(ase Number 6023 Application Transcripts. Small Exhibits

| | Page | 1 |
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| BEFORE NEW MEXICO OIL CONSEL Santa Fe, No 31 Augus | RVATION COMMISS ew Mexico | SION |
| EXAMINER | HEARING | |
| IN THE MATTER OF: Application of Inexco Of for downhole commingling tubing exception, Eddy Mexico. | | CASE 6023 |
| BEFORE: Daniel S. Nutter. | , | |
| TRANSCRIPT | OF HEARING | |
| <u>A P P E A</u> | RANCES | |
| For the New Mexico Oil Conservation Commission: | Lynn Teschend Legal Counsel State Land Of Santa Fe, New | fice Building |
| For the Applicant: | W. Thomas Ke. KELLAHIN & FO 500 Don Gaspo Santa Fe, New | OX ar |

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KEN SOBKOWICH

Direct Examination by Mr. Kellahin

Cross Examination by Mr. Nutter

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| Applicant | Exhibit | 1, | Map | 9 |
|-----------|---------|----|--------------------|---|
| Applicant | Exhibit | 2, | Schematic | 9 |
| Applicant | Exhibit | 3, | Log | 9 |
| Applicant | Exhibit | 4, | Production History | 9 |

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MR. NUTTER: Call Case Number 6023.

MS. TESCHENDORF: Case 6023. Application of Inexco Oil Company for downhole commingling and a tubing exception, Eddy County, New Mexico.

MR. KELLAHIN: Tom Kellahin, Kellahin and Fox,
Santa Fe, New Mexico, appearing on behalf of the Applicant,
and I have one witness to be sworn.

(Witness sworn.)

KEN SOBKOWICH

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Please state your name, by whom you're employed, and in what capacity?

A. My name is Ken Sobkowich. I'm employed by Inexco
Oil Company as Petroleum Engineer.

MR. NUTTER: Would you spell your name, please?

A. S-O-B-K-O-W-I-C-H.

MR. NUTTER: S-O-B --

A. K-O-W-I-C-H.

MR. NUTTER: Okay, thank you.

Q. Mr. Sobkowich, have you previously testified be-

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fore the Commission and had your qualifications as an expert witness accepted and made a matter of record?

- A. Yes, I have.
- Q And you're a professional geologist, I believe?
- A. No, professional engineer.
- Q. I'm sorry, you're a professional engineer. Have you made a study of this particular application and the facts surrounding it in your professional capacity?
 - A. Yes, I have.

MR. KELLAHIN: If the Examiner please, are Mr. Sobkowich's qualifications acceptable?

MR. NUTTER: Yes, they are.

- Q. Please refer to what we've marked as Exhibit Number 1 and identify it.
- A. Exhibit Number 1 is a map of the Avalon Gas Field on which we have outlined the communitized drilling unit containing the well, the Inexco Federal NC Com No. 1.
 - O. That's in the west half of Section 10?
- A. In the west half of Section 10. In which Inexco Oil Company is seeking authority for downhole commingling of the Upper Penn and Strawn production in that particular wellbore. In addition, we are seeking an exception to Commission Rule 107(d) to permit setting the tubing 374 feet above the uppermost perforation in that well.

I've -- on that exhibit I've marked the producing

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wells in the Avalon Gas Field. The orange dots designate the wells producing from the Morrow; the red dots designate the wells producing from the Strawn; the green dots designate the wells producing from the Upper Penn; and the blue dots designate wells producing from the Atoka.

- Q All right. Please refer to Exhibit Number 2 and identify it.
- A. Exhibit 2 is a schematic of the wellbore completion in the Inexco Federal 10 State Com No. 1 Well, and it shows the existing perforations and the setting depth of the packer. In addition, it also shows the formation tops.
- Q Okay. You're seeking permission to commingle which two zones?
 - A. The Strawn and the Upper Penn.
- Q When this well was originally drilled, what, in your opinion, was the interval of production?
- A. The well was originally drilled as a Morrow test, but failed to yield production in commercial quantities from the Morrow and so we moved up the hole to attempt completion at the interval shown, 9456 to 9469, and 9682 to 9686. At that time it was our interpretation that this was probably all Strawn and since that time the state geologist has indicated that their interpretation is that it's Upper Penn and Penn Strawn, and therefore a rule for downhole commingling would be required.

| Q. | All right, | sir. | What | is | your | explar | atic | on for the perforation? |
|-----------|-------------|--------|------|-----|-------|--------|------|-------------------------|
| distance | between the | bottom | of | the | tubli | ng and | 2 | perforation? |
| How did t | that occur? | | | | | | . 1- | - Commission |

- A. It was inadvertently set higher than the Commission Rule 107(d) allowed.
- Q In order to comply with Rule 107(d) what expense would be involved on behalf of Inexco?
- A. I would estimate that probably Three to Five Thousand Dollars would have to be expended to lower the packer to the -- to comply with Rule 107(d).
- And what, if any, risk is there to this well if you were required to recomplete the well in compliance with 107(d)?
- A. Well, any time -- it would require killing the well, and any time you have to kill a well, you run the risk of possibly damaging the perforations -- the existing perforations.
- Q. In your opinion as an expert engineer, is there any foreseeable risk in allowing this well to be produced in the present manner of its completion?
 - A. No, I don't see any risk whatsoever.
 - Q Please refer to Exhibit Number 3 and identify it.
 - A. Exhibit 3 is a portion of the Dual Laterolog for the particular well in which we have essentially shown all the formation tops, packer setting depth, and perforations.

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Essentially to scale; it's actually a duplicate of Exhibit

Number 2; rather than a schematic it's -- that information

is shown on the actual log.

Q. Okay. Please refer to Exhibit Number 4 and identify it.

A. Exhibit 4 is the daily production history from the Inexco Federal 10 State Com No. 1 since it went on production on August 5th, 1977, and it's complete through August 29th, 1977.

It shows daily production in McFs and tubing pressure.

Q. Is the vertical ownership the same between the two zones?

- A. Yes, it is.
- Q This well was completed on July 31st, 1977?
- A. Yes, it was completed.
- Q. Do you have a recommendation to the Examiner as to how to allocate production between the Strawn and the Upper Penn?
- A. Yes, I do. Inexco Oil Company ran a flowmeter survey --
 - 0 A flowmeter?
 - A. A flowmeter survey.
 - Q. Who ran that test for you?
 - A. Schlumberger.

Q. And based upon that test what results were obtained?

A. Based on the interpretation of the flowmeter survey approximately 82 percent of the production is coming from the lower perforations, or the Strawn perforations at 9682 to 9686, and 18 percent of the production is coming from the Upper Penn perforations, 9456 to 9459.

Q. In your opinion, Mr. Sobkowich, is there any danger to either zone if production is allowed to be commingled and produced in the manner contemplated?

A. No.

Q Were Exhibits 1 through 4 prepared by you or compiled under your direction and supervision?

A. Yes, they were.

On In your opinion will the granting of this application be in the best interests of conservation, the prevention of waste and the protection of correlative rights?

A. Yes.

Q. I note in the advertised application that the distance from the tubing to the uppermost perforation is indicated at 370 feet. In your testimony just now you've indicated that distance to be 374 feet. Which in fact is correct?

A. The 374 is correct.

MR. KELLAHIN: That concludes my examination of

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this witness. We move the introduction of our exhibits.

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

CROSS EXAMINATION

BY MR. NUTTER:

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- Mr. Sobkowich, the nearest well that's producing from either of these two zones that your well is completed in, is more than a mile away, is that correct?
 - A Yes, it is.
- Q Now, you mentioned that the well was drilled to the Morrow. What was the result of the test in the Morrow?
- A. If we can refer to Exhibit Number 3, the Dual Laterolog, it shows the Morrow perforations, 10,698 to 10,942. That interval was perforated all at the same time and the well produced water from the lowermost perforations. They were subsequently cement squeezed and a recompletion in the upper perforations from 10,698 to 10,818 was attempted. Those perforations yielded gas in water and the gas was a lazy 5-foot flare simply too small to measure.
 - Q Did it make water in that upper section, also?
- A. Yes, the hole would eventually load up with water. We'd swab it down and overnight it would fill up with water again.
 - Q. Okay. So then you came on up the hole and perfor-

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ated in the Strawn and the Upper Penn?

A. Yes, sir.

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- Now, what is the potential upon the well in the two zones that you completed in?
- A. Essentially as it is -- as it is shown on Exhibit
 Number 4, around 500 McF per day.
- Q. So it really is not a whole lot better in the upper section of the Pennsylvanian than it was down in the Morrow.
 - A. No, it isn't.
 - Q It's a salvage operation, then.
 - A. Yes, it is.
 - Q. Does the well make any liquids?
- A. I think it makes a slight amount of condensate, although I don't have the actual condensate production figures with me.

MR. NUTTER: Are there any further questions of the witness? He may be excused.

Do you have anything further, Mr. Kellahin?
MR. KELLAHIN: No, sir.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 6023?

We'll take the case under advisement.

(Hearing concluded.)

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REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

I do noted consity that the foregoing is a complete resort of the promodings in Examiner New Mexico Oil Conservation Commission

sid morrish reporting service General Court Reporting Service 825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501 Phone (505) 982-9212



DIRECTOR JOE D. RAMEY

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO P. O. BOX 2088 - SANTA FE 87501

LAND COMMISSIONER PHIL R. LUCERO September 7, 1977



STATE GEOLOGIST EMERY C. ARNOLD

| ke: | UASE NU. 6023 |
|-------------------------------------|-------------------------------|
| Mr. Tom Kellahin | ORDER NO. R-5529 |
| Kellahin & Fox | |
| Attorneys at Law | |
| Post Office Box 1769 | Applicant: |
| Santa Fe, New Mexico | |
| | Trans. 041 0 |
| | Inexco Oil Company |
| Dear Sir: | • |
| | |
| | opies of the above-referenced |
| Commission order recently en | itered in the subject case. |
| Yours very truly, | |
| Tours very crury, | |
| | |
| Joe Haney | |
| JOE D. RAMEY | |
| (/Director | |
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| • | |
| JDR/fd | |
| JDK/ Id | |
| Copy of order also sent to: | |
| copy of the date and the control of | |
| Hobbs OCC x | |
| Artesia OCC <u>x</u> | |
| 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. 6023 Order No. R-5529

APPLICATION OF INEXCO OIL COMPANY FOR DOWNHOLE COMMINGLING AND A TUBING EXCEPTION, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 31, 1977, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 6th day of September, 1977, 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, Inexco Oil Company, is the owner and operator of the Federal 10 State Com Well No. 1, located in Unit L of Section 10, Township 21 South, Range 26 East, NMPM, Eddy County, New Mexico.
- (3) That the applicant seeks authority to commingle Upper Penn and Strawn production within the wellbore of the above-described well.
- (4) That the applicant further seeks an exception to Commission Rule 107 (d) to permit setting tubing 374 feet above the uppermost perforation in said well.
- (5) That from the Upper Penn zone, the subject well is capable of low marginal production only.
- (6) That from the Strawn zone, the subject well is capable of low marginal production only.
- (7) That the proposed commingling may result in the recovery of additional hydrocarbons from each of the subject pools, thereby preventing waste, and will not violate correlative rights.

-2-Case No. 6023 Order No. R-5529

- (8) That the reservoir characteristics of each of the subject zones are such that underground waste would not be caused by the proposed commingling provided that the well is not shut-in for an extended period.
- (9) That to afford the Commission the opportunity to assess the potential for waste and to expeditiously order appropriate remedial action, the operator should notify the Artesia district office of the Commission any time the subject well is shut-in for 7 consecutive days.
- (10) That in order to allocate the commingled production to each of the commingled zones in the subject well, 18 percent of the commingled production should be allocated to the Upper Penn zone, and 82 percent of the commingled production to the Strawn zone.
- (11) That applicant should be authorized to set the tubing in the subject well at approximately 9082 feet, some 374 feet above the uppermost perforation.

IT IS THEREFORE ORDERED:

- (1) That the applicant, Inexco Oil Company, is hereby authorized to commingle Upper Penn and Strawn production within the wellbore of the Federal 10 State Com Well No. 1, located in Unit L of Section 10, Township 21 South, Range 26 East, NMPM, Eddy County, New Mexico.
- (2) That 18 percent of the commingled production shall be allocated to the Upper Penn zone and 82 percent of the commingled production shall be allocated to the Strawn zone.
- (3) That the operator of the subject well shall immediately notify the Commission's Artesia district office any time the well has been shut-in for 7 consecutive days and shall concurrently present, to the Commission, a plan for remedial action.
- (4) That the applicant is hereby authorized to set the tubing in the subject well at approximately 9082 feet.
- (5) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

-3-Case No. 6023 Order No. R-5529

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

STATE OF NEW MEXICO OIL CONSERVATION COMMISSION

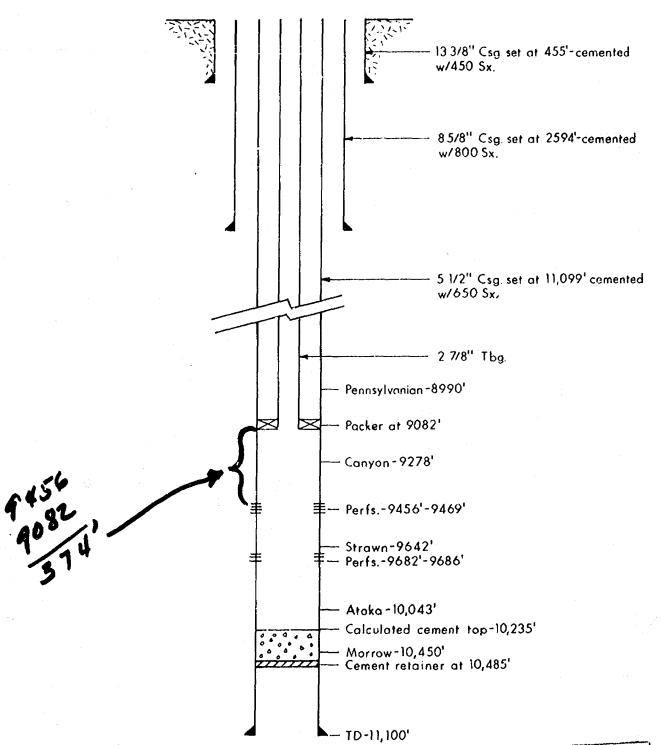
PHIL R. LUCERO, Chairman

EMERY C. ARNOLD, Member

JOE D. RAMEY, Member & Secretary

S E A L

SCHEMATIC OF WELLBORE COMPLETION



BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION

EXHIBIT NO. 5 2

CALL 14 6123

AVALON GAS FIELD EDDY COUNTY, NEW MEXICO

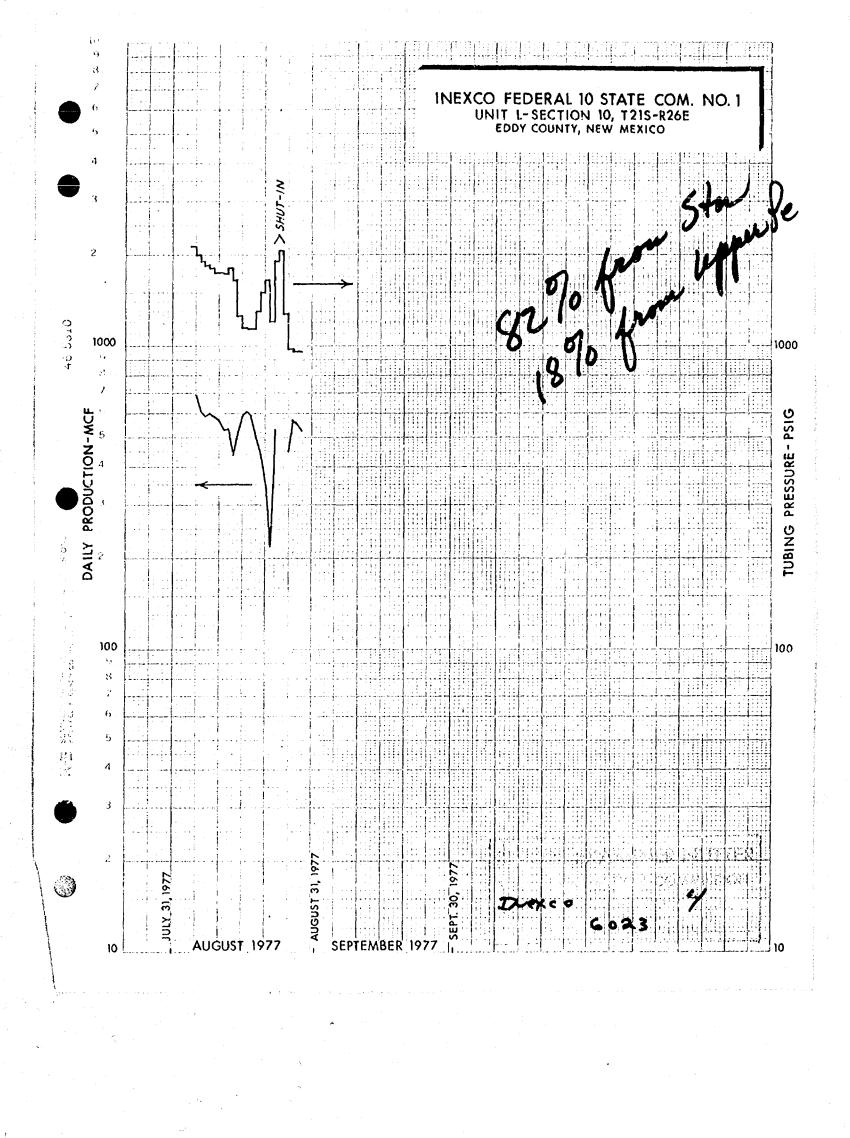
INEXCO FEDERAL 10 STATE COM. NO. 1 UNIT L-SECTION 10, T215-R26E

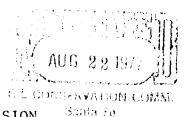
8-25-77



1100 Milam Bidg. Houston, Texas 77002 713-237-3300

ĪNEĀCŌ OIL COMPANY 🚐





BEFORE THE

NEW MEXICO OIL CONSERVATION COMMISSION

IN THE MATTER OF THE APPLICATION OF INEXCO OIL COMPANY FOR DOWN-HOLE COMMINGLING AND A TUBING EXCEPTION, EDDY COUNTY, NEW MEXICO

APPLICATION

Comes now INEXCO OIL COMPANY by and through their attorneys and applies to the Oil Conservation Commission of New Mexico for approval to downhole commingle production from the Upper Penn and the Strawn formation and for a tubing exception to NMOCC Rule 107(d) and in support thereof would show the Commission:

- 1. Applicant is the operator of the Federal 10 State Com Well No. 1. located in Unit L of Section 10, T21S, R26E, Avalon Gas Field, Eddy County, New Mexico.
- 2. That applicant seeks permission to downhole commingle production for the Upper Penn and the Strawn formation in the well bore of said well.
- 3. Application further seeks an exception to Commission Rule 107(d) to permit setting the tubing at a point 370 feet above the uppermost perforation of said well.
- 4. That approval of said application will be in the best interest of conservation, the prevention of waste and the protection of correlative rights.

WHEREFORE applicant prays that his application be set for hearing before the Commission's duly appointed examiner and that after notice and hearing as provided by law, the Commission

enter its order approving the commingling and tubing exception as prayed for.

Respectfully submitted,

INEXCO OIL COMPANY

Kellahin & Fox
P. O. Box 1769
Santa Fe, New Mexico 87501

(73) the 2200

Replication of intexes Oil Company 651-3300 for downhale commingers and a fuling exception, Eddy Co

Reels anthority for the downhard Comminghing of Upper Pour and Strawn production in the well bore of its Federal 10 State Com west on I located in Unit L of Section 10, Township 2, South, Range 26 East, avalou gas Field, Eddy County, how mexico. Cepticant further sakes an Exception to Commercion Pecco 107 (d) to permit setting tubing 370 feet above the uppermost perferation in said well.

Called in by Terry atherson Elestron Writin appl to follow DSN 8/10/27

dr/

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:

Carried States

CASE NO. 6023

Order No. R- 5529

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NOW, on this day of September, 19 77 , 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,

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- (2) That the applicant, Inexco Oil Company , is the owner and operator of the Federal 10 State Com Well / , located in Unit L of Section 10 , Township 21 South , Range 26 East , NMPM, Eddy County, New Mexico.

 (3) That the applicant seeks authority to commingle
- (4) That the applicant further seeks an exception to Commission Rule 107(d) to permit setting tubing 374 feet above the uppermost perforation in said well.

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| | Case No. R- | |
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| | subject zones are such that underground waste would not be caused | 3 |
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| | office of the Commission any time the subject well is shut-in for | \$ |
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| | hereby authorized to commingle Upper Penn and | |
| | Strawn production within the wellbore | |
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| | East , NMPM, Eday County, New Mexico. | |
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| | has been shut-in for 7 consecutive days and shall concurrently | |
| | present, to the Commission, a plan for remedial action. | |
| 1 | (6) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary. | |
| 1 | DONE at Santa Fe, New Mexico, on the day and year horeinabove designated. | |
| - | in the subject were at approximately 9082 feet. | |
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