1	Special Docket: Oil Conservation Division Hearings
2	
3	Docket No. 16-23 OCD
4	Case Nos: 23448, 23449, 23450, 23451, 23452, 23453,
5	23454, 23455, 23594, 23595, 23596, 23597, 23598,
6	23599, 23600, 23601, 23508, 23509, 23510, 23511,
7	23512, 23513, 23514, 23515, 23516, 23517, 23518,
8	23519, 23520, 23521, 23522, 23523
9	
10	Moderated by Felicia Orth
11	9 August 2023
12	8:30 a.m.
13	
14	
15	Remote Proceeding
16	
17	
18	
19	Reported by: Dana Fulton
20	JOB NO.: 6031717
21	
22	
23	
24	
	Page 1

1	APPEARANCES
2	List of Attendees:
3	Felicia Orth, Chair
4	Hailee Thompson, Examiner
5	John Garcia, Examiner
6	Marlene Salvidrez, Host
7	Blake Jones, Panel
8	Mark McCoy, Panel
9	Jim Bruce, Panel
10	Adam Rankin, Panel
11	Jenny Blake, Panel
12	Dylan Park, Panel
13	Leonard Lowe, Panel
14	Calvin Boyle, Panel
15	Darin Savage, Panel
16	Eddie Behm, Panel
17	John Coffman, Panel
18	Keaton Curtis, Panel
19	Bella Sikes, Panel
20	Staci Mueller, Panel
21	William Zimsky, Panel
22	
23	
2 4	
25	
	Page 2
	Dana /

1	CONTENTS		
2		PAGE	
3	Mr. Savage - Opening Statement	15	
4	Mr. Rankin - Opening Statement	18	
5	Mr. John Coffman	23	
6	Ms. Staci Mueller	150	
7	Mr. Calvin Boyle	214	
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
		Page 3	

1	PROCEEDINGS
2	MS. ORTH: be resuming. Thank you.
3	You see two technical examiners on your
4	screen, Hailee Thompson and John Garcia. My name is
5	Felicia Orth.
6	There are other staff on the line, of
7	course, and other folks. Looks like we have several
8	of the witnesses for whom I saw witness statements. I
9	did see other entries of appearance.
10	We had Mr. Bruce on earlier for Foran
11	Oil and MRC Permian. I also saw an entry of
12	appearance back from April by Blake Jones for Northern
13	Oil and Gas.
14	Mr. Jones, would you like to introduce
15	yourself? He may have stepped away. Let's see here.
16	Are there any other entries of
17	appearance this morning?
18	MR. RANKIN: Adam, here. And Officer,
19	I neglected to introduce my colleague, Paula Vance,
20	who will be assisting me during today's hearing as
21	well. She's with us.
22	MS. ORTH: Thank you very much. So let
23	me identify the cases. Maybe I should have done that
24	first.
25	We're here on the platform for a

1	hearing on the applications of Cimarex Energy for a
2	horizontal spacing unit and compulsory cooling in Lea
3	County, New Mexico. Cases number 23448 and 23455
4	through 23455.
5	Also, the applications of Cimarex
6	Energy for compulsory pooling in Lea County, New
7	Mexico. Cases number 23594 through 23601.
8	And the applications of Read & Stevens
9	for compulsory pooling in Lea County, New Mexico.
LO	These are cases 23508 through 23523.
L1	I have walked through the pleadings in
L2	each of those sets of cases from the applications,
L3	obviously; so motions for continuance, prehearing
L4	statements, exhibits, supplemental exhibits,
L5	objections to exhibits, and the self-affirmed
L6	statement of four witnesses for Cimarex and four
L7	witnesses for Read & Stevens/Permian.
L8	Is there anything else we should talk
L9	about before we begin the opening statements,
20	presumably, and then the introduction of witnesses?
21	MR. ZIMSKY: Yes, Madam, Hearing
22	Examiner. William Zimsky on behalf of Cimarex.
23	Mr. Rankin and I had discussed and
24	agreed to a procedure whereby Cimarex would go first.
25	They would present their witnesses in order and

1	they we, the attorneys, would ask questions of the
2	Cimarex witnesses regarding the exhibits and testimony
3	of the Permian Resources' witnesses.
4	And then, that way and then, Mr.
5	Rankin would do cross; and then, we would do redirect
6	and possibly recross.
7	Now, Cimarex or Permian Resources
8	filed rebuttal exhibits late last night. It's 44-
9	pages worth or so. And so I think it was at 9 o'clock
10	or so. We haven't had a real good chance to review
11	those.
12	So what I would suggest is that we put
13	off questioning about the rebuttal exhibits to allow
14	our witnesses to get a better grasp of them and put
15	that off until tomorrow, tomorrow morning.
16	If we get done with the hearing before
17	the end of today with everything else, then tomorrow,
18	pick up with questioning on the rebuttal exhibits.
19	And I would propose and I've
20	proposed this to Mr. Rankin; I don't think he agrees.
21	But I would propose that the Permian
22	Resources witnesses speak to those rebuttal exhibits;
23	and then we, Cimarex, would do a cross-examination and
24	redirect. And then, we would call back our land, our
25	geology, and our engineering experts to testify about

1	the rebuttal exhibits.
2	So and it based on the fact that we
3	just got those late last night, we're requesting a
4	limited continuance.
5	We had two days set for this hearing so
6	that we so the request is basically to start to
7	put off any questioning regarding the rebuttal
8	exhibits until tomorrow morning or at the end of the
9	regular hearing if it carries over into tomorrow.
10	MS. ORTH: Mr. Rankin?
11	MR. RANKIN: Thank you, Madam Hearing
12	Officer.
13	Yeah. What I had proposed to Mr.
14	Zimsky was that, in order to streamline and limit, you
15	know, the switching back and forth between
16	witnesses and I agreed that Cimarex could go first
17	and that they would present their witnesses, as Mr.
18	Zimsky stated, in turn; and then, after adopting their
19	testimony on direct, that they would go right into
20	their rebuttal testimony on exhibits.
21	And then, in order to save time, I
22	would then cross on both their direct testimony and
23	rebuttal and get it all done at one time. And then
24	they could do their redirect. And then we can move on
25	to the next witness.

1	And that way, I thought, was the most
2	streamlined manner of proceeding: to combine both
3	direct and cross at one time rather, direct and
4	rebuttal at one time.
5	Now, that was before, you know, we
6	circulated our rebuttal exhibits at the end of the
7	evening. We put those together in response to
8	Cimarex's new exhibit packets that they circulated,
9	you know, the week before the end of the prehearing
10	order.
11	And those new exhibit packets, you
12	know, included essentially new exhibits not just
13	around the discovery that was made on the fairly
14	limited issue, but basically was a significant
15	reconfiguration of their testimony and exhibits.
16	And so, you know, we did put together a
17	relatively concise rebuttal set of rebuttal
18	exhibits. And we circulated them as early as we could
19	in order to give them an opportunity to review so they
20	could prepare a cross examination.
21	What I understand Mr. Zimsky's asking
22	for, though, is more time to review our rebuttal
23	which we provided to them, you know, in advance in
24	order to provide to prepare surrebuttal. Which is,
25	you know, essentially a further rebuttal to our

1	rebuttal.
2	And I guess I don't understand the
3	basis for that. They've had our direct testimony and
4	exhibits from I don't know; I haven't added it up,
5	but I think it's almost been a month since the end of
6	July. Maybe three weeks, anyway, since July since
7	before the July 20th hearing.
8	And so I don't really understand why
9	they would need the additional rebuttal from Cimarex.
-0	Our rebuttal is narrowly focused to the
L1	issues that they've raised, and I believe it can be
L2	addressed through cross. And I don't think it needs
L3	to be that we need to go through another round of
L4	exhibits and testimony.
L5	MS. ORTH: So the packet I haven't
L6	had a chance myself, actually, to look at what was
L7	filed at 9 o'clock last night.
L8	Is it truly targeted, Mr. Rankin? It
L9	seems substantial to me.
20	MR. RANKIN: Well, Madam Examiner, if
21	you may note that their exhibit packets were they
22	submitted four different exhibit packets. The total
23	page count is on the order of just under 1200 pages.
24	They address a substantial amount of
25	information on their land, their geology, and their
	Page 9

1	engineering. And engineering is you know, went
2	from I don't have the page numbers.
3	But they went from a relatively concise
4	engineering testimony packet to an engineering
5	testimony that is on the order of it's 50 or 60
6	paragraphs, over 60 paragraphs, with a whole
7	additional set of exhibits.
8	And so yeah. I mean, I would say
9	that our exhibits that we filed are directed.
LO	Most many of them are focused on the engineering
L1	side.
L2	Some of our land exhibits do address
L3	some of the concerns we have with Cimarex's statements
L4	about support; you know, ownership issues; some title
L5	issues. We have some geology that is very, very
L6	limited; it's only two slides that address the
L7	geology. But those feed into and help explain the
L8	basis for the engineering rebuttal that we provide.
L9	So I think it is fairly direct.
20	There's some of the pages are, frankly, just pages
21	that address some of the working interest owners who
22	have either changed their positions or reflected a
23	desire to be neutral in the case going forward.
24	So many of those pages are really just
25	sort of supplements, you know, demonstrating the

1	position of some of the additional working interest
2	owners.
3	So I think if you do review it, Madam
4	Examiner, I think you'll see that it's fairly
5	directed.
6	We also included some, you know
7	Cimarex issued an investor relations report this week
8	that touches on some of these issues, and so we did
9	include some slides from their investor relations
10	report that came out two days ago.
11	So you'll see, I think, it's not
12	anything, you know, out of scope. It is directed
13	really specifically to the claims and arguments that
14	Cimarex raises in their direct testimony.
15	MS. ORTH: All right. I just I feel
16	like the night late, the night before the hearing,
17	particularly when we have two days set aside for the
18	hearing, as Mr. Zimsky noted, we have an opportunity
19	to handle the rebuttal tomorrow morning even if we do
20	finish today.
21	And I'm not sure that we're going to
22	finish today. We do need to wrap it up around 4:30
23	this afternoon.
24	One or more of the technical examiners
25	has a work-related reason to have to be pulled away

1	right around 4:30. So we've not got a lot of time
2	here today. I think we may well be going into
3	tomorrow in any event.
4	So Mr. Zimsky, let's handle rebuttal
5	tomorrow as you ask.
6	Is there anything else we need to talk
7	about?
8	MR. GARCIA: I have a question for the
9	parties.
10	MS. ORTH: Mr. Garcia?
11	MR. GARCIA: Do you guys plan on
12	screen-sharing your exhibits due to the large volume
13	of exhibits?
14	MR. RANKIN: Mr. Garcia, I can respond.
15	I think in some instances, I do plan to share the
16	screen where I think it's appropriate and helpful,
17	where there's details that I intend to point out or
18	walk through.
19	But I don't always intend to share in
20	every circumstance here. So at least from my
21	perspective, you know, I tend to be sort of selective
22	in terms of what documents or exhibits I intend to put
23	forward.
24	MR. SAVAGE: And Mr. Garcia, we agree
25	with that. We would try to identify the exhibits
	Page 12

1	within the packet and the page numbers to facilitate
2	their identity and location.
3	And if there needs to be something that
4	needs to be examined more closely, then we would
5	provide a share of that item. But I think testimony
6	and exhibits are pretty self-explanatory.
7	MR. GARCIA: I just want to ensure that
8	I'm looking at the right exhibit packets, because
9	there's multi exhibit packets in the files.
10	So that should work, as long as these
11	are clear on which exhibit packet we're staring at
12	throughout your testimony and cross testimony or
13	cross examination, also.
14	MR. SAVAGE: Thank you.
15	MR. RANKIN: Madam Hearing Officer, I
16	guess there's one procedural hearing matter that may
17	be worth raising.
18	And that is, as far as the direct
19	testimony goes and Mr. Zimsky and I and Mr. Savage
20	discussed this a little bit, but you know, what I
21	propose is, in order to also save time and because
22	everything has been pre-filed and, in our case, our
23	exhibits have been pre-filed for, you know, on the
24	order of almost four weeks that rather than take
25	any time to, you know, summarize or attempt to restate

1	our relatively lengthy testimony that we would just
2	have our witnesses appear; be sworn in; be recognized
3	as experts in their field; and then, essentially,
4	adopt their testimony.
5	I'm happy to orient the examiners to
6	identify the exhibits, but I don't plan on spending
7	any time summarizing the testimony.
8	My concern about that is it's an
9	opportunity to you know, for either party
10	incidentally or inadvertently to, you know, confuse
11	the testimony.
12	And I just think it's appropriate just
13	to stick to what we have pre-filed.
14	MS. ORTH: Mr. Zimsky, I have certainly
15	done hearings where we did that. What do you think?
16	MR. ZIMSKY: Yes. We have agreed. I
17	think that's a good proposal. It'll help speed things
18	along.
19	MS. ORTH: All right. And I did
20	actually, I printed out all the self-affirmed
21	statement of every witness.
22	Okay. Anything else? No? Okay.
23	In that case, would you like to open
24	with opening statements? Or shall we go directly to
25	the Cimarex witnesses?

1	MR. SAVAGE: Madam Hearing Examiner, if
2	we could, we'd like to make an opening statement for
3	this to orient that examiners towards the cases.
4	MS. ORTH: All right. Please go ahead,
5	Mr. Savage.
6	MR. SAVAGE: Madam Hearing Examiner,
7	Technical Examiners, Counsel, these cases represent
8	two very different views, philosophies, and strategies
9	for developing the subject lands in an area that has
10	both challenging and unusual geology and that presents
11	operators with engineering and regulatory challenges.
12	Permian Resources has been active in
13	this area for what looks like about the past three
14	years, during which time it has drilled a handful of
15	wells in the Bone Spring units and less so in the
16	Wolfcamp, and now suddenly proposes an astounding
17	number of wells to be drilled in the subject lands: 48
18	in total with and I don't think this is hyperbole
19	to say with an astounding price tag at costing
20	approximately a quarter of a billion dollars more than
21	Cimarex's plan.
22	Cimarex, who has been a pioneer and
23	leader in this area of Lea County surrounding the
24	subject lands, has been actively working with other
25	major players since 2010 and is an established

1	operator with 35 horizontal wells drilled within the
2	basal Third Bone Spring sand; and, over the course of
3	the past 13 years, has verified that the Third sand is
4	the most economic target and really the best target
5	for developing the single reservoir in this area that
6	is located primarily in the third Bone sand.
7	While we see Permian Resources taking
8	an imprudent shotgun approach by proposing a sudden
9	blast of 48 wells into the subject land, Cimarex
10	currently has proposed 10 wells in the pooling
11	applications for its Loosey Goosey and Mighty Pheasant
12	wells and is taking what we believe to be a precise
13	and methodical approach through proven drilling that

and methodical approach through proven drilling that allows the collection of data, allowing Cimarex to continuously assess the progress of its development plans; to make adjustments, as necessary, of the development; that will culminate with a total of 30 wells in the subject lands and achieve the same amount

of production as Permian Resources' plan, but at half

the cost and without having to drill 18 unnecessary

14

15

16

17

18

19

20

2.1

22

23

24

25

wells.

It should be noted that since Permian Resources has proposed all 48 wells as initial wells, technically, they would have one year to commence drilling of all the wells under an order which raises

1 a number of questions regarding the practicality and 2. intent of their proposals. The question of waste, understood by 3 the Oil and Gas Act by its ordinary meaning, becomes 4 5 paramount in these cases; as is the protection of correlative rights. 6 7 Cimarex maintains that it is impossible 8 to prevent waste and protect correlative rights when 9 you present working interest owners with the kind of 10 price tag that Permian Resources wants to hang around 11 their necks along with the excessive number of 12 unnecessary wells. 13 There are still a few regulatory challenges to be addressed and resolved during these 14 15 proceedings, but none of which are insurmountable if 16 Cimarex is provided the opportunity to address them in 17 full. As part of this effort, Cimarex asks 18 the Division to take judicial notice of its closing 19 20 statement in related cases 23295 and 22853. 2.1 Cimarex can account for all the 22 remaining regulatory matters and show that the subject 23 lands can be developed without massive financial 2.4 waste, without suffocating costs, and without scarring the lands by the gratuitous drilling of 18 unnecessary 25

1	and avoidable wells.
2	Madam Hearing Examiner, Cimarex thanks
3	the Division for the opportunity to present its cases
4	today.
5	MS. ORTH: Thank you, Mr. Savage.
6	Mr. Rankin?
7	MR. RANKIN: Thank you, Madam Hearing
8	Officer. May it please the Division.
9	Cimarex, in our view here, is looking
10	to make these cases into a contest of technical
11	testimony and competing expert opinions over geology
12	and engineering. For sure, you're going to hear that
13	today and tomorrow.
14	But what Cimarex's witnesses are going
15	to tell you is that this acreage is unique, because
16	there are unknown geomechanical barriers or
17	hydrocarbon barriers to flow separating the basal
18	Third Bone Spring sand from the upper Wolfcamp.
19	Now, those two zones are both
20	hydrocarbon-rich zones, and they're targets in
21	different Division-designated pools. One's in the
22	Bone Spring pool, and the other is in the Wolfcamp
23	pool.
24	The fact that there's not a barrier
25	between them, however, is not unique. As you'll hear

1	from Permian's witnesses, it's a relatively common
2	occurrence. The catch is that there's an ownership
3	difference between the pools.
4	The owners and the ownership
5	percentages for each of the contested spacing units in
6	all of these cases are not the same between the two
7	pools. Some owners own a greater share in the Bone
8	Spring. Some own a greater share in the Wolfcamp.
9	And two owners don't own an interest at all in the
LO	Bone Spring; they only own in the Wolfcamp.
L1	But even the difference in ownership
L2	here between the two zones is not unique. It's a
L3	relatively again, relatively common occurrence for
L4	there to be variation in the ownership between
L5	formations or pools or even, in some circumstances, in
L6	the middle of a Division-designated pool.
L7	At most, these ownership differences
L8	represent a hiccup when forced-pooling is required.
L9	It can be complicated when ownership breaks occur
20	right in the middle of a pool, but that's something we
21	deal with every day or every week at hearings. It's
22	not uncommon. Or even in some circumstances;
23	right you know, as I said, in the middle of a pool.
24	Now, you know, it's not generally a big
25	issue. Now, the only time it can be an issue as it

1	is here is when, you know, the target intervals
2	that we've identified that both parties well,
3	Permian has identified and, at least as to one of the
4	targets, Cimarex has identified are right at the
5	pool boundary along an ownership break as we have here
6	between the Bone Spring and the Wolfcamp.
7	But that still is not an intractable
8	challenge. As you will hear, Cimarex and supporters
9	generally own a greater share of interest in the Bone
10	Spring. Their preference is to drill the Bone Spring
11	only and not drill the Wolfcamp.
12	Their position is that the Wolfcamp is
13	completely uneconomic in this acreage and that it
14	would be a waste to drill it. Their view is that the
15	Bone Spring can better drain and produce than
16	Wolfcamp.
17	Cimarex goes as far as to say that the
18	Division should place a buffer, a barrier, in the
19	upper Wolfcamp to keep it from being developed at all.
20	They want to do that, they say, to protect the
21	correlative rights; and who they're protecting is the
22	Bone Spring owners.
23	But the problem here is that Cimarex is
24	proposing to drill and produce only from the Bone
25	Spring. And they would wall off the Wolfcamp owners

1	for the benefit of the Bone Spring owners.
2	That proposal would severely and
3	irreparably harm all of the Wolfcamp owners. All of
4	them. They would no longer have an opportunity to
5	produce their minerals.
6	That's what's unique in this case, is
7	that Cimarex is essentially disregarding the
8	correlative rights of the owners in the Wolfcamp.
9	What they're proposing here to get
10	around that problem are two options; okay? But
11	besides being impracticable, those two options also
12	conflict directly with the express provisions of the
13	Oil and Gas Act.
14	Now, those are legal issues for another
14 15	Now, those are legal issues for another time. I'm not going to get into them. But while
15	time. I'm not going to get into them. But while
15 16	time. I'm not going to get into them. But while Cimarex is proposing to drill only the Bone Spring;
15 16 17	time. I'm not going to get into them. But while Cimarex is proposing to drill only the Bone Spring; Permian, on the other hand, wants to drill and produce
15 16 17 18	time. I'm not going to get into them. But while Cimarex is proposing to drill only the Bone Spring; Permian, on the other hand, wants to drill and produce from both the Bone Spring and the upper Wolfcamp.
15 16 17 18	time. I'm not going to get into them. But while Cimarex is proposing to drill only the Bone Spring; Permian, on the other hand, wants to drill and produce from both the Bone Spring and the upper Wolfcamp. As you'll hear, the testimony and the
15 16 17 18 19 20	time. I'm not going to get into them. But while Cimarex is proposing to drill only the Bone Spring; Permian, on the other hand, wants to drill and produce from both the Bone Spring and the upper Wolfcamp. As you'll hear, the testimony and the evidence demonstrates that that those two zones are
15 16 17 18 19 20 21	time. I'm not going to get into them. But while Cimarex is proposing to drill only the Bone Spring; Permian, on the other hand, wants to drill and produce from both the Bone Spring and the upper Wolfcamp. As you'll hear, the testimony and the evidence demonstrates that that those two zones are really independent, separate targets and justify
15 16 17 18 19 20 21 22	time. I'm not going to get into them. But while Cimarex is proposing to drill only the Bone Spring; Permian, on the other hand, wants to drill and produce from both the Bone Spring and the upper Wolfcamp. As you'll hear, the testimony and the evidence demonstrates that that those two zones are really independent, separate targets and justify co-development. And from Permian's point of view, I
15 16 17 18 19 20 21 22 23	time. I'm not going to get into them. But while Cimarex is proposing to drill only the Bone Spring; Permian, on the other hand, wants to drill and produce from both the Bone Spring and the upper Wolfcamp. As you'll hear, the testimony and the evidence demonstrates that that those two zones are really independent, separate targets and justify co-development. And from Permian's point of view, I think you'll hear as you'll hear, that both those

1	Not only is this the most practicable
2	way to protect the correlative rights of owners on
3	both sides of the pool boundary; but developing these
4	targets is the only way, we submit, to efficiently and
5	effectively produce both zones.
6	So as you heard in Cimarex's attacking
7	Permian's approach as being too expensive, but
8	Permian's more robust plan is intended to provide
9	flexibility and was proposed to counter Cimarex's
LO	initial earlier proposal, which we view as more of a
L1	cookie-cutter approach that doesn't specifically
L2	target or identify or respond to the specific
L3	unique the different geology in this area relative
L4	to other areas and offsetting tracts.
L5	In sum, Cimarex is proposing only the
L6	Bone Spring and prevent Wolfcamp owners from producing
L7	their own minerals in the Wolfcamp. And we think
L8	that's not the correct way to develop this acreage.
L9	There's no factual or legal basis for
20	the Division to endorse or adopt Cimarex's proposal
21	here. Permian's plan is more reasonable, more
22	practical, more efficient and effective, and will
23	protect all the owners' interests.
24	And so we appreciate approval of our
25	applications over Cimarex's. Thank you.

1	MS. ORTH: Thank you, Mr. Rankin.
2	Let's see. Mr. Savage, would you like
3	to call your first witness, then?
4	MR. SAVAGE: I would. Thank you, Madam
5	Examiner. I'll call Mr. John Coffman, who is the
6	landman for Cimarex Energy Company.
7	MS. ORTH: Good morning. Or yeah.
8	Good morning, Mr. Coffman.
9	MR. COFFMAN: Good morning.
10	MS. ORTH: If you would please raise
11	your right hand. Do you swear or affirm to tell the
12	truth?
13	MR. COFFMAN: Yes. I do.
14	MS. ORTH: Thank you. And if you would
15	spell your name for the transcript?
16	MR. COFFMAN: J-O-H-N C-O-F-F-M-A-N.
17	MS. ORTH: Thank you very much.
18	Go ahead, Mr. Savage.
19	MR. SAVAGE: Okay. Thank you.
20	Mr. Coffman, can you state your full
21	name for the record?
22	MR. COFFMAN: Yeah. John Coffman.
23	MR. SAVAGE: And you are expert witness
24	in professional land matters who has testified before
25	the division; correct?

1	MR. COFFMAN: I have.
2	MR. SAVAGE: And you have made the
3	effort to present Cimarex's 16 cases in digestible
4	packets for the hearing examiners; correct?
5	MR. COFFMAN: Yes, I have.
6	MR. SAVAGE: And you have written
7	testimony in each of Cimarex's hearing packets and
8	those are one through four that varies to some
9	degree; correct?
10	MR. COFFMAN: Yes.
11	MR. SAVAGE: And Hearing Packet 1
12	covers cases 23448 through 2341 for the Mighty
13	Pheasant cases in the Bone Spring formation in which
14	your written testimony is provided in Exhibit A
15	followed by sub-exhibits Al through AlO; correct?
16	MR. COFFMAN: That's correct.
17	MR. SAVAGE: And Hearing Packet 2
18	covers cases 23452 through 23455 for the Loosey Goosey
19	cases in the Bone Spring formation in which your
20	written testimony is provided in Exhibits A followed
21	by sub-exhibits Al through A8; is that correct?
22	MR. COFFMAN: That's correct.
23	MR. SAVAGE: And Hearing Packet 3
24	covers cases 2352 through 2355 and 2352 through and
25	23594 through 23601 in relation to those cases

1	describing Cimarex's option one in which your written
2	testimony is provided in Exhibit A followed by
3	sub-exhibit A1; correct?
4	MR. COFFMAN: That's correct.
5	MR. SAVAGE: And finally and I
6	apologize for going through this, but there is a lot
7	of information and we need to get it into the record.
8	Hearing Packet 4 covers Cases 23594
9	through 23601 for the Wolfcamp describing Cimarex's
10	option two in which your written testimony is provided
11	in Exhibit A followed by sub-exhibits A1 through A7;
12	is that correct?
13	MR. COFFMAN: Yes.
14	MR. SAVAGE: Mr. Coffman, do you
15	testify that these that your exhibits are accurate
16	and correct to the best of your knowledge?
17	MR. COFFMAN: Yes.
18	MR. SAVAGE: Madam Hearing Examiner, I
19	ask that Exhibits that Land Exhibits As, all
20	sub-exhibits A1 through A10 as applicable in each
21	Hearing Packet 1 through 4 in Cases 23448 through
22	23451 and 23594 through 23597 and 23452 through 23455
23	and finally 23598 through 23601 be admitted into the
24	record.
25	MS. ORTH: Mr. Rankin, any objection?
	Page 25

1	MR. RANKIN: No objection.
2	MS. ORTH: Okay.
3	Then, let me just ask if there's any
4	objection from anyone else who entered an appearance?
5	No? All right. They're admitted.
6	Thank you, Mr. Savage.
7	MR. SAVAGE: Thank you.
8	And thank you for your patience for all
9	of that. Mr. Coffman, have you reviewed Permian
10	Resource's land testimony and exhibits? Those of Mr.
11	Macha [ph] and any other of their exhibits that relate
12	to land matters?
13	MR. COFFMAN: Yes, I have.
14	MR. SAVAGE: And Mr. Coffman, I know
15	that just a few minutes Mr. Rankin said that he would
16	not get into the legal matters of this case.
17	But that seems to be central to this
18	based on Mr. Mancha's [ph] testimony; do you agree?
19	MR. COFFMAN: Yeah. I agree.
20	MR. SAVAGE: And it looks like Mr.
21	Macha [ph] seems to think, as he testifies in his
22	Paragraph 5, that Cimarex's plan option two as well
23	as option one
24	MR. RANKIN: Examiner, I object to the
25	form of the question. Mr. Darin seems to be leading

1	the witness. And I guess I would ask that he just ask
2	open-ended questions for his witness to testify.
3	MS. ORTH: Yeah. Please, Mr. Savage.
4	MR. SAVAGE: Thank you. I will do
5	that. I was just trying to get everything in as
6	context.
7	But Mr. Coffman, looking at Mr. Macha's
8	[ph] Paragraph 5 in this testimony, regarding his
9	claim do you have an opinion on his claim that
10	Cimarex does not meet statutory mandate?
11	MR. COFFMAN: Well, I'm not an
12	attorney. But in my opinion, I think that that is an
13	issue that needs to be addressed by the Division,
14	maybe with additional pleadings by either you or
15	additional counsel on that statutory mandate that he's
16	referencing.
17	MR. SAVAGE: And he seems to argue that
18	we do not satisfy the allocation statute.
19	Does Cimarex have a formula in place
20	for its Third Bone Spring well to satisfy the
21	allocation formula
22	MR. COFFMAN: Yeah.
23	MR. SAVAGE: apply to the statute?
24	MR. COFFMAN: Yeah. We do. It's in
25	our option two.

1	MR. SAVAGE: Okay. And if Cimarex were
2	asked and needed to provide it, we could provide that
3	to the Division for their review; is that correct?
4	MR. COFFMAN: That's correct.
5	MR. SAVAGE: Mr. Macha [ph] goes on.
6	It looks like that he seems to think that in
7	Paragraph 6 of Mr. Macha's [ph] testimony, it looks
8	like he contrasts Permian Resource's plan across ten
9	sections and talks about the extensive position of
10	Read & Stevens.
11	Can you do you have an opinion? Do
12	you agree with those claims that he makes?
13	MR. COFFMAN: Yeah. I think I think
14	Travis is referencing Permian's acreage to the south.
15	But I don't know if that encompasses our leasehold
16	that is to the north, which covers around 20 sections.
17	And that's in 19 South 34 East and 19 South 33 East.
18	I would say that, you know,
19	there's their acreage is, like I said, towards the
20	south and ours to the north. So
21	MR. SAVAGE: And he seems to suggest
22	that Permian Resources has been more active and has
23	more a bit more active in the area of interest; do
24	you agree with that?
25	MR. COFFMAN: I no, not necessarily.
	Page 28

1	I think there's a lot of communications that happen
2	behind the scenes regardless of, you know, wells being
3	drilled.
4	I know for a fact I've been working on
5	trying to get a federal unit put together up in 19-34.
6	And those conversations are through email and not
7	necessarily public record.
8	So you know, the amount of work that
9	goes into filing and getting a federal unit set up
10	especially with acres that has federal units already
11	on it takes a lot of work and a lot of, you know
12	I hate to use the phrase "stacking hands," but a lot
13	of stacking hands.
14	MR. SAVAGE: So it's true that you have
15	been active in this area. Can you describe the extent
16	of your activity?
17	MR. COFFMAN: Yeah. I think we're
18	trying to, like I said, set up a federal unit on 12
19	sections, 14 sections, for full-field development
20	directly to the north of this area.
21	You know, these things take time,
22	especially from a federal-unit standpoint. So we've
23	been, you know, reaching out to other working interest
24	owners in this area.
25	Not everything is, you know, fifty-

1	fifty, everybody on at a hundred percent in the
2	section anymore, so especially up in this area. So
3	it's pretty it's pretty hairy.
4	MR. SAVAGE: And you have been how
5	have you been working with the other major players?
6	Have you been working well with them?
7	MR. COFFMAN: Yeah. I think there's a
8	lot of smaller individual owners; you know,
9	medium-sized companies; and the larger companies that
10	we've been working with that are pretty open to
11	negotiations and moving forward with a reasonable plan
12	of development.
13	I think trying to work with Read &
14	Stevens has been the hardest in this area, you know,
15	in the last years that I've been working on this. So
16	it's I would say that Read & Stevens was extremely
17	difficult to work with.
18	But I'd say Permian Resources has been
19	much more responsive, but nothing has come out of the
20	meetings that we've had on a you know, a trade
21	situation or anything like that.
22	So we I'd say that for these four
23	sections, we've tried to operate within, you know, a
24	proven operator how a proven operator would. I
25	think it's just been a difficult road to trying to

1	get something resolved and get this acreage drilled.
2	MR. SAVAGE: It looks like in some of
3	Permian Resources' exhibits that they give a history
4	of Read & Stevens prior to Permian Resources being
5	involved.
6	How has that history been with Cimarex?
7	Has there been obstacles? Or has it been smooth?
8	MR. COFFMAN: No. There's there was
9	a highly contentious operatorship battle that went
10	over on the majority of these plans covered the south
11	half of Sections 4 and 5 and all of Sections 8 and 9.
12	They're under a 1979 operating agreement.
13	We went to court on that with Read &
14	Stevens, and the court said that there was a lack of
15	operatorship vote. So we had sent out our elections
16	for operatorship to the parties under that operating
17	agreement.
18	And we received the majority of
19	support. And we sent a letter to Read & Stevens
20	showing that, and they ignored it and refuted it.
21	And then, I think a couple years ago,
22	they had apartments that were about to expire. So
23	they without proposing wells to anyone under that
24	operating agreement spud and set surface casing on
25	three wells in Section 9.

1	So that's also an obstacle we've been
2	trying to deal with, is how do we develop when how
3	do we develop as a prudent operator within an area
4	where people are spudding wells out of one mile in the
5	middle of the section?
6	MR. SAVAGE: Okay. And one of the
7	seven factors that the Division considers in their
8	evaluation of competing applications is good faith
9	negotiations. Do you think that this plays these
10	interactions with Read & Stevens plays a role in that
11	evaluation?
12	MR. COFFMAN: Yes, sir.
13	MR. SAVAGE: Okay. Could you elaborate
14	on that a little bit?
15	MR. COFFMAN: Yeah. I think like I
16	said, I think the original Read & stevens discussions
17	we've had with them I mean, we tried to get in
18	front of them and, you know, offered to go to New
19	Mexico to Roswell to meet with them.
20	And then, you know oh, they were in
21	Fort Worth that weekend or that week. So we offered
22	to go to Fort Worth; and it you know, the plans
23	just never matched up.
24	And it was just tough to get ahold of
25	or at least, you know, in some sort of discussion with

1	them, you know, on getting this acreage developed.
2	But I would say, Permian, they are much
3	more responsive. You know, I've talked with Travis.
4	I think we've had shoot four, five meetings; you
5	know, discussions about, you know, just how do we move
6	forward.
7	I don't think, from the Permian side,
8	that it's been nearly as contentious. But we just
9	haven't been able to come to a, you know, trade or
10	deal. And that's virtual connectivity error
11	from our side.
12	MR. SAVAGE: Okay. And in Mr. Macha's
13	[ph] Exhibit C5 and testimony, he seems to claim that
14	there is acreage that supports Permian Resources'
15	development plan. But I don't see any acreage
16	percentages listed; do you?
17	MR. COFFMAN: No. Not in C5. No.
18	MR. SAVAGE: Okay. And I guess part of
19	that larger package of 44 pages plus pages, there
20	may be some exhibits in there that address.
21	But can you talk about the kind of
22	working interest support? In rebutting Mr. Macha's
23	[ph] claims, can you describe the kind of working
24	interest support that Cimarex has garnered?
25	MR. COFFMAN: Yeah. I would say for

1	each proration unit in the Loosey Goosey and Mighty
2	Pheasant developments and for both Bone Spring and
3	Wolfcamp, we have the majority of support from owners
4	that own in the Bone Spring and own in the Wolfcamp in
5	all except for the west-half west-half of Sections 5
6	and 8 in the Wolfcamp.
7	I think that is mainly in pause due to
8	Read & Steven's entities owning almost 50 percent in
9	that Wolfcamp west-half west-half proration unit. But
10	I mean even in the Wolfcamp developments and the Bone
11	Spring developments, for every proration unit, we have
12	the majority support from all working interest owners
13	there.
14	MR. SAVAGE: Okay. And in rebutting
15	Mr. Macha [ph], do we have exhibits and tables that
16	the examiners can look at that show that majority?
17	MR. COFFMAN: Yes. Yes, we do.
18	MR. SAVAGE: On the Hearing Packet
19	1 and this is page 175 I'm looking at Exhibit
20	A9. Is this an example of an exhibit that
21	demonstrates this? What you just described?
22	MR. COFFMAN: Yes. That's correct.
23	And I would say that even with regard to the addition
24	of Challenger's letter and Matador and Foran being
25	
23	neutral, we still have the majority interest of

1	support in both the Bone Spring and the Wolfcamp
2	except for that west-half west-half proration unit in
3	the Wolfcamp.
4	MR. SAVAGE: Okay. And those items you
5	just described are part of that last-minute exhibits
6	that we will look at, hopefully, tomorrow in more
7	detail.
8	But as you're saying as I
9	understand, even with those adjustments, you still
10	have majority support?
11	MR. COFFMAN: Yes. That's correct.
12	MR. SAVAGE: Can you look at Exhibit A9
13	and describe how the exhibit table shows this in terms
14	of just, you know, a general description of how it's
15	labeled?
16	MR. COFFMAN: Yeah. So we're
17	using this is coming from our ownership report, our
18	title opinion that we had rendered in June of 2023.
19	So these are using those numbers.
20	I know the Permian numbers are
21	different compared to ours. But we do, later on, use
22	Permian's numbers and still show that we are the
23	majority. We have the support of the majority in
24	there.
25	So in blue is PR support or PR-owned,
	Page 35

1	and that shows Permian Resources in the west-half
2	west-half Sections 5 and 8. And then yellow is
3	Coterra support or Coterra-owned. And then white is
4	neutral; so those they are not being credited
5	towards anyone on Exhibit A9.
6	MR. SAVAGE: Okay. And this
7	exhibit there's exhibits like this in each of the
8	hearing packets for the different cases; is that
9	correct?
10	MR. COFFMAN: That's correct.
11	MR. SAVAGE: So Hearing Packet 2 would
12	address the Loosey Goosey and it would have a table
13	like this; and then Hearing Packet 4, which addresses
14	the pooling of the Wolfcamp, would have a table like
15	this for the Wolfcamp as well; correct?
16	MR. COFFMAN: That's correct.
17	MR. SAVAGE: Okay. So these are all
18	readily available to the examiners to be used?
19	MR. COFFMAN: Yes, sir.
20	MR. SAVAGE: Okay. I'm looking at
21	Exhibit A10. This is in regards to Mr. Macha's [ph]
22	claim that they have the superior development plan.
23	What exactly is this exhibit
24	describing?
25	MR. COFFMAN: This shows the comparison
	Page 36

1	between total Permian Resources development cost,
2	their net cost per working interest owner; and then
3	our development cost and the net cost per working
4	interest owner; and then the difference between
5	developments which comes out to be \$256 million and
6	some change.
7	And I would just like to point out
8	that aside from Northern, Matador, Cimarex, and
9	Permian Resources a lot of these folks are small.
10	You know, they're small companies that are not used to
11	operating within the hundreds of millions of dollars.
12	So I know, like, the Hudson group which
13	would be Javelina partners and Zoro partners. I'm not
14	speaking on their financial basis, but I would find it
15	hard for them to probably, you know, come up with \$30
16	million for a, you know, Permian Resources
17	development. That'd be difficult.
18	MR. SAVAGE: And what would that have
19	to come up with for Cimarex?
20	MR. COFFMAN: Half. Half of that.
21	MR. SAVAGE: Okay. And Mr. Macha [ph],
22	in Paragraph 5 of his testimony, he makes claims that
23	correlative rights would be undermined if Cimarex's
24	plans were adopted even though, it looks like, it's
25	half the cost.

1	Can you explain? Talk a little bit
2	about it seems like correlative rights are a major
3	here. Can you talk a little bit about how Cimarex
4	would uphold correlative rights?
5	MR. COFFMAN: Yeah. I think just by
6	having the support of owners that are in the Wolfcamp
7	and the Bone Spring shows that our development is, you
8	know, more appealing to protecting their correlative
9	rights across both formations. I think that shows
10	that pretty clearly.
11	Another thing to note would be I
12	know it'll come up, so CLM Production and Warren &
13	Associates. You know, they own in that west-half
14	west-half of Sections 5 and 8 in the Wolfcamp.
15	We offered at our detriment,
16	Coterra's detriment to assign them a like-for-like
17	interest in the Third Bone Spring so that they would
18	have, you know, an opportunity to share across
19	formations at each would be a half-a-percent
20	working interest in there. And they refused.
21	We were not looking for a change of
22	support. We knew that they were going to support
23	Permian on their development regardless, but that was
24	something we did, you know, to make it like-for-like
25	across third Bone and the Wolfcamp.

MR. SAVAGE: Well, I'm looking at these
numbers and it looks to me like the owners would
benefit. Even if they were just paid on the Bone
Spring, they would benefit far more under Cimarex's
plan than Permian Resources'
MR. RANKIN: Madam Officer, you know,
I'm trying to just object and ask Mr. Coffman
MR. SAVAGE: I'll rephrase. I'll
rephrase the question.
MR. RANKIN: Thank you.
MR. SAVAGE: Looking at this exhibit,
do you think that the owners would benefit more under
Cimarex's plan or Permian Resources' plan? And why?
MR. COFFMAN: Yes, I do. And I think
Eddie has a good amount of slides in his exhibits that
show the nitty-gritty numbers of that.
But just on a layman landman basis, you
know, if you were to stand to make X amount of money
regardless and you could pay \$283 million for it or
\$539 million for it, I think most people would choose
the lower cost for the same outcome.
MR. SAVAGE: And when you refer to
Eddie, who are you referring to?
MR. COFFMAN: Eddie Behm, our reservoir
engineer.

1	MR. SAVAGE: Mr. Coffman, I thank you
2	for your time. That's all the questions I have at
3	this point.
4	MR. COFFMAN: Thank you.
5	MS. ORTH: Thank you, Mr. Savage.
6	Mr. Rankin, do you have questions of
7	Mr. Coffman based on his testimony?
8	MR. RANKIN: Thank you, Madam Hearing
9	Officer. I do.
10	I guess one thing I just want to bring
11	up is a housekeeping matter. I understood the
12	questions directed to Mr. Coffman were in the nature
13	of rebuttal; and so I understand that, as far as
14	Cimarex's rebuttal, that that would have been
15	incorporated in Mr. Coffman's testimony.
16	MS. ORTH: Right. So I think you can
17	question him about anything he just said
18	MR. RANKIN: Yeah. I
19	MS. ORTH: and anything that was
20	filed in his self-affirmed statement.
21	MR. RANKIN: Yeah. Understood. I
22	appreciate that. I just wanted to make sure. I
23	wanted to make sure I understood that Cimarex is
24	putting on its rebuttal case today, and I'll be
25	crossing on both direct and their rebuttal.

1	MS. ORTH: Mr. Savage, any
2	clarification there?
3	MR. SAVAGE: If Mr. Rankin could repeat
4	that, I'd appreciate that.
5	MR. RANKIN: I just I was a little
6	confused by Mr. Zimsky's request. But I guess, based
7	on your presentation with Mr. Coffman, I understand
8	that Cimarex is going to proceed to present its
9	witnesses on the direct testimony and as a rebuttal to
10	Permian's direct testimony today.
11	MR. SAVAGE: Well, Mr. Zimsky
12	MS. ORTH: So Mr. Zimsky, I did hear
13	Mr. Savage lead Mr. Coffman through a number of
14	rebuttals to Mr. Macha's [ph] self-affirmed statement
15	in particular.
16	MR. ZIMSKY: Yes. So I think my
17	impression was that was the agreement that we had with
18	Mr. Rankin to speed things along; that we would get
19	through our witnesses, and they would testify on
20	direct to rebut the package of exhibits and testimony
21	that were submitted, I think, on July 14th by Permian
22	but not the rebuttal exhibits that were filed last
23	night.
24	MS. ORTH: All right. Are we on the
25	same page, Mr. Rankin?

1	MR. RANKIN: I think so. I think so.
2	I mean, I'll reserve my response, I guess, you know,
3	about their ability to file additional exhibits or
4	have additional testimony on our rebuttal.
5	But I just wanted to make sure I
6	understood that they're putting forth their rebuttal
7	towards our direct testimony today, as well. That's
8	all. I appreciate the clarification.
9	MR. ZIMSKY: Yes. That's correct.
10	MS. ORTH: Thank you.
11	MR. RANKIN: Yeah. Thank you, Madam
12	Hearing Officer.
13	Good morning, Mr. Coffman.
14	MR. COFFMAN: Good morning.
15	MR. SAVAGE: So I'm going to do my best
16	to keep myself organized here. I'm going to try to
17	focus on one of the exhibit packets. I know that your
18	testimony is generally the same, but there is some
19	variation. And I think, as I understand, really the
20	only testimony that caries between the exhibit packets
21	is yours; is that correct?
22	MR. COFFMAN: I'd have to I'll take
23	your word for it. There's a lot of hearing packets.
24	MR. RANKIN: there are a lot of hearing
25	packets. Okay. Well, we'll figure that out, I guess,
	D
	Page 42

1	as we go forward.
2	Now I'm going to start off with the
3	first hearing packet, Hearing Packet number 1; which,
4	as I understand, addresses the Mighty Pheasant Bone
5	Spring cases; is that correct?
6	MR. COFFMAN: That's correct.
7	MR. RANKIN: Okay. And I'm going to
8	ask I'm going to direct your attention first to
9	Paragraph 29 of your statement.
10	MR. COFFMAN: Okay.
11	MR. RANKIN: And this goes to the
12	discussion around the relationship between Read &
13	Stevens and Cimarex. And you discussed this to some
14	extent in your rebuttal, in your dialogue with Mr.
15	Savage.
16	And I understood you to essentially
17	distinguish between the time in which the time
18	before Read & Stevens acquired sorry the time
19	before Permian Resources acquired Read & Stevens's
20	interests as to the status of your relationship or
21	ability to communicate with Read & Stevens.
22	In other words: prior to Permian
23	Resources acquiring Read & Stevens's interests, that
24	relationship was difficult; is that fair to say?
25	MR. COFFMAN: Yes. I'd agree with

1	that.
2	MR. RANKIN: But after Permian
3	Resources acquired it, it was a cordial relationship.
4	And you were able to have good communications, but you
5	just weren't able to reach agreement; is that fair to
6	say?
7	MR. COFFMAN: Yeah. I agree with that.
8	MR. RANKIN: So the issue that you're
9	raising about whether or not whether, you know,
10	Read & Stevens's behavior towards Cimarex should
11	implicate good faith negotiations was all behavior
12	that occurred prior to Permian Resources' acquisition
13	of Read & Stevens; is that correct?
14	MR. COFFMAN: That's correct.
15	MR. RANKIN: And in fact, the specific
16	issues that you raised that you suggested
17	reflected, you know, negatively on good faith
18	efforts involved activities outside of the four
19	sections at issue in these cases; correct?
20	MR. COFFMAN: Outside of the four
21	sections?
22	MR. RANKIN: Is that true or not?
23	MR. COFFMAN: Could you repeat it one
24	more time for me?
25	MR. RANKIN: Yeah. Did the activity
	Page 44

1	that involved Read & Stevens, were they outside of the
2	four sections at issue in these cases? Or were they
3	involving some of the acreage here?
4	MR. COFFMAN: It was solely this
5	acreage here.
6	MR. RANKIN: Now okay. Now, I'm on
7	that paragraph that I directed your attention to,
8	Paragraph 29 in your statement. This is where, I
9	believe, you start referencing that 1979 operating
10	agreement.
11	That 1979 operating agreement covers,
12	as I understand, the south half of Sections 4 and 5
13	and all of Sections 8 and 9; correct?
14	MR. COFFMAN: That's correct.
15	MR. RANKIN: And I'm just going to
16	refer to it as you do here, which is I'm just going
17	to call it the "1979 OA"; okay?
18	Now that includes essentially
19	everything at issue in these contested cases except
20	for the north half of Sections 4 and 5; correct?
21	MR. COFFMAN: That's correct.
22	MR. RANKIN: Now Cimarex has contended
23	that it's the operator under that OA; right?
24	MR. COFFMAN: Yes.
25	MR. RANKIN: But it doesn't include all
	Page 45

1	the acres at issue in these contested cases?
2	MR. COFFMAN: That's correct.
3	MR. RANKIN: And as a consequence, you
4	have provided in your exhibit packet a copy of for
5	both sets of cases, the Mighty Pheasant and the Loosey
6	Goosey the front pages of a proposed joint
7	operating agreement that would cover this acreage
8	entirely; correct?
9	MR. COFFMAN: That's correct.
10	MR. RANKIN: And just so I'm clear, the
11	reason that you've done so and the reason you proposed
12	a JOA that would cover all the acreage is because that
13	1979 operating agreement addresses only the
14	development of that contract area, being the south
15	half of Sections 4 and 5 and all of Sections 8 and 9,
16	but excludes the north half of Sections 4 and 5;
17	correct?
18	MR. COFFMAN: That's correct.
19	MR. RANKIN: So there's currently no
20	agreement among all the working interest owners to
21	combine their interests in Sections 4 and 9 for the
22	Loosey Goosey or Sections 5 and 8 for the Mighty
23	Pheasant; correct?
24	MR. COFFMAN: I would say that the 1979
25	OA is still in effect. So for the north half of 4 and

1	5, I would agree that there is not an operating
2	agreement that covers 4 and 9 and 5 and 8.
3	MR. RANKIN: But Mr. Coffman, you
4	didn't just propose an operating agreement that only
5	covers the north half of those tracts.
6	You proposed an operating agreement
7	that's going to supersede and cover the entire
8	acreage; correct?
9	MR. COFFMAN: That's correct.
10	MR. RANKIN: And the reason you're
11	doing that is because your operators don't currently
12	have an agreement in place to combine their interests
13	for the entire acreage; correct?
14	MR. COFFMAN: That's correct.
15	MR. RANKIN: And the only way to do
16	that is to propose a new JOA that covers all the
17	acreage; fair to say?
18	MR. COFFMAN: That's correct.
19	MR. RANKIN: Thank you. Now I'm going
20	to come back to the JOA, but I just wanted to touch on
21	that as a framework for our discussions.
22	Now in the original exhibits you filed
23	when this case was originally going to go to hearing
24	in July, at the end of each of the individual spacing
25	unit working interest breakdowns for each case, you

1	prepared a complete list of the parties that were
2	going to be pooled; do you recall that?
3	MR. COFFMAN: Yes.
4	MR. RANKIN: And it appeared to me that
5	that list was actually all the working interests in
6	each spacing unit; is that correct?
7	MR. COFFMAN: That's correct.
8	MR. RANKIN: And I take it that, upon
9	reflection and reviewing your updated exhibits, you
10	intended only to identify in that summary list the
11	parties who you're seeking to pool which is only those
12	who remain uncommitted; correct?
13	MR. COFFMAN: Yes. That is correct.
14	MR. RANKIN: Okay. So you made that
15	adjustment in the updated exhibits?
16	MR. COFFMAN: Yes. That is correct.
17	MR. RANKIN: Okay. Now so I kind of
18	want to walk through that with you on the updated
19	exhibits, because you've identified as being committed
20	to Permian I mean, rather, Cimarex's proposal.
21	And I'm going to start I guess it's
22	at Exhibit A-2.1 in your Hearing Packet number 1.
23	That first page is a copy of let's see; I'm not
24	sure if it makes sense I guess I could pull this up
25	here. Let's see.

1	MR. COFFMAN: If you could give me a
2	page number, that would be awesome.
3	MR. RANKIN: Well, unfortunately, your
4	exhibit packets weren't paginated from the beginning.
5	And so I guess I could do it on a PDF-page basis.
6	MR. COFFMAN: Yeah. That'd be great.
7	MR. RANKIN: Looks like it should be
8	PDF page 65.
9	I will go ahead and, if it's okay,
10	share my screen. Let me know when you can see my
11	screen, Mr. Coffman.
12	MR. COFFMAN: Yep. I can see it.
13	MR. RANKIN: Great. Okay. So this is
14	the first working interest ownership breakdown for the
15	Mighty Pheasant cases, and it's east-half east half.
16	And on this land ownership plot, you've
17	identified different tracts; and by color, identified
18	the leases associated with each one.
19	And then on the subsequent pages,
20	you've identified for each tract the ownership
21	interests and the net acres associated with those
22	owners; correct?
23	MR. COFFMAN: That's correct.
24	MR. RANKIN: And then on the far-right
25	column, you've identified whether they've committed to

1	Cimarex's development plan or not; right?
2	MR. COFFMAN: Yes.
3	MR. RANKIN: Now when you say
4	"committed" or "uncommitted", what do you mean by
5	that? What does that mean?
6	MR. COFFMAN: So "committed" is they
7	have either signed a letter of support for us; I have
8	either had written or verbal communication with them;
9	or they have signed our operating agreement.
10	MR. RANKIN: You've indicated here on
11	your list that even though you don't have a JOA
12	but you either got an email or letter or you verbally
13	got their confirmation that they're going to join your
14	JOA, you've marked them as committed?
15	MR. COFFMAN: That's correct.
16	MR. RANKIN: Now I'm going to scroll
17	down through these, because I just have a couple
18	questions. And I got a little confused when I was
19	trying to go through all these to sort it all out.
20	And I know there's a lot here and
21	there's a lot of owners. And it's you know, I
22	don't you know, it's not easy to keep track of; and
23	that was what I was trying to do, was keep track of
24	it.
25	So especially with respect to the
	Page 50

1	ownership support that you reflect, I just want to
2	make sure I got this straight.
3	So I'm looking at this page here. I
4	scrolled down. You noted yourself in your rebuttal
5	testimony I'm going to stop here at Challenger
6	Crude.
7	If you would just clarify for the
8	examiners, when you refer to Challenger Crude very
9	lately, very recently changing its position if you
10	would just explain for the examiners what occurred and
11	what you understand Challenger Crude's position is at
12	this point?
13	MR. COFFMAN: Yeah. And that'll be
14	shown in the rebuttal tomorrow on those exhibits.
15	But Challenger sent that letter and
16	I think everyone's seen it that says that they
17	would join whoever prevails in this hearing.
18	But at the time when I had put them as
19	"committed," they had signed up under our operating
20	agreement.
21	MR. RANKIN: Right. And they actually
22	indicate that in the letter: that they had signed the
23	JOA, but given the nature of the contested case
24	correct me if I'm wrong, Mr. Coffman, as I
25	paraphrase but they indicated that, for purposes of

1	this hearing, they're going to stay neutral; is that
2	correct?
3	MR. COFFMAN: Yeah. That's correct.
4	MR. RANKIN: They're no longer
5	supporting either party. They're going to be neutral.
6	Okay.
7	So for every instance where we see
8	Challenger Crude in each tract, that should be changed
9	from committed to uncommitted; right?
10	MR. COFFMAN: That's correct.
11	MR. RANKIN: Okay. Now I just want to
12	make sure I understood. And I scrolled through here.
13	I wasn't quite sure what the status of this trustee
14	trust interest is.
15	You mark it as committed; did that
16	interest sign a term assignment over to Cimarex?
17	What's the status of that interest?
18	MR. COFFMAN: Yes. Yes, they did.
19	They term-assigned us their interest.
20	MR. RANKIN: Thank you. I just wanted
21	to make sure I understood that.
22	Now continuing to scroll through here,
23	I note that you've indicated here that Chase has is
24	a committed interest.
25	MR. COFFMAN: Yeah.

1	MR. RANKIN: And this is one where I'm
2	a little confused. Because I think depending on what
3	tract I look at or what exhibit I have, they're either
4	committed or uncommitted.
5	So I guess my and as you probably
6	have seen in our rebuttal exhibits, Chase has
7	submitted a letter indicating that they have like
8	Northern have concerns about the development of
9	interests across Bone Springs and Wolfcamp.
10	And I guess I just want to make sure I
11	understand that you've indicated here they're
12	committed; but is it, in fact, the case that they
13	remain uncommitted?
14	MR. COFFMAN: Yeah. We can we could
15	change them to uncommitted.
16	MR. RANKIN: So in every instance where
17	Chase shows up, it should be an uncommitted interest;
18	right?
19	MR. COFFMAN: Yep. I agree with that.
20	MR. RANKIN: Okay. Now similarly, you
21	know, I'll note on this same tract; okay? As I scroll
22	down past Chase, I see the Mark's Oil interest here;
23	okay?
24	And I know in your summary you've got
25	them as uncommitted, and you've got them here as
	Page 53

1	uncommitted. But in certain instances, as I scroll
2	through in particular, the very next tract I see
3	that they're marked here as committed.
4	MR. COFFMAN: Yes.
5	MR. RANKIN: In the same spacing as
6	so again, I just want to make sure I understand that
7	in every instance where we see Mark's, they should be
8	actually noted as uncommitted?
9	MR. COFFMAN: Yeah. They're shown as a
10	party to be pooled on the recapitulation down below,
11	as well. So that's simply just a typo of Mark's Oil.
12	MR. RANKIN: And then, I also see that
13	you've got Union Oil listed as committed. And I see
14	that that's the case in certain of your exhibits, that
15	you've got them listed as a committed interest; is
16	that your understanding?
17	MR. COFFMAN: It was until the email
18	that was submitted last night came about. But we can
19	change them to uncommitted as well based on Robert's
20	email.
21	MR. RANKIN: But you don't have a joint
22	operating agreement signed with Union Oil at this
23	point?
24	MR. RANKIN: No. That we listed
25	them as committed just based on either verbal or email
	Page 54

1	or some understanding that they were going to be
2	committed to your plan; right?
3	MR. COFFMAN: That's correct.
4	MR. RANKIN: So in every instance,
5	then, where we see Union Oil and Gas, they should be
6	switched from committed to uncommitted; correct?
7	MR. COFFMAN: That's correct.
8	MR. SAVAGE: Madam Hearing Examiner, I
9	believe Mr. Coffman would stipulate and we would
10	stipulate that any typo or variation based on an email
11	or a confirmed letter would be adjusted.
12	I don't know if it's useful to go
13	through every single one of these. Some are typos.
14	Some are based on, like, rebuttal letters.
15	But can we stipulate that they would be
16	adjusted accordingly when we get to the rebuttal part?
17	MR. RANKIN: Sure.
18	And Madam Hearing Officer, I just have
19	a couple more to go through because there's a few that
20	remain, you know, I'm concerns about title and some
21	other parties who don't appear to be included here.
22	I just want to make sure I got I'm
23	on the same page as Cimarex.
24	MS. ORTH: All right. Go ahead.
25	MR. RANKIN: Thank you.

1	Now Mr. Coffman, I think in order to
2	save time, I think I heard you mention also during the
3	rebuttal testimony that you understood Matador is
4	indicated that its intent is to be neutral here in
5	this case; is that right?
6	MR. COFFMAN: Yeah. Matador and Foran.
7	MR. RANKIN: Because in the interests
8	ownership breakdown, you had identified that they were
9	committed. But just to be clear, you understand at
10	this point their intent is to be neutral?
11	MR. COFFMAN: Yes.
12	MR. RANKIN: Okay. And again, so every
13	instance where they're identified would be an
14	uncommitted interest?
15	MR. COFFMAN: Yes.
16	MR. RANKIN: Okay. And then, you
17	mentioned Foran. Now of course, when I look at your
18	working interest breakdown and I look at your exhibits
19	in let me see what it is A9, I think it is.
20	Yeah. A9. I don't see them, I don't
21	think, on there. So I don't see Foran on there for
22	either the Mighty Pheasant or the Loosey Goosey. And
23	I don't think I saw them in the Wolfcamp, either.
24	But on A10 where you've assessed the
25	costs for full development under both Permian and
	Page 56

1	Cimarex's plans, I do see Foran listed. And I see you
2	assigned them a cost of approximately \$5.6 million
3	under your plan.
4	But I don't see them in any of the
5	working interests breakdown so I don't know where they
6	are in terms of working interest ownership; were they
7	a party that you provided a law proposal to?
8	MR. COFFMAN: Yes. So under my Exhibit
9	A9, they're actually shown fourth from the bottom
10	owning in the east-half west-half of Section 5 and 8
11	in the Mighty Pheasant Bone Spring proration unit, MRC
12	Permian. Or are you specifically referencing Foran?
13	MR. RANKIN: I'm referencing Foran.
14	MR. COFFMAN: Okay. Yeah. So for my
15	Exhibit A10, rather than argue have our title
16	attorneys argue on who's correct and who's incorrect,
17	I thought it'd be prudent to use y'all's interests
18	that were provided in a comparison between net cost
19	per working interest owner.
20	I think, you know, we have our title
21	up-to-date from up to June 2023. I'm not I know
22	I think Travis's exhibit mentions that theirs is
23	up-to-date from 2023, too. So that, I mean that's
24	obviously something that we're going to have to get
25	sorted out.

1	But for the comparison of Permian
2	Resources' development and Coterra's development, I
3	used the interests that were provided by Permian just
4	as a quick look for the differences in cost.
5	MR. RANKIN: Right. So just so I
6	understand: At this point in time, your title doesn't
7	show Foran as owning in any of Cimarex's units; is
8	that right?
9	MR. COFFMAN: That's correct.
10	MR. RANKIN: Okay. But you acquired a
11	change-of-title opinion that covers all of Sections 4,
12	5, 8, and 9 in these cases; correct?
13	MR. COFFMAN: Yeah. That's correct.
14	MR. RANKIN: And that was updated as of
15	June 2023?
16	MR. COFFMAN: That's correct.
17	MR. RANKIN: Did that when you
18	now just to be clear and I don't think I don't
19	know that I've got many questions on this, Mr.
20	Coffman; but I just want to, you know, make sure I
21	understand. Because I think if the examiners are
22	looking at our ownership interests and breakdown, they
23	may have questions about why there's not an
24	alignment okay as we both have updated title.
25	I understand, based on Mr. Savage's
	Page 58

1	initial objections to our exhibits, that Cimarex has
2	prepared its ownership representations on a
3	contractual interest basis; is that correct?
4	MR. COFFMAN: That's correct.
5	MR. RANKIN: And just so I'm clear when
6	I say "contractual interest" and when you say
7	"contractual interest", will you explain what you mean
8	when you say that you prepared your ownership
9	breakdowns on a contractual interest basis?
10	MR. COFFMAN: So we have to take into
11	account the 1979 OA that we referenced that is still
12	in effect. So when we supersede those, you still have
13	to take the contractual interest of that '79 OA that
14	covers the south half of Sections 4, 5, 8, and 9; and
15	then take the leasehold ownership or whatever
16	contractual interests are in the north half of 4 and 5
17	and, you know, make those three twenties in a
18	contractual basis. If that answers your question?
19	MR. RANKIN: I think for purposes of
20	right now, it does. And I think essentially,
21	then I think if I were to just follow-up on that.
22	Essentially, what you're saying is that
23	the leasehold interests the pure, record title
24	leasehold interest that each owner has in each space
25	unit is being adjusted in accordance with their
	Page 59

1	contractual rights under that 1979 JOA that partially
2	overlaps the proposed spacing acreage?
3	MR. COFFMAN: When you mean "record
4	title", what do you mean by "record title"?
5	MR. RANKIN: Well, I mean if you're
6	looking at a spacing unit, who is the owner of the
7	mineral interests within the spacing unit?
8	I would say a leasehold owner in a
9	spacing unit is a record title owner of that mineral
10	interest.
11	MR. COFFMAN: Okay. Could you repeat
12	your question? Sorry.
13	MR. RANKIN: It's okay. I guess my
14	question is, then, just to confirm what you I
15	understand had done; is that you have adjusted the
16	record title leasehold interest ownership in each
17	spacing unit to reflect their contractual interests,
18	to the extent they have any, under that 1979 operating
19	agreement?
20	MR. COFFMAN: Yeah. That's correct.
21	MR. RANKIN: Are there other JOAs that
22	you're aware of in this acreage that partially
23	overlap?
24	MR. COFFMAN: I think I believe
25	there's some in the north half of 4.

1	MR. RANKIN: Do you include those
2	contractual interests in your representation of the
3	ownership in your ownership breakdown?
4	MR. COFFMAN: Yes.
5	MR. RANKIN: And do you agree that, as
6	far as you can tell, that Permian did not include
7	contractual interests in its ownership
8	representations?
9	MR. COFFMAN: I think it would depend
10	on which ownership representation. I think on I'd
11	have to let me find it real quick.
12	I think he splits it out by contractual
13	and by leasehold ownership.
14	MR. RANKIN: Okay. So in the okay.
15	Good point. Thank you, Mr. Coffman.
16	So in the initial exhibit packet that
17	Permian submitted or Read & Stevens submitted,
18	those would you agree that those are all just
19	record title ownership breakdowns not influenced by
20	contractual interests?
21	MR. COFFMAN: Yeah. I'd agree with
22	that.
23	MR. RANKIN: And you would agree that
24	the ownership between the Bone Spring and the Wolfcamp
25	in this acreage when I say "this acreage", I mean

1	those four sections is not uniform?
2	MR. COFFMAN: On a leasehold basis?
3	Based on what Permian
4	MR. RANKIN: Let's do it two ways. So
5	initially, would you agree that the ownership is not
6	uniform on a leasehold basis between the Bone Spring
7	and Wolfcamp?
8	MR. COFFMAN: I would agree with that.
9	MR. RANKIN: Would you agree that it's
10	not uniform on a contractual basis between the Bone
11	Spring and Wolfcamp?
12	MR. COFFMAN: I would say that the 1979
13	OA covers from 5,000 feet to and below, which would
14	encompass the Wolfcamp; and if you had contributed
15	your leasehold interest to that operating agreement in
16	1979, that your interest would be indeed uniform
17	across the south half of 4, south half of 5, and all
18	of 8 and 9 unless you did break the maintenance of
19	uniform interest that exists in that operating
20	agreement.
21	MR. RANKIN: And what I think I heard
22	you say, Mr. Coffman, is that if I were looking at
23	the spacing units which are oriented north-south,
24	within a spacing unit basis would there be uniformity
25	between the Bone Spring and Wolfcamp zones?

1	MR. COFFMAN: In ownership?
2	MR. RANKIN: Yep.
3	MR. COFFMAN: For three-fourths of the
4	proration unit that we're proposing, yes.
5	MR. RANKIN: But there nevertheless
6	would be an ownership break between the Bone Spring
7	and Wolfcamp for all these spacing units whether
8	you're looking at it on a leasehold basis or a
9	contractual interest basis; correct?
10	MR. COFFMAN: Could you repeat that?
11	MR. RANKIN: So I guess my point is
12	that you indicated that for three-quarters of the
13	proration units, there's going to be uniformity
14	between the Bone Spring and Wolfcamp.
15	What I'm saying is that on a
16	spacing-unit-wide basis, whether it's leasehold
17	that you're looking at record title leasehold
18	interests or contractual interests, there's going to
19	be a break in ownership on a spacing unit basis in
20	every one of these cases; correct?
21	MR. COFFMAN: I'd say it's more so for
22	Sections 5 and 8 than it would be for 4 and 9. But
23	yes.
24	MR. RANKIN: Thank you. And you agree
25	that there are two owners in Wolfcamp who do not own
	Page 63

1	in the Bone Springs?
2	MR. COFFMAN: That's correct. They own
3	in the west-half west half of Sections 5 and 8.
4	MR. RANKIN: Right. And that's CLM and
5	Warren & Associates, who you mentioned; right?
6	MR. COFFMAN: Yes. That's correct.
7	MR. RANKIN: Now you did I may have
8	asked this question. I apologize if I'm asking again.
9	But when you did your when you got
10	your title opinion, it was for both the Bone Spring
11	and Wolfcamp; correct?
12	MR. COFFMAN: No. We only got the Bone
13	Spring.
14	MR. RANKIN: Okay. And so when I look
15	at your Wolfcamp breakout, it actually follows
16	Permian's ownership representation for the Wolfcamp;
17	right?
18	MR. COFFMAN: Yeah. And that kind of
19	goes back to the cost discrepancy. We you know, we
20	used Permian's just for ease of comparison.
21	MR. RANKIN: Okay. But also, you
22	didn't get your own title opinion; right?
23	MR. COFFMAN: We have title for the
24	Wolfcamp, but it's not up-to-date to June 2023 like
25	the Bone Spring is.

1	MR. RANKIN: Now talk about the law
2	proposals. I think that's your Exhibit A3. Just
3	going to get to that page. I'm going to stop sharing
4	here for a moment. All right.
5	So your law proposals. These were sent
6	out on August 25, 2022; correct?
7	MR. COFFMAN: That's correct.
8	MR. RANKIN: And that's the same date
9	you sent out both Mighty Pheasant and Loosey Goosey;
10	right? At the same time?
11	MR. COFFMAN: Yes, sir.
12	MR. RANKIN: Okay. And then for the
13	subsequent pages, you've got your AFEs; right?
14	MR. COFFMAN: Yes, sir.
15	MR. RANKIN: And those were
16	prepared if I look at them at the top corner, they
17	were prepared on August 17, 2022?
18	MR. COFFMAN: Yes, sir.
19	MR. RANKIN: And the first one here I
20	see is for the second Bone Spring sand; correct? I
21	guess just to make it easy, I'll pull it up so we can
22	just, you know
23	MR. COFFMAN: Are you referencing the
24	204 second sand well?
25	MR. RANKIN: Yes, I am. Thank you.
	Page 65
	raye 05

1	MR. COFFMAN: Okay. Yep.
2	MR. RANKIN: One moment. I'll make you
3	all real dizzy as I get to that page.
4	Now, the cost there, you testified to
5	in your statement; right? And you say that the costs
6	are fair and reasonable and comparable to the costs of
7	other wells completed in the same zones; correct?
8	MR. COFFMAN: Yes.
9	MR. RANKIN: And now your engineer
10	witness uses an updated cost on his Exhibit D18; are
11	you familiar with that?
12	MR. COFFMAN: I'll have to get to it to
13	be able to tell you yes or no. Which hearing packet?
14	Hearing Packet 1?
15	MR. RANKIN: Hearing Packet 1.
16	MR. COFFMAN: D18. Yes.
17	MR. RANKIN: So it looks like for the
18	second Bone Spring sand, he uses an updated as of June
19	current cost which is 9,651,993; right?
20	MR. COFFMAN: That's correct.
21	MR. RANKIN: And if I go back to the
22	screen I'm sharing here, it's not much of a difference
23	here for your second Bone Spring as you proposed it
24	back in August; correct?
25	MR. COFFMAN: Correct. Two hundred
	Page 66

1	thousand's a lot for me. But in the grand scheme
2	things, no.
3	MR. RANKIN: Yeah. You know, that's
4	true. Me, too.
5	Okay. Now your next AFE is for the
6	Third Bone Spring sand, and that's for the Mighty
7	Pheasant Fed Com 301H Well; right? And that's a
8	similar cost of 9 million I'm just going to say 9.4
9	million; okay?
10	MR. COFFMAN: Yep.
11	MR. RANKIN: But on D18, your engineer
12	has increased the cost to I'm just going to say
13	\$10.6 million; correct?
14	MR. COFFMAN: Yeah. That's correct.
15	MR. RANKIN: That's a little bit more
16	of a jump. That's \$1.2 million for that well; right?
17	MR. COFFMAN: I would agree.
18	MR. RANKIN: Now that's about that's
19	almost 13 percent more right than what your AFE
20	has; correct?
21	MR. COFFMAN: Correct.
22	MR. RANKIN: Have you sent out updated
23	AFEs to notify your owners that the costs have gone up
24	based on updated assessments?
25	MR. COFFMAN: We would under the order.
	Page 67

1	MR. RANKIN: That time?
2	MR. COFFMAN: Yeah.
3	MR. RANKIN: Okay. Now are you
4	familiar, Mr. Coffman, with the internal rather,
5	the investor relations report that Cimarex issued this
6	week?
7	MR. COFFMAN: I know it happened. But
8	no, not familiar.
9	MR. RANKIN: So you're not aware that
10	Cimarex identified that its average costs for well
11	bores in Lea County are \$1400 a foot?
12	MR. COFFMAN: No. I'm not aware of
13	that.
14	MR. RANKIN: And that would make a
15	two-mile lateral a little under \$14 million on
16	average?
17	MR. COFFMAN: I'll agree with the math
18	and not 1400.
19	MR. RANKIN: I guess my question is,
20	Mr. Coffman, we've got different representations of
21	cost here going back to August 2022 that vary in range
22	from \$9.4 million to \$10.6 million.
23	And then two days ago, Cimarex reports
24	that the average cost in Lea County is actually closer
25	to \$14 million.

1	So I'm just kind of wondering if we
2	know what the actual proposed estimated costs are for
3	these wells?
4	MR. COFFMAN: Yeah. We do. I think 14
5	million is a little too high for actuals. I would
6	like to push that question to Calvin or Eddie, to
7	people that are more in-tune with the full facilities
8	and, you know, all the costs for those. They could
9	probably hammer away on, you know, the nitty-gritty of
10	the AFEs.
11	MR. RANKIN: Okay.
12	MR. COFFMAN: And I think the cost per
13	foot actually gets high due to one-mile developments,
14	not necessarily two-mile developments.
15	If you were to extrapolate it from
16	one- to two-mile, I think that the cost per foot for a
17	one-mile is obviously going to be higher than the cost
18	per foot for a two-mile.
19	But like I said, I think we should let
20	Eddie and Calvin talk to the full scope of the AFEs.
21	MR. RANKIN: Okay. Now Mr. Coffman,
22	you testified I don't know what I think it was
23	the 20th of July in a case against Pride; is that
24	correct?
25	MR. COFFMAN: Yeah. That's correct.
	Page 69

1	MR. RANKIN: And the wells in that case
2	were also targeting the Third Bone Spring; is that
3	right?
4	MR. COFFMAN: Yeah. First, Second, and
5	Third.
6	MR. RANKIN: First, Second, and Third.
7	And in that case, you testified about the average
8	costs of wells that Cimarex was then drilling in that
9	case; correct?
10	MR. COFFMAN: Correct.
11	MR. RANKIN: And weren't the costs for
12	Third Bone Spring wells that you testified to as being
13	fair and reasonable and similar to what other
14	operators are drilling in the area I'm going to
15	just round it up to \$11.1 million?
16	MR. COFFMAN: Yeah. That's correct.
17	That's also a single proration unit development so
18	there's not we don't get to benefit from the
19	efficiencies of having facilities take away.
20	You know, we have to increase those
21	costs for trucking, water; I know specifically for
22	that area. So a lot of factors play into that just
23	right next door.
24	MR. RANKIN: Okay. So the difference
25	between the Pride case and this case is economies of
	Page 70

1	scale?
2	MR. COFFMAN: Yeah.
3	MR. RANKIN: Would you agree I mean,
4	do you have any sitting here today, do you have any
5	reason to dispute your engineer's representation of
6	the updated costs reflected in his Exhibit D10?
7	MR. COFFMAN: No.
8	MR. RANKIN: I'm sorry. D18. I said
9	the wrong exhibit. D18.
10	MR. COFFMAN: Which costs?
11	MR. RANKIN: Well, I can't tell because
12	he just gives a total cost. But on his Exhibit D18,
13	Mr your engineer gives a updated costs on a
14	per-well basis.
15	MR. COFFMAN: Yeah. I think the June
16	current costs is accurate.
17	MR. RANKIN: But you have not updated
18	your the working interest owners in any of these
19	spacing units with these updated costs that you're
20	reflecting that Mr. Behm is reflecting in his
21	exhibits?
22	MR. COFFMAN: No. Not yet.
23	MR. RANKIN: And so I mean, a 13
24	percent increase in cost; you think that might affect
25	any of their activations in terms of you mentioned

1	that some of these people don't have necessarily or
2	may not have be accustomed to spending large dollar
3	amounts on a well.
4	That's a 13 percent jump is a pretty
5	significant jump, but you haven't updated them?
6	MR. COFFMAN: That's correct. But I
7	don't I think it's a little bit different than a
8	200 percent jump between the two developments.
9	MR. RANKIN: Okay. Let's take a
10	moment. You're familiar you've read Mr. Macha's
11	[ph] testimony?
12	MR. COFFMAN: Yeah. That's correct.
13	MR. RANKIN: Are you familiar with
14	his what Permian is proposing through his testimony
15	for addressing costs in terms of a pooling order?
16	MR. COFFMAN: Do you
17	MR. RANKIN: Are you familiar with
18	MR. COFFMAN: forward me to?
19	Forward me to an exhibit that you're referencing or is
20	his testimony?
21	MR. RANKIN: Do you have Permian's
22	testimony in front of you?
23	MR. COFFMAN: Yes, I do.
24	MR. RANKIN: Turn to page 12 of his
25	self-affirmed statement and look at Paragraph 25.

1	And I'll get that up here on the screen
2	just for the benefit of everybody so we're all, again,
3	on the same page.
4	Do you see how Mr. Macha [ph] discusses
5	a proposed modification to the standard pooling
6	language?
7	MR. COFFMAN: Yes, I do.
8	MR. RANKIN: So your testimony now,
9	just to be clear, I mean Permian submitted this
10	affidavit and the exhibits on July 14th, I believe;
11	correct?
12	MR. COFFMAN: That's correct.
13	MR. RANKIN: So you've had some time to
14	review and understand what Permian is proposing in
15	terms of how it's going to allocate costs to pooled
16	working interest owners; correct?
17	MR. COFFMAN: Yeah. That's correct.
18	MR. RANKIN: And what Mr. Macha [ph] is
19	saying here and I'm just going to get to that. I'm
20	sorry. It's a lot of pages.
21	MR. COFFMAN: I'm assuming it's just
22	hanging the 60 days 30 days to 60 days before the
23	commencement of drilling of each well?
24	MR. RANKIN: Let me get to that
25	language. So okay. You're seeing my screen now, Mr.

1	Coffman?
2	MR. COFFMAN: Yes, sir.
3	MR. RANKIN: Okay. So I'll just read
4	it out loud. Mr. Macha [ph] proposes that the
5	language should read: "Operator shall submit the
6	estimated well costs no sooner than 60 days before the
7	commencement of the drilling of each initial well.
8	"And the owner of a pooled working
9	interest shall have 30 days upon receipt of the
10	estimated well costs to elect whether to pay its share
11	of the estimate well costs or its share of the actual
12	costs to drill, complete, and equip the well or actual
13	well costs out of production from the well."
14	So Mr. Coffman, do you understand that
15	Mr. Macha [ph] has proposed to offer pooled working
16	interest owners the opportunity to sequentially elect
L7	each well only at the time that Permian decides to go
18	forward to drill that well? Is that your
19	understanding of that language?
20	MR. COFFMAN: Yes.
21	MR. RANKIN: So nevertheless, you're
22	telling us that these working interest owners are
23	going to be burned by every single well that Permian
24	has proposed in its application even though what
25	they're actually proposing is that each owner pay only

1	sequentially?
2	MR. COFFMAN: That's correct. It
3	doesn't change the amount.
4	MR. RANKIN: No. But it changes the
5	burden on each working interest owner; correct?
6	MR. COFFMAN: I mean if they paid out
7	of production, who's to say that the well will pay out
8	and they'll ever be in the well?
9	MR. RANKIN: That's true for every well
10	that's drilled isn't it, Mr. Coffman? under a
11	pooling order?
12	MR. COFFMAN: Yep. I would agree with
13	that.
14	MR. RANKIN: Now I'm just I'm going
15	to skip through a bunch of stuff, because I think we
16	kind of touched on it. And I want to just kind of
17	move through stuff that I don't need to touch on
18	anymore, which is good.
19	I want to ask you a little bit about
20	you testified, rather let me back up.
21	Your colleague and I may pronounce
22	this name incorrectly; but is it Ms. Mueller, the
23	geologist?
24	MR. COFFMAN: Yes.
25	MR. RANKIN: Is that the correct
	Page 75

1	pronunciation?
2	MR. COFFMAN: Yes.
3	MR. RANKIN: Okay. She testified in
4	her self-affirmed statement about some APDs that y'all
5	had already submitted for; right? Are you familiar
6	with that testimony?
7	MR. COFFMAN: Yes.
8	MR. RANKIN: I just want to understand.
9	I mean, these APDs were submitted between February and
10	March of 2022; correct?
11	MR. COFFMAN: That's correct.
12	MR. RANKIN: And that was months before
13	you even proposed the wells to your partners; right?
14	MR. COFFMAN: Yeah. That's correct.
15	MR. RANKIN: Is that normal for Cimarex
16	to file for APDs before they even propose them to the
17	working interest owners?
18	MR. COFFMAN: Yeah. For sure. It
19	takes quite a long time to get permits approved so we
20	try to get on permits as quickly as possible.
21	MR. RANKIN: And in this case, you
22	filed some of these APDs some of these APDs are in
23	a potash area; correct?
24	MR. COFFMAN: Yeah. That's correct.
25	MR. RANKIN: And you filed these APDs
	Page 76

1	before seeking designation of a potash development
2	area?
3	MR. COFFMAN: That's correct. There's
4	no there's nothing that precludes us from filing
5	for the APDs. They just don't get approved unless a
6	development area is in place.
7	MR. RANKIN: But when you do a
8	development area as the BLM guidelines suggest, isn't
9	it part of the process you also give notice to each of
10	the other owners that have an interest in that potash
11	area?
12	MR. COFFMAN: Within the contract area,
13	you mean?
14	MR. RANKIN: Yes. Yes.
15	MR. COFFMAN: I guess it would depend
16	on what Jim Rutley provides as a notice area. If it's
17	an existing development area with locations
18	there like this, this isn't a drill island.
19	So the toe end of the wells are going
20	to be in the potash, not necessarily the surface. The
21	surface hole would have a wider notice area than the
22	bottom hole would.
23	But it's a mile radius of all impacted
24	working interest owners, all impacted owners. That'd
25	be surface, record title, all of that

1	MR. RANKIN: I guess
2	MR. COFFMAN: around the
3	MR. RANKIN: my
4	MR. COFFMAN: approved development
5	area.
6	MR. RANKIN: So I guess my point,
7	though, is that by filing the APDs first and months in
8	advance, the potentially-impacted owners within that
9	radius weren't apprised of your plans to develop until
10	they received either a well proposal or notification
11	of your subsequently noticed proposed potash
12	development area; correct?
13	MR. COFFMAN: The amount of people that
14	we notify for development areas of multiple people
15	hired and people that we proposed the wells to, I
16	don't think we we wouldn't propose the wells to a
17	lessee of record or, you know, a surface owner that's
18	a mile to the northwest. So I guess I'm not
19	MR. RANKIN: My own point is I
20	guess, Mr. Coffman is that because you didn't
21	propose, initially, the potash development area
22	first you went ahead and filed the APDs first it
23	wasn't until much later that anybody, you know, who
24	might have been affected got notice that you were
25	proposing to drill wells out here; correct?

1	MR. COFFMAN: That's true for the
2	development, from a development area standpoint and
3	notice standpoint. Yeah. I would agree with that.
4	MR. RANKIN: All right. Now moving
5	onto another topic here.
6	In Paragraph 19 of your statement, you
7	talk about, you know, your view or opinion that
8	Cimarex is a top-tier, you know, operator and
9	developer in this area in particular; correct?
10	MR. COFFMAN: I agree with that.
11	MR. RANKIN: Yeah. And you say that
12	your basis for that is that Cimarex has the knowledge
13	to know what it takes to drill successful wells in
14	this specific acreage; right?
15	MR. COFFMAN: That's correct.
16	MR. RANKIN: And you consider Cimarex
17	to be a prudent operator? It's one of the top
18	producers in the state?
19	MR. COFFMAN: Yes.
20	MR. RANKIN: You would agree that part
21	of having the knowledge necessary to be a top operator
22	includes keeping track of what Cimarex
23	competitors such as Read & Stevens and Permian
24	Resources are doing in the areas where Cimarex has
25	overlapping leasehold interests?

1	MR. COFFMAN: That's correct.
2	MR. RANKIN: And as a top-tier operator
3	who's operating prudently, that's something that
4	Cimarex does? You keep track of what your competitors
5	are doing?
6	MR. COFFMAN: Yeah, within reason. I
7	don't think there's you know, we can't we don't
8	have access to emails or things that are going on
9	between teams. But you know, we see proposals that
10	come around; APDs that are filed; you know, everything
11	that's public that everyone else gets to see.
12	MR. RANKIN: Sure. So public filings,
13	pooling cases, APDs, that sort of thing; right?
14	MR. COFFMAN: Yeah. That's correct.
15	MR. RANKIN: And you would agree that
16	by tracking your competitors, you know, Cimarex is
17	going to gain insight about an understanding of what
18	competitors' strategies for how they're going to
19	develop your proposed acreage; right?
20	MR. COFFMAN: Yeah. I agree. Nearby.
21	I mean, you have to take into account like, nearby;
22	right? Like, I don't think we're going to yeah.
23	Within the relative area. Yes.
24	MR. RANKIN: And by doing so, you've
25	got some idea of what their competing plans might be;
	Page 80

1	right? If it comes to a situation such as this one
2	where you're going to have, you know, a contested
3	operatorship?
4	MR. COFFMAN: I think it's a
5	case-by-case basis. I think people do a lot of
6	different things when you would expect them to do
7	something based on past performance. I'd say future
8	performance is not indicated by past performance.
9	MR. RANKIN: Okay. Now Cimarex filed
10	this or it, rather, issues well proposals first;
11	right? We talked about that August 25th, I think,
12	2022. So you issued your well proposals before
13	Permian did?
14	MR. COFFMAN: That's correct.
15	MR. RANKIN: And then, Cimarex filed
16	its applications in both Mighty Pheasant and Loosey
17	Goosey on March 7th; right?
18	MR. COFFMAN: That's correct.
19	MR. RANKIN: Now what I want what
20	I'm kind of getting at here is in your Exhibit Packet
21	3 okay you say that Cimarex was surprised; okay?
22	And the place I'm going to direct you
23	to is Paragraph 5 of Hearing Exhibit Packet 3 which
24	deals with option number one under your proposal.
25	You say that you were you know,
	Page 81

1	Permian's approach to filing not just the Bone Spring
2	but for the Wolfcamp was a surprise to Cimarex and was
3	unexpected; right?
4	MR. COFFMAN: Yeah. Which page?
5	Hearing Packet 3. What PDF page?
6	MR. RANKIN: Well, it's actually,
7	this one is marked as page 2. But I have a hard copy.
8	And if I open up every PDF on my screen, my computer
9	will freeze up. Sorry.
10	MR. COFFMAN: No, no. That's fine.
11	Let me just find it real quick.
12	MR. RANKIN: Is that yeah.
13	MR. COFFMAN: Okay. Sorry. I'm here.
14	MR. RANKIN: Okay. So in that
15	paragraph you say that basically a month after you
16	filed your applications which would have been in
17	April; right?
18	MR. COFFMAN: Yeah.
19	MR. RANKIN: Cimarex was surprised that
20	Permian had filed for both a Bone Spring and Wolfcamp
21	spacing units; correct?
22	MR. COFFMAN: I think we were surprised
23	on the Wolfcamp applications, not necessarily the Bone
24	Spring applications.
25	MR. RANKIN: You received Permian's
	Page 82

1	well proposals that included Wolfcamp wells and full
2	upper Wolfcamp development that were dated February
3	17th for its Bane wells and March 17th for the Joker
4	wells; correct?
5	MR. COFFMAN: That is correct.
6	MR. RANKIN: So you knew at least as
7	of, you know, late February/middle late March that
8	Permian had proposed Wolfcamp wells in this acreage?
9	MR. COFFMAN: Yeah. I think there's a
10	historical idea that a lot of operators do where they
11	propose the entirety of whatever they think that they
12	are going to drill ever to their working interest
13	owners.
14	I don't think we do that. I think we
15	try to keep them updated with things that we're going
	try to keep them updated with things that we're going to drill in the near term, not necessarily long term.
16	
16 17	to drill in the near term, not necessarily long term.
15 16 17 18	to drill in the near term, not necessarily long term. So I think having the Wolfcamp
16 17 18	to drill in the near term, not necessarily long term. So I think having the Wolfcamp proposals are not necessarily unexpected or
16 17 18	to drill in the near term, not necessarily long term. So I think having the Wolfcamp proposals are not necessarily unexpected or surprising, but the pooling that came after that for
16 17 18 19	to drill in the near term, not necessarily long term. So I think having the Wolfcamp proposals are not necessarily unexpected or surprising, but the pooling that came after that for the Wolfcamp I think is what surprised us.
16 17 18 19 20 21	to drill in the near term, not necessarily long term. So I think having the Wolfcamp proposals are not necessarily unexpected or surprising, but the pooling that came after that for the Wolfcamp I think is what surprised us. MR. RANKIN: So but I think we talked
16 17 18 19 20	to drill in the near term, not necessarily long term. So I think having the Wolfcamp proposals are not necessarily unexpected or surprising, but the pooling that came after that for the Wolfcamp I think is what surprised us. MR. RANKIN: So but I think we talked about this a little bit. But I mean, basically
16 17 18 19 20 21 22	to drill in the near term, not necessarily long term. So I think having the Wolfcamp proposals are not necessarily unexpected or surprising, but the pooling that came after that for the Wolfcamp I think is what surprised us. MR. RANKIN: So but I think we talked about this a little bit. But I mean, basically because Permian is a competitor in your area and

1	activities that Permian was undertaking in this area,
2	including APDs and pooling cases; right?
3	MR. COFFMAN: Yeah. For sure.
4	MR. RANKIN: Okay. So in addition to
5	the well proposals which identified the Wolfcamp, I'm
6	going to ask you a couple more questions here.
7	Because in your statement and it's
8	still in the same packet, the next paragraph in
9	Paragraph 6, you go on to say that, you know,
10	basically Permian is following what I understand
11	Cimarex's position is which is that there's a
12	consensus around developing only the Bone Spring.
13	And you point to Permian itself as
14	having filed 11 applications in the area. Ten of
15	which are for Bone Spring and only one of which is for
16	the Wolfcamp; right?
17	MR. COFFMAN: That is correct.
18	MR. RANKIN: But you prepared this
19	self-affirmed statement on August 1st; correct?
20	MR. COFFMAN: Correct.
21	MR. RANKIN: And you reviewed Permian's
22	exhibits that were filed on July 14th; right?
23	MR. COFFMAN: Yes.
24	MR. RANKIN: And if I pull up those
25	Permian exhibits and look at Exhibit C14, Mr. Macha
	Page 84

[ph] has put together kind of a nice little outline of
all the different activities that Permian has
undertaken in recent times, including 17 different
pooling cases focused on the Wolfcamp.
MR. COFFMAN: None of which we are in.
So we're not in any of those as a working interest
owner or as an affected party.
MR. RANKIN: Right. But I guess my
question is, I mean, this is right around your area
and you're seeing other operators doing different
developments.
You know, I thought that Cimarex might
be aware especially after the exhibits were
filed that it actually had been developing and
targeting the Wolfcamp and that the I guess,
Permian meant what it had said when it was proposing
wells in the Wolfcamp in February and March of 2022
or 2023. Sorry.
MR. COFFMAN: Yeah. I would agree with
that. But like I said earlier, I mean, the majority
of our acreage is to the north. We don't have
anything to the south.
So I think it'd be not necessarily the
best use of my time looking across the entirety of Lea
County for pooling that might happen up near the shelf

1	to, you know, look at competitors.
2	I know this is right next door, but I
3	guess we try to be focused on where our acreage is to
4	the north as a whole and around that area. But I see
5	what you mean. It's nearby.
6	MR. RANKIN: Well, I mean, I guess my
7	point is simply that in facts, there's a two-section
8	tract to the east and tracts to the southwest and a
9	total of 17 different Wolfcamp pooling cases which,
10	you know, were in our exhibit packet. And even after
11	that, you said there's only one Wolfcamp application.
12	So I just was I mean, I guess as an
13	operator who's focused on its acreage and
14	understanding what competitors are doing and
15	understand the trends in development, not to be fully
16	aware of what's happening on both sides of your
17	acreage here, I just I wasn't I just wanted to
18	make sure I understood, you know, where that was
19	coming from.
20	MR. SAVAGE: Madam Hearing Examiner,
21	could Mr. Rankin point to that exhibit with the 17?
22	MS. ORTH: Yes. Please.
23	MR. RANKIN: I'll pull it up on the
24	screen.
25	Mr. Coffman, this is the exhibit I was
	Page 86

1	referring to then. I guess you had it on your hard
2	copy here.
3	But this is Exhibit C14. It was filed
4	on July 14th and served to Cimarex's counsel.
5	And you'll see that it identifies the
6	different tracts in which Permian has identified
7	different pooling orders it has obtained as to both
8	the Bone Spring and Wolfcamp pools. It identifies the
9	orders applicable to each one.
10	And so if you were to go back and look
11	at and pull up those orders, you would see that as
12	the Call Offs state they apply to not only the Bone
13	Spring but the Wolfcamp.
14	And when you add them all up, it's not
15	one Wolfcamp pooling case but I believe the number is
16	seventeen.
17	MS. ORTH: Okay. Mr. Rankin, would you
18	estimate the remainder of your cross-examination,
19	please?
20	MR. RANKIN: Yeah. I guess I have some
21	questions about the last section that I need to ask
22	him about are the options. Cimarex has proposed two
23	different options.
24	And I'm you know, I know probably
25	people are hungry. I don't mean to drag this out. I

1	really don't. But I do want to make sure I'm
2	MS. ORTH: I no. I understand. I
3	don't feel like you're dragging it out. It's just
4	we've been going nearly two hours.
5	MR. RANKIN: Yeah. Thank you.
6	MS. ORTH: And I think we need a break.
7	MR. RANKIN: Yeah.
8	MS. ORTH: And I'm wondering if this is
9	a good time for a lunch break and if we should just
10	break until 1:30.
11	MR. RANKIN: Let's do that, Madam
12	Hearing Officer.
13	MS. ORTH: All right. We will see you
14	all at 1:30.
15	(Off the record.)
16	MS. ORTH: Mr. Rankin was near the end
L7	of his cross-examination of Mr. Coffman.
18	So Mr. Rankin, if you would, please?
19	MR. RANKIN: Thank you, Madam Hearing
20	Officer. Lunch break was well-timed. Thank you very
21	much.
22	Mr. Coffman, how are you today? I hope
23	you had a good lunch.

1	MR. COFFMAN: It was great.
2	Well-needed, as well.
3	MR. RANKIN: I would like to start off
4	this next section of our discussion, Mr. Coffman,
5	on I'm sorry.
6	I'm having to scroll through to get to
7	it here in the exhibit packet. But what I'd like to
8	discuss is very let's see. It's a little
9	firstly, I think it's in let's see. Oh, I know why
10	it's not there.
11	It's in the Wolfcamp. Let's see. It's
12	in Hearing Packet 4. I thought I had it all in my
13	head but I didn't. Yeah. Okay. I'm going to pull
14	this up on the screen.
15	One moment. Sorry. I'm sorry I didn't
16	have this ready. I thought it was in Hearing Packet 1
17	but it's in Hearing Packet 4.
18	Just a moment. It's a large file so it
19	takes a little bit of time, since I'm not at my
20	office, for things to load.
21	Mr. Coffman as I wait for this to

1	load and for this to appear on my screen by way of
2	introduction, I'm talking about the June 15, 2023
3	letter or actually letters that you sent out as a
4	supplement to the proposal to drill for both the
5	Loosey Goosey unit wells and the Mighty Pheasant unit
6	wells.
7	Are you familiar with those letters?
8	MR. COFFMAN: Yes, I am.
9	MR. RANKIN: And I understand that
10	these letters were written. And the reason they're in
11	the Hearing Packet 4 case, I understand, is that in
12	that set of cases or that hearing packet, it's under
13	option two.
14	And option two is where Cimarex is
15	seeking to pool the Wolfcamp formation and its spacing
16	units in those cases under that option; correct?
17	MR. COFFMAN: Correct.
18	MR. RANKIN: And the reason these
19	letters are in there is because you're explaining to
20	your working interest owners that you intend to
21	dedicate those Bone Spring wells to Wolfcamp spacing

1	units; is that correct?
2	MR. COFFMAN: That's correct.
3	MR. RANKIN: And let me get to that
4	page real quick. I apologize. Now that I have it up,
5	I need to scroll down to it. It's going to take me a
6	little while. Just a moment.
7	Okay. I found it. Great. I'm going
8	to share my page real quick just so that we can get a
9	visual. Let me know when you can see my page.
10	MR. COFFMAN: I can see it.
11	MR. RANKIN: Okay. So in this exhibit
12	packet, I didn't see I saw the letter referencing
13	the Loosey Goosey development. I don't think I saw
14	one for the Mighty Pheasant.
15	However, you did send one supplement
16	for each spacing unit; correct?
17	MR. COFFMAN: That's correct.
18	MR. RANKIN: Now as I review this, the
19	first paragraph I think explains a little bit about
20	the intent here.
21	First of all, this was sent out June

1	15th right? in 2023, both of these letters?
2	MR. COFFMAN: [No audible response.]
3	MR. RANKIN: Is that correct?
4	MR. COFFMAN: Yes. That's correct.
5	MR. RANKIN: Okay. And you addressed
6	it to all of the working interest owners in both those
7	spacing units; correct?
8	MR. COFFMAN: Correct.
9	MR. RANKIN: Okay. Now looking at the
10	first paragraph, you agree that the intent of the
11	letter was to update the initial well proposal in each
12	of the spacing units to "clarify the extent and scope
13	of projected production from the wells given their
14	respective depths and locations described in the
15	original proposal"; correct?
16	MR. COFFMAN: Correct.
17	MR. RANKIN: Then the second paragraph
18	goes on to say that the Bone Spring wells were
19	originally proposed for production from the Bone
20	Spring formation; correct?
21	MR. COFFMAN: Correct.

1	MR. RANKIN: And then in that same
2	second paragraph, you go on to say I'll highlight
3	it here that your geologists and engineers have
4	thoroughly evaluated the Bone Spring formation in
5	relation to the Wolfcamp formation in the
6	above-referenced lands and have determined that, due
7	to the extensive communication between the Bone Spring
8	and Wolfcamp, the wells as proposed will produce the
9	primary concentrations of hydrocarbons in the Wolfcamp
10	those being in the upper Wolfcamp
11	And Cimarex believes they will do so
12	more optimally given their current location within the
13	Third Bone Spring. That if additional wells and
14	that additional and unnecessary wells were drilled
15	into the Wolfcamp itself.
16	Did I other than almost mangling
17	that last bit, did I correctly state that sentence?
18	MR. COFFMAN: Yes. Yes.
19	MR. RANKIN: Okay. Now at the end of
20	the second paragraph, then it goes on to say that
21	because these wells, these Bone Spring wells, will

1	produce hydrocarbons, the primary production from the
2	Bone Spring and the Wolfcamp it goes on to say that
3	Cimarex doesn't believe that there would be a need for
4	any upper Wolfcamp wells, because its Third Bone
5	Spring wells will effectively develop both the Bone
6	Spring and upper Wolfcamp.
7	Is that a fair paraphrase of that last
8	bit of that paragraph?
9	MR. COFFMAN: Yeah. I would just say
10	that the incidental production from the upper
11	Wolfcamp.
12	MR. RANKIN: Now does the letter say
13	incidental production from the upper Wolfcamp?
14	MR. COFFMAN: No.
15	MR. RANKIN: Okay. But you told the
16	owners that you were going to produce the primary
17	production from the Wolfcamp; right? The upper
18	Wolfcamp?
19	"As proposed, will produce the primary
20	concentrations of hydrocarbons in the Wolfcamp, those
21	being in the upper Wolfcamp"; correct?

1	MR. COFFMAN: Correct.
2	MR. RANKIN: Okay.
3	MR. COFFMAN: And I think we clarified
4	with a motion. I'd have to refer to Darin on that. I
5	think we clarified those supplements.
6	MR. RANKIN: Okay. Well, I just want
7	to make sure I understood. I mean, this is in your
8	exhibit packet. You sent this out to your owners,
9	your partners in the wells.
10	I just want to make sure I I mean,
11	this is what your, you know did you send a
12	supplement to these folks explaining that you think
13	it's going to be only incidental production?
14	MR. COFFMAN: No. This is all we sent.
15	MR. RANKIN: Okay. Now in this letter,
16	you say also that you worked with your geologists and
17	engineers right to confirm these statements;
18	correct?
19	MR. COFFMAN: Correct.
20	MR. RANKIN: And was one of the
21	geologists Staci Mueller?

1	MR. COFFMAN: Yes.
2	MR. RANKIN: And was one of the
3	engineers Mr. Eddie Behm?
4	MR. COFFMAN: Yes.
5	MR. RANKIN: So now you're familiar
6	with the legal arguments you just mentioned them, I
7	think that your legal counsel made and submitted to
8	the Division on July 26th about incidental drainage
9	versus production?
10	MR. COFFMAN: Am I familiar with that?
11	Yes.
12	MR. RANKIN: Yeah. Okay. So Do you
13	understand that one of the arguments that Cimarex is
14	making is that Cimarex will not be "producing" from
15	the Wolfcamp? That it will be only incidentally
16	draining the Wolfcamp?
17	MR. COFFMAN: Yes.
18	MR. RANKIN: Okay. That's your
19	understanding of what Cimarex's current position is?
20	MR. COFFMAN: Yes.
21	MR. RANKIN: Okay. Now in that same

1	legal brief, Counsel discusses Cimarex's anticipation
2	or estimate that anywhere from 5 to approximately 26
3	percent of production in its Third Bone Spring wells
4	will be contributed by the Wolfcamp; is that your
5	understanding?
6	MR. COFFMAN: Yes. I'd have to refer
7	to Staci and Eddie on that percentage, which they can
8	touch on. But from my understanding, yes.
9	MR. RANKIN: Okay. So based on I
10	mean yeah. I mean, I haven't talked to them yet.
11	I'm just going off the motion and the language in the
12	memo, but basically yeah.
13	You and I are on the same page here
14	that it states somewhere between 5 percent to 26
15	percent is going to be pulled from the Wolfcamp
16	through these Bone Spring wells that Cimarex is
17	proposing; correct?
18	MR. COFFMAN: Correct.
19	MR. RANKIN: Okay. But in that same
20	legal memorandum, Cimarex is saying and tell me if
21	you understand this to be the case, too that the

1	exact amount of drainage is uncertain; correct?
2	MR. COFFMAN: Correct.
3	MR. RANKIN: Now in this supplemental
4	letter that I've got up here on the screen, you refer
5	to what's going to be happening here as production
6	okay from the Wolfcamp. You don't say it's going
7	to be drainage or incidental.
8	But as I understand it, one of the
9	points of this letter is to explain to the working
10	interest owners that Cimarex's Third Bone Spring wells
11	are going to so effectively produce, develop,
12	drain whatever you want to call it the upper
13	Wolfcamp that it would be wasteful to drill separate
14	wells in the upper Wolfcamp; do you agree?
15	MR. COFFMAN: No. I disagree.
16	MR. RANKIN: Okay. So tell me what you
17	understand the point of this letter to be.
18	MR. COFFMAN: I think our intent was
19	to and Eddie will get into this in his portion.
20	But as I understand it, packs travel upward.
21	So in this, we're trying to explain

1	that the upper Wolfcamp wells would trespass into the
2	Third Bone Spring and produce 75 percent from the
3	Third Bone Spring.
4	And 25 percent of that would be
5	Wolfcamp; anywhere from 5 to 25, as you referenced.
6	So that was our intent, to share that here.
7	That since the concentration would in
8	the Third Bone Spring and that incidental production
9	from the Wolfcamp may happen, but the upper Wolfcamp
10	would produce and trespass the Third Bone Spring.
11	MR. RANKIN: Now
12	MR. SAVAGE: Madam Hearing Examiner
13	MR. RANKIN: I got to try to sort
14	this out a little bit.
15	MR. SAVAGE: Madam Hearing Examiner
16	MR. RANKIN: I think it's
17	MR. SAVAGE: Could I just interject one
18	comment? These are very complicated excuse me.
19	These are very complicated questions of
20	mixed law and fact. These are unresolved legal issues
21	that have not been addressed and resolved.

1	I think this is a line of questioning
2	that is inappropriate and difficult for a landman to
3	fully address and clarify.
4	I don't know how to separate those two
5	without resolving the legal or having some commentary
6	or a motion hearing or something like that. But I
7	MR. RANKIN: Madam Examiner, if I
8	may
9	MS. ORTH: Yeah.
10	MR. RANKIN: This is a letter from Mr.
11	Coffman that he wrote in which he states that he
12	that their geologists, Ms. Mueller and Ms. Behm [sic]
13	who I will have a chance to cross here shortly,
14	thoroughly evaluated the Bone Spring formation in
15	relation to the Wolfcamp; and determined, due to the
16	communication between the two, that their proposed
17	Bone Spring wells will produce the primary
18	concentrations of hydrocarbons not in the Bone Spring,
19	but in the Wolfcamp. And they say it twice: "in the
20	Wolfcamp", "those being in the upper Wolfcamp"; okay?
21	And so Mr. Coffman signed the letter.

1	This is not a legal issue. It's a factual question
2	about what he understands the letter to mean and the
3	purpose behind it.
4	MR. SAVAGE: Madam Hearing Examiner, if
5	I can just make one more comment on that?
6	MS. ORTH: Sure.
7	MR. SAVAGE: Thank you. So the
8	proposal letter is part of a requirement of the
9	pooling procedure. You have to do a proposal letter
10	to initiate a pooling. That's why it's in the packet.
11	A pooling procedure is a legal and
12	administrative matter. That the two options
13	distinguish between drainage and production.
14	And once you get into the arena of
15	pooling, under the pooling statute, drainage becomes
16	reclassified to production.
17	And this letter is related to that
18	process. And it is very much a legal matter.
19	MS. ORTH: All right. So I'm going to
20	handle it this way.
21	This is a letter written by Mr.

1	Coffman. I think questions about the statements that
2	Mr. Coffman has put his signature to here are
3	definitely fair game.
4	But I'll instruct the witness to if,
5	in fact, you believe that one of Mr. Rankin's
6	questions is asking you for a legal conclusion, to
7	note that.
8	And I don't believe you're a lawyer.
9	So to the extent that you're answering these
10	questions, you're answering as a landman not as a
11	lawyer.
12	Just seems like your own counsel is
13	prompting you to remember the distinction here
14	between geological questions, for example, and legal
15	questions. And you are certainly invited to draw that
16	distinction yourself with further questioning.
17	Go ahead, Mr. Rankin.
18	MR. RANKIN: Thank you. And I'll do my
19	best to avoid all legal issues. I am referring
20	occasionally to the briefing simply because that's, at
21	this point, my understanding of some of their

1	positions. So but I will be careful not to encroach
2	upon any legal issues here.
3	Now Mr. Coffman, I think I heard you
4	say in response to my question that the intent here
5	was to inform the working interest owners that what
6	Cimarex believed was that it's actually going to be
7	producing primarily from the Bone Spring formation,
8	that the majority of the production would be from the
9	Bone Spring formation. Is that what I understood you
10	to say?
11	MR. COFFMAN: Yes. That's correct.
12	MR. RANKIN: Okay. But notwithstanding
13	that and notwithstanding the positions Cimarex has
14	taken in the briefing subsequent to this letter, as I
15	read this letter the plain language states that your
16	geologists and engineers have evaluated the Bone
17	Spring in relation to the Work Camp; and that the
18	wells those being Cimarex's Bone Spring wells
19	will produce the primary concentrations of
20	hydrocarbons in the Wolfcamp, the upper Wolfcamp.
21	Is that that's what the language

1	says; correct?
2	MR. COFFMAN: That's what the language
3	says. I'd have to refer to Staci and Eddie on how
4	extensive that communication would be and to get into
5	the technical aspects of that. But that is what the
6	language says. Yes.
7	MR. RANKIN: All right. That's fine.
8	I just wanted to I mean, I just okay.
9	So now as I understand it, this letter
LO	was sent out in order to make the basis that the
L1	Wolfcamp will produce by these wells so that you can
L2	go forward with the pooling application for the
L3	Wolfcamp for each of these spacing units; is that a
L4	fair statement?
L5	MR. COFFMAN: Could you repeat it?
L6	MR. RANKIN: Sure. I mean as Cimarex
L 7	stood, you had well proposals for Bone Spring wells
L8	that were going to produce from the Bone Spring as the
L9	first paragraph says; correct? I'm sorry. As the
20	first sentence of the second paragraph says?
21	MR. COFFMAN: Yes.

1	MR. RANKIN: Okay. So you had Bone
2	Spring wells that were proposed for the Bone Spring.
3	You had Bone Spring pooling applications; okay?
4	As I understand it, after you became
5	surprised by Permian's Wolfcamp applications, Cimarex
6	sent out this supplemental proposal letter; correct?
7	MR. COFFMAN: Correct.
8	MR. RANKIN: And in this letter, you
9	state the primary concentrations of hydrocarbons in
10	the Wolfcamp, in the upper Wolfcamp, will be produced
11	by those Bone Spring wells.
12	That's what the language of the letter
13	says; correct?
14	MR. COFFMAN: That's correct.
15	MR. RANKIN: And part of the reason for
16	saying that is because you need to demonstrate that
17	the Wolfcamp's going to be produced if you're going to
18	pull the Wolfcamp; agree?
19	MR. COFFMAN: Correct.
20	MR. RANKIN: Okay. Now you know,
21	that's I just want to make sure that you're on the

1	same page, because I think that's what I get out of
2	this letter; okay?
3	Now, the next part of it was okay
4	as I understood this last bit here I'm going to
5	highlight with my cursor is that Cimarex has
6	determined that "drilling new wells in the Wolfcamp
7	would be an improper use of resources and result in
8	significant financial waste.
9	"In developing the most prudent manner,
10	the hydrocarbons contained within both formations
11	underlying the subject lands" I'm going to stop
12	there.
13	And my understanding is that when this
14	letter says "both formations", its referring to the
15	Wolfcamp and the Bone Spring; is that your
16	understanding, as well?
17	MR. COFFMAN: Yeah. I would say "Third
18	Bone Spring". But yes.
19	MR. RANKIN: Okay. So even if okay.
20	Say Third Bone Spring and the upper Wolfcamp to be
21	more specific; is that fair?

1	MR. COFFMAN: Yeah.
2	MR. RANKIN: Okay. And that goes on to
3	refer to the recent historical development of wells in
4	the surrounding area as justification for that
5	position; correct?
6	MR. COFFMAN: Yes.
7	MR. RANKIN: Okay. I guess what I take
8	away from this, though, is Cimarex's position is that
9	Cimarex's Bone Spring wells are going to sufficiently
10	and effectively drain both the Wolfcamp and the Bone
11	Spring in order to pool the Bone Spring; is that fair
12	to say?
13	MR. COFFMAN: Like I said, I'd have to
14	resort to technical on that.
15	MR. RANKIN: That's fine. I
16	understand. That's good enough. I understand. I
17	don't mean to push you into areas you don't you
18	know, that are technical.
19	All right. So I guess what I want to
20	do now is pivot to the options; okay? Cimarex has now
21	proposed options.

1	And this letter, I think, in this
2	hearing packet relates to one of the two options;
3	okay?
4	As I understand, the two options are as
5	follows: option number one would be to drill and pool
6	only the Bone Spring; right? And then to create a
7	buffer to prevent drilling by anybody of the upper
8	Wolfcamp.
9	Is that a fair representation of option
10	one?
11	MR. COFFMAN: I think yeah. I'd
12	just like to clarify.
13	I think the buffer intends to make sure
14	that the production only comes from the upper Wolfcamp
15	and that the production isn't produced from the third
16	sand by where they're landed currently on the AFEs.
17	Does that make sense?
18	MR. RANKIN: No. Say that again.
19	Sorry.
20	MR. COFFMAN: So I think the buffer is
21	intended to protect third sand rights, not prevent

1	upper Wolfcamp rights.
2	They lowered their well bore to produce
3	only upper Wolfcamp and not and far enough away so
4	as to not produce Third Bone Spring. I think that's
5	option one.
6	MR. RANKIN: All right. Now you're not
7	an engineer and you don't know what the drainage rate
8	of this is. And so we can't
9	MR. COFFMAN: Right.
LO	MR. RANKIN: I can't get into it with
L1	you about what that business would be and whether
L2	there would be any way of actually ensuring that, in
L3	doing so, those owners would nevertheless still be
L4	able to develop fully their Wolfcamp minerals; right?
L5	That's not something that you and I can
L6	talk about?
L7	MR. COFFMAN: Yeah. I can give you the
L8	footages.
L9	MR. RANKIN: Now but under this
20	option okay under option one that we're just
21	discussing, production as we've discussed would

1	be allocated to owners within each of the Bone Spring
2	spacing units; correct?
3	MR. COFFMAN: Correct.
4	MR. RANKIN: And that would be done in
5	accordance with the statutory requirements which are
6	incorporated into the standard pooling language;
7	correct?
8	MR. COFFMAN: That might be getting
9	into
10	MR. RANKIN: I mean you understand
11	basically, Mr. Coffman, like if there's a pooling
12	order, the pooling order
13	MR. COFFMAN: Yes.
14	MR. RANKIN: dictates how
15	allocation's going to be done; right?
16	MR. COFFMAN: Yes. Correct.
17	MR. RANKIN: Okay. So in this specific
18	circumstance, when you pool the Bone Spring under
19	option one, the production would be allocated to those
20	pooled working interest owners in accordance with the
21	pooling order; right?

1	MR. COFFMAN: Correct.
2	MR. RANKIN: And that would be to the
3	Bone Spring owners only; correct?
4	MR. COFFMAN: Correct.
5	MR. RANKIN: Now so whatever
6	hydrocarbons whether it's 5 percent or 26
7	percent are produced from the Wolfcamp.
8	That would be deemed, under this
9	option, to be incidental drainage; correct?
10	MR. COFFMAN: Correct.
11	MR. RANKIN: And that would mean that
12	those Wolfcamp owners would not see any of that
13	production allocated to them in accordance with their
14	ownership percentages in the Wolfcamp; correct?
15	MR. COFFMAN: According to their
16	ownership interests in the Wolfcamp, no. But
17	that's yes. I agree with what you're saying.
18	MR. RANKIN: Yeah. It would be based
19	only on their ownership interest in the Bone Spring;
20	right?
21	MR. COFFMAN: Right.

1	MR. RANKIN: Okay. Now under this
2	option, option one, there's no mechanism for owners in
3	the Wolfcamp to share at all in this production under
4	their ownership percentages; correct?
5	MR. COFFMAN: I would say that we
6	offered that to the owners that only own in the
7	Wolfcamp and did not own in the Third Bone Spring,
8	being Warren & Associates and CLM Production.
9	We offered an in-kind, straight-up
10	assignment of interest out of Coterra's interest in
11	that proration unit for the Third Bone Spring.
12	MR. RANKIN: And that would be as to
13	those two owners who don't own at all in the Bone
14	Spring; right? You made that offer to them? Okay.
15	MR. COFFMAN: Correct.
16	MR. RANKIN: I'm talking about owners
17	that own in both the Bone Spring and Wolfcamp; okay?
18	But they have a different ownership proportion between
19	the two.
20	MR. COFFMAN: Right.
21	MR. RANKIN: And I think you and I were

1	just talking about this. I think we're on the same
2	page that under this option one, Bone Spring owners
3	would get their share of production from these Bone
4	Spring wells only in accordance with their interests
5	in the Bone Spring?
6	MR. COFFMAN: Yeah. That's correct.
7	And we have the majority of support from owners that
8	do own a differentiating interest in the Bone Spring
9	and the Wolfcamp.
10	We have that majority, including
11	interest owners that own in the Wolfcamp and the Bone
12	Spring. So
13	MR. RANKIN: Right. Yeah. We can I
14	mean, I think well, there's some I understand
15	that that's your position. I understand.
16	But there's some owners that own a
17	greater share of interest in the Wolfcamp who are not
18	supporting your position; correct?
19	MR. COFFMAN: Yeah. I'd agree with
20	that.
21	MR. RANKIN: Now that's option one.

1	Now I want to talk a little bit about option two.
2	Option two, as I understand, is that
3	same wells are being drilled in the Bone Spring;
4	right?
5	MR. COFFMAN: Yes.
6	MR. RANKIN: Only difference here is
7	that rather than dedicating those wells only to the
8	Bone Spring spacing units, you're going to also
9	dedicate them to Wolfcamp spacing units; correct?
10	MR. COFFMAN: Correct.
11	MR. RANKIN: And in this case, in this
12	option, then you would not need to institute a buffer
13	of any kind because Cimarex would be controlling the
14	operations in the Wolfcamp; correct?
15	MR. COFFMAN: Correct.
16	MR. RANKIN: And Cimarex, obviously, is
17	not going to drill upper Wolfcamp wells in that
18	circumstance; agree?
19	MR. COFFMAN: In that circumstance, no.
20	MR. RANKIN: Okay. So you
21	MR. COFFMAN: I'd have to I mean,

1	I'd have to
2	MR. RANKIN: So
3	MR. COFFMAN: Saying that we would
4	never drill an upper Wolfcamp well, no. But for
5	the I mean in this area, we take in we're
6	constantly moving. We're not doing our like you
7	said "cookie-cutter" development.
8	If things change, I don't want to make
9	a broad statement that says we're never going to drill
10	an upper Wolfcamp well.
11	MR. RANKIN: Well, in these four
12	sections, if you drill your Third Bone Spring at the
13	base of the Wolfcamp, are you going to come in and
14	drill an upper Wolfcamp well?
15	MR. COFFMAN: Under option two, no.
16	MR. RANKIN: Right. Because that's
17	essentially what Mr. Behm is saying happened in the
18	Black and Tan; right?
19	MR. COFFMAN: Correct.
20	MR. RANKIN: Yeah. You wouldn't do
21	that. Okay.

1	So under option two, that upper
2	Wolfcamp is not going to be developed; agree?
3	MR. COFFMAN: It'll be it'll be
4	pooled. And
5	MR. RANKIN: But okay. So it'll be
6	pooled. But as I understand and you and I discussed,
7	only 26 percent of that Wolfcamp production is going
8	to be attributable to those Bone Spring wells; agree?
9	MR. COFFMAN: Okay. Yes. I agree with
10	that.
11	MR. RANKIN: Okay. So some portion,
12	potentially, of the Wolfcamp is not going to be
13	produced by those Bone Spring wells; agree?
14	MR. COFFMAN: Upper Wolfcamp or
15	Wolfcamp in general?
16	MR. RANKIN: Upper Wolfcamp.
17	MR. COFFMAN: No. And I'd have to rely
18	on Eddie and Staci.
19	MR. RANKIN: Okay. That's fine. I
20	understand. Okay.
21	So now we've been talking about the

1	upper here, upper Wolfcamp. But I guess my question,
2	too, is then: Under option two, does Cimarex have any
3	plans to develop lower benches in the Wolfcamp?
4	MR. COFFMAN: I'd have to rely on Staci
5	and Eddie for future developments.
6	MR. RANKIN: Has Cimarex drilled any
7	lower Wolfcamp benches in the area of interest that
8	Mr. Behm has put together?
9	MR. COFFMAN: Area of interest being
10	Lea County?
11	MR. RANKIN: Well, Mr I guess I'm
12	going to, you know, defer to you on that. Whatever
13	Mr. Behm's area of interest is, you know, that he
14	refers to in his study.
15	MR. COFFMAN: Yeah. I that would be
16	a question for Eddie.
17	MR. RANKIN: Okay. But as you sit here
18	today, are you aware of any lower Wolfcamp wells that
19	have been drilled Cimarex?
20	MR. COFFMAN: Lower Wolfcamp, no.
21	MR. RANKIN: Mr. Behm, at the outset

1	when you were testifying under questioning from Mr.
2	Savage, you talked about a Read & Stevens well that
3	they had drilled in Section 9 in an acreage under
4	contract acreage that at the time, I think, Cimarex
5	contested as Cimarex being the operator. Do you
6	recall that testimony?
7	MR. COFFMAN: Yes.
8	MR. RANKIN: And you used that as a
9	basis to suggest that at the time, prior to Permian's
10	acquisition of Read & Stevens, that maybe Read &
11	Stevens, you know, didn't operate under in good
12	faith manner; fair?
13	MR. COFFMAN: Correct.
14	MR. RANKIN: But subsequent to Read
15	rather, Permian Resources' acquisition of Read &
16	Stevens, isn't it true that Read & Stevens went ahead
17	and plugged any of those wells that Read & Stevens had
18	drilled?
19	MR. COFFMAN: Could you repeat that?
20	MR. RANKIN: Isn't it true that Read &
21	Stevens I'm sorry that Permian went ahead and

1	plugged those wells that you referred to that Read &
2	Stevens had drilled?
3	MR. COFFMAN: That may be true. We
4	never received proposals on them. And
5	MR. RANKIN: Okay. But you don't know
6	that? Okay. That's fine.
7	I think at this time, Madam Hearing
8	Officer, I have no further questions for Mr. Behm.
9	I'm sorry. Mr. Coffman. Sorry.
10	MS. ORTH: Thank you, Mr. Rankin.
11	Mr. Savage, do you have any redirect?
12	Oh, wait. Hold on one minute.
13	I'm going to pause for a moment in the
14	event any counsel who has entered an appearance on
15	behalf of another part in this matter Mr. Bruce,
16	for example, or Mr. Jones has a question of Mr.
17	Coffman. I'll just pause.
18	No? I hear nothing. Oh. There. I
19	see somebody.
20	Mr. Jones?
21	MR. JONES: Yeah. Pardon me. Good

1	afternoon, Madam Hearing Examiner.
2	I just wanted to state my appearance
3	for the record. I was having some technical
4	difficulties as we got started this morning and didn't
5	want to interrupt.
6	But Blake Jones with Steptoe & Johnson
7	on behalf of Northern Oil and Gas. No questions,
8	though. Thank you.
9	MS. ORTH: Thank you very much. All
10	right.
11	Mr. Savage, if you have redirect for
12	Mr. Coffman, this would be a good time.
13	MR. SAVAGE: Thank you, Madam Hearing
14	Examiner.
15	Mr. Coffman, you mentioned and Mr.
16	Rankin asked some questions about your history with
17	Read & Stevens and pointed out that things may have
18	changed with Permian Resources.
19	But that is still a history of
20	negotiations and interactions with Read & Stevens in
21	the past that has brought us to this point of a

1	contested hearing; is that correct?
2	MR. COFFMAN: Yes. That's correct.
3	MR. SAVAGE: And when a company like
4	Permian Resources acquires a company like Read &
5	Stevens, they acquire the good stuff along with the
6	bad stuff; is that correct?
7	MR. COFFMAN: That is correct.
8	MR. SAVAGE: So do you agree, then,
9	that there's a certain amount of accountability for
10	those past negotiations and that past behavior that
11	has come to fruition in the present?
12	MR. COFFMAN: Yeah. I'd say so.
13	MR. SAVAGE: Okay. Mr. Rankin asked a
14	number of questions about the 1979 operating
15	agreement. And if you have an operating agreement in
16	place that covers parts of the subject land and then
17	you have a proposing new operating agreement for
18	owners that would incorporate other parts that were
19	not covered, is it true that the former operating
20	agreement is still fully binding and in place?
21	MR. COFFMAN: Yes. You can supersede

1	an existing operating agreement, but that does not
2	nullify the contractual obligations under that
3	operating agreement.
4	MR. SAVAGE: So members okay. So if
5	I I mean, it sounds very complicated.
6	So members of an old operating
7	agreement, a 1979 operating agreement, they want to
8	participate under in the new unit that still
9	includes parts of lands of the old operating
10	agreement.
11	They sign a new JOA. Now they're part
12	of the new JOA and the 1979 operating agreement?
13	MR. COFFMAN: Yes. That's correct.
14	MR. SAVAGE: Okay. Can you explain
15	that?
16	MR. COFFMAN: So they would contribute
17	their contractual interest under that '79 OA to the
18	new superseding OA.
19	MR. SAVAGE: And then how would
20	those how would that affect the overall
21	manifestation of their interests?

1	MR. COFFMAN: They would I mean,
2	they would be in the wells based on their contractual
3	interests across what the original OA covers.
4	MR. SAVAGE: Okay.
5	MR. COFFMAN: In addition to the north
6	half of 4 and 5.
7	MR. SAVAGE: Okay. Thank you, Mr.
8	Coffman. And in the next series of questions that
9	covered a bit of time, Mr. Rankin asked you about
10	various designations of commitment and uncommitment.
11	And it is true that a number of those
12	were typos?
13	MR. COFFMAN: Yes. That's true.
14	MR. SAVAGE: And you would revise those
15	promptly once identified?
16	MR. COFFMAN: Yeah.
17	MR. SAVAGE: Okay.
18	MR. COFFMAN: There was a lot of
19	committed and uncommitted going through all of these
20	hearing packets. And it gets lost. But yes. Typos.
21	MR. SAVAGE: And then that Foran you

1	know, we do not have Foran. But Foran is closely
2	allied with MRC; correct?
3	MR. COFFMAN: Yes. That's correct.
4	MR. SAVAGE: And you've received
5	information that Foran has laid notice and notice has
6	been satisfied; is that correct?
7	MR. COFFMAN: Yes. That's correct.
8	MR. SAVAGE: So there is really no
9	issue there. So given all the adjustments that Mr.
LO	Rankin had mentioned, how does that affect the overall
L1	interest balance of interest between Permian
L2	Resources and Cimarex?
L3	MR. COFFMAN: Minimal. I think one of
L4	the changes, as well, was adding the Josephine Hudson
L5	Trust as a Cimarex or Coterra interest. So that
L6	increases our support in both the Bone Spring and the
L7	Wolfcamp.
L8	But the changes that are made with
L9	parties that have gone in neutral does not change the
20	outcome of support, winning the majority of support
21	for Cimarex in the Bone Spring and the Wolfcamp except

1	for that west-half west half of Sections 5 and 8.
2	MR. SAVAGE: So overall, Cimarex still
3	owns a majority interest?
4	MR. COFFMAN: Yes.
5	MR. SAVAGE: And that's even based on
6	Permian Resources' own title evaluations?
7	MR. COFFMAN: Correct. Ownership and
8	support. Yes.
9	MR. SAVAGE: Then next, Mr. Rankin
10	talked about the AFEs and pointed out what he thinks
11	are, you know, some discrepancies regarding price and
12	cost in various places.
13	An AFE, that's basically an estimation;
14	is that correct?
15	MR. COFFMAN: Yeah.
16	MR. SAVAGE: And it always fluctuates a
17	little bit based on the market?
18	MR. COFFMAN: Yes.
19	MR. SAVAGE: And then the working
20	owners, they all understand that?
21	MR. COFFMAN: Yes. That's correct.

1	MR. SAVAGE: And you will send out
2	updated AFEs at the time of the order?
3	MR. COFFMAN: Yes, sir.
4	MR. SAVAGE: Okay. And the
5	fluctuations really, in the scheme of things, are not
6	significant; correct?
7	MR. COFFMAN: Yeah. I mean I would say
8	minimal inflation. But Eddie could fine-tune those in
9	his explanation.
10	MR. SAVAGE: So Mr. Behm has some good
11	information to provide for that?
12	MR. COFFMAN: Yes, he does.
13	MR. SAVAGE: Another area that Mr.
14	Rankin talked about and this confuses me a little
15	bit. He pointed out he pointed to some edited
16	language in the order and it looks like he gave the
17	working interest owners an extra 60 days to consider
18	whether or not to participate in the well or not. And
19	therefore, he makes the extrapolation that they're not
20	going to be burdened by the overall very massive costs
21	of the development plan that Permian Resources is

presenting; is that correct?
MR. COFFMAN: Yeah. That's correct.
MR. SAVAGE: But isn't it true that
Permian Resources presented this plan as a package
with all the wells; is that correct?
MR. COFFMAN: Yeah. It's a
co-development, at least in the Third Bone Spring and
upper Wolfcamp. Yes.
MR. SAVAGE: And so ultimately, the
owners are subject to the ultimate burden of the plan
as a whole; is that correct?
MR. COFFMAN: Yes. That's correct.
MR. SAVAGE: So really, the only
way I don't know if Mr. Rankin was implying this,
but the only way that a working interest owner would
not be additionally burdened or their burden would be
lessened is if on a case-by-case basis as they came to
the individual wells that Permian Resources itself
decided whether to develop the well or not; correct?
MR. COFFMAN: Correct.
MR. SAVAGE: So they proposed

1	Permian Resources proposed wells in the Bone Spring.
2	And then, they proposed the wells in the Wolfcamp.
3	Now if they're evaluating whether to
4	drill these on a case-by-case basis, they could for
5	example go through and decide to drill the Bone
6	Spring.
7	But then when they come to the
8	Wolfcamp, they may decide individually not to drill
9	the Wolfcamp and that would not burden the working
10	interests.
11	That would be a much less burden on the
12	working interests; correct?
13	MR. COFFMAN: That is correct.
14	MR. SAVAGE: But the overall result of
15	that would be that they would have, basically,
16	developing the Bone Spring and not the Wolfcamp;
17	correct?
18	MR. COFFMAN: Yeah. That would be like
19	our development.
20	MR. SAVAGE: Like Cimarex's?
21	MR. COFFMAN: The Bone Spring only.

1	MR. RANKIN: Madam Hearing Officer, I'm
2	hearing a lot of leading questions and I'd prefer to
3	hear Mr. Coffman testify.
4	MS. ORTH: Yeah.
5	Mr. Savage, that is how it's been
6	going.
7	MR. SAVAGE: Okay.
8	MS. ORTH: Turn it around.
9	MR. SAVAGE: Thank you.
10	You heard Mr. Rankin present his
11	exhibit on all the wells additional wells that he
12	wanted to show you; is that correct?
13	MR. COFFMAN: Yeah. With regard to
14	their pooling orders in the Bone Spring and Wolfcamp.
15	MR. SAVAGE: Yes. So is it your
16	opinion that he is claiming that Permian Resources is
17	developing more Wolfcamp wells than we show in our
18	example of cases
19	MR. COFFMAN: I think we
20	MR. SAVAGE: or courses?
21	MR. COFFMAN: I think we took ours from

1	Travis's testimony which references in the last 36
2	months that they drilled four Bone Spring and one
3	Wolfcamp wells.
4	MR. SAVAGE: And where in his testimony
5	is that?
6	MR. COFFMAN: That'd be in Paragraph
7	31.
8	MR. SAVAGE: And what does he say in
9	that paragraph?
10	MR. COFFMAN: He says: "As noted on the
11	exhibit, Read & Stevens/Permian has been the most
12	active operator in this area over the last 36 months,
13	drilling four Bone Spring wells and one Wolfcamp well
14	in that time with plans to spud at least an additional
15	eight wells in the Bone Spring and Wolfcamp formations
16	by the end of 2023.
17	"In comparison, Cimarex has drilled a
18	single one-mile well in 20 South 34 East and two
19	two-mile wells in an adjacent township to the north in
20	the same timeframe."
21	MR. SAVAGE: So 36 months, that's 3

1	years. Is that is it your understanding that's how
2	long Permian Resources as a company has been involved
3	and active in this area?
4	MR. COFFMAN: Permian Resources, yes.
5	MR. SAVAGE: Okay. So would it not be
6	fair to assume based on their landman's statement that
7	Permian Resources really is focusing on the Bone
8	Spring and has very little in the Wolfcamp?
9	MR. COFFMAN: Yes.
10	MR. SAVAGE: And then you we you
11	know, Cimarex provided some examples of other cases;
12	is that correct?
13	MR. COFFMAN: Yeah. We searched the
14	OCD for Permian Resources and that's where we got that
15	11 cases figures.
16	MR. SAVAGE: And that was just a
17	sample an example based on a search of the OCD
18	databases?
19	MR. COFFMAN: Correct.
20	MR. SAVAGE: The last part of Mr.
21	Rankin's questions dealt with the options one and the

1	options two.
2	You've heard your geologists talk about
3	the communication between the formations; is that fair
4	to say?
5	MR. COFFMAN: Yes.
6	MR. SAVAGE: And as you understand, do
7	these communications occur on all units, Bone Spring
8	units in this area of interest surrounding the subject
9	lands?
10	MR. COFFMAN: Yeah. I think the
11	yeah. The communication is like Eddie will get
12	into fractures growing upward from the upper Wolfcamp
13	into the Third Bone Spring sand.
14	MR. SAVAGE: So any operator Permian
15	Resources, Pride Energy who develops a unit of the
16	Bone Spring in this area, would they experience
17	drainage? Would they be draining the upper Wolfcamp
18	in some capacity?
19	MR. COFFMAN: Could you repeat that
20	again? Sorry.
21	MR. SAVAGE: Any operator who drills

and develops the Bone Spring formation in this area of
interest, would they drain from the upper Wolfcamp
because of the communication as you understand it?
MR. COFFMAN: Yeah. There'd be
incidental production from the upper Wolfcamp.
MR. RANKIN: I'm sorry. I couldn't get
my mute off.
But I think Mr. Coffman has explained
pretty clearly he's not a technical witness. And I'm
not sure how that is an appropriate question for Mr.
Coffman about drainage.
MS. ORTH: Yeah. It sounds as though
we need to have that discussion with the geologists.
MR. SAVAGE: Ms. Orth, that's why I
prefaced if I may, that's why I prefaced that he
has heard from the geologists that the communication
is a fact for this area.
I tried to limit the technical aspect
as much as possible. But
MR. RANKIN: Well, I think an engineer
can hear can rely on hearsay testimony for his

1	opinions.
2	But a landman can't rely on hearsay
3	testimony for his engineering, you know, opinions.
4	Because he's not an engineer.
5	MR. COFFMAN: Have we run into this
6	situation in other cases? Yes.
7	The Chauvez [ph] case that was held, I
8	think, is what Darin is trying to ask me with the
9	same same somewhat facts.
10	Is that right, Darin? I'm
11	paraphrasing. Sorry.
12	MR. SAVAGE: Well, is it your
13	understanding then that option one would result in
14	production from the Bone Spring and incidental
15	drainage of the upper Wolfcamp of whatever percentage
16	that might be?
17	MR. COFFMAN: Correct. Yes.
18	MR. SAVAGE: And that, as you
19	understand, is the nature of just about basically
20	every Bone Spring unit that's developed in this area
21	of interest; do you agree?

1	MR. COFFMAN: Yes. Correct.
2	MR. SAVAGE: And that would include
3	Permian Resources' Bone Spring units; correct?
4	MR. COFFMAN: Correct.
5	MR. SAVAGE: Okay. So option one, in
6	your understanding, is a viable option?
7	MR. COFFMAN: Yes.
8	MR. RANKIN: Maybe Mr. Savage can just
9	ask him what he thinks about option one, and Mr.
10	Coffman can testify to it.
11	MS. ORTH: Yeah. You've gone back to
12	leading, Mr. Savage.
13	MR. SAVAGE: These are Madam Hearing
14	Examiner, these are complicated questions and this is
15	an expert witness. I believe I can establish some
16	foundation for the question so that he can understand
17	what the nature of the question is.
18	I mean, you know, it looked like Mr.
19	Rankin was would set up a question in the same
20	manner. And I you know, he's probably a little bit
21	more sophisticated at doing that, because he's done it

1	for a longer time.
2	I respect his skills and abilities.
3	But I believe I'm basically doing the same kind of
4	foundation.
5	MS. ORTH: Yeah. But it sounded more
6	like an ultimate conclusion. And the question was not
7	"Do you consider option one to be viable?" which would
8	have been a great question. It was rather: "You
9	consider option one to be viable; right?"
10	MR. SAVAGE: Well
11	MS. ORTH: So just turn it around.
12	That's all.
13	MR. SAVAGE: I hear you. I hear you.
14	It's good nuance. It's a good point. Thank you.
15	Do you consider option one to be viable
16	issuant under the Oil and Gas Act as you understand
17	it?
18	MR. COFFMAN: Yes, I do.
19	MR. SAVAGE: Okay. So Cimarex could
20	produce the Bone Spring and then be allowed to drain a
21	certain percentage from the upper Wolfcamp; do you

1	agree with that?
2	MR. COFFMAN: I do agree with that.
3	MR. SAVAGE: Okay. But there's another
4	option under the Oil and Gas Act. Do you think there
5	is another option under the Oil and Gas Act?
6	MR. COFFMAN: Yes. I think we're
7	yes. I think that's our option two.
8	MR. SAVAGE: Okay. So that would be
9	the option two, as you point out.
10	How do you make the transition from
11	option one to option two?
12	MR. COFFMAN: I think that would be up
13	to the commission to decide.
14	MR. SAVAGE: Wouldn't the commission
15	have to pool the Wolfcamp to arrive at option two?
16	MR. COFFMAN: Yes.
17	MR. SAVAGE: Would you have to submit a
18	proposal letter as a requirement
19	MR. COFFMAN: Yes.
20	MR. SAVAGE: to pool? Okay.
21	Madam Hearing Examiner, at this point,

1	there is a lot of legal questions about how you make
2	that transition under the Oil and Gas Act. It's very
3	complicated.
4	And I would ask that Cimarex be allowed
5	to, at some point, address those questions for the
6	full understanding of the commission since this is a
7	very complicated matter.
8	And I'm not sure whatever the Division
9	would allow and thinks is appropriate for that. So
10	I'm going to and you know, there's a lot of things
11	to explore in this area I think are important.
12	But in terms of working with the
13	landman, I think I'm going to end the redirect at that
14	point.
15	MS. ORTH: All right. Thank you very
16	much, Mr. Savage.
17	I think in terms of laying out the
18	legal arguments that have not already been laid out in
19	the briefing that's already been done, I would
20	typically invite proposed findings of fact and
21	conclusions of law and any written legal argument

1	you'd like to make in a post-hearing submittal that
2	would follow the submission of the transcript.
3	I usually don't have that conversation
4	with Counsel until we're at the end of the evidentiary
5	record, though. So maybe we'll have that conversation
6	tomorrow.
7	MR. SAVAGE: Thank you. I just wanted
8	to since it is kind of creating some turbulence
9	with the questioning, I just wanted to make sure that
10	we're I understand how we're going to proceed.
11	Thank you.
12	MS. ORTH: Sure. Anything further, Mr.
13	Rankin or anyone else?
14	MR. RANKIN: Madam Hearing Officer, I
15	just
16	MS. ORTH: Questions of Mr. Coffman?
17	MR. RANKIN: have one question, and
18	that's based on Mr. Coffman's statement about, you
19	know he basically said it's up to the commission
20	which option to choose. And I guess that prompted me
21	to add just one question, because it prompted me to

1	wonder.
2	Mr. Coffman, does Cimarex itself have a
3	preference between the two options, option one or
4	option two?
5	MR. COFFMAN: I think option one would
6	be our preference. But we would comply with whatever
7	the commission decides.
8	MS. ORTH: Is that all, then? All
9	right.
10	Well, thank you very much, Mr. Coffman.
11	You may be brought back to discuss rebuttal exhibits
12	tomorrow. But if not, thank you very much for your
13	testimony.
14	MR. COFFMAN: All right. Thank you.
15	MR. RANKIN: Madam Hearing Officer, I
16	don't know if the Division has any questions of Mr.
17	Coffman?
18	MS. ORTH: I'm sorry? Oh. The
19	technical examiners
20	MR. RANKIN: I didn't know if the
21	MS. ORTH: Of course.

1	Mr. Garcia, I lost the thread there.
2	I'm sorry, Mr. Garcia and Ms. Thompson if you're on.
3	Do you have a question of Mr. Coffman?
4	MR. GARCIA: I do. And it's okay. I
5	thought maybe you were having a panel mindset maybe
6	before.
7	I thought you were going I do have
8	one or two questions. And they are probably pretty
9	repeats of what your counsel and Mr. Rankin have
10	already asked you. Just for my understanding.
11	And I will try to steer clear, as my
12	counsel has directed, about the legal arguments about
13	option one and option two.
14	For option one we've talked a lot
15	today about, I believe, CLM and Warren who are the
16	interest owners in the Wolfcamp but do not own
17	interest in the Bone Springs; is that correct?
18	MR. COFFMAN: Yes. That's correct.
19	MR. GARCIA: I believe you testified
20	that you had offered them basically that their
21	interest would be projected into the Bone Springs at

1	Cimarex's expense; is that correct?
2	MR. COFFMAN: Yes. That is correct.
3	MR. GARCIA: And they refused that, it
4	sounded like?
5	MR. COFFMAN: Yes.
6	MR. GARCIA: Did they have a counter
7	offer?
8	MR. COFFMAN: No. Their it wasn't
9	necessarily an offer. I mean, we had originally asked
LO	if they wanted to blend their interest with a Bone
L1	Spring interest. They declined that.
L2	And then I offered on behalf of Coterra
L3	to just do a straight-up assignment free of charge,
L4	and they did not counter that.
L5	MR. GARCIA: So was that two offers,
L6	per se I guess, that you made?
L7	MR. COFFMAN: Yes.
L8	MR. GARCIA: Okay. And they just
L9	were they didn't want to entertain either of those?
20	MR. COFFMAN: Yeah. I yeah.
21	Correct.

1	MR. GARCIA: Did they give reason? Was
2	it just mainly that they wanted Wolfcamp development?
3	Or did they state why?
4	MR. COFFMAN: They said they support
5	they would support Permian's development. But I'm
6	not
7	MR. GARCIA: Okay.
8	MR. COFFMAN: We weren't we were not
9	fishing for their support. So regardless, we were
LO	interested in assigning those interests to them.
L1	MR. GARCIA: That works. Let's see
L2	here. I think all my other questions are pretty
L3	legal-involved. That's all. I have one more.
L 4	The letter that Mr. Rankin pulled up to
L5	ask that we got confused on are is it technical or
L6	was it sent by you. Either way, the letter was sent
L7	by you.
L8	Was this letter sent to interests in
L9	just the Bone Springs? Or was it sent to interests in
20	Bones Springs and the Wolfcamp? Because it sounds
21	like there's some subtle differences there.

1	MR. COFFMAN: I think it was sent to
2	it was sent to everyone in the Bone Spring, I think,
3	except for Warren and CLM since they
4	MR. GARCIA: Okay. Since those are the
5	two exceptions?
6	MR. COFFMAN: Correct.
7	MR. GARCIA: So option two is basically
8	compulsory pooling the Bone Springs and compulsory
9	pooling the Wolfcamp.
10	Did you notify the Wolfcamp of being
11	potentially compulsory pooled?
12	MR. COFFMAN: With our letters? Are
13	you
14	MR. GARCIA: Yes. They need to be
15	served multiple notices as Counsel's aware. You know,
16	certified green cards, letters, JOAs, offers, AFEs, et
17	cetera, public posting.
18	MR. SAVAGE: Mr. Garcia, if I could
19	answer that because we handled that part. We did a
20	full application for the Wolfcamp. And as part of
21	that application, we sent out letter notices for

1	pooling the Wolfcamp and we published timely. So
2	MR. GARCIA: Okay.
3	MR. SAVAGE: all notice would be
4	taken care of.
5	MR. GARCIA: That's just what I wanted
6	to ensure is they were notified of potential pooling
7	without a well in the Wolfcamp.
8	MR. SAVAGE: And Mr. Garcia, if I can
9	point out that we did in the application, we
10	pointed out that the Third Bone Spring well would be
11	the well dedicated to the Wolfcamp because of the
12	substantial communication.
13	MR. GARCIA: Yeah. That's interesting.
14	Lots of questions around that, but it sounds like Ms.
15	Orth would like me to save those for tomorrow.
16	I'm trying to go through my notes and
17	see which ones are not legal or rule interpretation.
18	Last one I think I have is more of a
19	statement. All Counsel here is aware Mr is it Mr.
20	Coffman AFEs is one of our criteria in reviewing
21	compulsory pooling contested cases.

1	And as Mr. Adam discussed and seemed to
2	confirm by you, there's some slight issues with the
3	AFE currently. So I would like those updated, you
4	know, most of the timelines on that at the end of this
5	hearing depending on what other items we need.
6	But updated AFEs would be nice and an
7	also updated exhibit where you have committed and
8	uncommitted interest owners as Mr. Savage related you
9	would do.
10	MR. COFFMAN: We can do that for sure.
11	MR. GARCIA: I think that's it. Sorry.
12	Just trying to see which ones I'm I have lots of
13	questions for you, Mr. Savage, tomorrow.
14	MR. SAVAGE: That's great. I look
15	forward to them, Mr. Garcia. We want to flex this out
16	fully.
17	MR. GARCIA: Yeah. I'm just trying to
18	make sure I get all the ones for Mr. Coffman so I can
19	let him enjoy his day.
20	I believe that's it for now.
21	MS. ORTH: All right. Thank you, Mr.

1	Garcia.
2	Ms. Thompson, do you have questions of
3	Mr. Coffman?
4	MS. THOMPSON: I have no questions.
5	Thank you.
6	MS. ORTH: All right. Thank you.
7	Thank you, Mr. Coffman, again.
8	And we will move to the next witness.
9	Thank you.
10	MR. RANKIN: Madam, I'm so sorry.
11	MR. COFFMAN: Thank you.
12	MR. RANKIN: I have a question about
13	the well proposals under this proposal that Mr. Garcia
14	prompted me to
15	MS. ORTH: I'm having trouble hearing
16	you, Mr. Rankin.
17	MR. RANKIN: Sorry. Mr. Garcia's
18	question about well proposals and pooling in the
19	Wolfcamp prompted a question of mine that I think
20	would help the record if I asked it to clarify.
21	MS. ORTH: Okay. Of Mr. Coffman?

1	MR. RANKIN: Of Mr. Coffman. I
2	apologize.
3	MS. ORTH: Mr. Coffman, good. You're
4	still there.
5	Go ahead, Mr. Rankin.
6	MR. COFFMAN: I'm here. Yeah.
7	MR. RANKIN: Mr. Coffman, I think you
8	and I spoke around this a little bit, obliquely. But
9	I think Mr. Garcia's question about well proposals as
10	being an element of pooling prompted me to think
11	again.
12	My understanding when I reviewed your
13	exhibits is that the intent of the June 15, 2023
14	letter as a supplement to proposal to drill was that
15	it was intended to serve as a well proposal for
16	pooling the Wolfcamp; is that your understanding?
17	MR. COFFMAN: Yes.
18	MR. RANKIN: And as such, you would
19	have and should have sent out such a letter to each
20	owner of a working interest in the Wolfcamp formation
21	that you're seeking that has an interest; correct?

1	MR. COFFMAN: Correct. We needed to
2	provide notice.
3	MR. RANKIN: Okay. But not just
4	notice, but to provide good faith efforts to negotiate
5	what you're proposing to do in the Wolfcamp; correct?
6	MR. COFFMAN: Correct.
7	MR. RANKIN: So among those would be
8	CLM and Warren, but also would be Read & Stevens as
9	well; correct?
10	MR. COFFMAN: To provide a proposal to?
11	MR. RANKIN: Yeah.
12	MR. COFFMAN: Yes. Correct.
13	MR. RANKIN: Did you provide this
14	update supplemental proposal to drill to Read &
15	Stevens?
16	MR. COFFMAN: Read & Stevens or Permian
17	Resources? Because
18	MR. RANKIN: Either one.
19	MR. COFFMAN: Yes.
20	MR. RANKIN: You did?
21	MR. COFFMAN: Yeah. I'd have to go

1	back and look. But yeah. Yes. We know that Read &
2	Stevens own in the Wolfcamp so we would provide that
3	supplement to them.
4	MR. RANKIN: Okay. That's all my
5	questions.
6	MS. ORTH: Thank you all, then.
7	Thank you again, Mr. Coffman.
8	MR. COFFMAN: Thank you.
9	MS. ORTH: Mr. Savage, your next
10	witness?
11	MR. SAVAGE: Thank you.
12	I would like to call Staci Mueller as
13	geologist for Cimarex Energy Company.
14	MS. ORTH: All right.
15	Ms. Mueller, would you please raise
16	your right hand? Do you swear or affirm that you will
17	tell the truth?
18	MS. MUELLER: I do.
19	MS. ORTH: Thank you. And if you would
20	spell your name for the transcript, please?
21	MS. MUELLER: Staci Mueller. S-T-A-C-I

1	M-U-E-L-L-E-R.
2	MS. ORTH: Thank you.
3	Go ahead, Mr. Savage.
4	MR. SAVAGE: Thank you. Ms. Mueller,
5	can you state your full name for the record?
6	MS. MUELLER: Staci Mueller.
7	MR. SAVAGE: And are you an expert
8	witness in geology who has testified before the
9	Division?
10	MS. MUELLER: Yes.
11	MR. SAVAGE: And do you have written
12	testimony in each of Cimarex's Hearing Packets 1
13	through 4 as Exhibit B?
14	MS. MUELLER: Yes.
15	MR. SAVAGE: And Exhibit B is followed
16	by your geology exhibits B1 through B24; is that
17	correct?
18	MS. MUELLER: That's correct.
19	MR. SAVAGE: And do you testify that
20	your exhibits are accurate and correct to the best of
21	your knowledge?

1	MS. MUELLER: Yes, I do.
2	MR. SAVAGE: Madam Hearing Examiner, at
3	this time, I ask that Cimarex Exhibit B and sub-
4	exhibits B1 through B4 for cases 23448 through 23451
5	and 23594 through 23597 and 23452 through 23455 and
6	23598 through 23601 be admitted into the record.
7	MS. ORTH: All right.
8	Mr. Rankin, any objection?
9	MR. RANKIN: No objection.
10	MS. ORTH: We'll pause for a moment in
11	the event any other party has an objection. I don't
12	hear anything.
13	The exhibits are admitted. Thank you.
14	MR. SAVAGE: And Ms. Mueller, just to
15	confirm, is your statement in each hearing packet the
16	same in all four?
17	MS. MUELLER: Yes. It should be.
18	MR. SAVAGE: Okay. So the examiners
19	who are reviewing this would have reference to that in
20	each case?
21	MS. MUELLER: Correct.

1	MR. SAVAGE: Okay. Have you reviewed
2	Permian Resources' geologist's testimony and exhibits?
3	MS. MUELLER: Yes, I have.
4	MR. SAVAGE: Okay. And have you
5	reviewed any of the other exhibits that relate to
6	geology?
7	MS. MUELLER: Yes.
8	MR. SAVAGE: Okay. And you mention in
9	your testimony and exhibits that the geology is unique
10	in the subject lands and surrounding area of interest.
11	Because well, why is it unique in the subject
12	lands?
13	MS. MUELLER: There's no frac baffle
14	present between the Third Bone Spring target and the
15	upper Wolfcamp target.
16	That's pretty common in many places in
17	the Delaware Basin, and we also see that here.
18	MR. SAVAGE: Okay. And do you see in
19	Mr. Bradford's testimony discussion of lack of frac
20	baffles?
21	MS. MUELLER: He doesn't explicitly say

1	it in his statement. However, in his Exhibit E5, he
2	does show a cross-section with the basal third sand
3	landing in a red dashed line and then the upper
4	Wolfcamp landing in a purple dashed line. And I don't
5	see any evidence of frac baffles between those two
6	landings.
7	And what I mean by a frac baffle is a
8	very tight formation generally, carbonate is what
9	we see that might inhibit frac growth.
10	MR. SAVAGE: So there is direct
11	evidence of frac baffles in his testimony?
12	MS. MUELLER: Of a lack of frac
13	baffles.
14	MR. SAVAGE: Yeah. A lack of frac
15	baffles. Thank you. Okay.
16	And can you tell me what is the
17	significance of lack of frac baffles?
18	MS. MUELLER: It means that the
19	there are two formations. There's the Third Bone
20	Spring sand formation and the Wolfcamp formation.
21	However, there is one continuous reservoir interval.

1	Because we don't see a separation
2	between the two landing zones, we would expect
3	hydrocarbons to come from both the third sand and the
4	upper Wolfcamp.
5	MR. SAVAGE: Okay. And as I
6	understand, the Third Bone Spring and the upper
7	Wolfcamp do you they have two pool designations; is
8	that correct?
9	MS. MUELLER: Yes.
10	MR. SAVAGE: But you're saying that
11	that does not represent two separate reservoirs; am I
12	understanding that correctly?
13	MS. MUELLER: Correct.
14	MR. SAVAGE: So there's a single
15	reservoir, if I understand?
16	MS. MUELLER: Between the Wolfcamp
17	sands and the Third Bone Spring sand, I would say
18	that's correct.
19	MR. SAVAGE: Okay. Do you see anything
20	else in Mr. Bradford's Exhibit E5 that conflicts with
21	your exhibits or testimony?

1	MS. MUELLER: I think the biggest
2	conflict is the number of wells that Permian Resources
3	plans to put in the Wolfcamp and the third sand.
4	So my Exhibits B23 and B24 argue that
5	because there's no frac baffle in between the two
6	landing zones and the wells are spaced at a very tight
7	vertical distance of about 95 feet, the Wolfcamp and
8	third sand wells are going to significantly interfere
9	with each other. And Eddie Behm will cover that in
10	his testimony.
11	MR. SAVAGE: Okay. And Mr. Bradford's
12	Exhibit E4, have you looked at that?
13	MS. MUELLER: Yes.
14	MR. SAVAGE: What does he claim that
15	the Joker and Bane units cover?
16	MS. MUELLER: He's saying that the
17	Joker and Bane are geologically analogous to their
18	Batman development.
19	MR. SAVAGE: Okay. Does he describe
20	the extent of the formations that it covers?
21	MS. MUELLER: Yeah. So he's mapping

1	the Phi H of the Third Bone Spring sand in the top
2	map. And then the Phi H of the total Wolfcamp A shale
3	in the bottom map.
4	However, their landing zone is located
5	within just the very, very upper part of the Wolfcamp
6	known as the X and Y Sands.
7	And so I think by mapping the entire
8	Wolfcamp A shale, it's a little bit misrepresentative
9	of what they're actually targeting.
10	Just because when they aim for the very
11	top of the Wolfcamp, they're not going to be draining
12	the Wolfcamp shale below.
13	MR. SAVAGE: Okay. Does that effect
14	the analogy between the Joker and Bane and the Batman
15	wells?
16	MS. MUELLER: So I would say Joker and
17	Bane and Batman are geologically analogous. However,
18	I think they're trying to point out that the Black and
19	Tan is not analogous to Joker and Bane.
20	Which they are slightly different.
21	There's about a 4 pore/foot difference in the Third

1	Bone Spring sand and only a 3 pore/foot difference in
2	the Wolfcamp sands.
3	But both the Black and Tan development
4	and the Joker and Bane are located within a
5	high-porosity third sand fairway with only about a
6	hundred-fifty-foot difference in structure. So I
7	would consider those geologically analogous.
8	MR. SAVAGE: Okay. And Mr. Bradford
9	seems to indicate in his testimony and the Exhibit E3
10	that Batman wells, if I understand this, have a
11	thicker bone spring in the Wolfcamp formation than the
12	Black and Tan wells?
13	And I think you may have talked about
14	this already, but is that true?
15	MS. MUELLER: Yeah. So that's what I
16	just mentioned about the slight variation in Phi H
17	between the two areas.
18	However, it I don't consider that to
19	be a significant difference as they both lie within
20	the high-porosity third sand fairway that the majority
21	of operators are targeting here within the third sand.

geologic analogs.
MR. SAVAGE: Okay. Mr. Bradford,
looking at his exhibits, seems to give a number of
examples in E8 and E15 where he believes
co-development units currently exist.
In fact, looking at Section 28 and 23
of 20 South 34 East, what is your opinion of those
being co-development units?
MS. MUELLER: So I think you're
referring to the Little Bear development. And I
define that to be landed in only the Wolfcamp, whereas
they're saying that they're staggered between the
Wolfcamp and third sands.
So because the Wolfcamp sands are so
thin in the proximal part of the basin, it's sometimes
really difficult to tell where wells have landed
versus how they're defined on permits.
And at Cimarex, we use two approaches
to define where the wells are landed. We use grids at
the top and base of each landing zone. And then, we

1	also double-check that using offset type logs.
2	So I'm not sure where the discrepancy
3	is between how Permian Resources might be defining
4	wells versus how we do it. But we're definitely using
5	grids.
6	MR. SAVAGE: So if I understand that
7	right, you're looking at the geology and not a form
8	that's generated in an office?
9	MS. MUELLER: Right. We're checking
10	the permitted depths, but we're also looking at the
11	geologic grids to confirm or maybe have a different
12	opinion on where the wells might be landed.
13	MR. SAVAGE: And so is it the geology
14	that determines waste and correlative rights? Or at
15	least relates to them?
16	MS. MUELLER: I'm not sure what you
17	mean by that.
18	MR. SAVAGE: Well, would you have a
19	more accurate assessment of questions like waste if
20	you're looking directly at the geology and taking that
21	into consideration?

1	MS. MUELLER: As opposed to just going
2	with a number on the permitted form, that's correct.
3	Yeah.
4	MR. SAVAGE: Also looking at Mr.
5	Bradford's exhibits let's see here. So in terms of
6	your answer to the Little Bear not being a truly
7	co-development unit, is there a debate about the
8	number of actual co-development units in this area
9	that's being represented?
10	MS. MUELLER: Yeah. I would say there
11	are a couple differences in how we're defining where
12	the wells are landed versus where Permian Resources is
13	defining where the wells are landed.
14	MR. SAVAGE: Okay. Could you give a
15	kind of overview a little overview of which ones
16	that you raise questions about?
17	Or are there additional ones that you
18	raise questions about that I have not mentioned?
19	MS. MUELLER: I think the Little Bear
20	was the main one. I noticed the other one they had
21	was the War Eagle in Sections 1 and 12 out of 20 South

1	33 East.
2	That one just doesn't have a deviation
3	survey yet so I haven't included it on my Wolfcamp
4	map. But once that deviation survey comes in, then
5	I'm able to QC the depths of that well.
6	MR. SAVAGE: Okay. And what about
7	some of the other units that had been, you know,
8	thrown around, like Riddler and those kinds of wells?
9	MS. MUELLER: The Riddler unit, those
LO	wells are all one-mile Third Bone Spring sand wells
L1	that were drilled by Read & Stevens.
L2	MR. SAVAGE: Okay. Now I'm looking at
L3	Mr. Bradford's Paragraph E7 in Exhibit E7. I mean
L 4	that just looks like a lot of wells.
L5	Why doesn't Cimarex have wells all over
L6	the place like that?
L7	MS. MUELLER: So Cimarex proposed wells
L8	that lie within lower-risk zones. So I'm showing that
L9	in my Exhibit B4, I believe.
20	Meaning that there's offset production
21	in a geologically analogous area within the first

1	sand, second sand, and third sand.
2	And then in Mr. Bradford's statement
3	for Exhibit E7, he's saying that their plan
4	demonstrates that its spacing assumes maximum
5	development of all prospective zones.
6	Which to me sounds like this
7	development plan is not what Permian Resources intends
8	to realistically drill. So Cimarex is also
9	investigating the upper second sand in this area.
10	But because it's highly channelized and
11	the offset upper second sand wells are over six miles
12	away to the north, we're not rushing into a
13	development. And we'd like to collect more data on
14	those wells as we drill the Third Sand wells first.
15	And then we're also actively targeting
16	the Harkey and South lead. But we need to evaluate
17	the maturity of the shale up there and whether it's an
18	economically viable target, especially with
19	co-developing with an established zone such as the
20	lower Second Sand.
21	MR. SAVAGE: So if I understand that

1	right, Permian Resources by proposing all these
2	wells I believe there's 48 of them as initial
3	wells to be commenced drilling if an order is issued
4	in one year, would you feel like they're being rushed?
5	MS. MUELLER: Yeah. I think the main
6	landing zones that we would have an issue with are the
7	upper Second Sand.
8	I think more data needs to be collected
9	on that zone, as well as the Harkey and then the upper
10	Wolfcamp being co-developed with the Third Sand.
11	MR. SAVAGE: Okay. So if I'm looking
12	at this you would question the upper Wolfcamp and
13	the Bone Spring; why do you question that?
14	MS. MUELLER: It goes back to the very
15	tight vertical spacing of just 95 feet. We don't
16	consider that a true stagger.
17	And it's essentially a flat development
18	within one combined reservoir interval of eight wells
19	per section, which is twice as many wells as the
20	majority of operators have drilled within that
21	reservoir up here.

1	MR. SAVAGE: Okay. So flat
2	development. So if I understand this right, you think
3	there's a single reservoir; correct?
4	MS. MUELLER: Correct.
5	MR. SAVAGE: What happens if you put
6	two well bores into a single reservoir?
7	MS. MUELLER: At 95-foot vertical
8	separation, there would be a significant amount of
9	interference. And Eddie's going to show that later on
10	with the Black and Tan development.
11	MR. SAVAGE: Okay. So would there be
12	any benefit or not to
13	MS. MUELLER: I think it's it's a
14	matter of where you're allocating your reserves.
15	So if you drill a Third Sand well and
16	you drill a Wolfcamp well directly below it, then one
17	well is going to steal from the other.
18	MR. SAVAGE: Does the reservoir contain
19	a limited amount of resource?
20	MS. MUELLER: Yes.
21	MR. SAVAGE: So how would you describe

,	
1	Cimarex's approach in general compared to Permian
2	Resources' approach?
3	MS. MUELLER: I think the best way to
4	describe it is in the gun barrel plot. Let me get to
5	it.
6	So my Exhibit B4. Cimarex plans to
7	drill four wells per section within the basal Third
8	Bone Spring Sand. That's the established target in
9	the area.
10	And then, Permian Resources will be
11	essentially doubling that well count within the same
12	reservoir interval by adding in an additional four
13	wells within the upper Wolfcamp.
14	MR. SAVAGE: And what are can you
15	describe the possible consequences of Permian
16	Resources drilling all these wells?
17	MS. MUELLER: So their development is
18	essentially eight wells per section. It's in a highly
19	porous and permeable reservoir that's been developed
20	across most of the area with half the wells. So I
21	would consider it to be a waste of bore wells,

1	essentially.
2	MR. SAVAGE: Madam Hearing Examiner,
3	I'm done with my rebuttal comparison. And Ms. Mueller
4	is available for cross exam.
5	MS. ORTH: All right. Thank you very
6	much.
7	Mr. Rankin, do you have questions of
8	Ms. Mueller?
9	MR. RANKIN: Madam Hearing Officer, I
10	do. I wonder and I apologize if I may take a
11	short facility break before we commence. I apologize.
12	In order for me to have my attention
13	appropriately fixated on the questions, I need to take
14	a short break. I apologize.
15	MS. ORTH: You know what? We need to
16	take a break about this time anyway and then go to
17	4:30. So let's just come back at 3:05.
18	It's close to a 15-minute break. And
19	then we'll go straight on to 4:30.
20	MR. RANKIN: Thank you.
21	(Off the record.)

1	MS. ORTH: was about to begin his
2	cross-examination of Ms. Mueller.
3	Please go ahead.
4	MR. RANKIN: Good afternoon, Ms.
5	Mueller. How are you?
6	MS. MUELLER: Doing well.
7	MR. RANKIN: If you can't hear me or if
8	my questions get garbled, just please let me know and
9	I'll restate. Thank you.
10	I wanted to just clarify a couple of
11	things. I had understood based on your cross-
12	section and gun barrel view, I guess, really that
13	Cimarex was proposing a development plan of 24 wells
14	per section.
15	But when I read Mr. Coffman's testimony
16	that was updated, he says that there's going to be 30
17	wells per section. And I didn't see that in your gun
18	barrel view so I wanted to ask you.
19	And I understand that maybe those
20	additional four wells might be accounted for by the
21	Second Bone Spring upper Second Bone Spring zone,

1	which you indicated needed some additional evaluation.
2	Is that the situation there? Where he
3	identified 30 wells as the full development, and
4	you've got 24 in your gun barrel? And the difference
5	is that upper Second Bone Spring zone?
6	MS. MUELLER: So we have 12 wells per
7	section. So 24 total. And then, the 6 extra would
8	come from a potential upper Second Sand stagger.
9	Correct.
10	MR. RANKIN: So that would be two wells
11	per section? Oh, no. Sorry.
12	MS. MUELLER: Three in the upper Second
13	Sand.
14	MR. RANKIN: Three per section. I'm
15	sorry.
16	Now would that 30-well total for both
17	developments, at this point, be would you consider
18	that to be Cimarex's full development plan?
19	MS. MUELLER: That would not be the
20	maximum development plan that we would ever drill.
21	There's still opportunity within the Wolfcamp A shale

1	potentially deeper.
2	But the wells that we've proposed are
3	the ones that we feel confident in drilling in the
4	near future.
5	MR. RANKIN: You know what your maximum
6	development plan would be for this acreage?
7	MS. MUELLER: It's hard to say without
8	additional information, including additional offset
9	development, which is why we hadn't proposed
10	additional wells within the Wolfcamp A shale.
11	But I do see us potentially drilling
12	the upper Second Sand which is why that well count
13	increased to 30.
14	I don't it'd be very difficult to
15	tell if we would actually stagger the lower Second
16	Sand with the third carbonate like Permian Resources
17	has.
18	It's a lot like the Wolfcamp and the
19	Third Sand. There's a lot of shared resource there
20	with minimal frac baffles separating the two.
21	But I think that requires future or

1	additional research and information, as well.
2	MR. RANKIN: What I took away from your
3	testimony is that you're not taking anything off the
4	table; but you're saying that Cimarex needs to obtain
5	or acquire additional data, information, more
6	analogous offsetting wells in order to make an
7	educated determination on how to proceed with some of
8	these other zones; is that a fair recapitulation?
9	MS. MUELLER: Yes.
10	MR. RANKIN: And so an operator, you
11	know, would if they're going to propose certain
12	zones, they would as you're suggesting would
13	want to have some data information on an offset that
14	they could base their proposals on; fair to say?
15	MS. MUELLER: Yes.
16	MR. RANKIN: And you understand that
17	Permian has drilled a pilot hole in its offsetting
18	Batman development plan?
19	MS. MUELLER: Yes.
20	MR. RANKIN: And you understand that
21	they took some they did some science and core

1	took some core data and samples from that pilot hole?
2	MS. MUELLER: Yep.
3	MR. RANKIN: And that's the kind of
4	thing that you're talking about? That Cimarex would
5	need to do before it made a determination about
6	whether to target the Harkey, the upper Second Bone
7	Spring or what is it? Co-develop the Harkey and
8	the lower Second Bone Spring?
9	MS. MUELLER: Yes.
10	MR. RANKIN: I want to talk a little
11	bit I want to just have a little better
12	understanding about frac baffles.
13	I think I understood you to clarify
14	that frac baffles are basically and in your
15	exhibits, you identify frac baffles, I think, mostly
16	as carbonate.
17	But I think in your testimony just now,
18	you explained that really, it could be any tight
19	formation that would flow low permeability that
20	would impair or impede a frac from propagating; is
21	that correct?

1	MS. MUELLER: Yes. The most common
2	type of frac baffle we see within the Bone Spring
3	reservoir is carbonate.
4	However, in the Wolfcamp in many
5	areas especially the Wolfcamp A2 down south or in
6	Eddy County we see a high amount of clay stone
7	which we would also consider a frac baffle.
8	MR. RANKIN: These cross-sections, you
9	just identify frac baffles as being carbonates; right?
10	MS. MUELLER: Right.
11	MR. RANKIN: But are there no other
12	tight intervening lenses or formations that are not
13	carbonates that you believe would impede or impair
14	frac propagation at all?
15	MS. MUELLER: Not from what I see on
16	the logs. What I'm trying to identify is where the
17	neutron and density porosity decreases down to almost
18	0 percent. Or less than 4 percent density porosity is
19	a common cutoff used for frac baffles.
20	So what I'm highlighting is all I see
21	for formations that reach that low level of porosity

1	is the carbonate within the third car on my Exhibit
2	B7.
3	MR. RANKIN: Okay. And so looking at
4	that Exhibit B7, I see you have indicated some frac
5	baffles between the Third Cone Spring and the third
6	carbonate within the Bone Spring; correct?
7	MS. MUELLER: Correct.
8	MR. RANKIN: But nothing between the
9	basal Third Bone Spring and the X/Y of the Wolfcamp,
10	and then nothing between the X/Y and the Wolfcamp A;
11	correct?
12	MS. MUELLER: Yeah. It looks like
13	within the upper part of the Wolfcamp A there are
14	very, very thin-bedded what looks like potential
15	carbonate where you see the density porosity jump down
16	to zero percent.
17	But I didn't highlight that, because
18	they are so thin-bedded it's probably on an order of
19	five feet or less that a fracture is going to
20	propagate through that.
21	MR. RANKIN: Right. So part of the

1	other calculation here in your assessment would be not
2	just the log values but also the thickness; correct?
3	MS. MUELLER: Correct.
4	MR. RANKIN: Is there a sort of
5	thickness that you're looking for, below which you
6	would deem it not to be an effective barrier?
7	MS. MUELLER: So I'm very careful in my
8	use of "frac barrier" versus "frac baffle", because
9	it's very difficult to tell when fractures are
10	actually going to be stopped by these carbonates.
11	I think when a carbonate is less than a
12	hundred feet, two hundred feet, it's very difficult to
13	measure. Fractures will be slowed down, but it's so
14	difficult to tell if a fracture will actually be
15	stopped by that carbonate.
16	So a very complicated answer of saying
17	the thickness is it's very difficult to determine
18	the thickness of a frac baffle that makes it an actual
19	barrier to fractures.
20	MR. RANKIN: Sounds like it's sometimes
21	a little bit of an art more than a science, huh?

1	Okay. So as to determining what the
2	thickness would be, let's try to use your terms.
3	For a baffle, do you have a sense for
4	like what you would determine to be a barrier, a
5	thickness of a carbonate?
6	MS. MUELLER: Let's see. So on my type
7	log on Exhibit B6, what we see is that there's very
8	limited or no communication between wells landed
9	within the First Bone Spring versus the Second Bone
10	Spring versus the Third Bone Spring.
11	So it's probably a combination of
12	height difference and frac baffles in between the
13	different landings. But I would say a good frac
14	baffle is probably the Second Carbonate.
15	MR. RANKIN: On B7, you're talking
16	about that baffle you've identified in the first two
17	well logs going from A to A prime?
18	MS. MUELLER: That's pretty thin so I
19	would consider that to be a baffle. But because it's
20	not over a hundred feet of solid carbonate, it's if
21	one were to land a well within the Third Carbonate,

1	I'm not sure that we wouldn't see communication
2	between a Third Bone Spring Sand well versus a Third
3	Carbonate well.
4	MR. RANKIN: Well, I think you know,
5	I think I guess my bigger point here, though, is
6	that you didn't identify any frac baffles or barriers
7	on your exhibit between the Wolfcamp A or between the
8	X/Y and the Third Bone Spring; right?
9	MS. MUELLER: Right.
10	MR. RANKIN: Now I want to kind of get
11	away from frac baffles a little bit, having discussed
12	it with you.
13	I want to talk a little bit more about
14	Phi height, pore height. And I'm going to refer
15	to let's see. Make sure I have the right
16	paragraph. Okay.
17	Paragraph 15 of your statement, you
18	talk about Phi height, porosity height, in the Third
19	Bone Spring. And you're referring to your Exhibit
20	B10; okay?
21	And you make a comparison between the

1	Wolfcamp and the Bone Springs in this exhibit. And on
2	your left is your type log, your well log
3	right that you base your mapping on; correct?
4	MS. MUELLER: Correct.
5	MR. RANKIN: And you do two things
6	here, I think. You map the X/Y across the entire
7	interval based on the log; right?
8	MS. MUELLER: Right.
9	MR. RANKIN: And in your Third Bone
10	Spring Sand, you do the same thing. And you map the
11	entire interval from the top of the Third Bone Spring
12	to the base. And that's the basis for your map of the
13	Third Bone Spring; correct?
14	MS. MUELLER: Correct.
15	MR. RANKIN: Now Cimarex is landing its
16	Third Bone Spring at the base of that Third Bone
17	Spring interval; correct?
18	MS. MUELLER: Correct.
19	MR. RANKIN: And Cimarex is doing that,
20	presumably, because that is the zone that's identified
21	as having the best potential for productivity;

1	correct?
2	MS. MUELLER: Correct.
3	MR. RANKIN: You've mapped the entire
4	interval here and attributed Phi pore height across
5	the entire interval even though you're landing at the
6	base; correct?
7	MS. MUELLER: Correct.
8	MR. RANKIN: That's what I think I
9	heard you comment on in your rebuttal about what Mr.
LO	Bradford did in his Exhibit E4; correct?
L1	MS. MUELLER: Correct.
L2	MR. RANKIN: So in your testimony, you
L3	said that Mr. Bradford's depiction of the gross Phi
L4	height of the X/Y which was across the entire interval
L5	when they're landing at the bottom towards the
L6	bottom of it was a little bit of a misrepresentation
L 7	of the quality of that zone. Because they're really
L8	only landing in the bottom portion of it; correct?
L9	MS. MUELLER: They would be landing at
20	the top of the
21	MR. RANKIN: I'm sorry. Top. Sorry.

1	Top. Sorry.
2	MS. MUELLER: Right.
3	MR. RANKIN: But except for my
4	miscommunication on what part of the X/Y, that was the
5	thrust of your statement in your testimony; correct?
6	MS. MUELLER: Correct.
7	MR. RANKIN: So here, however, it seems
8	to me you're doing the same thing. You've mapped the
9	entire interval but you're landing the very bottom of
10	it.
11	And it seems to me that's a potential
12	misrepresentation of the target; is that not a fair
13	statement?
14	MS. MUELLER: The point of this exhibit
15	was to show what percent of the reservoir is the Bone
16	Spring versus what percent of the reservoir is the
17	upper Wolfcamp.
18	If I were to map the total reservoir, I
19	would map from the top of the Third Sand down to the
20	top of the Al.
21	MR. RANKIN: Okay. Now in doing

1	so I guess let me ask you this, then.
2	In doing so, you're in this
3	circumstance, is Phi height the pore height?
4	Is it as I understand your
5	testimony, it's serving as a proxy, as a substitute,
6	for potential hydrocarbon production; is that fair?
7	MS. MUELLER: Yes.
8	MR. RANKIN: But Phi height in other
9	words, the measurement of the pore density across the
LO	interval doesn't tell you anything about what's in
L1	those pores; does it?
L2	MS. MUELLER: Right.
L3	MR. RANKIN: So you don't know, looking
L4	at this data, what portion of that Third Bone Spring
L 5	Sand is oil-saturated, water-saturated, or some
L6	combination of the two?
L7	MS. MUELLER: Right. And I did look at
L8	SO Phi H as well and came up with very similar values.
L9	But here, I've only shown Phi H.
20	MR. RANKIN: Where do you get your
21	where did you get those values from?

1	MS. MUELLER: Those were derived from
2	our petrophysics model.
3	MR. RANKIN: Okay. So it's not actual
4	data that you had to determine that value?
5	MS. MUELLER: It's actual data taken
6	from a different part of the basin.
7	MR. RANKIN: Okay. And it's I'm not
8	a modeler. I'm not going to pretend to be one.
9	But it's not data taken from within
10	that four-section area or any immediate offsets?
11	MS. MUELLER: Correct.
12	MR. RANKIN: So when you did your
13	analysis here in B10 where you evaluate what portion
14	of the reservoir the Third Bone Spring contributes
15	versus the Wolfcamp, that's simply a measure of the
16	pore space as a proxy for productivity; correct?
17	MS. MUELLER: Correct. It was the best
18	way I could quantify through mapping which part of the
19	reservoir came from the Bone Spring versus the upper
20	Wolfcamp.
21	MR. RANKIN: But Cimarex doesn't have

1	the data itself or any offsetting wells to go any
2	farther than this with its assessment; is that
3	correct?
4	MS. MUELLER: Not in this area. But
5	elsewhere, we do.
6	MR. RANKIN: Thank you. Now I guess
7	just one other point I wanted to make on this is
8	again, I've got a kind of sort of tangent to this.
9	But your determination, your assessment
10	of the reservoir essentially assumes uniformity
11	across and I'm going to say both the X/Y and the
12	Third Bone Spring here.
13	I mean, you're unable to make any
14	distinctions or gradations between any portions of
15	these well at least in this assessment, you're not
16	making any distinctions in the quality from the top to
17	the bottom, between the top of the Third Bone Spring
18	to the bottom of the X/Y; correct?
19	MS. MUELLER: I'm not sure what you
20	mean by that.
21	MR. RANKIN: I mean, in other words,

1	you know, you're just comparing the kind of
2	gross-scale porosity across these two intervals.
3	And you're not saying, you know, the
4	upper third is better than the bottom third or
5	anything like that. You're just sort of comparing
6	them on a gross basis?
7	MS. MUELLER: Right.
8	MR. RANKIN: All right. Now let's make
9	sure all right. I'm going to stay on pore height a
10	little bit more.
11	Because I heard you talk about
12	analogizing or considering whether the I believe.
13	Let's see if I've got the right map here. One second.
14	Have to find the right one. Okay.
15	B10. Okay. Good thing because that's right where we
16	were. Okay.
17	The Black and Tan okay is the
18	well that was drilled by Apache, and Mr. Behm
19	addresses it fairly extensively in his testimony.
20	And he does some analysis of the pore
21	height or the Phi height right of the interval

ion, er.
er.
er.
Can
side
the
here
eight
ally,
ige of
ard
', as
1

1	Mr. Behm states, is approximately two miles south,
2	maybe a little bit more.
3	I can see it on my screen, but it's
4	basically it's hard to see. Tell me if you agree
5	that it's this section that I'm circling around with
6	my cursor. Do you agree?
7	MS. MUELLER: Yes.
8	MR. RANKIN: Okay. Now in Mr. Behm's
9	testimony, he assigns that section a Phi height of 7;
10	right?
11	MS. MUELLER: Yes.
12	MR. RANKIN: And you agree with that?
13	MS. MUELLER: Yes.
14	MR. RANKIN: And he assigns, I guess,
15	an average value of 10 for the Mighty Pheasant, Loosey
16	Goosey, Joker, Bane areas I've highlighted here with a
17	red circle a red outline; yeah?
18	MS. MUELLER: Yes.
19	MR. RANKIN: Now that doesn't seem like
20	a big number or a big difference, but what's the
21	percentage difference between 7 and 10 there?

1	MS. MUELLER: 30 percent.
2	MR. RANKIN: Pretty good, isn't it? I
3	mean, that's actually, well, I mean yeah.
4	That's a pretty good number.
5	And so you're saying that that's an
6	insignificant and now let me ask you this. In your
7	testimony, you equate Phi height with productivity of
8	oil and gas; correct?
9	MS. MUELLER: Correct.
10	MR. RANKIN: And so a difference of 30
11	percent in the potential for productivity between the
12	Black and Tan location in Section 27 and the
13	Joker/Bane cases in the sections highlighted, even by
14	your own Phi height analysis, is a pretty potentially
15	substantial difference in productivity as a Phi height
16	is a proxy for productivity?
17	MS. MUELLER: I would disagree with
18	that for Wolfcamp production.
19	One of the reasons why I sued Phi H was
20	because for all of the Third Bone Spring Sand
21	production in the area, we have wells in lower Phi H

1	and higher Phi H.
2	There's a pretty good spread across
3	this map. And we found a pretty good correlation
4	between well productivity and Phi H.
5	The Wolfcamp, however, has a very
6	limited number of tests in this area. So it's a
7	little difficult to tell if the Wolfcamp production is
8	on-trend with the Wolfcamp mapping, because a lot of
9	that production is coming from the Third Bone Spring
10	Sand.
11	MR. RANKIN: Aren't they both one tank?
12	Aren't they both one reservoir? And how would there
13	be a distinction between the two?
14	MS. MUELLER: I'm saying based on these
15	maps. And I totally agree that these are both one
16	reservoir.
17	So if I were to look at productivity of
18	both the Third Sand and the Wolfcamp wells compared to
19	a map of both the Third Sand and the X/Y Phi H, there
20	would be more of a correlation between productivity
21	and the Phi H map.

1	But with so few Wolfcamp X/Y data
2	points and just comparing that the Wolfcamp map;
3	because it's there's no production over a large
4	area with a large span in Phi H differences, it's a
5	little more difficult to tell.
6	MR. RANKIN: Your hesitation is that
7	you don't have enough data to make that correlation in
8	the Wolfcamp between Phi H and productivity in the
9	Wolfcamp?
10	MS. MUELLER: Right.
11	MR. RANKIN: So you're hesitant to make
12	that further step even though it's your position that
13	the Wolfcamp and X/Y and the Third Bone Spring are,
14	essentially function as a single flow unit; agree?
15	MS. MUELLER: I hesitate in the
16	Wolfcamp, but I'm very confident in the Third Sand
17	contributing 72.8 percent of the reservoir.
18	MR. RANKIN: I need to make sure I get
19	my screen resized properly.
20	Now Ms. Mueller, you're familiar with
21	the letter that I were you present for my

1	examination of Mr. Coffman?
2	MS. MUELLER: Yes, I was.
3	MR. RANKIN: And did you hear our
4	discussion about the June 15, 2023 letter that he sent
5	out to some of the owners for to supplement their
6	previous well proposal for the Bone Spring wells?
7	MS. MUELLER: Yes.
8	MR. RANKIN: And you heard our
9	discussion around that letter about how he agreed that
10	in general, the Wolfcamp would contribute anywhere
11	from 5 to 26 percent or so of production from those
12	to those Bone Spring wells?
13	MS. MUELLER: I don't remember if
14	that's what it said.
15	MR. RANKIN: Are you familiar with the
16	briefing that Cimarex's counsel submitted to the
17	Division on the legal issues around these cases?
18	MS. MUELLER: I'm relatively familiar
19	with the legal aspect.
20	MR. RANKIN: Pardon my screen for a
21	moment. I'm going to pull up the brief. Because I

1	want to understand where these numbers came from, and
2	I believe they're related to your assessment of Phi
3	height. And I want to understand; okay?
4	MS. MUELLER: Okay.
5	MR. RANKIN: Because I'm not connected
6	to our server directly, everything takes a little more
7	time. Okay. All right. I'm going to, again, share
8	my screen.
9	Oh, no. Wait. Am I? Yes. Clicked
10	the wrong thing. All right.
11	This is page 6 of Cimarex's brief;
12	okay? And I've highlighted the section here. And I'm
13	going to just scroll up so you can see that I'm
14	referring to the document that I said I was: Cimarex
15	Energy's Brief Providing the Basis for Evaluating a
16	Single Reservoir; okay? I'm not going to read the
17	whole thing.
18	Now in this brief okay that they
19	filed with the Division, Cimarex counsel identifies
20	says the following: "When an operator pools and spaces
21	just the Bone Spring pursuant to the pooling statutes,

1	the operator produces hydrocarbons from the Bone
2	Spring.
3	"However, this production will also
4	naturally drain a certain percentage from the upper
5	Wolfcamp because of the communication between the
6	formations.
7	"The exact amount of the production
8	attributable to the upper Wolfcamp is uncertain, but
9	can range anywhere from 5 to 10 percent up to
10	approximately 26 percent.
11	"Such drainage, distinct from
12	production, is incidental to producing the target
13	formation which is the Bone Spring."
14	Okay. Do you recall ever seeing that
15	language before?
16	MS. MUELLER: Yes.
17	MR. RANKIN: All right. Where did
18	these numbers come from? How does Cimarex determine
19	that 5 to 10 percent or up to 26 percent of production
20	in these Bone Spring wells will come from the
21	Wolfcamp?

1	MS. MUELLER: I believe that's based on
2	both Eddie's analysis of the Black and Tan as well as
3	these Phi H percentages.
4	MR. RANKIN: Some combination of
5	geology and engineering. Okay. Do you agree with
6	that range?
7	MS. MUELLER: Yes.
8	MR. RANKIN: Do you agree that the
9	exact amount of hydrocarbons from the Wolfcamp that
LO	would be produced is uncertain?
L1	MS. MUELLER: Yes.
L2	MR. RANKIN: Do you agree it could be
L3	more than 26 percent?
L4	MS. MUELLER: Based on the Phi H maps,
L5	that's highly improbable.
L6	MR. RANKIN: Okay. And again, that's
L7	just a proxy for porosity. You don't know. You have
L8	no basis to say in this location because you have
L9	no data how much of that porosity is filled with
20	oil or water or a rough combination; correct?
21	MS. MUELLER: We have no data to

1	support a confident oil saturation measurement.
2	Therefore, I can't give an accurate SO Phi H map.
3	But I am confident in the relationship
4	between Phi H and productivity of offset well.
5	MR. RANKIN: Only in the Bone Spring;
6	correct?
7	MS. MUELLER: Correct.
8	MR. RANKIN: Because you don't you
9	just told me you weren't confident about it in the
10	Wolfcamp; correct?
11	MS. MUELLER: Yeah.
12	MR. RANKIN: Thank you. Now so you
13	don't know, I mean, standing here today whether it
14	could be less or more; right? It could be more.
15	MS. MUELLER: Highly doubtful.
16	MR. RANKIN: Okay. So you're not so
17	you don't know. Now
18	MS. MUELLER: I do not know.
19	MR. RANKIN: Yeah. Now let me ask you
20	this. Suppose that the Division approves Cimarex's
21	application under option two and pools both the

1	Wolfcamp and the Bone Spring and dedicates the Bone
2	Spring wells to both formations.
3	In other words, there's no well drilled
4	into the upper Wolfcamp; okay? And the Wolfcamp pool
5	is being drained only by the Bone Spring wells; okay?
6	Is it your opinion do you have any
7	idea whether the Bone Spring wells will effectively
8	and efficiently drain the Wolfcamp?
9	MS. MUELLER: I think there will be
10	incidental drainage from the upper Wolfcamp. I don't
11	think the Bone Spring wells will drain the Wolfcamp Al
12	shale.
13	MR. RANKIN: You told me that it's
14	doubtful it will exceed 26 percentage production from
15	the Wolfcamp in the Bone Spring wells; correct?
16	MS. MUELLER: Correct.
17	MR. RANKIN: And you're talking about
18	the upper Wolfcamp here; correct?
19	MS. MUELLER: Right.
20	MR. RANKIN: So even the upper Wolfcamp
21	is only going to contribute, in your view, doubtfully

1	any more than 26 percent to production from the upper
2	Wolfcamp; correct?
3	MS. MUELLER: Correct.
4	MR. RANKIN: But nevertheless, Cimarex
5	is seeking to pool the entire Wolfcamp formation under
6	option two; correct?
7	MS. MUELLER: Correct.
8	MR. RANKIN: Are you aware of any wells
9	that Cimarex has drilled within Mr. Behm's area of
10	review that targe the lower Wolfcamp?
11	MS. MUELLER: The Perry I forgot the
12	number. But Cimarex actually did target the Wolfcamp
13	A shale at our Perry section, Section 22 in 20 South
14	34 East on one end of the section.
15	And then we also targeted the Third
16	Bone Spring Sand on the other end of the section.
17	MR. RANKIN: My understanding of Mr.
18	Behm's testimony on the Perry was that it was not a
19	good well, and it sounded to me like they wouldn't be
20	interested in drilling another one like it; is that
21	your understanding?

1	MS. MUELLER: It would be a lower-tier
2	reservoir, but we would definitely come back and drill
3	it at some point.
4	MR. RANKIN: So your understanding is
5	under Cimarex's economics, the Perry well would be
6	something that they would drill again?
7	MS. MUELLER: Yes.
8	MR. RANKIN: They would drill it? They
9	would target that Wolfcamp zone independently of the
10	Bone Spring because it's economic?
11	MS. MUELLER: Yes. It's just lower
12	tier so it would be further out in our inventory.
13	MR. RANKIN: Now on the Black and Tan,
14	Mr. Behm testifies we haven't gotten to him yet, of
15	course; but he testifies that it's the only and best
16	analog to Permian's development plan and is predictive
17	of the likely outcome of Permian's proposed wells in
18	the lower Third Bone Spring and the upper Wolfcamp
19	X/Y.
20	Do you recall his testimony on that if
21	you reviewed his written testimony?

1	MS. MUELLER: Yes.
2	MR. RANKIN: Is that a fair
3	recapitulation of what Mr. Behm testified?
4	MS. MUELLER: Yes.
5	MR. RANKIN: Have you conferred with
6	him over the geology where the Black and Tan wells are
7	landed?
8	MS. MUELLER: Yes.
9	MR. RANKIN: I think at this time, Ms.
LO	Mueller, I have no further questions. And we'll turn
L1	her back over for redirect or questions by the
L2	examiners.
L 3	MS. ORTH: Thank you, Mr. Rankin.
L4	Now let me pause a moment in the event
L5	other parties who have entered an appearance have a
L6	question of Ms. Mueller. No?
L7	Do you have any redirect, Mr. Savage?
L8	MR. SAVAGE: I do. Thank you, Madam
L9	Hearing Examiner.
20	Ms. Mueller, the Permian Resources
21	wells, where are they positioning those in the

1	Wolfcamp?
2	MS. MUELLER: Bane and Joker, you mean?
3	MR. SAVAGE: Yes.
4	MS. MUELLER: Those will be in the
5	Wolfcamp Y Sand.
6	MR. SAVAGE: And in that location, Bane
7	and Joker, would they produce the entire Wolfcamp?
8	MS. MUELLER: No. They would not.
9	MR. SAVAGE: So if I understand that,
10	in comparison from the Third Bone Spring and the
11	Permian Resources' Wolfcamp would bear the same; is
12	that correct?
13	MS. MUELLER: Say that again? Sorry.
14	MR. SAVAGE: In terms of producing the
15	Wolfcamp, would you say that Cimarex's Third Bone
16	Spring well would be just as effective at producing
17	the Wolfcamp as their upper Wolfcamp wells?
18	MS. MUELLER: It's hard to say because
19	we're primarily targeting the Third Bone Spring Sand.
20	But we would expect some drainage from the upper
21	Wolfcamp.

1	MR. SAVAGE: And if that were pooled,
2	that drainage, that would be production; do you agree
3	with that?
4	MS. MUELLER: Yes.
5	MR. RANKIN: But Permian Resources'
6	upper Wolfcamp wells would not produce fully the
7	middle or the lower Wolfcamp; is that right?
8	MS. MUELLER: That's correct.
9	MR. SAVAGE: Okay. So they are
10	potentially analogous in regards to how much they
11	would produce from the Wolfcamp?
12	MS. MUELLER: You're saying our the
13	basal Third Sand wells versus the Wolfcamp Y Sand are
14	analogous?
15	MR. SAVAGE: That they are going to
16	basically produce about the same amount from the
17	Wolfcamp; is that accurate?
18	MS. MUELLER: Yes. I would agree with
19	that.
20	MR. SAVAGE: And once you drill the
21	wells, is it fair to say that you would collect more

1	data?
2	MS. MUELLER: Yes. That's our plan
3	when we go in and drill the Third Bone Spring Sand
4	wells.
5	MR. SAVAGE: And based on that data,
6	you would have an accurate assessment of how much is
7	being produced from the Wolfcamp; do you agree with
8	that?
9	MS. MUELLER: Yes. And I would love to
10	get a more accurate estimation of oil saturation.
11	MR. SAVAGE: So at that point, you
12	would have concrete numbers and firm percentages; do
13	you agree?
14	MS. MUELLER: Yes.
15	MR. SAVAGE: And there's a question of
16	allocation that has been brought up through this. And
17	Mr. Rankin, I believe, has alluded to this.
18	But those firm numbers that you'd
19	receive in terms of percentages, would those allow you
20	to do an accurate allocation?
21	MR. RANKIN: Objection. I didn't ask

1	her about allocation between the different formations
2	for the purposes of pooling.
3	MR. SAVAGE: I'll
4	MS. ORTH: Right.
5	MR. SAVAGE: I'll strike that question.
6	MS. ORTH: Thank you.
7	MR. SAVAGE: I'm finished, Madam
8	Examiner, with the redirect.
9	MS. ORTH: All right. Thank you.
LO	Mr. Garcia, do you have any questions
L1	of Ms. Mueller?
L2	MR. GARCIA: I have a few.
L3	Good afternoon, Ms. Mueller. Looking
L 4	at your Exhibit B4, PDF page 195. This is my main
L 5	question so we're on this exhibit because it's easiest
L6	to see the comparison, I think.
L 7	Just to clarify some other stuff real
L8	quick. Earlier, you said lack of baffle. Are we
L9	talking about no baffle exists? Or is it just such a
20	thin baffle that a frac would blow right through it?
21	MS. MUELLER: In most cases around this

1	whole area, there's a very minimal baffle. If you go
2	to my Exhibit B24, I actually show all of the control
3	points.
4	And where the number says zero, it
5	means no baffle exists. And if it's a slightly higher
6	number, it means there's something minimal separating
7	the two formations.
8	MR. GARCIA: Okay. What logs did
9	you do you have for all of the formations on your
10	guys's cross-section from nearby wells? What type of
11	logs?
12	MS. MUELLER: Are you talking the
13	cross-sections in my exhibits? Or in general, what do
14	we have access to?
15	MR. GARCIA: I guess I'm just curious
16	on if there's any way and this goes to both
17	parties, FYI, Adam if the Division could get copies
18	of any logs you guys have; such as like neutron logs,
19	dual lateral logs, triple combos. Just I guess I'm
20	curious on looking at the logs myself, too.
21	MS. MUELLER: Got you. So we have a

1	lot of deep vertical control with triple combos. In
2	some cases, we have sonics as well.
3	And I think we're able to provide
4	copies of well logs that we own. So anything in
5	any logs in my exhibit, I should be able to provide
6	for you guys.
7	MR. GARCIA: Okay.
8	MS. MUELLER: But I can check for
9	specialty log data. But this is pretty much the basis
10	of my exhibits, just triple combo.
11	MR. GARCIA: I have a personal
12	weakness. I struggle with gamma on formation plots.
13	MS. MUELLER: Right. Which is why we
14	try to use gamma resistivity and neutron density.
15	MR. GARCIA: Yeah. Yeah. They're just
16	hard to read when they're coded in the exhibits and
17	not the actual log sometimes.
18	MS. MUELLER: Got you.
19	MR. GARCIA: You discussed earlier that
20	basically the Third Bone Springs on the top of the
21	Wolfcamp is essentially acting as a reservoir, a

1	single reservoir.
2	Have you talked to OCD or any of the
3	district offices about the possibility of renaming
4	this as a single pool?
5	MS. MUELLER: Not that I'm aware of,
6	but I would highly support that.
7	MR. GARCIA: Yeah. I'm going to
8	butcher the definition, but OCD calls pools basically
9	a unique source of reservoir, a unique source of oil.
10	We have some parts of the state that
11	like up north, I think we have the Mesaverde pools
12	which crosses three separate formations, I think.
13	I was just curious if you've had any
14	discussions with the Division on this before.
15	MS. MUELLER: I don't think so but I'd
16	have to refer to Darin.
17	MR. GARCIA: That's fine. I'm not
18	aware of any, myself.
19	How thick is the Wolfcamp X/Y here? I
20	might have missed your exhibit on that.
21	MS. MUELLER: Let's see. About a

1	hundred feet.
2	MR. GARCIA: Okay. Did you guys
3	evaluate any wine rack patterns with the Wolfcamp A,
4	then? Or also stacked patterns, I guess?
5	MS. MUELLER: You mean what our future
6	development plan might look like when we come back and
7	develop the Wolfcamp A?
8	MR. GARCIA: I guess initial
9	development plans and future development plans.
10	MS. MUELLER: Yeah. So I guess our
11	Tier 1 formations in this area are the Third Sand,
12	Second Sand, and First Sand so that's what we
13	proposed.
14	If we were to come back later on and
15	develop the Wolfcamp A shale, then we would land
16	probably 250 feet-ish below our Third Sand landing to
17	make sure that those wells have minimal interaction
18	between each other. But I don't have an example of
19	that in my exhibits.
20	MR. GARCIA: Okay. And I guess that
21	kind of leads into my next thing is if you come

1	back in the future, do you foresee any native
2	parent-child effects with those Wolfcamp A wells?
3	MS. MUELLER: I think we would land as
4	low as possible to avoid parent-child relationships
5	between the Wolfcamp A shale and the Third Sand wells.
6	MR. GARCIA: Earlier, we spoke to your
7	landman about option one and option two. I believe he
8	said his option one was his preferred outcome, which
9	was completely pooling just the Bone Springs.
LO	I guess do you agree with that option?
L1	Or would you prefer the option two because of
L2	potential future Wolfcamp development?
L3	MS. MUELLER: I think I would agree
L 4	with option one. And we would come back later on and
L 5	drop our well below any sort of baffle, well into the
L6	A1 shale.
L 7	MR. GARCIA: Okay. And your counsel's
L 8	aware if you if that was to play out that way, you
L9	would most likely have to reapply for compulsory
20	pooling of Wolfcamp if option one was successful.
21	Just a FYI.

1	Sorry. I'm moving pretty quick through
2	these. You touched a little bit about frac growth.
3	Are you the one I can ask about frac questions and
4	frac height?
5	MS. MUELLER: I would probably leave
6	that more to Eddie, but I can comment on HFTS2 if
7	that's kind of where you're going. I can comment on
8	HFTS2 microseismic and fiber data showing racks
9	growing up.
10	MR. GARCIA: I guess I'll ask and, I
11	guess, if anything it'll prep Eddie to Eddie is
12	our is you guys's production engineer; is that
13	correct?
14	MS. MUELLER: He's our reservoir
15	engineer.
16	MR. GARCIA: So there's lots of concern
17	with Read & Stevens' plan of feeding into Wolfcamp
18	because of the potential concerns of draining the Bone
19	Springs. Frac heights go upwards is what I believe
20	you guys have testified on today.
21	Was there any evaluation done on if a

1	different frac design was used? I think most
2	operators use slick water fracs nowadays which are
3	meant for, you know, high-rate/high-pressure frac
4	length.
5	Old school, there's thick water fracs
6	which result in lower frac lengths but wider fracs.
7	Would you expect similar issues?
8	I mean because those frac lengths
9	can be half of a slick water frac in some situations.
10	MS. MUELLER: Yes. I'll comment on the
11	geologic part of that and Eddie can comment on the
12	engineering part.
13	But I would expect that no matter what
14	frac design you try to go with, we're clearly unable
15	to control frac height growth.
16	And especially with the distance of 95
17	feet for vertical spacing and with a lack of frac
18	baffles, I think no matter what frac design you go
19	with you're definitely going to be accessing the Third
20	Sand.
21	MR. GARCIA: Okay. I think that is all

1	my questions for now. Thank you for keeping up with
2	me. I know I moved fast around that.
3	MS. ORTH: Thank you, Mr. Garcia.
4	Ms. Thompson, do you have any questions
5	of Ms. Mueller?
6	MS. THOMPSON: I don't have any
7	questions at this moment.
8	MS. ORTH: All right. Thank you.
9	Anything else for Ms. Mueller today?
10	MR. SAVAGE: Madam Examiner, would it
11	be possible to provide some comments that might be
12	helpful to Mr. Garcia based on some of the questions
13	he was asking?
14	MS. ORTH: You mean right now?
15	MR. SAVAGE: Right now or yes. If I
16	could
17	MS. ORTH: Yeah.
18	MR. SAVAGE: Okay.
19	MS. ORTH: No, no. That's fine. If
20	you want to ask Ms. Mueller some follow-up,
21	absolutely.

1	MR. SAVAGE: No. I'd just make some
2	comments regarding Mr. Garcia's questions. I think
3	there's some information that would be useful for him,
4	that would clarify.
5	MS. ORTH: All righty. Go ahead.
6	MR. SAVAGE: Okay.
7	Mr. Garcia, you know that those were
8	very interesting questions. The option one, the
9	question about pooling just the Bone Spring.
10	We had a case involving Pride Energy
11	just last week; and that's case number 23295.
12	And that whole issue of lowering the
13	landing zone in the Wolfcamp and trying to see if you
14	could design fracs that would not that would
15	produce the upper Wolfcamp and not go into the Third
16	Bone Spring, those were main issues that we discussed
17	in that. So I think that might be useful in that
18	regard.
19	And then, the other question you asked
20	about could you, you know, do a different pool that
21	would encompass the upper Wolfcamp and the Third Bone

1	Spring.
2	As I understand, in this area there's
3	been so much trading because the Bone Spring seems to
4	be the developed area formation.
5	And there's been a lot of trading
6	trying to get acreage in that Bone Spring over the
7	Wolfcamp. And that seems to account for the every
8	place being non-uniform.
9	So even if you did reevaluate or expand
LO	the pool, like doing a WolfBone or something like
L1	that, you would still have that ownership severance
L2	that you would have to account for.
L3	And under permit interpretations of the
L4	statute and regulations, you account for a severance
L5	by you know, if you want to produce below the
L6	severance, you have to do a separate well bore as I am
L7	sure you know.
L8	So we still have this issue of how to
L9	produce from the if you did option two, how to
20	produce from the Third Bone Spring and the upper
21	Wolfcamp.

1	So I think those you know. I
2	appreciate the time to be able to talk about that.
3	MR. GARCIA: No. I mean, you're
4	correct here on the WolfBone. WolfBone has mixed
5	feedback from industry on if it's a good thing or bad
6	thing.
7	And we do, like in the Mesa formation,
8	have lots of depth severance as you're probably aware.
9	And we have compulsory pooling, standard compulsory
10	pooling cases on those all the time about depth
11	severance where counsel will bring two cases for the
12	entire form at Yeso thickness because of depth
13	severance.
14	I was just curious if anyone had ever
15	talked to us on it before. More out of curiosity
16	than, I guess, deciding a winner on this. I was just
17	curious on how discussions have taken place with
18	these.
19	I'm sorry. I'm trying to refrain
20	myself from the legal questions that I have for you,
21	because you touched on some of them. But I'm trying

1	to be caged today, but
2	MR. SAVAGE: I look forward to them
3	very much, you know. I appreciate it.
4	MR. GARCIA: Yeah.
5	MS. ORTH: Well, thank you. Thank you
6	both, gentleman.
7	And thank you, Ms. Mueller.
8	And let's see if we can't get another
9	witness at least mostly done. Mr. Savage?
10	MR. ZIMSKY: Madam Hearing Officer
11	MR. SAVAGE: Bill Zimsky will be doing
12	the next witness.
13	MR. ZIMSKY: Yes.
14	MS. ORTH: Great. Thank you.
15	Hello, Mr. Zimsky.
16	MR. ZIMSKY: Good afternoon. Our next
17	witness is Calvin Boyle.
18	MS. ORTH: All right. Thank you.
19	Mr. Boyle, would you raise your right
20	hand please? Do you swear or affirm to tell the
21	truth?

1	MR. BOYLE: I do.
2	MS. ORTH: Thank you. And if you would
3	spell your name for the transcript?
4	MR. BOYLE: It's Calvin Boyle.
5	C-A-L-V-I-N B-O-Y-L-E.
6	MR. ZIMSKY: Good afternoon.
7	MS. ORTH: Thank you.
8	MR. ZIMSKY: Mr. Boyle, can you hear
9	me?
10	MR. BOYLE: Yes, sir.
11	MR. ZIMSKY: There seems to be an echo,
12	at least on my end. But I'll proceed.
13	Have you ever testified before the OCD
14	as an expert in production facilities?
15	MR. BOYLE: No, sir.
16	MR. ZIMSKY: Could you briefly go over
17	your educational background for the hearing examiner?
18	MR. BOYLE: Yes, sir. I graduated with
19	a petroleum engineering degree from the University of
20	Oklahoma in 2016, followed by my MBA from Oklahoma
21	State University in 2018.

1	MR. ZIMSKY: And give us a brief
2	summary of your employment history.
3	MR. BOYLE: I started with Halliburton
4	as a cement technical professional for about two
5	years, from 2017 to 2019. And from there, I went to
6	work for Cimarex as a field engineer for about a year.
7	After that, I was a production engineer
8	for Cimarex for about a year. And since then, I've
9	been a facility engineer for a little over two years,
10	since April 2021.
11	MR. ZIMSKY: And can you briefly
12	describe your responsibilities as a facility engineer
13	for Cimarex and Coterra?
14	MR. BOYLE: Generally, I do the
15	planning, designing, and the managing of our
16	production facilities operated by Cimarex and Coterra.
17	MR. ZIMSKY: And are you involved in
18	the design of the facilities?
19	MR. BOYLE: Yes, sir.
20	MR. ZIMSKY: And as part of that, do
21	you have any responsibility for budget? Budgeting?

1	MR. BOYLE: Yes, sir. I am over the
2	facilities budget for Lea County, currently, or any
3	projects that I'm over.
4	MR. ZIMSKY: And as far as that, do you
5	have to make decisions on allocating capital?
6	MR. BOYLE: Yes, sir.
7	MR. ZIMSKY: And this is your resume
8	is attachment A to your statement; is that correct?
9	MR. BOYLE: Yes, sir.
10	MR. ZIMSKY: At this point, I would
11	offer Mr. Boyle as an expert in the field of reservoir
12	engineering and facility engineering with knowledge
13	regarding the design and planning of production
14	facilities, as well as the budgeting and capital costs
15	associated therewith.
16	MS. ORTH: Any objection, Mr. Rankin?
17	MR. RANKIN: No objection.
18	MS. ORTH: All right. I'll pause for a
19	moment to see if there's any other objection. No?
20	He's so recognized, Mr. Zimsky.
21	MR. ZIMSKY: Thank you.

1	Do you have your self-affirmed
2	statement in front of you?
3	MR. BOYLE: Yes, sir.
4	MR. ZIMSKY: And I'm not going to go
5	over it in much detail. Now are the is your
6	statement and the two exhibits attached to your
7	statement, are they correct and accurate to the best
8	of your knowledge?
9	MR. BOYLE: Yes, sir.
10	MR. ZIMSKY: Madam Hearing Examiner, I
11	would move to introduce the self-affirmed statement of
12	Calvin Boyle and the two exhibits attached
13	thereto which, I believe, is Exhibit C1 and C2.
14	I'd like to have each of those
15	introduce those into evidence in case number 23448;
16	23451; 23594 through 23597; and in cases 23452 through
17	23455; and finally, in cases 23598 - 23601.
18	MS. ORTH: Thank you.
19	Mr. Rankin, any objection?
20	MR. RANKIN: No objection.
21	MS. ORTH: All right. I'll pause for a

1	moment to see if there's any other.
2	The exhibits are admitted. Thank you.
3	MR. ZIMSKY: Now Mr. Boyle, have you
4	had a chance to review the statement of Davro Clemens
5	from Permian Resources Operating LLC, Exhibit D to the
6	Permian Resources hearing packet?
7	MR. BOYLE: Yes, sir.
8	MR. ZIMSKY: And I have a few questions
9	about that. On Paragraph 9, third page, first
10	sentence says: "Permian Plans to utilize a four-stage
11	separation process to maximize retention of
12	hydrocarbon production."
13	Can you is that an unusual design or
14	proposal?
15	MR. BOYLE: No, sir. That's pretty
16	standard across the Basin, including our design.
17	MR. ZIMSKY: Including your design. My
18	second question, I'm going to try to share my screen.
19	And do you see Exhibit D9? Is that
20	showing up on the
21	MR. BOYLE: Yes.

1	MR. ZIMSKY: Okay. And this indicates
2	that Permian is going to have an off-pad their
3	essential tank battery is going to be off-pad.
4	Cimarex's central battery is going to
5	be on-pad; is that correct?
6	MR. BOYLE: Yes, sir. That's correct.
7	MR. ZIMSKY: And so what's the
8	implications of being off-pad as Permian Resources is
9	proposing?
10	MR. BOYLE: So if your facility is
11	off-pad, you're going to have run additional flow
12	lines off of off of the pad that it would be
13	extended from.
14	So for ours, since we have a pad
15	extension where the facility actually connects to one
16	of the pads, we'll run flow lines on the pad. Rather
17	than, if it's off-pad, you have to run additional flow
18	lines off-pad to the battery.
19	MR. ZIMSKY: So would you would they
20	have to do flow lines for each well?
21	MR. BOYLE: It depends on their design.

1	From what I can tell from the Permian
2	Resources design, looking at Exhibit D3, it would
3	appear that they're running individual flow lines back
4	to the battery for every well.
5	Compared to our design where we have
6	satellite separators, where we're putting them up
7	on-pad and running a single set of flow lines.
8	So when we come back, we'll only be
9	setting on-pad equipment. We will have no further
10	environmental impacts or disturbance. Once we've set
11	the first four pads, we won't have any more
12	disturbance.
13	Compared to Permian's, where they're
14	going to have to run flow lines every time they come
15	back. And that includes crossing the highway, 62/180,
16	every time they come from the east two pads.
17	MR. ZIMSKY: Now they indicate in this
18	exhibit that they plan to use one CTB. So what you're
19	saying is if they use the Joker CTB, will what will
20	the flow lines from the Bane what will those
21	traverse?

1	MR. BOYLE: They're going to run
2	along I think it's a yellow line there. They're
3	going to run all the way over to the Joker CTB.
4	So from the Bane section, they would
5	need to cross 62/180 with every well that they drill
6	going to the Joker CTB.
7	And if it was the opposite of that and
8	they were using the Bane CTB, it'd just be the it'd
9	be the exact opposite where they've got to cross with
10	all the Joker wells.
11	MR. ZIMSKY: Okay. And my cursor is
12	going along a diagonal line there. Is that the
13	highway you're speaking of?
14	MR. BOYLE: Yes, sir. That's correct.
15	MR. ZIMSKY: Okay. I'm going to move
16	to discuss there was someone questioning earlier
17	today about the cost of an average well that
18	Cimarex/Coterra is drilling in Lea County as part of
19	the investor presentation; do you recall that
20	testimony?
21	MR. BOYLE: Yes, sir.

1	MR. ZIMSKY: And I believe indicated it
2	was a \$14 billion average; do you recall that?
3	MR. BOYLE: Yes, sir. I believe it
4	was \$1400 a foot.
5	MR. ZIMSKY: And Mr. Rankin pointed out
6	that the proposals in Exhibits B18 and let me get
7	that shared. Okay. Can you see the D18?
8	MR. BOYLE: Yes, sir.
9	MR. ZIMSKY: And the June current cost,
LO	do you know how those were calculated on the capital
L1	plan comparison for Loosey Goosey and Mighty Pheasant?
L2	MR. BOYLE: Can you repeat the first
L3	part of that question?
L4	MR. ZIMSKY: The June current cost, do
L 5	you know how that was
L6	MR. BOYLE: Yes, sir. Those yes,
L 7	sir. Those are our current costs that we're using to
L8	develop this acreage. It's what we would use if we
L9	going to drill these wells tomorrow. They're going to
20	be the our new AFE would be very similar to those
21	numbers.

1	MR. ZIMSKY: And if you drilled your
2	wells six months from now, those costs would change;
3	correct?
4	MR. BOYLE: Yeah. They could they
5	could change somewhat, but I wouldn't expect them to
6	change a lot. But they could change some, depending
7	on timing.
8	MR. ZIMSKY: And can you explain why
9	these current costs are less than the average that was
10	presented in the investor relation presentation that
11	Coterra made in the last several days?
12	MR. BOYLE: Yes, sir. So it is an
13	average which directly means there is costs above and
14	below that number. And currently, in our inventory,
15	we have or we're drilling a significant one-mile
16	development.
17	And with a one-mile development, those
18	costs are higher so you're going to see a higher
19	average cost which is dragging that up to 1400.
20	Not only that, but a lot of those wells
21	are in southern Lea County. And we have a more

1	expensive well bore design in the Wolfcamp down there,
2	as well as a larger frac. And with that, the costs
3	are higher compared to what we would see with these
4	wells.
5	MR. ZIMSKY: So the June current cost
6	listed on D18 is an accurate estimation of the cost
7	that it would that Cimarex would incur in drilling
8	the wells as shown on Exhibit D18?
9	MR. BOYLE: Yes, sir.
10	MR. ZIMSKY: That's all the questions
11	that I have. I tender the witness.
12	MS. ORTH: Thank you, Mr. Zimsky.
13	Mr. Rankin, do you have questions of
14	Mr. Boyle?
15	MR. RANKIN: Good afternoon, Mr. Boyle.
16	How are you?
17	MR. BOYLE: Great.
18	MR. RANKIN: Just a couple questions.
19	I understand that Cimarex here is proposing to use a
20	single battery for all of its wells in this
21	development project, the Loosey Goosey and the Mighty

1	Pheasant; correct?
2	MR. BOYLE: Yes, sir.
3	MR. RANKIN: And in your testimony, you
4	say that there's going to be and I'm looking at
5	Paragraph 11.
6	You say there's going to be oops.
7	One second. I've got the wrong sorry. Thought I
8	had the right one.
9	MS. ORTH: It's only two sentences. I
LO	can read it to you.
L1	MR. RANKIN: I know. I'm getting slow.
L2	Sorry. All right. Paragraph 11.
L3	At the start there, it says that
L4	"Cimarex will use a single battery" okay which
L 5	you discussed with Mr. Zimsky.
L6	And then it goes on to say for all the
L7	27 to 34 wells that Cimarex intends to drill as part
L8	of the MPLG Development Plan I understand that to
L9	be MP being Mighty Pheasant; LG being Loosey
20	Goosey.
21	Now I'm trying to get a figure on this,

1	because I think I asked Ms. Mueller and I got an
2	answer that we were up now from 24 wells to 30.
3	And now, I read in your testimony it's
4	potentially up to 34. And I'm wondering; is that your
5	understanding as well?
6	MR. BOYLE: I believe that's a typo.
7	That should be 30.
8	MR. RANKIN: Okay. That answered my
9	question there.
LO	Now has Cimarex ever used a single
L1	battery for 30 wells before in New Mexico?
L2	MR. BOYLE: In New Mexico, we are very
L3	close to that. I'm trying to remember the exact
L4	number.
L5	We're above 20 on one of our
L6	facilities. I can't remember exactly how many are in
L 7	it. It's close, though.
L 8	MR. RANKIN: But so far, not yet?
L9	MR. BOYLE: Yes, sir.
20	MR. RANKIN: Has Cimarex done an onsite
21	with the BLM to confirm approval for its locations?

1	MR. BOYLE: Yes, sir.
2	MR. RANKIN: Are you guys a member
3	of and I'm going to mangle it, but you can correct
4	me the CCA or CCAA or whatever it is? The
5	conservation agreement dealing with native species?
6	Are you guys
7	MR. BOYLE: Yes, sir. We are.
8	MR. RANKIN: a member?
9	MR. BOYLE: Yes, sir. We are enrolled
10	in the Candidate Conservation Agreements. Yes, sir.
11	MR. RANKIN: No matter how many times
12	I've heard that, I can never get it into my head.
13	Now did you also then do a meeting with
14	the representatives that help manage that program?
15	MR. BOYLE: We are currently working
16	with them. Yes, sir.
17	MR. RANKIN: Have you met with them yet
18	on those locations?
19	MR. BOYLE: I'm not sure.
20	MR. RANKIN: Okay.
21	MR. BOYLE: That would be with the

1	regulatory department.			
2	MR. RANKIN: I'm sorry. Say that			
3	again?			
4	MR. BOYLE: It would be with the			
5	regulatory department.			
6	MR. RANKIN: So to your knowledge, you			
7	don't whether you've had that meeting? Or whether			
8	MR. BOYLE: Right.			
9	MR. RANKIN: those locations have			
10	been approved for any the dunes lizard issues or other			
11	potential issues in the area?			
12	MR. BOYLE: Yes, sir.			
13	MR. RANKIN: Okay. So based on that,			
14	it's possible I suppose that they may recommend			
15	that you move some of your facilities or locations; is			
16	that fair to say?			
17	MR. BOYLE: I mean, we've had our			
18	onsite. Yeah. I'm not sure.			
19	MR. RANKIN: Okay. Now you mentioned			
20	in your testimony that Cimarex is going to spend an			
21	additional sum for tankless surge vessels, an			

1	additional sum for line containment.			
2	Are those additional costs that you			
3	call out included in the AFEs that were initially			
4	proposed with the well proposals?			
5	MR. BOYLE: The original? The very			
6	original ones, they would not be. That would be with			
7	the new updated cost that we were just talking about.			
8	MR. RANKIN: Okay.			
9	MR. BOYLE: And those costs are			
10	they're not necessarily just for surge vessels and			
11	containment.			
12	That's a plethora of things that we're			
13	doing to go above and beyond to make sure that we			
14	don't have spills or emissions, et cetera.			
15	MR. RANKIN: You just called out a			
16	couple of them in your testimony, but there may be			
17	other costs that are going to up the AFE to			
18	MR. BOYLE: Oh, no, sir. That that			
19	covers it. I didn't list out every single thing that			
20	was inside that cost.			
21	MR. RANKIN: Okay. All right.			

1	No further questions.
2	MS. ORTH: All right. Thank you, Mr.
3	Rankin.
4	Now let me pause for a moment to see if
5	there are questions by any other party entering an
6	appearance. No.
7	Mr. Zimsky, do you have a follow-up
8	before I turn to Mr. Garcia?
9	MR. ZIMSKY: Yes.
10	I'm going to share that Exhibit D18 one
11	more time. And this is going to the question Mr.
12	Rankin asked about Paragraph 11. Cimarex will use a
13	single battery for all 27 now, you've corrected it
14	to 30.
15	Should it be 24 to 30? These upper
16	Second wells, are they the note says, you know,
17	you're not sure going to drill those depending on the
18	data you get from the other wells.
19	So should this read: "Cimarex will use
20	a single battery for all of 24 to 30 wells" instead of
21	27 to 33, I think it was?

1	MR. BOYLE: Yes, sir. I believe
2	that's correct.
3	MR. ZIMSKY: Okay. And that's the
4	only I just wanted to get that clarified. Thank
5	you.
6	And that's all the questions I have.
7	MS. ORTH: All right. Thank you, Mr.
8	Zimsky.
9	Mr. Garcia?
10	MR. GARCIA: I just have a few.
11	Looking at your Exhibit C2. I guess
12	out of curiosity, is this facility in New Mexico?
13	MR. BOYLE: The one specifically isn't,
14	but we do have other tankless facilities in New
15	Mexico.
16	MR. GARCIA: Okay. Mr. Rankin talked
17	about the CCA. If they have issues with the site, is
18	the goal to find another location that would still
19	suit a one essential tank battery? Or would you
20	MR. BOYLE: Yes. Yeah. I would expect
21	us to continue to keep one tank battery. And if we

1	needed to move it for the lizards, we would.
2	MR. GARCIA: What's the safety factor
3	and design for this tank battery?
4	Or basically, I guess my question is:
5	The initial design of this tank battery, is it going
6	to have capacity if future Wolfcamp wells are drilled?
7	Or will it need to be upgraded?
8	MR. BOYLE: No, sir. I would expect
9	the first time to be able to cover all of the the
10	future. If it needed to be upgraded, it would be
11	minimal.
12	MR. GARCIA: And then, you guys have
13	takeaway for all of the emulsion, oil, gas, water?
14	MR. BOYLE: We are we have proposals
15	back right now that we're looking through.
16	MR. GARCIA: And those proposals would
17	be 100 percent takeaway for gas and water?
18	MR. BOYLE: What do you mean, 100
19	percent?
20	MR. GARCIA: So basically, the waste
21	rule went out which I'm sure you probably heard a few

1	times.
2	One of the big things OCD is on is
3	reducing venting and flaring, which I'm assuming this
4	exhibit's discussing?
5	So when you submit APDs, there's a
6	natural gas management plan. And on there, you
7	certify that you have 100 percent takeaway.
8	Or you submit an additional plan of
9	what you're going to do with the gas that you don't
10	have takeaway for, such as powering generators, heater
11	treaters, et cetera.
12	MR. BOYLE: Yes, sir. We would have
13	100 percent takeaway. We permit zero flaring, zero
14	routine flaring so we would not we would have 100
15	percent takeaway.
16	MR. GARCIA: And then you said you're
17	working on water takeaway, too? Reduced water?
18	MR. BOYLE: Yes, sir. We're working on
19	all of it. There will be no trekking from this
20	facility.
21	MR. GARCIA: Your Exhibit C2 also says

_	
1	shale bows in during highline pressure. How are you
2	guys doing that? Is that just setting your back
3	pressure valves?
4	MR. BOYLE: No. We're actually
5	shutting the wells in. We have automated valves on
6	the well head that would be shutting the wells in if
7	we have highline pressure.
8	MR. GARCIA: Yeah. I guess that's what
9	I meant, is your back pressure sees highline pressure
10	and your SCADA systems are shutting it in?
11	MR. BOYLE: Correct.
12	MR. GARCIA: And also hitting on the
13	waste rule since that's one of our big topics in
14	recent years, how often do you guys do AVO inspections
15	on these at the facilities?
16	MR. BOYLE: We're doing them pretty
17	often. I'm not exactly sure what the exact cadence
18	is.
19	MR. GARCIA: And is it always AVOs? Or
20	do you guys use any other systems, like fenceline
21	monitoring?

1	MR. BOYLE: We do more than that. We			
2	do AVOs. We also do a Bridger flyover. We have a			
3	plane that flies over that checks our facilities.			
4	We also have the OGI cameras that we go			
5	out and check them on a certain cadence. We have an			
6	entire maintenance program that's based around			
7	checking these facilities to make sure there's no			
8	leaking.			
9	Which is really the benefit of our			
10	tankless facility, because we have no high-risk			
11	emission devices on this facility.			
12	So as far as like our OGI findings, we			
13	would expect it to be zero off of the closed vent			
14	system where you'd typically see the majority of your			
15	emissions.			
16	MR. GARCIA: And if a vent or spill is			
17	detected, you guys have a pretty solid plan for			
18	submitting 129s, preventing flaring, or 141s for			
19	spills?			
20	MR. BOYLE: Yes, sir.			
21	MR. GARCIA: Okay. I believe that's			

1	all my questions.
2	MS. ORTH: Thank you, Mr. Garcia.
3	Ms. Thompson?
4	MS. THOMPSON: I have no questions.
5	MS. ORTH: All right. Thank you.
6	Anything further for this witness on
7	this day?
8	MR. ZIMSKY: Madam Hearing Examiner, I
9	have one question.
LO	MS. ORTH: Go ahead.
L1	MR. ZIMSKY: Mr. Garcia asked you
L 2	about, you know, leak detection. And one of the
L 3	things you said is that you have a plane that flies
L 4	overhead. I assume that can detect has
L 5	instrumentation to detect leaking?
L6	MR. BOYLE: Yes, sir.
L 7	MR. ZIMSKY: That's the only question I
L 8	had.
L9	MS. ORTH: All right. Thank you for
20	that, Mr. Zimsky.
21	If there's nothing else, Mr. Boyle, I

1	thank you for your testimony.			
2	Ewe have just about six minutes before			
3	we need to adjourn for the day. We'll start again			
4	tomorrow morning at 8:30. Is there anything we should			
5	talk about?			
6	Any question that we'll be able to			
7	finish tomorrow with the other five witnesses?			
8	MR. GARCIA: I have a simple question.			
9	Do we use the same link to join tomorrow? Or is it a			
10	different link?			
11	MS. ORTH: Marlene?			
12	MS. SALVIDREZ: It is a different link			
13	and it is on the docket.			
14	MR. GARCIA: Okay. I am bad at			
15	looking. I am sorry, Marlene.			
16	MS. SALVIDREZ: That's okay.			
17	MS. ORTH: Thank you, Marlene.			
18	Anyone have any question about whether			
19	we'll be able to finish tomorrow? We have five other			
20	witnesses.			
21	MR. RANKIN: I think with our			

1	streamlined approach, Madam Hearing Officer, where
2	we're just going right to rebuttal and into
3	examination; I think I have every expectation that
4	we'll finish tomorrow.
5	MS. ORTH: All right. Well
6	MR. ZIMSKY: I concur. I think we
7	will.
8	MS. ORTH: Okay. Well, thank you, Mr.
9	Rankin and Mr. Zimsky.
10	Let's adjourn for the evening, then.
11	And we'll see you on the platform by 8:30. Thank you
12	all.
13	(Whereupon, the meeting concluded at
14	4:30 p.m.)
15	
16	
17	
18	
19	
20	
21	
22	
23	
	D
	Page 239

1 CERTIFICATE OF DEPOSITION OFFICER 2 I, DANA FULTON, the officer before whom the 3 foregoing proceedings were taken, do hereby certify that any witness(es) in the foregoing proceedings, 4 5 prior to testifying, were duly sworn; that the 6 proceedings were recorded by me and thereafter reduced to typewriting by a qualified transcriptionist; that said digital audio recording of said proceedings are a 8 9 true and accurate record to the best of my knowledge, 10 skills, and ability; that I am neither counsel for, 11 related to, nor employed by any of the parties to the 12 action in which this was taken; and, further, that I 13 am not a relative or employee of any counsel or 14 attorney employed by the parties hereto, nor 15 financially or otherwise interested in the outcome of 16 this action. 17 Dane Fulton 18 19 DANA FULTON 20 2.1 Notary Public in and for the State of Missouri 22 23 2.4 2.5 Page 240

1 CERTIFICATE OF TRANSCRIBER I, MARIE HELLER, do hereby certify that this 2 3 transcript was prepared from the digital audio recording of the foregoing proceeding, that said 4 5 transcript is a true and accurate record of the proceedings to the best of my knowledge, skills, and 6 ability; that I am neither counsel for, related to, nor employed by any of the parties to the action in 8 9 which this was taken; and, further, that I am not a relative or employee of any counsel or attorney 10 11 employed by the parties hereto, nor financially or 12 otherwise interested in the outcome of this action. 13 14 15 Marie L. Heller 16 17 18 MARIE HELLER 19 2.0 21 22 23 2.4 25 Page 241

[& - 23515]

	100 222.17.10	10 20.17.17	140.12 100 4
&	100 233:17,18	19 28:17,17	148:13 190:4
& 5:8,17 28:10	234:7,13,14	79:6	204 65:24
30:13,16 31:4	11 84:14	19-34 29:5	20th 9:7 69:23
31:13,19 32:10	131:15 185:14	195 202:14	214 3:7
32:16 34:8	226:5,12	1979 31:12	22 196:13
38:12 43:12,18	231:12	45:9,11,17	22853 17:20
43:19,21,23	11.1 70:15	46:13,24 59:11	23 3:5 159:7
44:10,13 45:1	12 29:18 72:24	60:1,18 62:12	23295 17:20
61:17 64:5	161:21 169:6	62:16 121:14	211:11
79:23 112:8	1200 9:23	122:7,12	2341 24:12
118:2,10,10,15	129s 236:18	1:30 88:10,14	23448 1:4 5:3
118:16,17,20	13 16:3 67:19	1st 84:19	24:12 25:21
119:1 120:6,17	71:23 72:4	2	152:4 218:15
120:20 121:4	14 29:19 68:15	2 24:17 36:11	23449 1:4
130:11 149:8	68:25 69:4	82:7	23450 1:4
149:14,16	223:2	2.1 48:22	23451 1:4
150:1 162:11	1400 68:11,18	20 28:16	25:22 152:4
208:17	223:4 224:19		218:16
	141s 236:18	130:18 159:8	23452 1:4
0	14th 41:21	161:21 196:13	24:18 25:22
0 173:18	73:10 84:22	227:15	152:5 218:16
1	87:4	200 72:8	23453 1:4
1 24:11 25:21	15 3:3 90:2	2010 15:25	23454 1:5
34:19 43:3	148:13 167:18	2016 215:20	23455 1:5 5:3,4
48:22 66:14,15	177:17 190:4	2017 216:5	24:18 25:22
89:16 151:12	150 3:6	2018 215:21	152:5 218:17
161:21 206:11	15th 92:1	2019 216:5	23508 1:6 5:10
1.2 67:16	16 24:3	2021 216:10	23509 1:6
10 16:10	16-23 1:3	2022 65:6,17	23510 1:6
185:14 186:15	17 65:17 85:3	68:21 76:10	23510 1:0 23511 1:6
	86:9,21	81:12 85:17	23512 1:7
186:21 192:9	175 34:19	2023 1:11	23512 1:7 23513 1:7
192:19	17th 83:3,3	35:18 57:21,23	23513 1:7 23514 1:7
10.6 67:13	18 3:4 16:20	58:15 64:24	23514 1:7 23515 1:7
68:22	17:25	85:18 90:2	1.7
	17,23	92:1 130:16	

[23516 - 9]

[9 - additional]

185:14 219:9	absolutely	acquisition	activity 29:16
9,651,993 66:19	210:21	44:12 118:10	44:25
9.4 67:8 68:22	access 80:8	118:15	actual 69:2
95 156:7	203:14	acreage 18:15	74:11,12 161:8
164:15 165:7	accessing	20:13 22:18	175:18 182:3,5
209:16	209:19	28:14,19 31:1	204:17
a	accordance	33:1,14,15	actually 9:16
a.m. 1:12	59:25 110:5,20	45:3,5 46:7,12	14:20 48:5
a.m. 1.12 a1 24:15,21	111:13 113:4	47:8,13,17	51:21 54:8
25:3,11,20	account 17:21	60:2,22 61:25	57:9 64:15
180:20 195:11	59:11 80:21	61:25 79:14	68:24 69:13
207:16	212:7,12,14	80:19 83:8,24	74:25 82:6
a10 24:15	accountability	85:21 86:3,13	85:14 90:3
25:20 36:21	121:9	86:17 118:3,4	103:6 109:12
56:24 57:15	accounted	170:6 212:6	157:9 170:15
a2 173:5	168:20	223:18	175:10,14
a2 173.3 a3 65:2	accurate 25:15	acres 29:10	187:3 196:12
a7 25:11	71:16 151:20	46:1 49:21	203:2 220:15
a7 23.11 a8 24:21	160:19 194:2	act 17:4 21:13	235:4
a9 34:20 35:12	200:17 201:6	136:16 137:4,5	actuals 69:5
36:5 56:19,20	201:10,20	138:2	adam 2:10 4:18
57:9	218:7 225:6	acting 204:21	146:1 203:17
abilities 136:2	240:9 241:5	action 240:12	add 87:14
ability 42:3	accustomed	240:16 241:8	139:21
43:21 240:10	72:2	241:12	added 9:4
241:7	achieve 16:18	activations	adding 124:14
able 33:9 44:4	acquire 121:5	71:25	166:12
44:5 66:13	171:5	active 15:12	addition 34:23
109:14 162:5	acquired 43:18	28:22,23 29:15	84:4 123:5
204:3,5 213:2	43:19 44:3	130:12 131:3	additional 9:9
233:9 238:6,19	58:10	actively 15:24	10:7 11:1
above 93:6	acquires 121:4	163:15	27:14,15 42:3
224:13 227:15	acquiring	activities 44:18	42:4 93:13,14
230:13	43:23	84:1 85:2	129:11 130:14
230.13			161:17 166:12

[additional - allowed]

160 20 160 1	1 14 1 25 22	11.10	60 10 60 15 00
168:20 169:1	admitted 25:23	ago 11:10	60:19 62:15,20
170:8,8,10	26:5 152:6,13	31:21 68:23	121:15,15,17
171:1,5 220:11	219:2	agree 12:24	121:20 122:1,3
220:17 229:21	adopt 14:4	26:18,19 28:12	122:7,7,10,12
230:1,2 234:8	22:20	28:24 43:25	228:5
additionally	adopted 37:24	44:7 47:1	agreements
127:16	adopting 7:18	53:19 61:5,18	228:10
address 9:24	advance 8:23	61:21,23 62:5	agrees 6:20
10:12,16,21	78:8	62:8,9 63:24	ahead 15:4
17:16 33:20	afe 67:5,19	67:17 68:17	23:18 49:9
36:12 100:3	125:13 146:3	71:3 75:12	55:24 78:22
138:5	223:20 230:17	79:3,10,20	102:17 118:16
addressed 9:12	afes 65:13	80:15,20 85:19	118:21 148:5
17:14 27:13	67:23 69:10,20	92:10 98:14	151:3 168:3
92:5 99:21	108:16 125:10	105:18 111:17	211:5 237:10
addresses	126:2 144:16	113:19 114:18	ahold 32:24
36:13 43:4	145:20 146:6	116:2,8,9,13	aim 157:10
46:13 184:19	230:3	121:8 134:21	alignment
addressing	affect 71:24	137:1,2 186:4	58:24
72:15	122:20 124:10	186:6,12	allied 124:2
adjacent	affected 78:24	188:15 189:14	allocate 73:15
130:19	85:7	193:5,8,12	allocated 110:1
adjourn 238:3	affidavit 73:10	200:2,18 201:7	110:19 111:13
239:10	affirm 23:11	201:13 207:10	allocating
adjusted 55:11	150:16 214:20	207:13	165:14 217:5
55:16 59:25	affirmed 5:15	agreed 5:24	allocation
60:15	14:20 40:20	7:16 14:16	27:18,21
adjustment	41:14 72:25	190:9	201:16,20
48:15	76:4 84:19	agreement	202:1
adjustments	218:1,11	31:12,17,24	allocation's
16:16 35:9	afternoon	41:17 44:5	110:15
124:9	11:23 120:1	45:10,11 46:7	allow 6:13
administrative	168:4 202:13	46:13,20 47:2	138:9 201:19
101:12	214:16 215:6	47:4,6,12 50:9	allowed 136:20
	225:15	51:20 54:22	138:4
			1

[allowing - arena]

allowing 16:14	anybody 78:23	applications	april 4:12
allows 16:14	108:7	5:1,5,8,12	82:17 216:10
alluded 201:17	anymore 30:2	16:11 22:25	area 15:9,13,23
amount 9:24	75:18	32:8 81:16	16:5 22:13
16:18 29:8	anyway 9:6	82:16,23,24	28:23 29:15,20
39:15,18 75:3	167:16	84:14 105:3,5	29:24 30:2,14
78:13 98:1	apache 184:18	apply 27:23	32:3 46:14
121:9 165:8,19	apartments	87:12	70:14,22 76:23
173:6 192:7	31:22	appreciate	77:2,6,8,11,12
193:9 200:16	apds 76:4,9,16	22:24 40:22	77:16,17,21
amounts 72:3	76:22,22,25	41:4 42:8	78:5,12,21
analog 197:16	77:5 78:7,22	213:2 214:3	79:2,9 80:23
analogizing	80:10,13 84:2	apprised 78:9	83:23 84:1,14
184:12	234:5	approach 16:8	85:9 86:4
analogous	apologize 25:6	16:13 22:7,11	107:4 115:5
156:17 157:17	64:8 91:4	82:1 166:1,2	117:7,9,13
157:19 158:7	148:2 167:10	239:1	126:13 130:12
162:21 171:6	167:11,14	approaches	131:3 132:8,16
200:10,14	appealing 38:8	159:19	133:1,17
analogs 159:2	appear 14:2	appropriate	134:20 138:11
analogy 157:14	55:21 90:1	12:16 14:12	153:10 161:8
analysis 182:13	221:3	133:10 138:9	162:21 163:9
184:20 187:14	appearance 4:9	appropriately	166:9,20
193:2	4:12,17 26:4	167:13	182:10 183:4
answer 144:19	119:14 120:2	approval 22:24	185:2,18
161:6 175:16	198:15 231:6	227:21	187:21 188:6
227:2	appeared 48:4	approved	189:4 196:9
answered	applicable	76:19 77:5	203:1 206:11
227:8	25:20 87:9	78:4 229:10	212:2,4 229:11
answering	application	approves	areas 22:14
102:9,10	74:24 86:11	194:20	78:14 79:24
answers 59:18	104:12 144:20	approximately	107:17 158:17
anticipation	144:21 145:9	15:20 57:2	173:5 186:16
97:1	194:21	97:2 186:1	arena 101:14
		192:10	

[argue - background]

27.17	• 20.15		207.10.212.0
argue 27:17	assign 38:16	attorney 27:12	207:18 213:8
57:15,16 156:4	assigned 52:19	240:14 241:10	awesome 49:2
argument	57:2	attorneys 6:1	b
138:21	assigning	57:16	b 151:13,15
arguments	143:10	attributable	152:3 215:5
11:13 96:6,13	assignment	116:8 192:8	b1 151:16
138:18 141:12	52:16 112:10	attributed	152:4
arrive 137:15	142:13	179:4	b10 177:20
art 175:21	assigns 186:9	audible 92:2	182:13 184:15
articulate	186:14	audio 240:8	185:6
185:16	assisting 4:20	241:3	b18 223:6
aside 11:17	associated	august 1:11	b23 156:4
37:8	49:18,21	65:6,17 66:24	b24 151:16
asked 28:2 64:8	217:15	68:21 81:11	156:4 203:2
120:16 121:13	associates	84:19	b4 152:4
123:9 141:10	38:13 64:5	automated	162:19 166:6
142:9 147:20	112:8	235:5	202:14
211:19 227:1	assume 131:6	available 36:18	b6 176:7
231:12 237:11	237:14	167:4	b7 174:2,4
asking 8:21	assumes 163:4	average 68:10	176:15
64:8 102:6	183:10	68:16,24 70:7	back 4:12 6:24
210:13	assuming 73:21	186:15 222:17	7:15 47:20
asks 17:18	234:3	223:2 224:9,13	64:19 66:21,24
aspect 133:18	astounding	224:19	68:21 75:20
190:19	15:16,19	avo 235:14	87:10 135:11
aspects 104:5	attached 218:6	avoid 102:19	140:11 150:1
assess 16:15	218:12	207:4	164:14 167:17
assessed 56:24	attachment	avoidable 18:1	197:2 198:11
assessment	217:8	avos 235:19	
160:19 175:1	attacking 22:6	236:2	206:6,14 207:1
183:2,9,15	attempt 13:25	aware 60:22	207:14 221:3,8 221:15 233:15
191:2 201:6	attendees 2:2	68:9,12 85:13	
assessments	attention 43:8	86:16 117:18	235:2,9
67:24	45:7 167:12	144:15 145:19	background
		196:8 205:5,18	215:17

[bad - best]

bad 121:6	base 115:13	59:3,9,18 62:2	126:10 156:9
213:5 238:14	159:21 171:14	62:6,10,24	184:18 186:1
baffle 153:13	178:3,12,16	63:8,9,16,19	197:14 198:3
154:7 156:5	179:6	71:14 79:12	behm's 117:13
173:2,7 175:8	based 7:2 26:18	81:5 104:10	186:8 196:9,18
175:18 176:3	40:7 41:6	118:9 127:17	believe 9:11
176:14,16,19	54:19,25 55:10	128:4 178:12	16:12 45:9
202:18,19,20	55:14 58:25	184:6 191:15	55:9 60:24
203:1,5 207:15	62:3 67:24	193:18 204:9	73:10 87:15
baffles 153:20	81:7 97:9	batman 156:18	94:3 102:5,8
154:5,11,13,15	111:18 123:2	157:14,17	135:15 136:3
154:17 170:20	125:5,17 131:6	158:10 171:18	141:15,19
172:12,14,15	131:17 139:18	battery 220:3,4	146:20 162:19
173:9,19 174:5	168:11 178:7	220:18 221:4	164:2 173:13
176:12 177:6	188:14 193:1	225:20 226:14	184:12 191:2
177:11 209:18	193:14 201:5	227:11 231:13	193:1 201:17
balance 124:11	210:12 229:13	231:20 232:19	207:7 208:19
bane 83:3	236:6	232:21 233:3,5	218:13 223:1,3
156:15,17	basically 7:6	battle 31:9	227:6 232:1
157:14,17,19	8:14 82:15	bear 159:11	236:21
158:4 186:16	83:22 84:10	161:6,19	believed 103:6
187:13 199:2,6	97:12 110:11	199:11	believes 93:11
221:20 222:4,8	125:13 128:15	bedded 174:14	159:5
barrel 166:4	134:19 136:3	174:18	bella 2:19
168:12,18	139:19 141:20	beginning 49:4	benches 117:3
169:4	144:7 172:14	behalf 5:22	117:7
barrier 18:24	185:16 186:4	119:15 120:7	benefit 21:1
20:18 175:6,8	200:16 204:20	142:12	39:3,4,12
175:19 176:4	205:8 233:4,20	behavior 44:10	70:18 73:2
barriers 18:16	basin 153:17	44:11 121:10	165:12 236:9
18:17 177:6	159:16 182:6	behm 2:16	best 16:4 25:16
basal 16:2	219:16	39:24 71:20	42:15 85:24
18:17 154:2	basis 9:3 10:18	96:3 100:12	102:19 151:20
166:7 174:9	22:19 37:14	115:17 117:8	166:3 178:21
200:13	39:17 49:5	117:21 119:8	182:17 197:15

[best - boyle]

218:7 240:9	197:13 198:6	104:17,18	181:14 182:14
241:6	blake 2:7,11	105:1,2,3,11	182:19 183:12
better 6:14	4:12 120:6	106:15,18,20	183:17 187:20
20:15 172:11	blast 16:9	107:9,10,11	188:9 189:13
184:4 185:5	blend 142:10	108:6 109:4	190:6,12
beyond 230:13	blm 77:8	110:1,18 111:3	191:21 192:1
big 19:24	227:21	111:19 112:7	192:13,20
186:20,20	blow 202:20	112:11,13,17	194:5 195:1,1
234:2 235:13	blue 35:25	113:2,3,5,8,11	195:5,7,11,15
bigger 177:5	bone 15:15	114:3,8 115:12	196:16 197:10
biggest 156:1	16:2,6 18:18	116:8,13	197:18 199:10
bill 214:11	18:22 19:7,10	124:16,21	199:15,19
billion 15:20	20:6,9,10,15,22	127:7 128:1,5	201:3 204:20
223:2	20:24 21:1,16	128:16,21	207:9 208:18
binding 121:20	21:18 22:16	129:14 130:2	211:9,16,21
bit 13:20 28:23	24:13,19 27:20	130:13,15	212:3,6,20
32:14 38:1,3	34:2,4,10 35:1	131:7 132:7,13	bones 143:20
67:15 72:7	38:7,17,25	132:16 133:1	bore 109:2
75:19 83:22	39:3 43:4 53:9	134:14,20	166:21 212:16
89:19 91:19	57:11 61:24	135:3 136:20	225:1
93:17 94:8	62:6,10,25	141:17,21	bores 68:11
99:14 106:4	63:6,14 64:1	142:10 143:19	165:6
114:1 123:9	64:10,12,25	144:2,8 145:10	bottom 57:9
125:17 126:15	65:20 66:18,23	153:14 154:19	77:22 157:3
135:20 148:8	67:6 70:2,12	155:6,17 157:1	179:15,16,18
157:8 172:11	82:1,20,23	158:1,11	180:9 183:17
175:21 177:11	84:12,15 87:8	162:10 164:13	183:18 184:4
177:13 179:16	87:12 90:21	166:8 168:21	boundary 20:5
184:10 186:2	92:18,19 93:4	168:21 169:5	22:3
208:2	93:7,13,21	172:6,8 173:2	bows 235:1
black 115:18	94:2,4,5 97:3	174:6,9 176:9	boyle 2:14 3:7
157:18 158:3	97:16 98:10	176:9,10 177:2	214:17,19
158:12 165:10	99:2,3,8,10	177:8,19 178:1	215:1,4,4,8,10
184:17 185:1	100:14,17,18	178:9,11,13,16	215:15,18
187:12 193:2	103:7,9,16,18	178:16 180:15	216:3,14,19

[boyle - case]

		I _	Ι .
217:1,6,9,11	breakdowns	burned 74:23	capital 217:5
218:3,9,12	47:25 59:9	business	217:14 223:10
219:3,7,15,21	61:19	109:11	car 174:1
220:6,10,21	breakout 64:15	butcher 205:8	carbonate
222:1,14,21	breaks 19:19	c	154:8 170:16
223:3,8,12,16	bridger 236:2	c 2:1 3:1 4:1	172:16 173:3
224:4,12 225:9	brief 97:1	23:16 150:21	174:1,6,15
225:14,15,17	190:21 191:11	215:5	175:11,15
226:2 227:6,12	191:15,18	c1 218:13	176:5,14,20,21
227:19 228:1,7	216:1	c14 84:25 87:3	177:3
228:9,15,19,21	briefing 102:20	c2 218:13	carbonates
229:4,8,12,17	103:14 138:19	232:11 234:21	173:9,13
230:5,9,18	190:16	c5 33:13,17	175:10
232:1,13,20	briefly 215:16	cadence 235:17	cards 144:16
233:8,14,18	216:11	236:5	care 145:4
234:12,18	bring 40:10	caged 214:1	careful 103:1
235:4,11,16	213:11	calculated	175:7
236:1,20	broad 115:9	223:10	caries 42:20
237:16,21	brought 120:21	calculation	carries 7:9
bradford 158:8	140:11 201:16	175:1	case 1:4 10:23
159:3 179:10	bruce 2:9 4:10	call 6:24 23:3,5	13:22 14:23
bradford's	119:15	45:17 87:12	21:6 26:16
153:19 155:20	budget 216:21	98:12 150:12	40:24 47:23,25
156:11 161:5	217:2	230:3	51:23 53:12
162:13 163:2	budgeting	called 230:15	54:14 56:5
179:13	216:21 217:14	calls 205:8	69:23 70:1,7,9
break 20:5	buffer 20:18	calvin 2:14 3:7	70:25,25 76:21
62:18 63:6,19	108:7,13,20	69:6,20 214:17	81:5,5 87:15
88:6,9,10,20	114:12	215:4 218:12	90:11 97:21
167:11,14,16	bunch 75:15	cameras 236:4	114:11 127:17
167:18	burden 75:5	camp 103:17	127:17 128:4,4
breakdown	127:10,16	candidate	134:7 152:20
49:14 56:8,18	128:9,11	228:10	211:10,11
57:5 58:22	burdened	capacity	218:15
61:3	126:20 127:16	132:18 233:6	
		102.10 200.0	

[cases - cimarex's]

cases 4:23 5:3,7	certificate	charge 142:13	87:22 90:14
5:10,12 15:3,7	240:1 241:1	charge 142.13	93:11 94:3
17:5,20 18:3	certified	53:6,17,22	96:13,14 97:16
18:10 19:6	144:16	chauvez 134:7	97:20 103:6,13
24:3,12,13,18	certify 234:7	check 160:1	104:16 105:5
24:19,24,25	240:3 241:2	204:8 236:5	106:5 107:20
25:8,21 36:8	cetera 144:17	checking 160:9	114:13,16
43:5 44:19	230:14 234:11	236:7	117:2,6,19
45:2,19 46:1,5	chair 2:3	checks 236:3	117:2,0,19
49:15 58:12	challenge 20:8	child 207:2,4	124:15,21
63:20 80:13	challenger 51:5	choose 39:20	125:2 130:17
84:2 85:4 86:9	51:8,11,15	139:20	131:11 136:19
90:12,16	52:8	cimarex 5:1,5	138:4 140:2
129:18 131:11	challenger's	5:16,22,24 6:2	150:13 152:3
131:15 134:6	34:24	6:7,23 7:16 9:9	159:19 162:15
145:21 152:4	challenges	11:7,14 14:25	162:17 163:8
187:13 190:17	15:11 17:14	15:22 16:9,14	166:6 168:13
202:21 204:2	challenging	17:7,16,18,21	171:4 172:4
213:10,11	15:10	18:2,9 20:4,8	178:15,19
218:16,17	chance 6:10	20:17,23 21:7	182:21 191:14
casing 31:24	9:16 100:13	21:16 22:15	191:19 192:18
catch 19:2	219:4	23:6 27:10,19	196:4,9,12
cca 228:4	change 37:6	28:1 31:6	216:6,8,13,16
232:17	38:21 53:15	33:24 37:8,19	222:18 225:7
ccaa 228:4	54:19 58:11	38:3 40:23	225:19 226:14
cement 216:4	75:3 115:8	41:8 43:13	226:17 227:10
central 26:17	124:19 224:2,5	44:10 45:22	227:20 229:20
220:4	224:6,6	52:16 55:23	231:12,19
certain 54:1,14	changed 10:22	59:1 68:5,10	cimarex's 8:8
121:9 136:21	52:8 120:18	68:23 70:8	10:13 15:21
171:11 192:4	changes 75:4	76:15 79:8,12	18:14 22:6,9
236:5	124:14,18	79:16,22,24	22:20,25 24:3
certainly 14:14	changing 51:9	80:4,16 81:9	24:7 25:1,9
102:15	channelized	81:15,21 82:2	26:22 37:23
	163:10	82:19 85:12	39:4,13 40:14

[cimarex's - coffman]

48:20 50:1	108:12 147:20	36:10,16,19,25	71:2,7,10,15,22
57:1 58:7	168:10 172:13	37:20 38:5	72:6,12,16,18
84:11 87:4	202:17 211:4	39:7,14,24	72:23 73:7,12
96:19 97:1	clay 173:6	40:1,4,7,12	73:17,21 74:1
98:10 103:18	clear 13:11	41:7,13 42:13	74:2,14,20
107:8,9 128:20	46:10 56:9	42:14,22 43:6	75:2,6,10,12,24
142:1 151:12	58:18 59:5	43:10,25 44:7	76:2,7,11,14,18
166:1 169:18	73:9 141:11	44:14,20,23	76:24 77:3,12
190:16 191:11	clearly 38:10	45:4,14,21,24	77:15 78:2,4
194:20 197:5	133:9 209:14	46:2,9,18,24	78:13,20 79:1
199:15 220:4	clemens 219:4	47:3,9,14,18	79:10,15,19
circle 186:17	clicked 191:9	48:3,7,13,16	80:1,6,14,20
circling 186:5	clm 38:12 64:4	49:1,6,11,12,23	81:4,14,18
circulated 8:6,8	112:8 141:15	50:2,6,15	82:4,10,13,18
8:18	144:3 149:8	51:13,24 52:3	82:22 83:5,9
circumstance	close 167:18	52:10,18,25	84:3,17,20,23
12:20 110:18	227:13,17	53:14,19 54:4	85:5,19 86:25
114:18,19	closed 236:13	54:9,17 55:3,7	88:17,22 89:1
181:3	closely 13:4	55:9 56:1,6,11	89:4,21 90:8
circumstances	124:1	56:15 57:8,14	90:17 91:2,10
19:15,22	closer 68:24	58:9,13,16,20	91:17 92:2,4,8
claim 27:9,9	closing 17:19	59:4,10 60:3	92:16,21 93:18
33:13 36:22	coded 204:16	60:11,20,24	94:9,14 95:1,3
156:14	coffman 2:17	61:4,9,15,21	95:14,19 96:1
claiming	3:5 23:5,8,9,13	62:2,8,12,22	96:4,10,17,20
129:16	23:16,20,22,22	63:1,3,10,21	97:6,18 98:2
claims 11:13	24:1,5,10,16,22	64:2,6,12,18,23	98:15,18
28:12 33:23	25:4,13,14,17	65:7,11,14,18	100:11,21
37:22	26:9,13,14,19	65:23 66:1,8	102:1,2 103:3
clarification	27:7,11,22,24	66:12,16,20,25	103:11 104:2
41:2 42:8	28:4,13,25	67:10,14,17,21	104:15,21
clarified 95:3,5	29:17 30:7	67:25 68:2,4,7	105:7,14,19
232:4	31:8 32:12,15	68:12,17,20	106:17 107:1,6
clarify 51:7	33:17,25 34:17	69:4,12,21,25	107:13 108:11
92:12 100:3	34:22 35:11,16	70:4,10,16	108:20 109:9

[coffman - compared]

	I	T	
109:17 110:3,8	142:5,8,17,20	38:12 47:20	committed
110:11,13,16	143:4,8 144:1	80:10 115:13	48:19 49:25
111:1,4,10,15	144:6,12	121:11 128:7	50:4,6,14
111:21 112:5	145:20 146:10	155:3 167:17	51:19 52:9,15
112:15,20	146:18 147:3,7	169:8 192:18	52:24 53:4,12
113:6,19 114:5	147:11,21	192:20 197:2	54:3,13,15,25
114:10,15,19	148:1,3,6,7,17	206:6,14,21	55:2,6 56:9
114:21 115:3	149:1,6,10,12	207:14 221:8	123:19 146:7
115:15,19	149:16,19,21	221:14,16	common 19:1
116:3,9,14,17	150:7,8 190:1	comes 37:5	19:13 153:16
117:4,9,15,20	coffman's	81:1 108:14	173:1,19
118:7,13,19	40:15 139:18	162:4	communicate
119:3,9,17	168:15	coming 35:17	43:21
120:12,15	colleague 4:19	86:19 188:9	communication
121:2,7,12,21	75:21	commence	50:8 93:7
122:13,16	collect 163:13	16:24 167:11	100:16 104:4
123:1,5,8,13,16	200:21	commenced	132:3,11 133:3
123:18 124:3,7	collected 164:8	164:3	133:16 145:12
124:13 125:4,7	collection	commencem	176:8 177:1
125:15,18,21	16:14	73:23 74:7	192:5
126:3,7,12	color 49:17	comment 99:18	communicati
127:2,6,12,20	column 49:25	101:5 179:9	29:1 44:4
128:13,18,21	com 67:7	208:6,7 209:10	132:7
129:3,13,19,21	combination	209:11	companies 30:9
130:6,10 131:4	176:11 181:16	commentary	30:9 37:10
131:9,13,19	193:4,20	100:5	company 23:6
132:5,10,19	combine 8:2	comments	121:3,4 131:2
133:4,8,11	46:21 47:12	210:11 211:2	150:13
134:5,17 135:1	combined	commission	comparable
135:4,7,10	164:18	137:13,14	66:6
136:18 137:2,6	combo 204:10	138:6 139:19	compared
137:12,16,19	combos 203:19	140:7	35:21 166:1
139:16 140:2,5	204:1	commitment	188:18 221:5
140:10,14,17	come 30:19	123:10	221:13 225:3
141:3,18 142:2	33:9 37:15,19		

[comparing - contractual]

comparing	100:18 103:19	conflicts	constantly
184:1,5 189:2	105:9	155:20	115:6
comparison	concern 14:8	confuse 14:10	contain 165:18
36:25 57:18	208:16	confused 41:6	contained
58:1 64:20	concerns 10:13	50:18 53:2	106:10
130:17 167:3	53:8 55:20	143:15	containment
177:21 199:10	208:18	confuses	230:1,11
202:16 223:11	concise 8:17	126:14	contended
competing	10:3	connected	45:22
18:11 32:8	concluded	191:5	contentious
80:25	239:13	connectivity	31:9 33:8
competitor	conclusion	33:10	contest 18:10
83:23	102:6 136:6	connects	contested 19:5
competitors	conclusions	220:15	45:19 46:1
79:23 80:4,16	138:21	consensus	51:23 81:2
80:18 86:1,14	concrete	84:12	118:5 121:1
complete 48:1	201:12	consequence	145:21
74:12	concur 239:6	46:3	context 27:6
completed 66:7	cone 174:5	consequences	continuance
completely	conferred	166:15	5:13 7:4
20:13 207:9	198:5	conservation	continue
complicated	confident 170:3	1:1 228:5,10	232:21
19:19 99:18,19	189:16 194:1,3	consider 79:16	continuing
122:5 135:14	194:9	126:17 136:7,9	52:22
138:3,7 175:16	confirm 60:14	136:15 158:7	continuous
comply 140:6	95:17 146:2	158:18 159:1	154:21
compulsory 5:2	152:15 160:11	164:16 166:21	continuously
5:6,9 144:8,8	227:21	169:17 173:7	16:15
144:11 145:21	confirmation	176:19	contract 46:14
207:19 213:9,9	50:13	consideration	77:12 118:4
computer 82:8	confirmed	160:21	contractual
concentration	55:11	considering	59:3,6,7,9,13
99:7	conflict 21:12	184:12	59:16,18 60:1
concentrations	156:2	considers 32:7	60:17 61:2,7
93:9 94:20			61:12,20 62:10

[contractual - cost]

63:9,18 122:2	25:3,4,12,16	92:3,4,7,8,15	175:2,3 178:3
122:17 123:2	28:3,4 34:22	92:16,20,21	178:4,13,14,17
contrasts 28:8	35:11 36:9,10	94:21 95:1,18	178:18 179:1,2
contribute	36:15,16 42:9	95:19 97:17,18	179:6,7,10,11
122:16 190:10	42:21 43:5,6	98:1,2 103:11	179:18 180:5,6
195:21	44:13,14,19	104:1,19 105:6	182:11,16,17
contributed	45:13,14,20,21	105:7,13,14,19	183:3,18
62:14 97:4	46:2,8,9,17,18	107:5 110:2,3	185:11,12
contributes	46:23 47:8,9	110:7,16 111:1	187:8,9 193:20
182:14	47:13,14,18	111:3,4,9,10,14	194:6,7,10
contributing	48:6,7,12,13,16	112:4,15 113:6	195:15,16,18
189:17	49:22,23 50:15	113:18 114:9	196:2,3,6,7
control 203:2	51:24 52:2,3	114:10,14,15	199:12 200:8
204:1 209:15	52:10 55:3,6,7	115:19 118:13	208:13 213:4
controlling	57:16 58:9,12	121:1,2,6,7	217:8 218:7
114:13	58:13,16 59:3	122:13 124:2,3	220:5,6 222:14
conversation	59:4 60:20	124:6,7 125:7	224:3 226:1
139:3,5	63:9,20 64:2,6	125:14,21	228:3 232:2
conversations	64:11 65:6,7	126:6 127:1,2	235:11
29:6	65:20 66:7,20	127:5,11,12,19	corrected
cookie 22:11	66:24,25 67:13	127:20 128:12	231:13
115:7	67:14,20,21	128:13,17	correctly 93:17
cooling 5:2	69:24,25 70:9	129:12 131:12	155:12
copies 203:17	70:10,16 72:6	131:19 134:17	correlation
204:4	72:12 73:11,12	135:1,3,4	188:3,20 189:7
copy 46:4	73:16,17 75:2	141:17,18	correlative
48:23 82:7	75:5,25 76:10	142:1,2,21	17:6,8 20:21
87:2	76:11,14,23,24	144:6 148:21	21:8 22:2
cordial 44:3	77:3 78:12,25	149:1,5,6,9,12	37:23 38:2,4,8
core 171:21	79:9,15 80:1	151:17,18,20	160:14
172:1	80:14 81:14,18	152:21 155:8	cost 16:20 37:1
corner 65:16	82:21 83:4,5	155:13,18	37:2,3,3,25
correct 22:18	84:17,19,20	161:2 165:3,4	39:21 57:2,18
23:25 24:4,9	90:16,17 91:1	169:9 172:21	58:4 64:19
24:15,16,21,22	91:2,16,17	174:6,7,11	66:4,10,19

[cost - databases]

67:8,12 68:21	241:7,10	create 108:6	159:6 217:2
68:24 69:12,16	counsel's	creating 139:8	224:14 228:15
69:17 71:12,24	144:15 207:17	credited 36:4	cursor 106:5
125:12 222:17	count 9:23	criteria 145:20	186:6 222:11
223:9,14	166:11 170:12	cross 6:5,23	curtis 2:18
224:19 225:5,6	counter 22:9	7:22 8:3,20	cutoff 173:19
230:7,20	142:6,14	9:12 13:12,13	cutter 22:11
costing 15:19	county 5:3,6,9	87:18 88:17	115:7
costs 17:24	15:23 68:11,24	100:13 154:2	d
56:25 66:5,6	85:25 117:10	167:4 168:2,11	d 4:1 219:5
67:23 68:10	173:6 217:2	173:8 203:10	d10 71:6
69:2,8 70:8,11	222:18 224:21	203:13 222:5,9	
70:21 71:6,10	couple 31:21	crosses 205:12	d18 66:10,16 67:11 71:8,9
71:13,16,19	50:17 55:19	crossing 40:25	71:12 223:7
72:15 73:15	84:6 161:11	221:15	225:6,8 231:10
74:6,10,11,12	168:10 225:18	crude 51:6,8	d3 221:2
74:13 126:20	230:16	52:8	d9 219:19
217:14 223:17	course 4:7 16:2	crude's 51:11	
224:2,9,13,18	56:17 140:21	ctb 221:18,19	dana 1:19
225:2 230:2,9	197:15	222:3,6,8	240:2,20
230:17	courses 129:20	culminate	darin 2:15
coterra 36:3,3	court 31:13,14	16:17	26:25 95:4
124:15 142:12	cover 46:7,12	curiosity	134:8,10 205:16
216:13,16	47:7 156:9,15	213:15 232:12	
222:18 224:11	233:9	curious 203:15	dashed 154:3,4
coterra's 38:16	covered 31:10	203:20 205:13	data 16:14
58:2 112:10	121:19 123:9	213:14,17	163:13 164:8
counsel 15:7	covers 24:12,18	current 66:19	171:5,13 172:1
27:15 87:4	24:24 25:8	71:16 93:12	181:14 182:4,5
96:7 97:1	28:16 45:11	96:19 223:9,14	182:9 183:1
102:12 119:14	47:2,5,16	223:17 224:9	189:1,7 193:19
139:4 141:9,12	58:11 59:14	225:5	193:21 201:1,5
145:19 190:16	62:13 121:16	currently 16:10	204:9 208:8
191:19 213:11	123:3 156:20	46:19 47:11	231:18
240:10,13	230:19	108:16 146:3	databases
			131:18

[date - develop]

date 57:21,23	dedicates 195:1	depend 61:9	designation
64:24 65:8	dedicating	77:15	77:1
dated 83:2	114:7	depending 53:2	designations
davro 219:4	deem 175:6	146:5 224:6	123:10 155:7
day 19:21	deemed 111:8	231:17	designing
146:19 237:7	deep 204:1	depends 220:21	216:15
238:3	deeper 170:1	depiction	desire 10:23
days 7:5 11:10	defer 117:12	179:13	detail 35:7
11:17 68:23	define 159:12	deposition	218:5
73:22,22,22	159:20	240:1	details 12:17
74:6,9 126:17	defined 159:18	depth 213:8,10	detect 237:14
224:11	defining 160:3	213:12	237:15
deal 19:21 32:2	161:11,13	depths 92:14	detected
33:10	definitely 102:3	160:10 162:5	236:17
dealing 228:5	160:4 197:2	derived 182:1	detection
deals 81:24	209:19	describe 29:15	237:12
dealt 131:21	definition	33:23 35:13	determination
debate 161:7	205:8	156:19 165:21	171:7 172:5
decide 128:5,8	degree 24:9	166:4,15	183:9
137:13	215:19	216:12	determine
decided 127:19	delaware	described	175:17 176:4
decides 74:17	153:17	34:21 35:5	182:4 192:18
140:7	demonstrate	92:14	determined
deciding	105:16	describing 25:1	93:6 100:15
213:16	demonstrates	25:9 36:24	106:6
decisions 217:5	21:20 34:21	description	determines
declined	163:4	35:14	160:14
142:11	demonstrating	design 209:1,14	determining
decreases	10:25	209:18 211:14	176:1
173:17	density 173:17	216:18 217:13	detriment
dedicate 90:21	173:18 174:15	219:13,16,17	38:15,16
114:9	181:9 204:14	220:21 221:2,5	develop 22:18
dedicated	department	225:1 233:3,5	32:2,3 78:9
145:11	229:1,5	designated	80:19 94:5
		18:21 19:16	98:11 109:14

[develop - disregarding]

	T	I	
117:3 127:19	164:17 165:2	different 9:22	directly 14:24
172:7 206:7,15	165:10 166:17	15:8 18:21	21:12 29:20
223:18	168:13 169:3	22:13 35:21	160:20 165:16
developed	169:18,20	36:8 49:17	191:6 224:13
17:23 20:19	170:6,9 171:18	68:20 72:7	disagree 98:15
21:24 33:1	197:16 206:6,9	81:6 85:2,3,10	187:17
116:2 134:20	206:9 207:12	86:9 87:6,7,23	discovery 8:13
164:10 166:19	224:16,17	112:18 157:20	discrepancies
212:4	225:21 226:18	160:11 176:13	125:11
developer 79:9	developments	182:6 202:1	discrepancy
developing	34:2,10,11	209:1 211:20	64:19 160:2
15:9 16:5 22:3	37:5 69:13,14	238:10,12	discuss 89:8
84:12 85:14	72:8 85:11	differentiating	140:11 222:16
106:9 128:16	117:5 169:17	113:8	discussed 5:23
129:17 163:19	develops	difficult 30:17	13:20 43:13
development	132:15 133:1	30:25 37:17	109:21 116:6
16:15,17 21:22	deviation 162:2	43:24 100:2	146:1 177:11
29:19 30:12	162:4	159:17 170:14	204:19 211:16
33:15 36:22	devices 236:11	175:9,12,14,17	226:15
37:1,3,17 38:7	diagonal	188:7 189:5	discusses 73:4
38:23 46:14	222:12	difficulties	97:1
50:1 53:8	dialogue 43:14	120:4	discussing
56:25 58:2,2	dictates 110:14	digestible 24:3	109:21 234:4
70:17 77:1,6,8	difference 19:3	digital 240:8	discussion
77:17 78:4,12	19:11 37:4	241:3	32:25 43:12
78:14,21 79:2	66:22 70:24	direct 7:19,22	89:4 133:13
79:2 83:2	114:6 157:21	8:3,3 9:3 10:19	153:19 190:4,9
86:15 91:13	158:1,6,19	11:14 13:18	discussions
107:3 115:7	169:4 176:12	40:25 41:9,10	32:16 33:5
126:21 127:7	186:20,21	41:20 42:7	47:21 205:14
128:19 143:2,5	187:10,15	43:8 81:22	213:17
156:18 158:3	differences	154:10	dispute 71:5
159:6,9,11	19:17 58:4	directed 10:9	disregarding
161:7,8 163:5	143:21 161:11	11:5,12 40:12	21:7
163:7,13	189:4	45:7 141:12	

[distance - east]

	T	I	
distance 156:7	168:6 178:19	draw 102:15	164:3 166:16
209:16	180:8,21 181:2	drill 16:20	170:3,11
distinct 192:11	212:10 214:11	20:10,11,14,24	196:20 222:18
distinction	230:13 235:2	21:16,17 74:12	224:15 225:7
102:13,16	235:16	74:18 77:18	drills 132:21
188:13	dollar 72:2	78:25 79:13	drop 207:15
distinctions	dollars 15:20	83:12,16 90:4	dual 203:19
183:14,16	37:11	98:13 108:5	due 12:12 34:7
distinguish	door 70:23	114:17 115:4,9	69:13 93:6
43:17 101:13	86:2	115:12,14	100:15
district 205:3	double 160:1	128:4,5,8	duly 240:5
disturbance	doubling	148:14 149:14	dunes 229:10
221:10,12	166:11	163:8,14	dylan 2:12
division 1:1	doubtful	165:15,16	e
17:19 18:3,8	194:15 195:14	166:7 169:20	e 2:1,1 3:1 4:1,1
18:21 19:16	doubtfully	197:2,6,8	151:1,1 215:5
20:18 22:20	195:21	200:20 201:3	e15 159:5
23:25 27:13	drag 87:25	222:5 223:19	e3 158:9
28:3 32:7 96:8	dragging 88:3	226:17 231:17	e4 156:12
138:8 140:16	224:19	drilled 15:14	179:10
151:9 190:17	drain 20:15	15:17 16:1	e5 154:1 155:20
191:19 194:20	98:12 107:10	29:3 31:1	e7 162:13,13
203:17 205:14	133:2 136:20	75:10 93:14	163:3
dizzy 66:3	192:4 195:8,11	114:3 117:6,19	e8 159:5
docket 1:1,3	drainage 96:8	118:3,18 119:2	eagle 161:21
238:13	98:1,7 101:13	130:2,17	earlier 4:10
document	101:15 109:7	162:11 164:20	22:10 85:20
191:14	111:9 132:17	171:17 184:18	202:18 204:19
documents	133:11 134:15	195:3 196:9	207:6 222:16
12:22	192:11 195:10	224:1 233:6	early 8:18
doing 47:11	199:20 200:2	drilling 16:13	ease 64:20
79:24 80:5,24	drained 195:5	16:25 17:25	easiest 202:15
85:10 86:14	draining 96:16	70:8,14 73:23	east 28:17,17
109:13 115:6	132:17 157:11	74:7 106:6	49:15,15 57:10
135:21 136:3	208:18	108:7 130:13	86:8 130:18

[east - especially]

	I	I	T -
159:8 162:1	107:10 195:7	employee	enjoy 146:19
196:14 221:16	effects 207:2	240:13 241:10	enrolled 228:9
easy 50:22	efficiencies	employment	ensure 13:7
65:21	70:19	216:2	145:6
echo 215:11	efficient 22:22	emulsion	ensuring
economic 16:4	efficiently 22:4	233:13	109:12
197:10	195:8	encompass	entered 26:4
economically	effort 17:18	62:14 211:21	119:14 198:15
163:18	24:3	encompasses	entering 231:5
economics	efforts 44:18	28:15	entertain
197:5	149:4	encroach 103:1	142:19
economies	eight 130:15	ended 27:2	entire 47:7,13
70:25	164:18 166:18	endorse 22:20	157:7 178:6,11
eddie 2:16	either 10:22	energy 5:1,6	179:3,5,14
39:15,23,24	14:9 27:14	23:6 132:15	180:9 196:5
69:6,20 96:3	50:7,8,12 52:5	150:13 211:10	199:7 213:12
97:7 98:19	53:3 54:25	energy's	236:6
104:3 116:18	56:22,23 78:10	191:15	entirely 46:8
117:5,16 126:8	142:19 143:16	engineer 39:25	entirety 83:11
132:11 156:9	149:18	66:9 67:11	85:24
208:6,11,11	elaborate 32:13	71:13 109:7	entities 34:8
209:11	elect 74:10,16	133:20 134:4	entries 4:9,16
eddie's 165:9	elections 31:15	208:12,15	entry 4:11
193:2	element 148:10	216:6,7,9,12	environmental
eddy 173:6	email 29:6	engineer's 71:5	221:10
edited 126:15	50:12 54:17,20	engineering	equate 187:7
educated 171:7	54:25 55:10	6:25 10:1,1,4,4	equip 74:12
educational	emails 80:8	10:10,18 15:11	equipment
215:17	emission	18:12 134:3	221:9
effect 46:25	236:11	193:5 209:12	error 33:10
59:12 157:13	emissions	215:19 217:12	es 240:4
effective 22:22	230:14 236:15	217:12	especially
175:6 199:16	employed	engineers 93:3	29:10,22 30:2
effectively 22:5	240:11,14	95:17 96:3	50:25 85:13
94:5 98:11	241:8,11	103:16	163:18 173:5

[especially - exhibits]

209:16	208:21	26:24 55:8	25:2,3,11
essential 220:3	evaluations	86:20 99:12,15	33:13 34:19,20
232:19	125:6	100:7 101:4	35:12,13 36:5
essentially 8:12	evening 8:7	120:1,14	36:7,21,23
8:25 14:3 21:7	239:10	135:14 137:21	39:11 42:17,20
43:16 45:18	event 12:3	152:2 167:2	46:4 48:22
59:20,22	119:14 152:11	198:19 202:8	49:4 53:3 57:8
115:17 164:17	198:14	210:10 215:17	57:15,22 61:16
166:11,18	everybody 30:1	218:10 237:8	65:2 66:10
167:1 183:10	73:2	examiners 4:3	71:6,9,12
185:14 189:14	everyone's	11:24 14:5	72:19 81:20,23
204:21	51:16	15:3,7 24:4	84:25 86:10,21
establish	evidence 21:20	34:16 36:18	86:25 87:3
135:15	154:5,11	51:8,10 58:21	89:7 91:11
established	218:15	140:19 152:18	95:8 129:11
15:25 163:19	evidentiary	198:12	130:11 146:7
166:8	139:4	example 34:20	151:13,15
estimate 74:11	ewe 238:2	102:14 119:16	152:3 154:1
87:18 97:2	exact 98:1	128:5 129:18	155:20 156:12
estimated 69:2	192:7 193:9	131:17 206:18	158:9 162:13
74:6,10	222:9 227:13	examples	162:19 163:3
estimation	235:17	131:11 159:5	166:6 174:1,4
125:13 201:10	exactly 36:23	exceed 195:14	176:7 177:7,19
225:6	227:16 235:17	except 34:5	178:1 179:10
et 144:16	exam 167:4	35:2 45:19	180:14 202:14
230:14 234:11	examination	124:21 144:3	202:15 203:2
evaluate	6:23 8:20	180:3	204:5 205:20
163:16 182:13	13:13 87:18	exceptions	218:13 219:5
206:3	88:17 168:2	144:5	219:19 221:2
evaluated 93:4	190:1 239:3	excessive 17:11	221:18 225:8
100:14 103:16	examined 13:4	excludes 46:16	231:10 232:11
evaluating	examiner 2:4,5	excuse 99:18	234:21
128:3 191:15	5:22 9:20 11:4	exhibit 8:8,11	exhibit's 234:4
evaluation 32:8	15:1,6 18:2	9:21,22 13:8,9	exhibits 5:14
32:11 169:1	23:5 25:18	13:11 24:14	5:14,15 6:2,8

[exhibits - faith]

6:13,18,22 7:1	expand 212:9	explore 138:11	217:12 220:10
7:8,20 8:6,12	expect 81:6	express 21:12	220:15 232:12
8:15,18 9:4,14	155:2 199:20	expressly 83:24	234:20 236:10
10:7,9,12	209:7,13 224:5	extended	236:11
12:12,13,22,25	232:20 233:8	220:13	fact 7:2 18:24
13:6,23 14:6	236:13	extension	29:4 44:15
24:15,20,21	expectation	220:15	53:12 99:20
25:11,15,19,19	239:3	extensive 28:9	102:5 133:17
25:20 26:10,11	expense 142:1	93:7 104:4	138:20 159:7
31:3 33:20	expensive 22:7	extensively	factor 233:2
34:15 35:5	225:1	184:19	factors 32:7
36:7 39:15	experience	extent 29:15	70:22
41:20,22 42:3	132:16	43:14 60:18	facts 86:7
47:22 48:9,15	expert 18:11	92:12 102:9	134:9
48:19 51:14	23:23 135:15	156:20	factual 22:19
53:6 54:14	151:7 215:14	extra 126:17	101:1
56:18 59:1	217:11	169:7	fair 43:24 44:5
71:21 73:10	experts 6:25	extrapolate	47:17 66:6
84:22,25 85:13	14:3	69:15	70:13 94:7
140:11 148:13	expire 31:22	extrapolation	102:3 104:14
151:16,20	explain 10:17	126:19	106:21 107:11
152:4,13 153:2	38:1 51:10	extremely	108:9 118:12
153:5,9 155:21	59:7 98:9,21	30:16	131:6 132:3
156:4 159:4	122:14 224:8	f	171:8,14
161:5 172:15	explained	f 23:16,16	180:12 181:6
203:13 204:10	133:8 172:18	facilitate 13:1	198:2 200:21
204:16 206:19	explaining	facilities 69:7	229:16
218:6,12 219:2	90:19 95:12	70:19 215:14	fairly 8:13
223:6	explains 91:19	216:16,18	10:19 11:4
exist 159:6	explanation	217:2,14	184:19
existing 77:17	126:9	227:16 229:15	fairway 158:5
122:1	explanatory	232:14 235:15	158:20
exists 62:19	13:6	236:3,7	faith 32:8
202:19 203:5	explicitly	facility 167:11	44:11,17
	153:21	216:9,12	118:12 149:4
		210.7,12	

[familiar - foot]

familian 66.11	field 14:3 29:19	fine 82:10	florribility 22.0
familiar 66:11			flexibility 22:9
68:4,8 72:10	216:6 217:11	104:7 107:15	flies 236:3
72:13,17 76:5	fifty 29:25 30:1	116:19 119:6	237:13
90:7 96:5,10	158:6	126:8 205:17	flow 18:17
189:20 190:15	figure 42:25	210:19	172:19 189:14
190:18	226:21	finish 11:20,22	220:11,16,17
far 13:18 20:17	figures 131:15	238:7,19 239:4	220:20 221:3,7
39:4 40:13	file 42:3 76:16	finished 202:7	221:14,20
49:24 61:6	89:18	firm 201:12,18	fluctuates
109:3 217:4	filed 6:8 9:17	first 4:24 5:24	125:16
227:18 236:12	10:9 13:22,23	7:16 23:3 43:3	fluctuations
farther 183:2	14:13 40:20	43:8 48:23	126:5
fast 210:2	41:22 47:22	49:14 65:19	flyover 236:2
february 76:9	76:22,25 78:22	70:4,6 78:7,22	focus 42:17
83:2,7 85:17	80:10 81:9,15	78:22 81:10	focused 9:10
fed 67:7	82:16,20 84:14	91:19,21 92:10	10:10 85:4
federal 29:5,9	84:22 85:14	104:19,20	86:3,13
29:10,18,22	87:3 191:19	162:21 163:14	focusing 131:7
feed 10:17	files 13:9	176:9,16	folks 4:7 37:9
feedback 213:5	filing 29:9 77:4	206:12 219:9	95:12
feeding 208:17	78:7 82:1	221:11 223:12	follow 59:21
feel 11:15 88:3	filings 80:12	233:9	139:2 210:20
164:4 170:3	filled 193:19	firstly 89:9	231:7
feet 62:13	finally 25:5,23	fishing 143:9	followed 24:15
156:7 164:15	218:17	five 33:4	24:20 25:2,11
174:19 175:12	financial 17:23	174:19 238:7	151:15 215:20
175:12 176:20	37:14 106:8	238:19	following 84:10
206:1,16	financially	fixated 167:13	191:20
209:17	240:15 241:11	flaring 234:3	follows 64:15
felicia 1:10 2:3	find 37:14	234:13,14	108:5
4:5	61:11 82:11	236:18	foot 68:11
fenceline	184:14 232:18	flat 164:17	69:13,16,18
235:20	findings 138:20	165:1	157:21 158:1,6
fiber 208:8	236:12	flex 146:15	165:7 185:15
			223:4

[footages - garcia]

footages 109:18	former 121:19	175:18 176:12	function
foran 4:10	formula 27:19	176:13 177:6	189:14
34:24 56:6,17	27:21	177:11 202:20	further 8:25
56:21 57:1,12	fort 32:21,22	208:2,3,4,19	102:16 119:8
57:13 58:7	forth 7:15 42:6	209:1,3,6,8,9	139:12 189:12
123:21 124:1,1	forward 10:23	209:14,15,17	197:12 198:10
124:5	12:23 30:11	209:18 225:2	221:9 231:1
forced 19:18	33:6 43:1	fracs 209:2,5,6	237:6 240:12
foregoing	72:18,19 74:18	211:14	241:9
240:3,4 241:4	104:12 146:15	fracture 174:19	future 81:7
foresee 207:1	214:2	175:14	117:5 170:4,21
forgot 196:11	found 91:7	fractures	206:5,9 207:1
form 26:25	188:3	132:12 175:9	207:12 233:6
160:7 161:2	foundation	175:13,19	233:10
213:12	135:16 136:4	framework	fyi 203:17
formation	four 5:16,16	47:21	207:21
24:13,19 90:15	9:22 13:24	frankly 10:20	g
92:20 93:4,5	24:8 30:22	free 142:13	g 4:1
100:14 103:7,9	33:4 44:18,20	freeze 82:9	gain 80:17
133:1 148:20	45:2 62:1	front 32:18	game 102:3
154:8,20,20	115:11 130:2	46:6 72:22	gamma 204:12
158:11 172:19	130:13 152:16	218:2	204:14
192:13 196:5	166:7,12	fruition 121:11	garbled 168:8
204:12 212:4	168:20 182:10	full 17:17 23:20	garcia 2:5 4:4
213:7	219:10 221:11	29:19 56:25	12:8,10,11,14
formations	fourth 57:9	69:7,20 83:1	12:24 13:7
19:15 38:9,19	fourths 63:3	138:6 144:20	141:1,2,4,19
106:10,14	frac 153:13,19	151:5 169:3,18	142:3,6,15,18
130:15 132:3	154:5,7,9,11,12	fully 86:15	143:1,7,11
154:19 156:20	154:14,17	100:3 109:14	144:4,7,14,18
173:12,21	156:5 170:20	121:20 146:16	145:2,5,8,13
192:6 195:2	172:12,14,15	200:6	146:11,15,17
202:1 203:7,9	172:20 173:2,7	fulton 1:19	147:1,13
205:12 206:11	173:9,14,19	240:2,20	202:10,12
	174:4 175:8,8		203:8,15 204:7

[garcia - going]

204:11,15,19	gentleman	194:2 216:1	going 10:23
205:7,17 206:2	214:6	given 51:23	11:21 12:2
206:8,20 207:6	geologic 159:2	92:13 93:12	18:12,14 21:15
207:17 208:10	160:11 209:11	124:9	25:6 38:22
208:16 209:21			41:8 42:15,16
210:3,12 211:7	geological 102:14	gives 71:12,13 go 5:24 7:16,19	,
· ·		9:13 14:24	43:2,7,8 45:15
213:3 214:4	geologically		45:16 47:7,19
231:8 232:9,10	156:17 157:17	15:4 23:18	47:23 48:2,21
232:16 233:2	158:7 162:21	32:18,22 43:1	50:13,16 51:5
233:12,16,20	geologist 75:23	47:23 49:9	52:1,5 55:1
234:16,21	150:13	50:19 55:12,19	57:24 63:13,18
235:8,12,19	geologist's	55:24 66:21	65:3,3 67:8,12
236:16,21	153:2	74:17 84:9	68:21 69:17
237:2,11 238:8	geologists 93:3	87:10 93:2	70:14 73:15,19
238:14	95:16,21	102:17 104:12	74:23 75:14
garcia's 147:17	100:12 103:16	128:5 145:16	77:19 80:8,17
148:9 211:2	132:2 133:13	148:5 149:21	80:18,22 81:2
garnered 33:24	133:16	151:3 167:16	81:22 83:12,15
gas 4:13 17:4	geology 6:25	167:19 168:3	84:6 88:4
21:13 55:5	9:25 10:15,17	183:1 201:3	89:13 91:5,7
120:7 136:16	15:10 18:11	203:1 208:19	94:16 95:13
137:4,5 138:2	22:13 151:8,16	209:14,18	97:11,15 98:5
187:8 233:13	153:6,9 160:7	211:5,15	98:6,11 101:19
233:17 234:6,9	160:13,20	215:16 218:4	103:6 104:18
general 35:14	193:5 198:6	230:13 236:4	105:17,17
116:15 166:1	geomechanical	237:10	106:4,11 107:9
190:10 203:13	18:16	goal 232:18	110:15 114:8
generally 19:24	getting 29:9	goes 13:19	114:17 115:9
20:9 42:18	33:1 81:20	20:17 28:5	115:13 116:2,7
154:8 216:14	110:8 226:11	29:9 43:11	116:12 117:12
generated	gist 185:17	64:19 92:18	119:13 123:19
160:8	give 8:19 31:3	93:20 94:2	126:20 129:6
generators	49:1 77:9	107:2 164:14	138:10,13
234:10	109:17 143:1	203:16 226:16	139:10 141:7
	159:4 161:14		156:8 157:11

[going - hand]

161:1 165:9,17	188:2,3 196:19	group 37:12	228:2,6 233:12
168:16 171:11	202:13 213:5	growing 132:12	235:2,14,20
174:19 175:10	214:16 215:6	208:9	236:17
176:17 177:14	225:15	growth 154:9	guys's 203:10
182:8 183:11	goosey 16:11	208:2 209:15	208:12
184:9 185:4,5	24:18 34:1	guess 9:2 13:16	h
190:21 191:7	36:12 46:6,22	27:1 33:18	h 23:16 157:1,2
191:13,16	56:22 65:9	40:10 41:6	158:16 181:18
195:21 200:15	81:17 90:5	42:2,25 48:21	181:19 187:19
205:7 208:7	91:13 186:16	48:24 49:5	187:21 188:1,4
209:19 218:4	223:11 225:21	53:5,10 60:13	188:19,21
219:18 220:2,3	226:20	63:11 65:21	189:4,8 193:3
220:4,11	gotten 197:14	68:19 77:15	193:14 194:2,4
221:14 222:1,3	gradations	78:1,6,18,20	hailee 2:4 4:4
222:6,12,15	183:14	85:8,15 86:3,6	hairy 30:3
223:19,19	graduated	86:12 87:1,20	half 16:19
224:18 226:4,6	215:18	107:7,19 117:1	31:11 34:5,5,9
228:3 229:20	grand 67:1	117:11 139:20	34:9 35:2,2
230:17 231:10	grasp 6:14	142:16 168:12	36:1,2 37:20
231:11,17	gratuitous	177:5 181:1	37:20,25 38:13
233:5 234:9	17:25	183:6 185:15	38:14,19 45:12
239:2	great 49:6,13	186:14 203:15	45:20 46:15,16
good 6:10	89:1 91:7	203:19 206:4,8	46:25 47:5
14:17 23:7,8,9	136:8 146:14	206:10,20	49:15,15 57:10
32:8 39:15	214:14 225:17	207:10 208:10	57:10 59:14,16
42:13,14 44:4	greater 19:7,8	208:11 213:16	60:25 62:17,17
44:11,17 61:15	20:9 113:17	232:11 233:4	64:3,3 123:6
75:18 88:9,23	green 144:16	235:8	125:1,1 166:20
107:16 118:11	grids 159:20	guidelines 77:8	209:9
119:21 120:12	160:5,11	gun 166:4	halliburton
121:5 126:10	gritty 39:16	168:12,17	216:3
136:14,14	69:9	169:4	hammer 69:9
148:3 149:4	gross 179:13	guys 12:11	hand 21:17
168:4 176:13	184:2,6	203:18 204:6	23:11 150:16
184:15 187:2,4		206:2 208:20	214:20

[handful - hole]

	I	I	I
handful 15:14	heard 22:6 56:2	198:19 214:10	hfts2 208:6,8
handle 11:19	62:21 103:3	215:17 218:10	hiccup 19:18
12:4 101:20	129:10 132:2	219:6 237:8	high 69:5,13
handled 144:19	133:16 179:9	239:1	158:5,20 173:6
hands 29:12,13	184:11 190:8	hearings 1:1	209:3,3 236:10
hang 17:10	228:12 233:21	14:15 19:21	higher 69:17
hanging 73:22	hearing 4:20	hearsay 133:21	188:1 203:5
happen 29:1	5:1,21 6:16 7:5	134:2	224:18,18
85:25 99:9	7:9,11 9:7	heater 234:10	225:3
happened 68:7	11:16,18 13:15	height 176:12	highlight 93:2
115:17	13:16 15:1,6	177:14,14,18	106:5 174:17
happening	18:2,7 24:4,7	177:18 179:4	highlighted
86:16 98:5	24:11,17,23	179:14 181:3,3	186:16 187:13
happens 165:5	25:8,18,21	181:8 184:9,21	191:12
happy 14:5	34:18 36:8,11	184:21 185:10	highlighting
hard 37:15	36:13 40:8	185:10,14,18	173:20
82:7 87:1	42:12,23,24	186:9 187:7,14	highline 235:1
170:7 185:20	43:3,3 47:23	187:15 191:3	235:7,9
185:21 186:4	48:22 51:17	208:4 209:15	highly 31:9
199:18 204:16	52:1 55:8,18	heights 208:19	163:10 166:18
hardest 30:14	66:13,14,15	held 134:7	193:15 194:15
harkey 163:16	81:23 82:5	heller 241:2,18	205:6
164:9 172:6,7	86:20 88:12,19	hello 214:15	highway
harm 21:3	89:12,16,17	help 10:17	221:15 222:13
hate 29:12	90:11,12 99:12	14:17 147:20	hired 78:15
head 89:13	99:15 100:6	228:14	historical 83:10
228:12 235:6	101:4 108:2	helpful 12:16	107:3
hear 18:12,25	119:7 120:1,13	210:12	history 31:3,6
20:8 21:19,23	121:1 123:20	hereto 240:14	120:16,19
21:23 41:12	129:1,2 135:13	241:11	216:2
119:18 129:3	137:21 139:1	hesitant 189:11	hitting 235:12
133:21 136:13	139:14 140:15	hesitate 189:15	hold 119:12
136:13 152:12	146:5 147:15	hesitation	hole 77:21,22
168:7 190:3	151:12 152:2	189:6	171:17 172:1
215:8	152:15 167:2,9		

[hope - inform]

hope 88:22	56:8,13 68:10	improbable	incorrect 57:16
hopefully 35:6	84:5 87:6	193:15	incorrectly
horizontal 5:2	123:15 169:3	improper 106:7	75:22
16:1	176:16 178:20	imprudent	increase 70:20
host 2:6	identifies 87:5	16:8	71:24
hours 88:4	87:8 191:19	inadvertently	increased
housekeeping	identify 4:23	14:10	67:12 170:13
40:11	12:25 14:6	inappropriate	increases
hudson 37:12	22:12 48:10	100:2	124:16
124:14	172:15 173:9	incidental	incur 225:7
huh 175:21	173:16 177:6	94:10,13 95:13	independent
hundred 30:1	identity 13:2	96:8 98:7 99:8	21:21
66:25 158:6	ignored 31:20	111:9 133:5	independently
175:12,12	immediate	134:14 192:12	197:9
176:20 206:1	182:10	195:10	indicate 51:22
hundreds	impacted 77:23	incidentally	158:9 221:17
37:11	77:24 78:8	14:10 96:15	indicated 50:10
hungry 87:25	impacts 221:10	include 11:9	51:25 52:23
hydrocarbon	impair 172:20	45:25 61:1,6	53:11 56:4
18:17,20 181:6	173:13	135:2	63:12 81:8
219:12	impede 172:20	included 8:12	169:1 174:4
hydrocarbons	173:13	11:6 55:21	185:13 223:1
93:9 94:1,20	implicate 44:11	83:1 162:3	indicates 220:1
100:18 103:20	implications	230:3	indicating 53:7
105:9 106:10	220:8	includes 45:18	individual 30:8
111:6 155:3	implying	79:22 122:9	47:24 127:18
192:1 193:9	127:14	221:15	221:3
hyperbole	important	including 84:2	individually
15:18	138:11	85:3 113:10	128:8
i	impossible 17:7	170:8 219:16	industry 213:5
idea 80:25	impracticable	219:17	inflation 126:8
83:10 195:7	21:11	incorporate	influenced
identified 20:2	impression	121:18	61:19
20:3,4 48:19	41:17	incorporated	inform 103:5
49:17,17,20,25		40:15 110:6	

[information - involved]

information	148:15	112:10 113:8	interject 99:17
9:25 25:7	intends 108:13	113:11,17	internal 68:4
124:5 126:11	163:7 226:17	117:7,9,13	interpretation
170:8 171:1,5	intent 17:2	122:17 124:11	145:17
171:13 211:3	56:4,10 91:20	124:11,15	interpretations
inhibit 154:9	92:10 98:18	125:3 126:17	212:13
initial 16:23	99:6 103:4	127:15 132:8	interrupt 120:5
22:10 59:1	148:13	133:2 134:21	interval 154:21
61:16 74:7	interaction	141:16,17,21	164:18 166:12
92:11 164:2	206:17	142:10,11	178:7,11,17
206:8 233:5	interactions	146:8 148:20	179:4,5,14
initially 62:5	32:10 120:20	148:21 153:10	180:9 181:10
78:21 230:3	interest 10:21	185:2	184:21
initiate 101:10	11:1 17:9 19:9	interested	intervals 20:1
inside 230:20	20:9 28:23	143:10 196:20	184:2
insight 80:17	29:23 33:22,24	240:15 241:12	intervening
insignificant	34:12,25 37:2	interesting	173:12
187:6	37:4 38:17,20	145:13 211:8	intractable
inspections	46:20 47:25	interests 22:23	20:7
235:14	49:14 52:14,16	43:20,23 46:21	introduce 4:14
instance 52:7	52:17,19,24	47:12 48:5	4:19 218:11,15
53:16 54:7	53:17,22 54:15	49:21 53:9	introduction
55:4 56:13	56:14,18 57:6	56:7 57:5,17	5:20 90:2
instances 12:15	57:19 59:3,6,7	58:3,22 59:16	inventory
54:1	59:9,13,24	59:23 60:7,17	197:12 224:14
institute 114:12	60:10,16 62:15	61:2,7,20	investigating
instruct 102:4	62:16,19 63:9	63:18,18 79:25	163:9
instrumentati	71:18 73:16	111:16 113:4	investor 11:7,9
237:15	74:9,16,22	122:21 123:3	68:5 222:19
insurmounta	75:5 76:17	128:10,12	224:10
17:15	77:10,24 83:12	143:10,18,19	invite 138:20
intend 12:17,19	85:6 90:20	interfere 156:8	invited 102:15
12:22 90:20	92:6 98:10	interference	involved 31:5
intended 22:8	103:5 110:20	165:9	44:18 45:1
48:10 108:21	111:19 112:10		131:2 143:13

[involved - know]

216.17	•	04.22.07.4	I-m a-r. 20.00
216:17	j	84:22 87:4	knew 38:22
involving 45:3	j 23:16	96:8	83:6
211:10	javelina 37:13	jump 67:16	know 7:15 8:5
irreparably	jenny 2:11	72:4,5,8	8:9,12,16,23,25
21:3	jim 2:9 77:16	174:15	9:4 10:1,14,25
ish 206:16	joa 46:12 47:16	june 35:18	11:6,12 12:21
island 77:18	47:20 50:11,14	57:21 58:15	13:20,23,25
issuant 136:16	51:23 60:1	64:24 66:18	14:9,10 19:23
issue 8:14	122:11,12	71:15 90:2	19:24 20:1
19:25,25 27:13	joas 60:21	91:21 148:13	26:14 28:15,18
44:8,19 45:2	144:16	190:4 223:9,14	29:2,4,8,11,21
45:19 46:1	job 1:20	225:5	29:23,25 30:8
101:1 124:9	john 2:5,17 3:5	justification	30:14,20,23
164:6 211:12	4:4 23:5,22	107:4	32:18,20,22,25
212:18	johnson 120:6	justify 21:21	33:1,3,5,5,9
issued 11:7	join 50:13	k	35:14,20 37:10
68:5 81:12	51:17 238:9	keaton 2:18	37:12,15,16
164:3	joint 46:6	keep 20:19	38:8,12,13,18
issues 9:11	54:21	42:16 50:22,23	38:24 39:6,18
10:14,15 11:8	joker 83:3	80:4 83:15	42:2,17 44:9
21:14 44:16	156:15,17	232:21	44:17 49:10
81:10 99:20	157:14,16,19	keeping 79:22	50:20,21,22
102:19 103:2	158:4 186:16	210:1	53:21,24 55:12
146:2 190:17	187:13 199:2,7	kind 17:9 33:21	55:20 57:5,20
209:7 211:16	221:19 222:3,6	33:23 48:17	57:21 58:19,20
229:10,11	222:10	64:18 69:1	59:17 64:19
232:17	jones 2:7 4:12	75:16,16 81:20	65:22 67:3
it'd 57:17 85:23	4:14 119:16,20	85:1 112:9	68:7 69:2,8,9
170:14 222:8,8	119:21 120:6	114:13 136:3	69:22 70:20,21
it'll 14:17 38:12	josephine	139:8 161:15	78:17,23 79:7
116:3,3,5	124:14		79:8,13 80:7,9
208:11		172:3 177:10	80:10,16 81:2
item 13:5	judicial 17:19	183:8 184:1	81:25 83:7
items 35:4	july 9:6,6,7	206:21 208:7	84:9 85:12
146:5	41:21 47:24 69:23 73:10	kinds 162:8	86:1,2,10,18
	07.23 73.10		

[know - lessee]

87:24,24 89:9	l	landman's	lead 41:13
91:9 95:11	l 151:1,1 215:5	131:6	163:16
100:4 105:20	215:5	lands 15:9,17	leader 15:23
107:18 109:7	labeled 35:15	15:24 16:18	leading 26:25
117:12,13	lack 31:14	17:23,25 93:6	129:2 135:12
118:11 119:5	153:19 154:12	106:11 122:9	leads 206:21
124:1 125:11	154:14,17	132:9 153:10	leak 237:12
127:14 131:11	202:18 209:17	153:12	leaking 236:8
134:3 135:18	laid 124:5	language 73:6	237:15
135:20 138:10	138:18	73:25 74:5,19	leasehold 28:15
139:19 140:16	land 6:24 9:25	97:11 103:15	59:15,23,24
140:20 144:15	10:12 16:9	103:21 104:2,6	60:8,16 61:13
146:4 150:1	23:24 25:19	105:12 110:6	62:2,6,15 63:8
162:7 167:15	26:10,12 49:16	126:16 192:15	63:16,17 79:25
168:8 170:5	121:16 176:21	large 12:12	leases 49:18
171:11 177:4	206:15 207:3	72:2 89:18	leave 208:5
181:13 184:1,3	landed 108:16	189:3,4	left 178:2
185:15 193:17	159:12,17,20	larger 30:9	legal 21:14
194:13,17,18	160:12 161:12	33:19 225:2	22:19 26:16
209:3 210:2	161:13 176:8	late 6:8 7:3	96:6,7 97:1,20
211:7,20	198:7	11:16 83:7,7	99:20 100:5
212:15,17	landing 154:3,4	lately 51:9	101:1,11,18
213:1 214:3	155:2 156:6	lateral 68:15	102:6,14,19
223:10,15	157:4 159:21	203:19	103:2 138:1,18
226:11 231:16	164:6 178:15	law 57:7 65:1,5	138:21 141:12
237:12	179:5,15,18,19	99:20 138:21	143:13 145:17
knowledge	180:9 206:16	lawyer 102:8	190:17,19
25:16 79:12,21	211:13	102:11	213:20
151:21 217:12		laying 138:17	length 209:4
218:8 229:6	landings 154:6	layman 39:17	lengths 209:6,8
240:9 241:6	landman 23:6	lea 5:2,6,9	lengthy 14:1
known 157:6	39:17 100:2	15:23 68:11,24	lenses 173:12
		85:24 117:10	leonard 2:13
	102:10 134:2	217:2 222:18	lessee 78:17
	138:13 207:7	224:21	

[lessened - loosey]

lessened 127:17	222:12 230:1	lizards 233:1	206:6 214:2
letter 31:19	lines 220:12,16	llc 219:5	looked 135:18
34:24 50:7,12	220:18,20	load 89:20 90:1	156:12
51:15,22 53:7	221:3,7,14,20	located 16:6	looking 13:8
55:11 90:3	link 238:9,10	157:4 158:4	18:9 27:7
91:12 92:11	238:12	185:1	34:19 36:20
94:12 95:15	list 2:2 48:1,5	location 13:2	38:21 39:1,11
98:4,9,17	48:10 50:11	93:12 187:12	51:3 58:22
100:10,21	230:19	193:18 199:6	60:6 62:22
101:2,8,9,17,21	listed 33:16	232:18	63:8,17 85:24
103:14,15	54:13,15,24	locations 77:17	92:9 159:4,7
104:9 105:6,8	57:1 225:6	92:14 227:21	160:7,10,20
105:12 106:2	little 13:20	228:18 229:9	161:4 162:12
106:14 108:1	32:14 38:1,3	229:15	164:11 174:3
137:18 143:14	41:5 50:18	log 175:2 176:7	175:5 181:13
143:16,18	53:2 67:15	178:2,2,7	202:13 203:20
144:21 148:14	68:15 69:5	204:9,17	221:2 226:4
148:19 189:21	72:7 75:19	logs 160:1	232:11 233:15
190:4,9	83:22 85:1	173:16 176:17	238:15
letters 55:14	89:8,19 91:6	203:8,11,18,18	looks 4:7 15:13
90:3,7,10,19	91:19 99:14	203:19,20	26:20 28:6,7
92:1 144:12,16	114:1 125:17	204:4,5	31:2 37:24
level 173:21	126:14 131:8	long 13:10	39:2 49:7
lg 226:19	135:20 148:8	76:19 83:16	66:17 126:16
lie 158:19	157:8 159:11	131:2	162:14 174:12
162:18	161:6,15,19	longer 21:4	174:14
likely 197:17	172:10,11	52:4 136:1	loosey 16:11
207:19	175:21 177:11	look 9:16 34:16	24:18 34:1
limit 7:14	177:13 179:16	35:6,12 53:3	36:12 46:5,22
133:18	184:10 186:2	56:17,18 58:4	56:22 65:9
limited 7:4 8:14	188:7 189:5	64:14 65:16	81:16 90:5
10:16 165:19	191:6 208:2	72:25 84:25	91:13 186:15
176:8 188:6	216:9	86:1 87:10	223:11 225:21
line 4:6 100:1	lizard 229:10	146:14 150:1	226:19
154:3,4 222:2		181:17 188:17	

[lost - mapping]

12222			
lost 123:20	m	main 161:20	206:17 211:1
141:1	m 23:16 151:1	164:5 202:14	217:5 230:13
lot 12:1 25:6	macha 26:11	211:16	236:7
29:1,11,11,12	26:21 28:5	maintains 17:7	makes 28:12
30:8 37:9	34:15 37:21	maintenance	37:22 48:24
42:23,24 50:20	73:4,18 74:4	62:18 236:6	126:19 175:18
50:21 67:1	74:15 84:25	major 15:25	making 96:14
70:22 73:20	macha's 27:7	30:5 38:2	183:16
81:5 83:10	28:7 33:12,22	majority 31:10	manage 228:14
123:18 129:2	36:21 41:14	31:18 34:3,12	management
138:1,10	72:10	34:16,25 35:10	234:6
141:14 162:14	madam 5:21	35:23,23 85:20	managing
170:18,19	7:11 9:20 11:3	103:8 113:7,10	216:15
188:8 204:1	13:15 15:1,6	124:20 125:3	mancha's
212:5 224:6,20	18:2,7 23:4	158:20 164:20	26:18
lots 145:14	25:18 39:6	236:14	mandate 27:10
146:12 208:16	40:8 42:11	make 15:2	27:15
213:8	55:8,18 86:20	16:16 18:10	mangle 228:3
loud 74:4	88:11,19 99:12	38:24 39:18	mangling 93:16
love 201:9	99:15 100:7	40:22,23 42:5	manifestation
low 172:19	101:4 119:7	51:2 52:12,21	122:21
173:21 207:4	120:1,13 129:1	53:10 54:6	manner 8:2
lowe 2:13	135:13 137:21	55:22 58:20	106:9 118:12
lower 39:21	139:14 140:15	59:17 65:21	135:20
117:3,7,18,20	147:10 152:2	66:2 68:14	map 157:2,3
162:18 163:20	167:2,9 198:18	86:18 88:1	162:4 178:6,10
170:15 172:8	202:7 210:10	95:7,10 101:5	178:12 180:18
187:21 196:10	214:10 218:10	104:10 105:21	180:19 184:13
197:1,11,18	237:8 239:1	108:13,17	185:10 188:3
200:7 209:6	made 8:13 24:2	115:8 137:10	188:19,21
lowered 109:2	48:14 96:7	138:1 139:1,9	189:2 194:2
lowering	112:14 124:18	146:18 171:6	mapped 179:3
211:12	142:16 172:5	177:15,21	180:8
lunch 88:9,20	224:11	183:7,13 184:8	mapping
88:23	<i>∠∠</i> ¬,11	189:7,11,18	156:21 157:7

[mapping - million]

178:3 182:18	maximum	means 154:18	mesaverde
188:8	163:4 169:20	203:5,6 224:13	205:11
maps 188:15	170:5	meant 85:16	met 228:17
193:14	mba 215:20	209:3 235:9	methodical
march 76:10	mccoy 2:8	measure	16:13
81:17 83:3,7	mean 10:8	175:13 182:15	mexico 5:3,7,9
85:17	32:17 34:10	measurement	32:19 227:11
marie 241:2,18	42:2 48:20	181:9 194:1	227:12 232:12
mark 2:8 52:15	50:4,5 57:23	mechanism	232:15
mark's 53:22	59:7 60:3,4,5	112:2	microseismic
54:7,11	61:25 71:3,23	medium 30:9	208:8
marked 50:14	73:9 75:6 76:9	meet 27:10	middle 19:16
54:3 82:7	77:13 80:21	32:19	19:20,23 32:5
market 125:17	83:22,24 85:9	meeting 228:13	83:7 200:7
marlene 2:6	85:20 86:5,6	229:7 239:13	mighty 16:11
238:11,15,17	86:12 87:25	meetings 30:20	24:12 34:1
massive 17:23	95:7,10 97:10	33:4	43:4 46:5,22
126:20	97:10 101:2	member 228:2	49:15 56:22
matador 34:24	104:8,16	228:8	57:11 65:9
37:8 56:3,6	107:17 110:10	members 122:4	67:6 81:16
matched 32:23	111:11 113:14	122:6	90:5 91:14
math 68:17	114:21 115:5	memo 97:12	186:15 223:11
matter 13:16	122:5 123:1	memorandum	225:21 226:19
40:11 101:12	126:7 135:18	97:20	mile 32:4 68:15
101:18 119:15	142:9 154:7	mention 56:2	69:13,14,16,17
138:7 165:14	160:17 162:13	153:8	69:18 77:23
209:13,18	183:13,20,21	mentioned	78:18 130:18
228:11	187:3,3 194:13	56:17 64:5	130:19 162:10
matters 17:22	199:2 206:5	71:25 96:6	224:15,17
23:24 26:12,16	209:8 210:14	120:15 124:10	miles 163:11
maturity	213:3 229:17	158:16 161:18	186:1
163:17	233:18	229:19	million 37:5,16
maximize	meaning 17:4	mentions 57:22	39:19,20 57:2
219:11	162:20	mesa 213:7	67:8,9,13,16
			68:15,22,22,25

[million - name]

69:5 70:15	119:13 152:10	150:12,15,18	188:14 189:10
millions 37:11	190:21 198:14	150:21,21	189:15,20
mindset 141:5	210:7 217:19	151:4,6,6,10,14	190:2,7,13,18
mine 147:19	219:1 231:4	151:18 152:1	191:4 192:16
mineral 60:7,9	money 39:18	152:14,17,21	193:1,7,11,14
minerals 21:5	monitoring	153:3,7,13,21	193:21 194:7
22:17 109:14	235:21	154:12,18	194:11,15,18
minimal 124:13	month 9:5	155:9,13,16	195:9,16,19
126:8 170:20	82:15	156:1,13,16,21	196:3,7,11
203:1,6 206:17	months 76:12	157:16 158:15	197:1,7,11
233:11	78:7 130:2,12	159:10 160:9	198:1,4,8,10,16
minute 35:5	130:21 224:2	160:16 161:1	198:20 199:2,4
119:12 167:18	morning 4:17	161:10,19	199:8,13,18
minutes 26:15	6:15 7:8 11:19	162:9,17 164:5	200:4,8,12,18
238:2	23:7,8,9 42:13	164:14 165:4,7	201:2,9,14
miscommuni	42:14 120:4	165:13,20	202:11,13,21
180:4	238:4	166:3,17 167:3	203:12,21
misrepresent	motion 95:4	167:8 168:2,5	204:8,13,18
179:16 180:12	97:11 100:6	168:6 169:6,12	205:5,15,21
misrepresent	motions 5:13	169:19 170:7	206:5,10 207:3
157:8	move 7:24 33:5	171:9,15,19	207:13 208:5
missed 205:20	75:17 147:8	172:2,9 173:1	208:14 209:10
missouri	218:11 222:15	173:10,15	210:5,9,20
240:22	229:15 233:1	174:7,12 175:3	214:7 227:1
mixed 99:20	moved 210:2	175:7 176:6,18	multi 13:9
213:4	moving 30:11	177:9 178:4,8	multiple 78:14
model 182:2	79:4 115:6	178:14,18	144:15
modeler 182:8	208:1	179:2,7,11,19	mute 133:7
moderated	mp 226:19	180:2,6,14	n
1:10	mplg 226:18	181:7,12,17	n 2:1 3:1,1 4:1
modification	mrc 4:11 57:11	182:1,5,11,17	23:16,16 215:5
73:5	124:2	183:4,19 184:7	name 4:4 23:15
moment 65:4	mueller 2:20	185:8,12,19	23:21 75:22
66:2 72:10	3:6 75:22	186:7,11,13,18	150:20 151:5
89:15,18 91:6	95:21 100:12	187:1,9,17	215:3

[narrowly - number]

		10117100	1
narrowly 9:10	222:5 233:7	121:17 122:8	notes 145:16
native 207:1	238:3	122:11,12,18	notice 17:19
228:5	needed 28:2	223:20 227:11	77:9,16,21
natural 234:6	89:2 149:1	227:12 230:7	78:24 79:3
naturally 192:4	169:1 233:1,10	232:12,14	124:5,5 145:3
nature 40:12	needs 9:12 13:3	nice 85:1 146:6	149:2,4
51:23 134:19	13:4 27:13	night 6:8 7:3	noticed 78:11
135:17	164:8 171:4	9:17 11:16,16	161:20
near 83:16	negatively	41:23 54:18	notices 144:15
85:25 88:16	44:17	nitty 39:16	144:21
170:4	neglected 4:19	69:9	notification
nearby 80:20	negotiate 149:4	non 212:8	78:10
80:21 86:5	negotiations	normal 76:15	notified 145:6
203:10	30:11 32:9	north 28:16,20	notify 67:23
nearly 33:8	44:11 120:20	29:20 45:20	78:14 144:10
88:4	121:10	46:16,25 47:5	notwithstandi
necessarily	neither 240:10	59:16 60:25	103:12,13
28:25 29:7	241:7	62:23 85:21	nowadays
69:14 72:1	net 37:2,3	86:4 123:5	209:2
77:20 82:23	49:21 57:18	130:19 163:12	nuance 136:14
83:16,18 85:23	neutral 10:23	205:11	nullify 122:2
142:9 230:10	34:25 36:4	northern 4:12	number 5:3,7
necessary	52:1,5 56:4,10	37:8 53:8	15:17 17:1,11
16:16 79:21	124:19	120:7	41:13 43:3
necks 17:11	neutron 173:17	northwest	48:22 49:2
need 9:9,13	203:18 204:14	78:18	81:24 87:15
11:22 12:6	never 32:23	nos 1:4	108:5 121:14
21:24 25:7	115:4,9 119:4	notary 240:21	123:11 156:2
75:17 87:21	228:12	note 9:21 38:11	159:4 161:2,8
88:6 91:5 94:3	nevertheless	52:23 53:21	186:20 187:4
105:16 114:12	63:5 74:21	102:7 231:16	188:6 196:12
133:13 144:14	109:13 196:4	noted 11:18	203:4,6 211:11
146:5 163:16	new 5:3,6,9 8:8	16:22 51:4	218:15 224:14
167:13,15	8:11,12 32:18	54:8 130:10	227:14
172:5 189:18	47:16 106:6		

[numbers - okay]

numbers 10:2	occur 19:19	offsets 182:10	69:11,21 70:24
13:1 35:19,20	132:7	offsetting 22:14	72:9 73:25
35:22 39:2,16	occurred 44:12	171:6,17 183:1	74:3 76:3 81:9
191:1 192:18	51:10	ogi 236:4,12	81:21,21 82:13
201:12,18	occurrence	oh 32:20 89:9	82:14 84:4
223:21	19:2,13	119:12,18	87:17 89:13
0	ocd 1:3 131:14	140:18 169:11	91:7,11 92:5,9
o 3:1 4:1 23:16	131:17 205:2,8	191:9 230:18	93:19 94:15
23:16 215:5	215:13 234:2	oil 1:1 4:11,13	95:2,6,15
o'clock 6:9 9:17	offer 74:15	17:4 21:13	96:12,18,21
oa 45:17,23	112:14 142:7,9	53:22 54:11,13	97:9,19 98:6
46:25 59:11,13	217:11	54:22 55:5	98:16 100:20
62:13 122:17	offered 32:18	120:7 136:16	103:12 104:8
122:18 123:3	32:21 38:15	137:4,5 138:2	105:1,3,20
object 26:24	112:6,9 141:20	181:15 187:8	106:2,3,19,19
39:7	142:12	193:20 194:1	107:2,7,20
objection 25:25	offers 142:15	201:10 205:9	108:3 109:20
26:1,4 152:8,9	144:16	233:13	110:17 112:1
152:11 201:21	office 89:20	okay 14:22,22	112:14,17
217:16,17,19	160:8	21:10 23:19	114:20 115:21
218:19,20	officer 4:18	26:2 28:1 32:6	116:5,9,11,19
objections 5:15	7:12 13:15	32:13 33:12,18	116:20 117:17
59:1	18:8 39:6 40:9	34:14 35:4	119:5,6 121:13
obligations	42:12 55:18	36:6,17,20	122:4,14 123:4
122:2	88:12,20 119:8	37:21 42:25	123:7,17 126:4
obliquely 148:8	129:1 139:14	43:7,10 45:6	129:7 131:5
obstacle 32:1	140:15 167:9	45:17 48:14,17	135:5 136:19
obstacles 31:7	214:10 239:1	49:9,13 52:6	137:3,8,20
obtain 171:4	240:1,2	52:11 53:20,21	141:4 142:18
obtained 87:7	offices 205:3	53:23 56:12,16	143:7 144:4
obviously 5:13	offs 87:12	57:14 58:10,24	145:2 147:21
57:24 69:17	offset 160:1	60:11,13 61:14	149:3 150:4
114:16	162:20 163:11	61:14 64:14,21	152:18 153:1,4
occasionally	170:8 171:13	65:12 66:1	153:8,18
102:20	194:4	67:5,9 68:3	154:15 155:5

[okay - order]

155:19 156:11	one's 18:21	80:2 86:13	90:16 108:5,9
156:19 157:13	ones 145:17	118:5 130:12	109:5,20,20
158:8 159:3	146:12,18	132:14,21	110:19 111:9
161:14 162:6	161:15,17	171:10 191:20	112:2,2 113:2
162:12 164:11	170:3 230:6	192:1	113:21 114:1,2
165:1,11 174:3	onsite 227:20	operators	114:12 115:15
176:1 177:16	229:18	15:11 47:11	116:1 117:2
177:20 180:21	oops 226:6	70:14 83:10	134:13 135:5,6
182:3,7 184:14	open 14:23	85:10 158:21	135:9 136:7,9
184:15,16,17	27:2 30:10	164:20 209:2	136:15 137:4,5
186:8 191:3,4	82:8	operatorship	137:7,9,11,11
191:7,12,16,18	opening 3:3,4	31:9,15,16	137:15 139:20
192:14 193:5	5:19 14:24	81:3	140:3,4,5
193:16 194:16	15:2	opinion 27:9,12	141:13,13,14
195:4,5 200:9	operate 30:23	28:11 35:18	144:7 194:21
203:8 204:7	118:11	58:11 64:10,22	196:6 207:7,7
206:2,20	operated	79:7 129:16	207:8,10,11,14
207:17 209:21	216:16	159:8 160:12	207:20 211:8
210:18 211:6	operating	195:6	212:19
220:1 222:11	31:12,16,24	opinions 18:11	options 21:10
222:15 223:7	37:11 45:9,11	134:1,3	21:11 87:22,23
226:14 227:8	46:7,13 47:1,4	opportunity	101:12 107:20
228:20 229:13	47:6 50:9	8:19 11:18	107:21 108:2,4
229:19 230:8	51:19 54:22	14:9 17:16	131:21 132:1
230:21 232:3	60:18 62:15,19	18:3 21:4	140:3
232:16 236:21	80:3 121:14,15	38:18 74:16	order 5:25 7:14
238:14,16	121:17,19	169:21	7:21 8:10,19
239:8	122:1,3,6,7,9	opposed 161:1	8:24 9:23 10:5
oklahoma	122:12 219:5	opposite 222:7	13:21,24 16:25
215:20,20	operations	222:9	56:1 67:25
old 122:6,9	114:14	optimally	72:15 75:11
209:5	operator 16:1	93:12	104:10 107:11
once 101:14	30:24,24 32:3	option 25:1,10	110:12,12,21
123:15 162:4	45:23 74:5	26:22,23 27:25	126:2,16 164:3
200:20 221:10	79:8,17,21	81:24 90:13,14	167:12 171:6

[order - owns]

174 10	140 10 01	1 •	74 16 00 76 17
174:18	140:18,21	overlapping	74:16,22 76:17
orders 87:7,9	145:15 146:21	79:25	77:10,24,24
87:11 129:14	147:6,15,21	overlaps 60:2	78:8 83:13
ordinary 17:4	148:3 150:6,9	overview	90:20 92:6
organized	150:14,19	161:15,15	94:16 95:8
42:16	151:2 152:7,10	own 19:7,8,9	98:10 103:5
orient 14:5	167:5,15 168:1	19:10 20:9	109:13 110:1
15:3	198:13 202:4,6	22:17 34:4,4	110:20 111:3
oriented 62:23	202:9 210:3,8	38:13 63:25	111:12 112:2,6
original 32:16	210:14,17,19	64:2,22 78:19	112:13,16
47:22 92:15	211:5 214:5,14	102:12 112:6,7	113:2,7,11,16
123:3 230:5,6	214:18 215:2,7	112:13,17	121:18 125:20
originally	217:16,18	113:8,11,16	126:17 127:10
47:23 92:19	218:18,21	125:6 141:16	141:16 146:8
142:9	225:12 226:9	150:2 187:14	190:5
orth 1:10 2:3	231:2 232:7	204:4	ownership
4:2,5,22 7:10	237:2,5,10,19	owned 35:25	10:14 19:2,4
9:15 11:15	238:11,17	36:3	19:11,14,17,19
12:10 14:14,19	239:5,8	owner 37:2,4	20:5 35:17
15:4 18:5 23:1	outcome 39:21	57:19 59:24	49:14,16,20
23:7,10,14,17	124:20 197:17	60:6,8,9 74:8	51:1 56:8 57:6
25:25 26:2	207:8 240:15	74:25 75:5	58:22 59:2,8
27:3 40:5,16	241:12	78:17 85:7	59:15 60:16
40:19 41:1,12	outline 85:1	127:15 148:20	61:3,3,7,10,13
41:24 42:10	186:17	owners 10:21	61:19,24 62:5
55:24 86:22	outset 117:21	11:2 17:9 19:4	63:1,6,19
87:17 88:2,6,8	outside 44:18	19:7,9 20:22	64:16 111:14
88:13,16 100:9	44:20 45:1	20:25 21:1,3,8	111:16,19
101:6,19	overall 122:20	22:2,16,23	112:4,18 125:7
119:10 120:9	124:10 125:2	29:24 30:8	212:11
129:4,8 133:12	126:20 128:14	34:3,12 38:6	owning 34:8
133:14 135:11	overhead	39:2,12 46:20	57:10 58:7
136:5,11	237:14	49:22 50:21	owns 125:3
138:15 139:12	overlap 60:23	63:25 67:23	
139:16 140:8	_	71:18 73:16	

[p - pdf]

p	34:19 41:25	231:12	particularly
p 2:1,1 4:1	48:23 49:2,5,8	paragraphs	11:17
p.m. 239:14	51:3 55:23	10:6,6	parties 12:9
package 33:19	65:3 66:3	paramount	20:2 31:16
41:20 127:4	72:24 73:3	17:5	48:1,11 55:21
packet 9:15	82:4,5,7 91:4,8	paraphrase	124:19 198:15
10:4 13:1,11	91:9 97:13	51:25 94:7	203:17 240:11
24:11,17,23	106:1 113:2	paraphrasing	240:14 241:8
25:8,21 34:18	191:11 202:14	134:11	241:11
36:11,13 43:3	219:9	pardon 119:21	partners 37:13
43:3 46:4	pages 6:9 9:23	190:20	37:13 76:13
48:22 61:16	10:20,20,24	parent 207:2,4	95:9
66:13,14,15	33:19,19 46:6	park 2:12	parts 121:16,18
81:20,23 82:5	49:19 65:13	part 17:18	122:9 205:10
84:8 86:10	73:20	33:18 35:5	party 14:9 52:5
89:7,12,16,17	paginated 49:4	55:16 77:9	54:10 57:7
90:11,12 91:12	paid 39:3 75:6	79:20 101:8	85:7 152:11
95:8 101:10	panel 2:7,8,9	105:15 106:3	231:5
108:2 152:15	2:10,11,12,13	119:15 122:11	past 15:13 16:3
219:6	2:14,15,16,17	131:20 144:19	53:22 81:7,8
packets 8:8,11	2:18,19,20,21	144:20 157:5	120:21 121:10
9:21,22 13:8,9	141:5	159:16 174:13	121:10
24:4,7 36:8	paragraph	174:21 180:4	patience 26:8
42:17,20,23,25	26:22 27:8	182:6,18	patterns 206:3
49:4 123:20	28:7 37:22	209:11,12	206:4
151:12	43:9 45:7,8	216:20 222:18	paula 4:19
packs 98:20	72:25 79:6	223:13 226:17	pause 34:7
pad 220:2,3,5,8	81:23 82:15	partially 60:1	119:13,17
220:11,12,14	84:8,9 91:19	60:22	152:10 198:14
220:16,17,18	92:10,17 93:2	participate	217:18 218:21
221:7,9	93:20 94:8	122:8 126:18	231:4
pads 220:16	104:19,20	particular	pay 39:19
221:11,16	130:6,9 162:13	41:15 54:2	74:10,25 75:7
page 3:2 9:23	177:16,17	79:9	pdf 49:5,8 82:5
10:2 13:1	219:9 226:5,12		82:8 202:14

[people - place]

1 22 4	• 411	171 17 100 20	72 4 10 74 4
people 32:4	permian 4:11	171:17 198:20	73:4,18 74:4
39:20 69:7	5:17 6:3,7,21	199:11 200:5	74:15 85:1
72:1 78:13,14	15:12 16:7,19	219:5,6,10	134:7
78:15 81:5	16:22 17:10	220:2,8 221:1	pheasant 16:11
87:25	20:3 21:17	permian's 19:1	24:13 34:2
percent 30:1	26:9 28:8,22	21:22 22:7,8	43:4 46:5,23
34:8 38:19	30:18 31:3,4	22:21 28:14	49:15 56:22
67:19 71:24	33:2,7,14	35:22 41:10	57:11 65:9
72:4,8 97:3,14	35:20 36:1	64:16,20 72:21	67:7 81:16
97:15 99:2,4	37:1,9,16	82:1,25 84:21	90:5 91:14
111:6,7 116:7	38:23 39:5,13	105:5 118:9	186:15 223:11
173:18,18	41:21 43:19,22	143:5 197:16	226:1,19
174:16 180:15	44:2,12 48:20	197:17 221:13	phi 157:1,2
180:16 187:1	56:25 57:12	permit 212:13	158:16 177:14
187:11 189:17	58:1,3 61:6,17	234:13	177:18 179:4
190:11 192:9	62:3 72:14	permits 76:19	179:13 181:3,8
192:10,19,19	73:9,14 74:17	76:20 159:18	181:18,19
193:13 196:1	74:23 79:23	permitted	184:21 185:10
233:17,19	81:13 82:20	160:10 161:2	185:18 186:9
234:7,13,15	83:8,23 84:1	perry 196:11	187:7,14,15,19
percentage	84:10,13,25	196:13,18	187:21 188:1,4
97:7 134:15	85:2,16 87:6	197:5	188:19,21
136:21 186:21	118:15,21	personal	189:4,8 191:2
192:4 195:14	120:18 121:4	204:11	193:3,14 194:2
percentages	124:11 125:6	perspective	194:4
19:5 33:16	126:21 127:4	12:21	philosophies
111:14 112:4	127:18 128:1	petroleum	15:8
193:3 201:12	129:16 130:11	215:19	phrase 29:12
201:19	131:2,4,7,14	petrophysics	pick 6:18
performance	132:14 135:3	182:2	pilot 171:17
81:7,8,8	149:16 153:2	ph 26:11,18,21	172:1
permeability	156:2 160:3	27:8 28:5,7	pioneer 15:22
172:19	161:12 163:7	33:13,23 34:15	pivot 107:20
permeable	164:1 166:1,10	36:21 37:21	place 20:18
166:19	166:15 170:16	41:14 72:11	27:19 47:12

[place - position]

77:6 81:22	platform 4:25	177:5 180:14	129:14 144:8,9
121:16,20	239:11	183:7 197:3	145:1,6,21
162:16 212:8	play 70:22	201:11 217:10	147:18 148:10
213:17	207:18	pointed 120:17	148:16 191:21
places 125:12	players 15:25	125:10 126:15	202:2 207:9,20
153:16	30:5	126:15 145:10	211:9 213:9,10
plain 103:15	plays 32:9,10	223:5	pools 18:21
plan 12:11,15	pleadings 5:11	points 98:9	19:3,7,15 87:8
14:6 15:21	27:14	189:2 203:3	191:20 194:21
16:19 22:8,21	please 15:4	pool 18:22,23	205:8,11
26:22 28:8	18:8 23:10	19:16,20,23	pore 157:21
30:11 33:15	27:3 86:22	20:5 22:3	158:1 177:14
36:22 39:5,13	87:19 88:18	48:11 90:15	179:4 181:3,9
39:13 50:1	150:15,20	107:11 108:5	182:16 184:9
55:2 57:3	168:3,8 214:20	110:18 137:15	184:20 185:10
126:21 127:4	plethora	137:20 155:7	185:14,15
127:10 163:3,7	230:12	195:4 196:5	pores 181:11
168:13 169:18	plot 49:16	205:4 211:20	porosity 158:5
169:20 170:6	166:4	212:10	158:20 173:17
171:18 197:16	plots 204:12	pooled 48:2	173:18,21
201:2 206:6	plugged 118:17	54:10 73:15	174:15 177:18
208:17 221:18	119:1	74:8,15 110:20	184:2 193:17
223:11 226:18	plus 33:19	116:4,6 144:11	193:19
234:6,8 236:17	point 12:17	200:1	porous 166:19
plane 236:3	21:22 37:7	pooling 5:6,9	portion 98:19
237:13	40:3 51:12	16:10 19:18	116:11 179:18
planning	54:23 56:10	36:14 72:15	181:14 182:13
216:15 217:13	58:6 61:15	73:5 75:11	portions
plans 16:16	63:11 78:6,19	80:13 83:19	183:14
31:10 32:22	84:13 86:7,21	84:2 85:4,25	position 11:1
37:24 57:1	98:17 102:21	86:9 87:7,15	20:12 28:9
78:9 80:25	120:21 136:14	101:9,10,11,15	51:9,11 84:11
117:3 130:14	137:9,21 138:5	101:15 104:12	96:19 107:5,8
156:3 166:6	138:14 145:9	105:3 110:6,11	113:15,18
206:9,9 219:10	157:18 169:17	110:12,21	189:12

[positioning - produce]

positioning	pre 13:22,23	presents 15:10	printed 14:20
198:21	14:13	pressure 209:3	prior 31:4
positions 10:22	precise 16:12	235:1,3,7,9,9	43:22 44:12
103:1,13	precludes 77:4	presumably	118:9 240:5
possibility	predictive	5:20 178:20	probably 37:15
205:3	197:16	pretend 182:8	53:5 69:9
possible 76:20	prefaced	pretty 13:6	87:24 135:20
133:19 166:15	133:15,15	30:3,3,10	141:8 174:18
207:4 210:11	prefer 129:2	38:10 72:4	176:11,14
229:14	207:11	133:9 141:8	206:16 208:5
possibly 6:6	preference	143:12 153:16	213:8 233:21
post 139:1	20:10 140:3,6	176:18 187:2,4	problem 20:23
posting 144:17	preferred	187:14 188:2,3	21:10
potash 76:23	207:8	204:9 208:1	procedural
77:1,10,20	prehearing	219:15 235:16	13:16
78:11,21	5:13 8:9	236:17	procedure 5:24
potential 145:6	prep 208:11	prevails 51:17	101:9,11
169:8 174:14	prepare 8:20	prevent 17:8	proceed 41:8
178:21 180:11	8:24	22:16 108:7,21	139:10 171:7
181:6 187:11	prepared 48:1	preventing	215:12
207:12 208:18	59:2,8 65:16	236:18	proceeding
229:11	65:17 84:18	previous 190:6	1:15 8:2 241:4
potentially	241:3	price 15:19	proceedings
78:8 116:12	present 5:25	17:10 125:11	17:15 240:3,4
144:11 170:1	7:17 17:9 18:3	pride 69:23	240:6,8 241:6
170:11 187:14	24:3 41:8	70:25 132:15	process 77:9
200:10 227:4	121:11 129:10	211:10	101:18 219:11
powering	153:14 189:21	primarily 16:6	produce 20:15
234:10	presentation	103:7 199:19	20:24 21:5,17
pr 35:25,25	41:7 222:19	primary 93:9	22:5 93:8 94:1
practicable	224:10	94:1,16,19	94:16,19 98:11
22:1	presented	100:17 103:19	99:2,10 100:17
practical 22:22	127:4 224:10	105:9	103:19 104:11
practicality	presenting	prime 176:17	104:18 109:2,4
17:1	127:1		136:20 199:7

[produce - proven]

	1	I	
200:6,11,16	215:14 216:7	properly	80:19 83:8
211:15 212:15	216:16 217:13	189:19	87:22 92:19
212:19,20	219:12	proportion	93:8 94:19
produced	productivity	112:18	100:16 105:2
105:10,17	178:21 182:16	proposal 14:17	107:21 127:21
108:15 111:7	187:7,11,15,16	21:2 22:10,20	128:1,2 138:20
116:13 193:10	188:4,17,20	48:20 57:7	162:17 170:2,9
201:7	189:8 194:4	78:10 81:24	197:17 206:13
producers	professional	90:4 92:11,15	230:4
79:18	23:24 216:4	101:8,9 105:6	proposes 15:16
produces 192:1	program	137:18 147:13	74:4
producing	228:14 236:6	148:14,15	proposing 16:8
22:16 96:14	progress 16:15	149:10,14	20:24 21:9,16
103:7 192:12	project 225:21	190:6 219:14	22:15 31:23
199:14,16	projected	proposals 17:2	63:4 72:14
production	92:13 141:21	65:2,5 80:9	73:14 74:25
16:19 38:12	projects 217:3	81:10,12 83:1	78:25 85:16
74:13 75:7	prompted	83:18,25 84:5	97:17 121:17
92:13,19 94:1	139:20,21	104:17 119:4	149:5 164:1
94:10,13,17	147:14,19	147:13,18	168:13 220:9
95:13 96:9	148:10	148:9 171:14	225:19
97:3 98:5 99:8	prompting	223:6 230:4	proration 34:1
101:13,16	102:13	233:14,16	34:9,11 35:2
103:8 108:14	promptly	propose 6:19	57:11 63:4,13
108:15 109:21	123:15	6:21 13:21	70:17 112:11
110:19 111:13	pronounce	47:4,16 76:16	prospective
112:3,8 113:3	75:21	78:16,21 83:11	163:5
116:7 133:5	pronunciation	171:11	protect 17:8
134:14 162:20	76:1	proposed 6:20	20:20 22:2,23
181:6 187:18	propagate	7:13 16:10,23	108:21
187:21 188:7,9	174:20	22:9 46:6,11	protecting
189:3 190:11	propagating	47:6 60:2	20:21 38:8
192:3,7,12,19	172:20	66:23 69:2	protection 17:5
195:14 196:1	propagation	73:5 74:15,24	proven 16:13
200:2 208:12	173:14	76:13 78:11,15	30:24,24

[provide - raising]

provide 8:24	190:21	101:1 103:4	147:2,4 150:5
10:18 13:5	pulled 11:25	117:1,16	160:19 161:16
22:8 28:2,2	97:15 143:14	119:16 133:10	161:18 167:7
126:11 149:2,4	pure 59:23	135:16,17,19	167:13 168:8
149:10,13	purple 154:4	136:6,8 139:17	198:10,11
150:2 204:3,5	purpose 101:3	139:21 141:3	202:10 208:3
210:11	purposes 51:25	147:12,18,19	210:1,4,7,12
provided 8:23	59:19 202:2 pursuant 191:21 push 69:6 107:17 put 6:12,14 7:7	148:9 164:12	211:2,8 213:20
17:16 24:14,20		164:13 198:16	219:8 225:10
25:2,10 46:4		201:15 202:5	225:13,18
57:7,18 58:3		202:15 211:9	231:1,5 232:6
131:11		211:19 219:18	237:1,4
provides 77:16		223:13 227:9	quick 58:4
providing 191:15 provisions 21:12 proximal 159:16	8:7,16 12:22 29:5 51:18 85:1 102:2 117:8 156:3 165:5	231:11 233:4 237:9,17 238:6 238:8,18 questioning 6:13,18 7:7 100:1 102:16	61:11 82:11 91:4,8 202:18 208:1 quickly 76:20 quite 52:13 76:19
proxy 181:5 182:16 187:16	putting 40:24 42:6 221:6 q	118:1 139:9 222:16	r r 2:1 4:1 151:1
193:17 prudent 32:3 57:17 79:17 106:9 prudently 80:3 public 29:7 80:11,12 144:17 240:21 published 145:1 pull 48:24 65:21 84:24 86:23 87:11 89:13 105:18	qc 162:5 qualified 240:7 quality 179:17 183:16 quantify 182:18 quarter 15:20 quarters 63:12 question 12:8 17:3 26:25 39:9 40:17 59:18 60:12,14 64:8 68:19 69:6 85:9	questions 6:1 17:1 27:2 40:2 40:6,12 50:18 58:19,23 84:6 87:21 99:19 102:1,6,10,14 102:15 119:8 120:7,16 121:14 123:8 129:2 131:21 135:14 138:1,5 139:16 140:16 141:8 143:12 145:14 146:13	rack 206:3 racks 208:8 radius 77:23 78:9 raise 23:10 150:15 161:16 161:18 214:19 raised 9:11 44:16 raises 11:14 16:25 raising 13:17 44:9

[range - rankin]

range 68:21	65:1,8,12,15,19	99:16 100:7,10	168:7 169:10
185:14,17	65:25 66:2,9	102:17,18	169:14 170:5
192:9 193:6	66:15,17,21	103:12 104:7	171:2,10,16,20
rankin 2:10 3:4	67:3,11,15,18	104:16 105:1,8	172:3,10 173:8
4:18 5:23 6:5	67:22 68:1,3,9	105:15,20	173:11 174:3,8
6:20 7:10,11	68:14,19 69:11	106:19 107:2,7	174:21 175:4
9:18,20 12:14	69:21 70:1,6	107:15 108:18	175:20 176:15
13:15 18:6,7	70:11,24 71:3	109:6,10,19	177:4,10 178:5
23:1 25:25	71:8,11,17,23	110:4,10,14,17	178:9,15,19
26:1,15,24	72:9,13,17,21	111:2,5,11,18	179:3,8,12,21
39:6,10 40:6,8	72:24 73:8,13	112:1,12,16,21	180:3,7,21
40:18,21 41:3	73:18,24 74:3	113:13,21	181:8,13,20
41:5,18,25	74:21 75:4,9	114:6,11,16,20	182:3,7,12,21
42:1,11,24	75:14,25 76:3	115:2,11,16,20	183:6,21 184:8
43:7,11 44:2,8	76:8,12,15,21	116:5,11,16,19	185:9,13,20
44:15,22,25	76:25 77:7,14	117:6,11,17,21	186:8,12,14,19
45:6,15,22,25	78:1,3,6,19	118:8,14,20	187:2,10
46:3,10,19	79:4,11,16,20	119:5,10	188:11 189:6
47:3,10,15,19	80:2,12,15,24	120:16 121:13	189:11,18
48:4,8,14,17	81:9,15,19	123:9 124:10	190:3,8,15,20
49:3,7,13,24	82:6,12,14,19	125:9 126:14	191:5 192:17
50:3,10,16	82:25 83:6,21	127:14 129:1	193:4,8,12,16
51:21 52:4,11	84:4,18,21,24	129:10 133:6	194:5,8,12,16
52:20 53:1,16	85:8 86:6,21	133:20 135:8	194:19 195:13
53:20 54:5,12	86:23 87:17,20	135:19 139:13	195:17,20
54:21,24 55:4	88:5,7,11,16,18	139:14,17	196:4,8,17
55:17,25 56:7	88:19 89:3	140:15,20	197:4,8,13
56:12,16 57:13	90:9,18 91:3	141:9 143:14	198:2,5,9,13
58:5,10,14,17	91:11,18 92:3	147:10,12,16	200:5 201:17
59:5,19 60:5	92:5,9,17 93:1	147:17 148:1,5	201:21 217:16
60:13,21 61:1	93:19 94:12,15	148:7,18 149:3	217:17 218:19
61:5,14,23	95:2,6,15,20	149:7,11,13,18	218:20 223:5
62:4,9,21 63:2	96:2,5,12,18,21	149:20 150:4	225:13,15,18
63:5,11,24	97:9,19 98:3	152:8,9 167:7	226:3,11 227:8
64:4,7,14,21	98:16 99:11,13	167:9,20 168:4	227:18,20

[rankin - reference]

228:2,8,11,17	150:1 162:11	8:17,17,22,25	reconfiguration
228:20 229:2,6	168:15 185:21	9:1,9,10 10:18	8:15
229:9,13,19	185:21 191:16	11:19 12:4	record 23:21
230:8,15,21	204:16 208:17	40:13,14,24,25	25:7,24 29:7
231:3,12	226:10 227:3	41:9,22 42:4,6	59:23 60:3,4,9
232:16 238:21	231:19	43:14 51:4,14	60:16 61:19
239:9	readily 36:18	53:6 55:14,16	63:17 77:25
rankin's 102:5	ready 89:16	56:3 140:11	78:17 88:15
131:21	real 6:10 61:11	167:3 179:9	120:3 139:5
rate 109:7	66:3 82:11	239:2	147:20 151:5
209:3	91:4,8 202:17	rebuttals 41:14	152:6 167:21
rather 8:3	realistically	rebutting 33:22	240:9 241:5
13:24 48:20	163:8	34:14	recorded 240:6
57:15 68:4	really 9:8 10:24	recall 48:2	recording
75:20 81:10	11:13 16:4	118:6 192:14	240:8 241:4
114:7 118:15	21:21 42:19	197:20 222:19	recross 6:6
136:8 220:16	88:1 124:8	223:2	red 154:3
reach 44:5	126:5 127:13	recapitulation	186:17,17
173:21	131:7 159:17	54:10 171:8	redirect 6:5,24
reaching 29:23	168:12 172:18	198:3	7:24 119:11
read 5:8,17	179:17 236:9	receipt 74:9	120:11 138:13
28:10 30:13,16	reapply 207:19	receive 201:19	198:11,17
31:4,13,19	reason 11:25	received 31:18	202:8
32:10,16 34:8	46:11,11 47:10	78:10 82:25	reduced 234:17
43:12,18,19,21	71:5 80:6	119:4 124:4	240:6
43:23 44:10,13	90:10,18	recent 85:3	reducing 234:3
45:1 61:17	105:15 143:1	107:3 235:14	reevaluate
72:10 74:3,5	reasonable	recently 51:9	212:9
79:23 103:15	22:21 30:11	reclassified	refer 39:22
118:2,10,10,14	66:6 70:13	101:16	45:16 51:8
118:15,16,17	reasons 187:19	recognized	95:4 97:6 98:4
118:20 119:1	rebut 41:20	14:2 217:20	104:3 107:3
120:17,20	rebuttal 6:8,13	recommend	177:14 205:16
121:4 130:11	6:18,22 7:1,7	229:14	reference
149:8,14,16	7:20,23 8:4,6		152:19

[referenced - resistivity]

referenced	143:9	rely 116:17	representatives
59:11 93:6	regards 36:21	117:4 133:21	228:14
99:5	200:10	134:2	represented
references	regular 7:9	remain 48:12	161:9
130:1	regulations	53:13 55:20	request 7:6
referencing	212:14	remainder	41:6
27:16 28:14	regulatory	87:18	requesting 7:3
45:9 57:12,13	15:11 17:13,22	remaining	required 19:18
65:23 72:19	229:1,5	17:22	requirement
91:12	relate 26:11	remember	101:8 137:18
referred 119:1	153:5	102:13 190:13	requirements
referring 39:23	related 11:25	227:13,16	110:5
87:1 102:19	17:20 101:17	remote 1:15	requires
106:14 159:11	146:8 191:2	renaming	170:21
177:19 191:14	240:11 241:7	205:3	research 171:1
refers 117:14	relates 108:2	rendered 35:18	reserve 42:2
reflect 51:1	160:15	repeat 41:3	reserves 165:14
60:17	relation 24:25	44:23 60:11	reservoir 16:5
reflected 10:22	93:5 100:15	63:10 104:15	39:24 154:21
44:17 71:6	103:17 224:10	118:19 132:19	155:15 164:18
reflecting	relations 11:7,9	223:12	164:21 165:3,6
71:20,20	68:5	repeats 141:9	165:18 166:12
reflection 48:9	relationship	rephrase 39:8,9	166:19 173:3
refrain 213:19	43:12,20,24	report 11:7,10	180:15,16,18
refused 38:20	44:3 194:3	35:17 68:5	182:14,19
142:3	relationships	reported 1:19	183:10 188:12
refuted 31:20	207:4	reports 68:23	188:16 189:17
regard 34:23	relative 22:13	represent 15:7	191:16 197:2
129:13 211:18	80:23 240:13	19:18 155:11	204:21 205:1,9
regarding 6:2	241:10	representation	208:14 217:11
7:7 17:1 27:8	relatively 8:17	61:2,10 64:16	reservoirs
125:11 211:2	10:3 14:1 19:1	71:5 108:9	155:11
217:13	19:13,13	representations	resistivity
regardless 29:2	190:18	59:2 61:8	204:14
38:23 39:19		68:20	

[resized - rights]

	I	T .	I
resized 189:19	respect 50:25	revise 123:14	120:10 134:10
resolved 17:14	136:2	rich 18:20	136:9 138:15
31:1 99:21	respective	riddler 162:8,9	140:9,14
resolving 100:5	92:14	right 7:19	146:21 147:6
resort 107:14	respond 12:14	11:15 12:1	150:14,16
resource	22:12	13:8 14:19	152:7 160:7,9
165:19 170:19	response 8:7	15:4 19:20,23	164:1 165:2
resource's	42:2 92:2	20:4 23:11	167:5 173:9,10
26:10 28:8	103:4	26:5 40:16	174:21 177:8,9
resources 6:3,7	responsibilities	41:24 45:23	177:15 178:3,7
6:22 15:12	216:12	49:24 50:1	178:8 180:2
16:7,19,23	responsibility	51:21 52:9	181:12,17
17:10 28:22	216:21	53:18 55:2,24	184:7,8,9,13,14
30:18 31:3,4	responsive	56:5 58:5,8	184:15,21
33:14 36:1	30:19 33:3	59:20 64:4,5	185:6,17
37:1,9,16 39:5	restate 13:25	64:17,22 65:4	186:10 189:10
39:13 43:19,23	168:9	65:10,13 66:5	191:7,10
44:3,12 58:2	result 106:7	66:19 67:7,16	192:17 194:14
79:24 106:7	128:14 134:13	67:19 70:3,23	195:19 200:7
118:15 120:18	209:6	76:5,13 79:4	202:4,9,20
121:4 124:12	resume 217:7	79:14 80:13,19	204:13 210:8
125:6 126:21	resuming 4:2	80:22 81:1,11	210:14,15
127:4,18 128:1	retention	81:17 82:3,17	214:18,19
129:16 131:2,4	219:11	84:2,16,22	217:18 218:21
131:7,14	review 6:10	85:8,9 86:2	226:8,12 229:8
132:15 135:3	8:19,22 11:3	88:13 92:1	230:21 231:2
149:17 153:2	28:3 73:14	94:17 95:17	232:7 233:15
156:2 160:3	91:18 196:10	101:19 104:7	237:5,19 239:2
161:12 163:7	219:4	107:19 108:6	239:5
164:1 166:2,10	reviewed 26:9	109:6,9,14	righthand
166:16 170:16	84:21 148:12	110:15,21	185:9
198:20 199:11	153:1,5 197:21	111:20,21	rights 17:6,8
200:5 219:5,6	reviewing 48:9	112:14,20	20:21 21:8
220:8 221:2	145:20 152:19	113:13 114:4	22:2 37:23
		115:16,18	38:2,4,9 60:1

[rights - save]

108:21 109:1	108:16,21	15.1 5 6 10.5	
	100.10,21	15:1,5,6 18:5	135:8,12,13
160:14	132:13 154:2	23:2,4,18,19,23	136:10,13,19
righty 211:5	154:20 155:3	24:2,6,11,17,23	137:3,8,14,17
risk 162:18	155:17 156:3,8	25:5,14,18	137:20 138:16
236:10	157:1 158:1,5	26:6,7,14,20	139:7 144:18
road 30:25	158:20,21	27:3,4,17,23	145:3,8 146:8
robert's 54:19	162:10 163:1,1	28:1,5,21	146:13,14
robust 22:8	163:1,9,11,14	29:14 30:4	150:9,11 151:3
role 32:10	163:20 164:7	31:2 32:6,13	151:4,7,11,15
roswell 32:19	164:10 165:15	33:12,18 34:14	151:19 152:2
rough 193:20	166:8 169:8,13	34:18 35:4,12	152:14,18
round 9:13	170:12,16,19	36:6,11,17,20	153:1,4,8,18
70:15	177:2 178:10	37:18,21 39:1	154:10,14
routine 234:14	180:19 181:15	39:8,11,22	155:5,10,14,19
rule 145:17	187:20 188:10	40:1,5 41:1,3	156:11,14,19
233:21 235:13	188:18,19	41:11,13 42:15	157:13 158:8
run 134:5	189:16 196:16	43:15 55:8	159:3 160:6,13
220:11,16,17	199:5,19	86:20 99:12,15	160:18 161:4
221:14 222:1,3	200:13,13	99:17 101:4,7	161:14 162:6
running 221:3	201:3 206:11	118:2 119:11	162:12 163:21
221:7	206:12,12,16	120:11,13	164:11 165:1,5
rushed 164:4	207:5 209:20	121:3,8,13	165:11,18,21
rushing 163:12	sands 155:17	122:4,14,19	166:14 167:2
rutley 77:16	157:6 158:2	123:4,7,14,17	198:17,18
S	159:14,15	123:21 124:4,8	199:3,6,9,14
s 2:1 3:1 4:1	185:11	125:2,5,9,16,19	200:1,9,15,20
150:21	satellite 221:6	126:1,4,10,13	201:5,11,15
safety 233:2	satisfied 124:6	127:3,9,13,21	202:3,5,7
salvidrez 2:6	satisfy 27:18,20	128:14,20	210:10,15,18
238:12,16	saturated	129:5,7,9,15,20	211:1,6 214:2
sample 131:17	181:15,15	130:4,8,21	214:9,11
samples 172:1	saturation	131:5,10,16,20	savage's 58:25
sand 16:2,3,6	194:1 201:10	132:6,14,21	save 7:21 13:21
18:18 65:20,24	savage 2:15 3:3	133:14 134:12	56:2 145:15
66:18 67:6	12:24 13:14,19	134:18 135:2,5	

[saw - seems]

		T	
saw 4:8,11	49:11 66:22	159:7 164:19	89:11 91:9,10
56:23 91:12,13	73:1,25 82:8	166:7,18	91:12 111:12
saying 35:8	86:24 89:14	168:12,14,17	119:19 143:11
59:22 63:15	90:1 98:4	169:7,11,14	145:17 146:12
73:19 97:20	185:5,6 186:3	182:10 185:2	153:17,18
105:16 111:17	189:19 190:20	185:21 186:5,9	154:5,9 155:1
115:3,17	191:8 219:18	187:12 191:12	155:19 161:5
155:10 156:16	scroll 50:16	196:13,13,14	168:17 170:11
159:13 163:3	52:22 53:21	196:16 203:10	173:2,6,15,20
171:4 175:16	54:1 89:6 91:5	222:4	174:4,15 176:6
184:3 187:5	191:13	sections 28:9	176:7 177:1,15
188:14 200:12	scrolled 51:4	28:16 29:19,19	184:13 185:5,7
221:19	52:12	30:23 31:11,11	186:3,4 191:13
says 51:16	se 142:16	34:5 36:2	202:16 205:21
104:1,3,6,19,20	search 131:17	38:14 44:19,21	211:13 214:8
105:13 106:14	searched	45:2,12,13,20	217:19 219:1
115:9 130:10	131:13	46:15,15,16,21	219:19 223:7
168:16 191:20	second 65:20	46:22 58:11	224:18 225:3
203:4 219:10	65:24 66:18,23	59:14 62:1	231:4 236:14
226:13 231:16	70:4,6 92:17	63:22 64:3	239:11
234:21	93:2,20 104:20	115:12 125:1	seeing 73:25
scada 235:10	163:1,9,11,20	161:21 173:8	85:10 192:14
scale 71:1	164:7 168:21	187:13 203:13	seeking 48:11
184:2	168:21 169:5,8	see 4:3,9,15	77:1 90:15
scarring 17:24	169:12 170:12	11:4,11 16:7	148:21 196:5
scenes 29:2	170:15 172:6,8	23:2 33:15	seem 186:19
scheme 67:1	176:9,14	48:23,25 49:10	seemed 146:1
126:5	184:13 206:12	49:12 52:7	seems 9:19
school 209:5	219:18 226:7	53:22 54:2,7	26:17,21,25
science 171:21	231:16	54:12,13 55:5	27:17 28:6,21
175:21	section 30:2	56:19,20,21	33:13 38:2
scope 11:12	31:25 32:5	57:1,1,4 65:20	102:12 158:9
69:20 92:12	57:10 86:7	73:4 80:9,11	159:4 180:7,11
screen 4:4	87:21 89:4	86:4 87:5,11	212:3,7 215:11
12:12,16 49:10	118:3 154:2	88:13 89:8,9	

[seen - single]

seen 51:16 53:6	separators	20:9 38:18	sides 22:3
sees 235:9	221:6	49:10 74:10,11	86:16
selective 12:21		91:8 99:6	sign 52:16
self 5:15 13:6	sequentially 74:16 75:1	112:3 113:3,17	122:11
14:20 40:20	series 123:8	185:5 191:7	
41:14 72:25	serve 148:15	219:18 231:10	signature 102:2 240:19 241:17
76:4 84:19	served 87:4	shared 170:19	signed 50:7,9
218:1,11	144:15	223:7	51:19,22 54:22
send 91:15	server 191:6	sharing 12:12	100:21
95:11 126:1	serving 181:5	65:3 66:22	significance
sense 48:24	set 7:5 8:17	shelf 85:25	154:17
108:17 176:3	10:7 11:17	shoot 33:4	significant 8:14
sent 31:15,19	29:9,18 31:24	short 167:11,14	72:5 106:8
51:15 65:5,9	90:12 135:19	shortly 100:13	126:6 158:19
67:22 90:3	221:7,10	shotgun 16:8	165:8 224:15
91:21 95:8,14	sets 5:12 46:5	show 17:22	significantly
104:10 105:6	setting 221:9	34:16 35:22	156:8
143:16,16,18	235:2	39:16 58:7	sikes 2:19
143:19 144:1,2	seven 32:7	129:12,17	similar 67:8
144:21 148:19	seventeen	154:2 165:9	70:13 181:18
190:4	87:16	180:15 203:2	209:7 223:20
sentence 93:17	several 4:7	showing 31:20	similarly 53:20
104:20 219:10	224:11	162:18 208:8	simple 238:8
sentences 226:9	severance	219:20	simply 54:11
separate 21:21	212:11,14,16	shown 51:14	86:7 102:20
98:13 100:4	213:8,11,13	54:9 57:9	182:15
155:11 205:12	severely 21:2	181:19 225:8	single 16:5
212:16	shale 157:2,8	shows 35:13	55:13 70:17
separating	157:12 163:17	36:1,25 38:7,9	74:23 130:18
18:17 170:20	169:21 170:10	53:17	155:14 165:3,6
203:6	195:12 196:13	shutting 235:5	189:14 191:16
separation	206:15 207:5	235:6,10	205:1,4 221:7
155:1 165:8	207:16 235:1	sic 100:12	225:20 226:14
219:11	share 12:15,19	side 10:11 33:7	227:10 230:19
	13:5 19:7,8	33:11 185:9	231:13,20

[sir - spread]

	I	I	ı
sir 32:12 36:19	slightly 157:20	sort 10:25	63:16,19 71:19
65:11,14,18	203:5	12:21 32:25	82:21 90:15,21
74:2 126:3	slow 226:11	50:19 80:13	91:16 92:7,12
215:10,15,18	slowed 175:13	99:13 175:4	104:13 110:2
216:19 217:1,6	small 37:9,10	183:8 184:5	114:8,9 163:4
217:9 218:3,9	smaller 30:8	207:15	164:15 209:17
219:7,15 220:6	smooth 31:7	sorted 57:25	span 189:4
222:14,21	solely 45:4	sounded 136:5	speak 6:22
223:3,8,16,17	solid 176:20	142:4 196:19	speaking 37:14
224:12 225:9	236:17	sounds 122:5	222:13
226:2 227:19	somebody	133:12 143:20	special 1:1
228:1,7,9,10,16	119:19	145:14 163:6	specialty 204:9
229:12 230:18	somewhat	175:20	species 228:5
232:1 233:8	134:9 224:5	source 205:9,9	specific 22:12
234:12,18	sonics 204:2	south 28:14,17	44:15 79:14
236:20 237:16	sooner 74:6	28:17,20 31:10	106:21 110:17
sit 117:17	sophisticated	45:12 46:14	specifically
site 232:17	135:21	59:14 62:17,17	11:13 22:11
sitting 71:4	sorry 43:18	62:23 85:22	57:12 70:21
situation 30:21	60:12 71:8	130:18 159:8	232:13
81:1 134:6	73:20 82:9,13	161:21 163:16	speed 14:17
169:2 185:4	85:18 89:5,15	173:5 185:2	41:18
situations	89:15 104:19	186:1 196:13	spell 23:15
209:9	108:19 118:21	southern	150:20 215:3
six 163:11	119:9,9 132:20	224:21	spend 229:20
224:2 238:2	133:6 134:11	southwest 86:8	spending 14:6
sized 30:9	140:18 141:2	space 59:24	72:2
skills 136:2	146:11 147:10	182:16	spill 236:16
240:10 241:6	147:17 169:11	spaced 156:6	spills 230:14
skip 75:15	169:15 179:21	spaces 191:20	236:19
slick 209:2,9	179:21 180:1	spacing 5:2	splits 61:12
slides 10:16	199:13 208:1	19:5 47:24	spoke 148:8
11:9 39:15	213:19 226:7	48:6 54:5 60:2	207:6
slight 146:2	226:12 229:2	60:6,7,9,17	spread 188:2
158:16	238:15	62:23,24 63:7	

[spring - states]

	111010	100 15 10	1211
spring 15:15	116:8,13	199:16,19	staring 13:11
16:2 18:18,22	124:16,21	201:3 211:9,16	start 7:6 43:2
19:8,10 20:6	127:7 128:1,6	212:1,3,6,20	45:9 48:21
20:10,10,15,22	128:16,21	springs 53:9	89:3 226:13
20:25 21:1,16	129:14 130:2	64:1 141:17,21	238:3
21:18 22:16	130:13,15	143:19,20	started 120:4
24:13,19 27:20	131:8 132:7,13	144:8 178:1	216:3
34:2,4,11 35:1	132:16 133:1	204:20 207:9	state 23:20
38:7,17 39:4	134:14,20	208:19	79:18 87:12
43:5 57:11	135:3 136:20	spud 31:24	93:17 105:9
61:24 62:6,11	142:11 144:2	130:14	120:2 143:3
62:25 63:6,14	145:10 153:14	spudding 32:4	151:5 205:10
64:10,13,25	154:20 155:6	staci 2:20 3:6	215:21 240:22
65:20 66:18,23	155:17 157:1	95:21 97:7	stated 7:18
67:6 70:2,12	158:1,11	104:3 116:18	statement 3:3,4
82:1,20,24	162:10 164:13	117:4 150:12	5:16 14:21
84:12,15 87:8	166:8 168:21	150:21 151:6	15:2 17:20
87:13 90:21	168:21 169:5	stacked 206:4	40:20 41:14
92:18,20 93:4	172:7,8 173:2	stacking 29:12	43:9 45:8 66:5
93:7,13,21	174:5,6,9	29:13	72:25 76:4
94:2,5,6 97:3	176:9,10,10	staff 4:6	79:6 84:7,19
97:16 98:10	177:2,8,19	stage 219:10	104:14 115:9
99:2,3,8,10	178:10,11,13	stagger 164:16	131:6 139:18
100:14,17,18	178:16,17	169:8 170:15	145:19 152:15
103:7,9,17,18	180:16 181:14	staggered	154:1 163:2
104:17,18	182:14,19	159:13	177:17 180:5
105:2,2,3,11	183:12,17	stand 39:18	180:13 217:8
106:15,18,20	187:20 188:9	standard 73:5	218:2,6,7,11
107:9,11,11	189:13 190:6	110:6 213:9	219:4
108:6 109:4	190:12 191:21	219:16	statements 4:8
110:1,18 111:3	192:2,13,20	standing	5:14,19 10:13
111:19 112:7	194:5 195:1,2	194:13	14:24 95:17
112:11,14,17	195:5,7,11,15	standpoint	102:1
113:2,4,5,8,12	196:16 197:10	29:22 79:2,3	states 97:14
114:3,8 115:12	197:18 199:10	,	100:11 103:15

[states - support]

186:1	stipulate 55:9	234:5,8	suggesting
status 43:20	55:10,15	submittal	171:12
52:13,17	stone 173:6	139:1	suit 232:19
statute 27:18	stood 104:17	submitted 9:22	sum 22:15
27:23 101:15	stop 51:5 65:3	41:21 53:7	229:21 230:1
212:14	106:11	54:18 61:17,17	summarize
statutes 191:21	stopped 175:10	73:9 76:5,9	13:25
statutory 27:10	175:15	96:7 190:16	summarizing
27:15 110:5	straight 51:2	submitting	14:7
stay 52:1 184:9	112:9 142:13	236:18	summary 48:10
steal 165:17	167:19	subsequent	53:24 216:2
steer 141:11	strategies 15:8	49:19 65:13	superior 36:22
step 189:12	80:18	103:14 118:14	supersede 47:7
stepped 4:15	streamline 7:14	subsequently	59:12 121:21
steptoe 120:6	streamlined 8:2	78:11	superseding
steven's 34:8	239:1	substantial	122:18
stevens 5:8,17	strike 202:5	9:19,24 145:12	supplement
28:10 30:14,16	structure 158:6	187:15	90:4 91:15
31:4,14,19	struggle 204:12	substitute	95:12 148:14
32:10,16 43:13	study 117:14	181:5	150:3 190:5
43:18,21 44:13	stuff 75:15,17	subtle 143:21	supplemental
45:1 61:17	121:5,6 202:17	successful	5:14 98:3
79:23 118:2,10	sub 24:15,21	79:13 207:20	105:6 149:14
118:11,16,16	25:3,11,20	sudden 16:8	supplements
118:17,21	152:3	suddenly 15:16	10:25 95:5
119:2 120:17	subject 15:9,17	sued 187:19	support 10:14
120:20 121:5	15:24 16:9,18	sufficiently	31:19 33:22,24
130:11 149:8	17:22 106:11	107:9	34:3,12 35:1
149:15,16	121:16 127:10	suffocating	35:10,23,25
150:2 162:11	132:8 153:10	17:24	36:3 38:6,22
208:17	153:11	suggest 6:12	38:22 50:7
stevens's 43:19	submission	28:21 77:8	51:1 113:7
43:23 44:10	139:2	118:9	124:16,20,20
stick 14:13	submit 22:4	suggested	125:8 143:4,5
	74:5 137:17	44:16	143:9 194:1

[support - technical]

205:6	surprise 82:2	takeaway	158:12 165:10
supporters	surprised	233:13,17	184:17 185:1
20:8	81:21 82:19,22	234:7,10,13,15	187:12 193:2
supporting	83:20 105:5	234:17	197:13 198:6
52:5 113:18	surprising	taken 103:14	tangent 183:8
supports 33:14	83:19	145:4 182:5,9	tank 188:11
suppose 194:20	surrebuttal	213:17 240:3	220:3 232:19
229:14	8:24	240:12 241:9	232:21 233:3,5
sure 11:21	surrounding	takes 29:11	tankless 229:21
18:12 40:22,23	15:23 107:4	76:19 79:13	232:14 236:10
42:5 48:24	132:8 153:10	89:19 191:6	targe 196:10
51:2 52:12,13	survey 162:3,4	talk 5:18 12:6	target 16:4,4
52:21 53:10	swear 23:11	33:21 38:1,3	20:1 22:12
54:6 55:17,22	150:16 214:20	65:1 69:20	153:14,15
58:20 76:18	switched 55:6	79:7 109:16	163:18 166:8
80:12 84:3	switching 7:15	114:1 132:2	172:6 180:12
86:18 88:1	sworn 14:2	172:10 177:13	192:12 196:12
95:7,10 101:6	240:5	177:18 184:11	197:9
104:16 105:21	system 236:14	213:2 238:5	targeted 9:18
108:13 133:10	systems 235:10	talked 33:3	196:15
138:8 139:9,12	235:20	81:11 83:21	targeting 70:2
146:10,18	t	97:10 118:2	85:15 157:9
160:2,16 177:1	t 3:1,1 150:21	125:10 126:14	158:21 163:15
177:15 183:19	table 35:13	141:14 158:13	199:19
184:9 189:18	36:12,14 171:4	205:2 213:15	targets 18:20
206:17 212:17	tables 34:15	232:16	20:4 21:21,24
228:19 229:18	tag 15:19 17:10	talking 90:2	22:4
230:13 231:17	take 13:24	112:16 113:1	teams 80:9
233:21 235:17	17:19 29:21	116:21 172:4	technical 4:3
236:7	42:22 48:8	176:15 195:17	11:24 15:7
surface 31:24	59:10,13,15	202:19 203:12	18:10 104:5
77:20,21,25	70:19 72:9	230:7	107:14,18
78:17	80:21 91:5	talks 28:9	120:3 133:9,18
surge 229:21	107:7 115:5	tan 115:18	140:19 143:15
230:10	167:10,13,16	157:19 158:3	216:4

[technically - things]

	41:19 129:3 135:10 151:19 estifying 118:1	230:16 238:1 tests 188:6	237:5,19 238:1 238:17 239:8
			<i></i>
		thank 4:2,22	239:11
61:6 66:13	240:5	7:11 13:14	thanks 18:2
71:11 97:20 to	estimony 6:2	18:5,7 22:25	that'd 37:17
98:16 150:17	7:19,20,22	23:1,4,14,17,19	49:6 77:24
154:16 159:17	8:15 9:3,14	26:6,7,8 27:4	130:6
170:15 175:9	10:4,5 11:14	39:10 40:1,4,5	theirs 57:22
175:14 181:10	13:5,12,12,19	40:8 42:10,11	thereto 218:13
186:4 188:7	14:1,4,7,11	47:19 52:20	therewith
189:5 214:20	18:11 21:19	55:25 61:15	217:15
221:1	24:7,14,20	63:24 65:25	thick 205:19
telling 74:22	25:2,10 26:10	88:5,19,20	209:5
ten 28:8 84:14	26:18 27:8	101:7 102:18	thicker 158:11
tend 12:21	28:7 33:13	119:10 120:8,9	thickness 175:2
tender 225:11	37:22 40:7,15	120:13 123:7	175:5,17,18
term 52:16,19	41:9,10,20	129:9 136:14	176:2,5 213:12
83:16,16	42:4,7,18,20	138:15 139:7	thin 159:16
terms 12:22	51:5 56:3	139:11 140:10	174:14,18
35:13 57:6	72:11,14,20,22	140:12,14	176:18 202:20
71:25 72:15	73:8 76:6	146:21 147:5,6	thing 38:11
73:15 138:12	118:6 130:1,4	147:7,9,11	40:10 80:13
138:17 161:5	133:21 134:3	150:6,7,8,11,19	172:4 178:10
176:2 199:14	140:13 151:12	151:2,4 152:13	180:8 184:15
201:19	153:2,9,19	154:15 167:5	191:10,17
testified 23:24	154:11 155:21	167:20 168:9	206:21 213:5,6
66:4 69:22	156:10 158:9	183:6 194:12	230:19
70:7,12 75:20	168:15 171:3	198:13,18	things 14:17
76:3 141:19	172:17 179:12	202:6,9 210:1	29:21 41:18
151:8 198:3	180:5 181:5	210:3,8 214:5	67:2 80:8 81:6
208:20 215:13	184:19 186:9	214:5,7,14,18	83:15 89:20
testifies 26:21	187:7 196:18	215:2,7 217:21	115:8 120:17
197:14,15	197:20,21	218:18 219:2	126:5 138:10
testify 6:25	222:20 226:3	225:12 231:2	168:11 178:5
25:15 27:2	227:3 229:20	232:4,7 237:2	230:12 234:2

[things - time]

227.12	00.10.00.16	41.1.16006	204 20 206 11
237:13	98:18 99:16	third 16:2,3,6	204:20 206:11
think 6:9,20	100:1 102:1	18:18 27:20	206:16 207:5
9:5,12 10:19	103:3 106:1	38:17,25 67:6	209:19 211:15
11:3,4,11 12:2	108:1,11,13,20	70:2,5,6,12	211:21 212:20
12:15,16 13:5	109:4 112:21	93:13 94:4	219:9
14:12,15,17	113:1,14 118:4	97:3 98:10	thompson 2:4
15:18 21:23	119:7 124:13	99:2,3,8,10	4:4 141:2
22:17 26:21	129:19,21	106:17,20	147:2,4 210:4
27:12 28:6,13	132:10 133:8	108:15,21	210:6 237:3,4
28:13 29:1,17	133:20 134:8	109:4 112:7,11	thoroughly
30:7,13,25	137:4,6,7,12	115:12 127:7	93:4 100:14
31:21 32:9,15	138:11,13,17	132:13 145:10	thought 8:1
32:16 33:4,7	140:5 143:12	153:14 154:2	57:17 85:12
34:7 38:5,9	144:1,2 145:18	154:19 155:3,6	89:12,16 141:5
39:12,14,20	146:11 147:19	155:17 156:3,8	141:7 226:7
40:16 41:16,21	148:7,9,10	157:1,21 158:5	thousand's
42:1,1,19	156:1 157:7,18	158:20,21	67:1
51:16 53:2	158:13 159:10	159:14 162:10	thread 141:1
56:1,2,19,21,23	161:19 164:5,8	163:1,14	three 9:6 15:13
57:20,22 58:18	165:2,13 166:3	164:10 165:15	31:25 59:17
58:21 59:19,20	170:21 172:13	166:7 170:16	63:3,12 169:12
59:21 60:24	172:15,17	170:19 174:1,5	169:14 205:12
61:9,10,12	175:11 177:4,5	174:5,9 176:10	thrown 162:8
62:21 65:2	178:6 179:8	176:21 177:2,2	thrust 180:5
69:4,12,16,19	195:9,11 198:9	177:8,18 178:9	tier 79:8 80:2
69:22 71:15,24	202:16 204:3	178:11,13,16	197:1,12
72:7 75:15	205:11,12,15	178:16 180:19	206:11
78:16 80:7,22	207:3,13 209:1	181:14 182:14	tight 154:8
81:4,5,11	209:18,21	183:12,17	156:6 164:15
82:22 83:9,11	211:2,17 213:1	184:4,4 187:20	172:18 173:12
83:14,14,17,20	222:2 227:1	188:9,18,19	time 7:21,23
83:21 85:23	231:21 238:21	189:13,16	8:3,4,22 12:1
88:6 89:9	239:3,6	196:15 197:18	13:21,25 14:7
91:13,19 95:3	thinks 125:10	199:10,15,19	15:14 19:25
95:5,12 96:7	135:9 138:9	200:13 201:3	21:15,25 29:21

[time - true]

	1	1	
40:2 43:17,17	41:10 42:7	total 9:22 15:18	150:20 215:3
43:18 44:24	71:4 88:22	16:17 37:1	241:3,5
51:18 56:2	117:18 141:15	71:12 86:9	transcriptionist
58:6 65:10	194:13 208:20	157:2 169:7,16	240:7
68:1 73:13	210:9 214:1	180:18	transition
74:17 76:19	222:17	totally 188:15	137:10 138:2
85:24 88:9	today's 4:20	touch 47:20	travel 98:20
89:19 118:4,9	toe 77:19	75:17 97:8	traverse 221:21
119:7 120:12	together 8:7,16	touched 75:16	travis 28:14
123:9 126:2	21:24 29:5	208:2 213:21	33:3
130:14 136:1	85:1 117:8	touches 11:8	travis's 57:22
152:3 167:16	told 94:15	tough 32:24	130:1
191:7 198:9	194:9 195:13	towards 15:3	treaters 234:11
213:2,10	tomorrow 6:15	28:19 36:5	trekking
221:14,16	6:15,17 7:8,9	42:7 44:10	234:19
231:11 233:9	11:19 12:3,5	179:15	trend 188:8
timed 88:20	18:13 35:6	township	trends 86:15
timeframe	51:14 139:6	130:19	trespass 99:1
130:20	140:12 145:15	track 50:22,23	99:10
timelines 146:4	146:13 223:19	79:22 80:4	tried 30:23
timely 145:1	238:4,7,9,19	tracking 80:16	32:17 133:18
times 85:3	239:4	83:25	triple 203:19
228:11 234:1	took 129:21	tract 49:20	204:1,10
timing 224:7	171:2,21 172:1	52:8 53:3,21	trouble 147:15
title 10:14	top 65:16 79:8	54:2 86:8	trucking 70:21
35:18 55:20	79:17,21 80:2	tracts 22:14	true 29:14
57:15,20 58:6	157:1,11	47:5 49:17	44:22 67:4
58:11,24 59:23	159:21 178:11	86:8 87:6	75:9 79:1
60:4,4,9,16	179:20,21	trade 30:20	118:16,20
61:19 63:17	180:1,19,20	33:9	119:3 121:19
64:10,22,23	183:16,17	trading 212:3,5	123:11,13
77:25 125:6	204:20	transcriber	127:3 158:14
today 6:17	topic 79:5	241:1	164:16 240:9
11:20,22 12:2	topics 235:13	transcript	241:5
18:4,13 40:24	_	23:15 139:2	

[truly - understand]

		1	T
truly 9:18	15:8 18:19	type 160:1	45:23 51:19
161:6	19:6,9,12	173:2 176:6	56:25 57:3,8
trust 52:14	21:10,11,20	178:2 203:10	60:1,18 67:25
124:15	25:10 26:22	typewriting	68:15 75:10
trustee 52:13	27:25 62:4	240:7	81:24 90:12,16
truth 23:12	63:25 66:25	typically	101:15 109:19
150:17 214:21	68:15,23 69:14	138:20 236:14	109:20 110:18
try 12:25 42:16	69:16,18 72:8	typo 54:11	111:8 112:1,3
76:20 83:15	86:7 87:22	55:10 227:6	113:2 115:15
86:3 99:13	88:4 90:13,14	typos 55:13	116:1 117:2
141:11 176:2	100:4,16	123:12,20	118:1,3,11
204:14 209:14	101:12 108:2,4	u	122:2,8,17
219:18	112:13,19	u 151:1	136:16 137:4,5
trying 27:5	114:1,2 115:15	ultimate	138:2 147:13
29:5,18 30:13	116:1 117:2	127:10 136:6	194:21 196:5
30:25 32:2	130:18,19	ultimately	197:5 212:13
39:7 50:19,23	132:1 137:7,9	127:9	underlying
98:21 134:8	137:11,15	unable 183:13	106:11
145:16 146:12	140:3,4 141:8	209:14	undermined
146:17 157:18	141:13 142:15	uncertain 98:1	37:23
173:16 211:13	144:5,7 154:5	192:8 193:10	understand
212:6 213:19	154:19 155:2,7	uncommitment	8:21 9:2,8 35:9
213:21 226:21	155:11 156:5	123:10	40:13 41:7
227:13	158:17 159:19	uncommitted	42:19 43:4
tune 69:7 126:8	165:6 169:10	48:12 50:4	45:12 51:11
turbulence	170:20 175:12	52:9 53:4,13	53:11 54:6
139:8	176:16 178:5	53:15,17,25	56:9 58:6,21
turn 7:18 72:24	181:16 184:2	54:1,8,19 55:6	58:25 60:15
129:8 136:11	186:1 188:13	56:14 123:19	73:14 74:14
198:10 231:8	194:21 196:6	146:8	76:8 84:10
twenties 59:17	203:7 207:7,11	uncommon	86:15 88:2
100 10		dicominon	90:9,11 96:13
twice 100:19	212:19 213:11	19.22	90.9,11 90.13
164:19	212:19 213:11 216:4,9 218:6	19:22	97:21 98:8,17
		under 9:23	,
164:19	216:4,9 218:6		97:21 98:8,17

[understand - upper]

	I		
107:16 108:4	95:7 103:9	112:11 122:8	230:7
110:10 113:14	106:4 168:11	132:15 134:20	upgraded
113:15 114:2	172:13	161:7 162:9	233:7,10
116:6,20	undertaken	189:14	uphold 38:4
125:20 132:6	85:3	units 15:15	upper 18:18
133:3 134:19	undertaking	19:5 29:10	20:19 21:18
135:16 136:16	84:1	58:7 62:23	83:2 93:10
139:10 155:6	uneconomic	63:7,13 71:19	94:4,6,10,13,17
155:15 158:10	20:13	82:21 90:16	94:21 98:12,14
160:6 163:21	unexpected	91:1 92:7,12	99:1,9 100:20
165:2 168:19	82:3 83:18	104:13 110:2	103:20 105:10
171:16,20	unfortunately	114:8,9 132:7	106:20 108:7
181:4 191:1,3	49:3	132:8 135:3	108:14 109:1,3
199:9 212:2	uniform 62:1,6	156:15 159:6,9	114:17 115:4
225:19 226:18	62:10,16,19	161:8 162:7	115:10,14
understanding	212:8	university	116:1,14,16
54:16 55:1	uniformity	215:19,21	117:1,1 127:8
74:19 80:17	62:24 63:13	unknown 18:16	132:12,17
86:14 96:19	183:10	unnecessary	133:2,5 134:15
97:5,8 102:21	union 54:13,22	16:20 17:12,25	136:21 153:15
106:13,16	55:5	93:14	154:3 155:4,6
131:1 134:13	unique 18:15	unresolved	157:5 163:9,11
135:6 138:6	18:25 19:12	99:20	164:7,9,12
141:10 148:12	21:6 22:13	unusual 15:10	166:13 168:21
148:16 155:12	153:9,11 205:9	219:13	169:5,8,12
172:12 196:17	205:9	update 92:11	170:12 172:6
196:21 197:4	unit 5:2 29:5,9	149:14	174:13 180:17
227:5	29:18,22 34:1	updated 48:9	182:19 184:4
understands	34:9,11 35:2	48:15,18 58:14	192:4,8 195:4
101:2	47:25 48:6	58:24 66:10,18	195:10,18,20
understood	57:11 59:25	67:22,24 71:6	196:1 197:18
17:3 40:11,21	60:6,7,9,17	71:13,17,19	199:17,20
40:23 42:6	62:24 63:4,16	72:5 83:15	200:6 211:15
43:16 52:12,21	63:19 70:17	126:2 146:3,6	211:21 212:20
56:3 86:18	90:5,5 91:16	146:7 168:16	231:15

[upward - we've]

upward 98:20	vance 4:19	visual 91:9	183:7 232:4
132:12	variation 19:14	volume 12:12	wants 17:10
upwards	42:19 55:10	vote 31:15	21:17
208:19	158:16	\mathbf{w}	war 161:21
use 29:12 35:21	varies 24:8	wait 89:21	warren 38:12
57:17 85:24	various 123:10	119:12 191:9	64:5 112:8
106:7 159:19	125:12	walk 12:18	141:15 144:3
159:20 175:8	vary 68:21	48:18	149:8
176:2 204:14	vent 236:13,16	walked 5:11	waste 17:3,8,24
209:2 221:18	venting 234:3	walked 3.11	20:14 106:8
221:19 223:18	verbal 50:8	want 13:7	160:14,19
225:19 226:14	54:25	20:20 40:10	166:21 233:20
231:12,19	verbally 50:12	48:18 51:1	235:13
235:20 238:9	verified 16:3	52:11 53:10	wasteful 98:13
used 36:18	versus 96:9	54:6 55:22	water 70:21
37:10 58:3	159:18 160:4	58:20 75:16,19	181:15 193:20
64:20 118:8	161:12 175:8	76:8 81:19	209:2,5,9
173:19 209:1	176:9,10 177:2	88:1 95:6,10	233:13,17
227:10	180:16 182:15	98:12 105:21	234:17,17
useful 55:12	182:19 200:13	107:19 114:1	way 6:4 8:1
211:3,17	vertical 156:7	115:8 120:5	22:2,4,18
uses 66:10,18	164:15 165:7	122:7 142:19	47:15 90:1
using 35:17,19	204:1 209:17	146:15 171:13	101:20 109:12
160:1,4 222:8	vessels 229:21		127:14,15
223:17	230:10	172:10,11	143:16 166:3
usually 139:3	viable 135:6	177:10,13	182:18 203:16
utilize 219:10	136:7,9,15	191:1,3 210:20	207:18 222:3
v	163:18	212:15	ways 62:4
	view 18:9 20:14	wanted 40:22	we've 12:1 20:2
v 215:5	21:22 22:10	40:23 42:5	29:22 30:10,20
value 182:4	79:7 168:12,18	47:20 52:20	30:23 32:1,17
186:15	195:21	86:17 104:8	33:4 68:20
values 175:2	views 15:8	120:2 129:12	88:4 109:21
181:18,21	virtual 33:10	139:7,9 142:10	116:21 141:14
valves 235:3,5		143:2 145:5	170:2 221:10
		168:10,18	

[we've - wolfcamp]

229:17	127:5,18 128:1	231:18,20	wolfbone
weakness	128:2 129:11	233:6 235:5,6	212:10 213:4,4
204:12	129:11,17	went 10:1,3	wolfcamp
week 8:9 11:7	130:3,13,15,19	31:9,13 78:22	15:16 18:18,22
19:21 32:21	156:2,6,8	118:16,21	19:8,10 20:6
68:6 211:11	157:15 158:10	216:5 233:21	20:11,12,16,19
weekend 32:21	158:12 159:17	west 34:5,5,9,9	20:25 21:3,8
weeks 9:6	159:20 160:4	35:2,2 36:1,2	21:18 22:16,17
13:24	160:12 161:12	38:13,14 57:10	25:9 34:3,4,6,9
wells 15:15,17	161:13 162:8	64:3,3 125:1,1	34:10 35:1,3
16:1,9,10,12,18	162:10,10,14	white 36:3	36:14,15 38:6
16:21,23,23,25	162:15,17	wide 63:16	38:14,25 53:9
17:12 18:1	163:11,14,14	wider 77:21	56:23 61:24
29:2 31:23,25	164:2,3,18,19	209:6	62:7,11,14,25
32:4 66:7 69:3	166:7,13,16,18	william 2:21	63:7,14,25
70:1,8,12	166:20,21	5:22	64:11,15,16,24
76:13 77:19	168:13,17,20	wine 206:3	82:2,20,23
78:15,16,25	169:3,6,10	winner 213:16	83:1,2,8,17,20
79:13 83:1,3,4	170:2,10 171:6	winning 124:20	84:5,16 85:4
83:8 85:17	176:8 183:1	witness 4:8	85:15,17 86:9
90:5,6,21	187:21 188:18	7:25 14:21	86:11 87:8,13
92:13,18 93:8	190:6,12	23:3,23 27:1,2	87:15 89:11
93:13,14,21,21	192:20 195:2,5	66:10 102:4	90:15,21 93:5
94:4,5 95:9	195:7,11,15	133:9 135:15	93:8,9,10,15
97:3,16 98:10	196:8 197:17	147:8 150:10	94:2,4,6,11,13
98:14 99:1	198:6,21	151:8 214:9,12	94:17,18,20,21
100:17 103:18	199:17 200:6	214:17 225:11	96:15,16 97:4
103:18 104:11	200:13,21	237:6 240:4	97:15 98:6,13
104:17 105:2	201:4 203:10	witnesses 4:8	98:14 99:1,5,9
105:11 106:6	206:17 207:2,5	5:16,17,20,25	99:9 100:15,19
107:3,9 113:4	222:10 223:19	6:2,3,14,22	100:20,20
114:3,7,17	224:2,20 225:4	7:16,17 14:2	103:20,20
116:8,13	225:8,20	14:25 18:14	104:11,13
117:18 118:17	226:17 227:2	19:1 41:9,19	105:5,10,10,18
119:1 123:2	227:11 231:16	238:7,20	106:6,15,20

[wolfcamp - yeah]

107:10 108:8	170:10,18	word 42:23	wrap 11:22
108:14 109:1,3	173:4,5 174:9	words 43:22	written 24:6,14
109:14 111:7	174:10,13	181:9 183:21	24:20 25:1,10
111:12,14,16	177:7 178:1	195:3	50:8 90:10
112:3,7,17	180:17 182:15	work 11:25	101:21 138:21
113:9,11,17	182:20 185:11	13:10 29:8,11	151:11 197:21
114:9,14,17	187:18 188:5,7	30:13,17	wrong 51:24
115:4,10,13,14	188:8,18 189:1	103:17 216:6	71:9 191:10
116:2,7,12,14	189:2,8,9,13,16	worked 95:16	226:7
116:15,16	190:10 192:5,8	working 10:21	wrote 100:11
117:1,3,7,18,20	192:21 193:9	11:1 15:24	X
124:17,21	194:10 195:1,4	17:9 29:4,23	x 39:18 157:6
127:8 128:2,8	195:4,8,10,11	30:5,6,10,15	174:9,10 177:8
128:9,16	195:15,18,20	33:22,23 34:12	174:9,10 177:8
129:14,17	196:2,5,10,12	37:2,3 38:20	180:4 183:11
130:3,13,15	197:9,18 199:1	46:20 47:25	183:18 185:11
131:8 132:12	199:5,7,11,15	48:5 49:14	188:19 189:1
132:17 133:2,5	199:17,17,21	56:18 57:5,6	189:13 197:19
134:15 136:21	200:6,7,11,13	57:19 71:18	205:19
137:15 141:16	200:17 201:7	73:16 74:8,15	
143:2,20 144:9	204:21 205:19	74:22 75:5	y
144:10,20	206:3,7,15	76:17 77:24	y 157:6 174:9
145:1,7,11	207:2,5,12,20	83:12 85:6	174:10 177:8
147:19 148:16	208:17 211:13	90:20 92:6	178:6 179:14
148:20 149:5	211:15,21	98:9 103:5	180:4 183:11
150:2 153:15	212:7,21 225:1	110:20 125:19	183:18 185:11
154:4,20 155:4	233:6	126:17 127:15	188:19 189:1
155:7,16 156:3	wolfcamp's	128:9,12	189:13 197:19
156:7 157:2,5	105:17	138:12 148:20	199:5 200:13
157:8,11,12	wonder 140:1	228:15 234:17	205:19 215:5
158:2,11	167:10	234:18	y'all 76:4
159:12,14,15	wondering	works 143:11	y'all's 57:17
162:3 164:10	69:1 88:8	worth 6:9	yeah 7:13 10:8
164:12 165:16	227:4	13:17 32:21,22	23:7,22 26:19
166:13 169:21			27:3,22,24

[yeah - zoro]

28:13 29:17	135:11 136:5	7:18 11:18	171:8,12
30:7 32:15	142:20,20	12:4 13:19	zoro 37:13
33:25 35:16	145:13 146:17	14:14,16 41:11	
38:5 40:18,21	148:6 149:11	41:12,16 42:9	
42:11 44:7,25	149:21 150:1	214:10,11,13	
49:6 51:13	154:14 156:21	214:15,16	
52:3,25 53:14	158:15 161:3	215:6,8,11,16	
54:9 56:6,20	161:10 164:5	216:1,11,17,20	
57:14 58:13	174:12 186:17	217:4,7,10,20	
60:20 61:21	187:3 194:11	217:21 218:4	
64:18 67:3,14	194:19 204:15	218:10 219:3,8	
68:2 69:4,25	204:15 205:7	219:17 220:1,7	
70:4,16 71:2	206:10 210:17	220:19 221:17	
71:15 72:12	214:4 224:4	222:11,15	
73:17 76:14,18	229:18 232:20	223:1,5,9,14	
76:24 79:3,11	235:8	224:1,8 225:5	
80:6,14,20,22	year 16:24	225:10,12	
82:4,12,18	164:4 216:6,8	226:15 231:7,9	
83:9 84:3	years 15:14	232:3,8 237:8	
85:19 87:20	16:3 30:15	237:11,17,20	
88:5,7 89:13	31:21 131:1	239:6,9	
94:9 96:12	216:5,9 235:14	zimsky's 8:21	
97:10,12 100:9	yellow 36:2	41:6	
106:17 107:1	222:2	zone 157:4	
108:11 109:17	yep 49:12	159:21 163:19	
111:18 113:6	53:19 63:2	164:9 168:21	
113:13,19	66:1 67:10	169:5 178:20	
115:20 117:15	75:12 172:2	179:17 197:9	
119:21 121:12	yeso 213:12	211:13	
123:16 125:15	Z	zones 18:19,20	
126:7 127:2,6	zero 174:16	19:12 21:20	
128:18 129:4	203:4 234:13	22:5 62:25	
129:13 131:13	234:13 236:13	66:7 155:2	
132:10,11	zimsky 2:21	156:6 162:18	
133:4,12	5:21,22 7:14	163:5 164:6	
	,		

New Mexico Rules of Civil Procedure for the District Courts Article 5, Rule 1-030

(e) Review by Witness; Changes; Signing.

If requested by the deponent or a party before completion of the deposition, the deponent shall have thirty (30) days after being notified by the officer that the transcript or recording is available in which to review the transcript or recording and, if there are changes in form or substance, to sign a statement reciting such changes and the reasons given by the deponent for making them. The officer shall indicate in the certificate prescribed by Subparagraph (1) of Paragraph F of this rule whether any review was requested and, if so, shall append any changes made by the deponent during the period allowed.

DISCLAIMER: THE FOREGOING CIVIL PROCEDURE RULES

ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

THE ABOVE RULES ARE CURRENT AS OF APRIL 1,

2019. PLEASE REFER TO THE APPLICABLE STATE RULES

OF CIVIL PROCEDURE FOR UP-TO-DATE INFORMATION.

VERITEXT LEGAL SOLUTIONS

COMPANY CERTIFICATE AND DISCLOSURE STATEMENT

Veritext Legal Solutions represents that the

foregoing transcript is a true, correct and complete

transcript of the colloquies, questions and answers

as submitted by the court reporter. Veritext Legal

Solutions further represents that the attached

exhibits, if any, are true, correct and complete

documents as submitted by the court reporter and/or

attorneys in relation to this deposition and that

the documents were processed in accordance with

our litigation support and production standards.

Veritext Legal Solutions is committed to maintaining the confidentiality of client and witness information, in accordance with the regulations promulgated under the Health Insurance Portability and Accountability Act (HIPAA), as amended with respect to protected health information and the Gramm-Leach-Bliley Act, as amended, with respect to Personally Identifiable Information (PII). Physical transcripts and exhibits are managed under strict facility and personnel access controls. Electronic files of documents are stored

in encrypted form and are transmitted in an encrypted fashion to authenticated parties who are permitted to access the material. Our data is hosted in a Tier 4 SSAE 16 certified facility.

Veritext Legal Solutions complies with all federal and State regulations with respect to the provision of court reporting services, and maintains its neutrality and independence regardless of relationship or the financial outcome of any litigation. Veritext requires adherence to the foregoing professional and ethical standards from all of its subcontractors in their independent contractor agreements.

Inquiries about Veritext Legal Solutions'
confidentiality and security policies and practices
should be directed to Veritext's Client Services
Associates indicated on the cover of this document or at www.veritext.com.