



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

OIL CONSERVATION DIVISION
BOX 2088
SANTA FE, NEW MEXICO 87501

Case No.
8525

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

DATE 3-6-85

RE: Proposed MC _____
Proposed DHC _____
Proposed NSL _____
Proposed SWD X _____
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated 2-26-85

for the HICKS D/H Gas Tract - S.E. CHACHA UNIT #37 D-15-25N-10E
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

no objection for Hearing: Production
two miles - no objection

Yours truly,

E. R. [Signature]

1 TATE OF NEW MEXICO
2 ENERGY AND MINERALS DEPARTMENT
3 OIL CONSERVATION DIVISION
4 STATE LAND OFFICE BUILDING
5 SANTA FE, NEW MEXICO

6 27 March 1985

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Hicks Oil & Gas, Inc.
10 for salt water disposal, San Juan
11 County, New Mexico.

CASE
8525, 7546
8547, 8548

12 BEFORE: Michael E. Stogner, Examiner

13 TRANSCRIPT OF HEARING

14 A P P E A R A N C E S

15 For the Oil Conservation
16 Division:

17 Jeff Taylor
18 Attorney at Law
19 Legal Counsel to the Division
20 State Land Office Bldg.
21 Santa Fe, New Mexico 87501

22 For the Applicant:

23 W. Thomas Kellahin
24 Attorney at Law
25 KELLAHIN & KELLAHIN
 P. O. Box 2265
 Santa Fe, New Mexico 87501

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2
3 MR. STOGNER: We will call now
4 Case Number 8525.

5 MR. TAYLOR: The application of
6 Hicks Oil and Gas, Inc., for salt water disposal, San Juan
7 County, New Mexico.

8 MR. STOGNER: Call for appear-
9 ances.

10 MR. KELLAHIN: If the Examiner
11 please, I'm Tom Kellahin of Santa Fe, New Mexico, appearing
12 on behalf of the applicant and I have one witness to be
13 sworn.

14 MR. STOGNER: Are there any
15 other appearances in this matter?

16 MR. KELLAHIN: Mr. Examiner, we
17 would request that for purposes of hearing that this case be
18 consolidated with Cases 8546, 8547, and 8548.

19 MR. STOGNER: Are there any ob-
20 jections to consolidating these cases?

21 There being none, we will now
22 call Cases Nos. 8546, 8547, and 8548.

23 MR. TAYLOR: Each of those are
24 the application of Hicks Oil and Gas, Inc., for salt water
25 disposal, San Juan County, New Mexico.

MR. STOGNER: Cases 8525 and
8546, 8547, 8548 will be consolidated for purposes of testi-
mony today.

1
2 Will the witness please stand
3 and be sworn in?

4 (Witness sworn.)
5

6 MR. KELLAHIN: Mr. Examiner, so
7 that we can keep the -- so that we can keep the four cases
8 straight in terms of the wells, we've provided you with a
9 plat upon which there is a blue arrow identifying each of
10 the four proposed disposal wells, and if you'll start in
11 Section 17 and look at Well No. 16, Well No. 16 is Case
12 8546.

13 Just to the southwest is Well
14 No. 20, and that is Case 8548.

15 And if you'll look to the east
16 and find Section 15, there's an arrow pointing towards Well
17 37. That is Case 8525.

18 And then the last well to the
19 south is Well 34, and that's Case 8547.

20 MIKE HICKS,
21 being called as a witness and being duly sworn upon his
22 oath, testified as follows, to-wit:

23 DIRECT EXAMINATION

24 BY MR. KELLAHIN:

25 Q Mr. Hicks, for the record would you

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please identify yourself and describe your employment, sir?

A My name is Mike Hicks. I'm employed by
Hicks Oil and Gas, and I am President and engineer for the
company.

Q Mr. Hicks, have you previously testified
before the New Mexico Oil Conservation Division as an engineer?
eer?

A No, sir.

Q Would you describe for the Examiner what
has been your educational background, first, and then, second,
what has been your work experience as an engineer
working in the oil and gas industry?

A Yes, sir.
I graduated from Texas A & M University
in 1973 with a degree, Bachelor of Science degree in civil
engineering, and have worked in the oil fields for the past
five years.

Q What is the history of Hicks Oil and Gas
Company, Mr. Hicks?

A It was originally started by my father.
I joined him after its inception and we drill and complete
oil and gas wells and look after production.

Q Within the area identified on Exhibit A
that shows the Southeast Cha-Cha Gallup Unit, would you describe
for the Examiner what properties the Hicks Oil and
Gas Company operates?

A We operate the Southeast Cha-Cha Unit,

1 which is confined to the Gallup formation.
2

3 Q And how is that Cha-Cha Unit identified
4 on Exhibit A?

5 A By the hatched lines outlining the unit
6 boundary.

7 Q Within that area what do you do as an en-
8 gineer for Hicks Oil and Gas Company?

9 A We have infill drilled four new wells and
10 have worked over three -- two of the -- three of the old
11 producing wells, and are continuing to produce the wells to
12 their maximum.

13 Q Did you prepare and submit to the Divi-
14 sion its Form C-108, which requests that waterflood approval
15 -- salt water disposal approval be granted for each of these
16 four wells?

17 A Yes, sir, I did.

18 MR. KELLAHIN: We tender Mr.
19 Hicks as an expert witness.

20 MR. STOGNER: He is so quali-
21 fied.

22 Q Mr. Hicks, let me direct your attention
23 again to Exhibit A. You've identified for us the -- the
24 Gallup Unit.

25 Would you give us some of the historical
background about the unit itself?

A Yes, sir. The unit was created in the
early 1960's as a pressure maintenance project to enhance

1 the oil recovery.

2 The unit was operated by several opera-
3 tors. In approximately 1973 the injection of water for
4 pressure maintenance ceased and subsequent injection of
5 water into the disposal or into the injection wells was only
6 for disposal of produced water.

7 In 1978 Hicks Oil and Gas became the unit
8 operator and in November of 1984 Frank Chavez of the Oil
9 Commission in Aztec called concerning the two injection
10 wells that we are operating. No. 16 and No. 34 are pre-
11 sently the injection wells that we are utilizing and were
12 the injection wells that were being utilized at the time we
13 acquired the unit operatorship.

14 He -- he had two -- two concerns, the
15 first being that No. 34, one of the wells that we were using
16 for disposal, had never been approved as an injection well
17 during the -- when the well -- when the project was being
18 waterflooded, and the second thing he asked was that we get
19 the No. 34 Well approved as a salt water disposal well and
20 get Well No. 16 reclassified as a salt water disposal well
21 and not a pressure maintenance.

22 Q In addition to those two wells, Mr.
23 Hicks, do you have a request that two other wells be ap-
24 proved for salt water disposal?

25 A Yes, No. 20 and No. 37.

Q All right, sir. Let's start with No. 16,
which will be Case 8546, and turn to the C-108 that has been

1 submitted to the Commission for that case.

2 Would you identify for us, Mr. Hicks,
3 what is marked as Exhibit One in Case 8546?

4 That's the notice.

5 A It is the notice to offset operators and
6 surface owners of this proposed disposal well.

7 Q All right, sir, and if you'll turn past
8 the notice and the Commission Form C-108, and turn to Exhi-
9 bit Number Two, would you identify Exhibit Number Two for
10 us?

11 A It is a copy of the plat of the area with
12 a half mile radius circle drawn around Well No. 16.

13 Q Within that half mile radius, Mr. Hicks,
14 have you identified for us and tabulated all the wells that
15 either produced from the Gallup or have penetrated through
the Gallup?

16 A Yes, sir.

17 Q All right. Let's turn past Exhibit Num-
18 ber Two and have you identify Exhibit Number Three for us.

19 A Exhibit Number Three is a schematic and
20 description of the wellbore of Well No. 16.

21 Q Let's talk about Well No. 16 for a
22 moment. What is its current disposal rate that you're using
now?

23 A Approximately 50 barrels per day.

24 Q And what -- how long has this well been
25 disposing of produced water at that rate?

1
2 A We have operated it since 1978 as a dis-
3 posal well and previous to that time it was part of the
4 pressure maintenance project, and I'm really not certain
5 what -- what date it was. It was in the sixties when it was
6 converted to pressure maintenance.

7 Q Have you as operator experienced any kind
8 of difficulties with this well or the wellbore, utilizing it
9 for disposal purposes?

10 A No, sir.

11 Q The water that is produced and disposed
12 of in Well No. 16 comes from what sources, Mr. Hicks?

13 A It's produced water from the Southeast
14 Cha-Cha Gallup Unit.

15 Q Does the request for this well, as well
16 as the request for the other three wells, involve the pro-
17 posed future use of these wells for produced water from some
18 other formation other than the Gallup?

19 A Yes, sir. We would also like to have the
20 disposal wells approved to receive produced water from other
21 producing horizons in the San Juan Basin.

22 Q Could you identify for us the produced
23 horizons from which your -- you have attached water analyses
24 in the C-108?

25 A It would be the Fruitland Pictured
Cliffs, Mesaverde, Gallup, and Dakota.

 Q All right. Let's turn past the Exhibit
Number Three, the wellbore schematic, and turn to Exhibit

1
2 Number Four, Mr. Hicks, and have you describe the informa-
3 tion contained on that exhibit.

4 A We basically have an answer to the ques-
5 tions that are brought up on -- or the information that is
6 requested on the C-108 Form.

7 Q All right, let's go through the essential
8 elements of that information, then.

9 Have you proposed a maximum injection
10 pressure limitation that will be equal to or less than 0.2
11 psi per foot of depth?

12 A Yes, sir. We have specified our maximum
13 injection pressure to be 1000 psi.

14 Q And the well log for the well is pre-
15 viously filed with the Oil Conservation Division?

16 A Yes, sir.

17 Q Have you been able to identify in the
18 area around this wellbore any wells that produce fresh water
19 sources?

20 A There is a well within one mile of the
21 proposed disposal well that was called the Southeast Cha-Cha
22 Unit Water Supply Well No. 1. It's a well that was origi-
23 nally drilled and completed as a water source for the pres-
24 sure maintenance project, and also, there is a well, or a
25 spring, the Bentley Spring Well, also within one mile.

Q All right, your exhibit identifies the
location of the Cha-Cha Water Supply Well. Would you show us
on Exhibit A, identify for the Examiner, the approximate lo-

1
2 cation of the spring?

3 A It is in the north or southwest quarter
4 of Section 9, in the, I guess it would be the southwest of
5 the southwest of Section 9.

6 MR. KELLAHIN: These blue areas
7 are all fresh water sources in the area.

8 This is the spring here in Sec-
9 tion 9.

10 MR. STOGNER: Thank you, Mr.
11 Kellahin.

12 Q In preparing your exhibits for hearing,
13 Mr. Hicks, and in reviewing and studying this area, have you
14 found any evidence of faulting or hydrologic connections
15 that would put the Gallup formation in communication with
16 any shallow fresh water sands or aquifers?

17 A No, sir, I have not.

18 Q For this case and the other three cases,
19 do you have an opinion as to whether the continued use of
20 the Gallup formation for salt water disposal poses a risk of
21 contamination to shallower fresh water aquifers?

22 A No, sir, I don't, for the reason that the
23 Gallup is overlain by a massive shale section, the Mancos
24 Shale, that we feel is a very adequate barrier to the migra-
25 tion of the water upward.

26 Q Is the wellbore for Case 8546, as well as
27 the wellbores and completion techniques for the other three
28 wells, such that the water disposed of in the Gallup forma-

1 tion?

2 A Yes, sir, the casing is cemented across
3 the shale section and extends up to the bottom of the Mesa-
4 verde in all these wells.

5 Q Let's turn to Exhibit Number Five in Case
6 8546, Mr. Hicks, and have you describe for us the informa-
7 tion on the wellbore tabulation.

8 A It's a tabulation of all the wells that
9 are within one-half mile radius of the proposed salt water
10 disposal well, No. 16.

11 Q And subsequent to that tabulation you
12 have a schematic identified as Exhibit Number Six for the
13 Cha-Cha Water Supply Well No. 1?

14 A Yes, sir.

15 Q In your review of the information for
16 Case 8546 do you find any information that either the pro-
17 ducing wells or wells that are plugged and abandoned in the
18 area are in any way inadequately cemented or completed so as
19 they would serve as a source of contamination for water dis-
20 posed of in the Gallup?

21 A No, sir.

22 Q Subsequent to Exhibit Number Six is
23 Seven, which is simply a statement of fresh water drinking
24 sources and a geologic description of the Gallup formation?

25 A Yes, sir.

Q All right. And then Exhibit Number Eight
is a package of water analyses?

1 A Yes, sir, and those include water anal-
2 yses of wells on the unit plus water from typical South San
3 Juan Basin producing wells.

4 Q Is the package of water analyses attached
5 as Exhibit Eight, is this the same package that's attached
6 to all of the C-108's for all four cases?

7 A Yes, sir.

8 Q And those packages of water analyses in-
9 clude produced water analysis from the Gallup, Pictured
10 Cliffs, Dakota, and Mesaverde?

11 A Yes, sir.

12 Q Okay, let's go to the C-108 for Case
13 8547, Mr. Hicks, and this is the well in Section 22 that's
14 identified as Unit Well 34? Is that correct, sir?

15 A Yes, sir.

16 Q Would you describe for the Examiner what
17 is the current status and history of the Well 34 that you
18 propose to have approved for salt water disposal?

19 A The well is presently a disposal well and
20 has been Hicks Oil and Gas acquired the unit operatorship in
21 1978.

22 Q This is the second well that Mr. Chavez
23 asked you to have recertified for disposal purposes.

24 A Yes, sir.

25 Q All right, would you identify for the Ex-
26 aminer what the current rates of disposal are in this well?

27 A Approximately 50 barrels per day.

1
2 Q Would you turn to Exhibit Number One in
3 the package of exhibits and identify this? This is the
4 what, sir?

5 A Again this is the notice to surrounding
6 offset operators and surface owners of this proposed salt
7 water disposal well.

8 Q All right, and would you identify Exhibit
9 Number Two for us?

10 A Exhibit Number Two is a map of the area
11 surrounding Well No. 34, showing other wells and also shows
12 a radius circle drawn around Well No. 34 one-half mile.

13 Q All right, sir, and Exhibit Number Three?

14 A Exhibit Number Three is a proposed well-
15 bore schematic of the injection well.

16 Q And this is the way the injection well is
17 currently completed?

18 A Yes, sir.

19 Q You used plastic lined tubing in the dis-
20 posal well?

21 A That I don't know.

22 Q All right, sir. It's -- it's either
23 plastic coated steel or fiberglass tubing, one or the other?

24 A I do not know.

25 Q All right, sir. What is the -- have you
filled the annular space between the tubing and casing with
an inert fluid?

A We have not worked on this well since we

1 acquired it, and what was done prior, we have no records.

2 Q All right, will you make an investigation
3 to determine what the status is of the tubing in terms of
4 being plastic lined or fiberglass coated?

5 A Yes, sir, we fully intend to pull this
6 well and make sure that everything is as we've shown it on
7 the schematic.

8 Q All right. You will also place a pres-
9 sure gauge or some monitoring device at the surface to -- to
10 measure and monitor the pressure on the annular space be-
11 tween the tubing and the casing?

12 A Yes, sir.

13 Q All right. When Well 34 is completed in
14 the fashion shown on the schematic, do you have an opinion
15 as to whether the use of this wellbore for disposal in the
16 Gallup will be one that will adequately isolate the Gallup
disposal water from any fresh water sources?

17 A Yes, sir, I do.

18 Q In preparing your exhibits you have again
19 submitted an Exhibit Four, which is identical to the pre-
20 vious exhibit in the other case, showing maximum injection
pressures?

21 A Yes, sir, that's correct.

22 Q And that's the 1000 pounds?

23 A Yes, sir.

24 Q And that's surface pressure.

25 A Correct.

1
2 Q All right, let's turn to Exhibit Number
3 Five. This is again the same written summary of geologic
4 data and fresh water sources in the area?

5 A Yes, sir.

6 Q All right, and let's go now to Exhibit
7 Number Six and have you identify that for us.

8 A Exhibit Number Six is a tabulation of
9 wells within the one-half mile radius of the proposed salt
10 water disposal Well No. 34.

11 Q Do you find any of the wells listed on
12 the tabulation on Exhibit Number Six to be completed in such
13 a fashion that they expose a risk for fresh water sources if
14 the proposed disposal well is approved as requested?

15 A No, sir, I do not.

16 Q Let's turn to Exhibit Number Seven and
17 have you identify that.

18 A Exhibit Number Seven is a wellbore sche-
19 matic of Southeast Cha-Cha Unit Well No. 32, and it shows
20 the well was originally completed in the Dakota. It shows
21 the procedure utilized to plug and abandon the Dakota inter-
22 val.

23 The schematic also identifies a workover
24 attempt that was attempted on the well in April of 1971 and
25 the well was squeezed for bad casing leaks at that time.

Q Just a minute, let's make sure we're all
together.

MR. STOGNER: Which one are we

1 on now?

2
3 MR. KELLAHIN: We're on Exhibit
4 Number Seven for Case 8547.

5 MR. STOGNER: 8547, okay.

6 Q Would you identify for the Examiner where
7 this well is located in relation to Well 34?

8 A Yes, sir. It's to the northwest of Well
9 No. 34 on the plat. It lies in the northwest quarter of
10 Section 22.

11 Q It's the well located within the square
12 outline?

13 A Within the --

14 Q Identified by the well symbol that shows
15 the well --

16 A Yes, right. Right.

17 Q -- within a square?

18 A Right.

19 Q What's the well next to it to the south-
20 east?

21 A That is a Pictured Cliffs gas well.

22 Q All right. What is the current status of
23 Well No. 32?

24 A The well has been shut in since 1971. As
25 I was explaining earlier, the -- in their workover their at-
tempt to repair the casing after the well was squeezed, they
were attempting to drill out and in -- drill out the cement
plug that was in the casing and in that process they drilled

1 outside of the -- through the casing and drilled outside the
2 casing.

3 Q This well has been in this status since
4 approximately April of 1971?

5 A Yes, sir.

6 Q And how long has the Well 34, the pro-
7 posed disposal well, been utilized for disposal in the Gal-
8 lup?

9 A At least since 1978.

10 Q In your ownership of the property, Mr.
11 Hicks, have you found that Well No. 32, this plugged and
12 abandoned well, has had any difficulties in terms of having
13 waterflows on the surface or any other problems that you're
14 aware of?

15 A No, sir.

16 Q Can you re-enter this wellbore in its
17 current condition and recement off the Gallup formation?

18 A No, sir, I feel it would be impossible.

19 Q Why?

20 A Well, the -- they have -- they have side-
21 tracked the hole, drilled outside the casing and drilled 17
22 feet and the chances of drilling back into that wellbore are
23 nearly impossible.

24 Q Notwithstanding that, Mr. Hicks, do you
25 have an opinion as to whether this well is adequately plug-
ged and abandoned so as to avoid it being a source of con-
tamination of fresh water sources?

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A Yes, sir, I feel it is. When -- in their front procedure to squeeze that casing there were wireline plugs set in the casing that should seal the wellbore and we feel that the cement outside the casing should be adequate, too, to seal off the Gallup.

Q And, in fact, disposal has taken place in close proximity to this wellbore for some five or six years and there has been no problem.

A Yes, sir, that's correct.

Q All right, and again, now, Exhibit Number Eight are attached water analyses that we've discussed earlier.

A Yes, sir, that's correct.

Q All right, sir, let's go on to Case 8548. 8548 is the proposed disposal well in Section 17, Well No. 20?

A Yes, sir, that's correct.

Q All right, would you identify Exhibit Number One, for me?

A Exhibit Number One is a notice to surrounding offset operators and surface owners.

Q All right, sir, and let's turn to the Exhibit, then, Number Two, and have you identify the plat.

A The plat is a plat of surrounding oil and gas wells and it has a half mile circle drawn around Well No. 20.

Q What is the current status of Well No.

1 20?

2 A Presently the well is shut in.

3 Q All right, sir, let's turn to the schema-
4 tic for that well, Exhibit Number Three, and have you ident-
5 ify the schematic.

6 A This is a proposed schematic of the well-
7 bore as we would plan to operate the well as an injection
8 well.

9 Q It was formerly a Gallup producing well
10 for the pressure maintenance project?

11 A Yes, sir, that's correct. It was a pro-
12 ducing well.

13 Q And when did you stop using it as a pro-
14 ducing Gallup well? Do you recall approximately when?

15 A The last attempt was approximately 1980.

16 Q And will the method of recompletion for
17 disposal be one that conforms to the Commission requirements
18 for a disposal well?

19 A Yes, sir.

20 Q You'll use plastic lined tubing, fill the
21 annular space, and have a pressure gauge at the surface?

22 A Yes, sir, that's correct.

23 Q Let's turn to Exhibit Number Four. Again
24 the same pressure limitation at the surface of 1000 psi?

25 A Yes, sir, that is correct.

Q All right, and do you find any fresh
water sources within a mile of this well?

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A No, sir.

Q All right, if you'll turn to Exhibit Number Five and identify this schematic.

A Well number -- or Exhibit Number Five is a schematic of the well, or Southeast Cha-Cha Well No. 26 that was originally drilled and completed in the Dakota and the Gallup as a dual producer.

The Dakota is presently plugged and this schematic shows the method that was used to plug the Dakota perforations.

Q Is it still producing as a Gallup well?

A No, sir. It is shut in.

Q And then Exhibit Number Six, would you identify that for us?

A Exhibit Number Six is a tabulation of the wells within a half mile radius of the proposed salt water disposal well, No. 20.

Q Do you find any of the wellbores identified on Exhibit Number Six as being inadequately cemented?

A No, sir.

Q All right, and Exhibit Number Seven, then, is the same geologic narrative, the water, drinking water source information?

A Yes, sir, that's correct.

Q And then Exhibit Number Eight are the water analyses.

A That is correct.

1
2 Q Okay, and again the proposed method for
3 completion for disposal is one that conforms to Commission
4 requirements for a disposal well?

5 A Yes, sir, it is.

6 Q All right, identify Exhibit Number Four.

7 A Exhibit Number Four is a narrative of the
8 questions that are raised on the C-108 application.

9 Q And again the maximum injection pressure
10 at the surface will be not more than 1000 psi.

11 A Yes, sir, that's correct.

12 Q All right, sir, and Exhibit Number Five.

13 A Exhibit Number Five is a tabulation of
14 wells within the half mile radius of the proposed salt water
15 disposal well No. 37.

16 Q Okay. The last of the wells listed on
17 the tabulation shows 300 sacks of cement. The top of cement
18 is unknown. What have you intended to portray with regards
19 to the Robson No. 3 Well, Mr. Hicks?

20 A Well, the -- we could not determine
21 whether a temperature survey was run on the well at the time
22 it was drilled and completed and could not find any record
23 of any bond log on the well; however, I have calculated the
24 cement volumes based on theoretical hole volumes plus allow-
25 ing 30 feet -- or 30 percent for washouts, and shrinkage,
and have come up with that 300 cubic feet of -- or 300 sacks
of cement would be adequate to cover the Gallup.

1 Q All right, sir, let's turn now to the
2 last C-108, which is for Case 8525.

3 Case 8525 is for the proposed disposal
4 well 37 in Section 15?

5 A Yes, sir, that's correct.

6 Q All right, sir, and what -- what's the
7 current status of that well?

8 A It is presently shut in as an uneconomical
9 producing well.

10 Q And it formerly produced from what formation?
11

12 A The Gallup.

13 Q Would you identify Exhibit Number One for
14 Case 8525?

15 A Yes, sir, it's a notice to offset operators and surface owners.

16 Q All right, sir, and then Exhibit Number
17 Two?

18 A Exhibit Number Two is a plat of wells
19 surrounding Well No. 37 and it also indicates a half mile
20 radius around Well No. 37.

21 Q All right. Let's turn to the schematic
22 for the disposal well, which is Exhibit Number Three, and
23 have you identify that for us.

24 A This is a schematic of how we would propose
25 to operate the Well No. 37 as a salt water disposal
well.

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2 Q All right, sir. Would you turn to Exhibit Number Six and identify that one, please?

3 A Exhibit Number Six is a schematic diagram
4 of the Gallegos Canyon Unit Well No. 113, which has been
5 plugged and abandoned.

6 Q And has the Gallup formation or the Gallup perforations in that plugged and abandoned well been
7 adequately covered with a cement plug?

8 A Yes, sir, 45 feet of cement plug was
9 placed from 5300 feet to 5795 feet, covering the Gallup perforations 5712 to 5780.

10 Q All right, sir. Would you turn to Exhibit Number Seven and identify that one?

11 A Okay. Exhibit Number Seven is a narrative of the geological information of the Cha-Cha Gallup and
12 drinking water sources in the area.

13 Q And Exhibit Number Eight?

14 A Exhibit Number Eight is water analysis of wells on the unit and also San Juan Basin producing wells.

15 Q Can you give us an estimate, Mr. Hicks, of the approximate volumes of water on a daily basis in barrels that you propose to dispose of in each of the four disposal wells?

16 A Yes, sir, approximately 25 barrels per day in each well would be from lease sources and right now
17 we estimate that we'd be disposing of approximately 100 barrels per day from sources off of the lease and we would an-

1 anticipate that volume to increase.

2 Q Was Exhibit A and then the C-108 with the
3 attached exhibits for each of the four cases prepared by you
4 or compiled under your direction and supervision?

5 A Yes, sir, it was.

6 MR. KELLAHIN: We move the in-
7 troduction of Exhibit A and then each of the packets of ex-
8 hibits for the four respective cases, Mr. Stogner.

9 MR. STOGNER: All the exhibits
10 will be admitted into evidence at this time.

11 MR. KELLAHIN: That concludes
12 our examination of Mr. Hicks.

13 CROSS EXAMINATION

14 BY MR. STOGNER:

15 Q Mr. Hicks, if you'll refer to Case Number
16 8525, Exhibit Number Two, the problem well which alluded to
17 in Case Number 8547, the Well No. 32, is that within a half
18 mile of this one?

19 A It appears to be right on the edge of
20 that half mile circle.

21 Q Okay. Now then, the proposed injection
22 well, Well No. 37, that has been a shut-in producing well
23 since when?

24 A Since August, 1984.

25 I might point out that Well No. 37 is a
new well that was drilled in 1980. It's relatively newer

1
2 than the other wells in the field and when we completed it,
3 encountered large volumes of water and it was just uneconom-
4 ical to continue operating it.

5 Q What was done with the water before?

6 A It was being injected back into Well 34.

7 Q Okay. Refer to Exhibit Number Five in
8 this packet, Robson Well No. 3. I don't believe you've
9 given me a calculated top of cement, but you said it was
10 adequately covering the Gallup. Do you have the calculated
11 top of cement?

12 A Yes, sir. As I explained before, using
13 -- utilizing a 30 percent excess over the theoretical hole
14 volume, I calculated top of the cement fill to 5305 feet.
15 Top of the Gallup from the electrical logs is 5393 feet.

16 Q What was the top of the Gallup again?

17 A 5393.

18 MR. KELLAHIN: What was the
19 calculated top?

20 A 5305.

21 Q What is the status of that well? Is it
22 plugged and abandoned?

23 A The Robinson Well?

24 Q Yeah.

25 A No, sir, it is still a producing gas well.

Q Is Hicks the operator on that?

A No, sir, Southland Royalty.

Q Did you speak with them about the

1
2 calculated top of the cement? Did they have any bond logs
3 or any such items?

4 A No, sir, I have not spoken with them.

5 Q Okay. Refer to Exhibit Number Six. That
6 is your schematic of the Well No. 13.

7 A Yes, sir.

8 Q Do you know what the top of the cement
9 calculated is on this? You show 200 sacks.

10 A In the original, primary cement job on
11 the casing?

12 Q Yes.

13 A No, sir, I don't, do not.

14 Q But they did run 200 sacks from 5855?

15 A Yes, sir, that's correct.

16 Q And what's the hole size? Do you remem-
17 ber?

18 A 7-7/8ths.

19 Q Is Hicks the operator of this well?

20 A No, sir, Southland Royalty.

21 Q And has it been plugged? What's its pre-
22 sent status?

23 A It is plugged and abandoned.

24 Q Plugged and abandoned.

25 Okay, let's go to 8548, Well No. 20. You
said that well was shut in. How long has it been shut in?

A Since approximately 1980.

Q Is the tubing still in place?

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A No, sir, it is not.

Q When was this well drilled?

A Early 1960's, '61 or '62.

Q Are you aware that mechanical integrity tests would have to be run on that casing to see if it's adequate?

A Yes, sir.

Q Okay, let's refer to 8547, your Well No. 34.

A Yes, sir.

Q Now is this presently injecting at this time?

A Yes, sir, it is.

Q Okay, and who was the previous operator?

A Suburban Propane was the unit operator previous to Hicks Oil and Gas.

Q And they're records do not show what size tubing was in this hole?

A No, sir.

Q Whether it was plastic lined or anything?
Is there a pressure gauge on this well presently or --

A No, sir, there's not; not on the -- not or the annulus. There's one on the tubing.

Q What has it been injecting at or has it been injecting under pressure?

A Yes, sir, it injects at -- it does not

1 exceed 600 pounds.

2 Q Okay. Has it ever exceeded 600 pounds?

3 A Not while we've operated it.

4 Q Refer back to Exhibit Number Seven. This
5 is the so-called problem well or a pretty good problem well.

6 I didn't quite catch -- the well had been
7 sidetracked, you said?

8 A Well, in the -- they went in to prepare
9 or to perform remedial work on the casing, to repair the
10 casing. They squeezed, set -- set some bridge plugs in the
11 casing and to squeeze the casing with, and in the process of
12 crilling out casing, or the cement in the casing, they ran
13 into -- they -- they began drilling on the casing.

14 They ran a mill and milled on the casing
15 and then went back in the hole with a bit and drilled, ac-
16 tually drilled outside of the casing.

17 Q How far down did they go outside the cas-
18 ing?

19 A 17 feet.

20 Q Who was the operator of that well?

21 A At the time that that work was done?

22 Q Yes.

23 A I believe it was Aztec Oil and Gas.

24 Q And did they subsequently plug and aban-
25 don it after the --

26 A No, sir, they did not. The wellbore is
27 -- is open to 3499.

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Q What's the present status of this well?

A It is shut-in, not producing, and in our plan of development for the unit for 1985 this well was proposed to be plugged and abandoned.

Q And so you're -- Hicks is the operator?

A Yes, sir.

Q So you propose to plug and abandon. Do you propose to test any formations from that zone upwards, or anything?

A To -- as far as productivity of oil or gas?

Q Uh-huh.

A No, sir. Hicks' rights are only to the Gallup.

Q When does Hicks propose to plug and abandon it? Do you have a date set or --

A No, sir.

Q Okay, let's go to Case Number 8546. What's your Well No. 16, and this well has been injecting since 1978, is that right?

A Yes, sir, at least that long and it was originally approved in the pressure maintenance project as an injection well, and has been an injection well since the 1960's.

Q Do you know what order approved that pressure maintenance expansion?

A No, sir, I do not.

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Q Do you know if it was one of the original wells that was approved for the pressure maintenance project?

A No, sir, I don't know if it was one of the original wells or if it was approved at a later date.

Q But you know it was approved.

A Yes, sir.

Q Is there a pressure gauge on this one?

A Yes, sir.

Q How about on the annulus?

A No.

MR. STOGNER: That's all the questions I have for this witness.

Are there any other questions of Mr. Hicks?

MR. KELLAHIN: No, sir.

MR. STOGNER: Anybody else have any questions of him?

If not, he may be excused.

Mr. Kellahin, do you have anything further in these cases?

MR. KELLAHIN: No, sir.

MR. STOGNER: Does anybody else have anything further in these four cases?

If not, Cases Numbers 8525, 8546, 8547, and 8548 will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY
CERTIFY that the foregoing Transcript of Hearing before the
Oil Conservation Division was reported by me; that the said
transcript is a full, true, and correct record of the
hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is
a complete record of the proceedings in
the case of hearing in case No. 8525.
heard by me on 27 March 1985.
Michael E. [Signature], Examiner
Oil Conservation Division

1
2 STATE OF NEW MEXICO
3 ENERGY AND MINERALS DEPARTMENT
4 OIL CONSERVATION DIVISION
5 STATE LAND OFFICE BUILDING
6 SANTA FE, NEW MEXICO

7 13 March 1985

8 EXAMINER HEARING

9 IN THE MATTER OF:

10 The application of Hicks Oil & Gas, CASE
11 Inc. for salt water disposal, San 8525
12 Juan County, New Mexico.

13 BEFORE: Gilbert P. Quintana, Examiner

14 TRANSCRIPT OF HEARING

15 A P P E A R A N C E S

16
17 For the Oil Conservation Division: Jeff Taylor
18 Attorney at Law
19 Legal Counsel to the Division
20 State Land Office Bldg.
21 Santa Fe, New Mexico 87501

22 For the Applicant:
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MR. QUINTANA: Call next Case
8525.

MR. TAYLOR: The application of
Hicks Oil & Gas, Inc. for salt water disposal, San Juan
County, New Mexico.

The applicant has requested
that this case be continued.

MR. QUINTANA: Case 8525 will
be continued until March 27.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY
that the foregoing Transcript of Hearing before the Oil Con-
servation Division was reported by me; that the said tran-
script is a full, true, and correct record of the hearing,
prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is
a complete and correct transcript of the hearing in
the case of 8525
heard by me on MARCH 13 19 85.

Silbert P. Quintana, Examiner
Oil Conservation Division