

In the Matter Of:

SCOUT ENERGY MANAGEMENT, LLC, et al. vs

PILOT INTELLECTUAL PROPERTY

ERIC PRIM

February 13, 2025



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DATE: February 13, 2025

TIME: 9:00 a.m. (CT)

Remote deposition of ERIC PRIM,
before AYLETTE GONZALEZ, a Registered
Professional Reporter, Certified LiveNote
Reporter, Certified Court Reporter and
Notary Public of the States of New York,
New Jersey, Pennsylvania, Delaware and
Texas.

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R E M O T E A P P E A R A N C E S :

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R E M O T E A P P E A R A N C E S :

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ALSO PRESENT:

TREVOR BORS

MARK MATHIAS

KEVIN JOHNSON, Lexitas

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-----I N D E X-----

WITNESS: ERIC PRIM

EXAMINATION BY PAGE

MR. PIALA 6

MR. ROGERS 80

-----E X H I B I T S-----

EXHIBIT FOR I.D.

(None)

1

2 E R I C P R I M,

3 called as a witness, having been duly

4 sworn by a Notary Public, was

5 examined and testified as follows:

6 EXAMINATION BY

7 MR. PIALA:

8 Q. Good morning, Mr. Prim.

9 A. Good morning, Alex. How are
10 you doing?

11 Q. Good. How are you?

12 A. Good.

13 Q. So I'm going to start with the
14 ground rules. I think you've heard them
15 before, but we're just going to do them
16 again real quick.

17 I'm going to ask you questions
18 and if any of the questions are confusing,
19 could you please let me know?

20 A. Okay.

21 Q. And if you answer a question,
22 I'm going to assume that you understood the
23 question; does that make sense?

24 A. That makes sense, yeah.

25 Q. Is there anyone else in the

1 ERIC PRIM (2/13/2025)

2 room with you today?

3 A. Yeah. I've got Charles Rogers,
4 who's our counsel on this, whom you know,
5 Trevor Bors, who gave his deposition last
6 week, and Mark Mathias who's the process
7 engineer that works for me in Pilot.

8 Q. Great.

9 Do you have any notes with you?

10 A. I don't have any notes. I've
11 got two clean copies of my declaration
12 though.

13 Q. Okay. Do you have any other
14 documents with you now?

15 A. There's documents all over the
16 room and if we need those documents, I'm
17 going to say, "Charles, can you find this
18 for me?"

19 Q. Perfect.

20 A. Only two things I've got in
21 front of me right now are copies of my --
22 clean copies of my declaration.

23 Q. And if any other documents
24 appear in front of you, would you please
25 let me know?

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2 A. Yes, sir.

3 Q. And you are, I'm guessing,
4 using a computer right now?

5 A. I'm just talking to you on the
6 computer. I have no computer in front of
7 me.

8 Q. Okay. Are there any other
9 windows open in the computer; is it just
10 me?

11 A. Oh, gosh, somebody help me with
12 this. I think it's just you.

13 MR. ROGERS: Just the Zoom.

14 Q. Okay. So you are an employee
15 of the patent owner; correct?

16 A. I am an employee of Holloman
17 Holdings Corporation, that's correct.

18 Q. Are you an employee of Pilot?

19 A. I'm the president of Pilot
20 Energy Solutions. I also have a role in
21 Pilot Intellectual Properties. I'm not
22 exactly sure what my title is with that.
23 I'd have to ask downstairs. My paycheck
24 comes from Holloman Corporation, so that's
25 -- you know, you are -- you belong to who

1 ERIC PRIM (2/13/2025)

2 pays you, so that's probably -- probably
3 the most important one.

4 Q. Do you have any ownership
5 interest in Pilot?

6 A. I have ownership interest in
7 some of its subsidiaries. There's a
8 subsidiary, and I'm not sure how this
9 exactly works, but I'm one of the owners in
10 H & H Pilot Partners who owns an interest
11 in the Weyburn facility in Canada.

12 Q. Do you have an ownership
13 interest in Holloman?

14 A. No. Well, we all do. Holloman
15 is a 100 percent ESOP company and I have
16 ESOP shares, so yes, I do, as does Mark
17 and, you know, all employees of Holloman
18 that have got ownership in the company.

19 Q. Okay. But you are the inventor
20 of the '333 -- strike that.

21 You are the inventor of the
22 '332 patent?

23 A. Yes, that's correct.

24 Q. And that's the patent at issue
25 in this matter?

1 ERIC PRIM (2/13/2025)

2 A. That is correct, as far as I
3 know.

4 Q. You have a substantial personal
5 interest in the outcome of this matter
6 though?

7 A. I have a -- I have a personal
8 interest in it because I think that the --
9 I think what the case is about is about
10 someone inappropriately and illegally using
11 our technology, and I am a person that
12 likes to see justice done, so yes, I have
13 that interest in the outcome of the case.

14 Q. But you also have a financial
15 stake in the outcome; right?

16 A. Yes, I do.

17 Q. So let's talk about C02Flex.
18 You've described the success of C02Flex
19 being owed at least in part due to the
20 limiting propane recovery; right?

21 A. I would have to see where that
22 was. I don't remember making that
23 statement.

24 Q. Okay. So I'm going to pull up
25 your declaration, which is Exhibit 2029.

1 ERIC PRIM (2/13/2025)

2 Do you have that on you?

3 A. I've got Exhibit 2029, yes,
4 sir, sure do.

5 Q. Fantastic. And according to my
6 notes, paragraph 22, can you tell me when
7 you get to paragraph 22. That is on
8 page 17.

9 A. Sure. Okay. I am on paragraph
10 22.

11 Q. Right. And so to be clear,
12 Exhibit 2029 is your declaration; correct?

13 A. That's correct.

14 Q. Did you write this declaration?

15 A. I did.

16 Q. Is it true and correct to the
17 best of your knowledge?

18 A. I've read it many times and
19 it's true and correct to the best of my
20 knowledge.

21 Q. Right. Did anyone help you in
22 preparing this declaration?

23 A. Well, I certainly had Charles
24 help me put the -- put all the words
25 together, sure.

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2 Q. Okay. So here in paragraph
3 2029 -- strike that.

4 Here on paragraph 22, you
5 explain that part of the success of the
6 C02Flex process is derived by limiting the
7 propane recovery; right?

8 A. Let me read paragraph 22. I
9 think we might be in different places.
10 Does 22 start with "My final alternative
11 process"?

12 Q. Correct.

13 A. Okay. Okay. Could you ask the
14 question, please.

15 Q. Sure. Part of the unexpected
16 success of the C02Flex process is derived
17 by limiting the propane recovery; correct?

18 A. That is correct, to an economic
19 -- the most economical point in the -- in
20 the process, and it varies with
21 composition, so all the fields and floods
22 act a little bit differently.

23 But if I can opine a little
24 bit, and this is actually in the patent
25 itself, I found that very, very small

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2 changes in propane recovery can result in
3 very large changes in capital requirements
4 and energy requirements. And the -- as is
5 in the patent, there's a lot in the patent
6 about economics in this -- what we do or
7 what I did is increased the propane
8 recovery to the point where that next
9 barrel of propane was -- it cost too much
10 in capital energy and stopped, and that was
11 unexpected.

12 And the gas processing field,
13 which gas processing is very different
14 because there's not -- you're in a methane
15 stream, not a CO2 stream. It just turns
16 out to be far easier to process.

17 High propane recovery is always
18 a good idea. It's adding that extra
19 horsepower to get higher yield propane is
20 always a good thing, but not here. And I
21 was surprised to see that because my
22 background is in gas processing.

23 Q. So what is limited propane
24 recovery though?

25 A. Depends on the composition of

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2 the stream coming in. Let's say that I
3 initially model the system to have, let's
4 say, I don't know, 25 percent propane
5 recovery, and that takes 1,000 horsepower,
6 and then I increase the propane recovery to
7 50 percent and that takes 10,000
8 horsepower. Well, I know that somewhere I
9 have hit a hockey stick and it's time to
10 start trimming that propane back.

11 And once again, when I increase
12 the propane recovery for that next set of
13 recovery, it doesn't pay out, I stop. And
14 sometimes that propane recovery is very
15 low, and sometimes it's very high, and it
16 depends on the composition of the stream
17 that I'm messing with.

18 Q. Is there a particular range of
19 recoveries where -- of propane that that
20 would fall within what you're describing?

21 A. I think the patent itself calls
22 for ranges of propane recovery, but it's --
23 the range is very wide. I don't recall
24 what those are, but I'm happy to look those
25 up in the patent if you'd like me to, but

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2 there is a very wide range.

3 Q. Okay. So it could be more than
4 50 percent?

5 A. It could be, sure.

6 Q. And it could be less than
7 five percent?

8 A. Not less than five, but it
9 could certainly be less than 20.

10 Q. Okay. Less than ten?

11 A. Yeah, maybe. It's all a
12 hypothetical, so if we had a composition
13 that was extremely lean in propane and was
14 super high in CO2 concentration, it could
15 be, just don't know, but I can envision
16 that.

17 Q. So in paragraph 46 of your
18 declaration, you've mentioned attending and
19 presenting at a July 2012 conference; do
20 you remember that?

21 A. I remember presenting at
22 several conferences. Let's see what number
23 46 is referring to. 2012 Wyoming CO2
24 Conference, yeah, I remember presenting
25 there.

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2 Q. Okay. You see the paragraph?

3 A. I do, yeah.

4 Q. Great.

5 And you presented a slide deck
6 which you've mentioned in your declaration;
7 correct?

8 A. That's correct.

9 Q. And you attached it as
10 Exhibit 2049?

11 A. If that's correct, we attached
12 it as an exhibit, that's correct.

13 Q. And you say that you spoke to a
14 Chevron employee at that conference; right?

15 A. I did.

16 Q. And the Chevron employee in
17 question is Rory Clark?

18 A. Yes, that's what I recall. He
19 was also presenting at that same conference
20 on the C02 flood that Chevron operates in
21 the Rangely field. I think I attached his
22 presentation as part of the exhibits also.

23 Q. Right. So when exactly did you
24 speak to Rory Clark?

25 A. I had present -- I had done the

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2 presentation on the stage. Rory Clark was
3 in the room. After you present -- I think
4 after we presented -- after I presented
5 that at that time, there was a break right
6 after that, and Rory came up to me at the
7 break and said hey, I enjoyed your
8 presentation, and we started talking,
9 because he was telling me about the plant
10 that he had up in Rangely.

11 Q. And how long did you talk
12 roughly?

13 A. Oh, gosh, you know, pretty
14 quick, five minutes.

15 Q. Okay. And Mr. Clark was
16 responding to the recoveries you presented
17 in Exhibit 2049; correct?

18 A. As Exhibit 2049, my slide deck
19 from that presentation?

20 Q. Yes.

21 A. Okay. Then that would be
22 correct.

23 Q. Okay. Can we -- do you have
24 Exhibit 2049 on hand?

25 A. Yeah, or I can get it.

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2 THE WITNESS: Can you find that
3 for me, Charles?

4 A. I've got a non-marked up copy
5 on my desk. Hang on just a second, Alex,
6 and we'll get that.

7 Q. Great.

8 (Off-the-record discussion.)

9 BY MR. PIALA:

10 Q. If it's easier, I can send it
11 to you as a pdf.

12 A. Okay. Alex, I've got a copy of
13 NGL Recovery in CO2 Floods Options and
14 Reasons, 6th Annual CO2 Conference, Casper,
15 Wyoming, July 12, 2012, okay.

16 Q. Are you familiar with this
17 document?

18 A. I am.

19 Q. Is this the PowerPoint deck
20 that you presented in 2012?

21 A. Yeah, I think it was.

22 Q. And is this the one that
23 Mr. Clark was responding to?

24 A. Yes.

25 Q. Can you please turn to page 3.

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2 A. Okay. Let's count, one, two,
3 three. It says, "Pilot Energy Patents," is
4 that it?

5 Q. Correct, yes.

6 This is CO2Flex; right?

7 A. No. The -- this is a slide
8 showing the patents that are not CO2 flood
9 related. The first patent actually was the
10 first patent that I received is recovery of
11 NGLs from an LNG vaporization facility.

12 The CO2 fractionation patent is
13 not for CO2 floods specifically. It's for
14 high CO2 production reservoirs. This
15 patent was developed for a field in
16 Southwest Pecos County, Texas, to help
17 recover CO2 and methane from a stream that
18 was about 50/50 CO2 and methane.

19 HyREX is a process that uses an
20 expander and in the -- in the gas
21 processing industry, there are lots of --
22 there are lots of times and lots of reasons
23 why you would not want to recover ethane.

24 The major reason is because
25 there's no transportation system to get the

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2 ethane out of where you are. But because
3 -- if you're using a standard single stage
4 process, it's hard to get high propane
5 recovery and reject the ethane.

6 So what this plant does is it
7 uses an expander to cryogenically
8 demethanizes and deethanizes a stream and
9 it's got very high propane recoveries,
10 99 percent propane recoveries-ish with very
11 low ethane recovery, one percent or
12 two percent.

13 And that allows that NGL
14 recovery to take place when you don't have
15 a pipeline, when you're stuck with getting
16 those NGLs out of the -- out of the system,
17 either via rail, truck, I guess in some
18 cases barge, but this allows that to
19 happen.

20 The last one is NGL recovery
21 from CO2 by fractionation and that's the
22 stream -- that's the patent that is for NGL
23 for CO2 floods, but the other three are
24 not.

25 Q. Okay. So that last one is

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2 related to C02Flex?

3 A. Right.

4 Q. Okay. And if you could turn to
5 page 14, please.

6 A. Okay. And the title of the
7 slide is Recoveries, we're on the right
8 side?

9 Q. Correct.

10 A. Okay.

11 Q. This is the slide that
12 Mr. Clark was responding to when he talked
13 about your recoveries for C02Flex; right?

14 A. That would be correct.

15 Q. Okay. There aren't any other
16 slides that he could have been responding
17 to when he's talking about recoveries;
18 right?

19 A. Maybe. Let me flip through.

20 Q. Sure.

21 A. Could have been talking about
22 slide number 15 because value of products
23 is a derivative of recovery. EBITDA is a
24 derivative of value of products, products
25 times cost or less operating cost is

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2 EBITDA. He could have been referring to
3 any one of these bar graphs that show the
4 relative value of the products because in
5 gas processing, the higher the recovery,
6 the more valuable the production. It's
7 just that simple.

8 Q. But not all those are
9 derivatives of these recoveries; right?

10 A. Well, if you have -- yeah, if
11 you -- let's look at the value of product
12 slide, which is 15, that slide is derived
13 by taking the recoveries from slide 14 and
14 applying what the value of those products
15 is. Propane is worth X. Butane is worth
16 Y. C5+ is worth Z. And of course ethane
17 and methane are worth A and B.

18 And it applies -- what the
19 point is it shows that even though the
20 recoveries on Ryan/Holmes and membrane
21 aiming systems is much, much higher, the
22 value of the products is not that much
23 higher because the methane and the ethane
24 just aren't worth very much.

25 Anyway, back to slide 14. Yes.

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2 Was Rory referring to this? I don't know
3 the mind of Rory, but we talked about
4 recoveries.

5 Q. Which of these four categories
6 in slide 14 is CO2Flex?

7 A. It's fractionation.

8 Q. And how do you know that?

9 A. Because I wrote the slide.

10 Q. So what recovery does that
11 fractionation bar show for propane?

12 A. It shows about 40-something
13 percent, maybe 45.

14 Q. And what is the recovery for
15 butane or C4?

16 A. 90. In the mid 90s, 92,
17 94 percent, something like that.

18 Q. And for C5+, it's about
19 100 percent?

20 A. Yeah, it's just basically
21 everything.

22 Q. So this is for CO2 flex; right?

23 A. Yes, correct.

24 Q. And if we could go back to your
25 declaration real quick, and could we turn

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2 to page, let's see here, 29.

3 A. 29, okay.

4 Q. And this is paragraph 47, it's
5 continuing from page 28.

6 A. Okay.

7 Q. Here you say, "The '332 patent
8 process typically recovers about 25 percent
9 of the propane"; right?

10 A. Typically.

11 Q. So the recoveries that you
12 described in your slide at the 2012
13 conference are atypical recoveries?

14 A. No, they're not. They're
15 within the range. If I say the average
16 recovery of a product is 25 percent, that
17 means that some of the recovery could be 20
18 percent and some of the recovery could be
19 70 percent.

20 You know, the -- when I look --
21 I've looked at almost every CO2 flood in
22 the country, and that's just a number that
23 sticks in my head that on the larger fields
24 especially seems to be about 25 percent.

25 This particular field that I

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2 did the slide deck on, Alex, to tell you
3 the truth, I don't remember what the data
4 was that I used for this, but I list that
5 data on page 10 of the recovery, and show
6 the composition.

7 And I bet I could find it too.
8 You know, if you sent me a letter and said
9 can you find out what field this is for, I
10 could find it. It might take me a couple
11 of days, but I would just be looking for a
12 stream that had 88 percent CO2 and
13 2 percent propane in it.

14 But this came from a -- this
15 came from an actual case that I did, so
16 it's not typical or atypical, it's the
17 actual data from a CO2 flood that's
18 operating in the United States.

19 Q. Okay. If we -- do you have the
20 patent on hand?

21 A. Sure, I do.

22 Q. Great. Could you pull up
23 Claim 1 for me.

24 A. Absolutely. Are we through
25 with a declaration for a minute so I can

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2 close it up and make some room?

3 Q. We're probably going to come
4 back to it pretty quick. That's going to
5 be a common touchstone.

6 A. Okay. Are we through with the
7 slide deck?

8 Q. For now. Certainly for now.

9 A. I'll put that aside. I'm just
10 trying to make me some room to get this
11 stuff spread out.

12 Q. Very reasonable.

13 A. And you have to bear with me, I
14 have to put my glasses on, because patents
15 are written .2 font or whatever the worst
16 font is that they could possibly write
17 these things. Okay. I've got the patent
18 open and I'm on Claim 1.

19 Q. Great.

20 Does Claim 1 limit propane
21 recovery?

22 A. Let me read through it real
23 quick. My opinion is no.

24 Q. Do you agree that prior art
25 systems taught separating NGL from the

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2 heavies?

3 MR. ROGERS: Objection. Form.

4 A. Could you tell me, are you
5 talking about the prior art that was listed
6 in the '332 patent?

7 Q. No, just generally. You have
8 knowledge of this space; right?

9 A. I'm a little confused, Alex.
10 Could you repeat the question and I'll
11 listen more carefully.

12 Q. Sure. Do you agree that prior
13 art systems taught separation of the NGL
14 from the heavy hydrocarbons?

15 A. Separation of the NGL from the
16 heavy hydrocarbons? Well, the heavy
17 hydrocarbons step is -- are you referring
18 to the C9+ hydrocarbons which in Claim 1
19 actually refers to the oil stream?

20 Q. Is that a heavy hydrocarbon --

21 A. Yes.

22 Q. -- to your understanding?

23 A. My understanding is that C9+
24 hydrocarbons are the oil -- is the oil and
25 everything else separation step.

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2 Q. And was that step known before
3 '332 patent?

4 A. Sure. All CO2 floods, except
5 the way CO2 floods work and pardon me if
6 I'm getting in too much minutia here, the
7 CO2 is injected into the reservoir,
8 hopefully under miscible conditions but
9 sometimes under immiscible conditions.

10 And it literally dissolves or
11 washes the hydrocarbons and the water out
12 of that reservoir when it comes out of the
13 recovery well, and it's no longer in a
14 miscible state because the pressure is too
15 low and you end up with three distinct
16 products: an oil product which we call
17 C9+, everybody kind of refers to oil as
18 C9+; a water fraction; and a gas fraction,
19 and the gas fraction contains the C3
20 through C8 NGLs, along with the CO2 and the
21 methane and the ethane and all the other
22 components.

23 Q. Okay. Before the '332 patent,
24 did people know how to separate the CO2
25 from the NGL?

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2 A. How to separate the CO₂ from
3 the NGL? There were various applications
4 where they did do NGL recovery from high
5 CO₂ streams, the most famous of those, of
6 course, is Ryan/Holmes.

7 Q. And in the prior art, was it
8 known to sweeten NGL?

9 A. NGL sweetening has been
10 occurring since the -- gosh, since the late
11 '40s, '50s, ever since the NGL markets were
12 developed, and so yes, sweetening of NGLs
13 is a process that has been practiced in our
14 country for, gosh, I would say going on a
15 century.

16 Q. Why are NGLs sweetened?

17 A. NGLs are sweetened for a
18 variety of reasons. Let me just give you
19 kind of the litany of reasons here.

20 Reason number one, if you're an
21 NGL producer and you're selling that NGL
22 into a market, that purchaser has got
23 specifications on your NGL and they are
24 only allowed to contain so much, so many
25 contaminants. And in the NGL markets, CO₂

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2 and H₂S are contaminants.

3 And I know we don't view CO₂ in
4 the bulk stream, in the CO₂ flood as being
5 a contaminant, because that's the tool
6 we're using or the producer is using to
7 extract the hydrocarbons out of the
8 reservoir. But when CO₂ is in the NGL
9 stream, it is a contaminant and it must be
10 removed in order to meet spec.

11 Now we can go to the derivative
12 of why those specs exist. The
13 specification especially for sourness isn't
14 a compositional spec usually. It's what's
15 called a copper strip spec. And the way
16 that that works is you have a copper strip
17 that you shine up and you put it in the NGL
18 sample and if the NGL is corrosive, that
19 copper strip will change color.

20 And then you can use a color
21 comparator to see how much sulfur is in
22 that stream. The normal spec on that is 1
23 or 1A. That means it's got to be
24 completely shiny or almost completely
25 shiny, and we know from doing -- from

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2 working in the natural gas industry, that
3 that specification relates to a sulfur
4 content of about a quarter grain.

5 One grain is 15.997 parts per
6 million, H₂S in a stream. So that, the H₂S
7 content that's allowable is about four
8 parts per million. But the test itself is
9 -- and these tests are -- you have to
10 remember the tests are done in the field
11 because they can be done by the normal
12 person, and analyzed on the fly.

13 So the test is what's important
14 and the test is copper strip, 1A, you know.
15 And so the guy pulls the strip and then
16 compares it to his color and says yeah,
17 that's 1A, we've got all the sulfur out.
18 But that's been going on for way before
19 I've been alive and I've been alive for a
20 long time.

21 Q. Just so I want to make sure I
22 heard you right, the copper strip test is 1
23 as in the number 1 and then A as in the
24 letter A?

25 A. 1, the normal specification and

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2 they vary a little bit, but usually the
3 specification is 1A, 1, the number 1, the
4 letter A, and sometimes the specification
5 can be 1A or 1B. They're the colors that
6 are right next to each other on the scale.

7 Q. Okay. It's nice when you learn
8 something new in a deposition.

9 A. There we go.

10 Q. So turning back to your
11 declaration, this is paragraph 34 I think,
12 you said that Exxon was skeptical of
13 CO2Flex; right?

14 A. 34. That doesn't sound right,
15 but let me pull up and see what I said and
16 maybe I need to clarify that. Page 34.

17 Q. Paragraph 34.

18 A. Paragraph that starts "Despite
19 my best efforts"?

20 Q. Correct.

21 A. Here we go. Okay. Ask me the
22 question now that I read it.

23 Q. Great. You said Exxon was
24 skeptical of CO2Flex; right?

25 A. No. Exxon was not skeptical of

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2 C02 floods. Exxon has numerous C02 floods
3 all over the world starting in Prudhoe Bay,
4 Alaska, several in the United States. When
5 I was working with Exxon on this, this
6 flood is called the Means Field. It's just
7 outside of Andrews, Texas.

8 Exxon still operates this flood
9 very successfully, but they're not
10 skeptical of C02 floods at all. They are
11 good C02 flood operators.

12 Q. I think you misheard me. That
13 explains the confusion. I'll be clearer on
14 speaking.

15 Exxon was skeptical of C02Flex;
16 right?

17 A. Oh, C02Flex, absolutely, and
18 rightly so. And the -- you know, I kind of
19 drew the -- you know, I kind of drew the
20 bad card by choosing to use an Exxon field
21 to do the development work on this process,
22 because you know, just between us, Exxon is
23 not the easiest company in the world to get
24 into and do work with. Exxon is a huge,
25 you know, multinational corporation, and

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2 having somebody from a small private
3 company try to do development work with
4 them is kind of a tough call. Would have
5 been far easier to do it with a small
6 independent operator.

7 But nonetheless, I found the --
8 I found the -- I found the products and
9 their stream and used their stream and they
10 were very helpful by giving me analysis and
11 looking at tie-in points and how this could
12 all work, but they were not -- not
13 interested in building that first
14 demonstration plant.

15 Q. You mentioned that you had been
16 speaking with Exxon as late as
17 February 2023?

18 A. That's correct. I know that
19 looks like a misprint, but it's not. The
20 Exxon -- the -- putting in a CO flex plant
21 on that Means Field is still a very, very
22 good project, and Exxon is just not
23 interested in using someone else's
24 technology to produce the NGLs out of that
25 field.

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2 Q. So they're still skeptical even
3 in 2023?

4 A. I don't think they're skeptical
5 anymore. I think that they are -- they
6 just choose not to recover the NGLs out of
7 the stream.

8 There's probably some reservoir
9 reasons why they wouldn't want to do that.
10 I don't know what they are. I'm not a
11 reservoir guy. If it's underground, I
12 don't understand it.

13 Q. So you've testified that the
14 method described in the '332 patent is
15 somewhere between mechanical refrigeration
16 and Ryan/Holmes; right?

17 A. That is correct.

18 Q. So what does that mean when you
19 say it's between mechanical refrigeration
20 and Ryan/Holmes?

21 A. You know, if we could -- since
22 we've already pulled the thing up, could we
23 go back to my presentation that I gave in
24 Wyoming?

25 Q. Sure.

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2 A. Okay. Let's go to that.

3 Q. So to confirm, your
4 presentation is Exhibit 2049; correct?

5 A. That's correct. And we're
6 going to go to the same page you looked at
7 on page 14.

8 Q. Okay.

9 A. If we look at the recoveries on
10 that page, you'll see that the
11 refrigeration plant only recovered less --
12 recovered less than half of the butanes.
13 Butanes are a huge value of that stream,
14 and only about 75 percent of the -- of the
15 C5+, and slightly less than 20 percent of
16 the propane.

17 If you look at Ryan/Holmes on
18 the far left-hand side, man, it gets
19 everything. You know, it's 90 percent of
20 everything in that stream. The difference
21 is you can go across this page from left to
22 right, and I might even have a slide that
23 shows that, the -- there's not -- here we
24 go. On slide number 11, it shows the
25 relative cost of these things.

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2 And if you look at this stream,
3 20 million a day stream, a Ryan/Holmes
4 plant is 60 million bucks. Yeah, you get
5 everything out of it, but it's \$60 million.
6 And a refridge plant, to do the same stream
7 is \$10 million, but you don't get very many
8 recoveries. So the invention is gosh,
9 there's got to be something in the middle.
10 There's got to be something between
11 \$10 million and \$60 million that gets you
12 better recoveries.

13 So that was the whole purpose
14 of developing the CO flex process. Because
15 as you can tell from slide number 14, it
16 gets really good C4 and C5 recovery and it
17 gets decent enough propane recoveries.
18 Recovery is absolutely zero methane and
19 zero ethane but it's only slightly more
20 expensive than a refridge plant so that's
21 an economic win.

22 Did that answer your question?

23 Q. It does.

24 So where does the Pastore
25 process fall on the spectrum?

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2 A. The Pastore process would -- if
3 we had included it in this, it would
4 actually fall -- it would fall to the
5 right-hand side of the refrigeration plant.

6 Q. Okay.

7 A. So if we look at the recovery
8 comparisons, if we want to use chart number
9 14, the chart would go Ryan/Holmes that
10 gets everything. Membrane aiming which
11 gets everything. Fractionation which makes
12 no attempt to get methane or ethane, but
13 does a pretty good job of getting C4s, C5s,
14 and recovers some propane. Refrigeration
15 which does a worse job of recovering all
16 those, but is cheaper. Then the one to the
17 right of that would be the Pastore '666
18 patent.

19 The Pastore patent, if we could
20 visualize what it would look like, and
21 these come out of the Pastore patent, we
22 could pull that up and look at it if you
23 want to, but I could tell you off of my
24 memory, which is hopefully good enough, is
25 the Pastore patent, the C5+ line, the --

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2 whatever color that is, purple, that line
3 would go all the way to the top. Pastore
4 patent recovers virtually all of the C5+.

5 The C4 line would be actually
6 at or less than the refrigeration plant.
7 Pastore shockingly only recovers about 20
8 percent of the ISO C4, and it recovers
9 substantially more of that, more of the
10 normal C4, about 60 percent.

11 So that line would be somewhere
12 in that 40 percent range of C4+ -- of C4
13 recovery. And the C3 line would be
14 nonexistent. The Pastore plant would have
15 two lines, C4, pretty poor recovery of C4,
16 and pretty good recovery of C5, and that's
17 it. That would be all that would be on
18 that chart.

19 Q. So when Pilot sells its CO2Flex
20 technology, it's selling CO2 flex plants;
21 right?

22 A. We offer a Chinese menu of
23 options because primarily here's what we're
24 good at. We're good at developing process,
25 processes. We're good at operating these

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2 plants, and we're good at troubleshooting
3 them when things go wrong.

4 We do own the four plants that
5 are operating today, but the -- when we go
6 to a new customer, we have new customers
7 that we're going to visit all the time.

8 Next week, I've got two
9 customer meetings, two potential customer
10 meetings, and here's what we offered them.
11 We tell them for lack of a better term that
12 we're like Burger King, you can have it
13 your way, what do you want to do.

14 Do you want us to pay for the
15 plant? If you want us to build, own, and
16 operate the plant, we will find some
17 financing source to do that and we will
18 give you a share of the proceeds, that's
19 called a percent of proceeds plant and
20 that's good for the producer because they
21 put up no capital. We spend all the money
22 and they get some products.

23 A lot of producers don't want
24 to do that though. A lot of producers want
25 to spend their money because these plants

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2 -- this is a pretty good economic threshold
3 for them inside their company. So we say
4 would you like to build, own, and operate
5 the plant? If you would, we will propose
6 that here is your plant. We will guarantee
7 the recoveries and you pay us a license
8 fee. Okay.

9 Something in the middle. How
10 about we joint venture this thing. You pay
11 have, I pay half or whatever the
12 percentages are, and we split the proceeds
13 down the middle. That's kind of what we
14 did with Weyburn up in Canada.

15 How about this? How about the
16 producer thinks that the oil prices are
17 getting ready to go to \$150 a barrel and
18 they don't want me to participate in that.
19 I say okay, I'll build, own, and operate
20 the plant, and I'll charge you a fee and
21 you keep all the products and they're all
22 yours, you take all the commodity risk.

23 And, you know, Alex, you know,
24 you guys seem to like to combine things,
25 combine all those. You know, you can have

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2 licensing fees. You could have percent of
3 proceeds. You can have fee-based deals.
4 You could have joint ventures. You could
5 have special purpose vehicles. We don't
6 care.

7 Our goal is to -- is to produce
8 this technology because we think it's
9 really good technology. There's lots of
10 money to be made in this and whatever you
11 guys want, we're there. That's what --
12 that's our marketing scheme.

13 Q. Perfect.

14 So with regard to the four flex
15 plants you mentioned, the four CO2 flex
16 plants?

17 A. Yeah.

18 Q. Those are plants that you own;
19 correct?

20 A. Not completely. We own the
21 United States plants completely and those
22 plants are the Goldsmith plant, the Wellman
23 plant and Monell 160 plant. Monell started
24 out as a -- the existing Monell plant was a
25 120 plant that was expanded to 160.

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2 We own those three plants 100
3 percent outright. We own and operate those
4 plants. All the operators work for us and
5 we have varying commercial arrangements
6 with the producers on each one of those
7 three plants.

8 The plant in Canada is the most
9 interesting commercial arrangement because
10 what -- and I'm going to say the term
11 Cenovus, but understanding that Cenovus has
12 since sold that to a company called Black
13 Cat.

14 I use the word Cenovus because
15 that's who I made my deal with. So when we
16 were making the deal with Cenovus, of
17 course Cenovus liked the idea because they
18 had -- Cenovus had already investigated a
19 refridge plant and they were on track to
20 build a refridge plant and they weren't
21 thrilled with the recoveries, but they were
22 going to do this. But when they found the
23 CO flex process, they changed from refridge
24 to CO flex.

25 They'd also investigated and I

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2 worked with their engineering group, they
3 had also investigated Ryan/Holmes. There
4 was just no way that they could do a
5 Ryan/Holmes plant because there was no way
6 to get rid of the ethane there. So it was
7 extraordinarily expensive. They didn't
8 want to extract these products because
9 there was no way to sell them.

10 So what we did with Cenovus, I
11 said, you know, we're a small company and
12 since you're in control, you being Cenovus,
13 since you're in control of the project, we
14 really don't want to take capital risk on
15 this.

16 So here's what we did. We
17 formed a special purpose vehicle, which was
18 a joint venture Cenovus and Pilot. Cenovus
19 has 65 percent of that. We have 35
20 percent. That joint venture, that special
21 purpose vehicle owns the plant. So we own
22 35 percent of the plant. Cenovus owns the
23 other 65 percent of the plant. And we
24 charge the other Cenovus, the Cenovus
25 producer a fee and that fee was based on

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2 the ultimate capital cost.

3 And so as that made me agnostic
4 or made Pilot agnostic when Cenovus wanted
5 to do -- add scope to the project. Sure,
6 add scope, because all adding scope does is
7 increase the fee. The fee was a certain
8 percentage of the final outcome capital
9 cost. And that fee is still being charged
10 today. That's how we make money up there.

11 But to your point, we own 100
12 percent -- we own and operate 100 percent
13 of the United States operations, and we own
14 35 percent of the Canadian operation and do
15 not operate it. They operate that plant.

16 Q. And Pilot constructed each one
17 of those four facilities; right?

18 A. No, that's not correct. The
19 facility in Weyburn, Saskatchewan was built
20 project managed by Cenovus, and they hired
21 a local Saskatchewan contractor to build
22 that plant.

23 We had lots -- we had a lot of
24 consulting input. They would -- we were up
25 there during construction a lot. We wanted

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2 to make sure it was piped properly, because
3 ultimately we get in the contract we have
4 with Cenovus, we guarantee the recoveries,
5 and we wanted to make sure that all the
6 equipment was suitable and was the proper
7 thing to install and it was installed
8 correctly because we had skin in that game.

9 Q. Pilot constructed each one of
10 the three CO2 flex plants in the United
11 States?

12 A. Not Pilot. Holloman. Holloman
13 Corporation did. I guess if you're looking
14 at corporate structure, Holloman would be
15 our sister company. We all roll up into
16 the mothership, which is Holloman Holdings
17 Corporation, but Holloman Corporation, the
18 construction company and Pilot Energy, the
19 entity we're talking about are not on the
20 same -- they're not on the same line. They
21 don't report up through each other, but
22 they are sister companies. We all report
23 to the same daddy.

24 Q. To determine the profitability
25 of one of these plants, you have to account

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2 for the capital cost of the plant; right?

3 A. Yeah. In some way, shape, or
4 form, you do, of course.

5 Q. Do you have a description of
6 how to account for the capital cost of the
7 plant?

8 A. I'm not quite understanding
9 that. Could you either restate or rephrase
10 that for me, please.

11 Q. Sure. If you wanted to account
12 for the capital cost to one of these plants
13 when determining whether or not to build
14 it, how would you do that?

15 A. We have experience in building
16 these. We know what all the parts are. We
17 have developed some cost estimating, mostly
18 spreadsheet programs, that list all of the
19 parts involved in the plant. The parts
20 would be treating sections, CO2
21 fractionator, gas to gas exchangers,
22 refrigeration units.

23 All these things and we list
24 all that stuff out and we have gotten
25 enough bids on these in the past. We've

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2 got -- we had a really, really good handle
3 on what our cost was before covid.

4 After covid, things kind of
5 changed. We're redeveloping all those
6 models. But we know what it cost to get
7 those skids manufactured and if we have too
8 much uncertainty, we'll go to the skid
9 manufacturing industry and say, hey, here's
10 a process flow diagram. Here's the
11 equipment. Could you give us, say, at
12 least a budgetary float on what it would
13 cost you to manufacture these skids.

14 And we take those skid costs
15 and number of skids. A plant could have a
16 lot of skids. A plant could have 20, 30
17 skids in it. We take those skid costs and
18 we do a general layout and then I go to my
19 sister company, Holloman Construction who
20 has got construction estimators and they
21 look at the layout. They say there's this
22 much piping. They even get down into the
23 weeds as far as cubic feet of concrete
24 poured, tons of rebar installed, pipe rack,
25 kinds of pipe racks erected, diameter

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2 inches of pipe welds that need to be made,
3 and we get all that costs.

4 So now we have the skid cost,
5 the equipment, the stuff, and we have the
6 installation costs and those costs are
7 usually plus or minus about -- you know, if
8 we do a really good job, plus or minus 20
9 percent, and that's how we determine the
10 capital cost of a project before we build
11 it.

12 And of course the capital cost
13 is an important parameter because you're
14 trying to calculate return on investment,
15 how quickly am I going to get my money
16 back, all these other kinds of things.

17 Is that enough for you or you
18 need -- I can --

19 Q. That's great.

20 A. I can opine about capital
21 finances all day long if you want to do
22 that.

23 Q. Maybe after the deposition.

24 A. Okay.

25 Q. We've been going about an hour

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2 and I'm going to start a new line after
3 this. Do you want to take like a bio break
4 or you're good?

5 A. You know, heck, I think I'd
6 like to take a bio break and get me another
7 cup of coffee if that works for you. I'm
8 aware of all the rules. I'm not allowed to
9 discuss all this stuff with Charles. I
10 would like to go to the restroom and get me
11 another cup of coffee, if that works for
12 you.

13 Q. Okay. Let's go off the record
14 for ten minutes.

15 (Recess taken at 10:59 a.m.)

16 BY MR. PIALA:

17 Q. Mr. Prim, can we talk -- go
18 back to your declaration.

19 A. Back to the declaration?

20 Q. Correct.

21 A. Okay. Sure. You cutout just a
22 little bit, sorry about that.

23 Q. That's my fault.

24 So you put together a chart
25 describing why you believe that the Mabee

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2 Plant copies C02Flex; correct?

3 A. Show me. I probably did.

4 Where's the chart?

5 Q. I believe it's on page 48.

6 A. Yes.

7 Q. Okay. So you put together a
8 chart describing why you believe the Mabee
9 Plant copies C02 flex; correct?

10 A. That's correct.

11 Q. And part of your reasoning for
12 why you believe that the Mabee Plant is a
13 copy of C02Flex is because you do not
14 believe the Mabee Plant is a copy of
15 Chevron's Rangely Plant; right?

16 A. I don't -- you know, the -- one
17 of the things that we've continuously asked
18 for in this case is discovery. We would
19 love to see the drawings and the operating
20 conditions of the -- of the Mabee Plant.
21 Thus far we have not seen any of those, so
22 we have to work with what we've got.

23 And the -- we have got -- we
24 know what's in our plant for sure, right,
25 and we speculate what's in the Mabee Plant

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2 based on information -- any information
3 that we can get from the air permit, the
4 hydrate formation paper, Google Earth
5 images. You know, we're kind of grasping
6 at anything that we can find.

7 But the reason that we think,
8 and we're talking about copying, right, the
9 reason we think this has been copied is
10 because we gave Chevron the process
11 diagram. We -- not only the diagram. We
12 gave them the entire process design for
13 this plant, after many, many iterations,
14 hundreds and hundreds of hours of time
15 spent on developing and refining the plant
16 for Mabee.

17 So do you have a question about
18 this chart?

19 Q. So Chevron told you that the
20 Mabee Plant is based on the Rangely Plant;
21 right?

22 A. They did. They told us the
23 Mabee Plant was based on the Pastore '666
24 patent in the letter from the legal
25 department.

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2 Q. We'll get to that in a moment.

3 So did Chevron tell you that
4 the Mabee Plant was based on the Rangely
5 Plant?

6 A. I need to look at the letter
7 from the attorney because we -- as you can
8 recall and as you have all the
9 documentation, we were concerned that they
10 -- that the Chevron was building our
11 process at Mabee.

12 I wrote a letter to Chevron
13 saying exactly that. Chevron responded a
14 letter from their legal counsel saying we
15 take all this very seriously, which I'm
16 glad they do because we do also, and that
17 the plant at the Mabee Field was being --
18 was being constructed per the Pastore '666
19 patent.

20 And to tell you the truth, I
21 had to read the letter to see if they
22 mentioned Rangely in it. I think they do,
23 but maybe not. If you'd like to go through
24 that letter, happy to pull that letter up
25 and read through that.

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2 Q. So were there any other
3 communications other than the letter that
4 they gave you this information or was it
5 actually just based on the letter?

6 MR. ROGERS: Objection. Form.

7 A. Let's back up and talk about
8 what this information is, okay. So you
9 said that was there any other thing, any
10 other communication that relayed this
11 information. I need you to define what
12 this information means.

13 Q. Sure. Was there another
14 communication other than the letter where
15 Chevron told you that the Mabee Plant was
16 based on the Rangely Plant?

17 A. There were other communications
18 that had -- that mentioned that. The one
19 that comes to mind is there was a
20 communication between Allen Hein and Naomi
21 Baker, where Allen Hein says they were
22 building the Mabee Plant to look like the
23 Rangely Plant and -- but that's -- that's
24 something that she had a communication with
25 him.

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2 So yes, is that hearsay? Yes,
3 it's like double hearsay. It's like he
4 said to her, so she said to me, right, so.
5 And I've got that documentation. It's in
6 the file. You guys have that also.

7 But the other communication
8 came much later in the hydrate formation
9 paper, where they explicitly say that this
10 plant was built like the Rangely facility.
11 I mean we can pull up the hydrate formation
12 paper and we can read those words.

13 According to the Pastore
14 patent, you know, they were very careful to
15 say that this plant is built like Rangely.

16 Q. And you investigated how the
17 Mabee Plant works; right?

18 A. I investigated with any
19 publicly available documentation that we
20 can have, but to tell you -- but, Alex, as
21 you know, that's not very accurate. We're
22 still speculating on how that plant works
23 and until we get discovery to actually look
24 at the drawings and see the heat and
25 material balances, we don't know for sure.

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2 Q. Did you put in that level of
3 investigation into how the Rangely Plant
4 works?

5 A. The -- no, because I don't --
6 I'm not in a lawsuit against the Rangely
7 Plant.

8 Q. Okay.

9 A. I'm assuming, let's continue on
10 this track because this might help you out,
11 and I'm not opposed to helping you out, I
12 assume that the Rangely Plant was built per
13 the Pastore '666 patent because that is the
14 field that the patent was developed around.
15 That may be completely incorrect, but I
16 don't know, but I assume that because
17 that's logical to me that they would have
18 built the plant that they designed the
19 patent around at Rangely.

20 Q. And you mentioned a letter from
21 Chevron's legal department that was sent to
22 you; right?

23 A. That's correct.

24 Q. Was that literally a physical
25 letter or was it an email?

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2 A. It was a physical letter and I
3 still own the letter and the envelope that
4 it came in.

5 Q. Okay. And did you scan that
6 letter as Exhibit 2019?

7 A. That sounds correct. Whatever
8 exhibit it is, yeah, we scanned that into
9 the -- into these.

10 Q. Let's pull it up.

11 A. It is an exhibit, yeah.

12 Q. I think it's 2019. Okay. Here
13 we go. Great. And tell me when you have
14 that up.

15 A. Okay. They're pulling it up
16 for me right now.

17 Q. Perfect.

18 A. Okay. I have a letter dated
19 August 29, 2013. I actually have the
20 original in my hand that's signed by
21 Maurice Teixeira, senior counsel.

22 Would you like to -- what would
23 you like to do with the letter?

24 Q. So that in your hand is exactly
25 what was sent to you?

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2 A. Yes. We are in receipt of your
3 -- would you like me to read it?

4 Q. No, I'm just confirming.

5 A. Starts with the "Dear Mr. Prim,
6 We are in receipt of your letter dated
7 August the 15," that's the one; right?

8 Q. Correct. And it is -- can I
9 see the envelope?

10 A. Can I ask Charles a question
11 about where that it is? It might be in my
12 pile or it might be in his.

13 Q. Sure. I'm just curious.

14 MR. ROGERS: I think it's in
15 your files.

16 A. Hang on a second, Alex. I'll
17 see if it's in my files.

18 Q. Sure.

19 A. I don't have that original
20 file.

21 THE WITNESS: Charles, can you
22 look in yours. It's in a yellow
23 file. We got it. Cool.

24 A. Okay. You want to see the
25 envelope? Can you see that?

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2 Q. Bookkeeping is immaculate.

3 Wow. Okay. Cool.

4 And that's the original letter?

5 A. That's the original letter,
6 yeah.

7 Q. Could I see what is -- what all
8 is paper-clipped to it?

9 A. Yep. It's exactly what the --
10 what you own. We have the first page of
11 the paperclip is the cover letter and that
12 is followed by the '666 Pastore patent.
13 There's a -- looks like there's about eight
14 pages of patent here and that's it.

15 Q. Sure. So is it your testimony
16 that Chevron wedged all eight pages of that
17 patent into the envelope?

18 A. Maybe I did this later. I
19 can't remember. Maybe I added the patent
20 to it.

21 Q. Okay. So turning your
22 attention to the letter.

23 A. Okay.

24 Q. Does the letter refer to
25 Rangely?

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2 A. No, it does not.

3 Q. Does the letter, and this is
4 Exhibit 2019, refer to the Pastore '666
5 patent?

6 A. No, it does not.

7 Q. Okay. Does -- and now I want
8 to talk a little bit about the Mabee Plant.
9 Does the Mabee Plant have a hydrocarbon
10 rich gas stream that's introduced into a
11 distillation column?

12 A. The -- my answer to that
13 question is I don't know.

14 Q. Okay. Does the Mabee Plant
15 cool an overhead vapor stream from the
16 distillation column into a partial
17 condenser?

18 A. Once again, I don't know,
19 because we don't have any other drawings of
20 the Mabee Plant. I speculate that it does
21 because that is a method to produce the
22 products that they talk about in the -- in
23 the hydrate formation paper and they talk
24 about the column and -- but that -- that's
25 my only information is what was in that

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2 hydrate formation paper.

3 So if it's in the hydrate
4 formation paper, we can pull the hydrate
5 formation paper and I can say yes, this is
6 what they're saying, but I don't know for
7 sure, because I don't know if that's
8 accurate, and we won't know until we get
9 discovery.

10 Q. Okay. So based on the -- let's
11 ask these questions based on your
12 understanding of the hydrate formation
13 paper then.

14 A. Okay.

15 Q. So does the Mabee Plant
16 introduce a gas stream into a multi-tray
17 distillation column?

18 A. Let me pull that. Do you have
19 a second so I can pull that paper?

20 Q. Absolutely. I'll see if I can
21 find the exhibit number for you.

22 THE WITNESS: Mark, you want to
23 pull that.

24 MR. MATHIAS: This is Mark
25 Mathias. If we do have the exhibit

1 ERIC PRIM (2/13/2025)

2 number, that would make it easier for
3 me to find.

4 MR. PIALA: Unfortunately I'm
5 going to have to say the same thing.

6 MR. OAKS: 2012.

7 MR. PIALA: Yeah.

8 THE WITNESS: Okay. Mark, you
9 want to put this back.

10 A. Okay, I've got Exhibit 2012 the
11 top of the paper states Hydrate Formation
12 paper and Chevron Mabee Unit for CO2
13 Purification.

14 Q. Excellent. And that is
15 Exhibit 2012; correct?

16 A. Correct.

17 Q. So based on your understanding
18 of how the Mabee Plant works using
19 Exhibit 2012, does the Mabee Plant
20 introduce a hydrocarbon gas stream into a
21 distillation column at an intermediate
22 tray?

23 A. Yes, it does, according to
24 Figure 1.

25 Q. Okay. And does the Mabee Plant

1 ERIC PRIM (2/13/2025)

2 cool the overhead from that column in a
3 partial condenser to make a two-phase
4 stream?

5 A. That's correct.

6 Q. Does Mabee Plant separate that
7 stream into a reflux drum to produce a
8 reflux kind of product?

9 A. The stream is separated in what
10 they -- at what they title a reflux
11 accumulator and to an overhead gas stream
12 and a reflux drum.

13 Q. And does the Mabee Plant
14 introduce the reflux stream back into the
15 top tray of the column?

16 A. Yes.

17 Q. Does the Mabee Plant reboil the
18 distillation column of the re-boiler?

19 A. Yes.

20 Q. Does the Mabee Plant inject the
21 product stream into a hydrocarbon bearing
22 formation?

23 A. I don't see where it says that.

24 Q. This would be the overhead gas
25 of the reflux accumulator. Does it

1 ERIC PRIM (2/13/2025)

2 re-inject that?

3 A. I'm assuming it does, but I
4 don't know by this drawing if it does or
5 not.

6 Q. Okay.

7 A. I assume that it does, but I
8 don't know, because I don't have the
9 drawings.

10 Q. Okay. And do you know if most
11 of the methane, ethane, propane in the
12 Mabee Plant is in that overhead stream from
13 the reflux accumulator?

14 MR. ROGERS: Objection. Form.

15 A. I know that most of the methane
16 and ethane is in that stream because
17 Table 1 gives me a composition table that
18 does not include methane and ethane, so I'm
19 assuming, maybe incorrectly, but I am
20 assuming nonetheless that the methane and
21 ethane are not in that stream.

22 Q. But you don't know --

23 A. I have no idea about the
24 propane. There's propane in this stream.
25 Is there propane in the overhead stream

1 ERIC PRIM (2/13/2025)

2 too? Yeah, probably. I don't know.

3 Q. Okay. So the Mabee Plant has
4 all the structural features that are
5 described in the Pastore '666 patent;
6 right?

7 MR. ROGERS: Objection to form.

8 A. I would have to look at the
9 Pastore '666 patent, but the quick answer
10 to your question is no, based on my
11 recollection.

12 Q. Okay. What structural feature
13 in the Pastore patent is not in Rangely?

14 A. Say that again. I was going
15 the other way. Ask me the question again,
16 please.

17 Q. I said what structural feature
18 in the Pastore patent, the '666 patent, is
19 not found in the Mabee Plant?

20 A. Oh, in Mabee. I'm sorry, I
21 thought you said Rangely. You know, let's
22 go ahead and do this right, and since the
23 -- since the letter has got a copy of the
24 '666 patent in it, I'll just use the
25 original -- original letter, and I do

1 ERIC PRIM (2/13/2025)

2 believe that you guys sent me this patent.

3 I wouldn't have pulled this patent up by
4 myself. So there's associated with the --
5 with the Chevron letter.

6 So when I look at the '666
7 patent, from a -- gosh, I don't know what
8 -- what to call this, just the parts and
9 pieces, the '666 patent does have these
10 elements, but it also has it economized and
11 it also has a gas to gas exchanger and
12 they're not shown on this.

13 The -- so does this -- does
14 this Figure 1 contain all of the elements
15 of the Pastore patent; no.

16 Q. What is an economizer?

17 A. An economizer is a way to recut
18 the overhead stream from the Pastore
19 column, is cold and they are using the cold
20 from that stream to cross exchange it with
21 refrigeration discharge in order to recover
22 some of that cooling. And then they're
23 further recovering more cooling from that
24 stream in a gas to gas exchanger.

25 Q. Both -- strike that.

1 ERIC PRIM (2/13/2025)

2 Both Rangely and Mabee have a
3 distillation tower; right?

4 A. I'm looking at the '666 patent
5 and -- and I can tell you that both -- that
6 Rangely has a distillation column and that
7 the column in the hydrate formation paper
8 is a distillation column.

9 But I need to go further. I
10 need to tell you why I know that's a
11 distillation column. If you look at -- do
12 you have the hydrate formation paper up?

13 Q. I could pull it up, yeah.

14 A. Or any column. Pull up any
15 distillation column, okay. The tube itself
16 and in the hydrate formation portion,
17 that's called column, that's called an
18 absorber, okay.

19 I'm going to tell you about the
20 four different levels of separation columns
21 because this is important, and this is
22 really important when it comes to the
23 differentiation between our patent and
24 Ryan/Holmes.

25 Since we've opened the can,

1 ERIC PRIM (2/13/2025)

2 let's go ahead and go in the can a little
3 bit. The column is called an absorber. It
4 doesn't have to have anything on it to make
5 a separation. It only has to have streams
6 that come in contact with each other and
7 take some of the qualities out of one
8 stream and move it into the other stream.

9 A typical -- a good example of
10 an absorber column is TEG. Now, if you put
11 a re-boiler on the bottom of that column,
12 that column is no longer called an
13 absorber, it's called a re-boiled absorber.
14 And that's really common when you have a
15 specification that you need to meet on the
16 bottom and no specification you need to
17 meet on the top.

18 A typical example of that would
19 be a stabilizer column that sits at the end
20 of a refrigeration plant. If on the other
21 hand you have a column that has a reflux
22 system in the top, chiller, accumulator,
23 pumps that pump it back into the top stage,
24 that is called a reflux absorber. That's
25 not a distillation column. It is a reflux

1 ERIC PRIM (2/13/2025)

2 absorber.

3 And the only spec in that
4 column is on the top, and you let
5 everything flow out the bottom that flows
6 out the column, not the bottom of the
7 column.

8 Now if you have an absorber
9 column, that column consist of an absorber
10 column and a re-boiler and a reflux system,
11 that is called a distillation column, and
12 that is what all distillation columns are.
13 They all have those three elements and
14 this, Ryan/Holmes, Godden, Soldati, when
15 they say distillation column, they have
16 these columns.

17 However, in all of those
18 others, there is a fourth column that is
19 even one step up from that. Remember,
20 absorber is just the absorber. Reboil
21 absorber has a re-boiler. Reflux absorber
22 has a reflux. Distillation column has both
23 of those and an extractive distillation
24 column has an additional stream that feeds
25 that column and aids in the separation by

1 ERIC PRIM (2/13/2025)

2 absorption.

3 That is what Ryan/Holmes
4 columns are. They are extractive
5 distillation columns as defined by anyone
6 that's been working on the separation
7 industry.

8 So Godden, Ryan/Holmes, Soldati
9 all of those are extractive distillation
10 columns. This column is not an extractive
11 distillation column, because it only
12 separates components by boiling points and
13 does not use absorbent solvents to do that,
14 this is a distillation column.

15 Okay. Now, I'm going to quit
16 opining about distillation. Sorry, but I
17 just know so much about distillation, I
18 can't let that go.

19 Q. So at both the Rangely and the
20 Mabee Plant, the heavy hydrocarbons are
21 separated from the NGL/CO2 stream; correct?

22 A. The heavy hydrocarbon -- when
23 you're talking about the heavy
24 hydrocarbons, you're talking about the oil
25 stream, are we -- yeah, they both separate

1 ERIC PRIM (2/13/2025)

2 all the oil out before the gas hits the
3 distillation column.

4 Q. At both the Rangely and the
5 Mabee Plant, the NGLs are separated from
6 the CO2; right?

7 A. There is -- there is a
8 separation, but the separations are
9 different, and we know that because we can
10 read the Pastore patent, which talks about
11 recoveries of -- of the various NGL
12 components, and we can read the hydrate
13 formation paper that talks about what the
14 various recoveries are at the Mabee Plant
15 and they're very different.

16 Q. Both the Rangely and Mabee
17 Plant send their NGL product sales; right?

18 A. I'm assuming, yes. Why else
19 would you extract it if you can't sell it?
20 So I assume that, but it's probably a
21 pretty strong assumption, probably valid.

22 Q. Both Rangely and Mabee recover
23 propane; right?

24 A. No. Rangely does not --
25 Rangely does not recover propane. If you

1 ERIC PRIM (2/13/2025)

2 look at the Rangely -- okay, let's back up.

3 I am assuming that the Rangely
4 Plant is built according to the '666
5 Pastore patent. I have no information or
6 knowledge about what is actually at
7 Rangely. I only have this patent and as
8 kind of an added treat on this thing, I do
9 have what the Chevron guy told me at the
10 conferences. Man, I sure wish we could get
11 your recoveries. Okay, I understand that.

12 But if we look at the Pastore
13 patent, if you look at the recovery column,
14 there is only recovery of ISO C4, normal
15 C4, and heavier things. There is a trace,
16 only a solubility trace of propane. That's
17 not propane recovery. That is accidentally
18 in that bottom. They didn't do that on
19 purpose. That propane is pulled down to
20 the bottom because of the basic
21 thermodynamics of the stream.

22 You can't make perfect
23 separations, i.e., Rockstraw, okay. He
24 said that too. We all know that. You
25 can't make perfect separations and that is

1 ERIC PRIM (2/13/2025)

2 a soluble amount of propane that's in the
3 bottom.

4 So to answer your question, no,
5 there is no propane recovery at Rangely and
6 there is substantial propane recovery at
7 Mabee, according to the hydrate formation
8 paper.

9 Q. So the Pastore '666 patent,
10 that Table 1 you've referred to, that's
11 based on a simulation; right?

12 A. Yes. And so is -- I think so
13 is the hydrate formation paper, because it
14 says, "Model validation of plant data."
15 Model, that's a simulation. You have the
16 model and you have the plant data, and then
17 Table 1, so they're validating their model.

18 Q. Right. But it also contains
19 actual data in Table 1 of the hydrate
20 formation paper?

21 A. Right. It does, and I would do
22 that too. And was there actual data of a
23 Pastore plant before a Pastore plant had
24 been made; no.

25 Q. Right. So there's no actual

1 ERIC PRIM (2/13/2025)

2 data from any plant in the Pastore '666
3 patent; correct?

4 A. No, but you could sure give
5 that to us. Thermodynamic models are very
6 accurate. We base our entire business on
7 them. So could there be errors in the
8 model? Not likely. Where are the errors?
9 The errors are in the composition that you
10 use to -- to run the models. I know our
11 models are very accurate. They match our
12 plants very precisely.

13 Q. Was that true back in the early
14 '80s?

15 A. You know, it turns out that it
16 kind of was. The -- when I was in -- when
17 I was in college, we talked a lot about --
18 this is back in the '80s. We talked a lot
19 about the difficulty of CO₂ and how it
20 misbehaves thermodynamically, and you have
21 to be very careful when you use it.

22 There was a lot of research
23 going on to determine what the effects of
24 high CO₂ concentrations were. When they
25 started flooding the field with CO₂, it's a

1 ERIC PRIM (2/13/2025)

2 whole new ballgame, and so -- but the
3 correlations turned out to be more accurate
4 than we thought they would be.

5 We all assumed that they would
6 be grossly inaccurate and they were pretty
7 close. And they're really good now because
8 they've -- they're -- not to get too much
9 in the weeds, but you know me, I'm a weeds
10 guy, the -- there are parameters in these
11 columns called binary interaction
12 coefficients, that are kind of like the
13 tweaks you get to make on how the -- how
14 the components interact with each other
15 thermodynamically.

16 And the binary interaction
17 coefficients in the models have been
18 adjusted to compensate for high CO2 levels.
19 And that's why we have special
20 thermodynamic correlations for high CO2
21 streams. But they're really good today,
22 and they were pretty good when Pastore did
23 this, and they were pretty good when I did
24 this stuff on Exxon Means, that was 25
25 years ago.

1 ERIC PRIM (2/13/2025)

2 Q. When you said, "pretty good,"
3 what do you mean?

4 A. They were close, you know, they
5 weren't exact, but they were close enough
6 and we were surprised that they were as
7 close as they were.

8 Q. When you say, "close enough,"
9 do you mean within five percent or one
10 percent or .1 percent or 50 percent or?

11 A. Oh, gosh, Alex, I don't know.
12 You know, they were close enough that you
13 could actually design a column or a system
14 with them and the system would mimic the
15 model outputs within a reasonable error.

16 Let's say five percent, you
17 know, one, five, two, you know, but they
18 were in that range and they were
19 surprisingly good. There are a lot of
20 really smart people at a lot of colleges
21 that are tweaking these models and have
22 been ever since they were developed.

23 Q. Do you know if the Rangely
24 Plant has a sweetener?

25 A. I don't. They might. And

1 ERIC PRIM (2/13/2025)

2 there's all kinds of reasons why it would
3 need one even though what -- even if
4 Rangely actually built the '666 patent,
5 then that means they're not recovering
6 propane and the whole -- you know, the
7 whole purpose of Pastore, it's a pretty
8 smart idea.

9 He said I'm going to run the
10 column in a manner where I'm not going to
11 allow any acid gases to escape the bottom
12 of that column. So, theoretically, the NGL
13 stream would be relatively sweet. And I
14 say relatively, because there are other
15 things that make that stream not sweet that
16 go out the bottom of the columns that are
17 heavy.

18 A couple of those are methyl
19 mercaptan, ethyl mercaptan, carbonyl
20 sulfide. Those all take that NGL stream
21 and give you a bad -- if you remember from
22 an hour ago -- copper strip. So they have
23 to be taken out.

24 So does Rangely have a treater?
25 Yeah, maybe. I don't know. Not my plant.

1 ERIC PRIM (2/13/2025)

2 Send me the drawings and I'll let you know
3 within five minutes if they have a treater.

4 Q. So could I just see that
5 Chevron letter again? Could you hold it up
6 for me?

7 A. Yeah. The original?

8 Q. Yeah, the original.

9 A. Yeah.

10 Q. It has -- okay.

11 So it looks like it was folded
12 into three parts; is that right?

13 A. Yeah, it does.

14 Q. Does the patent have those same
15 three folds?

16 A. No, it doesn't, but I can't
17 remember if they sent this to me in an
18 extra envelope or, you know, I seem to
19 recall that this was attached to something
20 else. This letter was attached to another
21 -- another envelope that had this document
22 in it and I didn't keep that because I
23 didn't -- there's no way I would have found
24 and pulled out the '666 patent. It was
25 attached to this letter.

1 ERIC PRIM (2/13/2025)

2 Q. So you're saying Chevron sent
3 you two letters?

4 A. They sent two of the same
5 thing. That's right. They sent me this.
6 They sent -- Chevron sent me the '666
7 patent.

8 Q. Do you know, could it have been
9 in reference to something else?

10 A. Maybe. I don't know.

11 Q. Okay. I think -- can we go off
12 the record for maybe ten, fifteen minutes?

13 A. Sure.

14 (Recess taken at 11:52 a.m.)

15 MR. PIALA: Mr. Prim, we just
16 wanted to thank you for your time,
17 and we'll pass the witness.

18 THE WITNESS: Oh, wow, thank
19 you. I've got time for lunch now. I
20 appreciate that.

21 MR. ROGERS: Patent-owner will
22 take a five-minute break and we'll be
23 back on and see if we have any
24 redirect.

25 (Recess taken at 12:03 p.m.)

1 ERIC PRIM (2/13/2025)

2 EXAMINATION BY

3 MR. ROGERS:

4 Q. Mr. Prim, is there any part of
5 your testimony from today that you would
6 like to clarify?

7 A. You know, just back to what we
8 were talking about at the very end. I'd
9 like to clarify the letter from Chevron,
10 and I know that Chevron sent me this
11 letter, but I also know that they sent me
12 the '666 Pastore patent.

13 And I don't remember how they
14 sent it to me. They might have sent me --
15 in fact, I seem to recollect, but memories
16 are terrible when they're ten years old,
17 but I seem to recollect they sent me this
18 letter and they sent me an email, and the
19 email had the attachment of this patent.

20 That might not be true. They
21 might have sent it to me all at the same
22 time, but I do know one thing that I
23 remember with great clarity is that Chevron
24 sent me the Pastore '666 patent, and I'll
25 tell you how I know that. It's because

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this was the very first knowledge of this patent that I have. I didn't know this patent existed until Chevron sent this thing to me along with this letter.

This patent isn't included in the prior art on the '332 patent. Why? Because I didn't know it existed. And so my very first knowledge of this patent came from Chevron in association with this letter.

So I'm absolutely certain that Chevron sent me the letter and the patent, and that's really about all I have to say about that.

MR. ROGERS: Okay. I'll pass the witness.

MR. PIALA: We have no further questions.

(Time noted: 12:13 p.m.)

ERIC PRIM (2/13/2025)

J U R A T

I, ERIC PRIM, do hereby certify
under penalty of perjury that I have
read the foregoing transcript of my
deposition taken on February 13,
2025; that I have made such
corrections as appear noted herein in
ink, initialed by me; that my
testimony as contained herein, as
corrected, is true and correct.

ERIC PRIM

Subscribed and sworn to before me

This _____ day of _____, 2025.

NOTARY PUBLIC

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C E R T I F I C A T E

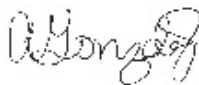
STATE OF NEW YORK)
 : SS.:
COUNTY OF RICHMOND)

I, AYLETTE GONZALEZ, a Notary
Public for and within the State of New
York, do hereby certify:

That the witness, ERIC PRIM,
whose examination is hereinbefore set forth
was duly sworn and that such examination is
a true record of the testimony given by
that witness.

I further certify that I am not
related to any of the parties to this
action by blood or by marriage and that I
am in no way interested in the outcome of
this matter.

IN WITNESS WHEREOF, I have
hereunto set my hand this 13th day of
February, 2025.



AYLETTE GONZALEZ

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ERIC PRIM (2/13/2025)

ERRATA SHEET FOR THE TRANSCRIPT OF:

Case Name: SCOUT vs. PILOT
Dep. Date: February 13, 2025
Deponent: ERIC PRIM

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ERIC PRIM

SUBSCRIBED AND SWORN BEFORE ME,
This___ day of_____, 2025.

Notary Public
My Commission Expires:_____

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