

In the Matter Of:

SCOUT ENERGY MANAGEMENT v

PILOT INTELLECTUAL PROPERTY

TREVOR BORS

February 05, 2025



UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SCOUT ENERGY MANAGEMENT, LLC, AND
CHEVRON U.S.A., INC.,

Petitioners,

vs.

PILOT INTELLECTUAL PROPERTY, LLC

Patent Owner.

CASE IPR2024-00385
US PATENT NO. 8,505,332 B1

STENOGRAPHIC DEPOSITION OF

TREVOR BORS

HOUSTON, TEXAS

WEDNESDAY, FEBRUARY 5, 2025

(Reported Remotely)

REPORTED BY: TANYA L. VERHOVEN-PAGE,
CCR-B-1790 (GA), CSR-12254 (TX),
LCR-991 (TN)

FILE NO. 2025-972270

February 5, 2025

9:08 a.m.

Stenographic deposition of

TREVOR BORS, held in Houston, Texas,
before Tanya L. Verhoven-Page, Certified
Court Reporter (GA), Licensed Court
Reporter (TN) and Certified Shorthand
Reporter (TX).

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(Via Zoom)

ALSO PRESENT: Eric Prim
Mark Mathias

TECHNICIAN: Joaquin Ramirez

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I N D E X

WITNESS: TREVOR BORS

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HOUSTON, TEXAS; WEDNESDAY, FEBRUARY 5, 2025

9:08 A.M.

Thereupon --

TREVOR BORS,
called as a witness, having been first duly sworn,
was examined and testified as follows:

EXAMINATION

BY MR. PIALA:

Q Good morning, Mr. Bors.

A Good morning, Mr -- Alex. I can't screw
that one up.

Q It's Piala.

A Piala, okay.

Q So, just to sort of start off, is there
anyone else in the room with you right now?

A Yes. Charles Rogers. Also in the room
are Eric Prim and Mark Mathias.

Q Who is Eric Prim?

A Eric Prim is the president of Highland
Energy Solutions.

Q And you mentioned a Mathias? Who is
Mathias?

A Mark Mathias.

1 Q Who is that?

2 A Mark Mathias is the engineer that works
3 for Pilot Energy Solutions.

4 Q Do you have any notes in front of you?

5 A I have copies of my declaration, the Prim
6 patent and the Soldati patent at this time.

7 Q And those are the copies as produced in
8 this case as exhibits?

9 A That is correct. They're clean with
10 no -- no notes or markings in them.

11 Q Do you have any other notes with you?

12 A Not -- not with me, no.

13 Q And you are -- I'm guessing -- on a
14 computer right now?

15 A Yeah, I'm sitting on a -- at a desk in
16 front of a computer with a microphone and video.

17 Q And do you have any applications open
18 other than Zoom?

19 A They're in the background if they are.

20 Q Okay. So the only window that's open is
21 Zoom?

22 A Correct.

23 Q Can you let me know if anyone else enters
24 the room at any time?

25 A I will.

1 Q And if you'll let me know, you know, if
2 there's another application you're running or want to
3 run or something like that?

4 A I will.

5 Q So, for this deposition, if I ever ask a
6 question that's not clear, could you please let me
7 know?

8 A I will.

9 Q I'm going to assume that if I ask a
10 question and you answer it, you understood the
11 question.

12 Does that sound reasonable?

13 A That is reasonable.

14 Q So let's start off with your background.
15 You used to work for Pilot, correct?

16 A That is correct.

17 Q Did you know Mr. Prim before you were
18 engaged on this matter?

19 A Yes.

20 Q How familiar were you with Mr. Prim
21 before you were engaged on this matter?

22 A I was formerly an employee of -- at the
23 time, it was Cenovus energy. I was the Manager of
24 Facilities Engineering and Construction, and I worked
25 on the Weyburn project. And we engaged Pilot to

1 build what -- we actually built the plant and Pilot
2 participated in it, beginning in 2010. It might have
3 been 2000 -- early 2011 that I first met Mr. Prim.
4 So I've known him since then.

5 Q And did you work for Pilot after Cenovus?

6 A Yes, I worked -- I worked for another
7 company in between, as well.

8 Q And did you work closely with Mr. Prim or
9 was it a less frequent relationship?

10 A During the time I worked for Eric, I did
11 not work out of the Houston office. I worked out of
12 my home in Canada. So we talked frequently on the
13 phone, and I would periodically make trips to Houston
14 to meet with him.

15 Q All right. Do you have any stake in
16 Pilot, such as stock?

17 A No.

18 Q Do you still keep in contact with any
19 Pilot employees?

20 A I still keep in contact with Eric, yes.

21 Q Did you talk -- strike that.

22 When you say Eric, do you mean Mr. Prim?

23 A Mr. Prim, yes.

24 Q That's fine.

25 Did you talk to Mr. Prim at all regarding

1 your declaration in this matter?

2 A Yes, we -- we talked quite a bit about my
3 declaration.

4 Q Do you remember what you talked about?

5 A Well, I'm sure Eric has reviewed my
6 declaration, and we didn't talk specifically about
7 the wording of my declaration or anything like that,
8 but -- well, we're -- we were colleagues. He hired
9 me to help him with this -- with this case and so,
10 yes, we talked about the declaration.

11 Q Did Mr. Prim review your declaration?

12 A I don't know if I've asked him that
13 specifically, but I presume he has.

14 Q So you don't know if Mr. Prim reviewed
15 your declaration?

16 A I'm not certain he did, no.

17 Q Did Mr. Prim offer any suggestions as to
18 the content of your declaration?

19 A No.

20 Q Did Mr. Prim make any revisions to your
21 declaration?

22 A No.

23 Q Were you involved in any of the
24 intellectual property efforts made by Pilot?

25 A No.

11

1 Q Were you involved in any Pilot inventions
2 while you were working for Pilot?

3 A No. I guess "involved," I reviewed some
4 patents for other processes. Not this one. This one
5 was already patented by the time I joined Pilot.

6 Q What were the other processes that you
7 looked at during your tenure at Pilot?

8 A Oh, I can't even remember. It was -- it
9 was more than five years ago -- more than eight years
10 ago, so -- it wasn't this one. This one was already
11 patented. So of course I've read this patent many
12 times in the past and recently.

13 (Bors Deposition Exhibit No. 1007
14 was identified for the record.)

15 BY MR. PIALA:

16 Q Okay. So I want to start off with
17 Exhibit 1007. This is the Ryan paper.

18 Do you have that with you, or do you want
19 me to just send you a copy? That's fine.

20 A That's okay. We have a clean copy of it
21 right here.

22 Q That's fine.

23 A Great. Yes, I'm familiar with this
24 article.

25 Q And is that the version of it that has

1 the stamp in the lower right corner? So it has
2 Exhibit 1007 and a page number?

3 A Yes.

4 Q So I'm going to use those to refer to the
5 page number for the exhibit instead of the numbers on
6 the page.

7 A Okay.

8 Q So if you could please turn to Exhibit
9 1007, Page 5.

10 A Okay. Got it.

11 Q And you're familiar with these two
12 figures?

13 A Absolutely, yes.

14 Q So in your declaration, you discussed
15 additives in the context of Ryan/Holmes?

16 A Correct.

17 Q Additives are recycled hydrocarbons?

18 A Yes, they are recycled from the additive
19 recovery column.

20 Q And the additives are ultimately derived
21 from what's coming up underground, right?

22 A It is -- they are the same as the ones
23 that come up from underground, however, I didn't -- I
24 didn't crunch the numbers on this, but if you
25 consider the volume that is required, it is unlikely

13

1 that the initial hydrocarbons that were used to start
2 this plant up would have come from under -- they
3 would have come from underground somewhere else.
4 They would have had to have imported butane and
5 heavier hydrocarbons to start this plant up. It
6 wouldn't have started without it.

7 Q Right. And then they would begin to
8 circulate and then the stuff from underground starts
9 to replace it slowly, right, as it's running?

10 A Yes, very slowly.

11 Q Do you know that's how they started up
12 this plant or is that an educated guess?

13 A I would -- I don't know that, but as
14 someone who's started up gas plants in the past, the
15 volume that is produced from this facility is very
16 small. So it would have taken -- and quite likely
17 there wouldn't have been enough initially in the
18 system to have been effective at generating
19 additional hydrocarbons. Because this plant won't
20 run without additives.

21 Q When you say "won't run," what do you
22 mean?

23 A The way this process works is it requires
24 the additives to be entering the first column,
25 whether you're looking at Figure 2 or Figure 3. The

1 addition of the additives is required to be able to
2 make the separations. Without the -- without the
3 carbon dioxide recovery solvents going into this
4 vessel or this distillation column, the separation
5 can't happen.

6 If you recall from Dr. Rockstraw's
7 deposition -- I don't -- I can't -- I could look up
8 the quote for you -- but he does say that without the
9 additives this process wouldn't work.

10 Q So can I turn your attention to Figure 2
11 of Exhibit 1007?

12 A Correct, yes.

13 Q Figure 2 is a diagram showing the
14 Three-Column Ryan/Holmes process, right?

15 A Correct.

16 Q And this version of the Ryan/Holmes
17 process uses three separation columns, correct?

18 A Correct.

19 Q The first of these columns in the
20 Three-Column Ryan/Holmes process is a demethanizer
21 column, correct?

22 A Correct.

23 Q The second column in the Ryan/Holmes
24 Three-Column process is an ethane recovery column?

25 A Correct.

1 Q And the third column in the Ryan/Holmes
2 Three-Column process is an additive recovery column,
3 correct?

4 A Correct. I'd also add, since the Prim
5 patent has a separate separation for the sweetening
6 process, that this Three-Column Ryan/Holmes process
7 also includes a fourth column that is in the box
8 labeled amine Claus. That is also a separation that
9 is taking place, just to be consistent with what is
10 included in the Prim patent.

11 Q The amine Claus process does not use a
12 column, though, correct?

13 A Pardon me?

14 Q The amine Claus process does not use a
15 column, though, correct?

16 A Typical amine separation includes a
17 distillation column, yes, a tray or a packed column.

18 Q It is your opinion that the ethane
19 recovery column contains a CO2 recovery solvent,
20 correct?

21 A That is correct.

22 Q What do you allege is the CO2 recovery
23 solvent in the ethane recovery column?

24 A Compositionally?

25 Q Correct.

16

1 A Well, compositionally, it's exactly the
2 same as the CO2 recovery solvent that goes into the
3 demethanizer column, because they're sourced from the
4 same place. And it's primary C4, C5. There may be
5 heavier -- there probably will be some heavier
6 hydrocarbons in there, as well, but predominantly C4,
7 C5.

8 Q In your opinion, what does the additive
9 that's put into the ethane recovery column do?

10 A There's a couple of things happening in
11 that column. The first thing that is happening is
12 that additive, that hydrocarbon or that carbon
13 dioxide recovery solvent, is breaking the azeotrope
14 between carbon dioxide and ethane. It is also aiding
15 in the separation between carbon dioxide and all of
16 the hydrocarbons and the additives that are being
17 added.

18 Q How do you know that?

19 A Well, I know that -- for one thing, I
20 know that because I understand the Ryan/Holmes
21 process, but I also know that because, if it isn't
22 1007 -- Exhibit 1007, it's 1010 or Exhibit 2008,
23 which describes that the purpose of the additive or
24 carbon dioxide recovery solvent is to break the
25 azeotrope between carbon dioxide and ethane.

1 Q So you just called it a carbon dioxide
2 recovery solvent, the additive?

3 A Yes.

4 Q Why did you call it a solvent?

5 A Because part of the purpose of that
6 carbon dioxide recovery solvent is in the
7 demethanizer and part of it is in the ethane recovery
8 column. And, in addition to breaking the azeotrope
9 in the ethane recovery column, it also combines with
10 the ethane and the methane in those columns to allow
11 it to be separated from the carbon dioxide, and it
12 allows it to be captured in the bottom of each of
13 those towers.

14 So if you -- maybe an explanation might
15 be the carbon dioxide recovery solvent drags the
16 other hydrocarbons down the bottom of the -- of those
17 towers.

18 Q How do you know that it's functioning via
19 solvation as opposed to a partial pressure
20 separation?

21 A I'm not a chemical engineer. However, I
22 do know that like products are soluble in like
23 products. So, for example, a heavier hydrocarbon
24 like butane would be -- or lighter hydrocarbons would
25 be soluble in heavier hydrocarbons.

1 Q I see. So you're saying -- you
2 believe -- strike that. I apologize.

3 So it's your opinion that it's acting as
4 a solvent for ethane, this additive, because it's
5 leaving through the bottom of the column -- ethane is
6 leaving through the bottom of the column, and you
7 know that ethane is soluble in the additive?

8 A I do know that, yes.

9 Q Right. So the additive is soluble in
10 ethane, and ethane is soluble in the additive, and
11 since the additive and ethane are leaving out the
12 bottom, it's your opinion that that's a solvation
13 method?

14 MR. ROGERS: Objection. Form.

15 THE WITNESS: Yes, those two are
16 soluble.

17 BY MR. PIALA:

18 Q Right. So I'm asking a different
19 question. How -- how do you know that the ethane
20 is -- strike that.

21 How do you know that the additive is
22 acting as an ethane solvent in the context of the
23 Ryan/Holmes ethane recovery column?

24 A It's a -- it's a physical attribute of
25 two hydrocarbons to be soluble in the additive.

1 Q The fourth -- strike that.

2 Do you -- so looking to Figure 2 of
3 Exhibit 1007 again. Do you see a C02 recovery column
4 in this figure?

5 A No.

6 Q Can I turn your attention to Figure 3 of
7 Exhibit 1007?

8 A Okay.

9 Q Figure 3 is a diagram showing the
10 Four-Column Ryan/Holmes process, right?

11 A Correct.

12 Q This version of the Ryan/Holmes process
13 uses four separation columns for the separation of
14 hydrocarbons?

15 A Correct.

16 Q The first separation column in the
17 Four-Column Ryan/Holmes process is an ethane recovery
18 column, correct?

19 A Correct.

20 Q And the second separation column in a
21 Four-Column Ryan/Holmes process is a C02 recovery
22 column, correct?

23 A Correct.

24 Q The third column in a Four-Column
25 Ryan/Homes process is a demethanizer, correct?

1 A Correct.

2 Q And the fourth column in a Four-Column
3 Ryan/Holmes process is the additive recovery column,
4 correct?

5 A Correct. And you might want to add the
6 fifth separation, the amine, to again be consistent
7 with what is shown in Prim.

8 Q The CO2 recovery column in a Four-Column
9 Ryan/Holmes process does not receive any additive,
10 correct?

11 A That is correct.

12 Q You've opined that a person skilled in
13 the art as, of the priority date of the '332 patent,
14 would be more likely to use the Four-Column process
15 than the Three-Column Ryan/Holmes process, correct?

16 A The Four-Column Ryan/Holmes process is
17 marketed and described as an improvement over the
18 Three-Column Ryan/Holmes process. So, quite likely,
19 it's a better choice than a Three-Column.

20 Q And a person of ordinary skill in the
21 art, reading Exhibit 1007, would understand that?

22 A Yes.

23 Q The Four-Column Ryan/Holmes process
24 operates at a temperature of -- from minus 10 degrees
25 to plus 40 degrees Fahrenheit, correct?

1 A The literature describes a scenario where
2 it could be operated at that -- at those conditions.
3 However, there would need to be some simulation work
4 to determine whether that is the optimum place to
5 operate that column, or that plant.

6 Q Well, if you look at Page 5 of the
7 first -- well, it's the paragraph starting on the
8 right-hand column. Do you see where it says, "A
9 general comparison"?

10 A Page 5, "A general comparison," yes.

11 Q Do you see where it describes the
12 temperatures in Exhibit 1007 for a Four-Column
13 Ryan/Holmes process?

14 A Yes.

15 Q That doesn't say that there's a specific
16 set of conditions, does it? It just says that the
17 coldest condition in the Ryan/Holmes process is minus
18 10 to minus -- or to plus 40 degrees F, right?

19 A Well, let's not forget, though, that in
20 the Three-column Ryan/Holmes process shown in Figure
21 2, the first column, the demethanizer column, is the
22 coldest tower or the coldest distillation in that --
23 in that process. If you look down at Figure 3,
24 you'll see that the second column, the CO2 recovery
25 column, and the column labeled demethanizer, the

1 temperature of those columns is not discussed.

2 And a person of ordinary skill in the art
3 who has access to a simulator would soon discover
4 that the coldest part of the plant is not the ethane
5 recovery tower, and the temperatures being quoted on
6 Page 5 in the paragraph starting "A general
7 comparison" is the temperature of the first column,
8 which is not the coldest column within that tower --
9 within that plant.

10 You would have to run simulations to
11 determine where the coldest part of that plant was,
12 and it's not the first column where the temperature
13 is described as minus 10 to plus 40 degrees
14 Fahrenheit.

15 MR. PIALA: Did you get that
16 feedback? I just got sudden audio
17 feedback.

18 THE WITNESS: Oh, no, not us.

19 (Bors Deposition Exhibit No. 1006
20 was identified for the record.)

21 BY MR. PIALA:

22 Q So can I turn your attention now briefly
23 to Exhibit 1006, which is the Soldati patent?

24 A I have a copy of that. Okay.

25 Q And you've opined that the Soldati patent

1 describes a Four-Column Ryan/Holmes process, right?

2 A That is correct.

3 Q And that it's both embodiments, correct?

4 A Yes, that is correct.

5 Q The embodiment described in Table 3 of
6 Soldati, the lowest temperature is minus 35 degrees
7 C, correct?

8 A In Table 3?

9 Q Correct. In the embodiment described in
10 Table 3.

11 A I want to make sure. Yes, that is
12 correct.

13 Q That is not a cryogenic temperature,
14 correct?

15 A By my definition of cryogenic, that would
16 not be cryogenic.

17 Q It is your opinion that Column 8 of the
18 Soldati system contains a carbon dioxide recovery
19 solvent, correct?

20 A Which embodiment are you referring to? I
21 guess -- I guess either one. Yes, that is correct.
22 That is --

23 Could you repeat the question again, just
24 to make sure?

25 Q Sure. It is your opinion that Column 8

1 of Soldati contains a carbon dioxide recovery
2 solvent?

3 A Correct. It does.

4 Q And the carbon dioxide recovery solvent
5 that you say is in Soldati is the additive, right?

6 A The carbon dioxide recovery solvent in
7 Soldati -- Soldati actually doesn't refer to it as an
8 additive, but it is essentially the same as the
9 additive described in Ryan/Holmes.

10 Q And it's the same as the additive we were
11 just discussing earlier in the deposition?

12 A There's a -- there's a slight difference
13 in that -- it is the same additive, yes. However, if
14 you look at the Figure 3 and Figure 4, there is, in
15 addition to fresh -- I'll call it fresh additive
16 coming from the additive recovery column, there's
17 also the stream which comes from the -- the eth- --
18 the stream that comes from the ethane recovery column
19 and the one labeled Demethanizer in the fourth
20 column.

21 There's another stream that comes in
22 after the azeotrope is being broke. It also -- it is
23 recycled back to the front of the plant. So it's in
24 addition to the fresh additive from the additive
25 recovery column.

1 Q And this would be the stream labeled 75
2 in Figure 3?

3 A That is correct, yeah. And then in -- in
4 Figure 4, which is the Soldati embodiment, it's
5 Stream 73 that joins with the fresh additive prior to
6 joining the top of the column.

7 Q And you would agree that the operation of
8 these distillation columns is predictable?

9 A Is predictable?

10 MR. ROGERS: Objection. Form.

11 THE WITNESS: Yes, it's -- you
12 could simulate this and see what's
13 happening.

14 BY MR. PIALA:

15 Q The Soldati embodiments, both of them,
16 only recover about 80 percent of the ethane, correct?

17 A No, that's not correct. I believe if you
18 look at Table 4 -- let's flip to Table 4. Table 4
19 shows that the ethane recovery in the -- I'm going to
20 call it the Ryan/Holmes, has a recovery of about
21 78.5 percent, and the Soldati embodiment has a
22 recovery of 94.1 percent.

23 It's on Page 12 of Exhibit 1006.

24 Q Okay. So the ethane recovery in the
25 Ryan/Holmes version, the prior art version in the

1 Soldati -- described in Soldati is about
2 78.5 percent?

3 A Correct.

4 Q That is not substantially all of the
5 ethane, is it?

6 A A big part of that is because the
7 operation of the coldest column in that -- in that
8 layout of Soldati, the Ryan/Holmes layout of the
9 Ryan/Holmes process in Soldati, is not operating at a
10 very low temperature.

11 If the owner or the operator of that
12 facility would like to get the recoveries up closer
13 to the 94 percent, all they would have to do is
14 operate that plant colder. That's the only reason
15 that that recovery is only 78 percent.

16 And you have to recall that Soldati
17 claims an improvement on Ryan/Holmes. And in their
18 embodiment of the facility, they operate it below
19 what I would consider a cryogenic temperature. So
20 they could operate Ryan/Holmes in a manner to get
21 substantially more ethane recovery.

22 Q As described -- the process as described
23 in Soldati, though, recovers 78.5 percent of the
24 ethane, right?

25 A Correct.

27

1 Q And that is not substantially all of the
2 ethane, is it?

3 A I would say it is substantially all of
4 the ethane considering that the comparative --
5 particularly the comparative that I have been asked
6 to do, recovers none, essentially none of the ethane.
7 So it's a relative thing. Relative to Soldati, it's
8 a lower recovery, but compared to, in fact, a
9 significant number of the gas-processing facilities,
10 78 percent or 70 -- yeah -- 78.5 percent ethane
11 recovery is a very good ethane recovery.

12 (Bors Deposition Exhibit No. 1001
13 was identified for the record.)

14 BY MR. PIALA:

15 Q So I want to turn your attention now to
16 Exhibit 1001, and this is the '332 patent.

17 A I don't have a copy of 1001 at this time,
18 but I think Charles can help me out there.

19 Q Let's do some basic questions while I
20 look for that then.

21 The processes described in the '332
22 patent include reflux and reboil circulations --
23 recirculations, right?

24 A That is correct.

25 Q The liquid that condenses in the reflux

1 condenser at the top of the column described in the
2 '332 patent is liquid hydrocarbon, right?

3 A That is correct, among other things.
4 There's also -- carbon dioxide is condensing in that,
5 as well.

6 Q And the vapor that rises out of the
7 reboil and condenses back down into the fractioning
8 column is also hydrocarbon, right?

9 A That is correct, as well as carbon
10 dioxide.

11 Q So -- let's see here. Do you have
12 your -- your declaration in front of you?

13 A Yeah.

14 (Bors Deposition Exhibit No. 2028
15 was identified for the record.)

16 BY MR. PIALA:

17 Q And that is Exhibit 2028?

18 A Correct.

19 Q Could you turn to -- let's see -- it's
20 Page 36, Paragraph 66.

21 A Okay. Got it.

22 Q You say that: The words of the claim
23 were chosen with the intention to avoid limiting the
24 solvents to carbon dioxide solvents.

25 Right?

1 A Correct.

2 Q On what basis do you say that that was
3 the intent?

4 A On what basis? Of course, I wasn't
5 there, so I can't -- I can't tell you exactly what
6 was going through his mind when he wrote those words.

7 However, a POSITA at the time of the
8 invention would have read those words and realized
9 that the intention was not to restrict that to carbon
10 dioxide solvents or solvents that have an affinity
11 towards carbon dioxide.

12 By including -- in patents, you don't
13 include words that you don't intend to use. So it
14 would have been illogical for Mr. Prim to have
15 included the word "recovery" in that statement unless
16 he had intended that it was not to limit it to
17 solvents with an affinity to carbon dioxide.

18 Q So turning to Claim 1 of the '332 patent,
19 Claim 1 does not require a specific amount of ethane
20 in any stream, does it?

21 A I think you could -- you could, in
22 reading Claim 1, come to the conclusion that the
23 presence of ethane in the sour NGL rich stream is not
24 significant, that there is virtually no ethane in
25 that stream.

1 And the reason I say that is the
2 definition of NGL within the oil and gas industry
3 typically is dependent upon the facility that you're
4 working in, but we don't refer to NGLs as C2 to C8
5 unless we are recovering C2.

6 So the Claim 1 says: The stream
7 comprises C3 to C8.

8 Which, as a POSITA, I would assume that
9 that means that there's very little or no C2 in that
10 stream. If I was describing a cryogenic plant, like
11 I used to work at -- when you look at my resume,
12 you'll see I worked at a cryogenic plant -- that was
13 a C2 to C8 plant. And I would describe that as
14 recovering C2 to C8 hydrocarbons.

15 The fact that Mr. Prim refers to this as
16 a C3 to C8 hydrocarbon would tell me, as a POSITA,
17 that carbon -- that ethane is not recovered in this
18 plant, not intentionally recovered in this plant.

19 Q Just to sort of touch back.

20 A Pardon me?

21 Q Just to sort of go back to the original
22 question, though.

23 A Okay.

24 Q 1 doesn't require a specific amount of
25 ethane in any stream, correct?

1 MR. ROGERS: Objection to form.

2 THE WITNESS: Let me read it to see
3 if I can see anything which would require
4 it to not have C2.

5 BY MR. PIALA:

6 Q Well, just -- it sounds like you
7 misunderstood the question. I'm going to retract
8 that question and state it again.

9 A Okay.

10 Q Claim 1 does not require an amount of
11 ethane in any stream?

12 MR. ROGERS: Objection to form.

13 BY MR. PIALA:

14 Q To not have C2 in the stream?

15 MR. ROGERS: Objection to form.

16 BY MR. PIALA:

17 Q So the question is: Does Claim 1 require
18 a specific amount of ethane in any stream?

19 MR. ROGERS: Objection. Form.

20 THE WITNESS: I'll answer the
21 question, yes, it does, because when you
22 read the Claim 1 where it says -- and
23 I'll just get to it here: Wherein the
24 hydrocarbon feed stream, the carbon
25 dioxide recycle stream and the sour NGL

rich stream are not subjected to
cryogenic congestions, membranes and
carbon dioxide recovery solvents.

So, as a POSITA, that would tell me
that there is not ethane in the sour NGL
rich stream because, first off, without
cryogenic conditions, you're not going to
be able to condense ethane unless you
have carbon dioxide recovery solvents
also.

So without carbon dioxide recovery
solvents, you're not going to break the
azeotrope, which means the only ethane
that's going to be recovered from the
distillation -- or from the separation
described in Claim 1 would be any ethane
that is connected to the carbon dioxide
that slips out the bottom of that first
separation.

BY MR. PIALA:

Q So, in your opinion, if a plant has
ethane in its sour NGL stream, it does not read on
Claim 1?

MR. ROGERS: Objection. Form.

THE WITNESS: Could you repeat the

1 question, please?

2 BY MR. PIALA:

3 Q Sure. In your opinion, if a plant has
4 ethane in its sour NGL stream, it does not read on
5 Claim 1, correct?

6 MR. ROGERS: Objection. Form.

7 THE WITNESS: That statement would
8 be correct if the -- if there isn't
9 carbon dioxide present. The problem is,
10 the carbon dioxide doesn't allow the
11 separation because of the azeotrope. So
12 the only ethane is that that is attached
13 to the carbon dioxide.

14 BY MR. PIALA:

15 Q Do you see the word "ethane" anywhere in
16 Claim 1?

17 A Let me have a look to be certain.

18 I do not see the word "ethane" anywhere
19 in Claim 1. However, that's -- its absence is as
20 important as its presence.

21 Q Claim 1 does not exclude ethane from the
22 carbon dioxide recycle stream, correct?

23 MR. ROGERS: Objection. Form.

24 THE WITNESS: Could you repeat the
25 question again?

1 BY MR. PIALA:

2 Q Sure. Claim 1 does not exclude ethane
3 from the carbon dioxide recycle stream, correct?

4 MR. ROGERS: Objection. Form.

5 THE WITNESS: I believe that is
6 correct, yes.

7 BY MR. PIALA:

8 Q Claim 1 does not exclude ethane from the
9 inlet stream, correct?

10 A Exclude?

11 Q Right.

12 A Ethane from the inlet stream?

13 MR. ROGERS: Objection to form.

14 THE WITNESS: No. It's a
15 hydrocarbon that's present in -- it just
16 seems like a strange question. But, no,
17 it does not exclude it from the inlet.

18 BY MR. PIALA:

19 Q Claim 1 does not exclude ethane from the
20 purified carbon dioxide recycle stream, correct?

21 MR. ROGERS: Objection. Form.

22 THE WITNESS: Does not exclude
23 ethane from the carbon dioxide recycle
24 stream? No.

25 BY MR. PIALA:

1 Q How does a person of skill in the art
2 identify a carbon dioxide recycle stream that meets
3 the requirements for such a stream in Claim 1?

4 MR. ROGERS: Objection. Form.

5 THE WITNESS: How does a person of
6 ordinary skill in the art -- you'll have
7 to repeat that. I'm sorry.

8 BY MR. PIALA:

9 Q Okay. So if I'm looking at a plant,
10 right --

11 A Yes.

12 Q -- how do I identify -- how would a POSA
13 identify a carbon dioxide recycle stream that meets
14 the requirements for such as a stream as recited in
15 Claim 1?

16 MR. ROGERS: Objection to form.

17 THE WITNESS: It just seems like a
18 strange question. I mean, I'm -- if I'm
19 working in a -- in a field under EOR CO2
20 injection, the recycle stream is the
21 stream that comes back from the -- from
22 the field. It's the recycle. It's the
23 CO2 that is intended to be put back into
24 the reservoir after processing and
25 compression. It would be obvious to a

1 POSITA.

2 BY MR. PIALA:

3 Q Claim 1 does not exclude methane from the
4 carbon dioxide recycle stream, correct?

5 A That is correct.

6 Q Claim 1 does not exclude the methane from
7 the purified carbon dioxide recycle stream, correct?

8 A Does not exclude? No.

9 Q No, as in that's wrong, or --

10 A No, it does not -- it does not exclude
11 methane from the carbon -- purified carbon dioxide
12 recycled stream.

13 Q Claim 1 does not exclude methane from the
14 sour NGL rich stream, correct?

15 A Claim 1 does not exclude methane from the
16 sour NGL-rich stream. However, a POSITA would
17 understand based on the -- the limitation in Claim 1,
18 which excludes the use of cryogenic conditions,
19 membranes and carbon dioxide recovery solvents.
20 Because without cryogenic conditions -- and it's
21 not -- not -- in this case, not as much the carbon
22 dioxide recovery solvents, but the cryogenic
23 conditions limitation would prevent substantial or,
24 in fact, basically any methane from slipping into the
25 bottom of that tower. Only soluble amounts could be

1 present.

2 And even with the re-boil on the bottom
3 of that tower, it's highly unlikely, without
4 cryogenic conditions, that there would be methane in
5 the sour NGL rich stream.

6 Q Claim 1 does not exclude ethane from the
7 sour NGL rich stream, correct?

8 A Without -- in Claim 1, the exclusion of
9 carbon dioxide recovery solvents, although it
10 wouldn't exclude the presence of ethane in the sour
11 NGL rich stream, it would limit it to amounts
12 included in the azeotrope with the carbon dioxide
13 that comes out the bottom of that tower.

14 And if you -- if you have read my
15 declaration, you'll see that very little of the
16 carbon dioxide comes out the bottom of that tower.
17 Therefore, very little, ethane comes out the bottom
18 of that tower. So Claim 1 -- the exclusions in Claim
19 1, although they don't exclude ethane in that stream,
20 it severely limits it.

21 And you -- in your discussion earlier,
22 when we looked at Table 4 of Soldati, you -- you
23 characterized 73 percent as a not-very-much ethane
24 recovery. That is significant compared to the ethane
25 recovery with the limitations in Claim 1.

1 Q Does the '332 patent describe any
2 embodiments of Claim 1?

3 A Does the '33 -- any embodiments of what?

4 Q Claim 1.

5 A Does the -- you're going to have to
6 repeat. I'm sorry. I didn't get that.

7 Q So does the '332 patent, Prim, describe
8 any embodiments of Claim 1?

9 MR. ROGERS: Objection to form.

10 THE WITNESS: I'm sorry. I don't
11 understand that question.

12 Does -- does the Prim patent
13 include embodiments of Claim 1?

14 BY MR. PIALA:

15 Q Right.

16 A Yeah, well, yes, that's what Claim 1 is.
17 Sorry. It just seemed -- seemed like an odd
18 question.

19 Q So you understand that there's a
20 difference between a claim and an embodiment of a
21 claim, right?

22 A Yeah, the claims -- the embodiment is in
23 the body of the -- of the patent which describes how
24 that patent works, correct?

25 Q So let me ask: What is your

1 understanding of embodiment?

2 A I think it's -- I think it's a detailed
3 description of what's included in the claim.

4 You have to excuse me. This is my first
5 deposition ever and it's my first job as a -- as an
6 expert witness.

7 Q You're doing great.

8 A Thank you.

9 Q It's all -- we're just laying simple
10 questions, foundation.

11 So does the '332 patent describe the
12 embodiments of Claim 1?

13 A Yes.

14 Q And those would be described in Tables 1A
15 through 9, right?

16 A Yes.

17 Q Is there any way to tell, based on those
18 tables, what streams are recovered?

19 A Which streams are recovered. Well, you
20 might have to refer to the figures, such as Figure 2.
21 I think that describes where the -- probably best
22 describes where the outlets of the plant are.

23 Q Okay. So the combination of the tables
24 and the figure would let you determine which streams
25 are recovered?

1 A Which streams are recovered, correct.

2 Q What streams are recovered in the process
3 described in the '332 patent?

4 A Well, I guess it depends upon your
5 definition of "recovered." If you mean something
6 that is removed from the inlet stream and disposed of
7 other than in the injection stream. Is that --

8 Q Whatever you understand recovered to
9 mean.

10 A That's what it means to me. I'm just not
11 sure if that's what it means to you.

12 Q Well, what do you understand "recovery"
13 to mean?

14 A I -- when -- when I work in the oil and
15 gas industry and I build plants and things, recovery,
16 to me, means things that I'm removing to either sell
17 or dispose of. So, for example, if I'm working in an
18 oil field, I recover produced water and I get rid of
19 it. In a gas plant, I would recover NGLs and sell
20 them, as an example.

21 Q Okay. So which streams of the '332
22 process are recovered?

23 A So there would be Stream 162. Let me
24 see. Yes. Let me just make sure that's correct.
25 162, yes. So Stream 162 in Figure 2 is recovered.

1 That's the NGL rich stream. That is the sweet NGL
2 rich stream. Stream 270, which is the acid gas, that
3 is also removed from the inlet to the facility. And
4 that's it.

5 The rest is -- the rest is the things
6 that aren't taken out or just put back into the
7 reservoir.

8 Q And you've -- you understand that
9 Dr. Rockstraw has opined that a person of skill in
10 the art would have been motivated to combine Aycaguer
11 and Soldati, correct?

12 A I understand that he believes that is
13 appropriate.

14 Q You agree that Aycaguer teaches that
15 Ryan/Holmes processes are suitable for the separation
16 of NGLs from a feed stream, correct?

17 A That is correct.

18 Q And you agree that in the Petitioners'
19 Ground No. 3, the Petitioners combined Aycaguer with
20 a Ryan/Holmes type process, right?

21 A I would have to either spend some time
22 looking at what Grounds 3 is in my declaration, or I
23 could just trust you that you wouldn't lead me astray
24 on that.

25 Q Well, if I can point to your declaration,

1 Ground 3 is on Page 101.

2 A Let me go there.

3 Q While I might not try to lead you astray,
4 I am not the expert.

5 A Okay. So what was the question, now that
6 I'm at Ground 3?

7 Q Yes, Ground -- Petitioners' Ground 3 used
8 the -- combines a Ryan/Holmes type process with
9 Aycaguer, correct?

10 A That is correct. It mentions it by name.

11 Q So a person of skill in the art, reading
12 Aycaguer, could reasonably look to Soldati as an
13 example of a Ryan/Holmes type process to use?

14 A It's the same -- it's the same process.
15 Soldati mentions Ryan/Holmes by name, as well. So
16 they're both describing the same process. So the --
17 I'm not sure what the rationale to combine two things
18 that are describing the same thing is. Again, not a
19 lawyer.

20 Q Some embodiments of the '332 patent
21 include ethane in the sweet NGL stream, correct?

22 A That is correct. There is some residual
23 ethane which came into the -- into the sweetening
24 separation as a result of the presence of carbon
25 dioxide.

1 Q That's 5 percent?

2 A Pardon me?

3 Q That's 5 percent of the ethane, right?

4 A 5 percent of the ethane? I don't have
5 the -- I guess I could look at the --

6 Q Well, it's -- I believe it's Paragraph 68
7 of your report. At least it is in my notes.

8 A Now, are you saying that it is 5 percent
9 of the ethane or the content of the NGL is 5 percent
10 ethane? They're two different things.

11 Q So my recollection is that it's 5 percent
12 of the ethane in the feed stream, and I believe the
13 calculations are on Page 68.

14 A Okay. Let me flip there.

15 Q Of your declaration.

16 MR. ROGERS: Alex, you said the
17 Paragraph 68? Which one?

18 MR. PIALA: Page 68.

19 THE WITNESS: Well, Page 68 of my
20 declaration or of the submission?

21 BY MR. PIALA:

22 Q Your declaration.

23 A Okay. Got it. Yeah, go ahead.

24 Q Okay. Great. So I'll start the question
25 from the top.

1 A Okay.

2 Q Some embodiments of the '332 patent
3 recover ethane in the sweet NGL rich stream, correct?

4 A Correct.

5 Q And according to your calculations, that
6 would be about 5 percent of the ethane in the feed
7 stream, correct?

8 A Correct. I see that.

9 Q 5 percent of the ethane is a significant
10 amount, right?

11 MR. ROGERS: Object to the form.

12 THE WITNESS: It depends upon the
13 circumstance. That would be a
14 significant amount if there were
15 penalties for including ethane in the
16 sale stream. As an example, the Weyburn
17 facility, which I'm very familiar with
18 because I used to work there, the
19 allowable amount of ethane in the sales
20 stream means that you can actually sell
21 ethane for the value of propane.

22 In other facilities, the presence
23 of ethane can even lead to a penalty in
24 the -- in the -- from the person that
25 you're selling the NGL to.

1 So the presence of ethane in the
2 sales stream is really dependent upon how
3 you operate the plant. And you get
4 better recoveries if you slip more CO2
5 out the bottom of that tower, but the
6 penalty for doing that is you end up with
7 more ethane in the NGL stream. So it's
8 an operations decision.

9 BY MR. PIALA:

10 Q And that will depend on plant location,
11 for example?

12 A Correct.

13 Q So I'm going to ask you to turn to
14 Soldati again. That's Exhibit 1006. And you can
15 tell me when you found it.

16 A Okay. Got it.

17 Q And I'm going, to be looking, I believe,
18 mostly at Table 3, and that's on Page 11 and extends
19 a bit to Page 12.

20 A Okay.

21 Q So Stream 12 of Soldati contains NGLs,
22 right?

23 A I'll pull up my figures, as well. Table
24 3 refers to Figure 4. Okay. So which stream are you
25 looking at?

1 Q Sure. Stream 12 of Soldati contains
2 NGLs, right?

3 A That is correct.

4 Q Stream 12 of Soldati contains acid and
5 gas, correct?

6 A That is correct.

7 Q Stream 12 of Soldati contain hydrogen
8 sulfide, correct?

9 A That is correct.

10 Q And Stream 12 of Soldati is sour,
11 correct?

12 A That is correct.

13 Q Stream 28 of Soldati contains NGLs,
14 right?

15 A That is correct.

16 Q Stream --

17 A Some of which are -- some of which are
18 used as additives. Actually, 99 percent of which are
19 used as additives. Okay, yes.

20 Q Stream 28 does not contain acid gas,
21 correct?

22 A It does not.

23 Q So Stream 28 of Soldati is a sweet
24 stream, correct?

25 A Stream 28 of Soldati is a sweet stream,

1 yes.

2 Q Stream 12 of Soldati enters Column 21,
3 correct?

4 A Stream 12 enters 21, yes.

5 Q Stream 28 of Soldati exits Column 21,
6 correct?

7 A That is correct.

8 Q So a sour stream enters Column 21 and a
9 sweet stream exits Column 21, right?

10 A That is correct.

11 Q The sour stream that exits Column 21
12 includes acid gas, right?

13 A It includes acid gas in -- relative --
14 in -- yes, it includes acid gas, sure.

15 Q Stream 12 contains less than 5 molar
16 percent carbon dioxide, correct?

17 A I'll have to look at the composition. So
18 the question is Stream 12 contains less than
19 5 percent -- what was the question again?

20 Q I'll repeat it.

21 A Stream 12 contains --

22 Q Sorry. Tell me when you're ready.

23 A Okay. You said Stream 12 contains less
24 than?

25 Q So Stream 12 contains less than 5 molar

1 percent carbon dioxide, correct?

2 A That is correct.

3 Q Stream 12 of Soldati contains less than 1
4 molar percent methane, correct?

5 A That is correct.

6 Q Stream 12 of Soldati contains less than 5
7 molar percent ethane, correct?

8 A That is not correct. Stream 12 of
9 Soldati contains 32.61 percent ethane.

10 Q So if I direct you to the units in the
11 upper left corner, I believe it's --

12 A Oh, okay. Kilobels per hour. Okay.
13 Yes, you're correct. I'll have to do the math, but
14 32 on 1580 is quite likely more than 5 percent.

15 Q Well, I'm going to ask the question again
16 because I was talking.

17 A You bet. No, I understand.

18 Q Stream 12 contains less than 5 molar
19 percent ethane, correct?

20 A I haven't -- I don't have the math in
21 front of me, but I would assume that, yes, it is less
22 than 5 percent.

23 Q Stream 28 contains substantially no
24 carbon dioxide, correct?

25 A That is correct.

1 Q Stream 28 contains less than 1 molar
2 percent methane, correct?

3 A I'm sure it does, but let me just look at
4 that. Where is the composition of Stream 28? Oh,
5 there it is. The question was less than 1 molar
6 percent methane? Yes.

7 Q Stream 28 contains less than 1 molar
8 percent ethane, correct?

9 A That is correct.

10 Q Stream 28 contains less than 1 molar
11 percent acid gas, correct?

12 A That is correct.

13 (Bors Deposition Exhibit No. 2023
14 was identified for the record.)

15 BY MR. PIALA:

16 Q So now I would like to turn to Exhibit
17 2023. This is the Chevron Mabee Plant, their permit
18 application.

19 A I don't have one of those.

20 Q And I'm happy to send it to you if you
21 need it, or if you guys have a copy, you can use
22 that.

23 A Don't have it. They're checking to see
24 if he has a copy of it.

25 Q If not, I can put it in the Chat. It's

1 easy to send to you.

2 A What was the exhibit number again?

3 MR. PIALA: 2023. I can start
4 sending it over now. It should pop up in
5 the Chat. So if you do need it, it's
6 there.

7 THE WITNESS: Just to let you know,
8 Eric has found a copy of that.

9 MR. PIALA: Fantastic.

10 THE WITNESS: Just let me check for
11 a second to make sure it's not annotated.

12 MR. PIALA: You can do that off the
13 record.

14 THE WITNESS: It's clean.

15 (Brief pause.)

16 THE REPORTER: We are now back on
17 the record.

18 BY MR. PIALA:

19 Q So, Mr. Bors, do you have the Mabee Plant
20 air permit application BX2823 in front of you?

21 A I do. Just for clarity, there is an
22 annotation at the top corner of this that says Air
23 Permit.

24 Q Okay. Thank you.

25 You've analyzed Exhibit 2023 as part of

1 your -- part of preparation for your declaration,
2 correct?

3 A I read it, but it didn't seem to be part
4 of the IPR. So I have read it, I've looked at it,
5 but I didn't go into detail. Actually, the slight
6 break here gave me an opportunity to have a quick
7 read through it. So --

8 Q Great. According to the air permit
9 application, the Mabee Plant uses a SulfaTreat power
10 to sweeten its NGL stream?

11 A Correct.

12 Q SulfaTreat towers remove hydrogen sulfide
13 by reacting it with an iron oxide, correct?

14 A That is correct.

15 Q And that results in the formation of iron
16 pyrite, correct?

17 A I'm not familiar with the details of the
18 chemical reaction.

19 Q So, regardless, when the SulfaTreat
20 column is exposed to hydrogen sulfide, the media
21 inside the SulfaTreat column gets used up, right?

22 A That is correct.

23 Q And then the SulfaTreat column media has
24 to be replaced every so often, correct?

25 A That is correct.

1 Q The spent media inside the column is not
2 a gas, is it?

3 A It is not.

4 Q And -- yeah, that's all.

5 So you mentioned that there were some,
6 quote, major differences between a Prim plant, that
7 is a plant that uses the methodologies in the '332
8 patent, and a Ryan/Holmes plant, correct?

9 A Correct.

10 Q You say that the -- there's a difference
11 in the amount of hydrocarbon recovery in a plant
12 based off the '332 patent and Ryan/Holmes plants,
13 correct?

14 A That is correct. I would include the
15 word "significant" even, for what it's worth.

16 Q So what is the difference in hydrogen --
17 hydrocarbon recovery between a Prim plant and a
18 Ryan/Holmes plant?

19 A If you look down the list of
20 hydrocarbons, the first one is methane. The
21 Ryan/Holmes plant recovers essentially 100 percent of
22 the methane for sale external to the plant. The
23 Ryan/Holmes plant recovers somewhere between --
24 depending upon how you operate it -- between 70 and
25 95-plus percent of the carbon -- of the ethane.

1 The Prim plant recovers only the amount
2 of ethane that slips out the bottom of the tower with
3 the carbon dioxide, which is typically less than
4 5 percent. It recovers propane, depending upon the
5 economics and the Method 400 -- and the Prim process
6 helps you decide what that percentage is -- but it
7 typically ranges between 30 and 50 or 60 percent.
8 Can be as high as 70 or 80 depending upon the
9 economics. Can be as low as 0 percent in -- in cases
10 where the economics don't make sense.

11 It -- whereas, the Ryan/Holmes plant
12 recovers essentially 100 percent of the propane and
13 the C4 plus Prim recovers -- I'd have to -- I'd have
14 to go through the -- the tables, but basically
15 recovers a high percentage of the butanes compared to
16 Ryan/Holmes, which recovers essentially all of the
17 butane.

18 Q And when you say "butane," you mean
19 butane plus?

20 A Yeah, butane plus. Yeah, yeah. Once
21 you've dragged out all of the butane, you're going to
22 get all the feed buy as well.

23 Q The percentages of hydrocarbon recovery
24 you just discussed are not recited in Claim 1,
25 correct?

1 A Let me zip to Claim 1 again, just to --
2 Claim 1 does not discuss recovery percentages.

3 Q Do you state another difference --
4 alleged difference between the Prim plant and a
5 Ryan/Holmes plant is the difference in equipment
6 costs, correct?

7 A Absolutely, yes.

8 Q Equipment cost is not recited in Claim
9 one, is it?

10 A It was. Let me have a quick read. I do
11 not see anywhere in Claim 1 where it discusses
12 equipment costs, which, as a claim in a patent of a
13 process, I would think equipment costs maybe don't it
14 belong there. But I do not see them anywhere, no.

15 Q To determine the economics of a -- a
16 processing plant in this industry -- strike that.

17 To determine the economics of a
18 processing plant in the gas processing industry, one
19 must take into account the initial capital costs,
20 correct?

21 A Absolutely.

22 Q How does one calculate the allowance for
23 the recovery of the initial capital cost?

24 A Well, typically, what you would do is you
25 would take the capital cost that you expect to

1 spend -- of course, you're not certain of the amount
2 you're going to spend until you spend it. You take
3 your initial cost, you take your estimate of what the
4 operating cost of that facility would be, including
5 manpower and power and all those kinds of things,
6 repairs and maintenance costs.

7 You would then take the products that you
8 are expecting to recover and you would do a net
9 present value cash flow analysis. And you would
10 determine what the expected rate of return on your
11 capital investment would be. And you would determine
12 what your net present value of the -- the sales less
13 the operating cost would be. That would include the
14 initial capital, as well, to determine the net
15 present value.

16 And you would typically compare that
17 against all of the other projects that are
18 potentially happening within your company. So even
19 though a project may be attractive to -- to one
20 company, it may not be attractive to another,
21 depending upon the other opportunities within the
22 portfolio.

23 (Bors Deposition Exhibit No. 2001
24 was identified for the record.)

25 BY MR. PIALA:

1 Q Do you have your original declaration on
2 hand? This is Exhibit 2001.

3 A I don't.

4 Q I'll put that in the Chat, just in case,
5 because that might not be something that you have on
6 hand. Well, let's see if we can do it without.

7 A Okay.

8 Q Real quick.

9 You have said that enhanced oil recovery
10 is most efficient for crude oils with a gravity
11 greater than 22 degrees API?

12 A That's what I've been told by the
13 reservoir engineers, yes.

14 Q And the Arand document describes a stream
15 with a gravity greater than 50 degrees API, correct?

16 A Yeah, I didn't -- I didn't have -- I
17 didn't have a simulator or anything to do the
18 calculation of what the actual gravity is, but it is
19 certainly much higher API gravity than would normally
20 be used in a EOR recovery project.

21 Q And --

22 A Arand is not EOR recovery gas.

23 Q But it does suggest that EOR would be
24 efficient for the streams described in Arand, right?

25 A What does that -- what was that again?

1 Can you repeat the question?

2 Q You would agree that EOR would be
3 efficient for the streams that are described in Arand
4 because Arand streams are 50 degrees API, right?

5 A No. I -- I'm not sure -- I'm not certain
6 what you're asking, but are you asking whether the
7 gas from the Arand process would be suitable for EOR?

8 Q Right.

9 A No, there's no CO₂. No. Let me have a
10 quick look here, but -- the time has CO₂ in it, but
11 virtually none. No, this would be terrible for CO --
12 for EOR. It has -- yeah, okay. Let me rephrase the
13 answer.

14 This could not be used for EOR because it
15 has so much methane in it that it would not be -- it
16 would not meet the minimum admissibility
17 requirements.

18 Q Okay.

19 A I frankly wondered why Arand was
20 included, but anyways. No, this would be terrible.

21 MR. PIALA: And I think, believe it
22 or not, that we might have to take 15
23 minutes now and I want to discuss real
24 quick. So if we could go off the record
25 for maybe 15 minutes, and we'll see if we

1 might actually get this wrapped up pretty
2 soon.

3 Does that sound good to your team,
4 15 minutes?

5 MR. ROGERS: Yes.

6 (Brief pause.)

7 MR. PIALA: Mr. Bors, we want to
8 thank you for your time. And at this
9 point, we pass the witness.

10 MR. ROGERS: This is Charles Rogers
11 for the patent owner. I want to take a
12 three-minute break, and we'll come back
13 on.

14 (Brief pause.)

15 EXAMINATION

16 BY MR. ROGERS:

17 Q So this is Charles Rogers, counsel for
18 the patent owner, and on redirect, one question.

19 And that is: Mr. Bors, is there anything
20 from your testimony today that you'd like to clarify?

21 A Just one thing, and it was regarding the
22 recovery of propane from the Prim process.

23 The only comment I'd make is, if you were
24 running the economics and determined that the propane
25 recovery was not worth recovering, there wasn't

1 enough propane or enough market or enough price to
2 justify the cost, you wouldn't build a Prim plant.

3 That's the only clarification I had. I
4 just wanted to make sure that, when I said you might
5 not want to recover any propane, if that was the
6 case, you wouldn't build a prim plant.

7 MR. ROGERS: And the patent owner
8 passes the witness.

9 MR. PIALA: I think we're good.

10 MR. ROGERS: We're ready to go off
11 the record.

12

13

14 (Thereupon, the deposition was

15 concluded at approximately 10:58 a.m.)

16

17

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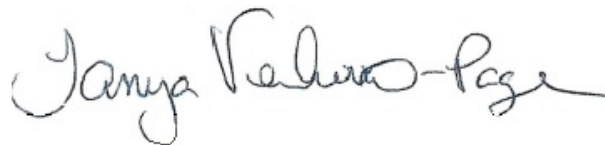
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C E R T I F I C A T E

I, Tanya Verhoven-Page, CCR, LCR, CSR, do hereby
certify that the witness was duly sworn by me and
that I was authorized to and did report said
proceedings.

I further certify that the foregoing transcript
is a true and correct record of the proceedings; that
said proceedings were taken by me stenographically
and thereafter reduced to typewriting under my
supervision; that reading and signing was requested;
and that I am neither attorney nor counsel for, nor
related to or employed by, any of the parties to the
action in which this deposition was taken; and that I
have no interest, financial or otherwise, in this
case.

IN WITNESS WHEREOF, I have hereunto set my hand
this 11th day of February, 2025.



Tanya L. Verhoven-Page,
Certified Court Reporter,
CCR-B-1790, CSR-12254
and LCR-991.

CERTIFICATE OF DEPONENT

I, TREVOR BORS, hereby certify that I have read the foregoing pages, numbered 1 through 59, of my deposition of testimony taken in these proceedings on Wednesday, February 5th, 2025 and, with the exception of the changes listed on the next page and/or corrections, if any, find them to be a true and accurate transcription thereof.

Signed: _____
Name: TREVOR BORS
Date: _____

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ERRATA SHEET FOR THE TRANSCRIPT OF:

Case Name:

Scout Energy v. Pilot

Dep. Date:

February 5, 2025

Deponent:

Trevor Bors

CORRECTIONS

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Pg.	Ln.	Now Reads	Should Read	Reason
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Signature of Deponent

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This the_____ day of_____, 2025.

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