

## STATE OF MICHIGAN

## BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION

In the matter, on the Commission's  
Own Motion seeking a declaratory  
ruling that the Commission will  
not approve any exceptions to  
R 460.867, which prohibits placing  
any well, pool or field under vacuum,  
or in the alternative.

Case No. U-16230

Volume 5

## CROSS-EXAMINATION

Proceedings held in the above-entitled matter  
before Mark D. Eyster, J.D., Administrative Law  
Judge with SOAHR, at the Michigan Public Service  
Commission, 6545 Mercantile Way, Room D, Lansing,  
Michigan, on Wednesday, March 30, 2011, at 9:01 a.m.

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(Continued)

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20                       -   -   -

21       REPORTED BY: Lori Anne Penn, (CSR-1315)

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Jay Prudhomme

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Lansing, Michigan

Wednesday, March 30, 2011

At 9:01 a.m.

- - -

(Hearing resumed pursuant to the adjournment of  
March 29, 2011.)

JUDGE EYSTER: O.K. We're back on the  
record in U-16230.

Mr. Christopherson.

MR. CHRISTOPHERSON: Mr. Prudhomme, do  
you want to step up there.

- - -

(Documents marked for identification by the Court  
Reporter as Exhibit Nos. A-33 and A-34.)

- - -

J A Y P R U D H O M M E

was called as a witness on behalf of Merit Energy Company  
and, having been duly sworn to testify the truth, was  
examined and testified as follows:

DIRECT EXAMINATION

BY MR. CHRISTOPHERSON:

Q Mr. Prudhomme, you've filed prefiled direct testimony in  
this case; is that correct?

A Yes, sir.

Q And along with your prefiled direct testimony, I think  
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1       you also caused to be filed two exhibits; is that right?

2   A     Yes, sir.

3   Q     And I think we marked those as A-33 (JP-1) and A-34  
4       (JP-2); is that correct?

5   A     Yes, sir.

6   Q     And you've obviously reviewed your direct testimony prior  
7       to coming in here and testifying today; is that correct?

8   A     Yes, sir.

9   Q     And if I asked you the same questions, would you give me  
10       the same answers as are contained in your prefiled direct  
11       testimony?

12   A     Yes, sir.

13   Q     Thank you.

14                       MR. CHRISTOPHERSON:  Then we'd move to  
15       bind into the record the direct testimony of Jay  
16       Prudhomme, along with Exhibits A-33 (JP-1) and A-34  
17       (JP-2).

18                       JUDGE EYSTER:  Mr. Sage, you have a  
19       motion regarding this testimony.

20                       MR. SAGE:  Yes, your Honor.  Ms. Newell  
21       would argue it.

22                       JUDGE EYSTER:  Ms. Newell.

23                       MS. NEWELL:  Your Honor, the details for  
24       our motion have been laid out in the motion and the brief  
25       that we have filed; I would just like to highlight a

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1 couple of them.

2 One is that the statement that is made on  
3 page 3, line 7 to 9, regarding the combination of  
4 compressors, the methodology that would be used and  
5 explanation given, there's not a foundation for such in  
6 the record, and so -- or in his testimony, so we'd ask  
7 that to be stricken.

8 Furthermore, that testimony, along with  
9 the testimony Mr. Prudhomme provides regarding potential  
10 leaks in the system and how that would be handled, as  
11 well as the potential impact on downstream plants, is  
12 cumulative of the testimony given by Mr. Dorr,  
13 Mr. Tetrick, Mr. Holmes and parts of Mr. Lee's testimony.  
14 So we would ask that that testimony be stricken as  
15 cumulative. These witnesses are all testifying in  
16 support of vacuum operations, and to have all of them  
17 testify to exactly the same testimony would just add  
18 needless delay and unnecessary time to this hearing.

19 JUDGE EYSTER: Mr. Christopherson.

20 MR. CHRISTOPHERSON: Well, they're all  
21 testifying from different companies. They have, you  
22 know, different wells, different compressors, and  
23 certainly I think that that's testimony that you want to  
24 hear. This is the first one you're going to hear, but I  
25 would think that you'd want to hear that from all the

1 different applicants in this case as to what they intend  
2 to do and what their equipment is. So I don't think the  
3 objection based on cumulative testimony is well taken.  
4 And I think there certainly is a foundation to all this  
5 testimony, and he has the expertise to testify to it.

6 JUDGE EYSTER: I've read through your  
7 motions, and I didn't find persuasive the argument that  
8 it was cumulative. Mr. Prudhomme is speaking on behalf  
9 of Merit, and many of the other witnesses are speaking on  
10 behalf of other companies.

11 I think there's some objections regarding  
12 this being speculative, I don't find that to be the case.  
13 I think that he's testifying with regards to the  
14 intentions of the company and how they would handle  
15 vacuum operations, and I think that's something that's  
16 important for the Commission to investigate.

17 With regards to the lack of foundation,  
18 that's kind of, I think as I indicated yesterday, sort of  
19 comes with the territory here with the nature of the  
20 prefiled testimony, although it certainly appears that  
21 this witness would be an expert with regards to the  
22 testimony that he's offered. And while the rule requires  
23 the facts that it's based upon to be in evidence, you can  
24 certainly inquire into those. So the motion is denied in  
25 its entirety.

1                   Having ruled on that, is there any other  
2                   objections to this testimony being bound into the record?  
3                   Hearing none, it will be bound in.

4                   (Testimony bound in.)

5                                 - - -



**STATE OF MICHIGAN**  
**BEFORE THE MICHIGAN PUBLIC SERVICE COMMISSION**

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|                                         |   |                  |
|-----------------------------------------|---|------------------|
| In the matter, on the Commission's own  | ) |                  |
| motion to consider the appropriate      | ) | Case No. U-16230 |
| regulatory response to proposals by     | ) |                  |
| various producers of natural gas from   | ) |                  |
| Antrim Shale Formation to operate their | ) |                  |
| <u>wells under a vacuum.</u>            | ) |                  |

**DIRECT TESTIMONY OF JAY PRUDHOMME**

- 1    Q.    Please state your full name and address for the record.
- 2    A.    Jay Prudhomme.
- 3    Q.    What is your occupation?
- 4    A.    I am the Vice President of Operations for Merit Energy Company, LLC.
- 5    Q.    Please state your educational and professional qualifications.
- 6    A.    I have a Bachelors of Science Degree in Petroleum Engineering from Texas
- 7        A&M University. I worked for over four years as a field engineer in Texas,
- 8        Oklahoma and New Mexico for Mewbourne Oil Company. I have worked for
- 9        Merit Energy Company for fourteen years as a production engineer, Region
- 10       Manager and Vice President of Operations.
- 11   Q.    Are you a member of any professional societies or groups?
- 12   A.    Yes. I am a member of the Society of Petroleum Engineers, Michigan Oil and
- 13       Gas Association and the Western Energy Alliance. I am also on the Board of
- 14       Directors of the Michigan Oil Gas Association and the Western Energy Alliance.
- 15   Q.    Have you reviewed the Commission's April 27, 2010 Order Opening Docket,
- 16       Staying Proceedings and Closing Docket?

1 A. Yes.

2 Q. Have you reviewed the petition for leave to intervene filed in this case by Merit  
3 Energy Company, LLC?

4 A. Yes.

5 Q. Please explain the purpose of your testimony in this proceeding.

6 A. I assisted with the preparation of the petition for leave to intervene and the exhibit  
7 filed by Merit Energy Company, LLC. The purpose of my testimony is to  
8 support Merit Energy Company, LLC's request to operate Antrim gas wells under  
9 a vacuum.

10 Q. Please describe where Merit Energy Company, LLC proposes to operate Antrim  
11 gas wells under a vacuum.

12 A. Merit Energy Company, LLC is requesting that existing and any future Antrim gas  
13 wells be allowed to be produced under a vacuum. The legal description of the  
14 lands on which the Antrim gas wells operated by Merit Energy Company, LLC  
15 are or may be located is described on Exhibit A-33 (JP-1).

16 Q. Has Merit Energy Company, LLC recently acquired additional Antrim gas wells in  
17 Michigan?

18 A. Yes, we recently purchased all of Petroleum Development Corporation's assets  
19 in the state of Michigan. The legal description of the lands on which Antrim gas  
20 wells operated by Merit Energy Company, LLC that we recently acquired from  
21 Petroleum Development Corporation are or may be located is described on  
22 Exhibit A-34 (JP-2).

1 Q. Please explain why approval is being sought to operate Antrim gas wells under a  
2 vacuum.

3 A. By operating some or all of the Antrim gas wells under a vacuum, both the  
4 production rate and the ultimate amount of gas recovered will be increased.

5 Q. Please explain the manner in which it is proposed that Antrim gas wells will be  
6 operated under a vacuum.

7 A. A combination of compressors, each pulling on a single well, and a single  
8 compressor pulling on multiple wells, will be used depending on the quality of the  
9 well and the size of the compressor installed. The methodology for determining  
10 placement of the compressors is to test each well with a mobile compressor unit  
11 for 3 to 5 days; then based on the results a plan is formed as to which wells will  
12 have their own dedicated unit and which wells may be grouped into a single  
13 machine.

14 Q. Is the strength of the well and piping material where a vacuum may exist  
15 sufficient to withstand stresses developed in vacuum service?

16 A. Yes. We have verified that all existing well casing, well head piping, valves,  
17 flowlines, compressors and other components are suitable for vacuum service  
18 and have sufficient collapse resistance which will exceed the maximum collapse  
19 pressure which will be experienced even if operated under a full vacuum. All  
20 future Antrim gas wells, piping, valves, flowlines, compressors and components  
21 that may be operated under a vacuum in this project will be of a similar strength.

22 Q. What measures will be undertaken to address ramifications of potential leaks in  
23 well and piping materials operated under a vacuum?

1 A. All well and piping components and connections are subject to pressure testing  
2 after construction and any leaks eliminated. Those portions of the system  
3 operating under positive pressure are subject to leak detection through the use of  
4 combustible gas detectors and periodic pressure testing. Oxygen sensors will be  
5 installed at the outlet of the Central Processing Facility (CPF) to detect any  
6 oxygen being introduced into the high pressure gathering lines, which deliver gas  
7 to the stripping plants. Alarms and operator callouts are configured to trigger if  
8 averages over 3 PPM for 20 minutes. If an instantaneous level of 30 PPM or  
9 greater is detected, the CPF compression is automatically shut down. This  
10 method detects any small leaks which may exist from the wellhead to the outlet  
11 of the CPF and protects any steel components of the gathering system from  
12 damage due to corrosion caused by the introduction of oxygen. Vacuum  
13 pressure sensors will be installed at the suction of each vacuum compressor with  
14 the low and high pressure kills being set within 20% of normal operating  
15 conditions. For example, if a unit is running at 15 inches of vacuum the high and  
16 low pressure kills would be set at 12 inches and 18 inches respectively. If for  
17 some reason there was a major mechanical failure on the suction side of the  
18 compressor, the vacuum would be lost or greatly reduced and the machine would  
19 be shut down as the pressure passed the kill point. This method prevents  
20 amounts of oxygen from being introduced into the system. The technology used  
21 to measure this pressure change and shut the machine down if it varies outside  
22 the set points is typically a Murphy switch gauge or comparable brand gauge.  
23 This technology has been around for many years. It is the industry standard for

1 safety kills and is very reliable. All gas lines to the CPF are constructed of non-  
2 corroding polyethylene materials so there is no issue of integrity loss due to  
3 oxygen-induced corrosion in the low pressure gathering system. We are  
4 currently reviewing the gas lines to the CPF that we recently purchased from  
5 PDC to determine their construction.

6 Q. What measures will be taken to prevent impacts to operations of processing  
7 plants downstream of the CPF with regard to potential leaks in Antrim gas wells  
8 and related piping systems operating under vacuum?

9 A. The contracts between producers and the plant owner set forth a detailed  
10 procedure for monitoring and responding to oxygen content levels at the  
11 downstream CO2 removal plant and at the CPF. Depending upon the oxygen  
12 concentration detected at the plant or in the pipelines connecting directly to the  
13 plant, notices are sent out by the plant operator to producers directly requesting  
14 that certain actions be taken. Merit Energy Company has agreed to implement  
15 the procedure set forth in the contract; and in this manner, the potential impact of  
16 leaks in Antrim gas wells and related piping systems operating under a vacuum  
17 on downstream plants will be addressed and mitigated.

18 Q. Please explain how Merit Energy Company, LLC will comply with the provisions  
19 of Part 615 Rules 324.1016 and 324.1015 of the Michigan Department of  
20 Environmental Quality oil and gas regulations?

21 A. The construction standards specified in Rule 1016 will be followed as to the  
22 compressors to which the Rule applies. Typical wellhead compression does not  
23 meet the 150 horse power threshold outlined in the Rule but for instances where

1 larger horse power compressors may be used to pull a vacuum on multiple wells  
2 the Rule will be followed. Merit Energy Company, LLC will also comply with Rule  
3 1015 dealing with nuisance noise and all other requirements of Michigan's oil and  
4 gas regulations.

5 Q. Does Merit Energy Company, LLC own any treating plants?

6 A. Yes, Merit Energy Company, LLC owns the Kalkaska Gas Processing Plant  
7 located at 1510 Thomas Road, SW, Kalkaska, Michigan.

8 Q. What additional measures do you propose for oxygen monitoring?

9 A. I recommend that automatic shut-in valves be used in conjunction with the  
10 oxygen monitoring.

11 Q. Explain how the automatic shut-in valves would work?

12 A. These motorized valves would be located downstream of the custody transfer  
13 point and tied into the oxygen monitoring system. This equipment would be paid  
14 for by the operator, but maintained and proved by the pipeline gathering  
15 company. If levels of 3 PPM to 10 PPM O<sub>2</sub> are detected by the Oxygen  
16 monitoring system, then the operator would have 6 hours to correct the issue or  
17 the motorized valve would close. If levels of 10 PPM to 29 PPM O<sub>2</sub> are detected  
18 by the oxygen monitoring system, then the operator would have 20 minutes to  
19 correct the issue or the motorized valve would close. Any reading of more than  
20 30 PPM would immediately relay for the valve to close.

21 Q. Will Merit Energy Company, LLC abide by the provisions of the Michigan Gas  
22 Safety Standards?

23 A. Yes.

- 1 Q. Does this conclude your direct testimony?
- 2 A. Yes.

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1 JUDGE EYSTER: Any objections to the  
2 exhibits? What were those exhibits labeled as?

3 MR. CHRISTOPHERSON: Your Honor, I think  
4 they are A-33 (JP-1) and A-34 (JP-2).

5 JUDGE EYSTER: A-31 --

6 MR. CHRISTOPHERSON: 33. And A-34.

7 JUDGE EYSTER: Any objections to those  
8 two exhibits being admitted into evidence? Hearing none,  
9 they're admitted.

10 Cross.

11 MR. SAGE: Yes, your Honor. Thank you.

12 JUDGE EYSTER: Mr. Sage.

13 MR. SAGE: Thank you.

14 CROSS-EXAMINATION

15 BY MR. SAGE:

16 Q Good morning, Mr. Prudhomme.

17 A Good morning.

18 Q How are you?

19 A I'm doing well, thank you.

20 Q I'm going to go through some background information, so  
21 just bear with me a moment.

22 Are you presently the V.P. of operations?

23 A Yes, sir.

24 Q And is it the region or a particular region, or is it the  
25 whole company?



1 A It's a division, sir. Our company is divided into two  
2 divisions, a north and a south.

3 Q And you're V.P. of?

4 A The north division.

5 Q That would include Michigan?

6 A Yes, sir.

7 Q You got the cold weather, then?

8 A Yes, sir.

9 Q O.K. And speaking of Michigan, do you spend a lot of  
10 time in Michigan?

11 A I come up about 12 times a year.

12 Q O.K. And is the intent to just oversee what's going on  
13 as far as the operations here in Michigan?

14 A Yes, sir.

15 Q And am I correct, though, you didn't participate yourself  
16 personally in the drilling or exploration or operations,  
17 you supervise them?

18 A That is correct.

19 Q And in that context, as it relates to your experience in  
20 Antrim, I'm assuming that you rely on others to do the  
21 drilling and then operations of the Antrim formations in  
22 Michigan?

23 A Yes, sir.

24 Q I noticed in your testimony on page 2 you're referring to  
25 the fact you did review your petition to intervene in

1       this instance; am I correct?

2   A     Yes, sir.

3   Q     And I guess in response to counsel's questions, you did  
4       review your testimony prior to taking the stand today,  
5       too?

6   A     Yes, sir.

7   Q     Now, as it relates to your petition, you stated that you  
8       assisted in the preparation of it. Did you provide  
9       portions of it?

10  A     I provided the exhibits.

11  Q     The exhibits. O.K.

12  A     Yes, sir.

13  Q     And then the testimony was drafted by counsel or somebody  
14       else, whoever it may be?

15  A     Yes, sir.

16  Q     And you did review it and approve of it?

17  A     Yes, sir.

18  Q     And you're in agreement with it?

19  A     Yes, sir.

20  Q     O.K. Now, in the petition it doesn't reference the fact  
21       that you've been involved, or informed by, you being the  
22       company, been informed by the Michigan Public Service  
23       Commission Staff that you had various wells on vacuum; am  
24       I correct?

25  A     That's correct.

1 Q O.K. And you did have, you again -- I'm sorry, it's not  
2 you personally -- Merit did operate wells in Michigan  
3 during the period of 2006 and some point in 2008, wells  
4 on a vacuum; am I correct?

5 A Yes, sir.

6 Q O.K. Is there some reason why you didn't provide in the  
7 petition that information to advise the Commission as  
8 well as the other individuals in this proceeding that you  
9 were, had gone on vacuum?

10 A No, sir.

11 Q O.K. Did you consider doing that?

12 A No, sir.

13 Q And any particular reason why you wouldn't offer it?

14 MR. CHRISTOPHERSON: Well, your Honor, at  
15 this point in time I'm going to object. The petition is  
16 signed by counsel, and we prepared it and signed it and  
17 filed it, there's certainly no requirement that  
18 additional information be in it, so I don't think these  
19 questions are proper to this witness at this point.

20 JUDGE EYSTER: Mr. Sage.

21 MR. SAGE: I asked him the question  
22 whether or not he reviewed the petition, did he approve  
23 of the petition, he said yes, and so therefore, I think  
24 I'm entitled -- he's representing the company, it's the  
25 petition of the company. If counsel wants to take the

1 stand, I'll ask him the questions. But the fact is, is I  
2 think I'm entitled to ask this gentleman why they didn't  
3 present it to the Commission and/or to the other people  
4 that they were on vacuum so we'd all have been aware of  
5 it back then and could have done some work on it.

6 JUDGE EYSTER: Well, the objection is  
7 overruled. Please proceed.

8 Q (By Mr. Sage): Do you understand the question?

9 A Could you repeat it, please?

10 Q I forgot it. Was there any particular reason why you  
11 didn't provide in the petition this information?

12 A No, sir.

13 Q And but you did -- and I asked you, I guess maybe I  
14 didn't, I want to make sure. Did you consider offering  
15 this information?

16 MR. CHRISTOPHERSON: Well, and I think  
17 we're getting very close to an attorney/client privilege  
18 here. I mean the petition again was signed by counsel,  
19 and presumably, not presumably, but obviously was  
20 between, discussions between counsel and Mr. Prudhomme  
21 and Merit, so to the extent that he has to answer this  
22 question based on conversations he had with counsel, I  
23 object on the basis of privilege.

24 MR. SAGE: I didn't ask him about  
25 counsel, your Honor.

1 MR. CHRISTOPHERSON: Well, but the  
2 question is open-ended towards that end.

3 JUDGE EYSTER: I have not heard any  
4 questions regarding discussions between this witness and  
5 counsel, so the objection is overruled.

6 Q (By Mr. Sage): Can you answer the question?

7 A Could you repeat it one more time?

8 MR. SAGE: Could you repeat the question,  
9 please? I'm sorry to do that. Let me do it this way --  
10 let me go ahead and I'll try it again, your Honor.

11 Q (By Mr. Sage): In preparing, and I'm not asking you  
12 anything about counsel, in preparing your portion or  
13 reviewing the petition to intervene, did you have  
14 conversation with anybody in your company as to whether  
15 or not you should consider advising the Commission and/or  
16 the parties in this case regarding the prior vacuum  
17 operations in 2006 through 2008?

18 A No, sir.

19 Q And likewise, so I can cut through some of this, as it  
20 relates to your company, when you prepared your -- well,  
21 let me do it this way: Did you prepare your testimony?

22 A Yes, sir.

23 Q And you reviewed it?

24 A Yes, sir.

25 Q And in that context, and again, not asking anything about  
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1 counsel, did you have a conversation with anybody in the  
2 company as to should we include in there representation  
3 of vacuum operations?

4 A No, sir.

5 JUDGE EYSTER: Were you aware at the time  
6 of preparing your testimony that you had engaged in  
7 vacuum operations?

8 A Yes, sir.

9 MR. CHRISTOPHERSON: Just as a point of  
10 clarification, there's a letter from the MPSC, I mean  
11 it's in the discovery, and I think you'll get to it, so  
12 the MPSC was aware of this.

13 MR. SAGE: The MPSC Staff was. And  
14 you're very preceptive, I will get to that.

15 Q (By Mr. Sage): All right. In preparation of your  
16 testimony, did you review the records pertaining to  
17 Merit's operation under vacuum?

18 A The records?

19 Q Yes.

20 A I'm not familiar with what you're speaking of.

21 Q Let me do this. You received a request for production of  
22 documents and discovery requests, correct?

23 A Yes, sir.

24 Q And I'm assuming you participated in some manner in  
25 responding to those?

1 A A large portion, yes, sir.

2 Q And in that context, and also in context of preparing to  
3 testify, not only in your draft testimony -- or not  
4 draft -- your written testimony, but today, have you  
5 reviewed those records?

6 A Yes, sir.

7 Q So you're familiar with them?

8 A Yes, sir.

9 Q Now, in those records did you review any conclusions or  
10 opinions or recommendations that arose out of operating  
11 under vacuum in 2006 through 2008?

12 A Yes, sir.

13 Q And let me do it this way since I asked you three things,  
14 and one is, did you arrive at any conclusions?

15 A Yes, sir.

16 Q And you being the company?

17 A Uh-huh.

18 Q O.K. And did you participate in those conclusions?

19 A Yes, sir.

20 Q O.K. And these are conclusions as to what occurred  
21 during 2002 -- or 2006 and 2008?

22 A Yes, sir.

23 Q And we'll get the exact dates best I can later.

24 A All right.

25 Q What was the conclusion that was reached by Merit?

1 A That pulling wells on vacuum, we could increase rate and  
2 recoverable reserves.

3 Q And did that occur, from looking at the data itself?

4 A Yes, sir.

5 Q O.K. Well, we'll get to that. Was there any  
6 recommendations besides the conclusions?

7 A No, sir.

8 Q Now, with that recommendation -- or that conclusion, why  
9 wouldn't you provide that to the Commission and to the  
10 parties here in your testimony so that we would all have  
11 been aware of that?

12 A I believe I did. I stated in -- let's see.

13 Q Go to page 3, line 3, I think that's what you're looking  
14 for.

15 A Yes, that's what I'm looking for.

16 Q O.K. But again, just so we'll -- we're going to go into  
17 that in some detail. But at the present time, I don't  
18 see any reference to the fact that you were on vacuum in  
19 2006 through 2008, correct?

20 A That's correct.

21 Q And so it's just essentially a conclusionary statement;  
22 am I correct?

23 A Yes, sir.

24 Q O.K. So you would agree at that point in time, you're  
25 not advising the Commission nor the parties in this case



1       regarding that you were on vacuum during 2006 and 2008?

2   A     That's correct.

3   Q     O.K.

4   A     Mr. Sage, do you mind if I grab my water?

5   Q     No problem. Any time you need a break, just ask. You  
6       have to ask the judge on that one.

7                 JUDGE EYSTER: You're doing a fine job.

8                 MR. SAGE: Can I do the ruling?

9                 JUDGE EYSTER: We can't go quite that  
10       far, but nice try.

11                MR. SAGE: All right.

12                JUDGE EYSTER: You'd probably have to  
13       take a pay cut for that, I'm not sure you'd want it.

14                MR. SAGE: You're also preceptive.

15   Q     (By Mr. Sage): Just a generic area question, since  
16       again, I'm going to assure you, we're going to get more  
17       detail, but I just want to get some more overview. Where  
18       would you propose to do these vacuum operations? I mean  
19       you've got several properties in Michigan; am I correct?

20   A     Yes, sir.

21   Q     And is it your intent to take and put them all on vacuum?

22   A     I can't definitely say all of them on vacuum. But it  
23       would be the vast majority of the Antrim wells on vacuum.

24   Q     O.K. And in that instance, when you're talking wells, I  
25       used the term project, Mr. Prudhomme, but that's -- and

1       you used wells, and that's fine, too, but is it your  
2       understanding that you would be putting vacuum on the  
3       wells then?

4   A    Yes, sir.

5   Q    You're familiar with the Albert Loud project?

6   A    Yes, sir.

7   Q    And am I correct, that is the project that was on vacuum  
8       in 2006 through 2008?

9   A    That is correct.

10   Q   And hopefully I can recall from your memory, you're a lot  
11       younger than I am, so can you tell me the exact dates  
12       when it began vacuum and when it ended?

13   A    I believe that it was, began in around June of 2006, and  
14       it ceased to exist on August 10 of 2008.

15   Q    I'm sorry, Jay, what was --

16   A    It ceased to exist on August 10 of 2008.

17   Q    And I mean, Mr. Prudhomme.

18   A    That's all right.

19   Q    And the first one was June?

20   A    I believe it was June of 2006, if memory serves me.

21   Q    O.K.

22   A    It wasn't an instantaneous, it put wells on vacuum over a  
23       little bit of time.

24   Q    All right. Now, at the time -- well, did you participate  
25       in the decision to put them on vacuum?

1 A No, sir, I did not.

2 Q Who did, from Merit?

3 A It was, his name was Dan Zilmer, Z-i-l-m-e-r.

4 Q And Mr. Zilmer still works for Merit?

5 A That is correct.

6 Q And what is his position?

7 A He is our manager of product marketing.

8 Q What was his position at that time?

9 A He was the region manager of our Michigan region.

10 Q Did you have discussions with him prior to these wells  
11 going on vacuum?

12 A About this issue, no, sir.

13 Q About this issue, being the Albert Loud project going on  
14 vacuum?

15 A No, sir, I did not. Are you referring to prior to him  
16 making the decision to put them on vacuum?

17 Q Yes, sir.

18 A No, I did not.

19 Q O.K. Were you his supervisor at the time?

20 A No, sir, I was not.

21 Q Who was his supervisor?

22 A His supervisor was Rusty Ginnetti.

23 Q Is Mr. Ginnetti still there?

24 A Yes, sir, Rusty is still with the company.

25 Q What was your position at that time?

1 A I had the operation manager's position, division  
2 operations manager's position of our south division at  
3 that time, which all the southern half of the United  
4 States.

5 Q You had the warm part?

6 A Yes, sir.

7 JUDGE EYSTER: What did you do wrong?

8 A I'm sorry?

9 JUDGE EYSTER: I said what did you do  
10 wrong? You don't have to answer that.

11 A I think it's a privilege to work in the north.

12 JUDGE EYSTER: All right. There we go.

13 Q (By Mr. Sage): When did you become aware of the fact  
14 that the Albert Loud project was on vacuum?

15 A I became aware of it when I came back to the north -- oh,  
16 I became aware that the wells had been on vacuum when I  
17 came back in the north and started intervening in this  
18 issue.

19 Q And when was that?

20 A That would have been sometime in the summer of 2010.

21 Q So you had no knowledge of this up until that time, that  
22 these wells were on vacuum?

23 A That they had been on a vacuum from '06 to '08, no, sir.

24 Q O.K. And am I correct they're not on vacuum now?

25 A That is correct.

1 Q O.K.

2 JUDGE EYSTER: You became aware of that  
3 through this proceeding or through --

4 A Yes, sir.

5 JUDGE EYSTER: O.K.

6 Q (By Mr. Sage): The company obviously was aware of it?

7 A Yes, sir.

8 Q When you became aware of it, did you have any discussion  
9 with anybody regarding, not counsel, with anybody else  
10 other than counsel as it relates to, hey, we're on  
11 vacuum, and the consequences of it?

12 A When I had the discussion, we weren't on vacuum.

13 Q I understand that. But you were -- did you have a  
14 discussion regarding previously being on vacuum in 2006  
15 through 2008 and the discussion would have occurred I'm  
16 assuming in 2010?

17 A Yes, sir, I did.

18 Q And who was that with?

19 A That was with Dan Zilmer.

20 Q O.K. And did that discussion include the fact that there  
21 may be a violation of Rule 17 of the Commission's Rules?

22 A Yes, sir, it did.

23 Q And did anybody indicate to you that -- and again, not  
24 counsel. Any question I have, keep him out, please, I  
25 mean it's appropriate not to have to discuss that.

1 But at that time, did you have a  
2 discussion with Mr. Zilmer regarding should we do  
3 something with advising the Commission of this?

4 A The Commission knew that we had been under vacuum. When  
5 they sent us a letter to stop vacuum, we did it  
6 immediately.

7 Q O.K.

8 A So I didn't feel like it was necessary to call the  
9 Commission and let them know of something they already  
10 knew.

11 Q Did you ask anybody whether or not they knew when they  
12 went on vacuum that the Commission Rule 17 prohibited  
13 that?

14 A Yes, sir, I did ask that.

15 Q And what was the answer to that?

16 A They did not know that it was against MPSC rules to pull  
17 wells under a vacuum in the State of Michigan.

18 Q So is it your understanding they never read the rule?

19 A Yes, sir, that is my understanding.

20 Q We've been talking about the Albert Loud project. How  
21 many wells, during the time it was on vacuum, how many  
22 wells were in that project?

23 A I do not know that number. I believe it was in my  
24 discovery.

25 Q I do. Well, would you refer to your Exhibit A-33,  
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1 please.

2 A Yes, sir.

3 Q I'm assuming that's a current list of the wells?

4 A This is a current list of all of our Antrim wells that we  
5 have, both A-33 and A-34, that Merit operates in the  
6 State of Michigan.

7 Q And out of those wells, do you know how many were in  
8 existence in 2006 through 2008?

9 A I do not know the exact number, no, sir.

10 Q Is it your best estimate at the present time that it was  
11 approximately the same number that's there?

12 A Yes, sir.

13 Q And I say the same number that's there, 106 wells?

14 A That's the total number of wells that we had prior to our  
15 Petroleum Development Corporation acquisition, yes, sir.

16 Q And that's essentially, the 106 wells, is that the Albert  
17 Loud project?

18 A No, sir, that's multiple projects.

19 Q How many of the 106 is in the Albert Loud project?

20 A It appears that 72 are in the Albert Loud project.

21 Q O.K.

22 MR. SAGE: May I approach the witness,  
23 your Honor?

24 JUDGE EYSTER: Yes.

25 (Document provided to the witness.)

1 MR. CHRISTOPHERSON: Can I get a copy of  
2 that, too?

3 MR. SAGE: May I approach? This is a  
4 copy for your Honor.

5 JUDGE EYSTER: Thank you.

6 Q (By Mr. Sage): Mr. Prudhomme, I'm going to hand you a  
7 document, it hasn't been identified as an exhibit yet,  
8 but it has the discovery response, one of them that I  
9 asked you, and it has attachments. Would you review that  
10 for a moment please and tell me if you can identify it?  
11 Have you had a chance to review that?

12 A Yes, sir.

13 Q And can you identify those documents as documents that  
14 you provided in response to a discovery request that we  
15 sent to you?

16 A That is correct.

17 MR. SAGE: O.K. I don't know how you  
18 want to number these, your Honor.

19 JUDGE EYSTER: Let's go off the record.

20 (Document marked for identification by the Court  
21 Reporter as Exhibit No. I-1.)

22 JUDGE EYSTER: Back on the record.

23 Q (By Mr. Sage): I'm going to hand you now a clean copy,  
24 since I saw you writing on yours. This is a proposed  
25 Exhibit I-1, and again, if I understand it correctly,

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1       it's identical to the one you just reviewed, but to  
2       assure yourself, look at that real quick, and then I'm  
3       going to ask you some questions on it, if I may.

4   A    Yes, sir.

5   Q    And am I correct, that's a copy of a portion of the  
6       documents you provided to us in response to discovery?

7   A    That's correct.

8   Q    And so the record's clear, there's two lists,  
9       Mr. Prudhomme, as it relates to the Antrim wells capable  
10      of vacuum operations, one is at the very beginning of  
11      that document and one is at the end. Do you see that?

12   A    Yes, sir.

13   Q    And there are -- and the best you can tell, those are  
14      identical; am I correct?

15   A    Yes, sir.

16                               MR. SAGE: And the only reason, your  
17      Honor, we have those is they came in that package and I  
18      didn't want to --

19   A    Oh, there's two of them in there?

20   Q    (By Mr. Sage): Yes. And I didn't want to disrupt it.  
21      So you can disregard one.

22   A    O.K.

23   Q    The last one. All right. In that document, Exhibit I-1,  
24      there's a map. Do you see that?

25   A    Yes, sir, I do.

1 Q And the reason for going to that right now, we will  
2 return to it probably a few times, is in the middle of  
3 that map, there's a shaded area. Is that shaded area the  
4 Albert Loud project?

5 A Yes, sir.

6 Q And is this map as of today or as of 2006 through 2008?

7 A I believe this was as of 2008.

8 Q O.K. And I know it's going to be hard to read, but in  
9 the middle of that it refers to 79 wells. Am I reading  
10 that correctly?

11 A Yes, sir.

12 Q O.K. And as best of your knowledge, there were 79 wells  
13 at that point in time in the Albert Loud?

14 A According to this sheet.

15 Q O.K. And that, after that, then, are wells -- were the  
16 wells drilled then?

17 A I do not believe there have been any wells drilled since  
18 this time.

19 JUDGE EYSTER: Since 2008?

20 A Yes, sir.

21 Q (By Mr. Sage): Mr. Prudhomme, just so we don't look like  
22 we tricked you, it says Albert Loud and Clinton Commins,  
23 so I'm assuming there's at least some other wells?

24 A There possibly is, yes, sir.

25 Q A couple of them maybe?

1 A Yes, sir.

2 Q And I wasn't intending to trick you, my assistant showed  
3 it to me.

4 A I understand.

5 Q Or my associate. All right. Do you know the reference  
6 is to 6,200 Mcf per day, per d?

7 A I believe that's the rate that those assets, that unit  
8 was making.

9 Q For all of it?

10 A Yes, sir.

11 Q O.K. When the Albert Loud project went on vacuum, do you  
12 know whether or not, from your review of the records or  
13 discussions with people at Merit, additional equipment  
14 was necessary?

15 A Yes, sir, it was.

16 Q O.K. And could you explain to us what type of additional  
17 equipment was necessary?

18 A We put casing head compressors on some of the wells, and  
19 wellhead compressors.

20 Q I missed the last one.

21 A Wellhead compressors.

22 Q O.K. Can you distinguish for me on the record what's the  
23 difference between a casing head --

24 A There is no difference.

25 Q O.K. Location is a difference?

1 A I'm sorry?

2 Q You said casing head and wellhead.

3 A Well, it would be wellhead compressors. I misspoke.

4 Q Oh, I got you. O.K. Thank you.

5 JUDGE EYSTER: And can you explain  
6 exactly what that is?

7 A It's a compressor that is located somewhere in the line  
8 between the CPF and the well in order to pull additional,  
9 to lower the line, the wellhead pressure on a well.

10 JUDGE EYSTER: And it can be anywhere  
11 between those two points?

12 A Yes, sir, it can.

13 JUDGE EYSTER: O.K.

14 Q (By Mr. Sage): In that context, two things: One is, do  
15 you know what size compressors those were?

16 A No, sir, I do not.

17 Q You didn't see that in the records?

18 A I do not remember what size that we submitted for the  
19 compressors that are currently out there.

20 Q You don't go out and look in the fields?

21 A I don't -- I haven't had the luxury to go out and look at  
22 all of our fields.

23 Q In the wintertime?

24 A Especially in the wintertime.

25 Q O.K. The ones you've looked at, you have no recollection

1 right now the size of those compressors?

2 A Most of them are between 20 horsepower and 100  
3 horsepower.

4 Q O.K. Thank you. And you mentioned between the CPF, and  
5 just so the record is clear, that's the central  
6 production facility?

7 A That is correct.

8 Q And what is at a central production facility?

9 A I'm sorry?

10 Q What is at, what are the -- what's the equipment at a  
11 central production facility?

12 A There's separation equipment, there's storage equipment,  
13 there's sales meters and there's compression.

14 JUDGE EYSTER: Storage for gas?

15 A Storage for any liquids that are produced in association  
16 with the gas.

17 JUDGE EYSTER: And the separation is just  
18 to separate liquids?

19 A The gas from the liquids, yes, sir.

20 JUDGE EYSTER: O.K. Any other treatment  
21 that takes place there?

22 A No, sir, not that I'm aware of.

23 Q (By Mr. Sage): And you indicated there was a compressor  
24 there as well?

25 A Yes, there's compressors at the central CPFs.

1 Q And those are the larger compressors; am I correct?

2 A That is correct.

3 Q Does yours range around, someone else mentioned around  
4 900 horsepower?

5 A They can be that size or even a little larger, up to  
6 1,200, 1,500 horsepower.

7 Q Why would you have an additional compressor, you had said  
8 a wellhead compressor, if you've got compression at the  
9 CPF?

10 A Because a lot of times the compression at the CPF, either  
11 due to distances from wells or the size of the  
12 compressor, can not pull the wells down as far as we  
13 would like to pull them.

14 Q Now, the distance from wells, what's, do you -- are these  
15 wells 100 feet from a CPF or 1,000 feet or a mile, could  
16 be a variation?

17 A Some of them are multiple miles.

18 Q O.K. So therefore, then, when you say in between, you  
19 put the compressor there, additional one?

20 A That's correct.

21 Q Are those the same that have been, at least I have  
22 discussed, as a booster?

23 A Yes, sir.

24 Q O.K. Do you know whether or not, and this is again  
25 reviewing your records and/or discussion with individuals

1 at Merit, at any time whether or not prior to going on  
2 vacuum in 2006 they notified the offset projects?

3 A I do not believe they did.

4 JUDGE EYSTER: Notified who?

5 MR. SAGE: The offset projects, the  
6 adjoining leasehold owners.

7 Q (By Mr. Sage): Have you read Rule 17?

8 A Yes, sir.

9 Q Is it your understanding Rule 17 would require the  
10 notification of adjoining lease owners?

11 A I do not remember.

12 Q Do you recall any discussions with anybody at Merit that,  
13 why they didn't notify the adjoining lease owners?

14 A We did not know that the Rule 17 existed and did not know  
15 that that was a requirement, if that is in Rule 17.

16 Q O.K. Let me approach.

17 MR. SAGE: May I approach, your Honor?

18 JUDGE EYSTER: Yes.

19 MR. SAGE: And, Mr. Christopherson, I  
20 highlighted it.

21 MR. CHRISTOPHERSON: O.K. That's fine.

22 (Document provided to the witness.)

23 Q (By Mr. Sage): Would you look at Rule 17 for just a  
24 second, please.

25 A O.K.

1 Q Does that help you recall what it says?

2 A Yes, sir, it does.

3 Q And am I correct there's a requirement to notify the  
4 adjoining lease owners?

5 A Yes, sir, there is.

6 Q And do you know what the reason for that rule is, is to  
7 advise people and protect correlative rights; is that  
8 your understanding of it?

9 A I would -- if that's what you say that is.

10 Q Thank you.

11 JUDGE EYSTER: What's your understanding  
12 of why that rule would be in place?

13 A Are you asking me, sir?

14 JUDGE EYSTER: Yes.

15 A It would be to notify the offset operators to let them  
16 know that you are pulling your wells lower than zero PSI.

17 JUDGE EYSTER: And why would that be  
18 necessary?

19 A I would assume so that if they were wanting to do the  
20 same thing, they would know that you were doing it, for a  
21 correlative rights issue.

22 JUDGE EYSTER: O.K. Mr. Sage.

23 MR. SAGE: Thank you.

24 Q (By Mr. Sage): And isn't the reason is that when you,  
25 whether you're on vacuum or otherwise, there's an



1 opportunity because of the Antrim formation to drain  
2 offset projects?

3 A I don't know what the drainage radius is for an Antrim, a  
4 particular Antrim well.

5 Q And you're the operations manager of Merit?

6 A That's correct.

7 Q And are you familiar with fractures?

8 A Yes, sir, I am.

9 Q And is it your understanding fractures are limited by  
10 lease lines?

11 A I would not think that fractures are limited by lease  
12 lines.

13 Q O.K. To the extent that they're not limited by lease  
14 lines, if you placed a well within 330 feet, is it your  
15 understanding that it wouldn't drain, potentially drain  
16 from an adjoining acreage?

17 A There's a potential for it, but I wouldn't say that that  
18 is a definite.

19 Q Oh, I agree with that part. But you agree there is a  
20 potential?

21 A Depending on how the fracture system of the shale was  
22 around that particular well, there would be a potential.

23 Q And that potential would increase when you go on vacuum,  
24 wouldn't it?

25 A Yes, sir.

1 Q Have you seen in any of your review of records any  
2 limitation on the extent of fractures as it relates to  
3 the 106 wells that Merit operates?

4 A No, sir.

5 Q Would you agree with me it could cross township lines?

6 A A fracture?

7 Q Sure.

8 A I would agree that yes, there's fractures that would  
9 probably cross township lines.

10 Q Fractures could go for miles; am I correct?

11 A I don't know the extent of what the fractures system  
12 could be.

13 Q Have you seen any communications between wells?

14 A I have not personally witnessed communication between  
15 wells.

16 Q Neither have I because I can't go underground, but have  
17 you looked at records that have --

18 A I have not seen anything that indicates we have  
19 communication between wells.

20 Q Any of your wells?

21 JUDGE EYSTER: Just a moment. Just so  
22 the record is clear, could you describe what  
23 communication between wells means?

24 A Where you would see the effects of one well affecting  
25 another well, the production rates or where the

1 reservoir's continuous and there's continuity between two  
2 wells, the pressures of one affects the other.

3 JUDGE EYSTER: And what does that tell  
4 you in terms of what's going on underground?

5 A It tells you that the two formations are in  
6 communication, two wells are in communication, meaning  
7 that the, the homogenatia of the reservoir is such that  
8 the gas can flow, the product can flow from one well to  
9 another essentially.

10 JUDGE EYSTER: O.K. Mr. Sage.

11 MR. SAGE: Thank you.

12 Q (By Mr. Sage): So it's your testimony that the Albert  
13 Loud, you haven't seen any communication between any of  
14 the wells within the Albert Loud Field?

15 A I have not personally.

16 Q O.K. Personally. But the fact is they could exist and  
17 you don't even know it?

18 A That is a possibility.

19 Q Have you ever discussed this with anybody at Merit as to  
20 the communication between wells?

21 A No, sir.

22 Q Please return to Exhibit I-1. And, Mr. Prudhomme, I'm  
23 referring to the map, if you would, please, and it's page  
24 7 of 12. In the Albert Loud Field, are there any  
25 horizontal wells?

1 A I believe there are.

2 Q Were there horizontal wells in --

3 A Oh, I'm sorry. Go ahead.

4 Q I didn't mean to interrupt you.

5 A Are there any horizontal wells in 2008?

6 Q Yeah. That's why I wanted to go back, so the record is  
7 clear. Between 2006 and 2008, were there any horizontal  
8 wells on the Albert Loud Field?

9 A Let me correct that. I know that there are directional  
10 wells, I'm not sure if there are horizontal wells.

11 Q O.K. Why don't you, then, explain for the record what  
12 the difference between a horizontal well and a directional  
13 well is?

14 A A horizontal well is a well in which you drill vertically  
15 until you get to the productive zone, then you kick off  
16 and go horizontally in that zone. A directional well is  
17 where your surface location is in a different location in  
18 the Y direction than your bottom-hole location. So if  
19 you have an impediment at the surface, such as a lake or  
20 homes or something, you'll drill directionally down to  
21 the productive zone and intersect the productive zone  
22 almost vertically at that point.

23 Q And from looking at the Albert Loud map that you  
24 provided, and considering you're the operations manager,  
25 you are unaware of whether or not any of those are

1 horizontal?

2 A I believe those are directional wells.

3 Q All of them, all the ones that show a line?

4 A Yes, sir, I believe those are directional wells.

5 Q O.K. Can you tell from this map which direction is  
6 north?

7 A Yes, sir.

8 Q Is it the top of the map?

9 A Yes, sir.

10 Q Thank you. The reason, I'm going to have to give you  
11 some direction in a moment. If you go and look at the  
12 eastern part of the Albert Loud Field, I see, which I  
13 believe then you're suggesting are like at least two,  
14 three directional wells?

15 A Yes, sir.

16 Q And those are right on the border of the lease line looks  
17 like?

18 A According to this map, yes, sir.

19 Q You don't -- you're not contesting your own map, are you?

20 A I have not gone to check the locations of the wells in  
21 accordance with this map personally.

22 Q I understand that. But is there some doubt in your mind,  
23 then?

24 A I don't know if this map was made in order to show where  
25 these are in exact relation to the lease lines. It

1 appears as though they're close to the lease line,  
2 though.

3 Q Now, are any of those wells you're going to consider  
4 putting on a vacuum?

5 A I believe so, yes, sir.

6 JUDGE EYSTER: I'm going to ask some  
7 questions about the map. Do you have a copy there?

8 A Yes, sir, I do.

9 JUDGE EYSTER: I just want to make sure I  
10 understand what this represents. You have some circles.  
11 Just the circle without the hatch marking, what's that  
12 represent?

13 A Are you talking about the dark circles?

14 JUDGE EYSTER: No, not the shaded ones.

15 A Those are wellbores. I believe the dark shaded wellbores  
16 are the ones that we put on vacuum.

17 JUDGE EYSTER: O.K. Hang on a second.  
18 So the small circles, empty circles with no hatch  
19 markings on it represents, that's where a well is  
20 drilled?

21 A Yes, sir.

22 JUDGE EYSTER: O.K. And one of those  
23 with a line extending away from it means that it's what?

24 A It's directionally drilled.

25 JUDGE EYSTER: O.K. And then you have  
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1       some circles that have four, I'm calling them hatch  
2       marks, I don't know if that's the proper terminology for  
3       them, but have four lines coming off the circle, kind of  
4       east, west, north, south, what does that represent?

5   A     I believe those are unproductive wells, plugged wells.

6                 JUDGE EYSTER:   O.K.   And then you have  
7       other ones that seem to have, what is it, eight marks?

8   A     Those are producing wells.

9                 JUDGE EYSTER:   O.K.   So the four marks is  
10       unproducing, it's been capped, sealed, cemented, whatever  
11       you guys do.   Then you have, it appears you have at least  
12       one that has a circle inside the outer circle?

13   A     I don't know what that well is, or what that item is.

14                 JUDGE EYSTER:   O.K.   Now, the shaded  
15       areas you indicated were areas placed on vacuum?

16   A     Yes, sir.

17                 JUDGE EYSTER:   O.K.   Now, does that  
18       indicate -- is that to indicate an area that you believe  
19       was being pulled, like in terms of the scope of where  
20       this vacuum was, because some of them seem to have --  
21       well, I can't tell if there's a well there or if it's at  
22       the end of a directional drill.

23   A     I imagine that is the -- those are wells that have the  
24       dark hatch.

25                 JUDGE EYSTER:   So that's where it meets  
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1 the surface?

2 A That would be the bottom-hole location.

3 JUDGE EYSTER: So the shaded area is the  
4 bottom-hole location of that well?

5 A Yes, sir.

6 JUDGE EYSTER: So on the left side,  
7 because I can't tell, some of these you can't tell --  
8 excuse me. On the right side of the chart here, the  
9 second and third shaded areas from the top seem to have a  
10 line between them?

11 A You probably drilled one vertically and then drilled off  
12 of the same wellpad directionally, so you have two wells  
13 on the surface at the same point, but you have two  
14 different bottom-hole locations.

15 JUDGE EYSTER: Do you see anything else  
16 on the map, chart, whatever you'd like to call it, that  
17 I've missed that --

18 A I don't believe so.

19 JUDGE EYSTER: O.K. So let me just, so  
20 the shaded area is the bottom hole, and that indicates  
21 the area that you believe this will be drained from?

22 A That is correct.

23 JUDGE EYSTER: Mr. Sage.

24 MR. SAGE: Thank you, your Honor.

25 Q (By Mr. Sage): I'm a little confused right now. The



1 circle, the circle that's dark, there's like 35 of them,  
2 correct?

3 A Yes, sir.

4 Q And those are the wells that went on vacuum?

5 A That is correct.

6 Q Now, you're not suggesting that those circles is the  
7 radius of the drainage from those wells; am I correct?

8 A No, sir, I'm not.

9 Q O.K. The drainage could be miles?

10 A I don't believe it's miles.

11 Q All right. A mile?

12 A I don't believe it's a mile.

13 Q How do you know?

14 A I don't know for sure.

15 Q O.K.

16 A Jack, you know, the spacing rules for the Antrim dictate  
17 what the drainage is proposed by the Commission.

18 Q The spacing rules propose the drainage?

19 A Yes. That's why you have the spacing requirements for a  
20 particular development is so that you're not draining  
21 each well.

22 Q And is it your testimony, then, a well that's drilled on  
23 80 acres would not drain beyond that?

24 A I'm saying that is what it is put out there in order to  
25 effectively produce the reservoir efficiently and

1 effectively.

2 Q Right. But you'd agree with me a well could, an Antrim  
3 well could drain beyond either a 40-acre spacing or an  
4 80-acre spacing?

5 A There may be a potential for that.

6 Q And your testimony is you have never, you haven't seen  
7 any documents to show you one way or the other?

8 A No, I have not.

9 Q So you're just speculating?

10 A Based on the spacing requirements that were set forth for  
11 the Antrim.

12 Q So you have no personal knowledge, then?

13 A No.

14 Q It's just what you suggest is the spacing order or rule  
15 of the Commission?

16 A Yes.

17 Q Let me stick with this for a moment. If you have a well  
18 on an 80-acre spacing, you would agree with me that  
19 fractures could cross beyond that 80 acres?

20 A There's a potential that fractures could run.

21 Q Do you have any question in your mind whether or not  
22 fractures would stop at the 80 acre?

23 A They may not be continuous.

24 Q Do you know that as a fact?

25 A No, sir, I don't.

1 Q Have you seen any documentation to suggest that?

2 A No, sir.

3 Q If you had a well on 80 acres and the fractures were not  
4 limited to the 80 acres, am I correct that that well  
5 could drill and produce beyond the 80 acres?

6 A If you had fractures that extended past the 80 acres, it  
7 would produce or extend, the influence would be outside  
8 the 80 acres.

9 Q And if you went on vacuum, the influence would increase?

10 A That's correct. But all those fractures would have to be  
11 contiguous, in communication with each other in order to  
12 reach past the 80 acres.

13 Q Well, that would be included if it was within the 80  
14 acres, right?

15 A Yes, sir.

16 Q It couldn't produce anything if they're not connected?

17 A Correct.

18 Q In the package, Exhibit I-1, is the infamous letter of  
19 July 22, 2008. This is the one you referred to earlier?

20 A Yes, sir.

21 Q And for the record, it's page 8 of 12, correct?

22 A Yes, sir, it is.

23 Q And Randy Sanders, he's with Merit, or was with Merit,  
24 and he still is?

25 A He's still with Merit, yes, sir.

1 Q Is this your understanding of the first notification that  
2 you received from the Michigan Public Service Commission  
3 Staff as it relates to the vacuum operations?

4 A Yes, sir.

5 Q And you've looked at your records and you found no other  
6 information?

7 A I was told that this is the first letter that we received  
8 from the MPSC.

9 Q And that was dated July 22?

10 A Yes, sir.

11 Q And then if I understand it correctly, Merit then sent  
12 its letter of August 13, 2008?

13 A Yes, sir.

14 Q And that's page 11 of 12 of Exhibit I-1?

15 A Yes, sir.

16 Q Now, if I understand your earlier testimony, you didn't  
17 participate in either one of those as far as receiving or  
18 sending anything out?

19 A That is correct.

20 Q Have you questioned anybody regarding, and again, not  
21 counsel, but whether or why there was this time period  
22 lapse between July 22 and August 13 to respond?

23 A No, sir, I didn't.

24 Q O.K. Do you know from your discussion with individuals  
25 at Merit or looking at the records, did Merit immediately

1       cease when it received the first letter, i.e., the letter  
2       from the Michigan Public Service Staff, I mean cease  
3       vacuum operations?

4   A    I was told within three days we had all vacuum off of the  
5       wells, three days of notification.

6   Q    Now, in the package on, of Exhibit I-1, there's also two  
7       identical lists, and just if you would please look at the  
8       first one, and it's entitled Antrim Wells Capable of  
9       Vacuum Operations, and it is page 6 of the 12 pages of  
10      I-1. Do you see that?

11   A    Yes, sir.

12   Q    First of all, is that a form that Merit created, or is  
13       that a form that was provided by the Michigan Public  
14       Service Commission Staff, if you know?

15   A    I believe that's a form that Merit created.

16   Q    O.K. And it's dated August 13, 2008, which is the same  
17       date of the letter that we just referred to, correct?

18   A    Yes, sir.

19   Q    Those wells that are listed on the left-hand side under  
20       well names, those are all in the Albert Loud project,  
21       correct?

22   A    Correct.

23   Q    And those are the ones that are referenced in the map  
24       that we just looked at?

25   A    Correct.

1 Q Well, let me backtrack for a second. Fortunately for my  
2 associate. There are some that may have been in the  
3 Clinton?

4 A Clinton Commins, yes, sir.

5 Q So some in Clinton and the rest are in Loud?

6 A Yes, sir.

7 Q And the dates installed, that's date installed of the  
8 compressor?

9 A That's the date that, yes, sir, that the compressor was  
10 installed.

11 Q O.K. And you indicated before that the compressors were  
12 essentially staggered, you're putting a few in at one  
13 time and some more and more and more as it goes down, and  
14 I'm assuming that's based on the dates that we see there,  
15 October 6 and the continuous dates?

16 A Yes, sir.

17 Q Now, once the compressor went on, let's use the first  
18 one, Albert, Saint [sic] Albert A3-25 HD, when it went  
19 on, did it stay on for the two years, as far as you know?

20 A Yes, sir.

21 Q O.K. HD, what does that mean, horizontal drill?

22 A Yes, sir.

23 Q So we do have a horizontal drilled well?

24 A Yes, sir, looks like we have three of them.

25 Q And this is all on the Albert Loud?

1 A Yes, sir. Actually there are, I believe there's four.

2 JUDGE EYSTER: Well --

3 A Five, six.

4 JUDGE EYSTER: Does each one of these HDs  
5 represent a horizontal drill?

6 A Yes, sir.

7 JUDGE EYSTER: Do you want to take the  
8 time, then, to review all the listings on this page and  
9 indicate how many are horizontal?

10 MR. SAGE: Did you have a question, your  
11 Honor? I'm sorry.

12 JUDGE EYSTER: I wanted him to review the  
13 document and indicate how many horizontal drilled wells  
14 existed.

15 A Six, sir.

16 JUDGE EYSTER: O.K. You have down here  
17 towards the bottom Saint [sic] Cloud at the C1-19, and it  
18 says HD, HD1 and HD2; is that just one or is that  
19 several?

20 A I believe that's one, and those are redrills. I'm not  
21 sure about that.

22 JUDGE EYSTER: O.K. So you're counting  
23 that as one?

24 A Yes, sir.

25 JUDGE EYSTER: And that's your total of  
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1 six?

2 A Yes, sir.

3 JUDGE EYSTER: O.K. Thanks.

4 Q (By Mr. Sage): Can you locate those on the map?

5 A No, sir, I can't.

6 Q That's two of us. Do you have available here a map that  
7 would show where those horizontal wells are?

8 A No, sir, I do not.

9 MR. SAGE: Your Honor, I'm going to make  
10 a request, and it's kind of an unusual one, but I'm going  
11 to make a request to ask that they provide a map that  
12 shows where the horizontal wells are, and reserve the  
13 right to have that as part of this record.

14 JUDGE EYSTER: Mr. Christopherson, any  
15 comment?

16 MR. CHRISTOPHERSON: Let me talk to  
17 Mr. Prudhomme about that at break. If I can respond  
18 after that, I'd appreciate it.

19 MR. SAGE: That's fine.

20 JUDGE EYSTER: All right.

21 Q (By Mr. Sage): Mr. Prudhomme. I'm sorry, gees. It's  
22 easier to call you by your first name. The dates vary,  
23 and looks like the first well that went on vacuum may  
24 have been this March of 2006. Do you see that?

25 A Yes, sir.



1 Q So when you said June, this helps you recall that it  
2 could have started then?

3 A Yes, sir.

4 Q And when it means installed, it would go on vacuum,  
5 essentially a couple days later anyway?

6 A Correct.

7 Q O.K. In the column to the right, it says type of  
8 compressor, wellhead and then inline or CPF. Would you  
9 explain what those three terms mean, and you've done the  
10 ones before, but just for the record so it's consistent?

11 A The wellhead compressor would be isolated to a single  
12 well; the inline would have multiple wells coming through  
13 that compressor; and then the CPF would be compressors at  
14 the central processing facility.

15 Q You have projects, just like the Loud project, where you  
16 have, let's say, ten wells gathered and there are, those  
17 wells are connected to then a, I hate to use a main line  
18 because a main line in Michigan is considered some  
19 20-inch or 30- inch line, but a central line, then that  
20 line takes it to the CPF; is that a reasonable  
21 explanation?

22 A In some areas, yes, sir.

23 Q O.K. And that in between the gathering and once you get  
24 into the main line, that's where you put this inline  
25 compressor?

1 A Correct.

2 JUDGE EYSTER: Do you know the depth of  
3 these wells?

4 A They range anywhere from 600 to 2,000 feet, the Antrim  
5 does. I don't know the exact depth of these wells.

6 JUDGE EYSTER: O.K. But the depth of the  
7 Antrim, it varies across the state, correct?

8 A Yes, sir.

9 JUDGE EYSTER: O.K. Is that -- you gave  
10 a range of, what did you say, 600 to 2,000?

11 A That's what the Antrim range is.

12 JUDGE EYSTER: Is that the location for  
13 these gas wells across this structure, or are there other  
14 ones that are more shallow? I mean I know, for instance,  
15 the Antrim shale comes to the surface someplace in Antrim  
16 County, thus the name. But are there other wells in  
17 other areas that are shallower than that?

18 A Not that I'm aware of.

19 JUDGE EYSTER: O.K. Do these wells that  
20 you have produce significant quantities of water?

21 A I'm not -- I don't know how much water these wells  
22 produce now.

23 JUDGE EYSTER: O.K. Mr. Sage.

24 A I don't think it's significant, it's not a great deal.

25 JUDGE EYSTER: Well, you're not aware,  
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1       you just indicated to me you're not aware, right?

2   A     Yes, sir.

3                   JUDGE EYSTER:  O.K.  That's -- if you're  
4     not aware, you're not aware.

5                   Mr. Sage.

6   Q     (By Mr. Sage):  I was going to ask him the quantity, if  
7     he knew the quantity.  Do you know the quantity?

8   A     No, sir.

9                   MR. SAGE:  May I approach the witness,  
10    your Honor.

11                   JUDGE EYSTER:  Yes.

12                   (Document distributed.)

13   Q     (By Mr. Sage):  Mr. Prudhomme, I'm going to hand you a  
14    proposed exhibit, and I'd ask you to look at it, it's  
15    another discovery response and attachment to that.  And  
16    if you would review that and tell me whether or not,  
17    first of all, you're familiar with the question and the  
18    answer and the attachment to it, and can you identify it,  
19    please?  Please don't write on it, though.

20   A     O.K.

21   Q     Can you identify that for me, sir?

22   A     Yes, sir.  It's part of my discovery response.

23                   MR. SAGE:  O.K.  I'd like to have that  
24    marked, if I may, your Honor.

25                   JUDGE EYSTER:  Let's go off the record  
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1 for a moment.

2 (Document marked for identification by the Court  
3 Reporter as Exhibit No. I-2.)

4 JUDGE EYSTER: O.K. We're back on the  
5 record.

6 Q (By Mr. Sage): Mr. Prudhomme, I know that you, I gave  
7 you a copy of one, now I'm going to give you the exhibit  
8 itself. Would you again verify that it's the same  
9 document, and I'm going to ask you some questions on it,  
10 but please do not write on it.

11 A Yes, sir.

12 Q In the document I-2, there are some identical documents  
13 we just reviewed; am I correct?

14 A That is correct.

15 Q And the reason, at least I'm going to make a  
16 representation in the record, the reason it's that way,  
17 this is in the form we received it, you don't need to  
18 look at those, I'm going to direct you to the rest of it.  
19 O.K.

20 A O.K.

21 Q Are you familiar with the company Petroleum Development  
22 Corporation?

23 A I am.

24 Q And am I correct that that is a company in which,  
25 hopefully I have this right, Merit purchased assets?

1 A That is correct.

2 Q O.K. And the assets were approximately 207 wells?

3 A Yes, sir.

4 Q And was this a recent purchase?

5 A It was in the summer of last year.

6 Q Last year, 2010?

7 A 2010, yes, sir.

8 Q Would you go to page 11 of 30 of Exhibit I-2.

9 A Yes, sir.

10 Q Part of this, I would just like you to make sure it's  
11 clear on the record, at the top of it, it refers to  
12 Michigan Daily Antrim Volumes Report?

13 A Yes, sir.

14 Q And is it your understanding this is a report made by  
15 Merit?

16 A This report is made by Petroleum Development Corporation  
17 out of their system.

18 Q And now they don't make it any longer, I take it?

19 A That is correct.

20 Q O.K. So this was made at the time you purchased?

21 A This was made during the due diligence portion of our  
22 acquisition.

23 Q And so you -- when was the due diligence occurring,  
24 approximately?

25 A It was occurring in June and July.

1 Q Of 2010?

2 A Of 2010, yes, sir.

3 Q O.K.

4 JUDGE EYSTER: And excuse me. Due  
5 diligence portion would be?

6 A After we signed the purchase and sale agreement to  
7 purchase these assets from Petroleum Development  
8 Corporation, we have roughly 45 days to go and explore to  
9 make sure that everything we're buying and that we paid  
10 for is in regulatory compliance, environmentally sound,  
11 that the rates that they've represented in their dataroom  
12 are accurate, making sure land title is appropriate and  
13 correct, things like that. You have about a 45-day  
14 window between when you sign the purchase and sale and  
15 when you actually close the assets and take over  
16 operations.

17 JUDGE EYSTER: And I assume that if  
18 there's something that didn't check out, you'd have an  
19 opportunity to renegotiate the sale?

20 A That is correct.

21 JUDGE EYSTER: O.K. Thank you.

22 Q (By Mr. Sage): The project, the very first project we're  
23 looking at is entitled Blue Spruce, you're familiar with  
24 that?

25 A Yes, sir.

1 Q And if you move across the columns, it says gross sales.

2 Do you see that?

3 A Yes, sir, I do.

4 Q Would it be your understanding that gross sales does not,  
5 or does include CO2?

6 A Yes, sir, it does.

7 Q O.K. And then we have water production. Do you see  
8 that?

9 A Yes, sir.

10 Q And make sure I'm understanding that correctly, on June  
11 14, 2010, it was 762 barrels of water?

12 A That's what the report shows.

13 Q O.K. What's the next column, it says lift gas?

14 A For gas lift, to help unload, keep the wells unloaded  
15 with the water.

16 Q Unload the water, so you use the gas to do that?

17 A Yes.

18 Q And that gas is never sold then?

19 A That gas is cycled.

20 Q Cycled. And when you cycle it, do you ever lose it,  
21 portions of it?

22 A Yes, there's loss.

23 Q Do you know, is there a percentage loss?

24 A I don't know what that percentage would be.

25 Q Fuel gas, what is that?

1 A That's the amount of gas used for the operations of this  
2 project.

3 Q O.K. Now, going to the left again under project, going  
4 down, there's a minus 12; is that an indication that the  
5 well was on a vacuum?

6 A That is correct.

7 Q And that lasted at least until June 30, 2010?

8 A That's correct.

9 Q And when did you purchase?

10 A We closed on it on July 31 of 2010.

11 Q When was the effective date of the purchase?

12 A I don't remember what the effective date was.

13 Q Was it before July?

14 A Yes, sir.

15 Q You think it was --

16 A I believe so. It would have been somewhere around the  
17 time that we signed the purchase sale agreement, so it  
18 could have been June 1st or possibly a July 1st effective  
19 date.

20 Q O.K. Did you participate in this purchase?

21 A Yes, sir.

22 Q When you saw that, the minus 12 --

23 A Yes, sir.

24 Q -- did you think you should call or contact the Michigan  
25 Public Service Commission and advise them of this?



1 A We're not the operator, and we notified PDC, Petroleum  
2 Development Corp., that they were in violation and  
3 insisted that they get in compliance.

4 Q And do you know if they contacted the Michigan Public  
5 Service Commission?

6 A I do not know if they did.

7 Q When you saw this, did you advise the offset operators  
8 that this had occurred?

9 A No, sir.

10 Q Now, have any of these wells, these wells, I'm talking  
11 about the wells that are referred to on Exhibit I-2,  
12 which also looks like the wells on your Exhibit A-34,  
13 after taken over by Merit, operated under vacuums?

14 A No, sir.

15 Q And that's personal knowledge on your part?

16 A Yes, sir.

17 Q Let me backtrack on that. Personal knowledge, you didn't  
18 go out and look at all those?

19 A No, sir, I did not.

20 Q But from you -- no one's come to tell you, Mr. Prudhomme,  
21 we've got these wells on a vacuum?

22 A Correct.

23 Q And you haven't seen records that showed that?

24 A Correct.

25 Q And you do review records I hope?

1 A Yes, sir.

2 Q Does Merit have records like this, in this form as to the  
3 other 106 wells?

4 A Yes, sir.

5 Q That would show what the production was and the lift gas  
6 and fuel gas and things like that?

7 A Yes, sir.

8 Q Do you know, do you recall ever producing any of those?

9 A I provided it in the discovery, the production reports  
10 that you requested.

11 Q O.K. Now, without going through every one of these, you  
12 will agree with me that there's other wells that are  
13 attached and referenced in this exhibit that were on  
14 vacuum?

15 A That is correct.

16 Q Did you ever receive any explanation from Petroleum  
17 Development Corporation why they were on vacuum?

18 A No, sir.

19 Q Did you have discussions with them?

20 A Not me personally, but our business development group  
21 did.

22 Q And did they ask them, you know --

23 A I don't know if they asked them why they did. We  
24 notified them that they were in violation of the MPSC  
25 Rule 17 and they weren't compliant with it and they had

1 to get into compliance.

2 Q If I'm looking at this, then, correctly, and this being  
3 the exhibit, and I'm looking at page 11 of 30, someone  
4 terminated the vacuum operation on June 30th. Am I  
5 looking at that correctly?

6 A Yes, sir.

7 Q And is that -- that would have been before you actually  
8 took over operations?

9 A That is correct.

10 Q So we can assume, then, the best we know is Petroleum  
11 Development did fulfill that obligation to terminate it?

12 A That is correct.

13 Q O.K. Now, if I wanted to determine what the, just  
14 looking at the one exhibit, again, page 11 of 30, what  
15 would be the net sales, I would take that gross sales and  
16 subtract the lift from that?

17 A No, sir. Gross sales would be what is sold out of the  
18 CPF for this project. Gross sales would be net of all  
19 the other.

20 Q Net of those --

21 A Yes.

22 Q -- that are there? But it would include CO2, though?

23 A It would include CO2, yes, sir.

24 Q All right. What is the percentage of CO2 in your wells?

25 A It varies on project, ranges anywhere from 8 percent to

1 14 percent.

2 Q Would you look at the last page of this exhibit, please,  
3 Exhibit I-2. Do you see that, it says CO2 Plant Volume  
4 Reduction and then says Date?

5 A Uh-huh.

6 Q And then it has a percentage. I'm assuming that's not a  
7 date?

8 A No, sir.

9 Q Is that a CO2 percentage?

10 A It appears to be, yes, sir.

11 Q And so at least as to these wells, it looks like there's  
12 approximately 17.34 percent of CO2?

13 A Yes, sir.

14 Q These wells being the wells that are referred to in this  
15 exhibit?

16 A Yes, sir.

17 JUDGE EYSTER: On this page of the  
18 exhibit?

19 A Yes, sir.

20 JUDGE EYSTER: O.K. Not the exhibit, the  
21 entire exhibit?

22 A The last page is the summation of the previous 19 pages  
23 or so.

24 JUDGE EYSTER: O.K. So the 17.34 percent  
25 then represents the CO2 content that was removed for all

1 of these projects that are listed in this entire exhibit?

2 A Yes, sir.

3 JUDGE EYSTER: O.K.

4 Q (By Mr. Sage): Out of curiosity, what's shrunk volume.

5 A I'd have to mget a calculator, but I imagine that's the  
6 volume that's taken out after, the volume remaining of  
7 hydrocarbon gas that's after the CO2 has been removed.

8 Q O.K. So then the sales volume was 8,548 and then the,  
9 after you've taken out the CO2, it's 7,066?

10 A That is correct.

11 Q O.K. And then please help me, what's the next column,  
12 it's boepd?

13 A That's barrel oil equivalent per day.

14 Q What does that mean?

15 A It's a conversion of putting it all to constant, where  
16 you can compare different oil and gas together. Usually  
17 it's a six-to-one ratio.

18 Q O.K. We're not talking about barrels of oil there,  
19 though, we're just --

20 A No, sir, we're not. Barrels of oil equivalent.

21 Q Now, this fuel gas, that's in addition to the fuel gas we  
22 discussed earlier?

23 A I would imagine that that is the summation of the fuel  
24 gas columns. I haven't done the math to it, but.

25 Q Oh, I see. If I added up all of those individually from

1 all these other wells, that would be the summation of it,  
2 to the best of your knowledge?

3 A Yes, sir.

4 Q O.K. So it has nothing to do with fuel gas used at the  
5 CO2 plant?

6 A No, sir.

7 Q O.K. You're charged, though, gas at, usage at a plant,  
8 are you?

9 A A proportionate share, yes, sir.

10 Q Right. So then that reduces your sales volume even more?

11 A Yes, sir.

12 Q Anything else that reduces that sales volume?

13 A Not that I'm aware of.

14 JUDGE EYSTER: Do you know where this gas  
15 is treated?

16 A At the DCP. I don't know the specific plant that this  
17 goes to, but I believe it's to the DCP facilities.

18 JUDGE EYSTER: Do you know what they  
19 treat the, the level of treatment that they provide, what  
20 percentage of CO2 content is when it leaves the plant?

21 A No, sir, I do not.

22 JUDGE EYSTER: Mr. Sage.

23 Q (By Mr. Sage): Merit has a plant; is that correct?

24 A That is correct.

25 Q And it's at Manistee?

1 A No, sir. It's at Kalkaska.

2 Q Kalkaska. I'm sorry. And that plant takes out CO2,  
3 correct?

4 A Yes, sir, it does.

5 Q When it takes out CO2 at that instance, is there CO2 left  
6 in gas stream as it goes to, in your instance I imagine  
7 it goes to MichCon?

8 A There's very little CO2.

9 Q O.K. Very early in your response to my questions I  
10 directed to your page 3, and this is the lines 3 through  
11 4 where you state that the vacuum will increase the  
12 production rate and ultimate amount of gas recovery. Do  
13 you recall that?

14 A Yes, sir.

15 Q You indicated that when the wells went on vacuum at the  
16 Albert Loud Field, there was an increase in rate?

17 A That's correct.

18 Q And what was the production rate increase per well during  
19 that period?

20 A I don't know what it was per well.

21 JUDGE EYSTER: Is the amount of water  
22 produced in these wells characteristic of gas wells  
23 throughout the country, or at least in the areas where  
24 you've worked personally?

25 A It seems as though there's a dewatering process where the

1 water will sometimes diminish some, but in some areas you  
2 have very little water, some areas you have, like in the  
3 PDC, you have significant amounts of water that you have  
4 to use artificial lift.

5 Q (By Mr. Sage): You said PDC, you're talking about --

6 A Petroleum Development Corporation.

7 Q Right.

8 A I'm sorry.

9 Q You threw me.

10 JUDGE EYSTER: And you've stated that  
11 under vacuum, the gas production, daily production went  
12 up?

13 A Yes, sir.

14 JUDGE EYSTER: And I assume water  
15 production also went up?

16 A I haven't verified that, but I would assume that, yes,  
17 sir, it would.

18 JUDGE EYSTER: Is there any other effects  
19 of placing those wells on vacuum that you're aware of?

20 A No, sir.

21 JUDGE EYSTER: What do you guys do with  
22 all that water?

23 A We dispose of it in disposal wells.

24 JUDGE EYSTER: Do you know where those  
25 wells are?



1 A Not specifically, no, sir. They're typically in, within  
2 the production unit in an approved disposal interval.

3 JUDGE EYSTER: And what are the  
4 characteristics of that water that comes off of those  
5 wells?

6 A I'm not sure. I don't know.

7 JUDGE EYSTER: Have you ever discussed  
8 with anybody what the impact of removing all that water  
9 is?

10 A No, sir.

11 JUDGE EYSTER: Mr. Sage.

12 MR. SAGE: Thank you, your Honor.

13 Q (By Mr. Sage): In response to the judge's question --

14 JUDGE EYSTER: Just one minute. Let me  
15 follow that up.

16 Are you otherwise aware of what it might  
17 be?

18 A Well, if I'm not mistaken, it's got a higher salinity  
19 content, salt water, so it's not potable water.

20 JUDGE EYSTER: I guess I was, in  
21 reference to the last question, because I asked you if  
22 you discussed it with anybody, and I was just curious if  
23 you yourself happen to have gained any knowledge from  
24 other means?

25 A No, sir.

1 JUDGE EYSTER: All right.

2 A I don't know of any use for that water that by disposing  
3 of it would be detrimental to the, to the people or the  
4 environment.

5 JUDGE EYSTER: And you don't know what,  
6 have any insight into if or what any impacts of removing  
7 it would be?

8 A No, sir, I don't.

9 JUDGE EYSTER: O.K. Mr. Sage.

10 Q (By Mr. Sage): In response to one of the earlier  
11 questions of the judge, you indicated he asked you was  
12 there any other effects of going on vacuum, and am I  
13 correct that when you go on vacuum, you see in Michigan  
14 increase in CO2?

15 A I don't know if that's correct or not, Jack.

16 Q In response to a discovery request -- and unfortunately,  
17 I mean everybody has this, and I only have one clean  
18 copy -- but it goes to the question of production rate  
19 and ultimate gas recovery, and I'm going to, with the  
20 permission of your Honor, just show it to him so he can  
21 recall his recollection and then ask him if it's true,  
22 and then we'll put it in the record, because I don't have  
23 another clean copy of it yet, but the answer will be in  
24 the record, if I may.

25 JUDGE EYSTER: That's fine.

1 MR. CHRISTOPHERSON: Can you reference  
2 the page number and number for me?

3 MR. SAGE: Yes. It's question 35, and it  
4 covers pages 13, 14 and 15, and the answer is on page 15.

5 MR. CHRISTOPHERSON: O.K.

6 Q (By Mr. Sage): Sir, I'm going to hand you which is my  
7 understanding is your discovery response to our Question  
8 35. Would you review that and tell me if that's an  
9 accurate response, or that's your response? Let me put  
10 it that way.

11 (Document provided to the witness.)

12 A Yes, sir.

13 Q O.K. Would you read the response into the record,  
14 please?

15 A Mr. Prudhomme relied on his experience, education and  
16 background as well as his testimony and exhibits in this  
17 case. Mr. Prudhomme has a degree in Petroleum  
18 Engineering. See attachments 35a, 35b and 70. The  
19 estimated increase in the production rate for the wells  
20 listed on A-33 is 300 Mcf per day total and 1,200 Mcf per  
21 day total for the wells listed on A-34.

22 MR. SAGE: O.K. Thank you, your Honor.

23 Q (By Mr. Sage): Mr. Prudhomme, now, you have a copy of  
24 A-33 and 34, they're attached to your testimony?

25 A Yes, sir.

1 Q And A-33 reflects 106 wells and A-34 was 207; am I  
2 correct?

3 A That's correct.

4 Q And this is covering, on an average -- and I'm assuming  
5 the period of 2006 and 2008?

6 A Yes.

7 Q The dates we've covered, whatever the beginning and  
8 ending of those dates. And that's 300 Mcf per day, if I  
9 understand that correctly, for the 106 wells?

10 A I believe that is incorrect. I apologize. It would be  
11 for the 72 wells that were in the Albert Loud unit,  
12 Clinton Commins unit, it does not take into account the  
13 remaining 33 wells.

14 Q Were the other wells being produced at the time?

15 A They were being produced, yes, sir.

16 Q But the 300 itself is not involved in, or doesn't relate  
17 to those other wells?

18 A That is correct.

19 Q O.K. No one gives me a checking account, so don't agree  
20 with my numbers, but it looks like to me that's  
21 approximately 4 Mcf a day per well?

22 A Yes, sir.

23 Q O.K. And then the other one is 207 wells, and that's  
24 1,200, and that looks like to me it's about 5.7 Mcf per  
25 well?

1 A Correct.

2 Q So that's the incremental that arose from the  
3 compression; am I correct?

4 A That is correct.

5 Q Now, when these wells are on vacuum, or when they were on  
6 vacuum -- I'm sorry -- from 2006 through 2008, did they  
7 decline in rate?

8 A Yes, sir.

9 Q Do you know what the percentage decline was?

10 A I did not know the percentage.

11 THE WITNESS: Your Honor, may I take a  
12 break?

13 JUDGE EYSTER: Yeah. We'll take a break  
14 right now.

15 (At 10:39 a.m., there was a ten-minute recess.)

16 JUDGE EYSTER: O.K. We're back on the  
17 record. Mr. Sage.

18 MR. SAGE: Thank you, your Honor.

19 Q (By Mr. Sage): Mr. Prudhomme, would you go back to  
20 Exhibit I-1, please. Do you have a copy of that? O.K.  
21 And page 6 of 12, this is the -- page 6 of 12, do you see  
22 that?

23 A Yes, sir.

24 Q That's the column of wells. One of the questions I  
25 failed to ask you is, if you go down that column, you'll

1 see a Fuller D4-25 SL, do you see that?

2 A Yes, sir, I do.

3 Q What is that, what's SL mean?

4 A I do not know what that stands for.

5 Q Now, while you've got that in mind, that exhibit, the  
6 next page is the map.

7 A Yes, sir.

8 Q Now, you've now earlier testified that we have six  
9 horizontal wells, correct?

10 A Yes, sir.

11 Q Would it be your understanding, and even though you don't  
12 have it, you know, the documents in front of you, you do  
13 have the map, and the map shows wells with lines, would  
14 it be your understanding that rather than those being  
15 directional, those are horizontal wells?

16 A There are more than six lines on the map.

17 Q I'm referring to the ones that have the dark circles.

18 A There still appears to be more lines, but that could be  
19 what that represents.

20 Q I think there's seven of them I couldn't figure out. So  
21 to the best of your recollection, would you agree with me  
22 that at least there are six horizontal wells on this map?

23 A Yes.

24 Q And that would include those that are on the east side of  
25 that Albert Loud project?

1 A It appears that way.

2 Q O.K. Thank you.

3 MR. SAGE: May I approach the witness,  
4 your Honor?

5 JUDGE EYSTER: Yes.

6 (Document marked for identification by the Court  
7 Reporter as Exhibit No. I-3.)

8 Q (By Mr. Sage): Mr. Prudhomme, I'm going to hand to you  
9 what's been marked as proposed Exhibit I-3, it has a  
10 discovery request and response and attachment. Would you  
11 review that and tell me if you can identify it, please?

12 A Yes, sir.

13 Q You've had a chance to look at it, or review it? I'm  
14 sorry.

15 A O.K.

16 Q Have you had a chance to review it?

17 A Yes, sir.

18 Q And am I correct that that is a copy of a document that  
19 you provided in response to Discovery Request No. 35 that  
20 we submitted to Merit Energy?

21 A That's correct.

22 Q And to the best of your knowledge, the information there  
23 is true and correct?

24 A Yes, sir.

25 Q Now, am I correct this document on page 7 of 39 refers to  
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1 the Saint [sic] Albert A 3 25 Hd?

2 A The State Albert A 3 25 Hd.

3 Q Oh, it's not the same?

4 A No, sir.

5 Q All right. And that is the same well that's referenced  
6 on Exhibit I-1 in the column, the very first well in the  
7 column on page 6 of 12?

8 A Yes, sir.

9 Q O.K. Now, on page 7 of 39 it begins with, if I'm reading  
10 it correctly, January of 2006. Do you see that?

11 A Yes, sir, I do.

12 Q And if I understood -- well, and if you look at Exhibit  
13 I-1, it looks like it went on vacuum October 6, 2006?

14 A I'm not sure exactly where you get the day.

15 Q I'm sorry, I'm not either. October 2006?

16 A Yes, sir.

17 Q You're right. Now, you indicated you thought the wells  
18 would go on on or about the dates that are reflected in  
19 Exhibit I-1, but didn't know the exact date?

20 A That's correct.

21 Q We could agree that at least sometime in October 2006, it  
22 went on vacuum?

23 A Yes, sir, according to the paper that we submitted to the  
24 MPSC.

25 Q And so if you -- would you go to October 2006, please,  
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1 and it's on page 14 of 39 of Exhibit I-3.

2 A O.K.

3 Q Can you tell me from looking at that when, I'm looking at  
4 October, when it would have gone on vacuum?

5 A No, sir, I can't.

6 Q If we used, for just purposes of looking at numbers,  
7 October 1, 2006, it refers to under PROD, I assume that's  
8 production?

9 A I'm sorry. Yes, sir.

10 Q It's 152.50, is that Mcf?

11 A That is Mcf, yes, sir.

12 Q And that would be the production rate for that well on a  
13 daily basis?

14 A That's correct.

15 Q Or on that day anyway?

16 A On that date.

17 Q O.K. Now, if you take that date and you go through the  
18 year, it varies, it goes down, it went to zero. Let me  
19 ask you this: Why would a well go to zero?

20 A If there was an issue with the well.

21 Q Just shut it in for the day?

22 A Yes, sir.

23 Q O.K. And then it varies and it seems to range in the  
24 150s for quite a while, do you see that, going through  
25 2006? It does vary, don't get me wrong.

1 A Yes, sir.

2 Q O.K. Now, if you can, because it goes for several pages,  
3 I'll try to get to the end of this, go to page 35 of 39,  
4 and it will take you to August of 2008. And if I  
5 understood it correctly, you received a -- you responded  
6 to the Commission's letter -- or not Commission's -- the  
7 Commission Staff's letter on August 13; is that correct?

8 A That is correct.

9 Q Now, at that point in time, am I reading it correctly,  
10 that the production rate was 101.39 for that well?

11 A For that exact day, yes, sir.

12 Q O.K. I'm not -- it varies, I recognize that. Now, from  
13 looking at this, it looks like when it was on vacuum,  
14 just using October 1, since we don't know the exact day,  
15 and using August 13, 2008, which is the date that you  
16 obviously told them you're not going to do it anymore, it  
17 reduced the daily rate, production rate, it reduced  
18 substantially?

19 A On this well, yes, sir.

20 Q O.K. Don't accept my math, but it looked like it was  
21 like 51.11 Mcf per day reduction, approximately; do you  
22 agree with that?

23 A Yes, sir.

24 Q Now, that's just the period of time it was on vacuum; am  
25 I correct?

1 A Yes, sir.

2 Q Am I correct that this production rate that we're  
3 referring to, no matter what column, or not what column,  
4 but under the productions, that includes CO2?

5 A Yes, sir, it would.

6 Q And if you would, is this a Merit schedule?

7 A Yes, sir, it is.

8 Q And when I asked you earlier did you provide Merit  
9 schedules, this is what you were referring to?

10 A Yes, sir, I was.

11 Q If you moved to the right of any of those pages, it  
12 refers to, has lift and it has zero?

13 A Yes, sir.

14 Q There's no lift in these?

15 A There's no gas lift on this well.

16 Q On this well. O.K. And then to the right of that, it  
17 says net, and then which it seems the same number as the  
18 production, and then it goes to sales?

19 A Yes, sir.

20 Q And sales is less. So what was taken out?

21 A The fuel gas.

22 Q O.K. Anything else you can think of?

23 A Fuel to run dehydrators at CPFs, compression at CPFs.

24 Q Essentially fuel?

25 A Yes, sir.

1 Q And that fuel is taken and used from the well itself?

2 A Yes, sir.

3 Q And then what's other, 9.95? I'm looking at -- I hope  
4 you're on the same page.

5 A That is the difference between the net and the sales.

6 Q I got you. All right. Thank you. Told you I wasn't  
7 good in math. Now, this is the -- this was a horizontal  
8 well; am I correct?

9 A Yes, sir.

10 Q Do you know what the casing pressure was on the day  
11 before it went on vacuum?

12 A No, sir.

13 Q Do you know what the casing pressure was when it went on  
14 vacuum?

15 A No, sir, I don't.

16 Q Have you had any discussions with anybody regarding it?

17 A No, sir.

18 Q Have you reviewed any documents? I know you may not know  
19 today, but did you recall reviewing any documents that  
20 would reflect the casing pressure?

21 A No, I haven't.

22 Q Who would have that knowledge at the company?

23 A It would be in our gauge sheets that our pumpers submit.

24 Q So it wouldn't be in any of the information I have here  
25 then?

1 A No, sir, I don't believe so. It may be in some. I can't  
2 remember if you requested in discovery gauge sheets from  
3 our pumpers or not, from the field or not.

4 Q We probably asked it in more of a generic sense because I  
5 don't know what gauge sheets are. But would there be any  
6 other document that you would have that would show what  
7 the casing pressure on the wells are? Would you have a  
8 summation of that on your wells?

9 A Summation?

10 Q You know, summary of what the wells were operating on as  
11 far as your casing pressure?

12 A Possibly be in our ProCounts.

13 Q You better help me, what's a ProCount?

14 A That's the system that we use for, our pumpers use to  
15 daily input production, pressures, things like that.

16 Q So on the stand right now, you can't tell me if it was a  
17 negative 1 or a negative 10 or a negative 14 vacuum; am I  
18 correct?

19 A That is correct right now on the stand.

20 Q And besides the pumpers, there must be someone who  
21 supervises them. Who would that be that would have that  
22 information?

23 A The field foreman.

24 Q O.K. And who's above the field foreman?

25 A Randy Sanders, our operations manager.

1 Q I know Randy. O.K. And who's above Randy?

2 A Well, at the time or now?

3 Q At the time.

4 A At the time, it would have been Dan Zilmer.

5 Q O.K. And he's the one who signed the letter with the  
6 MPSC Staff?

7 A Yes, sir, that's correct.

8 MR. SAGE: I'd like to make another  
9 question, your Honor, if I may, and counsel can consider  
10 it, but I'd like to have any documentation they have  
11 regarding this well, and I've got one other well, just  
12 two wells, as to the casing pressure that was on the  
13 wells prior to going on vacuum and then while on vacuum  
14 and then off of vacuum. And I'll make that request, and  
15 obviously counsel can consider it.

16 MR. CHRISTOPHERSON: Yeah, we'll consider  
17 it. I mean we can't respond right now, we'll consider  
18 it.

19 MR. SAGE: How about can you consider it  
20 during lunch?

21 JUDGE EYSTER: I was going to suggest  
22 that over the lunch hour you discuss that and then see if  
23 you can agree, and if there's any issues that I need to  
24 take up, then I can do it after the lunch hour.

25 MR. CHRISTOPHERSON: And generally it's  
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1 like any other discovery request, if we have the  
2 documents, we can make them available. We're not going  
3 to withhold anything here.

4 JUDGE EYSTER: O.K. We're off the  
5 record.

6 (At 11:08 a.m., a discussion was held off the  
7 record.)

8 JUDGE EYSTER: We're back on the record.

9 MR. SAGE: May I approach the witness,  
10 your Honor?

11 JUDGE EYSTER: Yes.

12 (Document marked for identification by the Court  
13 Reporter as Exhibit No. I-4.)

14 Q (By Mr. Sage): I'm sorry, have you had a chance to  
15 review that?

16 A Yes, sir.

17 Q And am I correct that that's your response to our  
18 Discovery Request No. 35?

19 A Yes, sir, it is.

20 Q And obviously that is the response you read into the  
21 record; am I correct?

22 A Yes, sir.

23 Q O.K. Also, am I correct that that well, it's State  
24 Albert B 4 36, is on the list of wells in Exhibit I-1?

25 A That's correct.

1 Q At page 6 of 12?

2 A Yes, sir.

3 Q Now, this well is not a horizontal well, correct?

4 A That is correct.

5 Q And so if it's not a horizontal, I guess can we assume  
6 it's a vertical?

7 A Yes, sir.

8 Q And what's a vertical well?

9 A It's a well that penetrates the producing formation  
10 vertically.

11 Q And in the Antrim, the intent is to try to find a  
12 fracture; am I correct?

13 A Yes, sir.

14 Q Would you refer to page 14 of 39, please.

15 A Yes, sir.

16 Q And what I want to do, Mr. Prudhomme, is to go over what  
17 we did on the other well to get some sense of what  
18 happened during this period of time on the well. On page  
19 14 of 39, would you refer to October 1, 2006, please?

20 A Yes, sir.

21 Q And again, under the column of production, if I'm looking  
22 at it correctly, looks like it's 223.99 Mcf per day; am I  
23 correct?

24 A That's correct.

25 Q And that would have been then the daily production rate



1 on that day for that well?

2 A Yes, that would be the allocated daily production rate to  
3 that well.

4 Q You mentioned allocated; what's allocated mean?

5 A You go from -- you have meters on each individual well  
6 and you have a final meter at the CPF and then you  
7 allocate them back to specific wells.

8 Q And as far as you know, that's an accurate number,  
9 though?

10 A Yes, sir.

11 Q And I'm assuming, then, the columns as we discussed  
12 previously regarding net and sales and other, your  
13 answers would be the same?

14 A Yes, sir.

15 Q Now, would you then go to page 34 of 39, and this will  
16 take you to -- I'm sorry. 35 of 39, and to August 13,  
17 please.

18 A Yes, sir.

19 Q It appears, if I'm reading that one correctly, the daily  
20 production rate at that point in time is 127.84?

21 A Yes.

22 Q Now, again, I don't want you to accept my math in total,  
23 but it looks like to me the difference between the  
24 beginning and the end was 96.15 Mcf; is that  
25 approximately correct in your review of that?

1 A From those two dates, yes, sir.

2 Q Yes. And those two dates, those are the dates between  
3 the, from the beginning of a vacuum and end of a vacuum,  
4 assuming it began October 1 --

5 A Yes, sir.

6 Q -- we don't know exactly? But sometime in October?

7 A Yes, sir.

8 Q So therefore, we did have a decrease under all  
9 circumstances?

10 A Yes, sir.

11 MR. SAGE: May I approach the witness,  
12 your Honor?

13 JUDGE EYSTER: Yes.

14 (Document marked for identification by the Court  
15 Reporter as Exhibit No. I-5.)

16 Q (By Mr. Sage): Mr. Prudhomme, I'm going to hand you  
17 what's been marked as proposed Exhibit I-5, and ask you  
18 if you'd review that for me and advise myself and your  
19 Honor whether or not you've seen this before and you can  
20 identify it.

21 MR. CHRISTOPHERSON: Can I make one  
22 clarification for the record?

23 MR. SAGE: Sure.

24 MR. CHRISTOPHERSON: I think in your last  
25 exhibit, you said it was excerpts, which it was, because  
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1 it was thousands of pages in the document, so I think  
2 this attachment is actually 53 pages, so this actually is  
3 an excerpt, too.

4 MR. SAGE: Which?

5 MR. CHRISTOPHERSON: 98. Your attachment  
6 No. 98, you're actually taking an excerpt from 98.

7 MR. SAGE: Yes.

8 MR. CHRISTOPHERSON: It doesn't say that;  
9 your other one didn't say excerpt, this one does, and I  
10 just want it clear that this is only part of the response  
11 they gave you was.

12 MR. SAGE: Oh, no problem. That's fine.  
13 We killed enough trees.

14 A Yes, sir.

15 Q (By Mr. Sage): You've had a chance to review it?

16 A Yes, sir.

17 Q And am I correct that this is an excerpt from the portion  
18 of a document that you provided in response to our  
19 Discovery Request No. 98?

20 A That is correct.

21 Q Mr. Prudhomme, would you refer to page 5 of 8 of I-5. Do  
22 you have a copy of that?

23 A Yes, sir.

24 Q It refers to station name E. Albert 24. Is that a  
25 project?

1 A Yes, that's the Albert portion of that project, there's  
2 two meters.

3 Q And on the second page, 6 of 8, am I correct that's the  
4 same, it's referring to the same Albert 24 run?

5 A Yes, sir, I believe it is.

6 Q And run, again, what's Run 1?

7 A What's that? I'm sorry.

8 Q It says Run 1.

9 A I think meter Run 1, a meter.

10 Q O.K. And there for this well, it appears, if I'm reading  
11 it correctly, in 2010 it had a CO2 content of 16.83?

12 A Yes, sir.

13 Q And that was consistent for at least 30 days on that, in  
14 that month or in that year; am I correct?

15 A Yes, sir.

16 Q I'm trying to figure out what month is this covering?

17 A For November of 2010.

18 Q O.K. And it says report date, and that's just when, it  
19 says 2010/20/08?

20 A That would be December 8 of 2010 was when we received the  
21 report from MichCon.

22 Q I got you. O.K. So this came from MichCon then?

23 A Yes, sir.

24 Q So they take and record all of your CO2 content or level  
25 when it comes to the plant?

1 A Yes, sir.

2 Q And then on page 8 of 8, if you're looking at the -- I  
3 mean looking at -- am I correct that it's referencing the  
4 Loud 17A?

5 A Yes, sir.

6 Q And that's in the Loud project?

7 A Yes, sir.

8 Q And am I reading that one correct, the CO2 is 20.7?

9 A For November of 2010, that's what it shows, yes, sir.

10 Q Now, if the Loud 17A reflects that, could I assume that  
11 probably one or more of the other wells in the Loud  
12 project would have similar CO2 content?

13 A Yes, sir. That's the summation of the wells in the Loud.  
14 If you look at the volumes, it's the summation. We have  
15 two meters that go into MichCon out of the Albert Loud  
16 project.

17 Q Oh, O.K. I understand.

18 A One of them is Albert, one of them is Loud.

19 Q O.K. What's the, it says diff pressure, or diff press?

20 A When you have a meter, part of it, in order to be able to  
21 calculate the volume is the differential pressure that is  
22 measured.

23 Q O.K. And then the pressure (psi), what's that reference?

24 A That is the line pressure that you're selling into  
25 MichCon.

1 Q And the gas temperature, is that on the line?

2 A That's the gas temperature as it's going through the  
3 meter, what the temperature, actual physical temperature  
4 of gas is.

5 Q And is there any significance in the temperature of gas?

6 A It changes the calculation for volume slightly.

7 Q So is colder better or worse?

8 A Boy, I'm going to -- I'm not sure.

9 Q O.K.

10 A I have to go back to my Halliburton book.

11 Q I'm just thinking selling gas in Michigan, it's always  
12 cold, so maybe it would be better.

13 Earlier when we looked at two different  
14 wells -- no, strike that.

15 When we looked at A-33 and A-34, and we  
16 discussed the incremental of approximately what, 2.8  
17 and -- no, it's 4. and 5.7, do you know where that gas  
18 came from?

19 A I'm sorry, I don't understand what you're asking. The  
20 2 -- 4.8.

21 Q No, that's understandable. Let me try it again. I asked  
22 you earlier regarding your discovery request as to the  
23 106 wells and the 300 Mcf a day, and then I did a  
24 calculation and you accepted it, and you're wrong --  
25 you're right, I was wrong on my number. It was 4 -- I

1 was originally looking at 2.8, but it's 4 Mcf a day  
2 incremental, and in the second instance where it's the  
3 other company you purchased its wells, it came out to be  
4 about 5.7 Mcf a day.

5 A O.K. I understand.

6 Q Now, my question is, do you know where that gas came  
7 from?

8 A Where the --

9 Q Incremental.

10 A Came from the reservoir.

11 Q And the reservoir being what, define what you mean by  
12 reservoir?

13 A From the Antrim shale.

14 Q O.K. So it could be anyplace in the Antrim shale?

15 A It would be in the proximity of our well.

16 Q O.K. And so is -- was it coming, being produced, do you  
17 think, from the fractures or the matrix, do you know  
18 which one?

19 A Predominantly from the fractures.

20 Q And when you say predominantly from the fractures, why do  
21 you believe predominantly from the fractures?

22 A Because the processing permeability in the shale matrix  
23 is significantly less than the fractures.

24 Q So if you go on vacuum, you would essentially try to  
25 drain the fracture?

1 A As well as the matrix.

2 Q But initially it would be the fracture, wouldn't it?

3 A It would be a larger percentage of it would be from the  
4 fractures.

5 Q And then at some point in time you would be attempting to  
6 drain from the matrix?

7 A It would be simultaneous.

8 Q Simultaneously, but slower?

9 A It would be a slower drainage from the matrix than the  
10 fractures.

11 Q What I'm trying to determine and put on the record so  
12 it's clear enough is that when you drill and you're  
13 producing from the fractures, as you mentioned, the good  
14 porosity and permeability, and therefore that will  
15 produce faster?

16 A Correct.

17 Q And at a certain point, you're going to deplete or  
18 decrease the volume in that fracture, are you not, and  
19 it's going to be replenished slow, but by the matrix?

20 A Correct.

21 Q O.K. So in this instance, it's your belief that at least  
22 at some point in time initially, at least initially  
23 anyway, the production of this incremental is coming from  
24 the fractures?

25 A The majority of it was coming from the fractures.



1 Q I recognize, and I'm not trying to dispute with you that  
2 you'll have simultaneous gas being desorbed from the  
3 shale at times, but if I understand that, it's a slower  
4 process?

5 A Yes.

6 Q Are you familiar with pores in the matrix?

7 A Somewhat.

8 Q And is it your understanding that that holds gas?

9 A Yes.

10 Q And do you know what percentage of gas is in the pores  
11 versus the gas that's on the, absorbed to the matrix?

12 A No, sir, I don't.

13 Q O.K. From reviewing Merit's records and discussing with  
14 Merit's personnel or others, other than counsel, were you  
15 advised that there was an impact on offset wells based on  
16 this operation under, going under a vacuum for 2002 to  
17 2008?

18 A No, sir.

19 Q Did anybody make an investigation of that?

20 A No, sir.

21 Q On Exhibit I-1 we have a list of the wells that went on  
22 vacuum. How many of those wells did you have to put  
23 additional or new wells -- or new, additional or new  
24 compressors on?

25 A Jack, I do not know that answer.

1 Q O.K. But you indicated earlier there was additional  
2 compressors?

3 A Yes, sir, there was.

4 Q And does Merit own compressors?

5 A We both own and lease compression.

6 Q And in this instance, do you know whether or not you,  
7 Merit, either leased or used owned, previously owned  
8 compression?

9 A I was told it was a combination of the two.

10 Q Were any purchased?

11 A Yes.

12 Q So we had purchased, old and rentals?

13 A Correct.

14 Q Did you make, did you -- again, did Merit -- I'm sorry.

15 A That's all right.

16 Q Did Merit make an analysis as to whether or not during  
17 this period of time of 2006 and 2008 being under vacuum  
18 that it resulted in a net revenue?

19 A Net revenue from the project?

20 Q Yes.

21 A We do a capital followup project every quarter, and I'm  
22 sure it was done; I have not seen the results of that.

23 Q And when you talk in terms, when you do a capital project  
24 or -- did I do that right?

25 A Capital followup.

1 Q Followup. I'm sorry. But you mentioned project. In  
2 this instance, you only had 35 wells on a vacuum, would  
3 you separate that out to see whether or not those were  
4 economical?

5 A As a whole, you would do it all, yes, sir.

6 Q So you just do it on the whole 106 wells?

7 A Well, it would be the 72 that were on the project that we  
8 put under -- or the 35 that we put on vacuum.

9 Q O.K. So again, I guess so it's, when you do your  
10 analysis for economics, you're only looking at, you would  
11 only look at the 35?

12 A That were impacted by the capital or the additional LOE  
13 that was spent from a rental standpoint.

14 Q And for the record, what's an LOE?

15 A Lease operating expense.

16 Q Thank you. And that includes what?

17 A The rental charges for the compression in this specific  
18 instance.

19 Q And do you also include the fuel cost?

20 A No, sir.

21 Q O.K. That's not part of expense --

22 A No, sir.

23 Q -- in determining something's economical?

24 A No, sir.

25 Q And why wouldn't you include that, it's a cost, isn't it?

1 A It's not a -- it is a cost, but it does not fall under  
2 our expense that we're paying out to other.

3 Q It's an out-of-pocket expense, though?

4 A It's less revenue, it's not an expense.

5 Q It's less revenue because you're not selling the gas?

6 A Correct.

7 Q So if you didn't have the gas, you'd to go buy it for the  
8 compressor anyway?

9 A Yes, sir.

10 Q And sometimes that's occurred, hasn't it?

11 A Around the company, yes, it does. I don't think it's  
12 occurred here.

13 Q O.K.

14 A But that fuel gas would be factored in to the economics  
15 of the project, because when you're looking at the final  
16 production rate after vacuum, that has the fuel gas taken  
17 out of it, the additional fuel gas taken out, so it would  
18 be factored in.

19 Q Taken out of?

20 A Of the sales.

21 Q Oh, the sales volume?

22 A Yes. So the fuel gas coming out of that would be taken  
23 out so you would have that factored into the economics of  
24 it.

25 Q So you'd have less volume basically for sales?

1 A Yes.

2 Q In looking at the records at Merit and discussing the  
3 matter, if you did or not, with somebody at Merit or  
4 anybody else, did you ever encounter any information  
5 regarding what was the average production rate for the  
6 Loud Field prior to going on vacuum?

7 A Yes, sir.

8 Q And what was the average?

9 A I do not recall what it was, but we looked.

10 Q And then we've already talked about during vacuum. What  
11 about after vacuum in 2010, what's the average production  
12 rate for the --

13 A 2010?

14 Q Yes.

15 A I can not recall what the average production rate for the  
16 Albert Loud Field is in 2010.

17 Q How about 2011?

18 A I can not recall off the top of my head. Jack, from this  
19 sheet, it's around 6 million a day for November 2010.

20 Q I'm sorry, where are you reading?

21 A From the Exhibit I-5, when you add up the Albert meter  
22 and the Loud meter from the MichCon statements for 2010,  
23 it's around 6 million a day.

24 Q That's for the whole project?

25 A That's for the Albert Loud projects, yes.

1 Q That's production rate?

2 A Yes, sir.

3 Q And then on an average of a well, we just divide 106  
4 wells into that?

5 A Well, the 72 wells --

6 Q Seventy-two wells.

7 A -- that are in that project, yes, sir.

8 Q O.K. What's the 106 go to?

9 A Those are other wells outside that production area,  
10 Manistee wells, Mancelona wells, things like that that  
11 were not put on vacuum.

12 Q Oh, that's -- O.K. You clarified that in your answer  
13 saying that --

14 A Yes, sir.

15 Q -- you gave me a different answer?

16 A Yes, sir.

17 (Document marked for identification by the Court  
18 Reporter as Exhibit No. I-6.)

19 Q (By Mr. Sage): You've had a chance to review that?

20 A Yes, sir, I have.

21 Q And am I correct that that is a response to our Discovery  
22 Request No. 82?

23 A Yes, sir, it is.

24 Q And to the best of your knowledge, the information there  
25 is true and correct?

1 A Yes, sir.

2 Q And if you would now -- is the Bear Lake -- go to page --  
3 I'm sorry, Mr.Prudhomme. Go to page 6 of 16, please.

4 A Yes, sir.

5 Q Is the Bear Lake one of the projects of Merit's?

6 A Yes, sir.

7 Q And does this portion of the exhibit, page 6 of 16,  
8 reference compression cost or lease operating gross  
9 activity cost?

10 A It is a portion of our lease operating expense that  
11 pertains to compression.

12 Q All right. And in that -- and we'll look at another one  
13 that's a little clearer than this, but this is the way we  
14 received it. It says compressor pad station. What is  
15 that?

16 A That would be any type of work that had to be done with  
17 the grounds where you would have a compressor set.

18 Q And can you tell from this document whether this is a  
19 compressor that was purchased or rented, or rental one?

20 A I would assume that this is a company-owned compression.

21 Q And the basis of that assumption is?

22 A Is there's no compressor rental charge.

23 Q O.K. And then the repair, those are just normal repair  
24 costs that occurs on a compressor?

25 A Correct.

1 Q And those are monthly accounts?

2 A Yes, sir.

3 Q Would you then refer to page 7 of 16. I asked you  
4 earlier about rental and ownership of compressors.

5 A Yes, sir.

6 Q And if I understand it, this is reflecting that  
7 comparison?

8 A Correct.

9 Q And it goes on for a few pages?

10 A Yes, sir.

11 Q Now, on page 10 of 16, it refers to the Albert Loud,  
12 that's the field that went on vacuum?

13 A That is correct.

14 Q And this one has a variety of columns over on the  
15 left-hand side, one is compressor rental, so I'm assuming  
16 this is a rental compressor?

17 A Yes, sir.

18 Q And the charge of \$49,483 is for that, a month of 2008?

19 A That is correct.

20 Q O.K. And compressor pad, that's intriguing, it varies by  
21 month. Is it --

22 A Just, it's for the compressor pad or the station, there's  
23 just miscellaneous expenses that you may have to go out  
24 and work on that happen one month that aren't  
25 reoccurring.



1 Q O.K. I was thinking you had to put a pad in every month.

2 A No, sir.

3 Q O.K. So it's costs?

4 A Yes, sir.

5 Q And then you've got compressor repair, and that reflects  
6 the monthly charges on that?

7 A Yes, sir.

8 Q Now, this covers, it looks like, from 2008 through  
9 December of 2010, because it takes it from pages 10 of 16  
10 to 12 of 16?

11 A That is correct.

12 Q And this is simply the Albert Loud project?

13 A Yes, sir, that is correct.

14 Q And you have other projects?

15 A Yes, sir, we do.

16 Q And they would have, if they're rentals, it would be  
17 similar types of costs?

18 A Yes, sir. Well, depends on the amount of equipment that  
19 you had out there.

20 Q Right, I understand. And also the size of the equipment?

21 A Yes, sir.

22 Q And this is a reoccurring cost because it's on  
23 compression -- wait a minute. Strike that.

24 This is not even -- this is not  
25 reflecting the Albert Loud compression that was occurring

1 during 2006 and 2008, is it?

2 A Yes, sir, it is.

3 Q In respect to?

4 A The same compression's out there, we just turned them  
5 down so that we weren't pulling vacuums on the wells.

6 Q So they're in existence?

7 A Yes.

8 Q And so you're not pulling on -- are you then producing at  
9 zero?

10 A We're producing as close as we can to not pulling a  
11 vacuum.

12 Q So that would be as close as you can to zero?

13 A Yes, sir.

14 Q And just so it's clear on the record, PSIA or PSIG?

15 A It would be PSIG.

16 JUDGE EYSTER: O.K. And then PSIG means?

17 A That's the gauge pressure.

18 JUDGE EYSTER: O.K. But when it's --

19 A Absolute is gauge pressure plus atmospheric, meaning --

20 JUDGE EYSTER: O.K. So the gauge, so  
21 when a gauge reads zero, that's actually --

22 A Absolute --

23 JUDGE EYSTER: -- less than atmospheric?

24 A Yes, sir. Or it's -- well, it's less than absolute  
25 pressure.

1 JUDGE EYSTER: You know, I got confused  
2 on this and I'm still confused on it. Explain to me the  
3 difference between the two.

4 A Absolute pressure takes into account the weight of the  
5 air at whatever elevation or temperature you're at  
6 essentially. Gauge is the difference between the  
7 absolute pressure and the atmospheric pressure.

8 JUDGE EYSTER: Gauge is the difference  
9 between the atmos -- so when it reads zero pressure in  
10 the line is equal to the atmospheric pressure?

11 A That means -- yes. The absolute is equal to --

12 JUDGE EYSTER: So the tire gauge that I  
13 use to put air in my tire is gauge pressure?

14 A Yes, sir.

15 JUDGE EYSTER: Because when it reads  
16 zero, it's actually 14 pounds or whatever atmospheric  
17 pressure is, but it says zero?

18 A Yes, sir.

19 JUDGE EYSTER: O.K.

20 Q (By Mr. Sage): I have a question, a little further  
21 question on that. When I asked you about were you  
22 operating at zero, you're looking at operation of the  
23 compressor?

24 A Yes, sir.

25 Q On the suction side?

1 A Yes, sir.

2 Q O.K. And then if it's zero at the suction side, what  
3 would it be at the casing of the well?

4 A I don't know.

5 Q Would it be less --

6 A Yes, sir.

7 Q -- than zero? So then the well would be on a negative,  
8 be on a vacuum?

9 A Yes, sir.

10 Q So if I understand you correctly, all your wells are on a  
11 vacuum?

12 A I don't know how close to zero we are at.

13 Q But if you're at zero --

14 A And at that low pressure, I don't know what the pressure  
15 drop would be back on the wellbore.

16 Q But it would be less than zero?

17 A If you were at zero on the suction of the compressor.

18 Q This cost that we've just looked at, the Albert Loud  
19 cost, you have to take that into consideration if you  
20 want to look at whether or not vacuum operations would be  
21 economical; am I correct?

22 A The cost that's listed there?

23 Q Yes.

24 A No, sir.

25 Q You just ignore the rental cost?

1 A No, sir. That cost is a fixed cost now regardless of  
2 whether or not we pull vacuums on the well or we produce  
3 them above a vacuum, because it requires this equipment  
4 that's in place in order to get the wells down to as  
5 close of a vacuum as we're permitted.

6 Q You were operating these wells at the Loud Field without  
7 the compression as close to zero as you could prior to  
8 going into 2006; am I correct?

9 A No, sir.

10 Q You could have; am I correct?

11 A Not without setting additional equipment out there.

12 Q Well, you're talking about additional equipment, are you  
13 talking about additional compression?

14 A Talking about the wellhead compression, yes, sir. Before  
15 we set the wellhead compression, all we had was our main  
16 compressors, and they couldn't draw the field down far  
17 enough.

18 Q Well, that depends on the distance between the well and  
19 the CPF; am I correct?

20 A Yes, sir, that is correct, it would be different between  
21 wells, yes, sir.

22 Q So you -- right. So some of it wouldn't be necessary,  
23 some of the additional compression would not have been  
24 necessary to operate certain wells that Merit has to as  
25 close as possible to zero?

1 A I can't say whether that's accurate or not because I  
2 don't know what the exact pressure was at the time of the  
3 CPF compression and how far the wells were away from  
4 that.

5 Q Well, that's one reason I had asked for, and I'll ask  
6 during lunchtime, about what were the casing pressures  
7 before, during and after. O.K.

8 MR. SAGE: Is this a good time, your  
9 Honor, or do you want to continue?

10 A Sir, Jack, can I clarify something. I apologize. We're  
11 reading -- we're keeping -- we have the individual wells,  
12 we're keeping zero on the casing, not zero on the suction  
13 of the compressors.

14 Q (By Mr. Sage): O.K.

15 A When you looked at the -- when you looked at the PDC  
16 wells, when we were looking to see that they're pulling  
17 vacuums, and then you went in there and saw that they  
18 weren't, then that is --

19 Q Casing or --

20 A Yes.

21 Q -- compression?

22 A The casing.

23 Q O.K.

24 JUDGE EYSTER: Where do you physically  
25 measure that?

1 A No. No, I take that back. It's going to be at the  
2 compressor. That's where -- yes, sir, that's where we  
3 measure is at the suction of the compressor.

4 Q (By Mr. Sage): That's where you measured it. So if you  
5 measured it, if it was zero -- and I'm not asking because  
6 you don't know for sure -- but if it was zero, then you'd  
7 have a negative on the well casing?

8 A Yes, sir.

9 Q Now, you indicated earlier that if you were allowed to go  
10 on vacuum, you need to have some more compressors?

11 A I don't remember indicating that.

12 Q Well, all right. Then let me ask you again. If you go  
13 on vacuum, is it your understanding you would need some  
14 additional compression?

15 A The vast majority of the wells that we've identified for  
16 vacuum right now, the equipment is in place.

17 Q Well, you say now the vast majority, I had asked you  
18 earlier, then, out of the 106 wells you were going to put  
19 on vacuum, and you thought you said majority of those.  
20 So are you saying the majority of the 106 wells would go  
21 on vacuum?

22 A The 72 wells that are in the Albert Loud area, that  
23 equipment is in place. The outlying different projects,  
24 we have not done an examination yet.

25 Q How many wells do you have besides the Albert Loud?

1 A Well, we have the, what is it, 106 minus --

2 Q You got 207 of the --

3 A From the Petroleum Development Corporation.

4 Q Right.

5 A And those are ready to go on vacuum with no additional  
6 equipment.

7 Q That's because they were already on vacuum?

8 A That is correct.

9 Q O.K. In addition to that, how many other wells do you  
10 have?

11 A We'd have the difference between 106 and 72.

12 Q That's it?

13 A Yes, sir.

14 Q So another 30 some wells?

15 A To consider.

16 Q Right. If you had to purchase additional compression,  
17 that would be a cost you'd have to take into  
18 consideration whether or not it would be economical; am I  
19 right?

20 A Yes, sir.

21 Q And likewise, fuel costs?

22 A Yes, sir.

23 Q Price of gas?

24 A Yes, sir.

25 Q Do you operate all your wells, or do you have an



1 independent company do it?

2 A Predominantly we operate almost all of our wells in the  
3 State of Michigan. We have a few wells, outlying wells  
4 that we have contracts.

5 Q Is that Randy on the operate -- is it Randy, I can't  
6 think of his last name?

7 A Sanders.

8 Q Sanders.

9 A Sanders is over the personnel that operates the wells.

10 Q For the company?

11 A For our Michigan assets, yes. Well, he's over the  
12 contract employees as well, overseeing what they're  
13 doing, but --

14 Q Right. O.K. What's the average cost for operating a  
15 well -- a compressor, a monthly cost?

16 A It totally depends on the size of the compressor, where  
17 it's at, what kind of deal you can get.

18 Q For operating?

19 A Oh, for operating. I'm sorry. Well, operating is -- are  
20 you talking about rental compression, company-owned  
21 compression?

22 Q Well, no, I'm -- O.K. Either one, let's do your own  
23 compression. Someone has to go out and check it  
24 obviously because you're looking at the cost, and if it,  
25 even if it's rental, I'm assuming you have your own

1 people go out and check it, there's got to be a cost to  
2 that, and someone indicated it was like \$350 a month.  
3 Does that sound reasonable?

4 A No, sir, it doesn't.

5 Q Is that unreasonable?

6 A Yes, sir, I think that's high.

7 Q That's high?

8 A Yes, sir.

9 Q And why -- what do you think it would be?

10 A Because we have the personnel that's right there having  
11 to check the wells, the CPFs, they spend a majority of  
12 the time on that, they're right there to look at the  
13 compressors, so it would be, the incremental amount for  
14 them to check on the compression would not be that high.

15 Q What would you estimate it to be on a monthly basis per  
16 well?

17 A Per well?

18 Q Yes.

19 A It would depend on how many wells go through that  
20 compressor. Jack, I'd have to put a pencil and paper to  
21 it.

22 Q Somewhere between \$100 and \$350?

23 A It would totally depend on -- some compressors have one  
24 well going through it, which it would have a  
25 significantly higher cost, some compressors have, you

1 know, 40 wells going through it, which on a per-well  
2 basis would be considerably less.

3 JUDGE EYSTER: Are you answering just in  
4 terms of labor costs?

5 A That's what he's asking.

6 JUDGE EYSTER: I just want to make sure.

7 A Yes, sir, that's what I'm referring to.

8 JUDGE EYSTER: So you're only talking  
9 about the cost of labor?

10 A Yes, sir.

11 JUDGE EYSTER: The additional cost of  
12 labor for having those out there?

13 A Yes, sir.

14 JUDGE EYSTER: All right.

15 Q (By Mr. Sage): That would be in addition to the other  
16 costs we've already looked at?

17 A Yes, sir.

18 Q And when I say looked at, that's on Exhibit I-6 where  
19 we're looking at, it says -- oh, it doesn't say that. In  
20 fact, let me backtrack for a moment. Albert Loud, on  
21 page 10 of 16, refers to compressor rental, compressor  
22 pad and compressor repair, there's no reference to an  
23 operating cost there; am I correct?

24 A Are you talking about labor?

25 Q Well, let's go through that.

1 A These are the direct expenses associated with the  
2 compression out there that aren't labor.

3 Q Is operating only labor cost? Because this doesn't refer  
4 to operating, it refers to repair --

5 A If we have maintenance, PM work, upkeep, maintenance,  
6 that goes in the repair category.

7 Q O.K. Do you have any other operating costs besides labor  
8 costs as it relates to these compressors on a monthly  
9 basis?

10 A No, sir, not that I'm aware of.

11 Q Do you have administrative costs?

12 A G and A costs?

13 Q Yes.

14 A Yes.

15 Q And that's not included here, right?

16 A I would not think there would be, it would be miniscule  
17 the amount of G and A costs.

18 Q I'm not asking you the numbers, I'm asking you whether or  
19 not it's included?

20 A No, sir, it's not.

21 Q O.K. Can you think of any other operating cost, and I'm  
22 not referring to rental, I'm not referring to the pad  
23 station, I'm not referring to repair, I'm only looking at  
24 operating costs to operate the compressors on a monthly  
25 basis?

1 A The only thing that would be, could be additional is  
2 power costs if it's electric-driven compression, that I  
3 can think of right now.

4 JUDGE EYSTER: And if it's gas-driven?

5 A That comes out of your sales gas.

6 JUDGE EYSTER: O.K. So that's reflected,  
7 that's already reflected in your sales?

8 A That's your fuel gas, yes, sir, the difference between  
9 your net produced and your net sales.

10 JUDGE EYSTER: Do you have a breakdown  
11 for what that amount is?

12 A Yes, sir, it's in the production exhibits that we showed  
13 a little bit ago.

14 JUDGE EYSTER: But do you have a  
15 breakdown for the impact of compression, how much the  
16 compression component --

17 A No, sir, we don't have it broken down between  
18 compression, dehydration, fuel usage, things like that.  
19 It's we look at it as total fuel usage and loss.

20 JUDGE EYSTER: O.K. So these exhibits  
21 don't indicate how much fuel, how much gas is used by the  
22 company -- by the compressors?

23 A That is correct, these don't, no, sir.

24 JUDGE EYSTER: O.K.

25 Q (By Mr. Sage): And is it your testimony, then,

1 Mr. Prudhomme, that you don't separate it out?

2 A We don't allocate out fuel gas between the different  
3 components.

4 Q So if I see a reference to fuel, then it's any kind of  
5 fuel?

6 A Yes, sir.

7 JUDGE EYSTER: Mr. Sage, it is about two  
8 minutes to noon, so any time that you want to, if you've  
9 got to a good place to stop, we can stop.

10 MR. SAGE: This is fine, your Honor.

11 JUDGE EYSTER: O.K. 1:00 o'clock, is  
12 that good for everybody to be back?

13 MR. CHRISTOPHERSON: Yeah, that's fine.

14 JUDGE EYSTER: O.K. We're off the  
15 record.

16 (At 12:00 p.m., the hearing recessed for lunch, to  
17 reconvene at 1:00 p.m.)

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Lansing, Michigan

Wednesday, March 30, 2011

At 1:02 p.m.

- - -

(The hearing resumed following the luncheon recess.)

JUDGE EYSTER: O.K. We're back on the  
record. Mr. Sage.

MR. SAGE: Thank you, your Honor.

J A Y P R U D H O M M E

resumed the stand, and having been previously sworn,  
testified further as follows:

CROSS-EXAMINATION (Continuing)

BY MR. SAGE:

Q Good afternoon. Before we left for break I was asking  
you some economic costs, looking at cost of going on  
vacuum, and we talked in terms of the compressor cost,  
whether it's rental or a capital cost if you purchased,  
and some operating costs and some fuel costs. I want to  
pursue that a little further, Mr. Prudhomme. And when  
you look at whether or not an operation will be  
economical for vacuum purposes, you obviously would take  
into consideration what's going to be the revenue coming  
from that; am I correct?

A Yes, sir.

Q And in determining the revenue, you would use a price for  
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1 gas, and I'm assuming if you had a crystal ball and  
2 neither of us would be here and you would be on a yacht  
3 somewhere and I would still be working, but do you take  
4 and kind of estimate what would be the price of gas  
5 prospectively to determine whether or not to put this  
6 project on a vacuum?

7 A Yes, sir.

8 Q And has that been done by Merit presently for the  
9 purposes of if the Commission allowed vacuum, that you've  
10 done a study as to what the price of gas would be?

11 A No, sir.

12 Q But that would be a consideration, though; am I correct?

13 A Yes, sir, it would.

14 Q And then that would give you, for a better term, a gross  
15 revenue, but then there would be some deductions from  
16 that; am I correct?

17 A Yes, sir.

18 Q Would one of those deductions be severance tax?

19 A Yes, sir.

20 Q And severance tax is your understanding is at 7  
21 percent --

22 A Yes, sir.

23 Q -- in Michigan? And then there's a royalty, and I know  
24 royalty varies, don't get me wrong, I understand that,  
25 but on an average, it's what, 12 1/2 percent?



1 A Yes, sir.

2 Q And we've already talked about the rental. And then  
3 during lunch did you have an opportunity, and then I know  
4 I didn't ask you to do it, but I didn't know if you had  
5 an opportunity to think more about the operating costs,  
6 anything else besides what you've already told us on the  
7 record regarding operating cost?

8 A No, sir, I can't think of anything else.

9 Q And were you able to, or did you consider what would be a  
10 number for operating costs considering the components we  
11 discussed?

12 A Once again, it would depend on the specific instance that  
13 we're looking at as far as the rental, the personnel, the  
14 share of labor; it would have to be more specifically  
15 defined for me to understand that.

16 Q O.K. When Merit decided to go on vacuum back in 2006, I  
17 assume it was around 2006 when they decided to do that,  
18 there must have been some kind of a study or analysis;  
19 was there?

20 A I believe so.

21 Q And did you review that?

22 A No, sir, I did not.

23 Q Do you have any understanding of what -- strike that.

24 Did you have any discussion with anybody  
25 regarding that?

1 A No, sir.

2 Q So your present understanding is -- or you have no  
3 understanding exactly how they arrived at a decision to  
4 go on vacuum as far as the economics?

5 A That is correct. I was working the south division.

6 Q But yeah, and I understand that. But you're still in the  
7 same building, I would assume?

8 A Yes, sir, but I wasn't privy to the decision.

9 Q O.K. Now, after it occurred, did you look at documents  
10 that reflected that?

11 A I did not, no, sir.

12 Q You didn't. Do you know if anybody else did under your  
13 supervision?

14 A I do not, no.

15 Q Is there an installation cost for putting these  
16 compressors in?

17 A Yes, sir.

18 Q And is there -- I assume it depends on the size of the  
19 compressor?

20 A It depends on a lot of factors, yes.

21 Q Are you aware of a range of what the cost is that you've  
22 encountered?

23 A No, sir. Once again, it would totally depend on the  
24 specific objective trying to be accomplished for a  
25 specific unit.

1 Q And I'm not asking you that, I'm asking you whether or  
2 not you are aware of a range of it?

3 A No, sir, I'm not.

4 Q But is that under your supervision?

5 A Yes, sir.

6 Q What's the price of gas today, do you know?

7 A It's ballpark, \$4.25 or so, NYMEX.

8 Q NYMEX, is that for six months?

9 A That would be the prompt month.

10 Q What's the prompt?

11 A Current month.

12 Q O.K. Do you know what the six-month is --

13 A No, sir.

14 Q -- six-month average?

15 A No, sir.

16 Q On NYMEX, does it go out two years?

17 A NYMEX, you can take it out further than that.

18 Q In recommending for Merit to go on vacuum, I'm assuming  
19 you've looked at what you believe the price of gas would  
20 be prospectively?

21 A We have parameters that we use for estimating capital  
22 projects, yes, sir.

23 Q And in this instance, if -- you're going to be incurring  
24 a capital project; am I correct?

25 A Yes, sir. Well, there would be a small expenditure, not

1 taking into account all the equipment that we already  
2 have out there, because most of the equipment is already  
3 in place for vacuum.

4 Q Well, that's as it relates to the 70 some wells  
5 apparently, right?

6 A And the 207 wells with PDC.

7 Q But you indicated earlier that there's a possibility of  
8 the other 30 going on vacuum as well?

9 A That is correct, yes, sir.

10 Q O.K. And those would be individual wells primarily?

11 A They would be projects as well.

12 Q Well, projects. But you indicated -- well, in fact your  
13 exhibit showed most of the wells were individual  
14 compressors. Is that what you intend on those 30 if  
15 you're going to use the 30?

16 A We would have to look at it and see what would make the  
17 most sense as far as whether to set inline compression or  
18 wellhead compression.

19 Q But at each one of those, if it's inline -- O.K. I  
20 understand what you're saying. Inline, you would have  
21 possibly multiple wells --

22 A That's correct.

23 Q -- to one compressor? But, and it's your testimony now  
24 that you haven't looked at, Merit hasn't looked at that  
25 as to those wells?

1 A Not for the 30 additional wells.

2 Q O.K. If the Commission allowed you to go on vacuum, is  
3 it your testimony that you would be able to go on vacuum  
4 right now?

5 A On the Albert Loud area and the wells that we purchased  
6 from Petroleum Development Corp.

7 Q So you wouldn't, your testimony is you wouldn't incur any  
8 additional capital cost?

9 A We may incur a small amount for optimization and such,  
10 but the vast majority of the expense, there would not be  
11 that much.

12 Q Well, small is relative. What is your estimate of small,  
13 because I'm assuming you've already done this, sounds  
14 like?

15 A No, sir, I haven't.

16 Q Not you, but the company?

17 A We have not looked at what it would take to completely  
18 optimize the Albert Loud area.

19 Q Well, that's a little bit different. Optimizing you're  
20 looking at the addition of 30 wells. I'm looking at the  
21 70 some wells that you say are ready to go and you say  
22 there's some small amount of cost, I'm trying to figure  
23 out what that small amount of cost is as to those 70 some  
24 wells.

25 A I don't know what that cost would be.

1 Q And your testimony is that the company hasn't looked at  
2 that yet?

3 A Not as far as expanding the compression over what we've  
4 already got in place.

5 Q And expanding relates to those 70 some wells?

6 A Not all the 70 something wells, it would be partial of  
7 those 70 something wells.

8 Q But no more than the 70? I'm trying to separate the 70  
9 from the 30.

10 A Yes, sir.

11 Q Going back to my question when I asked, I was asking you  
12 about what price of gas Merit has taken into  
13 consideration to consider whether to go on vacuum as to  
14 the wells that are in Exhibit I -- or Exhibit A-33 and  
15 A-34, did they arrive at a price to utilize for their  
16 calculations?

17 A We typically use a three-year strip and a flat price  
18 deck, take it out three years and then hold it flat after  
19 that.

20 Q And the three years, does it increase?

21 A In this particular market, I believe it does increase  
22 over those three years.

23 Q And what was the price at the beginning and at the end of  
24 that three years that was used in that analysis?

25 A We haven't performed that analysis. If we were doing

1       that analysis, that we would sit there and use that price  
2       deck.

3   Q     O.K.

4                   JUDGE EYSTER:   That's NYMEX --

5   A     NYMEX.

6                   JUDGE EYSTER:   -- strips?

7   A     Yes, sir.

8   Q     (By Mr. Sage):   When you say NYMEX strip three years, are  
9       you looking at the NYMEX three years from today?

10   A     Whenever we -- whenever my engineers would propose that  
11       project to us, it would be three years from that time.

12   Q     Now, I'm sorry, I'm not really understanding this.   When  
13       you say three years from that time, they would look at  
14       the NYMEX three years down the road?

15   A     They would say -- they would use the first-year NYMEX for  
16       production rates for the first year, they'd use the  
17       second-year NYMEX price for second-year production rates,  
18       third-year NYMEX for third year, and then hold that price  
19       flat.

20   Q     O.K.   Thank you.

21                   JUDGE EYSTER:   Is that broken down by  
22       month?

23   A     Yes, sir.   It can be either way, you can either take an  
24       average or you can use a, by month, but the NYMEX strip  
25       is broken out by month.

1 JUDGE EYSTER: O.K. So you're looking at  
2 monthly numbers when you make your calculations?

3 A Yes, sir.

4 JUDGE EYSTER: O.K.

5 Q (By Mr. Sage): In your testimony you refer to a  
6 combination of compressors, and we talked a little bit  
7 about this already, and you've got some that would just  
8 be a single compressor and then some would actually be a  
9 compressor for multiple wells. And I guess that does  
10 exist today, right?

11 A Yes, sir, it does.

12 Q O.K. And that was what occurred when you were on vacuum?

13 A Yes, sir.

14 Q O.K. On Exhibit A-33, we have 106 wells, on Exhibit I-1,  
15 we have 35 wells. To go on vacuum, you had the majority  
16 of those on I-1 being wellhead wells; am I correct? It's  
17 page 6 of 12 on I-1.

18 A Yes, sir.

19 Q So we have a difference between 37 and 106 wells, and my  
20 understanding is you, Merit intends to, if it is able to  
21 go on vacuum, put the majority of the 106 wells on  
22 vacuum. Is it your testimony you have vacuum components  
23 already in place for the remainder of those?

24 A No, sir, it's not.

25 Q O.K. Do you know why Merit selected the Albert Loud



1 project to go on vacuum?

2 A That well is, or that group of wells was the highest  
3 concentration of wells we had in a unit.

4 Q Just the number of wells in an area?

5 A With the highest rate.

6 Q I'm still confused. You have 106 wells, you put 35 wells  
7 on a vacuum, you're going to put the remaining wells,  
8 majority of the remaining wells on vacuum, wouldn't you  
9 need more equipment?

10 A We're going to evaluate putting the wells on vacuum that  
11 aren't already set up for vacuum right now, and I don't  
12 know what the equipment situation is on those additional  
13 wells, what it would take to be able to draw those wells  
14 on vacuum.

15 Q O.K. We do know 35 of the 106 wells are capable of going  
16 on vacuum?

17 A Yes.

18 Q We don't know the difference between 35 and 106 which are  
19 capable of going on vacuum?

20 A Correct.

21 Q Thank you. I'm sorry.

22 A That's all right.

23 MR. SAGE: May I approach the witness,  
24 your Honor?

25 JUDGE EYSTER: Yes.

(Document marked for identification by the Court  
Reporter as Exhibit No. I-7.)

Q (By Mr. Sage): Mr. Prudhomme, I'm going to hand you what  
I represent is your response to Discovery No. 70, and was  
directed to Merit. Would you review that and tell me if  
you can identify that, please?

MR. CHRISTOPHERSON: Is that marked as  
I-7?

MR. SAGE: Yes.

A Yes, sir.

Q (By Mr. Sage): And you agree with me that's a document  
you provided?

A That's correct.

Q On page 5 of 7 --

A Yes, sir.

Q -- if I understand this correctly, this is representing  
the types of compressors on one or more of the fields or  
wells that is operated by Merit; am I correct?

A Yes, sir.

Q O.K. And earlier I had asked some questions regarding  
horsepower. And am I correct that this represents the  
horsepower for various wells in the Albert Loud, as well  
as maybe even the Clinton, certain Clinton wells?

A In addition to other ones, yes, sir.

Q Other ones. Right, right. And this helped you recall

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1 the fact of what those horsepower are?

2 A Yes, sir.

3 Q O.K. On the second, the next page, it would be page 6 of  
4 7, it's referring to electric. Those are electric  
5 compressors?

6 A Yes, sir.

7 Q Are those small compressors?

8 A Yes, sir.

9 Q What's the average cost of one of those small  
10 compressors?

11 A I do not know what the average cost of that is.

12 Q What about going back to the former page, page 5 of 7,  
13 there's a variety, a 68 horsepower, do you know what the  
14 average cost of that would be?

15 A No, sir I do not.

16 Q How about the ones referred to as 86 horsepower?

17 A No, sir, I don't.

18 Q Is this not under your supervision?

19 A Yes, sir, it is.

20 Q It is under it?

21 A Yes, sir.

22 Q O.K. And you haven't seen costs of compressors?

23 A When these were put in, I wasn't over this division, so I  
24 did not see the actual projects.

25 Q But you've seen costs of compressors since then, haven't

1       you?

2   A     I'm trying to think if we've added any additional  
3       compression since then.

4   Q     I didn't ask you that.

5   A     I do not recall seeing any additional compression costs.

6   Q     Do you have any understanding what the compression costs  
7       would be for a compressor that's at 68 horsepower?  I'm  
8       talking about the capital cost.

9   A     I understand.  Not specifically, no.

10  Q     Well, I understand that, because you've indicated you --  
11       but you have no understanding whatsoever today on the  
12       stand what it would cost for a horsepower, a compressor  
13       at 68 horsepower?

14  A     No, sir, I don't.

15  Q     Not even the range?

16  A     Probably somewhere \$10,000, maybe \$20,000.

17  Q     And that's based on personal knowledge, then?

18  A     That is an estimate.

19  Q     An estimate?

20  A     Yes, based on personal knowledge.

21  Q     O.K.  And if it was 86 horsepower?

22  A     Be slightly more.

23  Q     Be more than that.  It just increases as the horsepower  
24       goes up?

25  A     Typically, yes.

1 Q Does the fuel cost or fuel usage increase when it goes  
2 up?

3 A Typically, yes.

4 Q And in electric, I guess you're using electric power,  
5 you're not using gas to generate electric to generate the  
6 horsepower; am I correct?

7 A That is correct.

8 Q Over at the right-hand side, it had unit numbers and then  
9 it's disappeared, part of the numbers; do you know what  
10 that is?

11 A No, I don't.

12 Q It's not important, I'm just, more than anything else,  
13 curiosity. O.K. Are these numbers, the best you can  
14 tell, representative of the types of horsepower that  
15 Merit uses on its projects?

16 A Yes, sir.

17 MR. SAGE: May I approach the witness,  
18 your Honor?

19 JUDGE EYSTER: Yes.

20 (Document marked for identification by the Court  
21 Reporter as Exhibit No. I-8.)

22 A Yes, sir.

23 Q (By Mr. Sage): Have you had a chance to review that?

24 A Yes, sir.

25 Q And am I correct that's a copy of a response that you  
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1 provided to us in answering one of our previous discovery  
2 responses, which is -- or Request No. 107?

3 A That's correct.

4 Q And this refers to PDC, and that's Petroleum Development  
5 Corporation?

6 A That's correct.

7 Q And you must have received this, apparently either in the  
8 due diligence and/or after acquiring their interest?

9 A That's correct.

10 Q To the best of your knowledge, does this represent the  
11 type of compressors they have?

12 A Yes, sir.

13 Q And I looked, I see 12, I'm assuming those are -- well,  
14 it says 12 locations. Are those the inline booster  
15 compressors?

16 A No, sir.

17 Q What are they that you're representing?

18 A These are CPF compression.

19 Q And what makes you think they're CPF compression?

20 A By the horsepower, and talking to my field personnel.

21 Q You had discussions regarding, with your field personnel  
22 regarding the Caldonia 10?

23 A I was told by our field personnel that there aren't any  
24 casing, wellhead compression or inline compressors on the  
25 PDC assets.

1 Q So the PDC's got the 207, that's the one that has the 207  
2 wells?

3 A That is correct.

4 Q And they have compression only at the CPFs?

5 A That is correct.

6 Q And they were drawing down, as we saw earlier, pressure  
7 of a minus 12?

8 A Yes, sir.

9 Q And do you know the distance between the wells and the  
10 CPF in those instances?

11 A No, sir, I don't.

12 Q Do you have any estimate at all?

13 A No, sir.

14 Q You have never gone out and looked at the wells?

15 A I have not been to the PDC wells.

16 Q You operate them, right?

17 A Merit operates them.

18 Q You're the operating manager?

19 A I'm vice president of operations.

20 Q I'm sorry. Vice president. And you've -- you haven't  
21 had an opportunity to go out there yet?

22 A There's three levels between myself and the folks that  
23 look at these wells directly; and no, I have not had the  
24 opportunity to go out to look at the PDC wells.

25 Q I'm assuming these compressors also use fuel?

1 A That is correct.

2 Q And the larger the compressor, the more fuel generally?

3 A Yes, sir.

4 Q Do you know how much fuel, let's say a compressor that's,  
5 there's a couple of them that says 1,085 horsepower, how  
6 much fuel it would use on a daily basis?

7 A A rule of thumb is 6 cubic feet per horsepower hour, but  
8 I don't know how much this compressor uses.

9 Q It could be higher or lower than that?

10 A Yes, sir.

11 Q O.K. So to the best of your knowledge, this is all the  
12 compression they had for the 207 wells?

13 A Yes, sir.

14 Q Do you have any understanding what a cost of a compressor  
15 that's, has a horsepower of 1,085 horsepower?

16 A No, sir.

17 Q None at all?

18 A No, sir.

19 Q Do you know if it costs \$1,000?

20 A I'm sure it costs more than \$1,000.

21 Q How about 500,000?

22 A I would not think it would cost that much.

23 Q But you have no knowledge?

24 A No, sir.

25 MR. SAGE: May I approach the witness,  
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1 your Honor?

2 JUDGE EYSTER: Yes.

3 (Document marked for identification by the Court

4 Reporter as Exhibit No. I-9.)

5 A O.K.

6 Q (By Mr. Sage): Is that a document that you provided to,

7 in response to our Discovery Request No. 74?

8 A Yes, sir.

9 Q And the best of your knowledge, is the information true  
10 and correct?

11 A Yes, sir.

12 Q And on page 6 of 7 it references the Albert 25. Is that  
13 an Albert Loud unit or project?

14 A Yes, sir.

15 Q And it says total fuel Mcf; do you see that?

16 A Yes, sir, I do.

17 Q O.K. For January '09, it looks like it's 9,517?

18 A That's correct.

19 Q Now, the question that was asked, it says: Provide the  
20 fuel consumed separately by month by each compressor. So  
21 that is only, then, compressor fuel; am I correct?

22 A That is total compressor fuel, yes.

23 Q O.K. So you do have numbers for fuel for compressor  
24 separate from other? My confusion was earlier --

25 A Yes.

1 Q O.K. So but this is simply for the compressor fuel  
2 because that's all it represents?

3 A The title says total fuel. I can't state verbatim that  
4 this is solely just compression fuel.

5 Q Well, the question to you was: Provide fuel consumed  
6 separately by month by each compressor. Your answer then  
7 was that document.

8 A I understand that.

9 Q So when it says total fuel Mcf, isn't your understanding,  
10 at least when you provided this under oath, was it was  
11 for simply compressor?

12 A Yes, sir, I thought this was answering the question, but  
13 looking back when it says total fuel, I can not verbatim  
14 say that that is only compression fuel.

15 Q Could it be total fuel for compression?

16 A Yes, sir. Yes, sir, could be.

17 Q To your knowledge, you have no reason to question your  
18 original answer, do you?

19 A No, sir.

20 Q Now, in the next page, page 7 of 7, it has total CPF fuel  
21 Mcf on the Loud, Albert Loud 29; do you see that?

22 A Yes, sir.

23 Q So that would have been in that instance a, I'm assuming,  
24 a compressor, one compressor?

25 A I'm sorry, can you repeat that?

1 Q That's fine. The Albert Loud 29, when it says total CPF  
2 fuel Mcf, am I correct to understand that that would be  
3 just one compressor at the CPF, the fuel for that month?

4 A It could possibly -- there could be possible or multiple  
5 compressors there. I'm not sure how many compressors may  
6 or may not be at the Albert Loud 29 CPF.

7 Q Have you ever been out there?

8 A I have, yes, sir.

9 Q And did you see multiples?

10 A I do not remember, I don't recall.

11 Q O.K. But putting aside, it's whatever it was at the CPF?

12 A Yes, sir.

13 Q What is a unit? Then it says unit 16C Mcf. We've been  
14 talking about projects and everything else. What's a  
15 unit?

16 A I believe that's the individual compressors at that --

17 Q Oh, all right.

18 JUDGE EYSTER: Can you tell me what the  
19 difference is between the column that's total CPF fuel  
20 and total comp fuel?

21 MR. SAGE: Can I?

22 JUDGE EYSTER: I'm asking the witness.

23 A Oh, I'm sorry. I --

24 MR. SAGE: I'd answer if you like.

25 JUDGE EYSTER: You want to sit up here?

1 MR. SAGE: No, sir.

2 A I'm sorry, could you repeat the question?

3 JUDGE EYSTER: You have two columns, the  
4 total CPF fuel and total comp fuel.

5 A Yes, sir.

6 JUDGE EYSTER: I was just curious as to  
7 what the difference between the two of those was.

8 A I'm not sure what the difference is in -- theoretically  
9 the total, the total CPF fuel should exceed the total  
10 compression fuel.

11 JUDGE EYSTER: Should exceed it?

12 A Yes, sir.

13 JUDGE EYSTER: Why?

14 A Because there's other equipment at the CPF that utilizes  
15 fuel gas besides just the compression.

16 JUDGE EYSTER: But that doesn't appear to  
17 be the case in any of these figures, right?

18 A That is correct.

19 JUDGE EYSTER: O.K. Now I guess I'll ask  
20 the question again: What's the difference, not the  
21 difference in the numbers, but the difference in what is  
22 the total CPF fuel, what's that represent, and what does  
23 total comp fuel represent?

24 A The total CPF fuel is all the fuel gas used at the CPF  
25 for all of the operations for that central processing

1 facility.

2 JUDGE EYSTER: O.K. So that could be  
3 compression, that could be dewatering, it could be what  
4 else?

5 A Instrument, just loss --

6 JUDGE EYSTER: O.K.

7 A -- and unaccounted for. And then the total compressor  
8 fuel is the fuel used to run the actual compression.

9 JUDGE EYSTER: O.K. And you have no  
10 explanation why those numbers appear to be reversed,  
11 then?

12 A No, sir, I don't.

13 JUDGE EYSTER: Mr. Sage.

14 MR. SAGE: Thank you, your Honor.

15 Q (By Mr. Sage): My question was, regarding Unit 16C, then  
16 it says Mcf, and then Unit 5C Mcf, and goes on for three  
17 more. What's a unit?

18 A A compressor, I believe.

19 Q So these are each of the compressors at that CPF?

20 A I believe so.

21 Q So if I added up those numbers, it should match one of  
22 those, the latter columns, either the first column or the  
23 last column?

24 A I believe it should.

25 Q Maybe this is just part of the machine, but if you look

1 at October 10, the numbers are somewhat different.

2 A I have no explanation for that.

3 Q I don't either, so I was just curious. O.K. Thank you.

4 MR. SAGE: May I approach the witness,  
5 your Honor?

6 JUDGE EYSTER: Yes.

7 (Document marked for identification by the Court  
8 Reporter as Exhibit No. I-10.)

9 A Yes, sir.

10 Q (By Mr. Sage): Have you had a chance to review it?

11 A Yes, sir.

12 Q And is this Merit's response to our Discovery Request No.  
13 75?

14 A Yes, sir, it is.

15 Q And to the best of your knowledge, is the information  
16 there true and correct?

17 A Yes, sir.

18 Q And am I correct that the information refers to fuel  
19 usage of compressors that were operated by Merit which  
20 they purchased from Petroleum Development Corporation?

21 A That's correct.

22 Q And the reason that each of the documents that are  
23 attached, or the schedules or whatever you want to call  
24 them, beginning on page 5 of 14, begin in August is  
25 that's when Merit took over operation?

1 A That's correct.

2 Q And this represents the fuel usage for the compressors?

3 A Yes, sir.

4 Q Earlier we had a little discussion regarding horizontal  
5 wells and going on compression. Are there any  
6 requirement changes when you go on compression if you're  
7 going to utilize a horizontal well versus a vertical  
8 well?

9 A Not that I'm aware of.

10 Q Do you know whether Merit prior to going on vacuum in  
11 2006 did any testing of wells to determine whether or not  
12 it would be acceptable for vacuum operations?

13 A Acceptable in what way?

14 Q In terms of accepting a vacuum operation. I don't  
15 mean -- let me rephrase that. I see you're confused.

16 Prior to going on well, or prior to going  
17 on vacuum, someone must have made some evaluation that  
18 this is going to be a potential use for certain wells.

19 A Yes, sir.

20 Q And in doing that, did anybody -- do you know whether  
21 anybody at Merit tested certain wells with a mobile --  
22 some mobile equipment?

23 A Yes, sir, I believe we did.

24 Q And this would have been on the Albert Loud?

25 A Yes, sir.

1 Q And is this something you would intend to do as it  
2 relates to the remaining wells that you might want to  
3 consider going on vacuum?

4 A Yes, sir.

5 Q And how many mobile units do you have?

6 A I do not know that number.

7 Q O.K. Do you have any estimate of what those, that number  
8 is?

9 A No, sir, I don't.

10 Q O.K. Are they -- well, are these mobile units owned, or  
11 do you have to rent them?

12 JUDGE EYSTER: When you're speaking of a  
13 mobile unit, are you talking about a compressor?

14 A Yes, sir. Yes, sir. You know, all the wellhead  
15 compressors are fairly mobile because of the size of  
16 them. I don't know how many of those are owned versus  
17 leased.

18 Q (By Mr. Sage): Well, you wouldn't be taking a compressor  
19 off an existing well to go and test some other well; am I  
20 correct?

21 A Chances are, not likely.

22 Q O.K. So you'd have to either rent a unit or purchase a  
23 unit?

24 A Yes, sir.

25 Q And that would be an additional cost in determining of a,  
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1 determining the value of a well on vacuum, wouldn't it?

2 A You bet, that is correct.

3 Q As it relates to the 106 wells and the 207 wells, I'm  
4 assuming -- well, I'm not assuming. Does Merit own those  
5 wells?

6 A Yes, sir.

7 Q They're not simply the operator?

8 A That's correct.

9 Q Is it your understanding that the Antrim trend varies  
10 across the trend as to permeability and porosity?

11 A Yes, sir.

12 Q So that would be another determination to be made as to  
13 whether or not you put a well on a vacuum; am I correct?

14 A Very much so.

15 Q And is this something that's been considered already by  
16 Merit?

17 A We know that not all wells are candidates for vacuum, and  
18 so that's something that we'll have to look at when we  
19 entertain the possibility of putting additional wells on  
20 vacuum.

21 Q And when you look at whether a well is -- I don't know  
22 what term you use.

23 A Candidate.

24 Q -- candidate -- thank you -- for vacuum, do you look at  
25 what its existing production rate is?

1 A Yes, sir.

2 Q And then I assume you would use a test compressor and  
3 determine from that what its potential would be?

4 A That's correct.

5 Q And that plus costs we've discussed, you would make a  
6 determination is this going to be economical?

7 A Yes, sir.

8 Q And in doing that, did you also take into consideration  
9 how long it would take to produce the gas?

10 A Yes, sir.

11 Q And that's because, we talked about earlier, gas could be  
12 coming all the way out of the matrix and could be slower  
13 and money is valuable if it's quicker?

14 A Correct.

15 Q More valuable. You were asked some -- or well, not  
16 asked. Actually, you testified in your prefiled  
17 testimony, which has now been admitted, that the strength  
18 of the well and piping material have been verified. Do  
19 you recall that?

20 A Yes, sir.

21 Q And it says we have verified. And if I understand that  
22 correctly, you didn't personally verify it?

23 A On some of the components, I did; on other ones, our  
24 field folks and other engineers have.

25 Q When you say on some of the components, you did, I

1       thought you just a few moments ago told me you were third  
2       level; why would you check out the components of a well?

3   A     Just knowing that the tubing and such has, what their  
4       collapse pressure is.

5   Q     What is the collapse pressure of --

6   A     I don't know it off the top of my head.

7   Q     Then how do you know -- you actually went out and  
8       verified it?

9   A     Looking at the books, the Halliburton books and things.

10   Q     Well, the books will tell you what it should be, but it  
11       doesn't tell you what it is.

12   A     That's correct.

13   Q     So basically --

14   A     From the manufacturers.

15   Q     Right. The manufacturer says what it should be?

16   A     Yes, sir.

17   Q     And then you have to verify whether or not you have that  
18       type of pipe, because there's different type of pipe,  
19       isn't there?

20   A     Yes, sir.

21   Q     And that's not only steel pipe, but polyethylene?

22   A     Correct.

23   Q     And different thickness, strength, et cetera?

24   A     Yes, sir.

25   Q     And you personally haven't verified that?

1 A That's correct.

2 Q And that would also include the well casing?

3 A That's correct.

4 Q And what's a -- wellhead piping, I'm assuming you didn't  
5 go out and look at all that other?

6 A No, I didn't.

7 JUDGE EYSTER: Do Halliburton charts take  
8 into consideration age of the material?

9 A No, sir, it doesn't.

10 JUDGE EYSTER: So they consider just new  
11 material?

12 A Yes, sir.

13 JUDGE EYSTER: All right.

14 Q (By Mr. Sage): In one of your responses to discovery,  
15 you refer to 14 inches of vacuum.

16 A Yes, sir.

17 Q And what does that mean?

18 A That is the amount of vacuum that we've seen as far as  
19 how much can be pulled on -- or how much we've seen  
20 pulled on wells, the Antrim wells. Those came from when  
21 we were doing our due diligence with PDC.

22 Q So what you're really referring to, or not really, but in  
23 laymen's term, it's like a minus 14?

24 A PSIG?

25 Q Yes.

1 A I don't believe that's correct. I think there's a  
2 conversion to actual pressure.

3 Q O.K. What is --

4 A I don't know what the conversion is.

5 Q Is this the -- I saw someone else refer to mercury, this  
6 is not the same thing?

7 A No, sir.

8 Q O.K. You guys have really confused me. So when we  
9 looked at PDC's records earlier and you verified the  
10 document, it was a minus 12?

11 A Yes, sir.

12 Q And if I was going to convert that to inches of vacuum --

13 A Minus 12 is, that's what they're measuring in that is  
14 inches of vacuum.

15 Q O.K. That's my earlier question when I said minus 14,  
16 wouldn't minus 14 be the same as 14 inches of vacuum?  
17 Oh, I'm sorry. You're saying minus 12 is how many inches  
18 of vacuum?

19 A That's what they were reporting on their sheets were  
20 minus 12, that was minus 12 inches of vacuum.

21 Q O.K. So in your discovery response, you said 14 inches  
22 of vacuum; do you recall that? That's not in your  
23 testimony, it's in your discovery response.

24 A I'm sorry. What was the --

25 Q It's No. 37, but it's -- all I'm trying to determine is

1 if a minus 12 is the equivalent of 12 inches of vacuum,  
2 why isn't a minus 14 the equivalent of 14 inches of  
3 vacuum?

4 A I believe that it is. I'm sorry what, I don't remember  
5 the context in what you're telling me a minus 14.

6 Q It wasn't really that significant, I was just trying to  
7 figure out what it meant, just so you're comfortable with  
8 your testimony is.

9 MR. SAGE: May I approach the witness,  
10 your Honor, just so the record is clear?

11 JUDGE EYSTER: Yes.

12 (Document provided to the witness.)

13 Q (By Mr. Sage): This is the question and your answer. I  
14 just want to clarify the numbers on it.

15 A O.K. Are you talking about 14 inches of vacuum being the  
16 same thing as the minus 12?

17 Q No, no. I'm asking is the 14 inches of vacuum the same  
18 as a minus 14?

19 A Yes, sir.

20 Q That's all.

21 A I'm sorry, I didn't understand.

22 Q No problem.

23 A Yes, sir.

24 Q From looking at the records and discussing any of these  
25 matters, and any of these matters being the vacuum

1 operation in 2006 to 2008, were you informed either  
2 verbally or in those documents that while the wells were  
3 on vacuum, it encountered any leaks?

4 A I'm not aware that we encountered any leaks.

5 Q O.K. When you say you're not aware, you weren't  
6 informed?

7 A I was not informed.

8 Q And did you look at the documents, did you read all the  
9 documents regarding those operations?

10 A I did not read them all, no, sir.

11 Q Has Merit encountered oxygen entering into its systems?

12 A Can you be more specific?

13 Q Sure. Have they encountered oxygen going into their  
14 gathering system?

15 A Are you referring to the Antrim gas or Kalkaska plant, or  
16 I mean I guess I'm not --

17 Q I'm referring to the Antrim wells, the 106 wells, the 207  
18 wells, coming from the well and going to the CPF, which  
19 is the gathering system, have they encountered oxygen  
20 entering that?

21 A We have had small encounters of oxygen.

22 Q When you say small encounters, everything is relative.

23 A I don't know the exact number, but we typically don't see  
24 anything more than 3 parts per million.

25 Q O.K. This is -- now we're talking in terms from the well

1 to the CPF?

2 A I'm talking -- or the way that we can measure it is at  
3 our oxygen analyzer, oxygen monitoring device that's at  
4 the custody transfer point between our facility and the  
5 now DCP gathering system.

6 Q So you're downstream?

7 A This is downstream.

8 Q Right. O.K. We'll come to that later.

9 A I'm sorry.

10 Q That's all right.

11 A O.K.

12 Q I was trying to start with the wellhead.

13 A O.K.

14 Q Let's do this way: In the well, have you encountered  
15 oxygen entering into the well or the casing of the well?

16 A Oh, not that I'm aware of.

17 Q O.K. When you do a workover, doesn't oxygen get in?

18 A There's a potential for it to go down in the wellbore,  
19 yes, sir.

20 Q And you're not aware of any kind of a leak or a crack or  
21 anything else that will allow oxygen or has allowed  
22 oxygen in any of the 106 wells or the 207 wells that you  
23 operate?

24 A Into the reservoir or the wellbore?

25 Q In the wellbore.



1 A No, sir, I am not.

2 Q From your experience, would you agree with me that that  
3 is a potential?

4 A Under a closed system?

5 Q O.K., you've got me.

6 A If you're not working on a well, just basic operation?

7 Q Yes, with positive pressure.

8 A With positive pressure. I can not see how oxygen would  
9 get into a wellbore.

10 Q You know the term diffusion?

11 A I've heard of it.

12 Q O.K. Are you familiar with it and the principle of  
13 diffusion?

14 A Basically.

15 Q Am I correct that even if a well is on positive pressure,  
16 if there's a crack, oxygen can get into the system?

17 A I've heard there's a possibility of that. I don't know  
18 that for sure.

19 Q Has Merit taken consideration in the potential of oxygen  
20 getting into the reservoir and its impact?

21 A No, sir.

22 Q Is it your testimony that if oxygen got into the  
23 reservoir, it wouldn't cause an impact?

24 A I'm not -- I don't know how oxygen would get into the  
25 reservoir.

1 Q Well, assume from my hypothetical that oxygen could get  
2 in; would it be your understanding or your testimony that  
3 it would not have an impact?

4 A I don't know how it would affect the reservoir.

5 Q O.K. You have no knowledge?

6 A I have no knowledge on how oxygen would affect the  
7 reservoir.

8 Q When Merit was operating on vacuum, am I correct that no  
9 tests were taken?

10 A Can you be more specific?

11 Q Let me strike that.

12 I asked you a question in discovery at  
13 No. 38, I asked you the measures that will be undertaken  
14 to address ramifications of potential leaks in the well  
15 and the piping materials operated under vacuum, provide  
16 the basis -- because that was your testimony I just  
17 quoted from -- provide the basis, including any work  
18 papers, documentation, et cetera, that all well and  
19 piping components and connections are subject to pressure  
20 testing after construction and any leaks eliminated.  
21 Your answer, and I misinterpreted it, your answer was:  
22 No tests were documented. And but were tests -- do you  
23 know if any tests were taken?

24 A The tests I think were the initial pressure testing of  
25 the wells upon construction, that's the tests that I was

1 referring to.

2 Q Way back at the time when they put them under  
3 construction?

4 A Yes, sir.

5 Q Do you test those wells afterwards at all for pressure?

6 A Pressure testing, typically not, unless we see that  
7 there's an issue.

8 Q And what would tell you there's an issue?

9 A If you have a leak, if you're going with a sniffer and  
10 you can detect gas, or if your sales meter is not  
11 correlated closely to your production meters or your  
12 wellhead meters out in the field, if there's a  
13 discrepancy there, you would have, that would give you an  
14 idea that you may have some kind of leak.

15 Q In the latter circumstance, you're referring to a volume  
16 discrepancy, right?

17 A Discrepancy, yes, sir.

18 Q And you've encountered these?

19 A Yes, sir.

20 Q So that means there's leaks have gone into at least that  
21 part of the system?

22 A I'm not sure what I -- let me check that. I don't know  
23 for fact that we've experienced them. I would imagine  
24 that leaks happen in the oil field periodically.

25 Q But during the vacuum operation, am I correct there was

1 no test for pressure in -- no pressure tests?

2 A That's correct.

3 Q And no testing for any kind of oxygen levels in fact?

4 A That's incorrect. We have oxygen monitoring on our  
5 custody transfer points between the CPF and the DCP  
6 gathering system, and we did not incur high levels of  
7 oxygen, to my understanding, at any time during the time  
8 we were pulling vacuums.

9 Q So but that's all downstream?

10 A But if it, it gets introduced upstream, it's got to go  
11 downstream, and you would have to see that oxygen at that  
12 custody transfer point.

13 Q Now, when the oxygen -- you're referring to oxygen,  
14 you're looking at an oxygen sensor at the CPF, right?

15 A That is correct, at the downstream side of the CPF.

16 Q Yes. Same building, but it's on the downside, not the  
17 suction side?

18 A That's correct.

19 Q Now, you have indicated wells can be quite a distance  
20 away from the CPF?

21 A That's correct.

22 Q And to the extent oxygen would enter into, let's say, the  
23 line, one of the gathering lines just downstream of a  
24 well, that oxygen level could be in excess of 3 parts per  
25 million, by the time it gets up to the CPF, it could less

1       because there's commingling of gas?

2   A     That's correct.

3   Q     O.K. And it's your testimony that as far as you know --  
4       well, strike that. That's not true.

5                       Has Merit ever been curtailed?

6   A     We have been curtailed.

7   Q     O.K. And that's because of oxygen level?

8   A     It was, from my understanding, that we were curtailed on  
9       the entire DCP or MichCon systems at the time due to high  
10       oxygen in a specific area. When we reviewed our reports,  
11       we did not see that our oxygen levels were beyond the  
12       limitations of what DCP or MichCon put on us.

13   Q     And was that limitation 3 parts per million?

14   A     I do not know what the limitation is there.

15   Q     I'm assuming this is under your supervision as well?

16   A     Yes, sir, it is.

17                       JUDGE EYSTER: I want to just clear  
18       something up. DCP is, fill in the blank.

19   A     Duke Conoco Phillips, they're the operator of the dry  
20       header system and the processing plants that treat the  
21       Antrim gas for CO2.

22                       JUDGE EYSTER: O.K. And so they have a  
23       pipeline system and they have a treatment plant, and then  
24       from there it goes to MichCon?

25   A     I believe so.

1 JUDGE EYSTER: To the MichCon pipeline?

2 A To the downstream, yes, to market. MichCon used to own  
3 the gathering system until I believe DCP bought the  
4 MichCon system.

5 JUDGE EYSTER: And the processing  
6 facility, CO2 removal?

7 A They bought the CO2 removal from a different entity.

8 JUDGE EYSTER: O.K. And so you feed  
9 in -- well, you have several CPFs, right?

10 A That's correct.

11 JUDGE EYSTER: And they all feed into  
12 the --

13 A DCP.

14 JUDGE EYSTER: -- DCP system?

15 A System.

16 JUDGE EYSTER: And they do the CO2  
17 removal?

18 A That's correct.

19 JUDGE EYSTER: And I forgot, you may have  
20 said this already, you have your own CO2 removal plant?

21 A Yes, sir, we do.

22 JUDGE EYSTER: And where is that located?

23 A In Kalkaska, Michigan.

24 JUDGE EYSTER: And what's that, where is  
25 that in this whole line of interconnection of pipelines?

1 A The Kalkaska gas plant predominantly strips out NGLs from  
2 the wet header system, which is mainly the Niagaran gas,  
3 the Antrim gas. But there are some Antrim facilities  
4 that go into the wet header system which then we strip  
5 out the CO2 as a result of that.

6 JUDGE EYSTER: O.K. So the gas that  
7 we're speaking of today is not processed through your CO2  
8 removal plant?

9 A That is correct.

10 JUDGE EYSTER: O.K. Mr. Sage.

11 The Niagaran has a lower CO2 content,  
12 doesn't it?

13 A Yes, sir, significantly.

14 Q (By Mr. Sage): Does the Antrim gas have H2S?

15 A If it does, it's a very small part.

16 Q How many of the components of these 106 wells and 207  
17 wells are steel?

18 A How many of the components?

19 Q Yeah. What component -- let me do it this way, let me  
20 break it down. Are there steel pipelines?

21 A In the PDC, in the Petroleum Development Corporation  
22 assets, they have some steel pipelines.

23 Q And are these pipelines coming from the well to the CPF?

24 A Yes, sir.

25 Q And then out of the 207 wells, do you know how many?

1 A No, sir, I don't know that breakdown.

2 Q And then you have -- and in those wells, when they  
3 produce, and from the well, they produce gas and water,  
4 don't they?

5 A That's correct.

6 Q So that gas and water would go through that same line?

7 A Yes, sir.

8 Q And then it goes to the CPF and goes through the  
9 compressor and does something?

10 A Yes, sir.

11 Q All right. And then there's other steel components on --  
12 why don't we do this: The 107 wells --

13 A Yes, sir.

14 Q -- is any steel pipelines there?

15 A To my knowledge, it's polyethylene pipe.

16 Q O.K. Any of those ever collapsed?

17 A Not to my knowledge.

18 Q I'll use a laymen's term. Any of them ever burst?

19 A Not to my knowledge.

20 Q There's valves that are steel, right?

21 A That's correct.

22 Q On all these wells?

23 A Yes, sir.

24 JUDGE EYSTER: Earlier in your testimony  
25 you talked about being curtailed because of oxygen. Did



1       you determine -- maybe you testified about this and I've  
2       forgotten -- did you determine where the oxygen was  
3       coming into the system?

4   A    It was coming in from a different operator, and we did  
5       not know where it came in. When we -- the procedure is  
6       DCP will send out an e-mail if the oxygen levels are  
7       starting to rise in any particular part of their  
8       facility, their gathering system, for you to go out and  
9       look if it's raising in any part of their gathering  
10      facility. If it gets to a point, they will start to  
11      curtail that part of the gathering system, they'll pinch  
12      it back so that the parts per million of the oxygen isn't  
13      excessive getting to their plant.

14                   When they send out the e-mail, everyone  
15      is supposed to go and look at their facilities to see if  
16      they are the ones contributing to that high oxygen. So  
17      immediately we go and look at our oxygen monitoring  
18      system, see if we've had any spikes in our systems or if  
19      we're, if we're putting a high level of oxygen into the  
20      system.

21                   JUDGE EYSTER: Have you ever been shut  
22      in?

23   A    Not for that, no, sir. Now, we may have been shut in as  
24      the whole pipe got shut in, but not Merit specifically,  
25      that I'm aware of.

1 JUDGE EYSTER: O.K. Mr. Sage.

2 MR. SAGE: Thank you, your Honor.

3 Q (By Mr. Sage): What happens to -- you talked in terms of  
4 a segment being shut in, the pipeline system, and in your  
5 instance, someone else was the violator, I'll say the  
6 violator, of the excess CO2 -- not CO2 -- oxygen,  
7 correct?

8 A Yes, sir.

9 Q In those instances, what happens to the gas?

10 JUDGE EYSTER: Wait a minute. Let me  
11 just make sure the record is clear. The reference that  
12 you made about someone else being the violator and there  
13 was a curtailment in that case.

14 A Yes.

15 JUDGE EYSTER: And I'm not sure you gave  
16 any details with regards to a shut-in. You indicated  
17 there had been a shut-in, but it was because, I think you  
18 said the whole pipeline was shut in, but it wasn't just  
19 you?

20 A Yes. We may -- there may have been a time where instead  
21 of curtailing the gas, they actually shut off that whole  
22 leg because the oxygen levels were high enough. I don't  
23 know if that has happened, but if -- but we have never,  
24 to my knowledge, been the ones that was said that you're  
25 the contributor to the high oxygen on the system.

1 JUDGE EYSTER: Under both scenarios?

2 A Yes.

3 JUDGE EYSTER: O.K. Mr. Sage.

4 Q (By Mr. Sage): Define what you mean by curtailed.

5 A Where the production volumes that are produced are less  
6 than what the wells are capable of because of having a  
7 valve closed, or not closed, but pinched back by DCP.

8 Q O.K. And you've indicated they have actually shut in a  
9 segment of the pipeline?

10 A I can't confirm that.

11 Q Well, if it did occur, what would happen to the gas?

12 A The gas would cease to flow.

13 Q O.K. So it's in the pipeline?

14 A Right.

15 Q But it's shut in, and so it just remains in the pipeline?

16 A They would probably -- yes, and then they'd probably  
17 slowly open the valve and blend the higher oxygen levels  
18 down until the pipeline was clean of oxygen again.

19 Q Do they ever vent it?

20 A You'd have to ask DCP.

21 Q Flare it, do you know if they ever flare it?

22 A I do not know. I would doubt that they would do those  
23 two options.

24 Q Have you ever flared gas?

25 A I don't know of any specific instances, but I would

1        imagine there's a potential for flaring.

2    Q        Would that be because of the oxygen in your gathering  
3            system?

4    A        No, sir.

5    Q        Would it pertain to any type of oxygen issue?

6    A        No, sir.

7    Q        O.K. Are you familiar -- let me do it this way: Does  
8            Merit pay a fee to DCP for oxygen damage, potential  
9            damage, at the South Chester plants?

10   A        Not that I'm aware of.

11   Q        Had they in the past?

12   A        Not that I'm aware of.

13   Q        Are you aware of whether there's been any damage at any  
14            time since you've been at Merit at the amine facility at  
15            South Chester?

16   A        I believe they have had some issues there.

17   Q        And that was caused because of oxygen, wasn't it?

18   A        I can't verify what their issues were.

19   Q        They didn't contact Merit and advise them that they'd  
20            have to pay a fee?

21   A        Not that I'm aware of. I'm not saying that didn't  
22            happen, but not that I'm aware of.

23   Q        When I asked you, you know, regarding verification of the  
24            casing and the pipeline and the valves and things like  
25            that, you indicated you weren't the one anyway. When you

1 say we, then in the discovery responses you refer to a  
2 gentleman called Jason Manning. Do you remember that?

3 A Yes, sir.

4 Q And Randy Sanders?

5 A Yes, sir.

6 Q Did you verify with them that they had looked at each of  
7 the pipelines and the valves and the casing and flow  
8 lines and compressors to determine whether or not they  
9 were capable of handling the backup service?

10 A No, sir, I didn't verify everything.

11 Q Well, how much did you verify?

12 A The major components.

13 Q The major components being the what?

14 A The pipelines, the compressors, the tubings, the casings.

15 Q Did you ask them what the quality of the polyethylene  
16 line you have?

17 A Yes, sir.

18 Q And what was it?

19 A We have SDR-7 and SDR-11.

20 Q And as -- and but we didn't, you didn't pressure test it?

21 A No, sir, we didn't.

22 Q So it would could have leaks and we don't know it?

23 A I don't believe it has leaks due to the fact that when we  
24 look at the volumes, the sales volumes versus the  
25 wellhead volumes, the volumes check out, we do periodic

1 testing of sniffing.

2 Q Do you have meters on all your wells?

3 A We have allocation meters.

4 Q Well, I understand that. I'm asking, do you have meters  
5 on your wells?

6 A I'm not aware of if we have them to every single well.

7 JUDGE EYSTER: Do you know what the age  
8 of the material is that you just, what did you say, it's  
9 the SDR-7 and 11?

10 A I don't know the age exactly. It was probably from the  
11 '80s.

12 JUDGE EYSTER: So this would be the  
13 original material that was used in wells in the pipeline?

14 A For some of the wells. Some of it's newer, wells that  
15 we've drilled.

16 JUDGE EYSTER: O.K.

17 Q (By Mr. Sage): Have you pressure tested the 207 wells,  
18 or lines?

19 A 207, the lines from the 207 wells from -- no, we have  
20 not.

21 Q Do you have any salt water wells?

22 A Yes, sir, I believe we do.

23 Q And they're utilized in the operations of the Antrim  
24 wells that we've been discussing?

25 A Yes, sir.

1 Q And you don't know how many?

2 A No, sir, I don't.

3 Q If you go on vacuum, are you going to have more?

4 A I don't believe so, no.

5 Q O.K. Do you pressure test those?

6 A We do mechanical integrity tests that are required by the  
7 state.

8 Q And how often is that done?

9 A I believe it's every five years, if I'm not mistaken.

10 Q Has any of them failed?

11 A I could not answer that. If they failed, then we  
12 repaired them.

13 Q I recognize that, the state would require that.

14 A Yes, sir.

15 Q So the record is clear, though, I'm trying to make sure  
16 that you're not suggesting that Randy Sanders and Jason  
17 Manning took and verified all the well casing, the  
18 wellhead piping, valves, flow lines, compressors and  
19 other components suitable for vacuum services?

20 A Not specifically to that; we looked at the standard,  
21 manufacturing standard of those.

22 Q O.K. The book that you mentioned before?

23 A Yes, sir.

24 Q O.K. Thank you. If Merit decides to go on vacuum, but  
25 not include all of the wells, am I correct you may have

1 to then modify your infrastructure?

2 A I don't believe so.

3 Q O.K. My point would be is if you have one compressor for  
4 multiple wells, and out of the multiple wells, let's say  
5 there's ten, only five of them would meet what you want  
6 for purposes of vacuum, would you have the other wells  
7 still going through the vacuum system?

8 A We wouldn't put the compressor in a locale where it would  
9 have to do all ten wells then.

10 Q So you'd just put one of them, maybe one on each of those  
11 other five?

12 A Potentially, or trying to group; if three of five were on  
13 a line, then you could put that in line.

14 Q So there's a possibility you may have to do some  
15 infrastructure, but you're not suggesting anything of a  
16 great magnitude anyway?

17 A Correct.

18 Q But you don't know yet because you haven't designed it  
19 yet?

20 A Well, we've already, as you've stated, we've already, or  
21 has been stated here, we've already pulled back and  
22 pumped these wells, so we have a very good idea in its  
23 current existing structure that we could pull vacuums  
24 without doing number modification.

25 Q Well, you've pulled vacuum on 35 wells out of 106?



1 A Correct.

2 Q So you've got a number of others that you may have to  
3 look at?

4 A Yes, sir.

5 JUDGE EYSTER: If you have, just use the  
6 example, I think you said five wells and you were only  
7 going to use compression on three, you have five that  
8 were leading into the same line, what do you do to stop  
9 the compression from -- how do you isolate the wells that  
10 aren't on compression?

11 A You would either put the compression further upstream  
12 closer to each individual well, or you could put all five  
13 wells on vacuum, you just may not have the response from  
14 the other two wells that aren't good candidates for it.

15 JUDGE EYSTER: If you put the compression  
16 upstream, doesn't that raise the pressure on the  
17 downstream wells?

18 A Yes, sir, it would.

19 JUDGE EYSTER: So is there some sort of  
20 modification that would then have to take place to  
21 isolate that?

22 A It wouldn't really -- it wouldn't increase the pressure  
23 on the downstream wells because those are going be  
24 dictated by the suction compressors at the CPF. It's  
25 just going to lower the production -- the vacuum on the

1 wells that you are going to put on vacuum. The discharge  
2 will still be equivalent, slightly higher to the suction  
3 of the CPF compressor. Did I explain that?

4 JUDGE EYSTER: So if I understand it,  
5 there would be a slight, but probably insignificant,  
6 change in the pressure?

7 A Correct.

8 JUDGE EYSTER: O.K. Yeah, that makes  
9 sense. Thanks.

10 A Sure.

11 Q (By Mr. Sage): On page 4 of your testimony at the very  
12 top, actually, the question is on page 3 at the bottom:  
13 What measures will be undertaken to address ramifications  
14 of potential leaks.... And then the answer was: All  
15 wells and pipeline components and connections are subject  
16 to pressure testing after construction.... This goes  
17 back to what we discussed earlier; I assume when you put  
18 in a well, you pressure test it?

19 A Yes, sir, before building the facilities, we pressure  
20 test.

21 Q And even if you put in a pipeline, you pressure tested  
22 it?

23 A Yes, sir.

24 Q But as you, in response to the judge's questions earlier,  
25 you've got some of these wells probably the 1970s, right?

1 A I'm not sure exactly what vintage, but they're at least  
2 in the '80s.

3 Q O.K. How about the '60s?

4 A I don't know when Albert Loud was initially developed.

5 Q And in that context, that would -- but a majority of  
6 those wells, 107 wells, majority of them have been in  
7 there for some time, you know, over ten years?

8 A Yes, sir.

9 Q And best of your knowledge right now, there hasn't been  
10 any additional pressure testing?

11 A Unless we had to replace some pipe, we would have  
12 pressure tested that, but --

13 Q It would be that pipe?

14 A Yes, sir, that pipe.

15 Q I questioned someone during breaktime on this one just to  
16 get an understanding of it. You reference combustible  
17 gas detectors, and the best thing I could think of is one  
18 of these flick lighters. And I'm assuming that's not  
19 what you use?

20 A No, I don't believe they sit there and try to ignite the  
21 potential gas.

22 Q What is a combustible gas detector?

23 A I believe it's a device that can detect hydrocarbon gas.

24 Q We're not talking about combusting it anyway?

25 A Well, no, you're not actually combusting it, it detects

1 hydrocarbon, which is combustible.

2 Q O.K. They call them -- what do they call these?

3 A Sniffers.

4 Q Sniffers.

5 A Yes, sir.

6 Q And someone walks along the line and tries to find it?

7 A Uh-huh.

8 Q Or near the wellhead or wherever it may be?

9 A Wherever they think there may be a leak.

10 Q Now, this is --

11 JUDGE EYSTER: Excuse me a minute.

12 That's a person?

13 A Yes, sir.

14 JUDGE EYSTER: O.K. I assumed it was a  
15 device.

16 A Well, no, they're holding a device that does it.

17 JUDGE EYSTER: So this is not a person  
18 that goes around and sniffs it?

19 A No. That would be a bad job.

20 JUDGE EYSTER: I was just -- that's what  
21 I thought you were trying to say, I was kind of  
22 surprised.

23 A No, sir. It's a person holding a device that reads the  
24 hydrocarbon gas.

25 JUDGE EYSTER: O.K. Thanks.

1 MR. SAGE: Used to work for a winery.

2 JUDGE EYSTER: You know, I mean they use  
3 it to what, they used it, that was one of the things they  
4 used for detecting gas in, or oil in the fish out of the  
5 gulf, right? They had people that were smelling the  
6 products when it came in.

7 MR. SAGE: Always an opportunity.

8 A Your Honor, may I use the restroom?

9 JUDGE EYSTER: Let's take a break here.

10 (At 2:28 p.m., there was a 15-minute recess.)

11 JUDGE EYSTER: We're on the record.

12 Mr. Sage.

13 Q (By Mr. Sage): On page 4, Mr. Prudhomme, you also  
14 referred to oxygen sensors, you've kind of alluded to  
15 those every so often throughout your testimony, and I  
16 just want to pinpoint a few things. My understanding,  
17 these oxygen sensors -- I guess what we haven't done is,  
18 explain what an oxygen sensor does.

19 A It's a piece of equipment that monitors the gas stream  
20 running through it and detects the amount of oxygen  
21 that's present in that stream, whether it's in a  
22 percentage basis or a parts per million basis, and  
23 there's different levels of periodic testing for them  
24 where they take random, different samples.

25 Q The oxygen sensor does?

1 A Yes.

2 Q And it does this right at the CPF?

3 A Yes.

4 Q O.K. Now I understand, I think I understand. When you  
5 said random sampling, it tests every so often?

6 A Yes, and you can dictate on how frequently you'd like  
7 that sample to be taken.

8 Q How often, do you know, do you do it at Merit?

9 A They're typically one-minute samplings.

10 Q O.K. Now, the oxygen sensor, is it set at a certain  
11 parts per million?

12 A Set at a certain -- can you --

13 Q When you're talking about oxygen going through the  
14 sensor, oxygen, my limited knowledge of oxygen, everybody  
15 refers to it as parts per million.

16 A Yes, sir.

17 Q And so I'm assuming, then, the oxygen sensor is set so  
18 that it would do something at a certain parts per  
19 million?

20 A Yes, sir. In fact, from what I've read on the kind that  
21 we use, that it obviously reads down to non-detect and  
22 reads in the parts per million down to the third, second  
23 decimal.

24 Q And in your testimony you refer to 3 parts per million  
25 for 20 minutes. Do you see that?

1 A Yes, sir, I do.

2 Q That's what I'm trying to understand.

3 A It reads well below that level of detect.

4 Q Right. And then when it reaches at 3 parts per million  
5 for 20 minutes, does it shut in the compressor?

6 A No, sir, not currently.

7 Q O.K. What happens at 3 parts per million, then, after 20  
8 minutes?

9 A Well, these are what we are proposing be part of the  
10 regulations. Right now it just monitors it so that when  
11 DCP calls us to say we have an issue on your gathering  
12 line, we can send them the backup saying the issue is not  
13 with us.

14 Q O.K. The reason I was confused, it says alarms and  
15 operator callouts are configured to trigger if averages  
16 over 3 parts per million, and it looks like to me that  
17 was existing, but you're saying that's a proposal?

18 A Yes, sir.

19 JUDGE EYSTER: Those are existing oxygen  
20 sensors, correct?

21 A They are all existing oxygen sensors.

22 Q (By Mr. Sage): And you have them on all your CPFs?

23 A All of our Antrim CPFs.

24 Q Now, an oxygen sensor then would tell you oxygen has  
25 reached the CPF and it's for protection of the downstream

1 plant?

2 A It is for protection of the midstream assets and  
3 downstream plant, yes.

4 Q O.K. And that's a new term for me now. Midstream is  
5 going from the --

6 A The gathering system.

7 Q The gathering system coming from the well to the --

8 A No, sir. The gathering system at the downstream side of  
9 the CPF going to the processing facilities.

10 Q O.K. That's called a gathering system?

11 A For MichCon. There's different -- or excuse me -- for  
12 DCP. There's different gatherings.

13 Q So when you refer to a high-pressure gathering line,  
14 that's that --

15 A That's what I'm referring to, yes, sir.

16 Q So then the next part of your testimony says: If an  
17 instantaneous level of 30 parts per million or greater is  
18 detected, the CPF compression is automatically shut down.  
19 That's again a proposal, that doesn't occur right now?

20 A That's correct.

21 Q And what made you limit it to 30 parts per million?

22 A Because as far as being a high side or a low side, why  
23 did I come up with 30 parts per million? That's where  
24 we, where, as operators at Kalkaska plant, we start  
25 getting very concerned about that level of oxygen into



1 the system and not being able to dilute it enough by the  
2 time it got to the plant.

3 Q And have you encountered that at Kalkaska?

4 A Yes, we have.

5 Q And do you automatically shut in?

6 A Well, right now we don't have the ability to do that.

7 JUDGE EYSTER: So would this sort of  
8 apply to new construction everywhere?

9 A If this -- on some people, some folks have oxygen  
10 monitoring on their system, on their CPFs. Right now the  
11 wet header and the dry header systems are vastly  
12 different in regards to what they can do to curtail  
13 oxygen coming to the plants.

14 JUDGE EYSTER: O.K. But the automatic  
15 shutdown, that would require installation of equipment?

16 A Or if you have the oxygen monitoring on your equipment,  
17 then you would just have to tie it to your compressor if  
18 it's not already there in order to shut it down.

19 JUDGE EYSTER: What about for your  
20 company?

21 A We have -- it's not currently tied to the compression,  
22 but we have the oxygen monitoring in place.

23 JUDGE EYSTER: You have the oxygen  
24 monitoring in place, and you have alarms and operator  
25 callouts attached to them?

1 A I'll have to -- I'd have to check to see if there are  
2 callouts.

3 JUDGE EYSTER: And do you have automatic  
4 shutdown systems?

5 A No, sir. No, sir.

6 JUDGE EYSTER: O.K. Mr. Sage.

7 MR. SAGE: Thank you, your Honor.

8 Q (By Mr. Sage): When you say tie it to the equipment, I'm  
9 assuming there's going to be some additional work there?

10 A There would be a little expense, time, the oxygen monitor  
11 turning to the compressor to shut it down.

12 Q Is this kind of a wiring system?

13 A Yes, sir.

14 Q All right. The judge asked you about alarms. You know,  
15 what alarms are you referring to?

16 A Alarms if the levels get up to a certain amount.

17 Q What's the difference between the alarms and the oxygen  
18 sensor?

19 A Well, the alarms are as a result of the oxygen sensor  
20 reading a higher than acceptable level.

21 Q So then it, like a fire alarm, turns it on?

22 A I believe it's more of a callout to the answering service  
23 or to whoever is responsible.

24 Q Right. And then if that occurs, then you've got an  
25 operator callout, someone gets a call in the middle of

1 the night and says you got to go out and do it?

2 A Yes, sir.

3 Q So it is like a fire alarm.

4 Now 3 parts per million means that there  
5 will be gas and oxygen going through the compressor into  
6 the downstream line, correct, for 20 minutes?

7 A Correct.

8 Q And what size line are we referring to?

9 A You would have to talk to DCP about the size of their  
10 lines.

11 Q Ten-inch line?

12 A I'm not sure.

13 Q You're not familiar?

14 A I can't remember off the top of my head.

15 Q O.K. Is it a steel line?

16 A Yes, sir, I believe so.

17 Q Have you -- has anybody at Merit, to your knowledge,  
18 quantified what volume of gas and oxygen would be mixed  
19 for this 20-minute period going on the line from the CPF  
20 down to DCP?

21 A It would totally -- I don't believe anybody has, but it  
22 would be totally dependent on the amount of flow going  
23 through that, out of that particular CPF.

24 Q I recognize that.

25 A O.K.

1 Q But my question is, has anybody ever tried to calculate  
2 that?

3 A No, sir.

4 Q If the gas went through that system and got to DCP, they  
5 could shut it in if it was excess oxygen, correct?

6 A Well, what would happen is it would get into their system  
7 and it would be blended with all the gas that did not  
8 have oxygen, and if that still was higher than their  
9 sensors that are placed along the, along their gathering  
10 system, then the process I've described earlier would  
11 take fold where they would e-mail out, or if the volume,  
12 if the concentration was high enough, they would start  
13 pinching back that line in order to dilute the oxygen  
14 getting to their plant.

15 Q Or they could shut it in?

16 A Or they could shut it in as an extreme case.

17 JUDGE EYSTER: I want to just ask you  
18 something based on what Mr. Sage suggested that, and you  
19 agreed with him, that if this alarm was activated and a  
20 callout went out in the middle of the night, that someone  
21 would then come out and do something. Is that really the  
22 way it's going to work?

23 A Yes, sir.

24 JUDGE EYSTER: So as soon as it's going  
25 to 3 parts per million for 20 minutes, someone is going

1 to show up there and --

2 A I can't tell you it's going to happen in 20 minutes.

3 JUDGE EYSTER: But I mean is someone  
4 going to wake up in the middle of the night and head out  
5 there, or is this something that's like, O.K., the next  
6 morning when the regular shift starts, I need to go out  
7 and examine that and we're going to try and figure out  
8 what the problem is?

9 A We have employees that go out to callout alarms at all  
10 times of the night, not necessarily for oxygen, but all  
11 different types of alarms.

12 JUDGE EYSTER: Well, I'm not asking you  
13 about anything else, I'm asking you about this, about  
14 your testimony --

15 A Yes, sir.

16 JUDGE EYSTER: -- and if that's the  
17 policy that you're, I mean you're presenting?

18 A Yes, sir.

19 JUDGE EYSTER: O.K. And so they'll go  
20 out, and at that level, that just means someone has to go  
21 out and start figuring out what the problem is?

22 A Trying to figure out what the issue is.

23 JUDGE EYSTER: You're not going to be  
24 shutting down?

25 A Correct.

1 JUDGE EYSTER: All right. Mr. Sage.

2 Q (By Mr. Sage): When that occurs, when someone goes out,  
3 is this when they use the combustible gas detector trying  
4 to find out where it's at?

5 A Well, I would think that if it's, if it's sucking oxygen  
6 in because it was on a vacuum, that you would probably  
7 not have, other than through diffusion, you may have that  
8 issue. I don't know if they would be able to -- I don't  
9 think that would be a safe practice in the middle of the  
10 night to go do.

11 Q O.K. I guess what my, going back to the questioning, is  
12 that if I understood it correctly, if it reaches --

13 A They would try to determine where the oxygen was entering  
14 into the system.

15 Q Right. And how do you do that other than, from what  
16 you've said here so far, combustible gas detector; how  
17 else would I find out where the oxygen is entering?

18 A Well, a combustible gas detector is used primarily  
19 through positive pressure.

20 Q Right.

21 A I would have to talk to our field people as to the steps  
22 that they go through in order to try to determine where a  
23 potential leak is on a well pulled on a vacuum.

24 Q That could take a substantial amount of time, couldn't  
25 it?

1 A Possibly.

2 Q Because you've got a lot of wells?

3 A Yes, sir.

4 Q During the vacuum operations of 2006 to 2008, were there  
5 oxygen sensors at those CPF during that period of time?

6 A Yes, sir, there was.

7 Q And do you recall from looking at any of the records  
8 and/or any discussion with anyone that there was any  
9 evidence of oxygen entering the system?

10 A I'd have to go -- we'd have to go back and look, but they  
11 did not recall any issues that we had concerning oxygen  
12 while we were pulling vacuums.

13 Q And you discussed that with someone?

14 A Yes, sir.

15 Q And who did you discuss that with?

16 A Randy Sanders and Dan Zilmer.

17 Q O.K. Now, they're not the field hands, right?

18 A Dan Zilmer -- excuse me. Randy Sanders is, he's out in  
19 the field, yes, sir, he's our ops manager over our field  
20 employees.

21 Q You testified earlier regarding wellhead compressors and  
22 booster compressors.

23 A Yes, sir.

24 Q Now, if I understand it correctly, you can't place an  
25 oxygen sensor at a wellhead; am I correct, in Michigan,

1 let me do it in Michigan?

2 A I'm not sure what the regulations are as far as putting  
3 an oxygen monitoring on a wellhead.

4 Q O.K. What I was referring to is the weather conditions.  
5 My understanding, an oxygen sensor is sensitive to  
6 weather conditions, cold and wet? Sounds like me.

7 A I imagine you'd need to have it protected from the  
8 elements.

9 Q O.K. So if -- we won't have an oxygen sensor at the  
10 wellhead. What about the booster, we've got these  
11 boosters between the CPF and the wellhead; was there  
12 going to be an oxygen sensor there either?

13 A No, sir.

14 Q So those won't automatically shut down?

15 A If the CPF compressor shut down for any reason, then  
16 those will shut down because of high discharge.

17 Q Correct. But there will be a time element between --

18 A There would be a lapse in time, yes, sir.

19 Q When you refer to small leaks, can you quantify that?

20 A Under 3 parts per million. Or under -- I guess that  
21 would be under -- where are you referring to, please,  
22 line 10?

23 Q Yes, sir.

24 JUDGE EYSTER: Is that line 10, page 4?

25 MR. SAGE: Yes, sir. Yes, your Honor.



1 A Yes, it would be any, any leaks that are under 30 parts  
2 per million. Well, it would actually -- it would  
3 actually be leaks all the way up, but having the oxygen  
4 monitoring on there would detect it all the way down to  
5 virtually nothing.

6 Q (By Mr. Sage): So from 3 parts per million to 29 parts  
7 per million?

8 A Well, it would detect even a 1 part per million oxygen,  
9 or less.

10 Q Now, am I correct that the oxygen sensor would not detect  
11 oxygen entering a reservoir?

12 A That's correct.

13 Q Am I correct that an oxygen detector would not detect if  
14 there's a leak on an adjacent acreage?

15 A No, it would not.

16 Q What's the difference between an oxygen detector and a  
17 vacuum pressure sensor?

18 A A vacuum pressure sensor is a device that measures the  
19 amount of vacuum that you're pulling on the well, whereas  
20 an oxygen monitor is one that measures the amount of  
21 oxygen in the gas flow stream.

22 Q Is the vacuum pressure sensor, that's also located at the  
23 CPF?

24 A That would be located on the vacuum -- or the  
25 compressors.

1 Q No matter where they're at?

2 A Yes, sir.

3 Q And so they're not impacted by weather conditions?

4 A They're Murphy switches, they're made for compressors.

5 Q The pressure sensor, it impacts upon gas coming from the  
6 well toward the CPI?

7 A Can you clarify that question?

8 Q I don't think I can because I don't understand it. I'm  
9 having a hard time understanding. Do me one more favor  
10 if you would, please. Define again what a vacuum  
11 pressure sensor is.

12 A Sure. It's a device that measures the amount of vacuum  
13 that is going into the inlet of a compressor; or, it  
14 depends on the scale, but it could just be the suction  
15 pressure sensor on the inlet of a compressor if it's  
16 positive pressure.

17 Q But so it's on the suction side of the compressor?

18 A Yes, sir.

19 Q And it simply measures what, you say the vacuum?

20 A Or the pressure coming into the suction.

21 Q O.K. And what's its purpose?

22 A What it does is it measures it, and if for some reason,  
23 if you have your scope of where you want that suction to  
24 run, if it's out of that scope, then it will kill the  
25 compressor, it will shut it down.

1 Q So it's in -- is its intent to protect against going on a  
2 vacuum on a well?

3 A It is to protect you from going outside certain -- excuse  
4 me -- certain operating parameters of a compressor.  
5 That's happened, they have them on the suction and on the  
6 discharge side.

7 Q What are your, are Merit's vacuum pressure sensors set  
8 at?

9 A Well, right now we're not pulling vacuums, so we have, we  
10 have set at zero. Or I can't speculate exactly what  
11 they're set at, Jack.

12 JUDGE EYSTER: Are you prepared to say  
13 they're set at greater than zero?

14 A The top side, yes, sir. Yes, sir. And the kill should  
15 be at zero or greater.

16 Q (By Mr. Sage): And you have these on all your  
17 compressors at the present time?

18 A Yes, sir.

19 JUDGE EYSTER: What do you mean by top  
20 side?

21 A I'm sorry. You have --

22 JUDGE EYSTER: You said top side.

23 A You have an operating parameter on a high and a low on  
24 the suction, so that's what I meant by top side, it's the  
25 high side. So if you were drawing 5 pounds of, if you

1 had 5 pounds of suction pressure and all of a sudden your  
2 suction pressure went up to 10 pounds and you had your  
3 kill there, then it would knock down the compressor,  
4 because something in the operations is awry causing the  
5 suction pressure to go up to 10 pounds, or maybe you had  
6 it at 15 pounds. And those are standard on all  
7 compression.

8 JUDGE EYSTER: O.K. So zero, zero you  
9 said is the high end then?

10 A Zero would be the low end. So if the pressure dropped  
11 below zero PSI, it should knock the compressor down.

12 JUDGE EYSTER: O.K. And your high end,  
13 then, is something greater than zero?

14 A Yes, sir.

15 JUDGE EYSTER: All right. Mr. Sage.

16 Q (By Mr. Sage): On lines 12 through, where is it at, 16,  
17 you refer to the vacuum pressure sensor will be installed  
18 at the suction side, which we discussed, with a low and  
19 high pressure kills set within 20 percent of normal  
20 operating conditions. And I guess what I'm trying to  
21 figure out, what is normal operating conditions?

22 A It's going to depend on the productivity of the well, the  
23 stabilization of the well with the manufacturer's  
24 recommended RPMs of that compressor.

25 Q Well, does it depend on the production rate?

1 A Yes, sir, it would.

2 Q And the casing pressure?

3 A Yes, sir, it would.

4 Q What about the reservoir pressure?

5 A Not directly, but your casing pressure is going to be  
6 dependent on that.

7 Q Can you tell me what the high and low would be of a  
8 pressure kill that's set at, a unit that's running at a  
9 minus 8 PSIG?

10 A No, sir, I can't.

11 Q And I asked that in discovery --

12 A Yes, you did.

13 Q -- and I was mystified by the answer. Why not?

14 A Well, because on these compressors, it's measured in  
15 inches of vacuum, not in negative PSIG.

16 Q O.K. When you're talking -- earlier we discussed 14  
17 inches of --

18 A Vacuum.

19 Q Right. And 14 inches of vacuum is a minus 14?

20 A Not PSIG. You asked me if on PDC's gauge sheets, when it  
21 said that it was a minus 14, if that was minus 14  
22 inches -- or if that was 14 inches of vacuum, and I said  
23 yes, sir, it was. It's not minus 14 PSIG.

24 JUDGE EYSTER: Can you convert that to  
25 PSIG?

1 A There is a methodology; I don't know what the equation is  
2 right off the top of my head.

3 JUDGE EYSTER: O.K.

4 Q (By Mr. Sage): Maybe you can help me out this way, then.  
5 What is meant by 15 inches of vacuum?

6 A 15. That is the measurement of the amount of vacuum that  
7 you are pulling on a particular liquid, being gas in this  
8 case. It's the way that you measure vacuum is in inches,  
9 not in PSIG.

10 JUDGE EYSTER: That's inches of what?

11 A Inches of water.

12 Q (By Mr. Sage): Oh, I was going to say. This is not  
13 actual water you're talking about in terms of in the  
14 casing or anything else?

15 A No, sir, it's from a laboratory.

16 Q O.K. So there is a conversion between 15 inches of  
17 vacuum and a minus pressure in a casing?

18 A Yes, sir.

19 Q And but you don't know what it is?

20 A I don't know the equation off the top of my head.

21 Q Do you -- so if the 15 inches of vacuum, it could be a  
22 minus 12 in a casing, you wouldn't know?

23 A It would be whatever the conversion of 15 inches of  
24 vacuum is to the -- are you talking about in the casing?

25 Well, the casing is going to be higher than the

1 compressor. The casing pressure is going to be higher  
2 than the compressor pressure.

3 Q If I go on vacuum, the casing would be lower, wouldn't  
4 it?

5 A No, sir, otherwise the gas would flow back downhole.

6 Q I see. Well, wait, no, I don't see.

7 A Yes. Because the gas is going to flow towards the lowest  
8 pressure.

9 Q But if I'm reducing the casing pressure, that means the  
10 reservoir would allow gas to come up through the casing  
11 and over to the compressor?

12 A Your lowest point is going to be the suction -- your  
13 lowest pressure point is going to be the suction of the  
14 compressor.

15 Q Right.

16 A The vacuum compressor. Everything upstream, meaning  
17 going towards the well, going down the well and towards  
18 the reservoir is going to be higher than that point.

19 Q So your point of vacuum is right at the compressor when  
20 you say --

21 A The point of vacuum is right at the compressor, that is  
22 the lowest point which you'll see on the system.

23 JUDGE EYSTER: That's different than the  
24 testimony you gave earlier this morning, isn't it?

25 A Yes, sir, it is.

1 JUDGE EYSTER: So you're correcting the  
2 testimony you gave earlier?

3 A That is correct.

4 JUDGE EYSTER: Because you indicated the  
5 pressure would be lower than the pressure at the gauge --

6 A I misspoke.

7 JUDGE EYSTER: -- on the compressor?

8 A Yes, sir.

9 JUDGE EYSTER: And so there was some  
10 discussion about whether or not if it was showing zero at  
11 the compressor, you'd be actually drawing on a vacuum?

12 A Correct. And to clarify, if it's showing zero at the  
13 suction of the compressor, then there is not a vacuum  
14 being drawn on the well.

15 JUDGE EYSTER: O.K.

16 Q (By Mr. Sage): Who did you have the discussion with?

17 A I realized it during, after we had sat there and further  
18 on in my testimony that I had misspoke.

19 JUDGE EYSTER: O.K. Can I also just say  
20 something here right now. It's, when we have a witness  
21 giving testimony in the stand, I would appreciate it if  
22 folks that are here observing don't nod their heads or  
23 shake their heads in agreement or disagreement with a  
24 witness's testimony. Thanks.

25 And I hope I didn't interrupt. If there  
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1 was anything else you wanted to add to that answer,  
2 please do so.

3 A No, sir.

4 JUDGE EYSTER: Mr. Sage.

5 Q (By Mr. Sage): Bear with me a little longer.

6 A Sure.

7 Q I now figured out when you're talking the 15 inches of  
8 vacuum, you're referring to the suction side of the  
9 compressor. How would you represent vacuum in a casing?

10 A It would be -- it would be less than that.

11 Q So you would refer to it as, let's say, 10 inches of  
12 vacuum in the casing?

13 A Correct.

14 Q And others have referred to a negative 10 or a negative 5  
15 or a negative 14, you're saying there's some kind of a  
16 conversion between those two numbers?

17 A That is correct.

18 Q And when they say a negative 10, what are they referring  
19 to?

20 A I don't know who you're talking about when you say they.

21 Q Well, just assume for the moment someone refers to a  
22 negative 10 in a casing. You've indicated there's a  
23 conversion factor, something that gets to there. I'm  
24 trying to figure out --

25 A From everything I've read and been privy to and known

1 through experience, when you're talking about pulling a  
2 vacuum, when you say a number, being a 10, or I guess  
3 some people even say negative because it's got the  
4 connotation of a vacuum, it's in inches of vacuum.

5 Q So then there isn't any conversion?

6 A There is one. It goes -- as I said, there is one, I  
7 don't know what it is, but common usage is in inches of  
8 vacuum.

9 Q O.K. And you're comfortable when it says, for example,  
10 if a unit's running at 15 inches of vacuum, it's not a  
11 negative in the casing?

12 A I don't understand the question.

13 Q O.K.

14 A Negative in the casing.

15 Q I'm just -- I'm concerned that we all understand when  
16 you're representing that it's, if a unit's running at 15  
17 inches of vacuum --

18 A It has a pressure less than zero.

19 Q Yes. So it's -- if that's occurring, then in that  
20 casing, it has to be higher than the 15?

21 A Yes, the pressure will be higher.

22 Q Right, I understood that.

23 JUDGE EYSTER: Meaning the number will be  
24 smaller?

25 A Yes, correct.

1 JUDGE EYSTER: O.K.

2 Q (By Mr. Sage): And all I want to make sure is, if we're  
3 going to be able to explain this, is that I'm assuming  
4 the 15 is a negative of some type because it's talking  
5 about a vacuum, it's less than zero?

6 A The 15 is a unit of measurement of vacuum. The 15 inches  
7 of vacuum equates to a pressure less than zero.

8 Q That's what I'm trying figure out. All right. So we got  
9 the 15 less than zero. Why wouldn't 13 be less than zero  
10 as well, could it be?

11 A 13 inches of vacuum would be less than zero.

12 Q So I could have 15 at the vacuum, or the suction side of  
13 the compressor, and I could have 13 in my casing,  
14 couldn't I?

15 A Yes, which would be higher than the suction of the, a  
16 higher pressure than the suction of the compressor.

17 Q But it still could be a negative, i.e., lower than zero?

18 A That is correct.

19 Q That's what I'm trying to figure out.

20 A Yes, sir.

21 Q Thank you.

22 A That was tough.

23 Q Are you familiar with the term smart pig?

24 A Yes, I am. Yes, sir, I am.

25 Q Is there a dumb pig? There's a regular pig, isn't there?

1 A There's a regular pig.

2 Q That's the reason I want to make the distinction. O.K.

3 And do you use smart pigs on your system?

4 A Only on one line that is DOT regulated.

5 Q O.K. And would a smart pig improve your system for  
6 vacuum operations if you utilize it?

7 A It would be very difficult to run a smart pig on an  
8 upstream gathering system just due to the number of turns  
9 and such in the piping.

10 Q But it does occur?

11 A I have -- I am not aware of anyone that's run a smart pig  
12 in gathering lines in upstream operations. There may be  
13 an instance, but I'm not aware of anyone that's run smart  
14 pigs in there.

15 Q Smart pig would be utilized if you wanted to remove  
16 water, right?

17 A No, sir.

18 Q It's not?

19 A No, sir.

20 Q O.K. What's it utilized for?

21 A To determine wall loss on piping.

22 Q Well, it also removes something?

23 A It would push water out, but you can use a regular pig to  
24 do that.

25 Q O.K.

1 A You can use a dumb pig to do that instead of a smart pig.

2 JUDGE EYSTER: O.K. So why are pigs  
3 called pigs?

4 A I did not come up with that nomenclature and I don't know  
5 why it's called a pig.

6 JUDGE EYSTER: I don't think I've ever  
7 had anybody be able to answer that. O.K.

8 Q (By Mr. Sage): My point, I recognize a smart pig will  
9 sense the lines. Do they sense the lines if it's a  
10 polyethylene line.

11 A I have never heard of a smart pig being run in a  
12 polyethylene line.

13 Q Just used in a steel line?

14 A Yes, sir.

15 Q And that's to determine corrosion?

16 A Yes, sir.

17 Q Cracks?

18 A Correct.

19 Q O.K. Do you video lines?

20 A We have not, no, sir.

21 Q That's capable to do?

22 A There is the technology to do that.

23 Q All right. What size are your gathering lines from the  
24 wells to the CPF?

25 A I'm not -- I'm sure they come in multiple sizes, but I

1 can't state verbatim.

2 Q Are they --

3 A They're two-inch or three-inch or four-inch.

4 Q Do you use telescope lines?

5 A I'm not familiar with that term.

6 Q In the context, do you remember the old telescope, you  
7 pull it out and look down; you set lines that way, the  
8 small, medium and large?

9 A Do you mean do they have different ODs and IDs?

10 Q I get the OD, but I don't know what an ID is.

11 A An internal diameter.

12 Q Yes.

13 A There are situations where when you have a well coming to  
14 tie into other wells, that you could increase the  
15 diameter of a pipe when you have multiple wells coming  
16 into it that will then transfer it over to either another  
17 tie-in or a CPF.

18 Q Do you use that process?

19 A I do not know for a fact if that's the case in Albert  
20 Loud, but that is used throughout the company.

21 Q And does that process assist in reducing back pressure?

22 A That is the intent of it, yes, sir.

23 Q And so, therefore, in those instances, if you could  
24 reduce the back pressure, is there a reason to go on to  
25 compression then -- or vacuum? I'm sorry.

1 A That would be one way to help reduce, but pulling a  
2 vacuum is another way of getting --

3 Q You've got options basically?

4 A Yes.

5 Q DCP contract, you refer to that in your testimony. I'm  
6 assuming that's the -- you say the contracts; is that the  
7 DCP contract you're referring to on page 5, line 9?

8 A Page 5, line -- I believe that was the original contract  
9 between MichCon and Merit that now has been inherited by  
10 DCP.

11 Q Have you read it?

12 A I have not, no, sir.

13 Q Do you know whether it specifically references -- I guess  
14 you don't, then. You don't know if it specifically  
15 references vacuum or not if you haven't read it?

16 A I do not believe it references vacuum. I haven't read  
17 it, but I would not think that it would reference vacuum  
18 since that's against MPSC rules.

19 Q I was thinking in terms of prohibiting vacuum.

20 A Oh, no. I don't -- I didn't know what the context you  
21 were referring to. I don't know if it prohibits vacuum  
22 or not.

23 Q I'm sure they're not encouraging you. What procedure --  
24 do you know anything about procedures in the contract  
25 regarding addressing oxygen?

1 A It was similar to what I talked about a little earlier  
2 where when they get any type of indication that there's  
3 oxygen in their system at any of their various detection  
4 points, depending on the level of that reading, they  
5 notify producers that, to go and look at their facilities  
6 and their wells to see if they are the ones contributing  
7 to the oxygen. If that percentage or volume of oxygen is  
8 high enough, they'll start curtailing the pipeline that  
9 is, that they're seeing the higher oxygen volumes, and  
10 then we are required to go and send them -- or I don't  
11 know if we're required, but we send them our electronic  
12 data showing our oxygen monitoring when they call to show  
13 that we are not the person introducing oxygen into the  
14 system.

15 Q So you know all this without even reading the contract?

16 A I spoke to Dan Zilmer, who was the one that signed the  
17 contract.

18 Q And he advised you of those procedures?

19 A Yes, sir, he did.

20 Q And as far as you know, he follows them?

21 A As far as I know, we follow them at Merit. Dan's no  
22 longer in that responsibility.

23 Q Oh, I see. All right. But the company does?

24 A Yes, sir.

25 Q Now, this contract, though, only protects as to oxygen



1 going from the central production facility down to DCP?

2 A That is correct.

3 Q Are you aware of whether or not any producers have  
4 breached that contract?

5 A Well, the contract calls for a certain level of oxygen to  
6 be in there, so I'm sure someone has breached the  
7 contract.

8 Q And the contract doesn't prohibit oxygen from getting  
9 there, it just says you shouldn't?

10 A Well, no. There's levels of oxygen that they permit to  
11 come into it, and when it gets higher, then they rectify  
12 the situation through steps outlined in the contract.

13 Q I may have asked this, or maybe the judge asked you, have  
14 you ever been curtailed?

15 A Yes, we have been curtailed.

16 Q And I guess now I think in terms of not because of your  
17 own operations, but because of someone else's operation?

18 A That's correct.

19 Q Is it your understanding that Merit's never exceeded the  
20 3 parts per million that's in the DCP contract?

21 A I do not know that.

22 JUDGE EYSTER: You measure the oxygen as  
23 it leaves your CPF, right?

24 A I mentioned it?

25 JUDGE EYSTER: You measure.

1 A Yes, sir, I do.

2 JUDGE EYSTER: And then DCP does the  
3 processing?

4 A That's correct.

5 JUDGE EYSTER: And they measure it as it  
6 leaves or as it comes in?

7 A It is measured at -- we measure it at the tailgate of our  
8 CPF.

9 JUDGE EYSTER: As it's leaving your CPF?

10 A As it's leaving ours, it goes into DCP's system, then  
11 they have monitors spaced strategically through their  
12 system where they can see if oxygen at that point on  
13 their system is of an unacceptable level, and then they  
14 start taking steps in order to keep that oxygen, high  
15 oxygen content from making it all the way to their plant.

16 JUDGE EYSTER: O.K. So do you know where  
17 they place their sensors?

18 A I do not know the locations of those sensors.

19 JUDGE EYSTER: And does the ownership  
20 change hands when it leaves your CPF?

21 A Yes, sir, it does.

22 JUDGE EYSTER: O.K. Who takes ownership  
23 of it at that time?

24 A I believe it is our marketing company at that time.

25 JUDGE EYSTER: So you have a separate  
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1 marketing company that takes ownership of it?

2 A The company that purchases our gas. And then it is, it's  
3 allocated back based on the total tailgate of the DCP  
4 plant based on the gas analysis performed at the custody  
5 transfer point.

6 JUDGE EYSTER: And the custody transfer  
7 point is where?

8 A At the tailgate of the CPF.

9 JUDGE EYSTER: O.K. Do you have a -- is  
10 there a marketer that markets for you and for other  
11 producers?

12 A Yes, sir.

13 JUDGE EYSTER: Who's your marketer?

14 A I believe it's Shell.

15 JUDGE EYSTER: Boy, you got a lot of  
16 hands in the pot up there, don't you? It's just I mean  
17 changing hands all the time.

18 O.K. Mr. Sage.

19 MR. SAGE: Thank you, your Honor.

20 Q (By Mr. Sage): I've asked you a lot of questions about  
21 compressors, and we've gone over the 35 that, on one of  
22 the exhibits, and we've looked at 106 different wells,  
23 207 different wells. My question is, do you know how  
24 many compressors you have?

25 A Off the top of my head, no, sir, I'd have to go back and

1 sum up the --

2 Q You would agree with me that not all of the wells that  
3 you have are on, have a compressor individually?

4 A That is correct.

5 Q You have -- but you would -- is it your understanding  
6 that all of the wells are connected to some type of  
7 compression?

8 A Yes, sir, they are connected to some type of compression.

9 Q And that would include either a booster and/or a central  
10 production facility compression?

11 A That is correct.

12 JUDGE EYSTER: Do you have any stainless  
13 steel up there?

14 A Only in parts of our processing plant.

15 JUDGE EYSTER: In the central --

16 A At Kalkaska.

17 JUDGE EYSTER: At Kalkaska. That's a CO2  
18 processing plant?

19 A Yes, sir.

20 JUDGE EYSTER: So you have some stainless  
21 in that, and the rest of it is just regular steel?

22 A Yes, sir.

23 JUDGE EYSTER: O.K.

24 Q (By Mr. Sage): And I recognize this may depend upon the  
25 size of the compressor, but you are familiar with your

1 sizes of compression, we've shown you through this  
2 discovery and things. What is the, in your  
3 understanding, the number, the largest number of wells  
4 that can be utilized, or that can utilize one compressor?  
5 A Jack, that, I can't answer that question because it would  
6 totally depend on the productivity of the wells in  
7 question. We have compressors that utilize one well, we  
8 have compressors that utilize substantially more than one  
9 well. I don't know what that -- you have to give me more  
10 defined --

11 Q Is a well -- would you normally consider putting a  
12 compressor, let's say especially for vacuum purposes, on  
13 a well that's been producing higher than others?

14 A That would be a candidate.

15 Q And a well that produces, because I don't know how to  
16 make anything relative in this instance, but if a well is  
17 producing higher than others in the area, is that  
18 generally because it's got a good fracture system?

19 A It has a higher permeability component than the other  
20 wells.

21 Q And permeability is basically the ability for the gas to  
22 move, correct?

23 A That is correct.

24 Q And so, therefore, that would generally mean it has a  
25 better fracture system?

1 A That is true.

2 Q If wells in Michigan, the Antrim wells were allowed to go  
3 on vacuum, that would be a benefit to Merit as it relates  
4 to its Kalkaska plant; am I correct?

5 A Potentially.

6 Q Because it would be more gas?

7 A Potentially.

8 Q And more gas and therefore more CO2 removal?

9 A Correct.

10 Q You recommend an automatic shut-in valve. Do you recall  
11 that?

12 A A Kimray automatic shut-in valve, yes, sir.

13 Q That's the name of it?

14 A A Kimray is a brand.

15 Q O.K. Yeah. I was looking at your testimony, it just  
16 referred to automatic shut-in valve. What is the purpose  
17 of that valve?

18 A That would be to take even more extreme measures than  
19 just shutting down the compressor to ensure that oxygen  
20 isn't introduced into the gathering systems of the  
21 midstream assets.

22 Q The gathering system of the midstream, that's --

23 A That's DCP, or that could be the wet header coming to  
24 Merit's Kalkaska plant.

25 Q It's a downstream gathering system, downstream of the

1 CPF?

2 A Downstream of the CPF, yes.

3 Q I grew up in the old days, gathering system on the other  
4 end of it. And do you know what the cost of those would  
5 be?

6 A I believe in discovery it was around 1,500 bucks, I  
7 believe.

8 JUDGE EYSTER: Do you -- are you involved  
9 with vacuum wells anywhere else?

10 A Yes, sir. Well, we were. We operated wells under vacuum  
11 in Wyoming.

12 JUDGE EYSTER: Is this the type of system  
13 you used there?

14 A Are you talking about the --

15 JUDGE EYSTER: The details --

16 A -- motorized? No, sir, it's not.

17 JUDGE EYSTER: I'm talking about the  
18 details you provided in your testimony with regards to  
19 the system you intend to use in the Antrim shale.

20 A No, sir.

21 JUDGE EYSTER: You've not used that  
22 before?

23 A No, sir.

24 JUDGE EYSTER: O.K. Is that based on  
25 somebody else's system somewhere?

1 A No, sir.

2 JUDGE EYSTER: When did you start  
3 developing this, the details of this plan?

4 A When we were contemplating joining the proceedings to  
5 allow vacuum to be pulled on the wells, we started coming  
6 up with this plan because there are Antrim wells located  
7 on the wet header system that comes to our Kalkaska  
8 plant, we wanted to ensure that there was not going to be  
9 oxygen coming to our Kalkaska plant.

10 JUDGE EYSTER: O.K.

11 A We think, you know, we think wells can be pulled on  
12 vacuum, we think it has to be done responsibly.

13 JUDGE EYSTER: And who was involved with  
14 developing this?

15 A There was myself, our field operations manager, some of  
16 our field hands out there, and then I spoke to various --

17 JUDGE EYSTER: Out where?

18 A I'm sorry. In Kalkaska, in Michigan.

19 JUDGE EYSTER: At the processing plant?

20 A Yes, sir. Or foreman that are responsible for our field  
21 operations outside the plant.

22 JUDGE EYSTER: Being the wells?

23 A Yes, sir. And then spoke to some other companies on  
24 their thoughts of it.

25 JUDGE EYSTER: What companies?



1 A I believe I spoke with Enervest and Breitburn considering  
2 this. Oh, and I spoke to DCP as well.

3 JUDGE EYSTER: O.K. So you've got some  
4 producers?

5 A Uh-huh.

6 JUDGE EYSTER: Did you have anybody else  
7 take a look at this and provide input?

8 A No, sir, I didn't.

9 JUDGE EYSTER: Mr. Sage.

10 Q (By Mr. Sage): What's the difference between your  
11 automatic shut-in valve proposal and the proposal that's  
12 been provided by DCP?

13 A Well, DCP, they are able to go in on their system and  
14 detect oxygen at certain parts of the their system and be  
15 able to curtail and dilute that oxygen. On the wet  
16 header system, it's different because you have, just have  
17 one contiguous pipe coming from both the east and the  
18 west with no way to curtail any oxygen that gets into it.  
19 If it gets into the system, it's going to come to the  
20 Kalkaska plant. So we felt we needed a more extreme  
21 failsafe for the potential of oxygen coming into the  
22 system.

23 Q Are you suggesting that this automatic shut-in valve  
24 system should only apply as it relates to lines that are  
25 going to the Kalkaska plant?

1 A There is much more urgency for this system to be  
2 implemented on the wet header system than it is the lines  
3 going to DCP's plant.

4 Q I guess that's not my question. My question, though, is,  
5 are you proposing this automatic shut-in valve system to  
6 be utilized beyond the lines that are going to the  
7 Kalkaska?

8 A I think it could be done on both, but at a minimum on the  
9 wet header system.

10 MR. SAGE: Can I have about two minutes  
11 to talk to my client, your Honor? I think I'm done, but  
12 that would encourage it.

13 JUDGE EYSTER: Yeah, we'll take a quick  
14 break. Off the record.

15 MR. SAGE: Thank you. Your Honor.

16 (At 3:36 p.m., there was a five-minute recess.)

17 JUDGE EYSTER: Back on the record,  
18 Mr. Sage.

19 MR. SAGE: Your Honor, I have no further  
20 questions. But so I don't forget, I would like to offer  
21 into evidence our proposed Exhibits 1 through 10, I-1  
22 through 10.

23 JUDGE EYSTER: Is there any objection to  
24 the motion? Hearing none, Exhibits I-1 through 10 are  
25 admitted into evidence.

1 Mr. O'Toole, any questions?

2 MR. O'TOOLE: Yes, your Honor, I just had  
3 a brief cross.

4 CROSS-EXAMINATION

5 BY MR. O'TOOLE:

6 Q Sir, with respect to the Albert Loud unit, the purpose,  
7 am I correct in assuming that the purpose of introducing  
8 the vacuum to that unit was to increase the production on  
9 that particular unit?

10 A You mean back in 2006?

11 Q Yes.

12 A As well as increase the estimated ultimate recovery.

13 Q O.K. And even though -- strike that.

14 I believe from your testimony you  
15 established that the rates did increase --

16 A Yes, sir, that's correct.

17 Q -- after introducing the vacuum?

18 A Yes, sir.

19 Q Do you consider the amount of the increase to be  
20 significant?

21 A Yes, sir.

22 Q And did you ever determine whether or not the increase in  
23 your production rates on that project resulted in a  
24 diminishment of the production rates on the adjoining  
25 producers' units?

1 A No, sir.

2 Q At any time did you notify -- I believe you indicated  
3 that you, that Merit did not notify any adjoining  
4 producers, correct?

5 A That is correct.

6 Q Since this application was filed in this case, I'm  
7 looking at the map, page 7 of 12 on Exhibit I-1, it  
8 indicates that, for example, on the southeast side of the  
9 project, Breitburn owns -- well, actually, on the entire  
10 south and southeast corner, Breitburn is the producer.  
11 Did you discuss with them your increases in production  
12 since the application was filed?

13 A I'm sorry, sir, I just located the exhibit that you were  
14 referencing. Can you tell me exactly where you're at  
15 again?

16 Q Yes. Do you have the map in front of you?

17 A Yes, sir, I do.

18 Q On the south side of the Albert Loud unit, there's  
19 several units identified as Breitburn units, and going  
20 completely across the south over to the southeast corner.  
21 My question to you is, after the application was filed in  
22 this case, after Merit had acquired the knowledge that  
23 there was a significant increase in your production, did  
24 you ever indicate to Breitburn the fact that there was a  
25 significant increase in your production?

1 A I do not recall if I spoke with, to Brian Dorr in that  
2 effect or not. I'm sure it was nothing formal.

3 Q Well, would you look at the map, please.

4 A Yes, sir.

5 Q Along the eastern edge -- and I'm assuming the top of the  
6 page Mr. Sage identified was north?

7 A Yes, sir.

8 Q Along the eastern edge, there appears to be five wells  
9 that are, the circles are colored in in a dark color.  
10 Those were vacuum wells, correct?

11 A That is correct.

12 Q And in the southeast corner, there's another two, and  
13 then below that appears to be another well. Do you see  
14 what I'm referring to in Section 4?

15 A Yes, sir.

16 Q Is it a mere coincidence that just on the other side of  
17 the production unit line there are offsetting wells from  
18 Breitburn and HighMount, or is there some conventional  
19 wisdom that you need to protect your project boundaries  
20 by offsetting wells?

21 A Sir, I don't know what the rationale was between  
22 selecting one well versus another well for vacuum. At  
23 the time they were chosen, I wasn't part of this project.

24 Q All right. Based on your training, your education and  
25 experience in this industry, is it more than coincidence

1 that where each of these vacuum wells were located, there  
2 was an offsetting well operated by either Breitburn or  
3 HighMount?

4 A I think that is coincidence. I think we went out there  
5 and tested the wells and found which ones would produce  
6 the best results, and that was the ones that we put on  
7 vacuum.

8 JUDGE EYSTER: I thought you just  
9 testified you had no idea what the rationale was?

10 A I guess I'm saying if it was me, that was what would be  
11 done.

12 JUDGE EYSTER: O.K.

13 A I'm sorry, I apologize.

14 JUDGE EYSTER: While I'm asking the  
15 question, you indicated that you didn't determine that it  
16 caused a reduction in offsetting wells, but did you  
17 actually go out to -- well, I'm not sure that was what  
18 you answered. Did you actually go out to determine that  
19 in fact it did not affect these wells?

20 A No, sir, I didn't. We didn't.

21 JUDGE EYSTER: So you did not make any  
22 determination with regard to effect of the wells?

23 A That's is correct.

24 JUDGE EYSTER: I just wanted to make sure  
25 that was clear because I wasn't sure it was in your last

1 answer.

2 Q (By Mr. O'Toole): Did Merit disclose to Breitburn and  
3 HighMount that those wells were operated under a vacuum  
4 and produced a significant amount of increase in  
5 production?

6 A No, sir.

7 Q Is it your testimony that the location of these vacuum  
8 wells, that these wells were not placed on a vacuum with  
9 an intent to evacuate minerals from wells that may be in  
10 communication with those wells across the unit boundary?

11 A Sir, to clarify, I do not know what parameters were used  
12 to choose which wells went on vacuum.

13 Q And you never asked any of the Merit representatives?

14 A When I asked Dan Zilmer, he said -- he was the one that  
15 approved it. He said that they went out and tested wells  
16 that we saw increases in production and by testing them  
17 on vacuum and that's the wells that we put on vacuum.

18 Q In your opinion, what's the likelihood of those vacuum  
19 wells evacuating minerals from across the unit boundary  
20 from wells operated by HighMount and Breitburn?

21 A I don't know what that likelihood is.

22 Q You have no opinion?

23 A No, sir.

24 Q Has there been anyone that you're aware of at Merit that  
25 has expressed that opinion?

1 A No, sir.

2 Q I believe you testified during your testimony here today  
3 that at some point, and I believe I'm quoting you, you  
4 indicated we are going to evaluate what other wells to  
5 put on a vacuum; that would be wells in addition to the  
6 70 some that were involved in the Albert Loud, correct?

7 A Only 35 wells were put on vacuum in the Albert Loud.

8 Q O.K. 35. All right. Did I correctly state what you  
9 stated, that you're going to evaluate what other wells to  
10 put on a vacuum in the future?

11 A That's correct.

12 Q Is there any way that you can determine whether or not  
13 economic waste would occur with respect to those other  
14 wells without knowing what the production rates would be,  
15 the cost of the equipment, the installation cost, the  
16 operation costs, and the price of gas at the time the  
17 production increase occurs?

18 A Not that I'm aware of.

19 MR. O'TOOLE: I have nothing further,  
20 your Honor.

21 JUDGE EYSTER: Mr. Sattler.

22 MR. SATTLER: Thank you, your Honor.

23 CROSS-EXAMINATION

24 BY MR. SATTLER:

25 Q Good afternoon.



1 A Hi.

2 Q You testified that by placing wells under vacuum, you  
3 increase both the production rate of the gas and the  
4 ultimate gas recovery?

5 A Yes, sir.

6 Q And you've been questioned a lot today about the  
7 production rate, but not as much about the ultimate gas  
8 recovery, or ultimate recovery of the gas. So do you  
9 have any studies to support your position that the  
10 ultimate recovery of gas will increase?

11 A I don't have any studies, no, sir.

12 Q Is your testimony based on your experience operating the  
13 Albert Loud wells on the vacuum?

14 A That's one aspect of it.

15 Q What else?

16 A Just basic material balance. Even though material  
17 balance isn't necessarily applicable to the Antrim shale  
18 because of the long time it would take to get a  
19 stabilized pressure, still the concept exists where if  
20 you lower the abandonment pressure, you will increase  
21 your estimated ultimate recovery.

22 Q But that concept hasn't necessarily been tested on Antrim  
23 shale?

24 A I don't believe so.

25 Q Do you know if all of Antrim's, all of Merit's Antrim

1 wells are metered to monitor the production rate at each  
2 well?

3 A I am not certain that all the wells are metered at the  
4 well.

5 Q But you don't know how many or a percentage of wells that  
6 are metered?

7 A No, sir, I don't. We have to have some method of  
8 allocation back to wells, I don't know if that's on a  
9 lease basis or what, so I don't know how many wells.

10 Q Do you know if it's less than 50 percent?

11 A I would venture to guess it would be greater than 50  
12 percent.

13 Q And if the wells aren't metered, then you can't monitor  
14 the production rate at the well?

15 A At the well, correct.

16 Q On page 3 of your testimony, beginning on line 7, you  
17 explain how you would determine which wells to put under  
18 vacuum.

19 A We would test the wells to see how they respond to  
20 vacuum, and then based on that, and if we had multiple  
21 wells coming into the same system that had positive  
22 individual tests, then we would look at either putting  
23 individual compressors on those wells or we would put in  
24 an inline compressor.

25 Q Essentially you'd put a portable compressor on the well

1 to see if it drew additional gas?

2 A Correct.

3 Q And if the well isn't metered, then would that well  
4 automatically not be a candidate for compression or --

5 A If there is a well, which I'm not saying there are wells,  
6 but if there is a well that doesn't have meter that we  
7 need to test, then you can also put portable meters on  
8 there as well to test.

9 Q On page 3, line 19, you reference operating a well under  
10 full vacuum.

11 A Uh-huh.

12 Q Can you define full vacuum?

13 A Yes. That was in our discovery as well. When I meant  
14 full vacuum, I meant the highest vacuum that we had seen  
15 in Michigan, and that was around, I believe it was 14  
16 inches.

17 Q You've been questioned pretty extensively about the  
18 oxygen sensors --

19 A Yes, sir.

20 Q -- in your system. Are you aware that other producers  
21 have a different trigger level than your proposed 3 PPM?

22 A I do not know what the other producers' trigger level is.

23 Q If a trigger level was set at 5 PPM, this would then  
24 allow gas to travel to DCP with gas content of higher  
25 than 3 PPM obviously, correct?

1 A Not necessarily, because if you have 200 Mcf with a 5 PPM  
2 amount of oxygen in it and it commingles with 10 million  
3 a day, when it gets to DCP's plant, it's going to have  
4 significantly less than 3 PPM.

5 Q Correct. But if all the producers relied on blending and  
6 all the producers had higher oxygen content than 3 PPM,  
7 then the 5 PPM level would allow gas to travel to DCP  
8 that's higher than 3 PPM?

9 A That is correct, if it all happened simultaneously.

10 Q You testified earlier that you were curtailed, but that  
11 Merit wasn't the cause of the curtailment?

12 A That's correct.

13 Q Merit lost revenue as a result of that curtailment; is  
14 that correct?

15 A That is correct.

16 Q You also testified earlier that the wells you, Merit  
17 purchased from PDC had some steel lines?

18 A That is correct.

19 Q Does Merit have any corrosion logs for those lines?

20 A Corrosion logs?

21 Q Yes.

22 A No, sir, we don't.

23 Q And you may have answered this already. I know you  
24 testified about the CO2 content from the wells acquired  
25 from PDC, but did you testify about the CO2 content for

1 the wells in the Albert Loud Field?

2 A I believe that was in one of the exhibits that Mr. Sage  
3 showed.

4 Q Was it -- is it your recollection that it was around 20  
5 percent?

6 A I believe one of them was 16 and some change and the  
7 other one was right at 20 percent.

8 Q Yesterday the applicants submitted testimony from James  
9 Holt as an expert in compressor operations and design,  
10 and Mr. Holt testified that if the CO2 content of the gas  
11 is high, like 8 or 10 percent or higher, that the  
12 compressor components should be -- that the compressor  
13 should be constructed with stainless steel pipes. Would  
14 you have any reason to disagree with that?

15 A No, sir, I wouldn't.

16 Q Are the compressors in the Albert Loud Field currently  
17 constructed with stainless steel pipes?

18 A No, they are not.

19 Q Are the proposed alarms, the alarms that you proposed on  
20 page 4 of your testimony for regulating oxygen content,  
21 are those more or less restrictive than the current  
22 Antrim oxygen procedures, the procedures outlined in the  
23 contract DCP, that produces at DCP?

24 A I believe these would be more restrictive than what is  
25 currently in place on the DCP system.

1 Q You testified that Merit would comply with the Michigan  
2 Gas Safety Standards --

3 A Correct.

4 Q -- if allowed to operate under a vacuum. Do the Gas  
5 Safety Standards require any additional steps to be taken  
6 by Merit?

7 A Not that I'm aware of.

8 Q So you wouldn't have to take any additional steps to  
9 comply?

10 A Not that I'm aware of.

11 Q Are you familiar with proration?

12 A Yes, sir.

13 Q Are Merit's wells prorated?

14 A I'm -- I don't know.

15 MR. SATTLER: That's all the questions I  
16 have.

17 JUDGE EYSTER: I wanted to go back and  
18 ask a couple more questions. Have you given any  
19 consideration to what it would cost if you were required  
20 to convert over to stainless steel pipes and compressors?

21 A No, sir, we have not.

22 JUDGE EYSTER: Do you have any idea what  
23 that cost would be?

24 A It would be astronomical.

25 JUDGE EYSTER: And then you testified

1       that the ultimate amount of gas recoverable would be  
2       increased, and I wanted to ask some followup questions  
3       here.

4   A     Sure.

5                 JUDGE EYSTER:  I didn't quite understand  
6       what, the last answer you gave with regards to the  
7       underlying facts that have led you to provide that  
8       testimony.

9   A     From a material balance standpoint?

10                JUDGE EYSTER:  Yeah.  Could you explain  
11       that to me?

12   A     One way to estimate reserves in a conventional sand or  
13       reservoir is through material balance.  It's pressure  
14       over a compressibility factor on a graph versus cum.

15                JUDGE EYSTER:  And this is -- excuse me.  
16       And you said this is for conventional sandstone?

17   A     Conventional reservoirs, not necessarily sandstone.

18                JUDGE EYSTER:  O.K.  And would that apply  
19       to the Antrim shale formation?

20   A     No, sir, I don't believe it would.

21                JUDGE EYSTER:  O.K.  And go ahead and  
22       finish your explanation.

23   A     And when you are able to shut in wells and shut in and  
24       get a stabilized reservoir pressure, you can plot that  
25       versus cum and extrapolate that out to whatever your

1       abandonment pressure is to get an estimated ultimate  
2       recovery. With the Antrim, it's not applicable because,  
3       due to the matrix porosity, it would take an unreasonable  
4       amount of time to get a stabilized pressure. But the  
5       basic concept still applies, whereas if you lower the  
6       abandonment pressure, that line will extrapolate out  
7       further and increase your estimated ultimate recovery.  
8       So even though material balance isn't practical, it's  
9       still applicable in theory.

10               JUDGE EYSTER: Is there anything else  
11       that led you to that conclusion?

12   A       The decline curve analysis on the, when we had the wells  
13       pulled on vacuum, the decline was not different than what  
14       the decline is since we have not had those wells on  
15       vacuum, and if you extrapolate the decline at a higher  
16       rate, then you're going to recover more reserves.

17               JUDGE EYSTER: O.K. So you're saying  
18       that you have curves. Did you provide those in any of  
19       your testimony or exhibits?

20   A       I don't know if those -- I don't believe those were  
21       provided, no, sir, they're just the historical production  
22       curves. We provided all the data.

23               JUDGE EYSTER: O.K. And so you have  
24       curves that you produced. Was that provided in  
25       discovery?



1 A I don't believe the curve was provided in discovery.

2 JUDGE EYSTER: O.K. So you have a curve  
3 that you've developed using the data from when these  
4 wells were produced under vacuum?

5 A It's our year-end reserve report where you put your  
6 declines for estimating your reserves.

7 JUDGE EYSTER: And that curve shows the  
8 production rate?

9 A Yes, sir, it does.

10 JUDGE EYSTER: And with these wells, it  
11 shows a decreasing production rate?

12 A When the wells were -- oh, both decreasing when the wells  
13 were taken off vacuum and the natural decline of the  
14 well.

15 JUDGE EYSTER: O.K. And under vacuum,  
16 they declined, and you're saying the decline under vacuum  
17 is the same as when they're not on vacuum?

18 A It's virtually the same.

19 JUDGE EYSTER: So it's not exactly the  
20 same?

21 A I don't believe I've actually gone and put a line on  
22 there to determine, because it's very -- one person draws  
23 the line could be different than another person drawing a  
24 line on a trend data.

25 JUDGE EYSTER: So a small variance today

1 over, extended over a long period of time can make a big  
2 difference at the end, right?

3 A There's a potential, yes.

4 JUDGE EYSTER: Do you have that data,  
5 that information available to you?

6 A Can I get that data do you mean? I don't have it right  
7 here with me, no, sir.

8 JUDGE EYSTER: And that's -- so you've  
9 got -- is there anything else you based that opinion on?

10 A No, sir.

11 JUDGE EYSTER: O.K. So you base that  
12 opinion on a, on the, whatever theory it was you  
13 described initially?

14 A Material balance.

15 JUDGE EYSTER: Material balance theory,  
16 which you've indicated is not applicable to a  
17 nonconventional Antrim shale formation, right?

18 A Not in practical sense.

19 JUDGE EYSTER: O.K. And then you've got  
20 some data and some curves?

21 A They're not -- they're not produced curves, they're ones  
22 that you bring up in our Aries program to look at the  
23 historical production of particular fields.

24 JUDGE EYSTER: Mr. Christopherson, is it  
25 possible that that data might be made available to be

1 placed in the record?

2 MR. CHRISTOPHERSON: Absolutely.

3 JUDGE EYSTER: Yes, Mr. Sage.

4 MR. SAGE: Your Honor, in that context, I  
5 don't know if you're asking it, but I'd like to see it,  
6 you know, the decline before, the decline during and the  
7 decline after so we can see that trend.

8 A Sure.

9 MR. SAGE: That's what I'd like, your  
10 Honor, I'm making that request.

11 JUDGE EYSTER: Mr. Christopherson, is  
12 that available?

13 A Yes. Do you want me to provide you the historical  
14 production data, or do you want me to provide you the  
15 historical production data with my interpretive decline,  
16 because --

17 MR. SAGE: Can I respond to that, your  
18 Honor?

19 JUDGE EYSTER: Well, I'd like to see all  
20 of that, because I'd like to see what this opinion is  
21 based on.

22 A O.K.

23 JUDGE EYSTER: It sounds like that's what  
24 it's based on, what you just described.

25 MR. SAGE: Right.

1 JUDGE EYSTER: So that would be helpful.

2 A Yes, sir.

3 MR. CHRISTOPHERSON: We'll certainly  
4 provide that. Does that mean we'll need to have  
5 Mr. Prudhomme back here to testify as to that additional  
6 data he brings?

7 JUDGE EYSTER: Well, I don't know.

8 MR. CHRISTOPHERSON: We'll discuss that  
9 with him and see if that's feasible.

10 JUDGE EYSTER: O.K. Let's see what we  
11 can do.

12 Let's just go off the record for a  
13 moment.

14 (At 4:08 p.m., there was a brief pause in the  
15 proceedings.)

16 JUDGE EYSTER: O.K. We're back on the  
17 record. Ms. Wellman.

18 MS. WELLMAN: Well, your Honor, the  
19 beauty of going last is that I think it's been asked and  
20 answered many times different areas that we would have  
21 been interested in, so I only have a few questions that  
22 would clarify.

23 CROSS-EXAMINATION

24 BY MS. WELLMAN:

25 Q I just would like you to clarify that your testimony  
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1 today has been on behalf of Merit Energy only?

2 A That's correct.

3 Q And so, therefore, on page 4 through 5 when you are  
4 discussing measures to address potential leaks,  
5 et cetera, those are measures that are only being  
6 addressed by Merit, correct?

7 A Yes, that's the only ones that we are taking, steps. I  
8 don't know what everyone else is doing.

9 Q O.K. And then when Mr. Sage was asking you questions  
10 regarding response times to alarms, et cetera, your  
11 answers again were limited to Merit policy?

12 A That's Merit policy, yes, ma'am.

13 MS. WELLMAN: Thank you, your Honor.

14 That's it.

15 JUDGE EYSTER: Redirect.

16 REDIRECT EXAMINATION

17 BY MR. CHRISTOPHERSON:

18 Q Mr. Prudhomme, when we're talking about those procedures  
19 that Ms. Wellman was just asking you about, the purpose  
20 is to limit the concentrations of oxygen; is that right?

21 A That is correct.

22 Q And that's to prevent corrosion; is that correct?

23 A That is correct.

24 Q Is it for safety reasons?

25 A No, sir.

1 Q O.K. You don't have any safety concerns at these levels,  
2 do you?

3 A No, sir.

4 Q Do you think that allowing vacuum operations on these  
5 wells is going to cause any safety issues?

6 A No, sir.

7 Q And that's based on what?

8 A That's based on the fact that we had no safety issues in  
9 the State of Wyoming when we were pulling vacuums on  
10 those wells, and we did not see any safety issues during  
11 the time of 2006 to 2008.

12 Q You stated your opinions, and the judge just asked you  
13 about reservoirs and also about increasing production; is  
14 that right?

15 A Yes, sir.

16 Q And when you were cross-examined by Mr. Sage, he showed  
17 you a couple examples of a couple wells; is that right?

18 A That is correct.

19 Q Was that all the information you provided to him?

20 A No, sir.

21 Q O.K. Was that -- I mean how much of the information that  
22 you provided to him was that?

23 A That was a very microscopic amount of the information we  
24 provided.

25 Q You provided thousands and thousands and thousands of

1 pages?

2 A That's correct.

3 Q In looking over that data that he provided to you, did  
4 that in any way change your opinions on that level?

5 A No, sir.

6 Q And even the data he showed you, what did that show after  
7 these wells were taken off of production?

8 A That the rate fell.

9 Q When you look at the rate, is vacuum the only factor that  
10 enters into what that rate is?

11 A No, sir.

12 Q What other factors are there that play into that?

13 A It could be well downtime, it could be high line  
14 pressures, it could be numerous operational issues that  
15 would affect the rate.

16 Q And Antrim wells, I mean is it true to say that Antrim  
17 wells have declining production?

18 A That is a correct statement.

19 Q And that continues to this day; is that correct?

20 A Yes, sir.

21 Q You were asked some questions about whether fractures can  
22 communicate, and I think you were asked under vacuum. I  
23 mean can fractures communicate under positive pressure?

24 A Yes, sir.

25 Q Explain that to us.

1 A The fracture system of the reservoir, it's still going to  
2 flow from lower pressure -- or higher pressure to lower  
3 pressure regardless of whether or not that pressure is  
4 positive or on a vacuum.

5 Q Did you see a difference when the PDC wells were taken  
6 off of vacuum as opposed to when they were on a vacuum?

7 A Yes, sir.

8 Q O.K. What was that difference?

9 A It was about 1.4, 1.5 million cubic feet of gas per day.

10 Q And obviously you're asking for permission from the  
11 Commission to allow those wells to go back and vacuum  
12 also; is that right?

13 A That is true.

14 Q The opinions that you've given in this case apply both to  
15 the PDC wells and, because obviously those are Merit  
16 wells now, and the Merit wells, correct?

17 A Yes, sir, that's correct.

18 Q Will vacuum operations increase CO2 levels?

19 A Not that I'm a -- only -- not levels, no.

20 Q O.K. Not percentages?

21 A Right.

22 Q I mean it may increase volume?

23 A Correct. But not that I'm aware of.

24 Q You were asked I think a couple questions by Judge Eyster  
25 about water disposal wells; do you recall those?



1 A Yes.

2 Q Do you have any concerns either from an environmental or  
3 any other standpoint about the water disposal wells?

4 A No, sir, those wells are regulated by the Michigan  
5 regulatory bodies and the EPA.

6 Q And how are they regulated, do you know?

7 A We have to have mechanical integrity tests performed on  
8 those wells periodically, we have to report volumes,  
9 things like that.

10 Q And what exactly is being injected into those wells?

11 A It's the brine water produced from the Antrim formation.

12 Q And if you're allowed to return to vacuum, will that  
13 change in any way?

14 A No, sir.

15 Q Might have a little more volume perhaps?

16 A Possibly.

17 Q Operationally to you, if the Commission gives you the  
18 permission to go back on vacuum, operationally what's  
19 going to change between what you're doing now and what's  
20 going to happen if you're allowed to go back on vacuum?

21 A Very little will change initially in the sense of the  
22 wells that are currently set up for vacuum will just take  
23 minor modifications to them in order, to the compression  
24 in order to reachieve pulling a vacuum on those wells,  
25 then we will evaluate on a well-by-well basis where we go

1 in the future.

2 Q O.K. Would there be -- I mean what would be the  
3 additional cost for you then to go on vacuum if you're  
4 allowed to do that?

5 A Virtually nothing.

6 Q Oh, you talked about the SDR-7 and SDR-11 pipes you have;  
7 is that correct?

8 A Yes, sir.

9 Q What does that mean, what does SDR mean?

10 A That's just the different grades of polyethylene pipe.

11 Q And are you -- do you have any concerns about the pipe  
12 perhaps collapsing if you're allowed to go on vacuum?

13 A No, sir.

14 Q And why not?

15 A I've talked to the manufacturer, and they said that the  
16 pipe is rated well over pulling the vacuums that we're  
17 looking at, as well as we've had it in practice.

18 Q And what about obviously some of the pipe that you  
19 purchased may have steel pipe; is that correct?

20 A On the PDC properties.

21 Q Do you have any concerns about that collapsing?

22 A No, sir.

23 Q Again, why not?

24 A Because the rating for the steel pipe greatly, for  
25 collapse greatly exceeds the amount of vacuum that we'd

1 be pulling.

2 Q And you were asked a few questions about the age of the  
3 pipe; do you recall those?

4 A Yes, sir.

5 Q Do you have any concerns about the age of the pipe and  
6 how that may perhaps lead to a collapse?

7 A No, sir.

8 Q And why not?

9 A Because the factor at which it would collapse based on  
10 the manufacturer specifications greatly exceeds, exceeds  
11 the level that we'd be pulling on these wells.

12 Q So if you're allowed to go back on vacuum, based on  
13 everything you know, both the vacuum experience and  
14 everything else, do you have any concerns about these  
15 pipes?

16 A No, sir.

17 MR. CHRISTOPHERSON: Thank you. I have  
18 no further questions on redirect.

19 JUDGE EYSTER: I've got a couple  
20 questions. Do you know what happens to the CO2 level  
21 over time with these wells?

22 A Yes, sir. The CO2 level over time tends to increase.

23 JUDGE EYSTER: O.K. Do you perceive that  
24 being an issue ever at some point?

25 A No, sir.

1 JUDGE EYSTER: Is there a level of CO2  
2 that you believe would present a problem, percentage?

3 A Not that I'm aware of.

4 JUDGE EYSTER: And boy, there was  
5 something you mentioned that you didn't believe it was a  
6 safety issue. And what do you define as safety?

7 A Putting anyone within our company, the environment, or  
8 our company, outside our company or the environment at  
9 risk.

10 JUDGE EYSTER: What's the source of the  
11 brine water that's removed?

12 A The source, it's entrained in the formation.

13 JUDGE EYSTER: How does it get there?

14 A Just through the depositional environment of when the  
15 formation was formed.

16 JUDGE EYSTER: So that brine that's there  
17 is hundreds of millions of years old?

18 A I can't speculate as to the age of it, no, sir.

19 JUDGE EYSTER: We heard some testimony  
20 yesterday with regards to I believe it was some fields in  
21 Texas that have a negative pressure to the point where  
22 the witness testified that they know when they've hit the  
23 formation because it sucks air. Is that a possibility  
24 for Antrim field, the Antrim shale?

25 A I'm not aware of that.

1 JUDGE EYSTER: Do you have any idea what  
2 the impact would be if that field ever got to that point?  
3 A Can you explain to me exactly -- I wasn't here yesterday,  
4 I apologize. Can you explain to me exactly what he said  
5 would happen, or I guess --

6 JUDGE EYSTER: I don't remember the  
7 specific testimony, but it was regards to some fields in  
8 Texas in which all of the wells are under vacuum because  
9 the field itself, the formation is under vacuum now  
10 because it's been producing that way for so long that  
11 it's below atmospheric pressure so that -- and it was  
12 described when they hit the formation, they know they've  
13 hit it because it will suck air in. So that's when they  
14 know it's, they've gotten there.

15 A I've never heard of that happening, and so I can't  
16 speculate as to if that's a possibility for the Antrim.

17 JUDGE EYSTER: So you're not aware of  
18 that type of a situation and the implications of it?

19 A No, sir.

20 JUDGE EYSTER: O.K. Mr. Sage, redirect.  
21 Recross.

22 MR. SAGE: Freudian slip.

23 JUDGE EYSTER: Sorry.

24 \* \* \*

25 \* \*

## RECROSS-EXAMINATION

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BY MR. SAGE:

Q Mr. Prudhomme, you were asked some questions from Mr. Christopherson about the fact that there's only two wells that I referred you to; do you recall that?

A Yes, sir.

Q And he referred to that you provided thousands of pages; do you recall that?

A Yes, sir.

Q And we're talking about 35 wells, aren't we?

A Yes, sir.

Q O.K. And so the thousands of pages are just additional information regarding each of the individual wells; am I correct?

A I believe most of the documentation was required -- was referencing Exhibit A-33, which would, and A-34, which would be all of the wells that we operate in the State of Michigan.

Q But it's the wells. But you only had in this instance 35 wells on vacuum?

A That's correct, yes, sir.

Q And so out of the 35, I referred you to the first two?

A Yes, sir.

Q And do you have any questions about the fact that during the period of time when it was on vacuum, there was a

1 decrease in the production rate that we discussed?

2 A That would be expected to have the decrease in production  
3 rate.

4 Q And was the decrease changed by any manner by going on  
5 vacuum?

6 A Was the decrease in the production rate changed by going  
7 on, I don't believe so.

8 Q Let me ask you this: What is the, what was the normal  
9 decrease in production rate on the State Albert A 3 25 Hd  
10 prior to going on vacuum?

11 A I do not know.

12 Q So you don't know if there's any effect one way or  
13 another after it went on vacuum as far as a decrease in  
14 production rate; am I correct?

15 A Not on that specific well.

16 Q O.K. And what about the second well that I referred you  
17 to, which is the, the second well, which is State Albert  
18 B4-36?

19 A No, sir, I don't know.

20 Q And you wouldn't know with any of those --

21 A No, sir.

22 Q -- in that list?

23 A No, sir.

24 Q But you will agree with me, if you would, would you go  
25 to -- what's this exhibit -- I-3, page 35 of 39, at the

1 time it was on vacuum on August 13, 2008, it was 101.39  
2 Mcf per day, correct?

3 A Correct.

4 Q And when it went off vacuum, it simply dropped 3 Mcf a  
5 day?

6 A Yes.

7 Q O.K. And secondly, if you go to the next well, which is  
8 Exhibit 4 and go to page 35 of 39, and on August 13, when  
9 the letter went out, it was 127.84 --

10 A I'm sorry, could you repeat the page?

11 Q Sure. It's page 35 of 39.

12 A O.K.

13 Q And August 13 it was 127.84 when it was on vacuum, and it  
14 went down to 124 when it went off vacuum?

15 A That's correct.

16 Q O.K. Now, do you have any understanding or question, or  
17 let's say any understanding, if I've taken you through,  
18 if I took you through every one of these wells, which I'd  
19 be happy to do, would we see a similar type of decline  
20 during the period these went on vacuum?

21 A I have not looked at these wells to that much, to that,  
22 being that specific, so I can't comment on that.

23 Q In case you return, would you be prepared?

24 A If you ask me to go through those wells, I will go  
25 through those wells with you, Jack.



1 Q So if I understand your testimony, you don't know what  
2 the production decline, the production rate decline was  
3 of any of these wells that we have on Exhibit I-1 prior  
4 to going on vacuum; am I correct?

5 A I don't recall it.

6 Q And as it relates to going on vacuum, you don't have any  
7 information that what was its decline rate; am I correct?

8 A I do not recall what the decline rates were.

9 Q And likewise, after it went off vacuum?

10 A That is correct.

11 Q Was this information available to you prior to coming  
12 here to testify?

13 A Yes, sir.

14 Q And is there a reason why you wouldn't have provided that  
15 in your testimony, to show the impact of a vacuum?

16 A Is there a reason why I did not provide that in my  
17 testimony?

18 Q In your testimony, yeah. Your testimony is to show the  
19 impact of vacuum, positive or negative I assume, and my  
20 question is, is there a reason why you didn't provide it?

21 A There is no reason.

22 Q But you did have it available?

23 A Yes, sir.

24 Q O.K. And this is the information I assume you're going  
25 to provide through the discussion with the judge and --

1 A If it wasn't already provided.

2 Q Well, I thought you already told the judge it wasn't  
3 provided?

4 A I can not recall if that, if a production graph was  
5 provided or not.

6 MR. CHRISTOPHERSON: It's not been  
7 provided to the judge, it may have been provided in  
8 discovery is what he's --

9 A Discovery, yes, sir. I'm sorry.

10 Q (By Mr. Sage): Well, no. I thought the judge was asking  
11 you was it provided in discovery, and I don't remember  
12 ever seeing it, I didn't see any curves and I didn't see  
13 any production amounts before or after.

14 A Well, we gave all the production volumes that you  
15 requested.

16 Q I'm not going to question that now until I go back and  
17 look at it; I'm not going to agree to it either.

18 A I can generate the curve, the production history for you.

19 Q Both the history which shows the actual production and  
20 your curve that comes out of your computer, I assume?

21 I'm not asking you to go and draw the line in.

22 A Well, I guess I'm not understanding what you're  
23 requesting then.

24 Q You understand a production curve, don't you?

25 A Yes, sir.

1 Q O.K. That's one. You also -- you understand also  
2 production rates, just like we have here in these two  
3 exhibits that we just went over prior to going on vacuum  
4 and after vacuum, correct?

5 A That is the same thing as a production curve in my mind  
6 is the production rate. There's a production forecast,  
7 which is what I put the, what I or another engineer would  
8 forecast what it's going to do in the future.

9 Q O.K. That's another issue. But I was thinking, after  
10 working with engineers for the last couple months trying  
11 to get ready for this case, everybody talked in terms of  
12 curves, and it happened to be an actual curve on an  
13 exhibit. You're thinking in terms of curves simply just  
14 having what we have here, Exhibit 3 and 4, where there's  
15 actual numbers?

16 A I'm sorry, I'm not following your questioning.

17 Q I'm trying to figure out what you mean by curves. Are  
18 you referring to curves being Exhibit I-3 and I-4?

19 A No, sir.

20 Q O.K.

21 A No, sir.

22 Q This is numerical data that shows the production?

23 A Yes, sir.

24 Q O.K. And you have that information before it went on  
25 vacuum and you have that information after it left

1 vacuum?

2 A That data or a rate versus time plot?

3 Q No, I'm asking you first this data.

4 A Yes.

5 Q O.K. And then rate versus time plot is a curve on --

6 A It's a, yes, sir.

7 Q Actual physical curve?

8 A Yes, sir.

9 Q O.K. And that, you have that as well?

10 A I can generate that, yes, sir.

11 Q O.K. That's what I would ask.

12 A O.K.

13 Q Before, during and after.

14 A Can it be on one graph just showing 2004 when we  
15 purchased it from Shell through today?

16 MR. CHRISTOPHERSON: Well, we'll work on  
17 this. He's my witness, we'll sit down and work on it,  
18 and we'll work on that and give him the data.

19 JUDGE EYSTER: Anymore questions?

20 MR. SAGE: Yes. If I may, your Honor.

21 Q (By Mr. Sage): You were asked after the PDC wells went  
22 off vacuum, what the daily rate was, and you, I think you  
23 said 1.1, or maybe you were led into the question, 1.15  
24 million per day; does that ring a bell?

25 A No, sir, it doesn't.

1 Q Oh, O.K. After the PDC wells went off vacuum, what was  
2 the daily rate for those wells, 207 wells?

3 A I think it was about 6.3 million a day, maybe 6.4 million  
4 a day.

5 Q You think, you said you think or is it --

6 A I don't know that number --

7 Q Oh, O.K.

8 A -- specifically.

9 Q Oh, all right. Let me do is it this way: After it went  
10 off vacuum, it was your testimony it was decreased 1.1  
11 million per day?

12 A I believe I thought I said a little bit higher than that,  
13 I think it was about 1.3 million a day.

14 Q All right, that's fine. And that, you divide it by 207  
15 wells, right?

16 A If you want an average drop per well.

17 Q And do you know what that is?

18 A No, sir.

19 Q The judge had asked you a question regarding vacuum, and  
20 counsel proceeded with it as well, vacuum, does it  
21 increase CO2 levels; do you recall that?

22 A Yes, sir.

23 Q And right now these wells have been in production, these  
24 wells that you have, the Merit wells, the 106 and 207,  
25 they've been on production for some time; am I correct?

1 A Yes, sir.

2 Q And the longer a well goes on production, am I correct  
3 that the CO2 level in Michigan increases?

4 A That's correct.

5 Q And in the present instances, would you agree with me  
6 that the production on these wells is coming from the  
7 matrix primarily?

8 A That the production coming from these wells is coming  
9 from the matrix?

10 Q Correct. It has to come from the source, and the source  
11 is, the storage source is the matrix; am I correct?

12 A Yes, sir.

13 Q And when it's coming from the matrix, as you just  
14 indicated, it increases as time goes by, the increase in  
15 CO2?

16 A Correct.

17 Q So if I increase the production rate, wouldn't you agree  
18 with me that there would be an increase then in CO2  
19 levels?

20 JUDGE EYSTER: Is that -- do you mean  
21 over time, percentage of CO2 will increase?

22 MR. SAGE: No, your Honor, I don't  
23 believe it is. I think the fact is is that when it's  
24 coming from the --

25 JUDGE EYSTER: What's your question? Is  
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1       that your question?

2                   MR. SAGE: My question was whether or not  
3       when it goes -- now I have to remember.

4                   JUDGE EYSTER: Why don't you just  
5       rephrase the question again, or restate it.

6                   MR. SAGE: I've got to think about it  
7       now.

8                   JUDGE EYSTER: All right.

9                   MR. SAGE: Hold on, please.

10                  JUDGE EYSTER: I just wasn't clear what  
11       you were asking, I wanted to make sure I understood what  
12       the question was.

13                  MR. SAGE: Okay. My question --

14                  JUDGE EYSTER: Sorry. Because I think we  
15       have two things, one is more volume, therefore larger  
16       quantity of CO<sub>2</sub>; and the other question is, because these  
17       wells, the percentage of CO<sub>2</sub> increases over time, what  
18       would be the impact of the vacuum on that, if there is  
19       any, more than what would normally happen. I mean  
20       that's -- there's two different categories, I wasn't sure  
21       which one you were asking about.

22   Q       (By Mr. Sage): What I'm trying to determine right now  
23       is, is that the gas that's being produced presently,  
24       since time has gone on on the production of these wells,  
25       the gas is being produced from the matrix, correct?

1 A From the rock, yes.

2 Q Yes. And as you indicated before, that the matrix has  
3 low permeability, correct?

4 A Yes, sir.

5 Q And during this period of time, during the last ten  
6 years, we've seen increases in CO2 levels, correct?

7 A That is correct.

8 Q And so if we increase the production rate, would you  
9 agree with me, then, you would be increasing the CO2  
10 percentage level?

11 A I don't know if that would happen or not, Jack.

12 Q It's coming from the matrix, where else -- and if it's  
13 increasing over time already, if you increase that  
14 production rate, wouldn't it increase that level of CO2?

15 A I can't confirm that.

16 Q O.K. I don't know exactly what the context of the  
17 response was, but there was a question regarding, from  
18 your counsel regarding additional costs of virtually  
19 nothing, and I'm assuming when you answered virtually  
20 nothing, you're referring to the 35 wells?

21 A As well as the 207 wells with Petroleum Development  
22 Corporation that we bought.

23 Q O.K. But that didn't include the difference between the  
24 35 wells and 106 wells; am I correct?

25 A That is correct.



1 Q There would be additional cost there?

2 A If through our evaluation we determined that we wanted to  
3 put those wells on vacuum, there would be additional  
4 cost.

5 Q You were asked the questions regarding the age of the  
6 pipe and would it make any difference, hopefully I'm  
7 understanding it correctly, and your response was I  
8 looked at some document and it appears it would not?

9 A Yes, sir.

10 Q You're relying on, what was the company that you referred  
11 to?

12 A Just for instance, the Halliburton book that has the  
13 collapse pressures of pipe, tubing, steel.

14 Q And was that referring to polyethylene?

15 A No, sir. I talked to the manufacturer of the  
16 polyethylene pipe.

17 Q And did you ask them would time make any difference?

18 A No, sir, I did not.

19 Q O.K.

20 JUDGE EYSTER: So what's your opinion  
21 that time won't make any difference based upon?

22 A I don't know that time would make a difference.

23 JUDGE EYSTER: You don't know if it  
24 would, so you don't know if it won't?

25 A That's correct.

1 JUDGE EYSTER: O.K.

2 A On polyethylene.

3 JUDGE EYSTER: O.K.

4 A I think steel would be fine with time as long as there's,  
5 integrity of the pipe is still valid.

6 JUDGE EYSTER: And that would be  
7 determined by what means?

8 A Right now we don't have a method.

9 JUDGE EYSTER: It basically says steel is  
10 going to be good as long as it's good; isn't that what  
11 you just told me?

12 A Essentially.

13 JUDGE EYSTER: O.K. So a little more  
14 clarification on that one might be helpful.

15 A Yes, sir.

16 JUDGE EYSTER: So as long as the steel is  
17 good, it's good?

18 A I think that --

19 JUDGE EYSTER: What more can you tell me  
20 about that?

21 A I guess the collapse pressure of the steel pipe is so  
22 great compared to what we're pulling on it, it would have  
23 to -- I believe that there would have to be some kind of  
24 integrity issue with the pipe other than just time that  
25 would cause it to be defective, your normal wear and

1       tear.

2                   JUDGE EYSTER:  Anything else you want to  
3       add on that?  I can't remember.  The majority of these  
4       lines where you'd really be concerned about the oxygen  
5       getting in, you have no way of inspecting the interior,  
6       anything upstream of your central CPF, right?

7   A       That's correct.

8                   JUDGE EYSTER:  You have no way of  
9       inspecting inside those pipes?

10  A       That's correct.

11                  JUDGE EYSTER:  And are you aware of what  
12       potential exists with high CO2 and water?

13  A       Yes, sir.

14                  JUDGE EYSTER:  Does that give you any  
15       concern?

16  A       No, sir.

17                  JUDGE EYSTER:  O.K.  What is the  
18       potential?

19  A       It's corrosion.

20                  JUDGE EYSTER:  Mr. Sage, did you have  
21       more questions?

22                  MR. SAGE:  Just a couple more, your  
23       Honor.  It goes to the questions in the area you were  
24       just questioning regarding.

25  Q       (By Mr. Sage):  The 207 wells that you purchased from  
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1 DCP, my understanding of those --

2 A PDC.

3 Q PDC. Thank you. They had steel pipe as far as the  
4 pipelines going to those wells, correct?

5 A They have a combination of steel and poly.

6 Q And is the majority of it steel as far as distance?

7 A I couldn't say whether it was more steel or more poly.

8 Q Is Merit intending to change that?

9 A No, sir.

10 Q O.K. And to the extent that it's steel, if I understand  
11 it correctly, when a well produces, an Antrim well  
12 produces, it produces gas and water, correct?

13 A That is correct.

14 Q And the gas could have CO2?

15 A That's correct.

16 Q And the water could have, could be salt water?

17 A Yes, sir.

18 Q And the combination of that can cause corrosion?

19 A Yes, sir.

20 Q And in addition to that, depending on whether or not, how  
21 they put the pipe in, you could have external corrosion  
22 as well; am I correct?

23 A Yes, sir.

24 Q Has that been checked?

25 A No, sir.

1 Q Has any of these pipelines been pigged?

2 A No, sir.

3 Q Smart pigged?

4 A No, sir.

5 Q Videoed?

6 A No, sir.

7 Q Have the joints been x-rayed?

8 A No, sir.

9 MR. SAGE: Nothing further, your Honor.

10 MR. O'TOOLE: Your Honor, I just have one  
11 question I'd like to ask.

12 JUDGE EYSTER: O.K.

13 RECROSS-EXAMINATION

14 BY MR. O'TOOLE:

15 Q When Mr. Christopherson asked you what would change if  
16 the application was approved, I believe you said nothing  
17 would change, but you would look at each well on a  
18 well-to-well basis to determine whether or not you wanted  
19 to put any additional wells on a vacuum; is that correct?

20 A Well, I guess I misspoke. We would make adjustments to  
21 our compression, our current existing compression, that  
22 would change in order to be able to pull vacuum on the  
23 wells that it's already set up, then we would look at  
24 additional prospective wells.

25 Q And this, of course, testimony only relates to what Merit

1 intends to do, correct?

2 A That is correct.

3 Q It doesn't relate to any impact as to any other producers  
4 and what costs that they would have to incur if they  
5 decided to go on a vacuum, correct?

6 A That is correct.

7 Q Now, if there was additional costs and you did determine  
8 to put additional wells on compression that required  
9 capital investment of some type to do that, who would  
10 absorb those costs?

11 A Who would absorb the capital costs?

12 Q Yes. Would the cost be passed on to the royalty owner,  
13 for example?

14 A No, sir. The royalty owners don't pay any share of  
15 capital expense.

16 Q All right. And would there be any part of that cost  
17 included in post-production costs?

18 A No, sir.

19 MR. O'TOOLE: All right. And thank you  
20 very much.

21 JUDGE EYSTER: Mr. Sattler.

22 MR. SATTLER: Nothing further, your  
23 Honor.

24 JUDGE EYSTER: Ms. Wellman.

25 MS. WELLMAN: Nothing, your Honor.

1 JUDGE EYSTER: All right. Thanks very  
2 much.

3 (The witness was excused.)

4 JUDGE EYSTER: O.K. Let's go off the  
5 record for a moment.

6 (Recess taken at 4:43 p.m.)

7 - - -

8 (Back on the record at 5:27 p.m.)

9 JUDGE EYSTER: Mr. Christopherson, your  
10 motion.

11 MR. CHRISTOPHERSON: Yes, your Honor. We  
12 have, as you're aware, filed discovery requests to Atlas  
13 requesting for specific information regarding Chevron on  
14 a number of different issues. But I think especially  
15 pertinent, for Chevron's experience in the operation of  
16 natural gas wells under vacuum, whether in the State of  
17 Michigan or other states, including West Texas and New  
18 Mexico, which we believe they do have such operations.  
19 So clearly we think that information is relevant to these  
20 proceedings. You have already heard testimony during  
21 these two days about --

22 JUDGE EYSTER: I'm not concerned about  
23 relevance.

24 MR. CHRISTOPHERSON: O.K. The issue of  
25 course is, as under the court rule and how it applies to  
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1 this situation and 2.309 where we have a parent-  
2 subsidiary situation. The court rule obviously says that  
3 the party must include in its answers such information as  
4 is available to the party served, which is Atlas. And  
5 the other important part was, or that the party could  
6 obtain from its employees, agents, representatives,  
7 sureties, or indemnitors.

8 JUDGE EYSTER: How does that apply to  
9 Chevron?

10 MR. CHRISTOPHERSON: Well, I think it  
11 applies to Chevron because this is a parent-subsubsidiary  
12 situation. And although there is no Michigan case  
13 directly on point, they haven't cited one, neither have  
14 we, under the Federal rules and certainly under the  
15 Pennsylvania case we cited, it is really identical in  
16 that they have a duty, since that language -- employees,  
17 agents, representatives, sureties, or indemnitors -- does  
18 include a parent-subsubsidiary situation.

19 JUDGE EYSTER: O.K. I did not have a  
20 chance to look at that case other than what -- the small  
21 portion of it that you cited.

22 MR. CHRISTOPHERSON: Yes.

23 JUDGE EYSTER: And it appears that that  
24 involved, and again I have not looked at that case, I  
25 have not read it, so I don't know, it sounds as though it



1 involves some sort of conduct of some sort.

2 MR. CHRISTOPHERSON: Right.

3 JUDGE EYSTER: That was involved by both  
4 the subsidiary and the parent company. I mean it made it  
5 sound as if there was a connection between the two  
6 companies and the information being requested.

7 MR. CHRISTOPHERSON: Well, I think --

8 JUDGE EYSTER: But again without having  
9 had an opportunity to read it, it's hard to make that  
10 judgment.

11 MR. CHRISTOPHERSON: I mean if you read  
12 Atlas's reply, they're not saying that they don't or  
13 can't get the information from Chevron. They have never  
14 said that. They don't say they can't get that  
15 information from Chevron. I think that if you look at  
16 Michigan's discovery rules which very clearly say that  
17 they have a policy of far-reaching open discovery, that  
18 when you say that the party could obtain from agents,  
19 representatives, that includes in this case Chevron. And  
20 given the policy of discovery in the State of Michigan,  
21 given the fact that it's obviously relevant, they can get  
22 it. They haven't said they can't get it; they can.

23 JUDGE EYSTER: Well, how come you haven't  
24 made discovery requests then of Chevron?

25 MR. CHRISTOPHERSON: Well, as you know,  
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1 Chevron only came involved in any way about a month ago  
2 when they bought out Atlas. So we submitted these  
3 directly to Atlas because there was a parent-subsubsidiary  
4 situation and we thought they would give us the  
5 information.

6 JUDGE EYSTER: You can serve the same  
7 requests on Chevron, correct, under the court rules?

8 MR. CHRISTOPHERSON: I believe we can,  
9 yes.

10 JUDGE EYSTER: So is there a reason you  
11 opted not to?

12 MR. CHRISTOPHERSON: No. And I suppose  
13 if you deny the motion, we'll do that tomorrow. I don't  
14 think we have to, given the way the rule is worded  
15 because I think in a parent-subsubsidiary situation, they  
16 have that information and they should provide it to us  
17 and we shouldn't have to go ahead and try to serve  
18 Chevron directly.

19 JUDGE EYSTER: Continue.

20 MR. CHRISTOPHERSON: I think that's it.  
21 We think that they have that information, that within the  
22 meaning of the court rule it's under their control and  
23 they should provide it.

24 JUDGE EYSTER: Mr. Sage, it appears that  
25 the reason you have cited in your responses for not

1       complying with discovery requests is because you believe  
2       that the information requested is neither material,  
3       relevant, nor reasonably calculated to lead to discovery  
4       of admissible evidence. I don't agree with that. If  
5       that's all you have --

6               MR. SAGE: No.

7               MS. NEWELL: It's not.

8               JUDGE EYSTER: O.K. What else do you  
9       have?

10              MS. NEWELL: Your Honor, the Applicants  
11       are trying to obtain indirectly through Atlas what they  
12       can't obtain through Chevron. It's been established  
13       through the affidavit that we have attached to our  
14       response that says that Atlas and Chevron are distinct  
15       corporate entities. This distinction as in the court  
16       case that we cited, the Michigan case we cited, that's  
17       recognized in Michigan.

18              The Applicants have directed -- they have  
19       discovery requests, and 24 of the questions are  
20       referencing Chevron, to seek information regarding  
21       Chevron's knowledge and experience -- and experience.  
22       That information isn't -- they're not required to answer  
23       that if the Applicants are asking them that or if Atlas  
24       is inquiring of them.

25              Also, the Applicants have not addressed  
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1 at all that Chevron, there is no jurisdiction over  
2 Chevron in that Chevron is not a party to this case. Now  
3 they're referencing 2.309(B)(1). That's inapplicable  
4 because Chevron is not an employee, agent,  
5 representative, surety, or indemnitor of Atlas. There is  
6 nothing in this particular court rule that regards the  
7 parent-subsidiary relationship as far as Atlas being a  
8 party in this case.

9 There is also nothing in the rule, as the  
10 Applicants have indicated in their reply that they filed  
11 yesterday, that there has to be a statement made by Atlas  
12 that this information is not available. The case that  
13 they have cited in their reply is inapplicable to this  
14 situation. That's dealing with financial documents that  
15 were produced as a result of a relationship. They're not  
16 asking for documents that were produced as part --

17 JUDGE EYSTER: Is that the Federal case?

18 MS. NEWELL: That's the Federal case.

19 JUDGE EYSTER: O.K. Again I have not had  
20 a chance to read that. Some of this stuff has been filed  
21 what, yesterday and today, today and the day before?

22 MR. CHRISTOPHERSON: It was filed  
23 yesterday while we were in hearings, yes.

24 JUDGE EYSTER: Right.

25 MS. NEWELL: In that case, what they're  
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1 asking for aren't documents or even anything related to  
2 some sort of relationship, business relationship,  
3 assuming even one would have existed between Atlas and  
4 Chevron. They're asking specifically about information  
5 regarding Chevron's knowledge. That's not the situation  
6 that's described in that case. That case is inapplicable  
7 for that reason as well as because it is not a Michigan  
8 case, it is not under Michigan law.

9 Furthermore, such are irrelevant because  
10 as has been established Chevron is not a party to this  
11 case. So anything regarding their experiences --

12 JUDGE EYSTER: O.K. I'll let you know, I  
13 am not buying the relevance, the irrelevant argument that  
14 you are trying to make. We have heard lots of testimony  
15 by people so far that -- well, one person that you could  
16 pretty much say has really nothing in this case except  
17 maybe selling a pump or two. But so I -- that  
18 information could very well be relevant in my opinion.  
19 I'm not really concerned about that argument.

20 I'm really concerned about the -- Well,  
21 what else do you have in your answers to these questions,  
22 the interrogatories? I believe it's a request for  
23 documents too in some cases.

24 MR. CHRISTOPHERSON: Yes.

25 JUDGE EYSTER: I mean, is the only

1 objection you have made in this answer is relevance?

2 MS. NEWELL: Say that again, please.

3 JUDGE EYSTER: Was the only objection you  
4 made, was it to relevance?

5 MR. SAGE: No.

6 MS. NEWELL: We have, at the very  
7 beginning of our discovery responses there are general  
8 objections that are incorporated into each of the  
9 replies.

10 JUDGE EYSTER: All right. Then do you  
11 have -- Mr. Christopherson made an argument that you  
12 hadn't even indicated that it wasn't -- that this  
13 information was not in your possession.

14 MS. NEWELL: Well, I don't --

15 JUDGE EYSTER: Is there, in your answer  
16 some place have you indicated that you don't possess the  
17 information?

18 MS. NEWELL: Well, I don't think we're  
19 required to under the law.

20 JUDGE EYSTER: Well, I don't know. What  
21 do the court rules say for answers? I mean, I think you  
22 have to indicate something.

23 MS. NEWELL: Well, we have responded and  
24 we have incorporated our objection into those responses.

25 JUDGE EYSTER: O.K. Where do you state  
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1       that you do not possess the information requested?

2               MS. NEWELL: Like I said, I don't see  
3       where that's required under the court rule. Under the  
4       court rule it requires us to obtain the information  
5       that's available to us or that we could obtain from our  
6       employees, agents, representatives, sureties, or  
7       indemnitors. That doesn't include Chevron.

8               You know, that's what the court rule  
9       provides. It doesn't say anything about making an  
10      affirmative statement of any sort.

11              JUDGE EYSTER: It's been a while since I  
12      have been on your side of it. I mean, is there an  
13      equivalent in the rules in terms of what -- an equivalent  
14      rule to that, the requirements for an answer to a  
15      complaint, for instance?

16              MS. NEWELL: Not that I'm --

17              JUDGE EYSTER: Specific, you know, for an  
18      answer to a complaint there is specific language.

19              MS. NEWELL: Not that I'm aware of.

20              JUDGE EYSTER: Admit, deny. O.K. Is  
21      there anywhere, is there anywhere you have indicated that  
22      you do not possess the information?

23              MR. SAGE: No.

24              MS. NEWELL: No.

25              JUDGE EYSTER: O.K. So you're not

1 claiming that you're not providing discovery because you  
2 don't have the information?

3 MR. SAGE: No, your Honor. What we're  
4 saying is, under the court rule it's very clear that  
5 we're not required even to respond to it. It says there  
6 that if we had -- we'd have to get it from an employee,  
7 agent, representative, surety, or indemnitor. There is  
8 no indication that Chevron is our employee; in fact  
9 they're not.

10 JUDGE EYSTER: Well, wait. If you  
11 possess the information that's being requested, you would  
12 have to turn it over. The court rule indicates not only  
13 you but all these other people.

14 MR. SAGE: I respectfully disagree with  
15 your Honor. That's the reason that the court is -- when  
16 you look at (B), it doesn't require that. (B) only says  
17 I have to -- if I have it and I can go -- but he's asking  
18 me to go check with Chevron, find out what their  
19 knowledge is in an area in which we don't have the  
20 information, as far as I know. But the fact is I'm  
21 required --

22 JUDGE EYSTER: O.K. Have you said that  
23 anywhere in any of this? Have you said: I don't have  
24 the information?

25 MR. SAGE: No, I haven't, because under  
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1 the rule I wasn't required to. That's my point.

2 MR. CHRISTOPHERSON: If you read the  
3 first part of that sentence, it says the answers must  
4 include such information as is available to the parties  
5 served. It is available to them. They do have it. Then  
6 it --

7 MR. SAGE: No. He's presuming something  
8 that, he keeps saying -- in fact he even says that he  
9 thinks there is some operations in Wyoming or wherever it  
10 is. And as far as I know, at least I can tell you I  
11 don't know anything about it.

12 MR. CHRISTOPHERSON: Well, then ask --  
13 have their party answer or say it doesn't, there isn't  
14 any --

15 MR. SAGE: They're not required to do  
16 that under the rule. That's our point. We're not  
17 required to do something that I think he is suggesting.  
18 There is nothing --

19 JUDGE EYSTER: O.K. But Mr. Sage, your  
20 answer, if you're not claiming that you don't possess the  
21 information, and if your objection is that it's not  
22 relevant --

23 MR. SAGE: That's one of them.

24 JUDGE EYSTER: O.K. Well, to me the  
25 non-relevance argument doesn't stand.

1 MR. SAGE: I understood your position,  
2 your Honor.

3 JUDGE EYSTER: It's not sufficient.

4 MR. SAGE: I'm not trying to argue it  
5 again, your Honor.

6 JUDGE EYSTER: So it's not your claim  
7 that you don't have the information.

8 MR. SAGE: All I am claiming right now,  
9 your Honor, is that I'm not required to go and get the  
10 information, because the rule doesn't say --

11 JUDGE EYSTER: You wouldn't be required  
12 to go get it if you already have it.

13 MR. SAGE: O.K. I can tell you I don't  
14 have any information. If you are asking me to go and  
15 check with our client to see if they have it from  
16 Chevron, we'd have to do that.

17 But I just -- we thought, from looking at  
18 this rule, we were not required to do anything other than  
19 say we object because, you know, irrelevance and all the  
20 other things we did. In addition, the rule didn't  
21 require us to go ahead and seek out any information. It  
22 doesn't require me to respond to their inquiry because  
23 their inquiry is simply an indirect way to get  
24 information they couldn't get from Chevron.

25 And to me that's offensive and it

1 violates the whole intent of the rule. The rule says you  
2 can't ask Chevron interrogatories that you're trying to  
3 get from us.

4 MR. CHRISTOPHERSON: The whole intent of  
5 the rule is to provide discovery that's relevant.  
6 They're a parent-subsidary situation, they have the  
7 information. They just won't provide it to us. If they  
8 don't, they certainly can get it from Chevron. The  
9 requirement of the court rule --

10 JUDGE EYSTER: Mr. Christopherson, I  
11 don't have, I am not convinced that that is required of  
12 them. All right. I am not, I'm not prepared today to  
13 actually rule on that. If you're going to ask me to rule  
14 on whether or not there is a requirement for Atlas to  
15 seek this information from Chevron, I'm not going to give  
16 you that.

17 MR. CHRISTOPHERSON: O.K.

18 JUDGE EYSTER: I will not do that today.  
19 If that's something that I need to address later, I will  
20 address it after having an opportunity to have done some  
21 more research.

22 MR. CHRISTOPHERSON: All right.

23 JUDGE EYSTER: So let's put aside that  
24 argument for the moment. I think that the first --  
25 before we really can get there, I think Mr.

1 Christopherson has made this point, that at least in that  
2 second document that was filed yesterday that I received  
3 today, he's making an argument that you haven't even  
4 denied possessing the information right now at this  
5 point.

6 MR. SAGE: That's true.

7 JUDGE EYSTER: So as far as I can tell,  
8 you may have the information that he is asking for. Not  
9 necessarily in your possession, but in your client's  
10 possession. And not having denied having it, it could be  
11 there. And if you have it, I think it's relevant, it  
12 will need to be turned over and need to be provided.

13 If you don't have it, then we get to the  
14 second question, which is whether or not you can be  
15 directed to go get information from Chevron instead of  
16 apparently Mr. Christopherson doing it through the rules  
17 that provide him the opportunity to do so directly. I  
18 don't know how you guys want to proceed with that.

19 MR. CHRISTOPHERSON: Well, I think then  
20 they have to respond. And if they have the information,  
21 they have to provide it. And if they don't, they have to  
22 indicate that they don't have it. And then we can take  
23 it from there whether we want to get further  
24 clarification from you on the issue which you haven't  
25 resolved, or if we want to take other action.

1 MR. SAGE: I don't think they're entitled  
2 to it. I don't think they're entitled to require us to  
3 do it, and that's the position I am taking right now on  
4 the law. I'm not saying, because I don't know, your  
5 Honor. I'm just telling you, I do not know if the, if  
6 Atlas has this information. First of all, I don't even  
7 think it exists. But I don't even know that, to be  
8 honest with you. But I don't know if they have it. My  
9 position was, it wasn't required under the court rule.  
10 That's the reason we took that position.

11 We listed several of our general  
12 objections at the very beginning. I didn't repeat them  
13 all the way through. But when repeating them, I'd look  
14 at very clearly, they cannot ask these same questions of  
15 Chevron. They cannot do that under the interrogatories.  
16 Chevron is not a party and the rule says you cannot ask  
17 that. So they haven't got any right to do that. They're  
18 trying to circumvent that and say, okay, now me, go get  
19 the information from Chevron.

20 JUDGE EYSTER: Why can't they ask them  
21 for this information?

22 MR. SAGE: Because they're not a party.  
23 You can't ask a party, you know, interrogatories. You  
24 may be asking or requesting for production of documents,  
25 but they didn't even follow that rule right.

1 MR. CHRISTOPHERSON: We followed the rule  
2 right because we asked Atlas and they have control of  
3 that information.

4 MR. SAGE: No, you didn't follow the rule  
5 right. The rule requires you to list what you want. You  
6 can't go and say: Do you have this, and then me to list  
7 it for you and then to provide it to you. You have to  
8 ask what it was. You didn't follow even the production  
9 rule.

10 MR. CHRISTOPHERSON: We did too. We  
11 asked very specifically --

12 JUDGE EYSTER: All right you guys. I'm  
13 going to grant the motion to the extent that it requires  
14 Atlas -- these are all directed to Atlas -- Atlas to turn  
15 over, provide the interrogatories, and I guess there's  
16 some production of documents in there also, whatever  
17 information it has in its possession.

18 If it doesn't have it, then you need to  
19 indicate the information is not available.

20 MR. SAGE: Can I have 14 days to do that?  
21 Because I'm going to have go and check through the  
22 company's --.

23 MR. CHRISTOPHERSON: I certainly prefer  
24 seven days. We have been waiting long enough for this.  
25 We've already started the hearings.

1 JUDGE EYSTER: Well, you've got --

2 MR. CHRISTOPHERSON: They had them served  
3 a month ago. They could have checked.

4 JUDGE EYSTER: Can you -- 14 days would  
5 be two Wednesdays from now.

6 MR. SAGE: We're not going back to  
7 hearing till May, your Honor. Our witnesses won't be  
8 until June.

9 JUDGE EYSTER: Do you think you can have  
10 a response in ten days?

11 MR. SAGE: I have no idea, to be honest  
12 with you. I mean I'll follow your directions. I can't  
13 do anything other than that. Everything has changed in  
14 this company. That's what I'm trying to -- I have to  
15 address. That's the reason. I don't want to have to  
16 come back for an extension. I'm going to try to do it in  
17 14 days. I mean I'll try to do everything I can.

18 JUDGE EYSTER: O.K. Well, try to have it  
19 in 12 days. That would be the Monday -- excuse me.  
20 Fourteen? Yes, 12. So that would be two Mondays from  
21 now instead of two Wednesdays.

22 MR. SAGE: I'll make every effort I can.  
23 If I can't, I'll file a motion --

24 JUDGE EYSTER: Well, soon as you can.  
25 But try to have them done by that date if you can.

1 MR. SAGE: I will, I will.

2 JUDGE EYSTER: A little bit earlier than  
3 the 14 days, but I'm not going to lean on you too heavy  
4 here.

5 MR. SAGE: But the direction is that we  
6 would -- if we don't have the material, if Atlas doesn't  
7 have the material requested, we just simply state that.

8 JUDGE EYSTER: If you -- or what does the  
9 rule say?

10 MR. SAGE: The rule says an agent, and  
11 you already said I don't have to search with Chevron.  
12 They're not our agent anyway.

13 MR. CHRISTOPHERSON: Well, he said he  
14 hasn't ruled on that issue yet. He didn't say whether  
15 you'd have to do it eventually.

16 MR. SAGE: Well, I --

17 JUDGE EYSTER: That's right. I'm not  
18 going to rule on whether or not -- If you guys don't  
19 resolve this discovery issue by this means, I mean I have  
20 not ruled on that today; we'll get to that later.

21 MR. CHRISTOPHERSON: Right.

22 JUDGE EYSTER: Because right now we  
23 hadn't established whether or not Atlas has the  
24 information, or its sureties, indemnitors, whatever the  
25 rules --



1 MR. SAGE: Right.

2 JUDGE EYSTER: Whatever the rule says.

3 MR. SAGE: Right. Well, the employees,  
4 agents, whatever it says.

5 JUDGE EYSTER: But the rule doesn't say  
6 parent corporation?

7 MR. SAGE: Absolutely not.

8 JUDGE EYSTER: O.K. So that's what I'm  
9 saying he needs to do. You need to answer that. I  
10 consider it to be relevant information, and if you don't  
11 have it, you don't have it.

12 MR. SAGE: We'll follow your instruction.

13 JUDGE EYSTER: O.K.

14 MR. SAGE: Thank you, your Honor.

15 MR. CHRISTOPHERSON: Thanks.

16 JUDGE EYSTER: Anything else in regards  
17 to that?

18 MR. CHRISTOPHERSON: No.

19 JUDGE EYSTER: All right. Thanks,  
20 everybody.

21 MR. SAGE: Thank you.

22 (At 5:50 p.m., the hearing was adjourned.)

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## C E R T I F I C A T E

We, the undersigned, do hereby certify that we reported stenographically the foregoing proceedings had in the within-entitled matter, being Case No. U-16230, before Mark D. Eyster, Administrative Law Judge with SOAHR, at 6545 Mercantile Way, Lansing, Michigan, on March 30, 2011, and that the foregoing transcript constitutes a full, true and correct transcript of our said stenographic notes.

Dated: