this application be set for hearing before the Commission's duly appointed examiner and that after notice and hearing as required by law, the Commission enter its order granting the relief prayed for.

Respectfully submitted,

PERRY R. BASS - CITIES SERVICE
OIL COMPANY, Agent

BY:

Jason W. Kellahin

KELLAHIN & FOX
Box 1769
Santa Fe, New Mexico

ATTORNEYS FOR APPLICANT

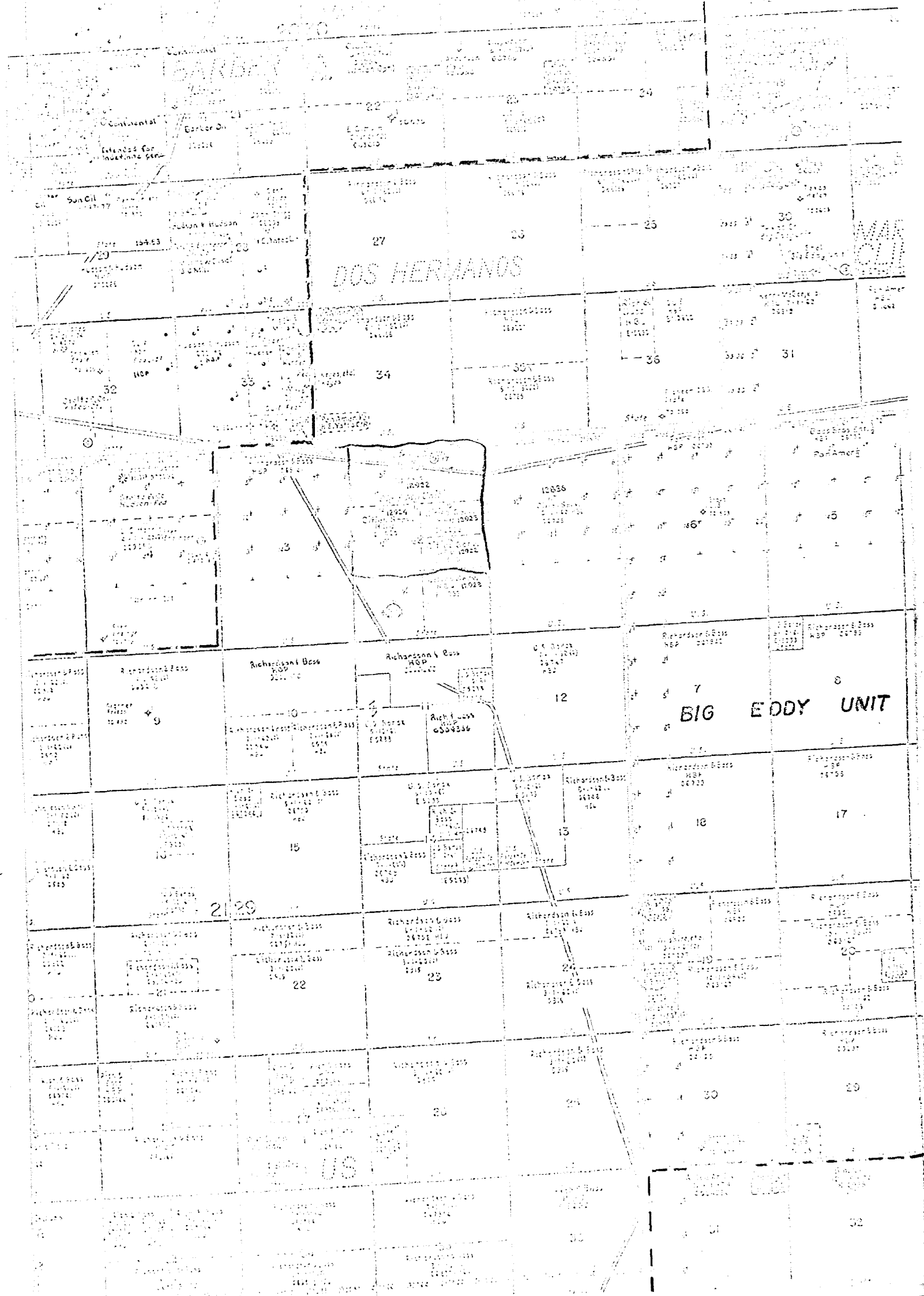
P.C.A.

BARBER

DOS HERMANOS

BIG EDDY UNIT

US



DOCKET: EXAMINER HEARING - WEDNESDAY - MARCH 22, 1967

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

The following cases will be heard before Elvis A. Utz, Examiner, or
Daniel S. Nutter, Alternate Examiner:

CASE 3541: Application of Texas Pacific Oil Company for several non-standard gas proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the rededication of certain acreage and the establishment of the following non-standard gas proration units in Township 23 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico:

A 280-acre unit comprising the NW/4, E/2 NE/4, and SW/4 NE/4 of Section 9, dedicated to its State "A" Acct. #1, Well No. 41 located 660 feet from the North and East lines of Section 9, and to its State "A" Acct. #1 Well No. 100 located 1980 feet from the North line and 990 feet from the East line of Section 9;

A 200-acre unit comprising the NE/4 SW/4, N/2 SE/4, and SE/4 SE/4 of Section 9, and the SW/4 SW/4 of Section 10 dedicated to its State "A" Acct. #1 Well No. 38 located 990 feet from the South and West lines of Section 10;

A 240-acre unit comprising the NW/4 and N/2 SW/4 of Section 10, dedicated to its State "A" Acct. #1 Well No. 37 located 1650 feet from the North and West lines of Section 10;

A 200-acre unit comprising the SE/4 SW/4 of Section 10 and the NW/4 of Section 15, dedicated to its State "A" Acct. #1 Well No. 33 located 1650 feet from the North and West lines of Section 15;

A 400-acre unit comprising the N/2 SE/4 and SE/4 SE/4 of Section 21 and SW/4, S/2 NW/4, and NE/4 NW/4 of Section 22, dedicated to its State "A" Acct. #1 Well No. 94 located 660 feet from the North line and 1980 feet from the West line of Section 22 and to its State "A" Acct. #1 Well No. 97 located 1980 feet from the North and West lines of Section 22.

CASE 3542: Application of Union Oil Company of California for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water in the Devonian formation through perforations from 12,017 to 12,036 feet in its Federal G Well No. 1 located in Unit G of Section 31, Township 9 South, Range 36 East, West Crossroads-Devonian Pool, Lea County, New Mexico.

PAGE -2- Docket No. 9-67
Examiner Hearing - March 22, 1967

CASE 3543: Application of Tenneco Oil Company for a pool contraction, new pool creation, and special pool rules, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the South Blanco-Tocito Oil Pool by the deletion of that portion of said pool contained in Sections 18, 19, 20, 21, and 22, Township 26 North, Range 5 West, Rio Arriba County, New Mexico, and the creation of a new Gallup sand pool to include Sections 16 through 23 of the same township, and the promulgation of special rules therefor. Applicant proposes pool rules for said pool similar to those promulgated by Order No. R-1410-C for the Angels Peak Gallup Pool.

CASE 3544: Application of Perry R. Bass, Cities Service Oil Company, agent, for creation of a gas pool and special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a Morrow gas pool for its Big Eddy Unit Well No. 17 located in Unit B of Section 2, Township 21 South, Range 29 East, Eddy County, New Mexico, and for the promulgation of temporary special pool rules therefor, including a provision for 640-acre proration units.

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
March 22, 1967

EXAMINER HEARING

IN THE MATTER OF:

Application of Perry R. Bass, Cities)
Service Oil Company, Agent, for creation)
of a gas pool and special pool rules, Eddy)
County, New Mexico.)

) Case No. 3544

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

dearnley-meier reporting on
services for

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

11120 SIMAS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO

MR. UTZ: Case 3544.

MR. HATCH: Application of Perry R. Bass, Cities Service Oil Company, Agent, for creation of a gas pool and special pool rules, Eddy County, New Mexico.

MR. KELLAHIN: If the Examiner please, Jason Kellahin, Kellahin and Fox, appearing for the applicant. We have one witness I would like to have sworn, please.

(Witness sworn.)

MR. UTZ: Let the record show we asked for other appearances and there were none.

E. F. MOTTER,

called as a witness herein on behalf of the applicant, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Will you state your name, please?

A E. F. Motter, M-o-t-t-e-r.

Q By whom are you employed and in what position?

A Cities Service Oil Company, Area Engineer, Texas, New Mexico, located at Hobbs, headquarters at Hobbs, I should say.

Q Have you testified before the Oil Conservation Commission and made your qualifications a matter of record?

A Yes, numerous times.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. UTZ: Yes, sir.

Q (By Mr. Kellahin) Mr. Motter, are you familiar with the application of Cities Service as an Agent in Case Number 3544?

A Yes, I am.

Q The Application of Perry R. Bass, Cities Service Oil Company, Agent; would you explain that, please?

A Yes. Perry R. Bass was the designated operator of the Big Eddy Unit and they still continue to hold that extension and any other development in this area must belong to Perry R. Bass of the Big Eddy Unit.

Q So you are an agent, as far as the area covered by the present application is concerned?

A Yes, that's correct.

Q Briefly, what is proposed in this application, Mr. Motter?

A Cities Service is requesting temporary rules for 640 acre proration units for the Morrow Gas Sand. We would like for these rules to be temporary for one year, following the date of connection of the well, so that we can utilize this one year's time in production history in establishing reserves and other characteristics of the well.

Q What size unit are you proposing?

A Well, --

Q 640 acres?

A 640 acres.

(Whereupon, Applicant's Exhibits
1 through 6 marked for
identification.)

Q (By Mr. Kellahin) Now, referring to what has been
marked as Exhibit Number 1, would you identify that exhibit,
please?

A Yes, sir. Exhibit Number 1 is a plat. This is a
plat of the area showing all offset operators, structural
contour on top of the Morrow Sand. The Cities Service acreage
is identified with a yellow shading. The Big Eddy Number 17,
to which this hearing is being used, is located and shown on
the plat. We also have drawn on there some mine operations
that are going on by U. S. Borax. It shows a tunnel going
through the eastern portion of Section 1, along with our other
mining operations, I believe that is the main substance. I
would like to perhaps refer to this later on.

Q What is the location of your well, the No. 17?

A The well, the Big Eddy No. 17 is located 660 feet
from the north line, 1980 feet from the east line in Section
2, Township 21 South, Range 21 East, Eddy County, New Mexico.
Now, this well was originally proposed as a Strawn oil test to

11,800 feet. However, it was dry in the Strawn and was drilled some 1,000 feet deeper.

Q That would have been an orthodox location for a Strawn well, would it not?

A That is correct.

Q And that accounts for the location of the well?

A Right.

Q No, referring to what has been marked as Exhibit 2, would you identify that exhibit, please?

A Yes. This is the log of the well. It has all the appropriate tops for the formations as well as the perforations located. However, going into detail in that log, or Exhibit 2, I would like to briefly summarize the drilling of the Big Eddy No. 17 and bring out some reasons why the cost is rather high.

As shown in one of our later exhibits, this well was spudded in November, on the 22nd, to be exact, and as a Strawn oil well. As I indicated previously, at 100 feet we lost complete returns and had to drill to 595. We ran and set 20 inch casing at 595, this casing was set with 400 sacks of cement, plus 1200 pounds per sack of gilsonite, plus 50 pounds of forty-two seal, two per cent balsamfluoride. We did not circulate the cement, we found the top around 345, we ran a one inch pipe in the annulus and displayed 545 sacks of cement

to obtain circulation.

We drilled to 1580 and there we ran thirteen and three-eighths inch casing and the cement circulated. Actually, we had no problems. We used 1800 sacks per well and just a few feet below the thirteen and three-eighths we lost complete returns, and drilled dry to 4,000 feet.

Now, during this period of time, which took some six days, we were drilling with a pump capacity of 450 to 600 barrels per hour, so you can imagine the large amount of fluid we had to have in there to continue this dry drilling. Now, we ran nine and five-eighths and set it at 5,000 feet, and by taking every precaution we knew how, we did get the cement circulated. We used 1660 sacks on the first stage, we used a cement basket at various places in the casing and also some did have tools. We lost circulation while pumping. We found the top of the cement by survey at 860 feet, so again we ran an inch pipe in the annulus to 840 feet and we pumped 225 sacks and circulated out and cemented the surface.

We tested the nine and five-eighths to 5,000 pounds and it held all right. So, we feel that we have got this pretty well protected in there. We drilled on down and the well was dry in the Strawn, so we decided to go on down and test the Morrow Sand in this area. We ran numerous drillstem tests in the Atoka, Base Lower Strawn and a few other zones,

but this is basically the drilling of the well. It, too, spudded on November the 22nd. We finally ran the bottom hole pressure, final bottom hole pressure on February the 28th, 1967.

Q Now, referring to what has been marked as Exhibit Number 3, Mr. Motter, would you identify that exhibit?

A Yes, this is an analysis of the gas that was sent in, or collected, excuse me, during the test period. Basically, this shows that this is fairly dry gas. The sulphur content is low enough we will have no problem selling it and the BTU content is high enough that again, we should have no trouble in getting any sales for this.

Q Do you have a sale for gas?

A Not as yet. We are working with two different parties and we have not signed a contract as yet, but we don't anticipate any problems.

Q Do you anticipate there will be any delay in getting a pipeline connection?

A Well, the pipeline is about three miles east. We assume that a contract signed with this group, it will take some time to get the line in. I can't tell you exactly where it will be. We also have requests from one of the potash mines for gas in the event this sale weren't consummated. I feel there would be a much quicker --

Q Now, referring to what has been marked as Exhibit 4, would you identify that exhibit?

A Yes, this is a copy of form C 1 22, the multi-point back pressure test for a gas well which we conducted on February the 25th. The result of this being that the absolute open flow was 9,188,000 mcf. The slope of this curve was .934, which we feel is indicative of probably some fairly good permeability. I might add, that during this time, we produced about, in fact, it was 20 barrels of 55.3 gravity hydrocarbons with the gas. The gas gravity was .617.

Q Then, the exhibit indicates you had a rapid pressure buildup, is that correct?

A This does not indicate it but we did have it indicated on the surface, that we had, utilizing a dead weight tester, that we reached a shutin pressure within fifteen minutes after we ended the test of what it was before we started, so we feel we have an indication of pretty good permeability.

The next exhibit, I believe, is 6 --

Q Number 5.

A --- Number 5 is a copy of the bottom hole pressure test which we ran immediately following the four point back pressure test. Actually, it was a 24-hour shutin and this indicates that at the sand phase of 12,696 for perforations, that the bottom hole pressure at that point was 5,074 pounds.

I might, for the record, should indicate which I had failed to do in going over the logs, although they are marked, the perforations, we actually have several sets. Starting at the top, it runs from 12,696 to 701; 12,704 to 711; 12,750 to 756; 12,769 to 12,777; 12,787 to 791; 12,794 to 12,800, and this well was brought in natural. As is being characteristic of the Morrow, to become contaminated at times with water motion, and it causes considerable problems in getting the well back on production, so we tried to be as careful as we could and we were not happy to get the well back in without any stimulation.

Q Now, have you made a cost estimate on this well, Mr. Motter?

A Yes, the final costs are not completely all in, but our exhibit Number 6 is an indication of what we feel the charges will be on this well, about \$400,760.00. As indicated before, this well did produce about 20 barrels of distillate per mile, and we are making some calculations right now to determine if we should use coal separation equipment on this to perhaps improve the liquid from the well, and if we do use this, I would say that this will cost probably an additional fifteen to \$25,000.00 for this type of equipment.

Q On the basis of information you have, on the productivity of this well as opposed to the cost of drilling

such wells, is it economic to develop this area on less than 640 acre spacing?

A Well, from what we know right now, I don't feel it is. It is rather difficult to make reservoir or gas in place calculations from a single pressure and, not knowing too much about the volumetrics of the reservoir. However, I have reviewed several Morrow Pools. By the way, there are now 23 prorated in New Mexico as Morrow Gas, with eight of them having 640 acre spacing, and it would appear that from the high cost of this well, that it would be very difficult to justify drilling on any closer spacing than 640 acres.

I have run out some economics on the fact that we might get an allowable, or I shouldn't say an allowable, we might be able to produce at a rate of two million cubic feet a day, and even at this, using a present worth of six per cent, it would take until the seventh year before we would pay out the well.

We can expect a recovery of this well of around eleven million, which is based on about 500 mmcf per acre foot and that the some thirty net feet might be uniform on 640, this would be produced in about 15 years and would leave us with an income gain at six per cent, of only slightly over \$300,000.00.

Q This well was not cored, was it?

A No. The -- Yes, I should correct that. We did core some of the Strawn, we did not core the Morrow.

Q You did not core the Morrow?

A No.

Q So you have no information then to the permeability?

A None, with the exception of what we have been able to get from the electriclog and I would be glad to give you this information. We feel on the net pay, that the porosity ranges from seven to twelve per cent, and I could break this down even further, if it was necessary, by the different intervals. The water saturation has indicated to be approximately 20 per cent.

Q The only indication you have of the permeability is your pressure buildup which indicates a good permeability?

A Yes, which we feel is good.

Q So you have no way of estimating reserves at the present time, is that correct?

A We could make an estimate. I feel it would be no better than a guess.

Q Assuming that the order is granted and you are able to produce the well for a year, would you then be able to give additional information on the reserves as well as drainage?

A Yes, sir, should this case be granted, we would run numerous bottom hole pressures, from which we can construct

pressure versus cumulative production of psi curves that are quite often used in establishing reserves, gas pools.

Q As a general rule, you mentioned that eight of the 23 Morrow Pools are on 640 acre spacing. What is the well location required in those orders, do you know?

A Yes. In nearly all orders the well spacing is no less than 1650 to an outer boundary of a section and no less than 330 to fill Government quarter-quarter sections.

Q Are you making any recommendations in this instance?

A Yes. We would like to follow this same procedure, however, I must say at this time that our location would be unorthodox and we would ask that it be authorized in this case to the 640 acre unit.

Q Now, you are asking for 640 acres. Mr. Motter, what acreage would you dedicate to your No. 17 Well?

A Well, actually, Section 2, as are all of the six sections in this particular Township, are corrective sections and Section 2 has 940 acres, and it would be our plan to dedicate the north 620 acres of Section 2 to the Big Eddy No. 17 and along with this we would like to suggest and recommend to the Commission that we be granted a 40 acre tolerance on the acreage.

Q Would that take care of any situation that might arise in connection with those odd sections in this tier of

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sections?

A Yes, sir. We feel it would take care of all of this.

Q In your south half, what -- would you have a substantial 300 --

A We would have 320 and on approximately 640 we would have probably no communication with other acreage in another one of these corrective sections.

Q Now, this is not in any designated pool at the present time, is it?

A No, sir, it is not.

Q Do you ask that a pool be designated for this area?

A Yes. This is the purpose of this, and along with this we would like to make the suggestion that this be designated as the Tower Hill Morrow Gas Pool, and this comes from a high on the southeast portion of Section 2, which is referred to on the two maps as the Tower Hill.

Q Were Exhibits 1 through 6 prepared by you or under your supervision and direction?

A Yes, they were. If I could go off the record for a moment, I would like to make an explanation.

MR. UTZ: Off the record.

(Whereupon, a discussion was held off the record.)

MR. KELLAHIN: At this time, I would like to offer in evidence Exhibits 1 through 6, inclusive.

MR. UTZ: Without objection, Exhibits 1 through 6 will be entered into the record of this case.

(Whereupon, Applicant's Exhibits 1 through 6 offered and admitted in evidence.)

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Motter, what did you give for the net pay, 35 feet, was it?

A No, sir, it is actually about 32 feet.

Q Which set of rules was it? I was busy doing some figuring here.

A Well, it's evident that these are, several are 640 acre spacing Morrows, the latest being the Cintaroja Morrow Gas Pool in Lea County, which was authorized on the 6th day of December, 1966, and Rule 4 gives the spacing of the wells, and I would be glad to read it if you like.

Q Oh, I don't think it is necessary. What is the Order Number?

A The Order Number on this is R 3161. It is Case No. 3492.

Q But the spacing is 330 feet from the center, 440 and 1650 from the outer boundary?

A I might add one thing. We have notified all offset operators of Perry Bass, the estate on whose property this is

found, and we have had no correspondence or objection to this proposal.

Q In what area did you recommend for the pool the 640 acres on the north end of Section 2?

A Actually, it would be the 620 acres in the north portion of Section 2. Those are corrective lots, the four lots in the very north part of this are about 35 acres each.

Q What are your plans for any additional wells in this area?

A Well, we have some plans. I probably couldn't speak entirely for the company, but the discussion is to do some additional development out here. It would probably be to the south of Section 2. As you will note, the mining operation in Section 1 prohibits us from getting too close or too far this way, and we feel in the event there was some development in Section 1, we might have to do some directional drilling to accomplish this.

Q You have got some mines here? Is that mine ore body?

A This, as I understand, where it says "Limits of Mine Ore Body", this is all actually mined out and this tunnel goes up as you will note at the top here on Section 25, but mining is continued again up there. There is actually a body up there that is being mined.

Q Why do they bring the ore down through the tunnel

to the shaft in Section 12?

A It must be less expensive to do this than to construct another shaft up north.

Q It is a long walk, isn't it?

A It sure is.

Q Now, this gas is considered sweet gas?

A I think that any time you have less than a quarter of a grain that is considered, and you will note that there is a total sulphur content of .23 of a grain.

Q What kind of point alignment did you get on your absolute open flow?

A We got a fairly good alignment of at least three points. It is my opinion, and I think we have discussed this previously, that on a short duration test such as this, that you will note these were only one hour points, that quite often it is difficult to get a uniform temperature on a rate such as this, and I am sure this would have caused some of the misalignment, however, there were three good points.

Q And you did get roughly a 20 per cent drawdown on the fourth point?

A Yes, sir.

Q Now, you are asking for a one year order?

A Yes, temporary. We would like to be back in one year to give some information on reservoir conditions and

perhaps reserves themselves.

MR. KELLAHIN: If the Examiner please, we would like a one year order from the date of pipeline connection.

MR. UTZ: Of this No. 17 Well?

MR. KELLAHIN: Yes, sir. We will have no way to test it until we have a connection.

MR. UTZ: Are there any other questions? The witness may be excused.

(Witness excused.)

MR. UTZ: Statements? If there is nothing further, the Hearing is adjourned.

(Whereupon, the Hearing was adjourned.)

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I N D E X

WITNESS	PAGE
E. F. MOTTER	
Direct Examination by Mr. Kellahin	2
Cross Examination by Mr. Utz	14

E X H I B I T S

NUMBER	MARKED FOR IDENTIFICATION	OFFERED	ADMITTED
No. 1 - plat	4	14	14
No. 2 - log	4	14	14
No. 3 - analysis	4	14	14
No. 4 - test	4	14	14
No. 5 - test	4	14	14
No. 6 - cost estimate	4	14	14

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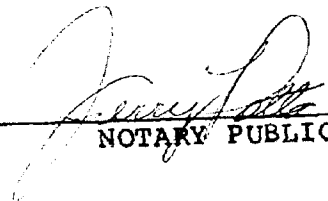
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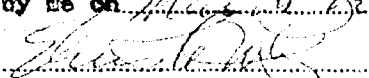
STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

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

Witness My Hand and Seal this 15th day of May, 1967.


NOTARY PUBLIC

My Commission Expires:
July 10, 1970

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 3544,
heard by me on May 12, 1967.

Examiner
New Mexico Oil Conservation Commission



WOLF PETRO LAB, INC.

DIAL EMERSON 6-9701
DIAL EMERSON 6-7171

2411 WEST 42ND STREET

P. O. BOX 643
ODESSA, TEXAS

79760

HYDROCARBON ANALYSIS

LABORATORY REPORT

Charge Cities Service Oil Co.

Test No. WPL-67-256

Date of Run 2-7-67

Date Received 2-7-67

A Sample of Gas from Drill Stem Test No. 7 - Big Eddie Unit No. 17

Secured from Morrow Formation

At Eddie County, New Mexico

Secured by Sexton

Purpose _____ Time _____ Date 2-7-67

Sampling Conditions: Pressure 3600 psig

CHROMATOGRAPH ANALYSIS

	Gas Vol. or Mol. %	Liquid Vol. %	GPM
Hydrogen Sulfide			
Carbon Dioxide	<u>.90</u>		
Air			
Nitrogen	<u>.68</u>		
Oxygen			
Methane	<u>89.40</u>		
Ethane	<u>5.56</u>		
Propane	<u>2.29</u>		<u>.63</u>
Iso-Butane	<u>.29</u>		<u>.09</u>
N-Butane	<u>.51</u>		<u>.13</u>
Iso-Pentane	<u>.13</u>		<u>.05</u>
N-Pentane	<u>.09</u>		<u>.03</u>
Iso-Hexane			
N-Hexane			
Pentanes (2)			
Hexanes (2)	<u>.15</u>		<u>.06</u>
Heptane (2)			
TOTAL	<u>100.00</u>		<u>1.02</u>

(1) and lighter
(2) and heavier

ANALYSIS INFORMATION

Volume of Sample _____ cc. @ _____ ° F

Sp. Gr. Residue _____ Vol. of Residue _____ cc.

Molecular Wgt. of Residue _____

Gal/lb. Mol. _____

VAPOR PRESSURE

Calculated _____ lbs. @ 100° F

_____ lbs. @ 100° F

GASOLINE CONTENT

26/70 Gasoline .21 G. P. M.

100.00 Propane .63 G. P. M.

Excess Butanes .18 G. P. M.

TOTAL 1.02 G. P. M.

SULPHUR DETERMINATION

Hydrogen Sulfide H₂S .0375 grs/100 SCF

Mercaptans RSH _____ grs/100 SCF

Sulfides RSR _____ grs/100 SCF

Residual Sulphur RSSR _____ grs/100 SCF

Total Sulphur .2309 grs/100 SCF

OTHER DATA

BTU Content (Actual) _____ (Calc.) 1103

Sp. Gravity (Actual) _____ (Calc.) .6343

A. P. I. Gr. (Actual) _____ (Calc.) _____

Run by: J. Wolf

Checked by: J. Wolf

Approved: J. Wolf

Additional Data and Remarks

COPIES

5 - Cities Service Oil Company
P. O. Box 69
Hobbs, New Mexico

1 - File

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 3
CASE NO. 3544

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION

EXHIBIT NO. 4
CASE NO. 3544

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form No. 122
Revised 9-1-65

Type Test <input type="checkbox"/> Initial <input type="checkbox"/> Annual <input checked="" type="checkbox"/> Special		Test Date 2-25-67	
Company Cities Service Oil Company		Connection None	
Well Undesignated		Formation Morrow	
Completion Date 2-24-67		Total Depth 12,913	Plug Back TD 12,870
Elevation 3387 DF		Unit Big Eddy Unit	
Cas. Size 5 1/2	Wt. 23-20-17	d 4.67	Set At 12,913
Perforations From 12696	To 12,800		Well No. 17
Tub. Size 2 3/8	Wt. 4.7	d 1.995	Set At 12,550
Perforations From Open	To ended		Unit 8
Type Well - Single - Rodhead - G.G. or G.O. Multiple Single		Packer Set At 12550	County Eddy
Producing Thru Tubing	Reservoir Temp. °F 174	Mean Annual Temp. °F 60	Baro. Press. - P _g 13.2
State New Mexico		Meter Run -	
L 12,550	H 12,550	G _g	% CO ₂ 0.9
		% N ₂ 0.68	% H ₂ S 0
		Provc.	Tape Flange

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
SI							3767	60			5 hr
1.	4"		1.25	630	80	64	3169	64	Pkr	-	1 hr
2.	4"		2.00	600	19	54	3052	64	Pkr	-	1 hr
3.	4"		2.00	630	34	48	3720	66	Pkr	-	1 hr
4.	4"		2.00	630	45	48	2485	66	Pkr	-	1 hr
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd
1	7.561	226.83	643.2	0.9962	1.216	1.057	2196.0
2	21.08	107.94	613.2	1.002	1.216	1.059	2936.0
3	21.08	147.88	643.2	1.012	1.216	1.065	4085.2
4	21.08	170.12	643.2	1.012	1.216	1.065	4699.8
5							

NO.	R _g	Temp. °R	T _g	Z	Gas Liquid Hydrocarbon Ratio	A.P.G. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1	.954	524	1.45	0.895	50	55.3	.617	XXXXXX	674	361
2	.910	514	1.42	0.891				XXXXXX		
3	.954	508	1.41	0.883						
4	.954	508	1.41	0.883						
5										

NO.	P _g	P _w	P _u	P _g - P _w	(1) $\frac{P_g^2}{P_g^2 - P_w^2} = 2.0499$	(2) $\left[\frac{P_g^2}{P_g^2 - P_w^2} \right]^n = 1.955$
1	3725.2	3215	10,350	3,541		
2		3118.2	9,723	4,153.9		
3		3725.2	8,074.7	5,802.4		
4		2649.0	7,017.2	6,859.9		
5						

Absolute Open Flow	9188	Mcfd @ 15.025	Angle of Slope	934
--------------------	------	---------------	----------------	-----

Remarks:	1. The surface temp. of the S.I. tubing could not be obtained.
	2. The friction pressure in the casing was not significant so L & H was considered the same. A BHP was taken & used instead of the P _c taken by the
Approved By Commission	Conducted By: Sexton
	Calculated By: Sexton
	Checked By: dead wt. tester.

3 points only

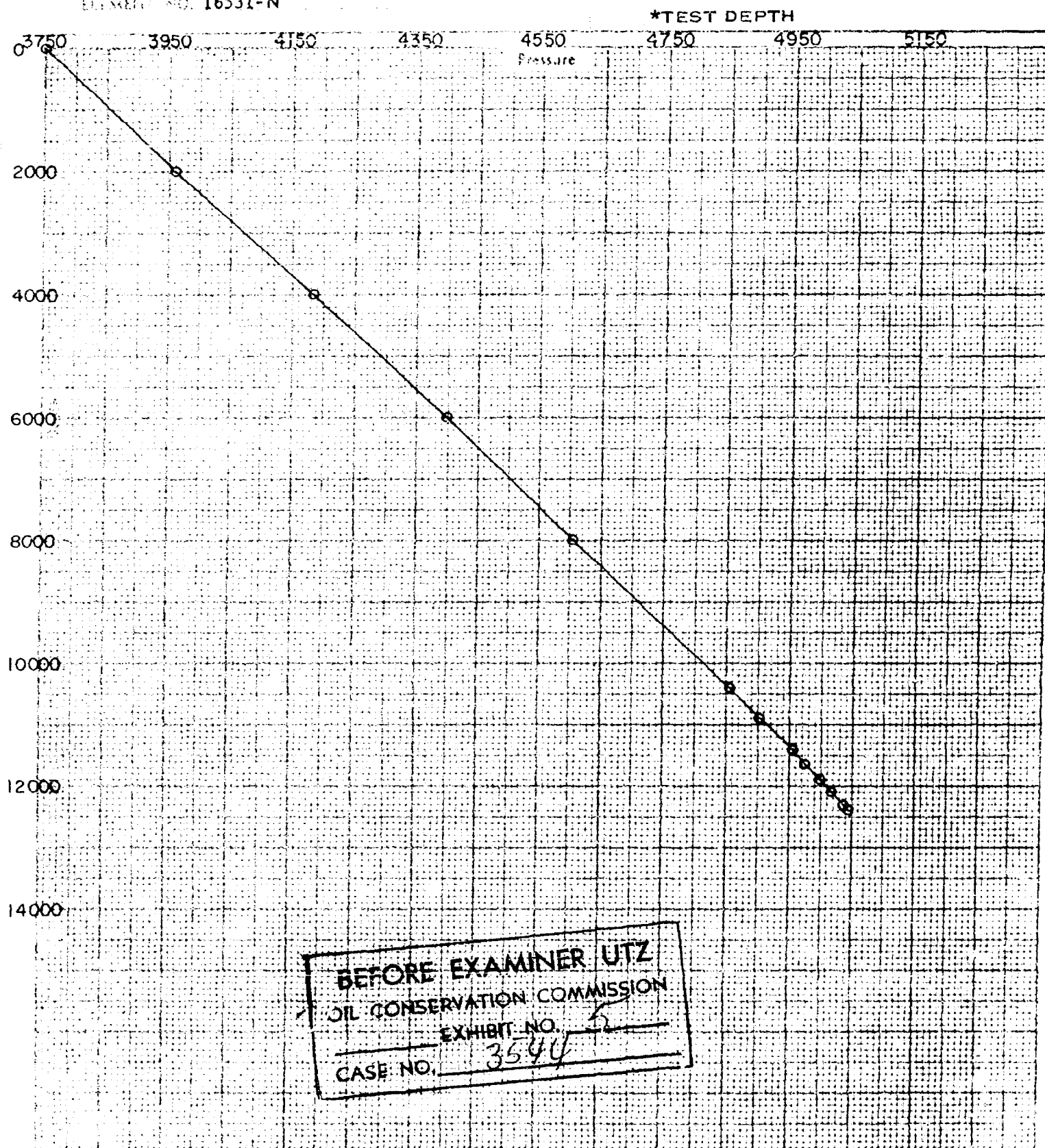
JOHN M. WEST ENGINEERING COMPANY
 311 NORTH DAL EAVE BOULE, NEW MEXICO

TELEPHONES 2-3942
 2-6770

BOTTOM HOLE PRESSURE SURVEY REPORT

CREATOR CITIES SERVICE OIL CO.
 NAME BIG EDDY UNIT
 WELL NO. 17
 DATE 2-27-67 TIME 1:00 P.M.
 SHUT-IN TEST DEPTH 12,400
 TEST DEPTH 12,400
 LAST TEST DATE INITIAL
 PREVIOUS TEST
 TEST DEPTH 3750
 SHUT-IN DEPTH
 FLUID TOP
 WATER TOP
 RUN BY J.W.W.
 COUNTER 5899 GAUGE NO. 16102
 ELEMENT NO. 16531-N

DEPTH	PRESSURE	GRADIENT
000	3750	
2000	3961	.105
4000	4185	.112
6000	4400	.107
8000	4605	.103
10400	4855	.104
10900	4902	.094
11400	4956	.108
11650	4975	.076
11900	5000	.100
12100	5019	.095
12300	5038	.095
12400*	5047*	.090



BIG EDDY UNIT NO. 17
COSTS TO DRILL AND EQUIP

Casing	\$ 73,040
Christmas Tree	11,000
Tubing and Packer	11,300
Tank Battery	13,700
Drilling and Completion Rig	118,380
Subsurface Equipment	6,000
Logging and D.S.T.	28,890
Perforating	2,500
Location and Misc. Labor	12,200
Cementing	22,000
Drilling Mud	40,000
Equipment Rental	12,750
Transportation	7,500
Water and Fuel	21,500
Miscellaneous	<u>20,000</u>
TOTAL	\$ 400,760

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 6
CASE NO. 3544