

STATE OF OHIO  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL AND GAS RESOURCES MANAGEMENT

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In re: :  
  
The Matter of the :  
Application of EAP :  
Ohio, LLC for Unit : Application Date:  
Operation : August 4, 2025  
:  
Good Shepherd HN GMN :  
SE Unit :

- - - - -

UNITIZATION APPLICATION HEARING

- - - - -

Before Hearing Host Cynthia Marshall  
All Parties Appearing Remotely  
September 24, 2025, 2:30 p.m.

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Spectrum Reporting LLC  
400 South Fifth Street, Ste. 201  
Columbus, Ohio 43215  
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A P P E A R A N C E S

ON BEHALF OF OHIO DEPARTMENT OF NATURAL RESOURCES:

Ohio Department of Natural Resources  
2045 Morse Road, Building F-3  
Columbus, OH 43229  
By Jennifer A. Barrett, Esq.  
(Via videoconference)

ON BEHALF OF EAP OHIO, LLC:

Bricker Graydon  
100 South Third Street  
Columbus, OH 43215  
By Lila M. Appaya, Esq.  
Jenae C. Allert, Esq.  
(Via videoconference)

ALSO PRESENT:

Barbara Richardson (Via videoconference)  
Jeff Large (Via videoconference)  
Scott Shaffer (Via videoconference)  
Emily Little (Via videoconference)  
Cory Cosby (Via videoconference)  
Katherine Kimble (Via videoconference)  
Judith B. Bratten (Via videoconference)  
Thomas Hill (Via videoconference)  
Megan Zemke (Via videoconference)  
Michael McConnell (Via videoconference)  
Tyler Heckathorn (Via videoconference)  
Tara Suitor (Via videoconference)  
Katie McDonald (Via videoconference)

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(PDF exhibits attached to the transcript.)



1 this information from anyone who represents any of  
2 these persons. We will make note of your name and  
3 call upon you when it's time for comments.

4 If you have joined us via WebEx, please  
5 unmute yourself now and tell us your name if you  
6 wish to make comments.

7 Hearing none.

8 If you've joined us via phone -- I'm  
9 sorry? Okay.

10 If you have joined us via phone, please  
11 unmute yourself by pressing "star 6" and tell us  
12 your name if you wish to make comments.

13 MR. HECKATHORN: Yes, ma'am. My name  
14 is Tyler Heckathorn, here on behalf of the Eric  
15 Petroleum party.

16 MS. MARSHALL: Okay. Mr. Heckathorn,  
17 we do have you listed.

18 MR. HECKATHORN: Thank you.

19 MS. MARSHALL: Is there anyone else?

20 Thank you. With that, we will begin  
21 the hearing.

22 Ms. Barrett?

23 MS. BARRETT: Thank you and good  
24 afternoon. Today is Wednesday, September 24,

1 2025. And we are here on the matter of the  
2 application of EAP Ohio, LLC for unit operation of  
3 the Good Shepherd HN GMN SE unit. This hearing  
4 before the Ohio Department of Natural Resources,  
5 Division of Oil and Gas Resources Management, is  
6 convened pursuant to Ohio Revised Code Section  
7 1509.28.

8 My name is Jennifer Barrett. And I am  
9 an administrative officer for the Division. Also  
10 with me today is Program Administrator Cynthia  
11 Marshall. We are conducting the hearing today and  
12 serve as the Chief's designees on this matter.

13 On August 4, 2025, EAP filed with the  
14 Division an application for unit operations for a  
15 unit designated as the Good Shepherd HN GMN SE  
16 unit. EAP filed subsequent revisions to the  
17 application. The unit is proposed to be located  
18 in Harrison County, Ohio. In its application, EAP  
19 claims to have the mineral rights through  
20 voluntary agreement to approximately 860.023478  
21 acres of the desired approximately 1,117.171-acre  
22 unit.

23 The purpose of today's hearing is to  
24 determine whether EAP's Good Shepherd HN GMN SE

1 unit application meets all of the requirements of  
2 Revised Code Section 1509.28. Under that section,  
3 the Chief of the Division must issue an order if  
4 he determines that the Applicant has shown that,  
5 one, the unit is reasonably necessary to increase  
6 substantially the ultimate recovery of oil and  
7 gas; and two, the estimated additional recovery  
8 from the unit exceeds the additional cost.

9           Neither the Chief nor any of us here  
10 today have made any decisions on EAP's  
11 application. After today's hearing, we will  
12 review all of the information provided to us in  
13 order to make a determination. We have a court  
14 reporter present as well, and we'll have a copy of  
15 the transcript of this hearing for review.

16           The Chief's decision will be issued  
17 through a Chief's Order, which will be posted on  
18 the Division's website. Pursuant to Revised Code  
19 Section 1509.36, any order may be appealed within  
20 30 days after the date upon which the person to  
21 whom the order was issued received the order, and  
22 for all other persons adversely affected by the  
23 order, within 30 days after the date of the order  
24 complained of.

1           The hearing will proceed as follows:  
2       EAP will present its witnesses and exhibits and  
3       will answer questions posed by the Division staff.  
4       Then any unleased mineral owners, working interest  
5       owners, and those persons with property included  
6       in the proposed Good Shepherd HN GMN SE unit will  
7       have the opportunity to present questions and  
8       concerns to the Division staff. And then the  
9       Division staff may take a break to determine if  
10      there's any additional questions for the  
11      Applicant.

12           To proceed in an orderly fashion, we  
13      ask that any interested party who speaks here  
14      today pose any questions to the Division, and we  
15      will then ask any questions to EAP. Additionally,  
16      anyone speaking today will be asked to provide  
17      their information to the court reporter. If  
18      you're uncomfortable speaking during the hearing,  
19      we will also accept written comments.

20           For purposes of the record, the  
21      Division received written comments from Katherine  
22      Kimble on behalf of Elizabeth Anne Tipton and Anna  
23      Marie Tipton; and also Tyler Heckathorn on behalf  
24      of Eric Petroleum Corporation, Eric Petroleum

1 Utica, LLC, and Bruce E. Brocker, Trustee of the  
2 Brocker Royalty Trust No. One u/a/d 10/15/2010.  
3 These comments have been included as part of the  
4 record for the Good Shepherd HN GMN SE unit  
5 application.

6 Tyler Heckathorn, on behalf of the Eric  
7 Petroleum parties, has indicated that he wishes to  
8 make comments. And those comments can be made at  
9 the end of the hearing.

10 We will now ask the Applicant to make  
11 its introductions and begin its presentation.

12 MS. APPAYA: Thank you. My name is  
13 Lila Appaya. And I'm an attorney with Bricker  
14 Graydon here on behalf of the Applicant, EAP Ohio,  
15 LLC. And I'm also joined by my colleague,  
16 Ms. Jenae Allert.

17 EAP is asking the Division to grant an  
18 order for unit operations for the Good Shepherd HN  
19 GMN SE unit, or, for short, the Good Shepherd SE  
20 unit. The unit is proposed to be located in  
21 German, Green, and Rumley Townships, Harrison  
22 County, Ohio. As you'll hear from EAP's  
23 witnesses, EAP and the consenting working interest  
24 owners are the owner, as that term is defined in

1 Ohio Revised Code Section 1509.28, of more than  
2 75 percent of the acreage in this proposed Good  
3 Shepherd SE unit, which exceeds the 65 percent  
4 threshold set by Section 1509.28.

5 As can be seen from Exhibit D to the  
6 application, which is now on the screen, the  
7 proposed Good Shepherd SE unit consists of 62  
8 tracts totaling approximately 1,117.171 acres.  
9 EAP proposes to drill two horizontal wells from a  
10 pad site located to the west of the unit, drilling  
11 the 10H and 210H in a southeasterly direction.  
12 The lateral portions of those wells will each  
13 extend horizontally through the unit for  
14 approximately 20,000 feet for the 10H and 19,979  
15 feet for the 210H. EAP seeks an order for unit  
16 operations from the Division because there are  
17 unleased tracts as well as non-consenting tracts  
18 in the unit.

19 In support of its application, EAP will  
20 call Matthew Buckles, a landman; Randy Daniels, a  
21 geologist; and Wes Casto, an engineer, who will  
22 each testify that the application meets the  
23 requirements for granting an order for unit  
24 operations under Ohio Revised Code Section

1 1509.28.

2 With that, I would like to call EAP's  
3 first witness, Matt Buckles.

4 MS. MARSHALL: Please swear in the  
5 witness.

6 - - - - -

7 MATTHEW BUCKLES

8 being first duly sworn, testifies and says as  
9 follows:

10 DIRECT EXAMINATION

11 BY MS. APPAYA:

12 Q. Good afternoon, Mr. Buckles. Would you  
13 please state your name and place of employment for  
14 the record.

15 A. My name is Matt Buckles. I work for  
16 EOG Resources, Inc., or EOG, which is the parent  
17 company of EAP Ohio, LLC, the Applicant.

18 Q. And what is your position at EOG?

19 A. I'm a land specialist.

20 Q. Can you describe for the panel your  
21 educational background?

22 A. I have an undergraduate degree from  
23 Purdue University and an MBA from the University  
24 of Oklahoma.

1 Q. And tell us a little bit about your  
2 professional experience in the oil and gas  
3 industry.

4 A. Sure. So I worked for Encino Energy  
5 for approximately the last six and a half years  
6 until this August when I was hired by EOG. And  
7 prior to that, I worked for Chesapeake Energy and  
8 Ascent Resources. And in sum, I've worked in the  
9 industry for about 15 years.

10 Q. And are you a member of any  
11 professional associations?

12 A. I'm a member of the American  
13 Association of Professional Landmen, or the AAPL.

14 Q. And for the AAPL, are there any  
15 educational requirements to maintain your  
16 membership as well as any sort of other  
17 certifications you may hold?

18 A. Yes. I hold a CPL designation, which  
19 is a Certified Professional Landman, which is the  
20 highest designation they offer. And I'm required  
21 to obtain 50 continuing education credits every  
22 five-year period.

23 Q. Thank you. Please describe a little  
24 bit about your work and responsibilities as a land

1 specialist at EOG.

2 A. As a land specialist, I help facilitate  
3 the development of our Utica Shale asset. And as  
4 part of that, I manage all aspects of land work,  
5 including, but not limited to, lease acquisitions,  
6 title review, trade agreements, and just general  
7 development planning.

8 Q. And did you assist with preparing the  
9 application for unitization of the Good Shepherd  
10 Southeast unit?

11 A. Yes, I did.

12 Q. I would like to turn your attention to  
13 the color-coded map shown on the slide that  
14 appears as Exhibit D of the application. Is this  
15 a depiction of the proposed Good Shepherd  
16 Southeast unit?

17 A. Yes, it is.

18 Q. And what is the size of this unit?

19 A. It's approximately 1,117.171 acres.

20 Q. And where is the unit located?

21 A. It spans across German, Green, and  
22 Rumley Townships in Harrison County, Ohio.

23 Q. And can you please tell us a little bit  
24 about what information is depicted on this map.

1 A. So you can see the map shows all 62  
2 parcels that are included in the Good Shepherd  
3 Southeast unit. They're identified by a tax  
4 parcel number and given a tract number. And, you  
5 know, besides that, it also categorizes each  
6 parcel by its status within the unit. The yellow  
7 parcels are leased and consenting, green parcels  
8 are non-consenting, red parcels are unleased, and  
9 those tracts that are crosshatched fall into  
10 multiple categories.

11 Q. And you mentioned that there will be  
12 two wells in this unit. How many wells will be  
13 drilled from the pad in total?

14 A. We currently have four wells planned at  
15 this time.

16 Q. And does EAP have a right to drill and  
17 operate wells from the pad?

18 A. Yes.

19 Q. Turning to the unit, what is the  
20 expected length of each of the laterals if an  
21 order for unit operations is granted?

22 A. Approximately 20,000 feet for the 10H  
23 well, which is the well in the west, and  
24 approximately 19,979 feet for the 210H well, the

1 eastern well.

2 Q. And when providing the lateral lengths,  
3 does the lateral placement comply with Ohio  
4 statutory setbacks?

5 A. Yes.

6 Q. What is your expected development  
7 timeline?

8 A. So we intend to drill and complete the  
9 wells in compliance with the timeframe specified  
10 in the Chief's Order, should an order be issued.

11 Q. And at this time, what percentage of  
12 the unit is committed to unit operations?

13 A. Between EAP and consenting working  
14 interest owners, approximately 76.98226 percent of  
15 the unit is committed to unit operations.

16 Q. And who are the consenting working  
17 interest owners in this unit?

18 A. Burj Energy, Eric Petroleum, and RHDK  
19 Oil & Gas.

20 Q. Are there any non-consenting owners  
21 included in the unit?

22 A. Yes. And those are listed on Exhibit A  
23 to the application.

24 Q. And what percentage of the Good

1 Shepherd Southeast unit remains non-consenting?

2 A. Currently, I believe it's approximately  
3 9.08 percent.

4 Q. And what is the status of EAP's efforts  
5 to commit those non-consenting working interest  
6 owners?

7 A. Over the course of several months,  
8 we've offered owners the opportunity to sell,  
9 trade, or commit their acreage to the unit. For  
10 those parties listed in the application and as  
11 outlined in Exhibit G, we have ongoing efforts to  
12 commit the non-consenting leasehold owners. And  
13 we'll continue to do so.

14 Q. Thank you. And moving on to a new  
15 topic, what percentage of the unit is comprised of  
16 unleased interests?

17 A. It looks like right now that's  
18 approximately 13.93 percent.

19 Q. And do you know how many acres in the  
20 unit those unleased interests account for?

21 A. Approximately 155.7 net mineral acres.

22 Q. And can you generally describe EAP's  
23 efforts to lease the owners of those unleased  
24 tracts?

1 A. Sure. So we make efforts to lease all  
2 the unleased interests. And those efforts are  
3 listed in our leasing affidavit included in  
4 Exhibit G. Generally speaking, we'll make phone  
5 calls, mail -- send mailers, or have in-person  
6 meetings to try to reach mutually agreeable terms.

7 Q. Since the filing of your application,  
8 has EAP continued its efforts to lease those  
9 unleased mineral owners as well as the  
10 non-consenting working interest owners?

11 A. Yes.

12 Q. Are you familiar with Exhibit C to the  
13 application?

14 A. Yes.

15 Q. Can you explain a little bit about what  
16 that is?

17 A. Exhibit C is an exhibit used for any  
18 parcels that are subject to pending ownership  
19 litigation or potential adverse ownership claims.

20 Q. And have you included any parties or  
21 parcels on Exhibit C for this application?

22 A. Yes. Parcels 1, 3, 53, and 61 are  
23 listed on the exhibit.

24 Q. Can you briefly explain the basis for

1 listing these?

2 A. Sure. So Parcels 1 and 3 are included  
3 due to ongoing quiet title proceedings between the  
4 surface owner and heirs of a reserving party.  
5 We've listed the prevailing party on Exhibit A and  
6 the appealing party on Exhibit C. We'll continue  
7 to monitor the proceedings and update the  
8 application as required or as it gets resolved.

9 Q. Thank you. And what about Tract 53?

10 A. Tract 53 is listed due to a dispute as  
11 to the subsisting nature of the lease. We're  
12 working with the landowner's counsel in order to  
13 reach a resolution to this dispute. And we're  
14 going to continue our discussions with these  
15 parties post-hearing to the extent we reach a  
16 resolution or continue in a constructive manner.

17 Q. Thank you. And last, please explain  
18 why Tract 61 is listed.

19 A. So that is listed due to possible  
20 marketable title implications. We've listed the  
21 reserving party and the MTA claimants. Similar to  
22 other parcels, we're going to continue to monitor  
23 the situation and we'll update the application as  
24 applicable.

1 Q. Great. I want to talk for a moment  
2 about the unit plan included in the application.  
3 Are you familiar with it?

4 A. Yes.

5 Q. Can you tell me the --

6 A. The purpose of the -- yeah, sure. The  
7 purpose of the unit plan is twofold. It helps  
8 define the respective rights of the parties in the  
9 unit. And it also serves to combine the oil and  
10 gas rights as if the unit was under one lease.

11 Q. And how will royalties and expenses be  
12 allocated pursuant to the unit plan?

13 A. On a surface acreage basis.

14 Q. Why did you choose this method?

15 A. For the reasons that will be discussed  
16 by Mr. Daniels, our geologist, including the  
17 uniformity of the formation, as well as this is  
18 the only way I've seen allocation, in my  
19 experience.

20 Q. So you're saying from your experience  
21 that this allocation methodology is common in Ohio  
22 for the Utica and Point Pleasant play?

23 A. Yes.

24 Q. Who pays unit expenses?

1 A. Participating working interest owners.

2 Q. Do royalty owners pay unit expenses  
3 under the terms of the unit plan?

4 A. No, they don't.

5 Q. Did you also include a joint operating  
6 agreement, or a JOA, in the application?

7 A. Yes.

8 Q. And does the JOA contain a mechanism  
9 for proposing operations to non-operating working  
10 interest owners?

11 A. Yes.

12 Q. Can you explain a little bit more about  
13 that?

14 A. Yeah. So Article 6 in the JOA provides  
15 that a proposal will be sent by the operator to  
16 the non-operating working interest owners. And  
17 the proposal will contain the proposed location of  
18 the initial well and an AFE setting forth the  
19 estimated cost to drill and complete the initial  
20 well.

21 Q. And are there non-consent penalties  
22 contained in the JOA to the extent that a party  
23 elects not to participate in unit operations?

24 A. Yes.

1 Q. And given your history and experience  
2 in the oil and gas industry, as well as your  
3 experience in the Utica-Point Pleasant play, do  
4 you believe the non-consent penalties set forth in  
5 the JOA are just and reasonable?

6 A. Yes.

7 MS. APPAYA: Thank you. I have no  
8 further questions for this witness.

9 MS. MARSHALL: Thank you. Ms. Barrett,  
10 do you have any questions?

11 MS. BARRETT: Yes, I do.

12 - - - - -

13 CROSS-EXAMINATION

14 BY MS. BARRETT:

15 Q. What is the current average outstanding  
16 offer to the unleased mineral owners in the  
17 proposed unit?

18 A. It's approximately \$4,080 and  
19 18 percent royalty.

20 Q. Okay. Is that 18 percent based on a  
21 net or gross amount?

22 A. For the outstanding offers, they're all  
23 gross.

24 Q. Okay. Do those offers include surface

1 use?

2 A. It's a combination of surface use and  
3 non-surface use.

4 Q. And when will those offers expire?

5 A. We don't currently have a specific  
6 expiration date. But so long as we continue  
7 negotiating, and to the extent that it's fruitful,  
8 we'll continue post-hearing and post-order.

9 Q. What is the average offer that was  
10 accepted by the leased mineral owners in the  
11 proposed unit?

12 A. So I have that at approximately \$4,200  
13 an acre and a 19 percent royalty. That's a  
14 mixture of gross and net.

15 Q. And can you please explain the  
16 difference between the current outstanding offer  
17 and the average offer that was accepted for the  
18 proposed unit.

19 A. Yes. Over time, just, the offers kind  
20 of go up and down based on anything from  
21 competition, specific lease terms, lease size.  
22 You know, most -- a lot of the acreage that has  
23 been leased at this point in this unit, you know,  
24 like the larger tracts and where we've had the

1 surface operations, as well as in the case of --  
2 in some cases, we have net leases that are  
3 probably leased at a higher, you know, bonus per  
4 acre as well.

5 Q. And do you believe your lease attempts  
6 have been reasonable?

7 A. Yes.

8 Q. Can you explain why?

9 A. Sure. Yeah, we've reached out to, you  
10 know, many mineral owners over the course of  
11 multiple years or certainly multiple months and  
12 via several attempts. And in general, in this  
13 area, we've taken hundreds or thousands of leases.  
14 And outside of this unit and inside, we continue  
15 to negotiate with interested mineral owners. And  
16 we'd like to enter into a mutually agreeable lease  
17 with anybody who is willing to do so.

18 Q. Will you continue attempts to lease the  
19 unleased mineral owners after today's hearing and  
20 after a unitization order's issued, if one is  
21 issued?

22 A. To the extent it's fruitful, we will.

23 Q. Okay. Do you believe your lease  
24 attempt -- or, sorry. I'll start that over. Do

1 you believe your attempts to commit the  
2 non-consenting working interest owners have been  
3 reasonable?

4 A. Yes.

5 Q. Can you explain why?

6 A. Sure, yeah. We've offered kind of  
7 industry standard terms in our, yeah, negotiations  
8 with them and offers to purchase, trade, or  
9 otherwise acquire the interest. In many of the  
10 cases, the third parties just wish to hold on to  
11 their interest but not commit themselves to our  
12 unitization application.

13 Q. Okay. And will you continue your  
14 attempts to commit non-consenting working interest  
15 owners after today's hearing?

16 A. Yeah. We're open to work with all of  
17 them. As far as the continuation, once the  
18 order's issued, should one be issued, they'll be  
19 subject to the unit agreement and operating  
20 agreement, including the application, which also  
21 includes the non-consent penalties. And they'll  
22 be provided a well proposal.

23 Q. Do the leases in the unit authorize  
24 drilling into and producing from the proposed

1 unitized formations?

2 A. They do.

3 Q. And to establish bonus and royalty  
4 amounts in leases, how are those generally  
5 determined?

6 A. Yeah, generally we'll start with the  
7 reservoir team to understand the range of bonus  
8 and royalty rates as guidance. And from there,  
9 competition is a big driver for the increase or  
10 decrease in the bonus in royalty. So are other  
11 factors such as pricing environment, parcel size,  
12 parcel location, surface, non-surface, kind of any  
13 number of factors that go into that.

14 Q. Okay. We received comments from the  
15 Eric Petroleum parties. You've listed Eric  
16 Petroleum Corporation as a consenting working  
17 interest owner in this application; is that  
18 correct?

19 A. That's correct.

20 Q. Okay. And then there was an -- just  
21 confirming that there was an affidavit of joint  
22 agreement that was filed where EAP stated it has a  
23 right to develop certain demographic -- or  
24 geographic areas, sorry, on behalf of the Eric

1 Petroleum Corporation; is that correct?

2 A. That's correct.

3 MS. BARRETT: Okay. Great. No further  
4 questions for me at this time. Thank you.

5 THE WITNESS: Thank you.

6 MS. MARSHALL: Thank you. Ms. Appaya,  
7 please call your next witness.

8 MS. APPAYA: Thank you. For our second  
9 witness, I'd like to call Mr. Randy Daniels.

10 MS. MARSHALL: Please swear in the  
11 witness.

12 - - - - -

13 RANDY DANIELS

14 being first duly sworn, testifies and says as  
15 follows:

16 DIRECT EXAMINATION

17 BY MS. APPAYA:

18 Q. Good afternoon, Mr. Daniels. Would you  
19 please state your name and place of employment for  
20 the record.

21 A. Good afternoon. My name is Randy  
22 Daniels. And I am employed by EOG Resources.

23 Q. And what is your position at EOG?

24 A. My title here at EOG is geoscience

1 operations advisor.

2 Q. And can you please describe a little  
3 bit about your educational background that led you  
4 to your position as a geoscience operations  
5 advisor. And please include any degrees that you  
6 hold.

7 A. Sure. So I do hold two degrees from  
8 the University of Houston. I have a Bachelor of  
9 Geology as well as my Master of Geology.

10 Q. And please describe a little bit about  
11 your professional experience and work history.

12 A. So I have over 14 years of petroleum  
13 industry experience as a geologist, with my first  
14 eight years being spent at Marathon Oil Company.  
15 At Marathon, I worked multiple unconventional  
16 basins across the U.S., from the Anadarko, the  
17 Eagle Ford, Permian, Delaware, and Williston  
18 Basins.

19 I left Marathon and joined Encino  
20 Energy in 2018. I spent almost seven years at  
21 Encino where I led a team in well planning and  
22 geosteering operations in the Appalachian Basin.  
23 And most recently, I have joined EOG in August,  
24 the successor in interest to EAP.

1 Q. Thank you. And can you please describe  
2 your work as a geoscience operations advisor at  
3 EOG?

4 A. Sure. So here at EOG I am one of the  
5 geologists responsible for the geologic  
6 information necessary to produce well permits and  
7 drilling plans for the development and drilling of  
8 the Utica-Point Pleasant asset owned or operated  
9 by EOG.

10 And to accomplish this, my daily  
11 activities include geologic risk assessment using  
12 seismic data, well log analysis, geologic mapping,  
13 well prognosis generation, and horizontal well  
14 planning. The team and I are also responsible for  
15 the real-time geosteering of all of our horizontal  
16 wells to ensure each one is accurately placed in  
17 the proper geologic target.

18 Q. Are you familiar with the application  
19 for unitization of the Good Shepherd Southeast  
20 unit, including the geology exhibits that appear  
21 in the application?

22 A. Yes, I am.

23 Q. Can you please describe for us what the  
24 term "unitized formation" means with respect to

1 the Good Shepherd Southeast unit.

2 A. So the unit formation describes -- it  
3 is described to be a depth from 50 feet above the  
4 top of the Utica Shale to 50 feet below the top of  
5 the Trenton Limestone.

6 Q. Thank you. And did you do any analysis  
7 to determine if the unitized formation is a pool  
8 or part of a pool, as required for unitization  
9 under Ohio law?

10 A. Yes, I did.

11 Q. Are you aware that the word "pool" has  
12 a specific meaning for purposes of EAP's  
13 application under Ohio law?

14 A. Yes, I am.

15 Q. So what does it mean to say that the  
16 unitized formation is part of a pool?

17 A. So a pool is defined to be an  
18 underground reservoir containing a common  
19 accumulation of oil or gas or both, but does not  
20 include a gas storage reservoir. And each zone of  
21 a geologic structure that is completely separated  
22 from any other zone in the same structure may  
23 contain a separate pool.

24 Q. So was that definition used for the

1 purposes of the geologic analysis of the Good  
2 Shepherd Southeast unit?

3 A. Yes, it was.

4 Q. And what information have you analyzed  
5 to determine whether the unitized formation is a  
6 pool or part of a pool?

7 A. So in the case of this unitization, my  
8 review of available core reports, mud logs and  
9 electric log data, nearby title wells.

10 Q. Thank you. Now turning to Exhibit F,  
11 which is shown on the screen, can you please  
12 describe what this exhibit is showing and why it's  
13 relevant to your geological analysis.

14 A. Sure. So this map shows the Good  
15 Shepherd unit as the yellow box, with the nearby  
16 pilot wells as blue circles. And these are the  
17 pilot wells that were used as part of that  
18 analysis to describe the pool underneath the Good  
19 Shepherd unit.

20 Q. All right. I'm turning now to  
21 Exhibit E. Can you explain what this exhibit is  
22 and how it relates to your geological analysis?

23 A. Yes. This is the cross-section of the  
24 pilot wells adjacent to the Good Shepherd unit.

1 Geologic mapping shows that the Utica Shale pool  
2 underlies the entire unit and is of the same  
3 approximate thickness and reservoir quality  
4 throughout the unit area.

5 This accumulation of oil and gas  
6 extends in all directions beyond the proposed  
7 unit. And the rock properties such as lithology,  
8 porosity, and fluid type are also similar  
9 throughout the entire unit and constitute a common  
10 source of supply. This is shown by the gamma ray,  
11 the resistivity, and the density logs on the  
12 cross-section. All three logs have very similar  
13 characteristics in all three of these pilot wells.

14 Q. So explain how gamma ray works and why  
15 this is relevant to your analysis.

16 A. So the gamma-ray log records the amount  
17 of natural gamma radiation emitted by the rocks in  
18 the subsurface. The gamma-ray log is used to help  
19 correlate different formations and derive  
20 lithology. For example, we're able to distinguish  
21 a sandstone or a shale from a carbonate using this  
22 log.

23 Q. And how is the gamma ray reflected on  
24 the slide?

1 A. So the gamma-ray curve is the far left  
2 curve on all three pilot wells. And you can see  
3 that the response or the character of the logs is  
4 very similar and the three curves are almost  
5 perfect overlays of each other.

6 Q. So what do these pilot well gamma-ray  
7 graphs tell us about the Good Shepherd Southeast  
8 unit?

9 A. So I would expect the gamma-ray  
10 signature of the Utica Shale Formation underlying  
11 the unit to be consistent with the three pilot  
12 wells.

13 Q. All right. Turning now to resistivity,  
14 can you please explain a little bit about how  
15 resistivity works and why it is relevant to your  
16 analysis.

17 A. Yeah. So the resistivity log measures  
18 electrical resistivity of the formation. It's  
19 used to determine the formation of fluid type,  
20 water or oil or gas. Water-bearing formations  
21 typically have lower resistivity while a  
22 hydrocarbon-bearing formation typically will have  
23 a higher resistivity.

24 Q. And how is this reflected on the slide?

1 A. The resistivity log is the middle curve  
2 on all three pilot wells. And once again, very  
3 similar log response, indicating that there is a  
4 uniform hydrocarbon saturation across the unit.

5 Q. And so what do these pilot well  
6 resistivity graphs tell us about the Good Shepherd  
7 Southeast unit?

8 A. I would expect the resistivity of the  
9 Utica Shale Formation underlying the Good Shepherd  
10 unit to be consistent with what we see in the  
11 pilot wells.

12 Q. All right. Now turning to bulk  
13 density, can you please explain what that is and  
14 why it's relevant to your analysis.

15 A. Yeah. The bulk density helps us  
16 understand just how dense or tight the rock is and  
17 helps us to evaluate the potential for storage  
18 space or porosity within the rock.

19 Q. And how is bulk density reflected on  
20 the slide?

21 A. The bulk density curve is the black  
22 curve on the far right of all three pilot wells.  
23 And once again, like the other two curves, the  
24 density curves on all three wells are almost

1 identical, showing a uniform amount of storage  
2 space across the unit.

3 Q. So what does the bulk density curve for  
4 the pilot wells tell us about the Good Shepherd  
5 Southeast unit?

6 A. I would expect the storage potential or  
7 porosity of the Utica Shale Formation underlying  
8 the Good Shepherd unit to be consistent with these  
9 three pilot wells.

10 Q. Did you use the data and analysis you  
11 just described to form a professional opinion  
12 about whether the unitized formation described in  
13 the application is a pool or part of a pool?

14 A. Yes, I did.

15 Q. And what is your professional opinion?

16 A. The unitized formation is part of a  
17 larger hydrocarbon pool.

18 Q. So is there uniform thickness across  
19 the unitized formation in the Good Shepherd  
20 Southeast unit?

21 A. Yes, there is.

22 Q. And what is the thickness of the Utica  
23 Shale interval underlying the unit?

24 A. That is expected to be 271 feet.

1 Q. What is the height of your target zone  
2 for the wellbore?

3 A. The height of our target zone is about  
4 50 feet.

5 Q. And given your opinion that the  
6 unitized formation is part of a pool and has  
7 uniform thickness across the unit, in your  
8 professional opinion, would it be appropriate to  
9 allocate unit expenses and payments of the  
10 proceeds of oil and gas production from the unit  
11 on a surface acreage basis?

12 A. Yes.

13 Q. And in your experience, is it common to  
14 allocate payments on a surface acreage basis for  
15 unit operations in the Utica Shale?

16 A. Yes, it is.

17 MS. APPAYA: Thank you, Mr. Daniels. I  
18 have no further questions for you.

19 MS. MARSHALL: Thank you, Mr. Daniels.  
20 I have a couple questions. What is the  
21 anticipated true vertical depth of the horizontal  
22 portions of the wellbores?

23 THE WITNESS: We expect to land this  
24 well at a TVD of 8,150 feet.

1 MS. MARSHALL: What is the anticipated  
2 true vertical depth of the top of the Utica, the  
3 Point Pleasant, and the Trenton?

4 THE WITNESS: So the Utica is expected  
5 at 7,959 feet, the Point Pleasant at 8,100 feet,  
6 and then the Trenton Lime at 8,230 feet.

7 MS. MARSHALL: Do you expect production  
8 from outside of the Point Pleasant?

9 THE WITNESS: There is the potential  
10 for production from the lower Utica as well, yes.

11 MS. MARSHALL: Okay. Thank you.

12 Ms. Barrett, do you have any questions?

13 MS. BARRETT: No, I do not. Thank you.

14 MS. MARSHALL: Thank you. Ms. Appaya,  
15 please call your next witness.

16 MS. APPAYA: Thank you. For our final  
17 witness, we'd like to call Mr. Wes Casto.

18 MS. MARSHALL: Please swear in the  
19 witness.

20 - - - - -

21 WES CASTO

22 being first duly sworn, testifies and says as  
23 follows:

24 DIRECT EXAMINATION

1 BY MS. APPAYA:

2 Q. Hi, Mr. Casto. Would you please state  
3 your name and place of employment for the record.

4 A. Yes. My name is Michael Casto. I go  
5 by Wes Casto. My business is called Casto  
6 Petroleum Engineering. And I'm working as a  
7 contractor for EOG Resources, Inc., the successor  
8 in interest to EAP Ohio, LLC.

9 Q. And what is your job title?

10 A. Petroleum engineering consultant.

11 Q. Can you please describe for the panel a  
12 little bit about your educational background that  
13 led you to become a petroleum engineering  
14 consultant.

15 A. Yes. I have a Bachelor of Science in  
16 Petroleum Engineering from Marietta College.

17 Q. And please tell us a little bit about  
18 your professional experience and work experience  
19 since receiving your engineering degree.

20 A. Yes, after graduating, I worked for  
21 Chevron in drilling and completions. And then I  
22 worked for Wright & Company Petroleum Consultants  
23 for four years. And then in 2015, I became a  
24 licensed professional engineer in Ohio and started

1 my company, Casto Petroleum Engineering. And  
2 during that time, I've testified as a reservoir  
3 engineer in many ODNR unitization hearings for  
4 several operators and testified as an expert  
5 witness in many other legal matters.

6 Q. Thank you. And can you please describe  
7 a little bit about your responsibilities and work  
8 at O -- EOG. Sorry.

9 A. Sure. I specialize in reservoir  
10 engineering in the Utica-Marcellus Shale. And I  
11 perform reserve reports, mineral appraisals,  
12 acquisition and divestiture evaluations, and other  
13 types of analysis for many clients throughout the  
14 Appalachian Basin.

15 Q. And did you assist with preparing the  
16 application for unitization of the Good Shepherd  
17 Southeast unit?

18 A. Yes.

19 Q. I understand that you have analyzed the  
20 potential recovery of oil and gas from the Good  
21 Shepherd Southeast unit and the associated  
22 economics of the unit under two scenarios. First  
23 is if the unit was drilled without an order for  
24 unit operations, and second is if it was drilled

1 with the benefit of an order for unit operations  
2 from the Division. Did I get that right?

3 A. That's correct.

4 Q. All right. So first I want to talk  
5 about exactly what the well configurations would  
6 be in each scenario so that we can understand your  
7 economic analysis. On the screen is Exhibit D.  
8 Are you familiar with this map?

9 A. Yes.

10 Q. And does this map accurately depict the  
11 configuration of the wells that are the basis of  
12 your operational and economic analysis?

13 A. Yes, it does.

14 Q. Will EAP produce from the whole length  
15 of each lateral if unit operations are approved?

16 A. Yes.

17 Q. And if EAP does not receive an order  
18 authorizing unit operations, what would be the  
19 configuration and extent of the wells?

20 A. So under that scenario, the 10H lateral  
21 would be limited to 8,235 feet. The 210H lateral  
22 will be limited to 7,189 feet.

23 Q. Would EAP drill these wells without an  
24 order for unit operations?

1 A. No, they would not.

2 Q. Can you tell us a little bit about why  
3 not?

4 A. Because in that case, the economics of  
5 each lateral would no longer compete with other  
6 internal prospects. And as the economics table  
7 will show later, the present value of each of  
8 those two laterals would be greatly affected if  
9 they could not be unitized and drilled to their  
10 longer extents.

11 Q. All right. Let's talk a little bit  
12 about the economics table that you just brought up  
13 and the production in both the unitized and  
14 non-unitized scenarios. Is this the economic  
15 table that was included in the latest supplement  
16 to the application for this unit?

17 A. Yes.

18 Q. Looking first at the bottom table, can  
19 you tell us the differences in lateral length  
20 between the unitized and non-unitized scenarios?

21 A. Yes. The differences are 11,765 feet  
22 for the 10H lateral and 12,790 feet for the 210H  
23 lateral.

24 Q. And when making your calculations, what

1 did you look at to estimate potential recovery  
2 from the Good Shepherd Southeast unit?

3 A. I created type curves for the proposed  
4 laterals based on the performance of analogous  
5 producing wells in the area. And in this  
6 analysis, I considered many variables like thermal  
7 maturity and completion parameters, the proximity  
8 and vintage, et cetera.

9 Q. Does the exhibit on the screen right  
10 now show the wells that you used in your analysis?

11 A. Yes.

12 Q. And does the information on the table  
13 now shown on the screen relate to the numbered  
14 analogue wells you were just discussing?

15 A. Yes.

16 Q. All right. Turning back now to the  
17 economics table, we've already discussed the  
18 lateral length column. But I have a few more  
19 questions about the other columns in these tables.  
20 In particular, can you explain what operating  
21 costs are and give some examples of operating  
22 costs?

23 A. Yes. So included in operating costs  
24 are lease operating expenses, which are the

1 day-to-day costs incurred by the wells after  
2 production begins. And those can be broken down  
3 into fixed monthly costs in terms of dollars per  
4 well per month, as well as variable costs like  
5 variable oil, gas processing and transportation,  
6 and water transportation.

7 Q. And to continue our discussion, in the  
8 columns in the economics table, I see that the  
9 next column is "Capital Costs." What is included  
10 in that?

11 A. That includes all the costs associated  
12 with land, drilling, completions, flowback  
13 facilities, plugging and abandonment, and  
14 reclamation.

15 Q. I'd like to ask now about the value  
16 assessment you made and applied to the estimated  
17 recovery in each scenario. First, what pricing  
18 index did you factor into your calculations?

19 A. It's the June of 2025 SEC pricing.

20 Q. And what do "PV0" and "PV10" mean?

21 A. Those are measures of cash flow, with a  
22 discount rate that accounts for the time value of  
23 money. And PV0 is a zero percent discount rate  
24 and PV10 reflects a 10 percent discount rate.

1 Q. And are the PV numbers net of  
2 reasonably expected capital costs and operating  
3 expenses?

4 A. Yes.

5 Q. Moving now to estimated gross recovery,  
6 what is that?

7 A. That is the amount of oil and gas in  
8 terms of BCFe equivalent that's expected to be  
9 recovered over time.

10 Q. Under that unitized scenario, can you  
11 tell the Division what you estimate for production  
12 volumes, revenue, expenses and costs, and value of  
13 recovery?

14 A. Yes. So for the unitized scenario, the  
15 recovery volumes expected are 50.4 BCFe, the  
16 discounted value of estimated recovery is \$146.7  
17 million, operating costs are \$59.8 million,  
18 capital costs are \$31.1 million, PV0 is \$28.8  
19 million, and the PV10 is \$8.8 million.

20 Q. Now can you tell the panel how those  
21 numbers change in the second table from the top,  
22 being the non-unitized scenario?

23 A. Yes. In a non-unitized scenario, the  
24 recovery volumes are 19.1 BCFe, the undiscounted

1 value of estimated recovery is \$55.5 million,  
2 operating costs are \$23.4 million, capital costs  
3 are \$12.4 million, PV0 is \$9.6 million, and PV10  
4 is \$3.2 million.

5 Q. And is it your professional opinion and  
6 testimony here today that a unit order is  
7 reasonably necessary to increase substantially the  
8 ultimate recovery of oil and gas in the Good  
9 Shepherd Southeast unit?

10 A. Yes. And I estimate that if an order  
11 is granted, EAP will recover an additional 31.3  
12 BCFe of oil and gas.

13 Q. And lastly, is it your professional  
14 opinion and testimony that the value of the  
15 estimated additional recovery of oil and gas  
16 exceeds the estimated additional cost of unit  
17 operations?

18 A. Yes. And if you compare the present  
19 value figures, an additional \$91.2 million would  
20 be realized on an undiscounted basis, an  
21 additional \$19.2 million in PV0 would be realized,  
22 and an additional \$5.6 million would be realized  
23 on a PV10 basis if a unitization order is granted.

24 MS. APPAYA: Thank you, Mr. Casto. I

1 have no further questions.

2 MS. MARSHALL: Thank you. Ms. Barrett,  
3 do you have any questions?

4 MS. BARRETT: Yes, I do.

5 - - - - -

6 CROSS-EXAMINATION

7 BY MS. BARRETT:

8 Q. What is the estimated economic life of  
9 the well in years?

10 A. At least 50 years.

11 Q. When do you estimate EAP will recover  
12 the cost of drilling, testing, and completing the  
13 wells? And we're looking for one, one and a half,  
14 two, and three times, please.

15 A. Yes. One times is 3.3 years, one and a  
16 half times is 15.6 years, two times is 35.8 years,  
17 and they do not recover those costs at a  
18 three-times multiple.

19 Q. Okay. And there were four total pads  
20 planned off the -- or, sorry, four total wells  
21 planned off the pad?

22 A. Yes, that's right.

23 Q. Okay. And there are no existing wells?

24 A. Correct.

1 Q. You used estimated pad costs in your  
2 calculations, correct?

3 A. That's right.

4 Q. Those were shared equally amongst all  
5 four wells?

6 A. Correct.

7 Q. What amount was included for plugging  
8 and restoration costs per well?

9 A. \$330,000 per well.

10 Q. What is the estimated BCFe per 1,000  
11 feet?

12 A. 1.26 BCFe per 1,000 feet.

13 Q. What's the estimated recovery factor in  
14 the area?

15 A. 47 percent for gas.

16 MS. BARRETT: Okay. Thank you. No  
17 further questions for me at this time.

18 MS. MARSHALL: Thank you. Once again,  
19 if you would like to make comments, I'm first  
20 going to take all of your names and note whether  
21 you are an unleased mineral owner, working  
22 interest owner, or an owner with property in the  
23 unit. Only one person may speak at a time to  
24 properly record the hearing. And please mute your

1 microphone once you have delivered your comments  
2 or questions to avoid any feedback.

3           Additionally, anyone speaking today  
4 will be asked to provide their information to the  
5 court reporter. If you are uncomfortable speaking  
6 during the hearing, we will also accept written  
7 comments.

8           I have Mr. Tyler Heckathorn and will  
9 now ask for anyone else that wishes to make  
10 comments.

11           If you have joined us via WebEx and  
12 would like to make comments, please unmute  
13 yourself and state your name.

14           Hearing none.

15           If you have joined us via phone and  
16 would like to make comments, please unmute  
17 yourself by pressing "star 6" and state your name.

18           Hearing none.

19           As a reminder, we ask that any  
20 interested party who speaks here today pose any  
21 questions to the Division and we will then ask any  
22 questions to the Applicant.

23           Mr. Tyler Heckathorn, please let us  
24 know if you are here and ready to be sworn in.

1 MR. HECKATHORN: Yes, ma'am. I'm here.

2 MS. MARSHALL: Please swear in  
3 Mr. Heckathorn.

4 (Mr. Heckathorn is sworn in.)

5 MS. MARSHALL: Mr. Heckathorn, please  
6 proceed with your comments or questions.

7 MR. HECKATHORN: Thank you. My first  
8 question would be, for the tracts involving  
9 pending or potential interest owners, such as  
10 those found on Exhibit C, what does EAP intend to  
11 do with the potential royalties to be paid out?

12 MS. BARRETT: Mr. Buckles, if you're  
13 able to respond to the question.

14 MR. BUCKLES: Sure. So for those that  
15 are subject to existing litigation, we would  
16 expect to suspend those royalty interests.

17 MR. HECKATHORN: Thank you. Based on  
18 the non-consent penalty -- oh, excuse me.  
19 Testimony of the reservoir engineer indicates that  
20 there are potential risks involved with the  
21 drilling of the wells. Are there any risks found  
22 specific to this particular well, or are they just  
23 general risks in drilling?

24 MS. BARRETT: Mr. Daniels, if you're

1 able to answer.

2 MR. DANIELS: Yeah, there's no specific  
3 risks. They are general risks, which is drilling  
4 oil and gas wells this deep in these long of  
5 laterals.

6 MR. HECKATHORN: Thank you. If it's  
7 determined if the wells are offset, developmental,  
8 or wildcat wells, what type of wells are these?

9 MS. BARRETT: Mr. Daniels, if you're  
10 able to answer the question.

11 MR. DANIELS: These are developmental  
12 wells.

13 MR. HECKATHORN: Thank you. And under  
14 the statute, I know unit plan approval is required  
15 in writing by the royalty owners. But in the  
16 past, EAP tried to meet that requirement through  
17 an affidavit that's signed solely by the landman.  
18 I'm curious if EAP is planning on continuing that  
19 practice with this unit as well.

20 MS. BARRETT: Mr. Buckles, if you're  
21 able to answer the question.

22 MR. BUCKLES: Sure. Yeah, should the  
23 order be granted, I would expect that we would  
24 continue.

1           MR. HECKATHORN: Thank you. I know it  
2 was claimed in the application that EAP has the  
3 right to commit acreage on behalf of the Eric  
4 Petroleum parties to the unit. What agreement or  
5 what does EAP believe gives it the right to be  
6 able to do so, for the record?

7           MR. BUCKLES: We would point back to a  
8 2014 letter of agreement executed between  
9 Chesapeake Energy and Eric Petroleum.

10          MR. HECKATHORN: Thank you. Has anyone  
11 from EAP actually contacted anyone at Eric  
12 Petroleum other than the notice for this hearing  
13 today?

14          MR. BUCKLES: To my knowledge, we've  
15 given notice. And, yeah, in these hearings today,  
16 no.

17          MR. HECKATHORN: Thank you. And  
18 finally, just in closing, I'd like to again direct  
19 the Division's attention to the explanation in the  
20 Brocker affidavit that was attached to the  
21 comments that we submitted. That would be around  
22 page 63 of that submission.

23                 So the relevant terms of the  
24 acquisition agreement, again, first, there must be

1 a mutually agreeable JOA before Eric Petroleum has  
2 agreed to commit to the Haverhill Glen acreage to  
3 this unit; and second, that the JOA can affect  
4 Eric's working interest in the ASA leases, which  
5 in this case is affected because of the Stewart  
6 and the Glover leases are involved in this unit,  
7 then I don't believe that EAP's -- or excuse me, I  
8 don't believe Eric Petroleum's rights in those  
9 units have -- or tracts have been recognized.

10 So we would just kind of note that the  
11 affidavit here is somewhat inaccurate. It says  
12 EAP has entered into an agreement with Eric  
13 Petroleum, establishing EAP as an operator to  
14 develop certain geographical areas. That's not  
15 really true, because we don't recognize them as an  
16 operator until a mutually agreeable JOA would be  
17 entered into. And as has been testified, no one  
18 has even contacted Eric Petroleum beyond the  
19 notice for this hearing.

20 So with that, I thank everyone for  
21 their time and their answers. And I have nothing  
22 further unless there are questions from the  
23 Division. Thank you.

24 MS. BARRETT: No questions for me;

1 however, if the Applicant has a response to the  
2 questions and comments, please feel free.

3 MS. ALLERT: Thank you. We would just  
4 state that the deadline to submit comments was  
5 September 10, 2025 for this particular  
6 application; however, Eric Petroleum and its  
7 associated entities, referred to collectively here  
8 as Eric Petroleum, submitted around 260 pages  
9 worth of comments late in the day yesterday,  
10 September 23rd.

11 While the Applicant does reserve the  
12 right to conduct a thorough reading and analysis  
13 of what's been untimely submitted, we do want to  
14 emphasize the unfairness to the participants of  
15 these proceedings to not have a reasonable time to  
16 review and respond to the comments that were  
17 submitted.

18 We ask the Division to strike from the  
19 record the comments untimely submitted by Eric  
20 Petroleum and require them to do as everyone else  
21 and comply with the procedural guidelines set  
22 forth by the Division. In the event the Division  
23 does not strike these comments, we reserve the  
24 right to respond to the comments after a

1 reasonable opportunity to fully review the  
2 contents. Thank you.

3 MR. HECKATHORN: If I may answer.  
4 Again, as was just stated by Ms. Marshall, if a  
5 person were uncomfortable with speaking today,  
6 they could submit written comments today. We will  
7 try in the future to get things in sooner. But to  
8 strike them from the record, I think, would be to  
9 go too far.

10 If the Division were to decide to do  
11 so, I would ask that they would give me notice of  
12 that. And I will gladly resubmit the comments  
13 again so that they could be reviewed before the  
14 order would be issued. But I thank you for your  
15 time.

16 MS. BARRETT: Ms. Marshall, I have no  
17 further questions.

18 MS. MARSHALL: Does the Applicant have  
19 any closing remarks?

20 MS. ALLERT: Lila, do you want to  
21 handle the closing?

22 MS. APPAYA: Yep. Yeah, we just wanted  
23 to thank everyone for their time today and state  
24 that EAP believes that it has demonstrated that

1 its application for unit operations of the Good  
2 Shepherd Southeast unit meets the requirements of  
3 Ohio Revised Code Section 1509.28, and, therefore,  
4 asks the Division to grant its application. Thank  
5 you.

6 MS. MARSHALL: Thank you, everyone.  
7 The hearing is now concluded.

8 - - - - -

9 Thereupon, the foregoing proceedings  
10 concluded at 3:28 p.m.

11 - - - - -

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1 State of Ohio : C E R T I F I C A T E  
2 County of Franklin: SS

3 I, Katherine Konneker, a Notary Public in and  
4 for the State of Ohio, do hereby certify that I  
5 transcribed or supervised the transcription of the  
6 audio recording of the aforementioned proceedings;  
7 that the foregoing is a true record of the  
8 proceedings.

9 I do further certify I am not a relative,  
10 employee or attorney of any of the parties hereto,  
11 and further I am not a relative or employee of any  
12 attorney or counsel employed by the parties  
13 hereto, or financially interested in the action.

14 IN WITNESS WHEREOF, I have hereunto set my  
15 hand and affixed my seal of office at Columbus,  
16 Ohio, on October 9, 2025.

17  
18  
19 *Katherine J. Konneker*

20 \_\_\_\_\_  
21 Katherine Konneker, Notary Public - State of Ohio  
22 My commission expires February 28, 2027.

# Good Shepherd HN GMN SE

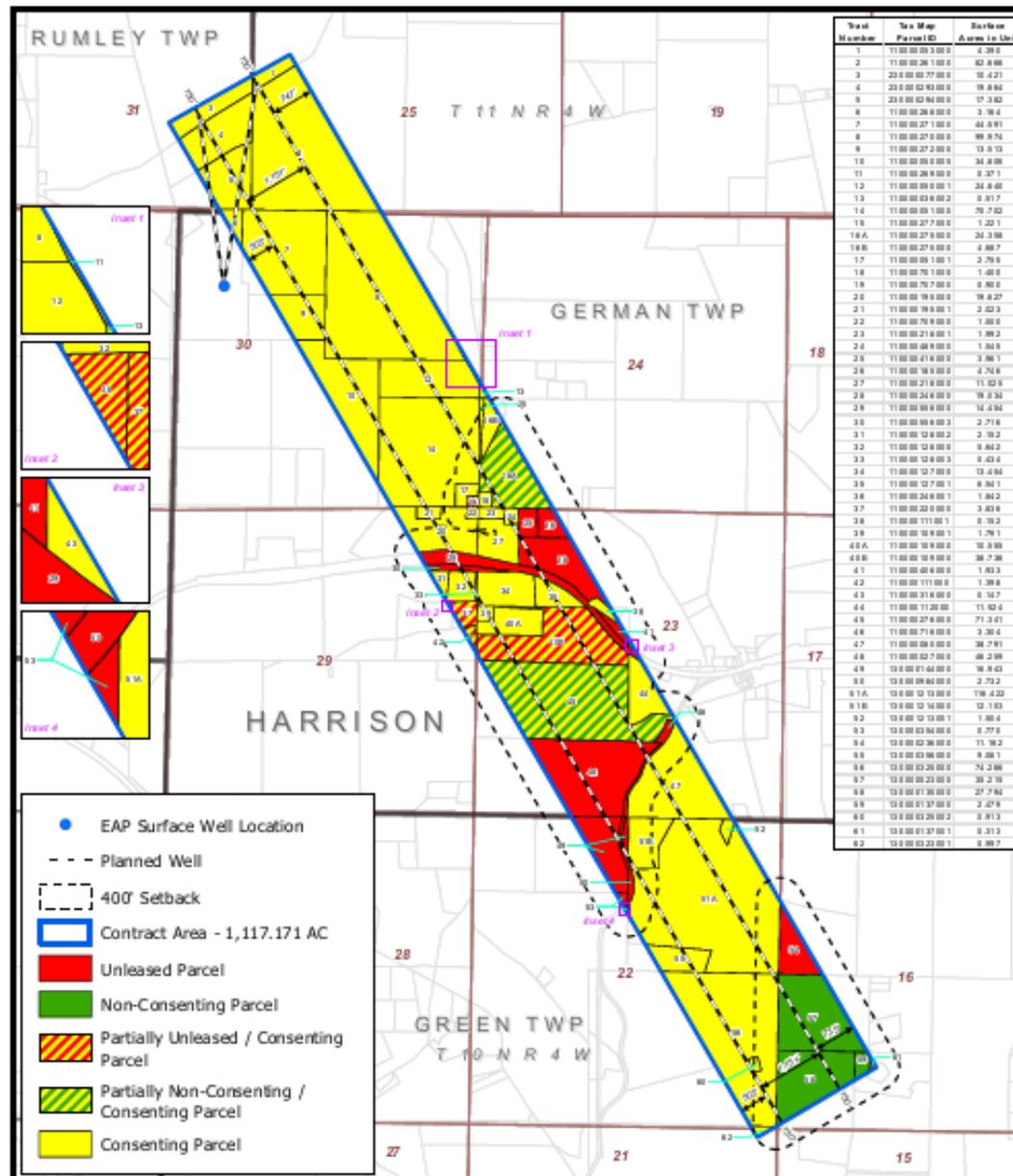
September 24, 2025

Jenae C. Allert

Lila M. Appaya



# Good Shepherd HN GMN SE Exhibit "D"

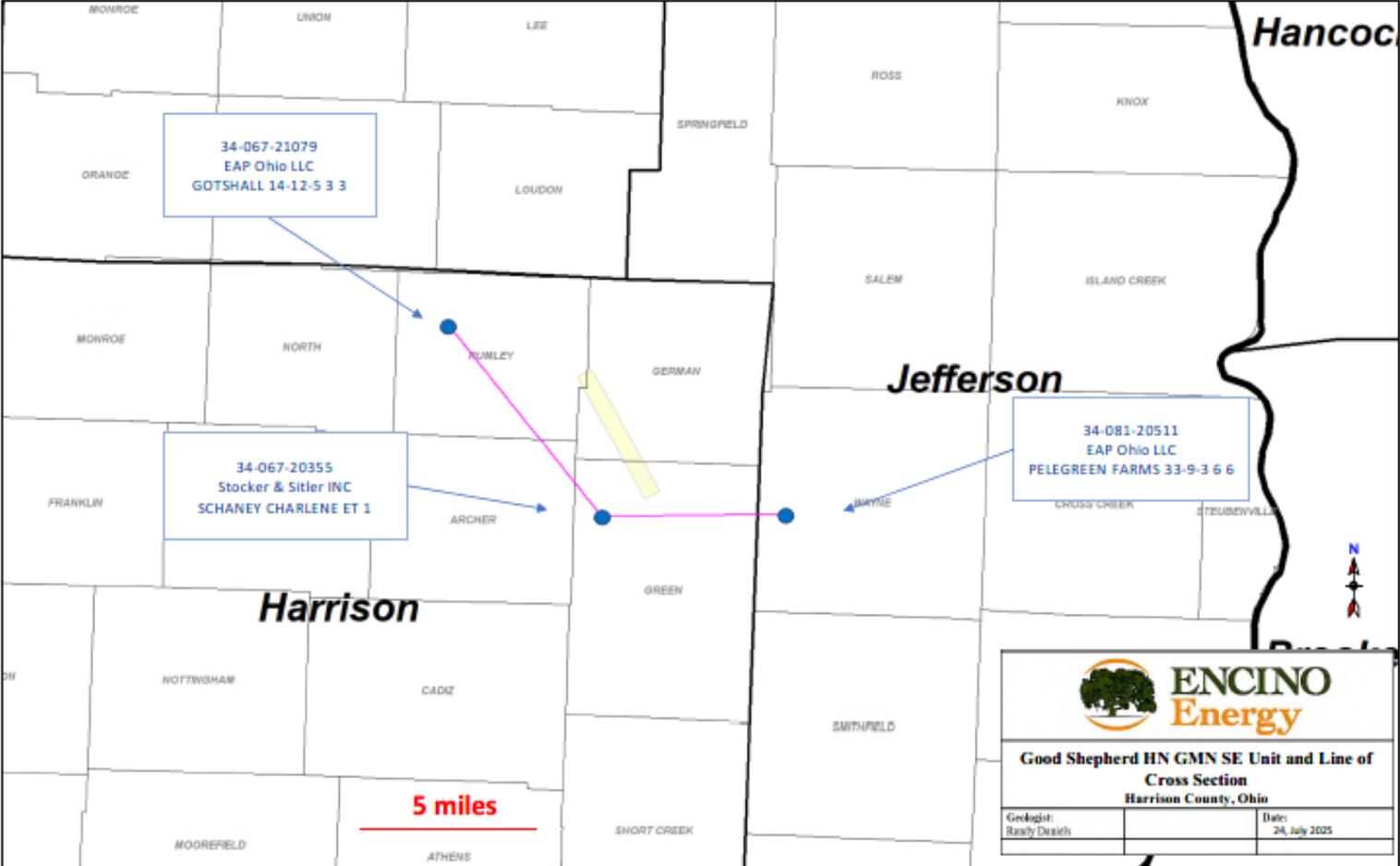


**Exhibit D**  
**Good Shepherd HN GMN SE Unit**  
**German, Rumley & Green Townships**  
**Harrison Co., OH**  
 1 inch = 2,200 feet

0 1,100 2,200  
Feet

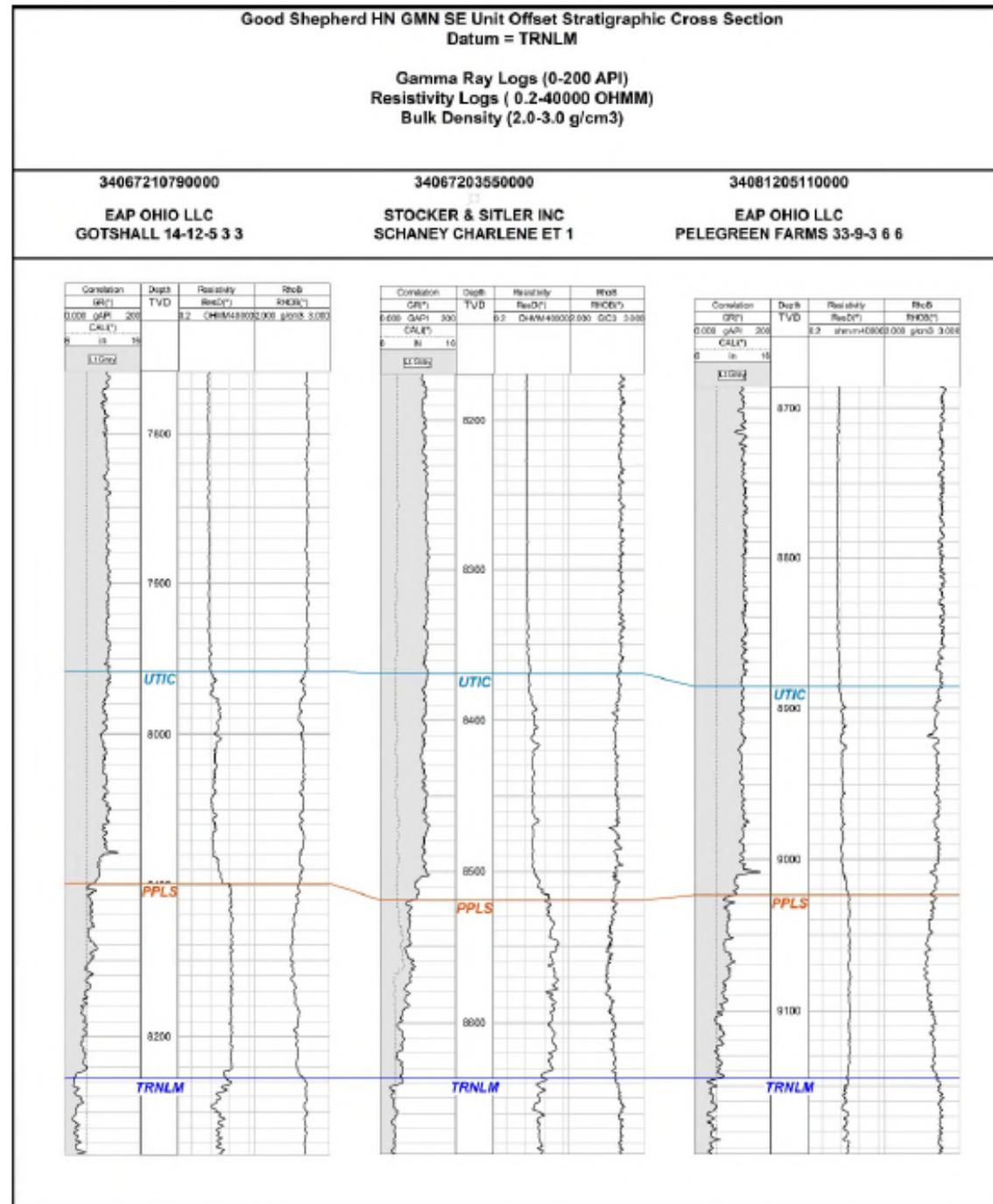
ENCINO Energy  
 Prepared Date: 04/17/2025

# Good Shepherd HN GMN SE Exhibit "F"



# Good Shepherd HN GMN SE

## Exhibit "E"



# Good Shepherd HN GMN SE

## Economic Summary

### Section 5. Economic Calculation Summaries *Required* Unitized Scenario



| Well Name                 | Lateral Length (ft) | Measured Depth (ft) | Operating Costs (MM\$) | Capital Costs (MM\$) | Undiscounted Value of Estimated Recovery (MM\$) | PV0 (MM\$)  | PV10 (MM\$) | Estimated Gross Recovery (BCFe) |
|---------------------------|---------------------|---------------------|------------------------|----------------------|---|-------------|-------------|---------------------------------|
| Good Shepherd HN GMN 10H  | 20,000              | 28,540              | 29.9                   | 15.6                 | 73.4  | 14.4        | 4.4         | 25.2                            |
| Good Shepherd HN GMN 210H | 19,979              | 28,519              | 29.9                   | 15.5                 | 73.3  | 14.4        | 4.4         | 25.2                            |
|                           |                     |                     |                        |                      |   |             |             |                                 |
|                           |                     |                     |                        |                      |   |             |             |                                 |
| <b>Total:</b>             | <b>39,979</b>       | <b>57,059</b>       | <b>59.8</b>            | <b>31.1</b>          | <b>146.7</b>                                    | <b>28.8</b> | <b>8.8</b>  | <b>50.4</b>                     |

### Non-Unitized Scenario

| Well Name                 | Lateral Length (ft) | Measured Depth (ft) | Operating Costs (MM\$) | Capital Costs (MM\$) | Undiscounted Value of Estimated Recovery (MM\$) | PV0 (MM\$) | PV10 (MM\$) | Estimated Gross Recovery (BCFe) |
|---------------------------|---------------------|---------------------|------------------------|----------------------|---|------------|-------------|---------------------------------|
| Good Shepherd HN GMN 10H  | 8,235               | 16,775              | 12.5                   | 6.6                  | 29.7  | 5.2        | 1.7         | 10.2                            |
| Good Shepherd HN GMN 210H | 7,189               | 15,729              | 10.9                   | 5.8                  | 25.8  | 4.4        | 1.5         | 8.9                             |
|                           |                     |                     |                        |                      |   |            |             |                                 |
|                           |                     |                     |                        |                      |   |            |             |                                 |
| <b>Total:</b>             | <b>15,424</b>       | <b>32,504</b>       | <b>23.4</b>            | <b>12.4</b>          | <b>55.5</b>                                     | <b>9.6</b> | <b>3.2</b>  | <b>19.1</b>                     |

### Difference

| Well Name                 | Lateral Length (ft) | Measured Depth (ft) | Operating Costs (MM\$) | Capital Costs (MM\$) | Undiscounted Value of Estimated Recovery (MM\$) | PV0 (MM\$)  | PV10 (MM\$) | Estimated Gross Recovery (BCFe) |
|---------------------------|---------------------|---------------------|------------------------|----------------------|---|-------------|-------------|---------------------------------|
| Good Shepherd HN GMN 10H  | 11,765              | 11,765              | 17.4                   | 9.0                  | 43.7  | 9.2         | 2.7         | 15.0                            |
| Good Shepherd HN GMN 210H | 12,790              | 12,790              | 19.0                   | 9.7                  | 47.5  | 10.0        | 2.9         | 16.3                            |
|                           |                     |                     |                        |                      |   |             |             |                                 |
|                           |                     |                     |                        |                      |   |             |             |                                 |
| <b>Total:</b>             | <b>24,555</b>       | <b>24,555</b>       | <b>36.4</b>            | <b>18.7</b>          | <b>91.2</b>                                     | <b>19.2</b> | <b>5.6</b>  | <b>31.3</b>                     |

# Good Shepherd HN GMN SE Adjacent Units

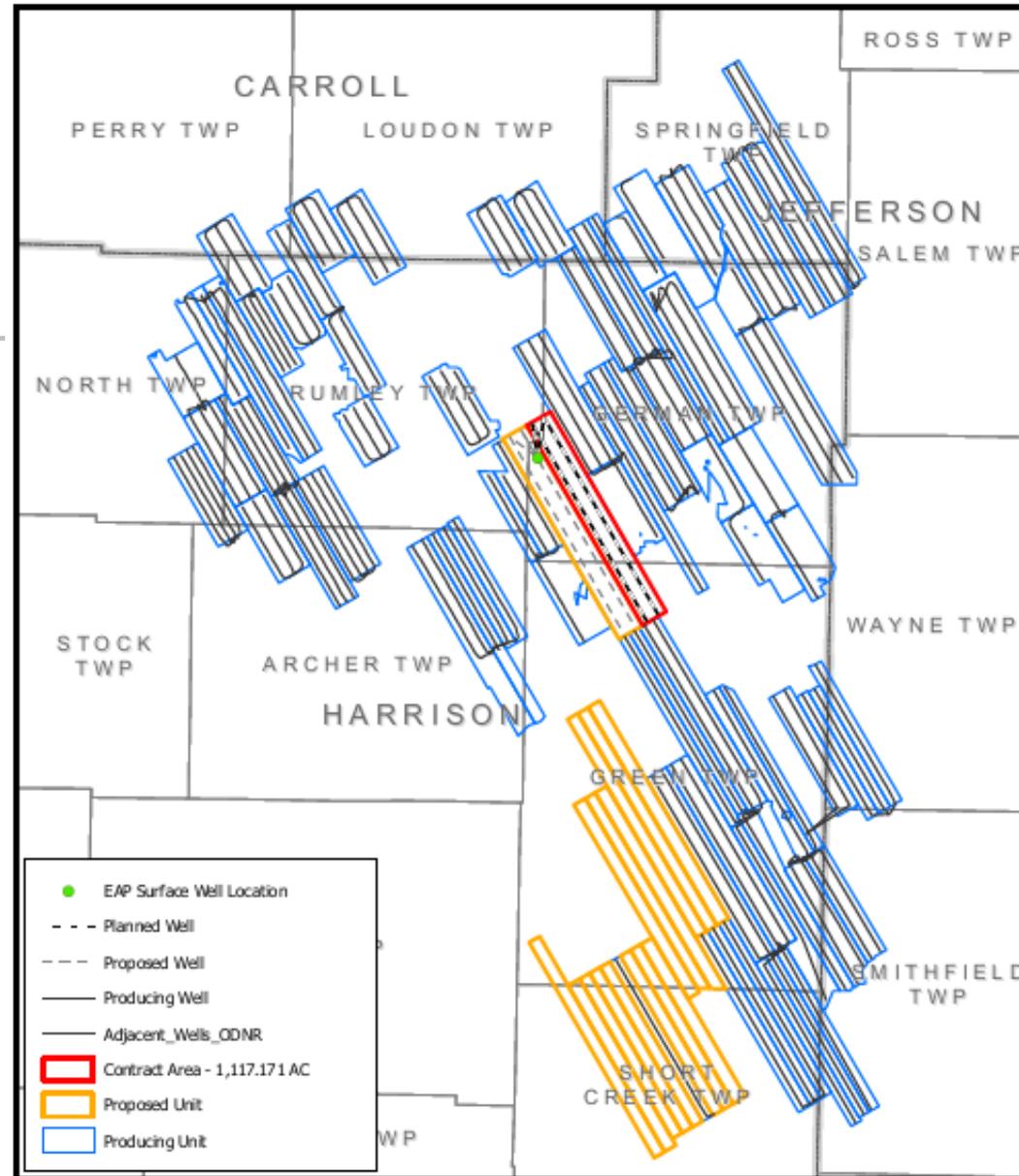


Exhibit - Adjacent Units - Overview



Good Shepherd HN GMN SE Unit  
German, Rumley & Green Townships  
Harrison Co., OH

1 inch = 2 miles



Prepared Date: 9/1/2025



## Good Shepherd HN GMN SE

# Offset Wells



| Well Name                | API Number     | Start Date | Lateral Length (Ft) | Distance from Unit (Mi) |
|--------------------------|----------------|------------|---------------------|-------------------------|
| ERICSON 11-10-4 5H       | 34067211510000 | 4/1/2016   | 6,889               | 1.85                    |
| ERICSON 11-10-4 6H       | 34067211520000 | 4/1/2016   | 5,602               | 1.63                    |
| ARBAUGH 31-11-4 1H       | 34067212340000 | 12/1/2014  | 6,653               | 0.82                    |
| ARBAUGH 31-11-4 5H       | 34067212390000 | 12/1/2014  | 6,692               | 0.64                    |
| ARBAUGH 31-11-4 3H       | 34067212430000 | 12/1/2014  | 6,432               | 0.81                    |
| HALL 29-10-4 3H          | 34067212810000 | 2/1/2016   | 7,406               | 0.75                    |
| HALL 29-10-4 6H          | 34067212820000 | 1/1/2016   | 8,232               | 0.76                    |
| HALL 29-10-4 1H          | 34067212940000 | 1/1/2016   | 8,245               | 0.76                    |
| HALL 29-10-4 5H          | 34067212950000 | 2/1/2016   | 10,477              | 0.55                    |
| MURRAY 5-10-4 6H         | 34067213380000 | 4/1/2016   | 7,899               | 2.27                    |
| MURRAY 5-10-4 3H         | 34067213400000 | 4/1/2016   | 7,747               | 2.44                    |
| MCBRIDE 20-11-4 8H       | 34067214060000 | 12/1/2015  | 8,398               | 1.83                    |
| DULKOSKI 24-10-4 8H      | 34067214120000 | 6/1/2016   | 6,942               | 0.45                    |
| DULKOSKI 24-10-4 4H      | 34067214660000 | 6/1/2016   | 6,956               | 0.46                    |
| SADIE 33-10-4 3H         | 34067215030000 | 6/1/2018   | 11,198              | 2.26                    |
| SADIE 33-10-4 5H         | 34067215040000 | 6/1/2018   | 11,155              | 2.05                    |
| SADIE 33-10-4 205H       | 34067215050000 | 6/1/2018   | 11,364              | 1.84                    |
| SADIE 33-10-4 1H         | 34067215070000 | 6/1/2018   | 11,155              | 2.28                    |
| SADIE 33-10-4 201H       | 34067215080000 | 6/1/2018   | 10,840              | 2.29                    |
| MICKEY 18-10-4 1H        | 34067215430000 | 8/1/2018   | 13,130              | 1.07                    |
| MICKEY 18-10-4 3H        | 34067215440000 | 8/1/2018   | 13,269              | 1.26                    |
| PICKENS 21-11-4 6H       | 34067215450000 | 9/1/2018   | 13,962              | 2.44                    |
| PICKENS 21-11-4 8H       | 34067215500000 | 9/1/2018   | 14,166              | 2.44                    |
| PICKENS 21-11-4 10H      | 34067215510000 | 10/1/2018  | 13,850              | 2.44                    |
| MCBRIDE 20-11-4 205H     | 34067215520000 | 5/1/2019   | 13,706              | 1.85                    |
| MCBRIDE 20-11-4 5H       | 34067215530000 | 5/1/2019   | 12,878              | 1.85                    |
| SHEPORG I GRN HR 3H      | 34067216160000 | 7/1/2020   | 16,451              | 1.53                    |
| SHEPORG I E GRN HR 5H    | 34067216170000 | 7/1/2020   | 16,316              | 1.60                    |
| MCBRIDE 20-11-4 3H       | 34067216230000 | 2/1/2020   | 12,607              | 1.84                    |
| MCBRIDE 20-11-4 210H     | 34067216240000 | 2/1/2020   | 8,655               | 1.85                    |
| DULKOSKI 24-10-4 10H     | 34067216800000 | 8/1/2022   | 13,176              | 0.45                    |
| PINE VALLEY NW GRN HR 1H | 34067216950000 | 5/1/2022   | 12,935              | 0.04                    |
| PINE VALLEY N GRN HR 3H  | 34067216960000 | 5/1/2022   | 12,625              | 0.04                    |
| PINE VALLEY NE GRN HR 5H | 34067216970000 | 5/1/2022   | 11,581              | 0.04                    |
| PINE VALLEY NE GRN HR 7H | 34067216980000 | 5/1/2022   | 11,450              | 0.04                    |
| DULKOSKI HN GMN 1H       | 34067216990000 | 8/1/2022   | 12,557              | 0.27                    |
| DULKOSKI HN GMN 201H     | 34067217000000 | 8/1/2022   | 12,420              | 0.07                    |
| DULKOSKI HN GNM 2H       | 34067217010000 | 8/1/2022   | 12,438              | 0.45                    |
| JEFFCO NW GRN HR 1H      | 34067217260000 | 12/1/2023  | 19,155              | 0.01                    |
| JEFFCO N GRN HR 3H       | 34067217280000 | 12/1/2023  | 18,321              | 0.00                    |

# Good Shepherd HN GMN SE Offset Wells



| Well Name           | API Number     | Start Date | Lateral Length (Ft) | Distance from Unit (Mi) |
|---------------------|----------------|------------|---------------------|-------------------------|
| JEFFCO NE GRN HR 5H | 34067217300000 | 12/1/2023  | 18,584              | 0.01                    |
| JEFFCO NE GRN HR 7H | 34067217310000 | 12/1/2023  | 18,902              | 0.01                    |
| MCBRIDE 20-11-4 1H  | 34067217320000 | 5/1/2023   | 11,122              | 1.43                    |
| MCBRIDE 20-11-4 6H  | 34067217330000 | 5/1/2023   | 8,429               | 1.60                    |
| MCBRIDE 20-11-4 7H  | 34067217340000 | 5/1/2023   | 11,152              | 1.66                    |
| MCBRIDE 20-11-4 10H | 34067217350000 | 5/1/2023   | 8,403               | 1.84                    |
| MICKEY 18-10-4 5H   | 34067218160000 | 12/1/2024  | 11,468              | 1.38                    |
| MICKEY 18-10-4 201H | 34067218170000 | 12/1/2024  | 13,157              | 0.89                    |
| MICKEY 18-10-4 201H | 34067218170001 | 12/19/2024 | 13,157              | 0.89                    |
| BORUM N SMF JF 3H   | 34081209200000 | 4/1/2022   | 12,240              | 2.78                    |
| BORUM NW SMF JF 1H  | 34081209210000 | 4/1/2022   | 12,397              | 0.05                    |
| BORUM NE SMF JF 5H  | 34081209220000 | 4/1/2022   | 13,548              | 2.63                    |

# Good Shepherd HN GMN SE Pricing



| <b>JUNE 2025 SEC PRICING</b>       |                         |
|------------------------------------|-------------------------|
| <b>HENRY HUB NATURAL GAS</b>       | <b>\$3.20/MMBtu</b>     |
| <b>WEST TEXAS INTERMEDIATE OIL</b> | <b>\$67.33/BBL</b>      |
| <b>OIL PRICE</b>                   | <b>WTI - \$8.00/BBL</b> |
| <b>GAS PRICE</b>                   | <b>93% OF HENRY HUB</b> |
| <b>NGL PRICE</b>                   | <b>35.5% OF WTI</b>     |

Thank You

Bricker   
Graydon