STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

APPLICATIONS OF CIMAREX ENERGY CO. FOR COMPULSORY POOLING, LEA COUNTY, NEW MEXICO

Case Nos. 23594, 23595, 23596, 23597, 23598, 23599, 23600 & 23601

PREHEARING STATEMENT

Cimarex Energy Co., ("Cimarex"), OGRID No. 215099, through its undersigned attorneys, submits the following Prehearing Statement pursuant to the rules of the Oil Conservation Division ("Division") for the above referenced Cases which are consolidated with the Case Nos. 23452-23455, and 23508 – 23523 for a contested hearing pursuant to that certain "Further Amended Pre-Hearing Order" issued on June 8, 2023. This Prehearing Statement describes the status of Cimarex's Case Nos. 23594 - 23601, which were originally filed in response to Read & Stevens, Inc., in association with Permian Resources Operating, LLC (collectively referred to herein as "Permian Resources") proposing to pool the Wolfcamp formation underlying Sections 5 and 8, and Sections 4 and 9, in Township 20 South, Range 34 East, NMPM, Lea County ("Subject Lands") in Case Nos. 23512-23515 and 23520 – 23523.

APPEARANCES

APPLICANT

Cimarex Energy Co.

ATTORNEY

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COMPETING PARTY

Read & Stevens, Inc., in association with Permian Resources Operating, LLC	Michael H. Feldewert Adam G. Rankin Julia Broggi Paula M. Vance Holland & Hart LLP Post Office Box 2208 Santa Fe, NM 87504 505-988-4421 Facsimile: 505-983-6043 mfeldewert@hollandhart.com agrankin@hollandhart.com jbroggi@hollandhart.com
ADDITIONAL PARTIES	
Sandstone Properties, LLC	Sealy Cavin, Jr. Scott S. Morgan Brandon D. Hajny P.O. Box 1216 Albuquerque, NM 87103 505-243-5400 scavin@cilawnm.com smorgan@cilawnm.com bhajny@cilawnm.com
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Northern Oil and Gas, Inc.

APPLICANT'S STATEMENT OF THE CASES

Cimarex provides this Prehearing Statement to inform the Division of the current status of Case Nos. 23594, 23595, 23596 and 23597, 23598, 23599, 23600 & 23601. A little more than a month after Cimarex filed its applications to develop and pool the Bone Spring formation in the Subject Lands, Permian Resources not only filed applications for the Bone Spring but also filed applications for drilling and pooling the Wolfcamp formation in the Subject Lands in Case Nos. 23512-23515 and 23520 – 23523, and proposed to drill wells in the Upper Wolfcamp of the Subject Lands despite the fact that, based on the geological and reservoir data, those wells would drain the 3rd Bone Spring Sand and would likely result in permanent damage to the target reservoir located in the Bone Spring where the target reservoir is located.

Permian Resources' decision to propose to develop the Upper Wolfcamp created a dilemma for Cimarex. On the one hand, Cimarex understood, based on clear geological and reservoir data, that the Upper Wolfcamp should not be developed in the Subject Lands but, on the other hand, Cimarex understood that once Permian Resources filed its application to pool the Upper Wolfcamp, Cimarex needed to provide a counter proposal that would oppose Permian Resources' Upper Wolfcamp applications.

Consequently, Cimarex drafted competing pooling applications for the Wolfcamp in which it explained that the best way to develop the target reservoir is by drilling wells in the 3rd Bone Springs Sands, the same wells proposed by Cimarex's Bone Spring applications and prohibit the drilling of wells in Upper Wolfcamp to prevent drainage from and damage to the target reservoir. Cimarex filed its Wolfcamp applications in Case Nos. 23594 – 23601, in which it dedicated the Wolfcamp units exclusively to wells drilled in the 3rd Bone Spring Sands, and not in the Upper Wolfcamp, in order preserve the Upper Wolfcamp from being drilled and thereby protect the 3rd Bone Spring Sand from drainage and damage. Cimarex has further evaluated its applications in Case Nos. 23594 – 23601 as a response to the applications filed by Permian Resources in Case Nos. 23512 – 23515 and 23520 – 23523, and Cimarex has determined that the best way to develop the Subject Lands and both protect the primary reservoir of said Lands while optimizing production is to request that the Division establish a protective zone covering the Upper Wolfcamp in order to protect correlative rights and prevent waste.

As a result, Cimarex has filed a Motion for an Order to Prohibit the Drilling of Wells in the Upper Wolfcamp in Order to Protect Correlative Rights and Optimize Production of the Subject Lands ("Motion"), attached hereto as Exhibit 1, in which it has asked the Division to consider and rule on the Motion as part of the Division's ruling in the contested hearing. Should the Division decide that Cimarex has the better development plan, then the Upper Wolfcamp would not be drilled.

APPLICANT'S PROPOSED EVIDENCE AND WITNESS QUALIFICATIONS

WITNESS

ESTIMATED TIME

EXHIBITS

Landman: John Coffman Approx. 5 min Approx. 1 Qualifications: I graduated in 2018 from Texas Tech University with a bachelor's degree in Business Administration with an emphasis on Energy Commerce. I have worked at Cimarex for approximately 4 years, and I have been working in New Mexico for 4 years. My credentials as an expert witness in petroleum land matters have been accepted by the Division and made a matter of record.

Geologist: Staci Meuller Approx. min Approx. 21 Qualifications: I have a Bachelor of Science Degree in Geophysical Engineering from Colorado School of Mines, and a Master of Science Degree in Geophysics from Colorado School of Mines. I have worked on New Mexico Oil and Gas matters since July 2018. My credentials as an expert witness in geology have been accepted by the Division and made a matter of record.

Reservoir Engineer: Eddie Behm Approx. 45 minutes Approx. 17 Qualifications: I attended the University of Tulsa and graduated with a bachelor's in petroleum engineering in 2011. I have worked for Occidental, California Resources prior to working for Cimarex and have been employed as a Production and Reservoir engineer for Cimarex for the last 6 years, working in the Delaware Basin with a primary focus on Lea County, New Mexico. I have previously testified before the Division as an expert reservoir engineer, and my credentials have been accepted of record.

Facilities Engineer: Calvin Boyle Available for questions (15 min) Approx. 1 Qualifications: I attended the University of Oklahoma and graduated with a bachelor's in petroleum engineering in 2016 followed by Oklahoma State University where I graduated with a Master of Business Administration in 2018. I worked for Halliburton prior to working for Cimarex Energy Co. ("Cimarex") and have been employed as a Field, Production, and Facilities engineer for Cimarex for the last 4 years, working in the Delaware Basin with a primary focus on Lea County, New Mexico. I am familiar with the subject applications filed in the above-referenced Cases and the engineering involved. I have not testified previously before the Division and am providing a one-page resume.

LIST OF MATERIAL FACTS NOT IN DISPUTE

Parties are in general agreement that the Bone Spring formation underlying the Subject Lands would be productive if drilled and developed and should be developed; however, there is disagreement about whether the Upper Wolfcamp should be drilled and developed simultaneously with the Bone Spring.

LIST OF DISPUTED FACTS AND ISSUES

The central issue in Cimarex's Case Nos. 23594 - 23601 and Permian Resources' competing Case Nos. 23512 – 23515 and 23520 - 23523 is whether the Upper Wolfcamp should be drilled and developed (Cimarex asserts that the drilling of the Upper Wolfcamp would result in waste and harm to correlative rights and to the target reservoir, and therefore the Upper Wolfcamp should not be drilled; while Permian Resources proposes to drill the Upper Wolfcamp). As an alternative to drilling the Upper Wolfcamp, Cimarex has filed a Motion to establish a protective buffer zone in the Upper Wolfcamp to prevent it from being drilled.

PROCEDURAL MATTERS

For Cimarex's Case Nos. 23594 – 23601 and Permian Resources' Case Nos. 23512 – 23515 and 23520 – 23523, Cimarex requests that the Division review and consider the Motion (attached hereto as Exhibit 1) that Cimarex has filed concerning the Wolfcamp formation and how best to

develop the Subject Lands.

Respectfully submitted,

ABADIE & SCHILL, PC

/s/ Darin C. Savage

Darin C. Savage

Andrew D. Schill William E. Zimsky 214 McKenzie Street Santa Fe, New Mexico 87501 Telephone: 970.385.4401 Facsimile: 970.385.4901 darin@abadieschill.com andrew@abadieschill.com

Attorneys for Cimarex Energy Co.

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was filed with the New Mexico

Oil Conservation Division and was served on counsel of record via electronic mail on July 13,

2023:

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Attorneys for Sandstone Properties, LLC

/s/ Darin C. Savage

Darin C. Savage

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

APPLICATIONS OF CIMAREX ENERGY CO. FOR A HORIZONAL SPACING UNIT AND COMPULSORY POOLING, LEA COUNTY, NEW MEXICO

Case Nos. 23448 – 23455

APPLICATIONS OF CIMAREX ENERGY CO. FOR COMPULSORY POOLING, LEA COUNTY, NEW MEXICO

Case Nos. 23594 - 23601

APPLICATIONS OF READ & STEVENS, INC. FOR COMPULSORY POOLING, LEA COUNTY, NEW MEXICO

Case Nos. 23508 – 23523

MOTION FOR AN ORDER TO PROHIBIT THE DRILLING OF WELLS IN THE UPPER WOLFCAMP IN ORDER TO PROTECT CORRELATIVE RIGHTS AND OPTIMIZE PRODUCTION OF THE SUBJECT LANDS

Cimarex Energy Co., ("Cimarex"), through its undersigned attorneys, respectfully requests that the New Mexico Oil Conservation Division ("Division") issue an order prohibiting the drilling of horizontal wells in the Upper Wolfcamp in Sections 4, 5, 8 and 9, Township 20 South, Range 34 East, NMPM, Lea County ("Subject Lands") to protect correlative rights and optimize production of the Subject Lands. In support of its Motion, Cimarex submits the following:

I. Factual and procedural background

1. Cimarex has been preparing to develop Subject Lands since 2018. Based on its detailed analysis of the specific geology and reservoir characteristics of this area, on March 9, 2023, Cimarex filed applications in Case Nos. 23448 through 23455 for the compulsory pooling



of the Bone Spring formation underlying the Subject Lands, proposing the Mighty Pheasant Wells for units in Sections 5 and 8, and proposing the Loosey Goosey Wells for units in Sections 4 and 9.

2. As a result of its evaluation of the Subject Lands, as well as the surrounding area, Cimarex found that not only were the best reserves of oil and gas residing in the 3rd Bone Spring Sand but also that the Upper Wolfcamp reservoir under the Subject Lands and surrounding area was significantly below average in quality and potential, rendering Wolfcamp wells economically unfeasible. *See* Exhibit 1, attached hereto, showing that the consensus landing for optimal development is the 3rd Bone Spring Sands, not the Upper Wolfcamp.

3. Cimarex has also determined that there are no indications of any major geomechanical changes/frac baffles in between Cimarex's 3rd Sand target and Permian Resources' Wolfcamp Sands target, indicating that these two intervals are most likely one shared reservoir tank. Due to the absence of the baffle between the 3rd Bone Spring Sand and the Upper Wolfcamp, Cimarex has concluded that if Upper Wolfcamp wells were to be completed while drilling and developing the 3rd Bone Spring Sand, those wells would drain much of the reserves in the 3rd Bone Spring Sand, where the best reserves are located, and would likely result in permanent damage to the target reservoir in the 3rd Bone Spring Sand.

4. Thus, Cimarex limited its proposed development and applications for compulsory pooling to the Bone Spring and did not seek to pool the Upper Wolfcamp. Cimarex's analysis of the Subject Lands comports to how other operators are developing the surrounding areas that share the same three fundamental characteristics, *viz.*, excellent reserves in the 3rd Bone Spring Sand, poor quality reservoir in the Upper Wolfcamp, and the lack of a baffle between the two. *See* Exhibit 2, attached hereto, showing the overwhelming predominance of Bone Spring development

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and the dearth and rarity of the Wolfcamp development.

5. A little more than a month after Cimarex filed is applications to develop and pool the Bone Spring Formation, Read & Stevens, Inc., in association with Permian Resources Operating, LLC (collectively referred to as "Permian Resources"), filed competing applications to pool the Bone Spring formation of the Subject Lands in Case Nos. 23508-23511 and 23516-23519. Permian Resources also filed applications for drilling and pooling the Wolfcamp formation in Case Nos. 23512-23515 and 23520-23523, proposing to drill eight wells in the Upper Wolfcamp despite the fact that those wells would drain the 3rd Bone Spring Sand and would likely result in permanent damage to the target reservoir located in the Bone Spring where the best reservoirs are located.

6. Given the poor quality of the Upper Wolfcamp reservoir, the lack of the baffle that would otherwise minimize drainage of the 3rd Bone Spring, the fact that additional Upper Wolfcamp wells will not increase EUR, and the recent history of developing the lands in the area that account for these facts, Permian Resources' decision to seek to develop the Upper Wolfcamp Formation is baffling. The geological data demonstrates that expending tens of millions of dollars¹ drilling unnecessary wells in the Upper Wolfcamp that will not increase EUR, but instead would place a substantial financial burden on Working Interest owners, incur environmental risks of drilling additional and unnecessary wells, undermine overall production, and likely result in permanent damage to the target reservoir, creating waste of oil and gas that would be forever lost through the misguided development of the Upper Wolfcamp. See Exhibit 4

7. Permian Resources' decision to propose to develop the Upper Wolfcamp created a dilemma for Cimarex. On the one hand, based on clear geological and reservoir data, Cimarex

¹ Permian Resources is proposing to drill eight Upper Wolfcamp wells on the Subject Lands at a total estimated cost of \$95,022,896. *See*: Permian Well Proposals, a copy of which are attached hereto as Exhibit 3.

knew, that the Upper Wolfcamp should not be developed on the Subject Lands but, on the other hand, Cimarex understood that once Permian Resources filed its application to pool the Upper Wolfcamp, Cimarex needed to provide a counter proposal that would oppose Permian Resources' Upper Wolfcamp applications.

8. Consequently, Cimarex drafted competing pooling applications for the Upper Wolfcamp in which it explained that the best way to develop the target reservoir is by drilling wells in the 3^{rd} Bone Springs Sands, the same wells proposed by Cimarex's Bone Spring applications and prohibit the drilling of wells in Upper Wolfcamp to prevent drainage from and damage to the target reservoir. Cimarex filed its Wolfcamp applications on June 5, 2023, in Case Nos. 23594 – 23601, in which it dedicated the Wolfcamp units exclusively to wells drilled in the 3^{rd} Bone Spring Sands, and not in the Upper Wolfcamp, in order preserve the Upper Wolfcamp from being drilled and thereby protect the 3^{rd} Bone Spring Sand from drainage and damage.

II. Argument

A. The optimal development of the Subject Lands is to drill wells in the 3rd Bone Spring Sand and create a protective buffer zone that would prohibit the drilling of wells in the Upper Wolfcamp.

9. In order to protect the abundant reserves in the 3rd Bone Spring Sand and avoid the inherent damage that Permian Resources' proposed Upper Wolfcamp wells would inflict on the reservoir, the Division should create a buffer zone that prohibits development of the subpar Upper Wolfcamp. The history and practice of achieving optimal development in the area surrounding the Subject Lands has repeatedly been demonstrated over the years by the fact the operators who were free to drill in both the Bone Spring and Wolfcamp decided to develop the 3rd Bone Spring Sands and to forego drilling any Upper Wolfcamp wells. *See* Exhibits 1 and 2, attached hereto.

10. Cimarex filed its Wolfcamp applications only as a response to Permian Resources'

unexpected and imprudent Wolfcamp applications as a means to prevent Permian Resources from making the mistake of drilling the costly, wasteful, and unnecessary Upper Wolfcamp wells. In its competing Wolfcamp applications, Cimarex emphasized that only the 3rd Bone Spring Sands should be drilled and not the Upper Wolfcamp, consistently advocating that the Division should not allow the drilling of Upper Wolfcamp wells on the Subject Lands.

11. Cimarex recognizes that filing its competing applications for pooling the Upper Wolfcamp based on wells drilled in 3rd Bone Spring Sand may not be the best way to protect correlative rights and counter Permian Resources' plan for the Upper Wolfcamp. Cimarex submits that the best course of action for the Division to follow, in order to ensure achieving optimal production from the rich reserves located in the 3rd Bone Spring Sand and to protect correlative rights, would be to allow the drilling of the 3rd Bone Spring Sand wells, as proposed by Cimarex, and to establish a vertical protective zone that would preclude the drilling of wells in the subpar Upper Wolfcamp. Such a protective zone would prevent drainage of the 3rd Bone Spring, thus protecting the correlative rights of the owners in the 3rd Bone Spring. In addition, the protective zone would spare the working interest owners approximately \$95 Million for wells that not only fail to increase the EUR but would also likely damage the reservoir. Cimarex has carefully analyzed the need for such a protective buffer zone and provides in Exhibit 5, attached hereto, a graphic depiction and quantification of the area and extent of the Upper Wolfcamp that needs to be protected.

12. The Division has the clear authority to fashion such a necessary solution and establish a protective zone under NMSA 1978 Section 70-2-11, which grants the Division authority "to do whatever may be reasonably necessary" to protect correlative rights, prevent waste, and prevent the drilling of unnecessary wells. The wells proposed to be drilled by Permian

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Resources in the Upper Wolfcamp are clearly unnecessary, wasteful, and unwarranted based on the geological and reservoir data.

13. When Cimarex drafted its competing application to pool the Wolfcamp formation as a counter to Permian Resources' Wolfcamp application, it did so with the intent of dedicating the Wolfcamp unit to a well drilled in the 3rd Bone Spring in order to prevent the Upper Wolfcamp from being drilled and establishing the Upper Wolfcamp as a buffer zone. Cimarex submits this Motion with the same intent - to prohibit the drilling of wells in the Upper Wolfcamp by creating a protective buffer zone that would prevent drainage of the target reservoir, protect correlative rights, prevent waste, avoid the drilling of unnecessary wells, and protect the target reservoir from harm and damage. Thus, Cimarex by this Motion respectfully requests that its competing applications in Case Nos. 23594, 23595, 23596, 23597, 23598, 23599, 23600, and 23601 to pool the Wolfcamp formation be dismissed; that the Division establish a protective buffer zone that prohibits the drilling of wells in the Upper Wolfcamp; and that the Division require any operator who wants develop the Lower Wolfcamp, below the proposed buffer zone, to file a separate pooling application that specifically targets the Lower Wolfcamp.

III. Conclusion:

Cimarex respectfully requests that the Division consider this Motion as part of the contested hearing for the above-referenced cases during which Cimarex and Permian Resources will be presenting their respective plans for the development of the Subject Lands. Permian Resources' development plans consist of drilling both the Bone Spring and Upper Wolfcamp formations; whereas, Cimarex's development plans consist of drilling only the Bone Spring formation to achieve optimal production of the Subject Lands that protects correlative rights and avoids waste.

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If the Division finds Cimarex's production data and analysis of the geology and target reservoir to be accurate and persuasive, and as a result, decides to grant Cimarex operatorship of the Subject Lands by approving its applications for the Bone Spring, then concurrently with the Division's decision, Cimarex respectfully asks the Division to grant this Motion by enacting the following: (1) Dismiss Cimarex's applications for the Wolfcamp in Case Nos. 23594, 23595, 23596, 23597, 23598, 23599, 23600, and 23601, and as an alternative to pooling the Wolfcamp, pool only the Bone Spring formation underlying the units proposed by Cimarex in Case Nos. 23448 – 234455; (2) establish a protective buffer zone covering the Upper Wolfcamp below the base of the Bone Spring that would prohibit the drilling of wells in the Upper Wolfcamp in order to protect the correlative rights of the owners, prevent waste and optimize production from the Subject Lands; and (3) deny the applications filed by Permian Resources that propose to pool the Wolfcamp formation for the purpose of drilling the Upper Wolfcamp and require any operator wanting to develop the Lower Wolcamp, below the protective zone, to file separate applications that actually target the Lower Wolfcamp, and not the Upper Wolfcamp.

Respectfully submitted,

ABADIE& SCHILL, PC

/s/Darin C. Savage

Darin C. Savage

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was filed with the New Mexico

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Attorneys for Sandstone Properties, LLC

/s/Darin C. Savage

Darin C. Savage

Well Count by Landing and Operators Shows 3rd Sand is the Consensus Landing

 3rd Sand / single bench landing supported by 236 wells, 97%.

Released to Imaging: 7/13/2023 4:59:58 PM

- 13 of 22 WCMP were drilled instead of 3rd SS
- 5 of 22 WCMP drilled as a separate bench
- 3 WCMP stack tests with 3rd Sand

single bench oported by 97%. 45 CMP were ead of 3 rd SS MP drilled te bench ack tests nd 5 0	2010	2011	2012	2013	2014	2015	2016	222			S:	2021	2022	2023	2015	W		1 P: ells	2019	2020
APACHE CORP							3r	dSS	6								Wolt	ca mp		5
CAZA OPERATING LLC					1		1	1	1	1		2								
CIMAREX ENERGY CO	2	7	2	8	7	1		1	3	3				1				1		
COG OPERATING LLC		1	7	9	14	16	5	1	2								1	1	8	
EARTHSTONE OPERATING LLC					3		1	1										1		
■ EOG RESOURCES INC					1		1			4						1				
FASKEN OIL & RANCH LTD			1	1	2	4														
FRANKLIN MOUNTAIN ENERGY 3 LLC			2	11	5	1				2			2							
LEGACY RESERVES OPERATING LP		1	1	2	1	5	1	4	2	1									1	
MARATHON OIL PERMIAN LLC					1	1									1					
MATA DOR PRODUCTION CO			2			1	4	2	2	3							1		1	
MEWBOURNE OIL CO					5	4					1	2	4	2						
RAYBAW OPERATING LLC				1														F	хнівіт	
READ & STEVENS INC						2			2				1						-	
XTO ENERGY INC				1		7			7										1	

3rd Bone Spring Sand Producers Wolfcamp Producers 18S 34E 18S 33E 8S 34E 18S 33E 18S 35E 18S 35E 19¹5 34E 19S 33E 19S 33E 9\$ 34E 19S 35E 19S 35E Contested area Contested area 20S 33E 20S 33E 20S 34E 20S 35E 20S 35E Black and Tan Black and Tan Permian analog Permia **EXHIBIT** Legend **Cimarex Operated Wells**

3rd Bone Spring Sand is the Established Single Bench Target at 4 WPS within AOI

42,650 acres developed with more than 1 well, all but one development, 98.5% of sections similar to Cimarex proposal

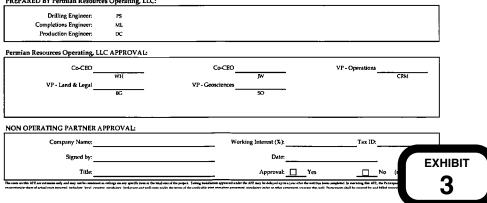
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Permian Resources Operating, LLC 300 N. Marienfeld St., Ste. 3000 Midland, TX 79701 Phone (432) 695-4222 • Fax (432) 695-4063

DATE:	2.17.2023		RIZATION FOR EXPEND	AFE NO .:	1
	Bane 4-9 Federal Com 201	<u></u>		FIELD:	Tonto; Wolfcamp
		<u></u>		MD/TVD:	21,210' / 10,925'
	Section 4, T20S-R34E				10.000'
COUNTY/STATE:	Lea County, New Mexico			LATERAL LENGTH:	
'ermian Wl:				DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY			COMPLETION DAYS:	19
	Drill a horizontal WCXY v	vell and complete wi	h 44 stages. AFE include	drilling, completions,	flowback and Initial
REMARKS:	AL install cost				
	·				
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBLE C	OSTS	COSTS	COSTS	COSTS	COSTS
Land/Legal/Regulatory	5	59,066		37,500	5 96,5
t Location, Surveys & Damage		288,079	18,067	2,500	308,6
Freight/Transportation		47,628	43,778	25,000	116,4
Rental • Surface Equipment		124,327	215,417	105.000	444,2
i Rental - Downhole Equipme	nt –	205,424	59,805		265,2
Rental - Living Quarters	_	48,083	54,480	-	102,5
0 Directional Drilling, Surve	rs _	429,543	. <u> </u>		429,
1 Drilling	-	753,820	·	<u> </u>	753,
2 Drill Bits	-	100,176	725,061	<u> </u>	100,
13 Fuel & Power	_	243,296	725,061	·	243,2
14 Cementing & Float Equip		243,290	<u> </u>	15,000	15,0
15 Completion Unit, Swab, Cl		<u> </u>	393,136	15,000	393,
16 Perforating, Wireline, Slick		<u> </u>	123,274		123,
17 High Pressure Pump Truck 18 Completion Unit, Swab, Cl			146,484		146,
20 Mud Circulation System		105,209	140,404	<u>_</u>	105,
21 Mud Logging	-	17,529	<u> </u>		105,
22 Logging / Formation Evaluation	-	7,270	8,339	<u> </u>	15,0
23 Mud & Chemicals	-	361,835	438,185	10,000	810,0
24 Waler	-	43,459	661,625	300,000	1,005,0
5 Stimulation	-		814,033	-	814,0
26 Stimulation Flowback & D	isn –		121,606	150,000	271,
28 Mud/Wastewater Disposa		193,104	61,151		254,
30 Rig Supervision / Engineer		121,196	133,420	21,667	276,
32 Drig & Completion Overhe		10,423			10,
35 Labor	-	153,358	69,489	101,667	324,
54 Proppant	-	-	1,255,227		1,255,
95 Insurance	-	14,660	-	-	14,0
97 Contingency	-	-	24,421	3,833	28,
99 Plugging & Abandonment	-	•	•	•	
	TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,655
			601 (DI 177101)		
		DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
TANGIBLE CO	ST5		0515	0515	
50 Surface Casing	5_	122,234	<u> </u>	<u> </u>	\$ <u>122,</u> 344,
61 Intermediate Casing	-	344,284	<u> </u>	<u> </u>	
62 Drilling Liner	-	687,039			- 687,
63 Production Casing 64 Production Liner	-	007,039	<u> </u>	<u> </u>	
	-	<u> </u>		140,000	140,
65 Tubing 66 Wellhead	-	64,820		40,000	104,
67 Packers, Liner Hangers	-	14,732	<u>.</u>	20,000	34,
68 Tanks	-		<u> </u>	45,833	45,
69 Production Vessels	-		<u> </u>	126,667	126,
70 Flow Lines	-			66,667	
71 Rod string	-	<u> </u>			
72 Artificial Lift Equipment	-		<u> </u>	90.000	90.
73 Compressor	-			5,833	
74 Installation Costs	-	<u> </u>	<u> </u>		
75 Surface Pumps	-	<u> </u>	<u> </u>	61,667	61,
76 Downhole Pumps	-		·		
77 Measurement & Meter Inst	allation -			116,667	116,
78 Gas Conditioning / Dehyd					
79 Interconnecting Facility Pi	oing -	-		20,000	
80 Gathering / Bulk Lines	-			-	
81 Valves, Dumps, Controller				108,333	108,
82 Tank / Facility Containmen		-	· ·	43,333	43,
83 Flare Stack	-	· · ·		16,667	16,
84 Electrical / Grounding	-	•	-	50,000	50,
85 Communications / SCADA	-	-		36,667	36,
86 Instrumentation / Safety				833	
	TOTAL TANGIBLES >	1,233,109	0	989,167	2,222



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Permian Resources Operating, LLC 300 N. Marienfeld St., Stc. 1000 Midland, TX 79701 Phone (432) 695-4222 • Fax (432) 695-4063

DATE: 2	17.2023			AFE NO.:	1
	ane 4-9 Federal Com 202	<u>н </u>		FIELD;	Tonto; Wolfcamp
		<u>n</u>		MD/TVD:	21,210' / 10,925'
	ection 4, T20S-R34E				
OUNTY/STATE:	ea County, New Mexico			LATERAL LENGTH:	10,000'
ermian WI:				DRILLING DAYS:	19.6
EOLOGIC TARGET: V	ICXY			COMPLETION DAYS:	19
	rill a horizontal WCXY v L install cost	vell and complete wi	th 44 stages. AFE include	s drilling, completions,	flowback and Initial
					-
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBLE CO	STS	COSTS	COSTS	COSTS	COSTS
Land/Legal/Regulatory	5	59,066	-	37,500	5 %,
Location, Surveys & Damages	-	288,079	18,067	2,500	308,0
Freight / Transportation	-	47,628	43,778	25,000	116,4
Rental - Surface Equipment	-	124,327	215,417	105,000	444,:
Rental - Downhole Equipmen	۰	205,424	59,805	-	265,2
Rental - Living Quarters	_	48,083	54,480	· · ·	102.3
0 Directional Drilling, Surveys	_	429,543			429,
1 Drilling	-	753,820	·	· · ·	753,
2 Drill Bits	-	100,176	725,061	<u> </u>	100, 913.0
3 Fuel & Power	-	188,935	725,061	<u> </u>	243,
4 Cementing & Float Equip 5 Completion Unit Sweb CTI	-	243,296	<u> </u>	15,000	243,
5 Completion Unit, Swab, CTU 6 Perforating, Wireline, Silckli	,	<u> </u>	393,136	13,000	
o renorating, wireline, Silcku 7 High Pressure Pump Truck	-	<u> </u>	123,274	<u>-</u>	123,
8 Completion Unit, Swab, CTI	- I	<u>.</u>	146,484		146,4
0 Mud Circulation System	,	105,209		<u> </u>	105,
21 Mud Logging	-	17,529			
22 Logging / Formation Evaluat	-	7,270	8,339	· · ·	15,
23 Mud & Chemicals	-	361,835	438,185	10,000	810,
4 Water	-	43,459	661,625	300,000	1,005,0
25 Stimulation	-		814,033		814,
6 Stimulation Flowback & Dis	- -		121,606	150,000	271,
28 Mud/Wastewater Disposal	-	193,104	61,151	·	254.
30 Rig Supervision / EngineerIr	- s	121,196	133,420	21,667	276,
2 Drig & Completion Overhea	d –	10,423	· ·	•	10,
35 Labor	-	153,358	69,489	101,667	324,
54 Proppant		-	1,255,227	-	1,255,
95 Insurance		14,660	<u> </u>		14,
97 Contingency	_	-	24,421	3,833	28,
99 Plugging & Abandonment	-	·	<u>.</u>		
	TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,655
		DRILLING	COMPLETION	PRODUCTION	TOTAL
TANGIBLE COS		COSTS	COSTS	COSTS	COSTS
50 Surface Casing	13 6	122.234			S 122.
51 Intermediate Casing	-	344,284	<u> </u>	<u> </u>	
52 Drilling Liner	-				
3 Production Casing	-	687.039	· · · ·		- 687,
64 Production Liner	-				
5 Tubing	-		<u> </u>	140,000	140,
56 Wellhead	-	64,820		40,000	104,
57 Packers, Liner Hangers	-	14,732	· · ·	20,000	34,
58 Tanks	-		· · · ·	45,833	45,
9 Production Vessels	-			126,667	126,
70 Flow Lines	-	•	-	66,667	66,
71 Rod string	-	-	•	-	
72 Artificial Lift Equipment	-	· ·		90,000	90,
73 Compressor	-			5,833	5,
74 Installation Costs	•			<u> </u>	
75 Surface Pumps		-		61,667	61,
% Downhole Pumps		<u> </u>			
77 Measurement & Meter Insta				116,667	116,
78 Gas Conditioning / Dehydra		-	· · ·	-	
79 Interconnecting Facility Pipi	ng -		<u> </u>	20,000	20,
0 Gathering / Bulk Lines		•	· · · ·	100 305	
81 Valves, Dumps, Controllers	-	<u> </u>	<u> </u>	108,333	108,
82 Tank / Facility Containment	-		<u> </u>	43,333	43,
3 Flare Stack	-	<u> </u>	<u> </u>	50,000	
84 Electrical/Grounding 85 Communications/SCADA	-	<u> </u>	<u> </u>	36,667	36,
	-	<u> </u>	<u> </u>	36,66/	
86 Instrumentation / Safety	TOTAL TANGIBLES >	1,233,109	<u> </u>	989,167	2.222
_	TOTAL COSTS>	4,749,528	5,367,000	1,761,334	11,877

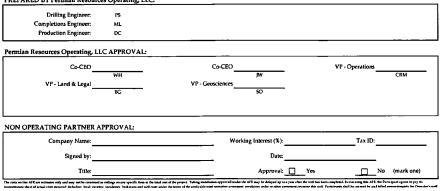
Drilling Engineer:	195			
Completions Engineer.	ML			
Production Engineer.	DC			
mian Resources Operating, LL	.C APPROVAL:			
Co-CEO		Co-CEO	VP - Operations	
	WH	Jw	CRM	
VP - Land & Legal		VP - Geosciences		
	BC	so		
N OPERATING PARTNER A	.PPROVAL:			
Company Name:		Working Interest (%):	Tax ID:	
Signed by:		Date:		

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Permian Resources Operating, LLC 300 N. Marienfeld St., 5te. 1000 Midland, TX 79701 Phone (432) 695-4222 • Fax (432) 695-4063

DATE	2.17.2023			AFE NO.:	1
WELL NAME:	Bane 4-9 Federal Com 203	H		FIELD:	Tonto; Wolfcamp
LOCATION:	Section 4, T205-R34E	···		MD/TVD:	21,210' / 10,925'
				LATERAL LENGTH:	10,000'
COUNTY/STATE:	Lea County, New Mexico			_	
Permian WI:				DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY			COMPLETION DAYS:	19
	Drill a horizontal WCXY w	vell and complete wi	th 44 stages. AFE include	s drilling, completions,	flowback and Initia
REMARKS:	AL install cost				
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBL		COSTS	COSTS	COST5	COSTS
Land/Legal/Regulatory		59,066	<u> </u>	37,500	S 96,
Location, Surveys & Dam	lages	288,079	18,067	2,500	308,0
Freight/Transportation		47,628	43,778 215,417	105,000	444,
i Rental - Surface Equipme 5 Rental - Downhole Equip	ent –	205,424	59,805	105,000	265,
7 Rental - Living Quarters		48,083	54,480	<u>.</u>	102
to Directional Drilling, Su	nvevs —	429,543	-		429,
1) Deilling	-	753,820		<u> </u>	753,
2 Drill Bits	-	100,176		<u> </u>	100,
13 Fuel & Power	-	188,935	725,061	•	913,
14 Cementing & Float Equi		243,296	-		243,
15 Completion Unit, Swab,			<u>.</u>	15,000	15,
16 Perforating, Wireline, S		<u> </u>	393,136	·	393,
17 High Pressure Pamp Tr		-	123,274	· · · ·	123,
18 Completion Unit, Swab, 20 Mud Circulation System		105.209	145,484	:	146,
20 Mud Circulation System 21 Mud Logging	' <u>-</u>	17,529	<u>.</u>	<u> </u>	103,
22 Logging / Formation Eva	algation	7,270	8,339	<u> </u>	15.
23 Mud & Chemicals		361.835	438,185	10,000	810,
24 Water	-	43,459	661,625	300,000	1,005,
25 Stimulation	-	· ·	814,033		814,
26 Stimulation Flowback &		-	121,606	150,000	271.
28 Mud/Wastewater Disp		193,104	61,151		254,
30 Rig Supervision / Engin		121,196	133,420	21,667	276,
32 Drig & Completion Ove	rrhead _	10,423	69,489	101,667	324.
35 Labor 54 Proppant	-	133,338	1,255,227	101,067	1,255,
95 Insurance	-	14,660			
97 Contingency	-		24,421	3,833	28.
99 Flugging & Abandonm	ent –	-	· · · · · ·		
	TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,655
		DRILLING	COMPLETION	PRODUCTION	TOTAL
TANGIBLE	COSTS	COSTS	COSTS	COSTS	COSTS
60 Surface Casing	5	122.234			5 122,
61 Intermediate Casing	-	344,284			344,
62 Drilling Liner	-	•		•	
63 Production Casing		687,039		· ·	687,
64 Production Liner				-	
65 Tubing	_	-	· · · ·	140,000	140,
66 Wellhead	-	64,820	<u> </u>	40,000	104,
67 Packers, Liner Hangers 68 Tanks	_	14,732	<u> </u>	45,833	34,
69 Production Vessels	-			126,667	126,
70 Flow Lines	-	<u> </u>	<u> </u>	66,667	66,
71 Rod string	-				
72 Artificial Lift Equipmer		.		90,000	90.
73 Compressor	-	· ·	<u>.</u>	5,833	5,
74 Installation Costs	-				
75 Surface Pumps	_			61,667	61,
76 Downhole Pumps					
77 Measurement & Meter I				116,667	116,
78 Gas Conditioning / Deh		<u> </u>	<u> </u>	20,000	
79 Interconnecting Facility	- ibruk -		<u> </u>	20,000	
80 Gathering/Bulk Lines 81 Vaives, Dumps, Control	ilers -	<u> </u>		108.333	108
82 Tank / Facility Contains	ment -		<u> </u>	43,333	43,
63 Flare Stack	-			16,667	16,
84 Electrical/Grounding	-			50,000	
85 Communications / SCA	DA -	-	<u> </u>	36,667	36,
86 Instrumentation / Safety	,			833	
	TOTAL TANGIBLES >	1,233,109	0	989,167	2,222



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Permian Resources Operating, LLC 300 N. Marienfeld St., Ste. 1000 Midland, TX 79701

	ESTIMATE O	Phone (432) 695-4222 • F COSTS AND AUTHO	RIZATION FOR EXPENDE	TURE	
DATE	2.17.2023			AFE NO.:	1
WELL NAME:	Bane 4-9 Federal Com 204	н		FIELD:	Tonto; Wolfcamp
VIELL NAME: LOCATION:	Section 4, T20S-R34E	<u> </u>		MD/TVD:	21,210' / 10,925'
				LATERAL LENGTH:	10,000
COUNTY/STATE:	Lea County, New Mexico				19.6
Permian WI:	·			DRILLING DAYS:	
GEOLOGIC TARGET:	WCXY			COMPLETION DAYS:	19
	Drill a horizontal WCXY	well and complete wi	th 44 stages. AFE includes	s drilling, completions,	flowback and Initial
REMARKS:	AL install cost				
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBLE	COSTS	COSTS	COSTS	COSTS	COSTS
Land/Legal/Regulatory	S	39,066	-	37,500	S 96,56
2 Location, Surveys & Dama	zes –	288,079	18,067	2,500	308,64
§ Freight / Transportation		47,628	43,778	25,000	116,40
5 Rental - Surface Equipmen		124,327	215,417	105,000	444,74
6 Rental - Downhole Equips	ient -	205,424	59,805	<u> </u>	265.22
7 Renial - Living Quarters	-	48,083	54,480	<u> </u>	
10 Directional Drilling, Surv	eys -	429,543 753,820	<u> </u>	<u> </u>	429,54
11 Drilling 12 Drill Bits	-	100,176	<u> </u>	<u> </u>	100,17
12 Druit Bits 13 Fuel & Power	-	188,935	725,061	<u> </u>	913,99
13 Fuel & Fower 14 Cementing & Float Equip	-	243,296		<u> </u>	243,29
15 Completion Unit, Swab, C	ти -		<u>.</u>	15,000	15,00
16 Perforating, Wireline, Slic			393,136		393,13
17 High Pressure Pump Truc	k -		123,274	<u> </u>	123,27
18 Completion Unit, Swab, C			146,484		146,48
20 Mud Circulation System	-	105,209			105,20
21 Mud Logging	-	17,529		-	17,52
22 Logging / Formation Eval	ation	7,270	8,339		15,60
23 Mud & Chemicals	-	361,835	438,185	10,000	810,02
24 Water		43,459	661,625	300,000	1,005,08
25 Stimulation		•	814,033	· · ·	814,03
26 Stimulation Flowback & I			121,606	150,000	271,60
28 Mud / Wastewater Dispos	a)	193,104	61,151		254,25
30 Rig Supervision / Engine		121,196	133,420	21,667	276,28
32 Drig & Completion Overl 35 Labor	iead -	10,423	69,489	101,667	10,42
35 Labor 54 Proppant	-	153,338	1,255,227	101,007	1,255,22
95 Insurance	-	14,660	1,2,2,2,1	<u> </u>	14,66
97 Contingency	-		24,421	3,833	28,25
99 Plugging & Abandonmen	t -				
	TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,655,58
		DRILLING	COMPLETION	PRODUCTION	TOTAL
TANGIBLE C	OSTS	COSTS 122.234	COSTS	COSTS	COSTS \$ 122.23
60 Surface Casing 61 Intermediate Casing	3-	344,284			344,28
62 Drilling Liner	-	344,204	<u> </u>	<u> </u>	344,20
63 Production Casing	-	687,039		<u>-</u>	687,03
64 Production Liner	-	-	·		
65 Tubing	-		·	140,000	140,00
66 Wellhead	-	64,820	· · ·	40,000	104,82
67 Packers, Liner Hangers	-	14,732	<u> </u>	28,000	34,73
68 Tanks	-	-		45,833	45,83
69 Production Vessels	-			126,667	126,66
70 Flow Lines	-	-	•	66,667	66,66
71 Rod string	-	•	· ·	· ·	-
72 Artificial Lift Equipment		· .	· · ·	90,000	90,00
73 Compressor	-	<u> </u>	•	5,833	5,83
74 Installation Costs		<u> </u>	· · · ·	· · · · · · · · · · · · · · · · · · ·	<u> </u>
75 Surface Pumps			·•	61,667	61,66
76 Downhole Pumps	-		<u> </u>	116,667	
77 Measurement & Meter In 78 Gas Conditioning / Dehy		·	<u> </u>	110,007	116,66
78 Gas Conditioning / Deny 79 Interconnecting Facility P		<u> </u>	<u> </u>	20,000	20,00
80 Gathering/Bulk Lines		<u> </u>	<u> </u>		
81 Valves, Dumps, Controlle	-	<u> </u>		108,333	108,33
82 Tank / Facility Containme		-		43,333	43,33
83 Flare Stack		· · ·	·	16,667	16,66
84 Electrical / Grounding	-	<u> </u>		50,000	50,00
85 Communications/SCAD	а ⁻	•		36,667	36,66
	-		<u> </u>	833	83
86 Instrumentation / Safety					
86 Instrumentation / Safety	TOTAL TANGIBLES >	1,233,109	0	989,167	2,222,2

Drilling Engineer:	PS			
Completions Engineer:	ML			
Production Engineer:	DC			
Resources Operating, LL	C APPROVAL:			
Co-CEO		Co-CEO	VP - Operations	
	WH	jw		CRM
VP - Land & Legal	BG BG	VP - Geosciences		
PERATING PARTNER A	PPROVAL:			
Company Name:		Working Interest (%):	Tax 1D:	
		Date;		
Signed by:				

Permian Resources Operating, LLC 300 N. Marlenfeld St., Ste. 1000 Midland, TX 79701 Phone (432) 695-4222 • Fax (432) 695-4063

ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

			DRIZATION FOR EXPEND		
DATE:	2.17.2023			AFE NO.:	1 Tanta Walfcamp
WELL NAME:	Joker 5-8 Federal Com 20	1H		FIELD:	Tonto; Wolfcamp
LOCATION:	Section 5, T20S-R34E			MD/TVD:	21,211' / 10,926'
COUNTY/STATE:	Lea County, New Mexico	»		LATERAL LENGTH:	10,000'
Permian W1:				DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY			COMPLETION DAYS:	19
	Drill a horizontal WCXY	well and complete wi	th 44 stages. AFE include	s drilling, completions,	flowback and Initial
REMARKS:	AL install cost				
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBLE O	COSTS	COSTS	COSTS	COSTS	COSTS
TLand/Legal/Regulatory		59,066	•	37,500	5 96,
2 Location, Surveys & Damag	es	288,079	18,067	2,500	308,
4 Freight / Transportation		47,628	43,778	25,000	
5 Kental - Surtace Equipment		124,327	215,417	105,000	444,
6 Rental - Downhole Equipm	ent	205,424	59,805	<u> </u>	
7 Kental - Living Quarters		48,083	54,480	·	429,
10 Directional Drilling, Surve	iys.	429,543			
11 Orilling 12 Orill Bits		100.176			100,
13 Fuel & Power		188,935	725,061		
14 Cementing & Float Equip		243,296	/10,001		
15 Completion Unit, Swab, C	ru		<u> </u>	15,000	
16 Pertorating, Wireline, Silci	kline	<u> </u>	393,135		393
17 High Pressure Pump Truci	(11)C		123,274	- <u></u>	123,
18 Completion Unit, Swab, C		<u></u>	146,484		146.
20 Mud Circulation System		105,209		<u> </u>	105
21 Mud Logging		17,529	<u> </u>	<u> </u>	- 17,
22 Logging / Formation Evalu	ation	7,270	8,339		
23 Mud & Chemicals		361,835	438,185	10,000	810
24 Water		43,459	661,625	300.000	1,005
25 Stimulation			814,033		
26 Stimulation Flowback & D	tisp	<u>.</u>	121,605	150,000	2/1
28 Mud / Wastewater Dispose		193.104	61,151		254
30 Rig Supervision / Engineer		121,196	133,420	21,667	- 275
32 Drig & Completion Overh		10,423		<u> </u>	
35 Labor		153,358	69,489	101,667	324
54 Proppant			1,255,227		1,255
95 Insurance		14,660	— ·		
97 Contingency		<u> </u>	24,421	3,833	- 28
99 Plugging & Abandonment					
	TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,655
		DRILLING	COMPLETION	PRODUCTION	TOTAL
TANGIBLE C	OSTS	COSTS	COSTS	COSTS	COSTS 5 122
60 Surface Casing 61 Intermediate Casing	3	122,234	<u> </u>		3 122,
62 Drilling Liner			<u> </u>	<u>.</u>	
63 Production Casing		687,039			
64 Production Liner					
65 Tubing		<u> </u>	<u> </u>	140,000	
66 Wellhead		64,820	<u> </u>	40.000	104
67 Packers, Liner Hangers		14,732		20,000	
68 Tanks				45,833	
69 Production Vessels		<u> </u>		126,667	126
70 Flow Lines		<u> </u>	<u> </u>	66,667	66
71 Rod string					
72 Artificial Lift Equipment				90,000	90
73 Compressor			<u> </u>	3,833	
74 Installation Costs		<u> </u>	<u> </u>		
75 Surface Pumps		· · ·		61,667	
76 Downhole Pamps		· · ·			
77 Measurement & Meter Ins	tallellon	<u> </u>		116,667	116
78 Gas Conditioning / Dehyd	ration	<u>.</u>			
79 Interconnecting Facility Pi		· ·		20,000	20
60 Gathering / Bulk Lines					e-1-
					108
				108,333	
2 Tank / Facility Containme				108,333 43,333	43
2 Tank / Facility Containments 13 Flare Stack					15
2 Tank / Facility Containments 13 Flare Stack				43,333	15
52 Tank / Facility Containmer 53 Flare Stack 54 Electrical / Grounding 55 Communications / SCADA	nt		······································	43,333	16 50 36
52 Tank / Facility Containmer 53 Flare Stack 54 Electrical / Grounding 55 Communications / SCADA	nt			43,333 16,667 50,000	16 50 36
52 Tank / Facility Containmer 53 Flare Stack 54 Electrical / Grounding 55 Communications / SCADA	nt	1,233,109		43,333 16,667 50,000 36,667	16 50 36
i2 Tank / Facility Containmen i3 Flare Stack i4 Electrical / Grounding i5 Communications / SCADA	nt		0	43,333 16,667 50,000 36,667 833	16 50 36, 2,222
82 Tank / Facility Containmen 83 Flare Stack 84 Electrical / Grounding 85 Communications / SCADA 86 Instrumentation / Salety	TOTAL TANGIBLES >			43,333 16,667 50,000 36,667 833 989,167	16 50 36, 2,222
82 Tank / Facility Containmen 83 Flare Stack 84 Electrical / Crounding 85 Communications / SCADA 86 Instrumentation / Selety 	TOTAL TANGIBLES > TOTAL COSTS > urces Operating, LLC:			43,333 16,667 50,000 36,667 833 989,167	16 50 36, 2,222
82 Tank / Facility Containent 83 Flare Stack 84 Electrical / Grounding 85 Communications / SCADA 86 Instrumentation / Salety PARED BY Permian Reso Drilling Engineer:	TOTAL TANGIBLES > TOTAL COSTS > urces Operating, LLC: PS			43,333 16,667 50,000 36,667 833 989,167	16 50 36, 2,222
82 Tank / Facility Containmen 83 Three Stack 94 Electrical / Grounding 85 Communications / SCADA 86 Instrumentation / Setety PARED BY Permian Reso Drilling Engineer: Completions Engineer:	TOTAL TANGIBLES > TOTAL COSTS > urces Operating, LLC: IS ML			43,333 16,667 50,000 36,667 833 989,167	16 50 36, 2,222
82 Tank / Facility Containent 83 Flare Stack 84 Electrical / Grounding 85 Communications / SCADA 86 Instrumentation / Selety PARED BY Permian Reso Drilling Engineer: Completions Engineer: Production Engineer:	TOTAL TANGIBLES> TOTAL COSTS> urces Operating, LLC: PS ML DC			43,333 16,667 50,000 36,667 833 989,167	16 50 36, 2,222
82 Tank / Facility Containent 83 Flare Stack 44 Electrical / Lorounding 45 Communications / SCADA 56 Instrumentation / Salety PARED BY Permian Reso Drilling Engineer: Completions Engineer: Production Engineer:	TOTAL TANGIBLES > TOTAL COSTS > urces Operating, LLC: PS ML DC , LLC APPROVAL:			43,333 16,667 50,000 36,667 833 989,167	16 50 36 2,222
82 Tank / Facility Containent 83 Flare Stack 84 Electrical / Grounding 85 Communications / SCADA 86 Instrumentation / Selety PARED BY Permian Reso Drilling Engineer: Completions Engineer: Production Engineer:	TOTAL TANGIBLES > TOTAL COSTS > urces Operating, LLC: PS ML DC , LLC APPROVAL:		5,367,000	43,333 16,667 30,000 36,567 833 989,167 1,761,334	16 50 36 2,222 11,877
82 Tank / Facility Containent 83 Flare Stack 44 Electrical / Lorounding 45 Communications / SCADA 56 Instrumentation / Salety PARED BY Permian Reso Drilling Engineer: Completions Engineer: Production Engineer:	TOTAL TANGIBLES > TOTAL COSTS > urces Operating, LLC: PS ML DC , LLC APPROVAL:	4,749,528	5,367,000	43,333 16,667 50,000 36,667 833 989,167	43, 16, 50, 30, 2222 11,877 11,877 ations
Completions Engineer: Production Engineer: nian Resources Operating	TOTAL TANGIBLES > TOTAL COSTS > urces Operating, LLC: IS ML DC , LLC APPROVAL: WH	4,749,528	5,367,000	43,333 16,667 30,000 36,567 833 989,167 1,761,334	16, 50, 50, 50, 50, 50, 50, 50, 50, 50, 50

NON OPERATING PARTNER APPROVAL:

Сотрапу Name:	Working Interest (%):		Tax ID:	
Signed by:	Date:			
Title:	Approval:	Yes .	No	(mark one)
he costs on this AFE are estimates outr and part not be construed as collings on part scrubb. Here with	a total unit of the project. Tables installation excepted under the AFE part in delayed up to a	was after the well has been completed. In parcet	tes this AFE, the Particl	cant errors to per its

the resonance of a service service of the service service of the service service of the service service of the service service service of the service service

Permian Resources Operating, LLC 300 N. Marlenfeld St., Ste. 1000 Midland, TX 79701 Phone (432) 695-4222 • Fax (432) 695-4263

ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

DATE;	2.17.2023			AFE NO.:	1
WELL NAME:	Joker 5-8 Federal Com 20	214		FIELD:	Tonto; Wolfcamp
LOCATION:	Section 5, T20S-R34E			MD/TVD:	21,211' / 10,926'
COUNTY/STATE:	Lea County, New Mexico			LATERAL LENGTH:	10,000
		·		DRILLING DAYS:	19.6
Permian WI:	100000				19.6
GEOLOGIC TARGET:	WOXY		· · ·	COMPLETION DAYS:	
REMARKS:	Drill a horizontal WCXY AL install cost	well and complete wi	th 44 stages. AFE include	es drilling, completions,	flowback and Initia
					TOTAL
		DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	COSTS
INTANGIBLE	_0515				5 %
Land/Legal/Regulatory	5	288.079	18.067	37,500	s
2 Location, Surveys & Damag	jes	47,628	43,778	2,500	
i Freight / Transportation 5 Kental - Surlace Equipment		124,327	215.417	105,000	
5 Kental - Surface Equipment 5 Kental - Downhole Equipm		205,424	59,805	105,000	
7 Kental - Living Quarters	en	48,083	54,480		
0 Directional Dritting, Surve		429,543	54,486		429
io Directional Dritting, Surve	cys	753.820		<u> </u>	
12 Drill Bils		100,176		<u>.</u>	
12 Drui bits 13 Fuel & Power		188,935	725.061		
14 Cementing & Float Equip		243,296	725,001		243
		243,290	<u>.</u>	15,000	
S Completion Unit, Swab, C 6 Pertorating, Wireline, Slici	10	<u> </u>	393,136	10,000	
17 High Pressure Pump Truck		<u>.</u>	123.274		
8 Completion Unit, Swab, C		<u> </u>	146,484		145
to Completion Unit, Swad, C 20 Mud Circulation System		105,209	110,101		
1 Mud Logging		17,529			
2 Logging/Formation Evalu	ation	7.2/0	8,339		
3 Mud & Chemicais	adon	361,833	438,185	10.000	
A Water		43,459	661.625	300,000	1,005
15 Stimulation		13/137	814,033		814
5 Stimulation Flowback & D	line .		121.606	150.000	
3 Mud / Wastewater Dispose			61,151	150,000	
0 Rig Supervision / Engineer			133,420	21,667	2/6
2 Drig & Completion Overh	and	10,423	135,420		<u> </u>
5 Labor	640	153,358	69,489	101.667	
64 Proppant		100,000	1,255,227	101,007	1,255
S insurance		14.660	1,233,227		
7 Contingency		14,000	24,421	3,833	
9 Plugging & Abandonment		<u> </u>	21/121		
or ingging a roundoimten	TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,65
		DRILLING	COMPLETION	PRODUCTION	TOTAL
TANGIBLE CO	OST5	COSTS	COSTS	COSTS	COSTS
50 Surface Casing	5	122,234	-	•	5 122
il Intermediate Casing		344,284	•	· · · ·	344
2 Drilling Liner				•	
3 Production Casing		687,039			687
4 Production Liner		· ·		-	
i5 Tubing		·		140,000	140
ob Weilhead		64,820		40,000	104
7 Packers, Liner Hangers		14,732		20,000	
8 Tanks		•	•	45,833	45
9 Production Vessels				126,667	126
U Flow Lines				66,667	66
1 Rod string				•	
2 Artificial Lift Equipment			•	90,000	90
J Compressor				5,833	
4 Installation Costs		•		· ·	
5 Surface Pumps		•	•	61,667	-61
6 Downhole Pumps					
7 Measurement & Meter Ins			· · · · · · · · · · · · · · · · · · ·	116,667	116
8 Gas Conditioning / Dehyd		·			
9 Interconnecting Facility Pi	ping	•		20,000	20
0 Gathering / Bulk Lines	_	<u> </u>			
1 Valves, Dumps, Controller		<u> </u>	· · ·	108,333	108
2 Tank / Facility Containment	nt.		•	43,333	43
3 Flare Slack		<u> </u>	<u> </u>	16,667	
4 Electrical / Grounding				50,000	
5 Communications / SCADA			•	36,667	
6 Instrumentation / Satety		· · · ·		833	
	TOTAL TANGIBLES >	1,233,109	Ō	989,167	2,22
	TOTAL COSTS >	4,749,528	5,367,000	1,761,334	11,87
PARED BY Permian Reso	surces Operating, LLC:	<u> </u>			
PARED BY Permian Reso Drilling Engineer:					
PARED BY Permian Reso Drilling Engineer: Completions Engineer:	PS				

Permian Resources Operating, LLC APPROVAL:

Co-CEO VP - Operations Co-CEO CRM VP - Land & Legal VP - Geosciences NON OPERATING PARTNER APPROVAL: Working Interest (%): Tax ID: Company Name: Signed by: Date: No (mark one) Title: Approval: _____ Yes ing this AF7, the Participant oppres to pay its provid by and billed proportionalely for Operal

APE may be delayed up to a year after the well has b egulatory under or other according concerns the well

Permian Resources Operating, LLC 300 N. Martenfeld St., Ste. 1000 Midland, TX 79701 Phone (432) 695-4222 · Fax (432) 695-4063

ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

	.17.2023			AFE NO.:	1
WELL NAME: J	oker 5-8 Federal Com 20	13H		FIELD:	Tonto; Wolfcam
LOCATION: 5	ection 5, T20S-R34E			MD/TVD:	21,191' / 10,906
COUNTY/STATE:	ea County, New Mexico	0		LATERAL LENGTH:	10,000'
Permian WI:				DRILLING DAYS:	19.6
-	WCXY			COMPLETION DAYS:	19
		wall and complete with	th 44 stages. AFE include		
	AL install cost	wen and complete wh	un 44 sunges. An 12 metude	s uning, compications,	
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBLE CO	STS	COSTS	COSTS	COST5	COSTS
I Land/ Legal/ Regulatory		59,066	· · ·	37,500	5 96
2 Location, Surveys & Damages	i	288,079	18,067	2,500	308
4 Freight / Transportation		47,628	43,778	25,000	116
5 Kental – Surface Equipment		124,327	215,417	105,000	444
6 Kental - Downhole Equipmen	t.	205,424	59,805		26:
7 Kental - Living Quarters		48,083	54,480	<u> </u>	425
10 Directional Drilling, Surveys	•	429,543	<u> </u>	·	753
11 Drilling 12 Drill Bits		100,176		<u> </u>	
13 Fuel & Power		188,935	725,061		913
14 Cementing & Float Equip		243,296	715,001		
15 Completion Unit, Swab, CI'l				15,000	
16 Periorating, Wireline, Silckli			393,136		
17 High Pressure Pump Truck	ac .	<u> </u>	123,274	<u> </u>	
18 Completion Unit, Swab, CIT			146,484		140
20 Mud Circulation System		105,209		<u>.</u>	10:
Zi Mud Logging		17,529	<u> </u>		
22 Logging / Formation Evaluat	ion	7,270	8,339		
23 Mud & Chemicals		361,835	438,185	10,000	
24 Water		43,459	661,625	300,000	1,005
25 Stimulation			814,033		
26 Stimulation Flowback & Dis	D	<u> </u>	121,606	150,000	2/1
28 Mud / Wastewater Disposal		193,104	61,151	· · ·	
30 Rig Supervision / Engineerir	IR.	121,196	133,420	21,667	
32 Drig & Completion Overhea		10,423			
39 Labor		153,358	69,489	101,667	324
54 Proppant		<u> </u>	1,255,227		1,255
95 Insurance		14,660			
97 Contingency			24,421	3,833	
99 Plugging & Abandonment		<u> </u>		· · ·	
	TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,65
		DRILLING	COMPLETION	PRODUCTION	TOTAL
TANGIBLE COS	JTS	COSTS	COSTS	COSTS	COSTS
60 Surface Casing		122,234	• •	•	\$ 12
61 Intermediate Casing		344,284		•	344
62 Drilling Liner		•		· · · ·	
63 Production Casing		687,039		-	687
64 Production Liner		-	<u> </u>		
65 Tubing			-	140,000	140
66 Wellhead		64,820	-	40,000	104
		14,732	•		
				20,000	
56 Tanks		<u> </u>		45,833	45
56 Tanks 59 Production Vessels		<u>.</u>		45,833	45
56 Tanks 59 Production Vessels 70 Flow Lines				45,833	45
88 Tanks 59 Production Vessels 70 Flow Lines 71 Rod string				45,833 126,667 66,667	43
88 Tanks 59 Production Vessels 70 Flow Lines 71 Rod string 72 Artificial Litt Equipment				45,833 126,667 66,667 90,000	49 126 66
55 Tanks 59 Production Vessels 70 Flow Lines 71 Rod string 72 Artitickal Lift Equipment 73 Compressor				45,833 126,667 66,667	49 126 66
85 Tanks 89 Production Vessels 70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 74 Installation Costs				45,833 126,667 66,667 90,000 5,833	42 120 60 99
56 Tanks 59 Production Vessels 70 Flow Lines 71 Rod string 72 Artiticial Lift Equipment 73 Compressor 74 Installation Costs 75 Surface Humps				45,833 126,667 66,667 90,000	43 126 66 90 3
59 Tanks 59 Production Vessels 59 Production Vessels 71 Rod string 72 Artiticial Liti Equipment 73 Compressor 74 Installation Costs 75 Surface Pumps 76 Dowrthole Pumps				45,833 126,667 66,667 90,000 5,833 61,667	43 126 66 90 5
98 Tanks 99 Production Vessels 70 Flow Lines 71 Rod string 72 Artiticial Liti Equipment 73 Compressor 74 Instaliation Costs 75 Surface Pumps 76 Downhole Pumps 76 Measurement & Meter Instal				45,833 126,667 66,667 90,000 5,833	43 126 66 90 5
58 Tanks 59 Production Vessels 70 Rod string 72 Rod string 73 Compressor 74 Institution Costs 75 Surdace Pumps 76 Downhole Pumps 76 Downhole Pumps 76 Rods Conditiontay, Johydra	lion			43,833 126,667 66,667 90(JUR 3,833 61,667	43 126 66 99 5 61
59 Traduction Vessels 70 How Lines 71 Nod string 72 Artitikiai Liti Equipment 73 Compressor 74 Installation Costs 75 Suriace Fumps 76 Downhole Pumps 76 Gasc Conditioning, / Dehydra 79 Interconneeting Facility Pju 9 Interconneeting Facility Pju	lion			45,833 126,667 66,667 90,000 5,833 61,667	43 126 66 99 5 61
58 Tanks 59 Production Vessels 70 Rod string 72 Rod string 72 Ardtikla Litt Equipment 73 Compressor 74 Inskillation Cosis 75 Surdace Pumps 76 Downhole Pumps 76 Downhole Pumps 79 Measurement & Meter Instal 79 Gascuronnet & Meter Instal 79 Gascuronnet Meter Instal 79 Cathering / Baik Lines	lion			43,833 126,667 66,667 90,008 3,833 61,667 116,567 20,060	43 122 66 90 5 61 61 116 20
89 Tranks 89 Traduction Vessels 70 How Lines 71 Kod siring 72 Artitikal Liti Equipment 73 Compressor 44 Installation Costs 75 Surace Fumps 76 Downhole Pumps 77 Massurement & Méter Instal 78 Gas Conditioning / Dehydral 91 Interconneeting Facility Pip 91 Interesting Contenting 81 Valves, Dump, Controllers	lion			43,833 126,667 66,667 90,080 5,833 61,667 116,667 20,000 108,333	
84 Tanks 89 Troduction Vessels 70 How Lines 71 Rod string 72 Antitikal Liti Equipment 73 Compressor 44 Installation Costs 75 Surface Pumps 76 Downhole Pumps 76 Jownhole Pumps 76 Gaussian & Meter Instal 78 GasC conditiontag / Johydrat 91 Alexconnetting Facility Pipi 80 Gathering / Balk Lines 81 Valves, Dumps, Contorliers 81 Valves, Dumps, Contorliers	lion			43,833 126,667 66,687 90,088 3,833 61,667 116,667 20,080 20,080 108,533 43,533	
59 Tranks 59 Troduction Vessels 70 How Lines 71 Rod siring 72 Antitikal Lili Equipment 73 Compressor 74 Installation Costs 75 Surace Pumps 76 Downhole Pumps 76 Gas Conditioning / Johydra 79 Interconnecting Facility Pipis 90 Gathering / Bulk Lines 19 Valves, Dumps, Controllers 52 Tank, Facility Containment 39 Hare Stack	lion			43,833 126,667 66,667 5,833 61,667 116,667 22,000 108,333 43,533 16,667	32 122 66 90 90 5 5 61 116 20 20 20 20 108 33 108
89 Tranks 89 Traduction Vessels 70 How Lines 71 Nod string 72 Artitiki Liti Equipment 73 Compressor 74 Installation Cosis 75 Suricae Pumps 76 Downhole Pumps 76 Downhole Pumps 76 Conditiontag, Dubydea 98 Gathering, Haik Lines 81 Valves, Dumps, Controllers 82 Tank / Facility Containment 83 Pare Stack 4 Electrical / Grounding	lion			43,833 126,667 66,667 90,000 3,833 61,667 116,667 20,000 108,333 43,333 16,667 20,000	33 128 36 99 99 90 90 90 90 90 90 90 90 90 90 90
58 Tanks 59 Troduction Vessels 70 Irobu Lines 71 Rod string 72 Antiticki Liti Equipment 73 Compressor 74 Installation Costs 75 Suntace Fumps 76 Downhole Fumps 77 Measurement & Meter Instal 76 Gas Conditioning / Unbydan 79 Interconnecting Facility Plpi 80 Gathering / Balk Lines 81 Valves, Dunps, Controllers 81 Valves, Dunps, Controllers 81 Fank / Sacilly Constanment 83 Flare Stack 44 Electrical / Grounding 85 Communications / SCADA	lion			43,833 126,667 66,667 90,0087 5,833 61,667 116,567 20,0007 108,533 43,533 16,667 5,0007 30,0007 30,0007	33 128 36 99 99 90 90 90 90 90 90 90 90 90 90 90
58 Tanks 59 Troduction Vessels 70 Irobu Lines 71 Rod string 72 Antiticki Liti Equipment 73 Compressor 74 Installation Costs 75 Suntace Fumps 76 Downhole Fumps 77 Measurement & Meter Instal 76 Gas Conditioning / Unbydan 79 Interconnecting Facility Plpi 80 Gathering / Balk Lines 81 Valves, Dunps, Controllers 81 Valves, Dunps, Controllers 81 Fank / Sacilly Constanment 83 Flare Stack 44 Electrical / Grounding 85 Communications / SCADA	lion NG			43,833 126,667 66,567 90,000 5,833 61,567 116,567 20,000 20,000 108,533 43,533 16,567 50,067 855	33 128 68 99 3 3 61 116 20 20 108 33 61 108 30 30 30 30 30
58 Tanks 59 Troduction Vessels 70 Irobu Lines 71 Rod string 72 Antiticki Liti Equipment 73 Compressor 74 Installation Costs 75 Suntace Fumps 76 Downhole Fumps 77 Measurement & Meter Instal 76 Gas Conditioning / Unbydan 79 Interconnecting Facility Plpi 80 Gathering / Balk Lines 81 Valves, Dunps, Controllers 81 Valves, Dunps, Controllers 81 Fank / Sacilly Constanment 83 Flare Stack 44 Electrical / Grounding 85 Communications / SCADA	lion 55 TOTAL TANGIBLES >			43,833 126,667 66,667 90,000 3,833 61,667 116,667 20,000 20,000 43,333 43,333 16,667 20,000 36,667 83,333 16,667 93,000 36,667 83,33 989,167	33 128 36 39 39 30 30 30 30 30 30 2,222
69 Tanks 69 Production Vessels 70 How Lines 71 Rod string 72 Arditicki Liit Equipment 73 Compressor 74 Installation Costs 75 Suntace Fumps 75 Downhole Pumps 75 Downhole Pumps 77 Measurement & Meter Instal 78 Gast Conditioning / Unbydan 79 Interconnecting Facility Plpi 80 Gathering / Baik Lines 81 Valves, Dumps, Controllers 82 Tank / Facility Constancent 83 Flare Stack 44 Electrical / Grounding 85 Communications / SCADJA	lion NG	1,233,109		43,833 126,667 66,567 90,000 5,833 61,567 116,567 20,000 20,000 108,533 43,533 16,567 50,067 855	44 122 66 99 90 100 100 100 100 100 100 100 100 1
89 Tanks 89 Troduction Vessels 70 How Lines 71 Rod string 72 Antiticial Lift Equipment 73 Compressor 74 Installation Cosis 75 Surtace Pumps 76 Downhole Pumps 76 Downhole Pumps 77 Measurement & Meter Instal 78 Gas Conditiontry, J Unhydran 79 Gastnerman & Meter Instal 79 Gastaerman & Meter Instal 79 Gastaerman & Meter Instal 79 Gastaerman & Meter 80 Gathering / Balk Lines 81 Valves, Dumps, Controllers 82 Tank / Facility Constancent 83 Flare Stack 44 Electrical / Grounding 85 Communications / SCADA 86 Instrumentation / Salety	ION NG TOTAL TANGIBLES > TOTAL COSTS >			43,833 126,667 66,667 90,000 3,833 61,667 116,667 20,000 20,000 43,333 43,333 16,667 20,000 36,667 83,333 16,667 93,000 36,667 83,33 989,167	44 122 66 99 90 100 100 100 100 100 100 100 100 1
69 Tanks 69 Troduction Vessels 70 How Lines 71 Rod string 72 Andtikul Liti Equipment 73 Compressor 74 Installation Cosis 75 Surface Pumps 76 Downhole Pumps 76 Downhole Pumps 76 Downhole Pumps 79 Gaseument & Meter Instal 78 Gas Conditioning / Dohydra 79 Gaseument & Meter 80 Tank / Facility Containment 81 Face Stack 44 Electrical / Grounding 85 Communication / Salety 85 Communication / Salety 86 Instrumentation / Salety 87 ARED BY Permian Resource	TOTAL TANGIBLES > TOTAL COSTS > TOTAL COSTS >			43,833 126,667 66,667 90,000 3,833 61,667 116,667 20,000 20,000 43,333 43,333 16,667 20,000 36,667 83,333 16,667 93,000 36,667 83,33 989,167	44 122 66 99 90 100 100 100 100 100 100 100 100 1
69 Tanks 69 Troduction Vessels 70 Flow Lines 71 Rod siring 72 Antitikal Lili Equipment 73 Compressor 74 Installation Cosis 75 Surtace Fumps 75 Ouwrhole Pumps 75 Marka Pumps 76 Gas Conditioning / Dehydra 79 Interconnecting Facility Fip 80 Gaitering / Haik Lines 81 Tank Jack 81 Face Stack 81 Face Stack 82 Tank / Facility Containment 83 Flare Stack 84 Electrical / Grounding 85 Communications / SCADA 86 Instrumentation / Safety PARED BY Permian Resour Drilling Engineer:	TOTAL TANGIBLES> TOTAL COSTS> ces Operating, LLC: 75			43,833 126,667 66,667 90,000 3,833 61,667 116,667 20,000 20,000 43,333 43,333 16,667 20,000 36,667 83,333 16,667 93,000 36,667 83,33 989,167	44 122 66 99 90 100 100 100 100 100 100 100 100 1
89 Tranks 89 Tranks 10 Kols Vessels 20 Kols Vessels 2	TOTAL TANGIBLES > TOTAL COSTS > TOTAL COSTS > ces Operating, LLC: PS ML			43,833 126,667 66,667 90,000 3,833 61,667 116,667 20,000 20,000 43,333 43,333 16,667 20,000 36,667 83,333 16,667 93,000 36,667 83,33 989,167	44 122 66 99 90 100 100 100 100 100 100 100 100 1
	TOTAL TANGIBLES> TOTAL COSTS> ces Operating, LLC: 75			43,833 126,667 66,667 90,000 3,833 61,667 116,667 20,000 20,000 43,333 43,333 16,667 20,000 36,667 83,333 16,667 93,000 36,667 83,33 989,167	33 128 36 39 39 30 30 30 30 30 30 2,222
89 Tanks 89 Troduction Vessels 70 Flow Lines 71 Rod siring 72 Antitikal Lift Equipment 73 Compressor 74 Instalation Costs 75 Surface Pumps 75 Measurement & Meter Instal 78 Gas Conditioning / Unbytan 79 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Pipi 80 Gathering / Bulk Lines 19 Interconnecting Facility Containeent 80 Gathering / Bulk Lines 10 Gatheri	TOTAL TANGIBLES> TOTAL COSTS> ces Operating, LLC: P5 ML DC			43,833 126,667 66,667 90,000 3,833 61,667 116,667 20,000 20,000 43,333 43,333 16,667 20,000 36,667 83,333 16,667 93,000 36,667 83,33 989,167	4 122 6 9 9 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
94 Tanks 194 Troduction Vessels 104 Food Lines 171 Kod skring 204 Artitickal Lift Equipment 204 Constraints 205 Constraints 201 Kod Statistics 201 Kod Statistics 201 Kod Statistics 201 Kod Statistics 201 Kod Kod Kod 201 Kod Kod Kod 201 Kod Kod Kod 201 Kod Kod Kod 201 Kod Kod 201 Kod Kod 201 Kod Kod 201 Kod	TOTAL TANGIBLES> TOTAL COSTS> Ces Operating, LLC: P5 ML DC LC APPROVAL:		5,367,000	43,833 126,667 66,667 90,000 3,833 61,667 116,667 20,000 20,000 43,333 43,333 16,667 20,000 36,667 83,333 16,667 93,000 36,667 83,33 989,167	4 124 6 9 9 9 10 10 10 10 10 10 10 10 10 10 10 10 10
69 Tanks 69 Troduction Vessels 70 How Lines 71 Rod string 72 Andtikul Lit Equipment 73 Compressor 74 Installation Cosis 75 Surface Pumps 76 Downhole Pumps 76 Downhole Pumps 76 Downhole Pumps 76 Conditiontog / Dohydra 79 Gascument & Meter Instal 78 Gas Conditiontog / Dohydra 79 Cascular Status 80 California (Containment 81 Valves, Dumps, Controllers 82 Tank / Facility Containment 83 Place Stack 44 Electrical / Grounding 85 Communications / SCAUA 86 Instrumentation / Salety PARED BY Permian Resour Drilling Engineer: Completions Engineer: Production Engineer: Production Engineer:	TOTAL TANGIBLES> TOTAL COSTS> ces Operating, LLC: P5 ML DC	4,749,528	5,367,000 EO	43,833 126,667 66,667 90,000 3,833 61,667 116,667 20,000 20,000 20,000 30,667 83,333 16,667 93,0000 30,667 83,333 16,667 1,0667 1,761,334	

NON OPERATING PARTNER APPROVAL:

BC.

Company Name:	Working Interest (%):	Tax ID:	
Signed by:	Date:		
Title:	Approval:	Yes	No (mark one)
he costs on this AFE are estimates only and may not be construed as orthogo as	my specific firm or the total cost of the project. Tubing installation approved under the AFE may be delayed up to a	yrus after the well has been completed. In executing this AFE	the Participant agrees to pay the

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nervenue no con reasonante primary ana espana e compana especialization de la constance de la prefer. La preference de la constance de la preference de la preference de la constance de la constance de la preference de la preference de la constance de la preference de la constance de la preference de

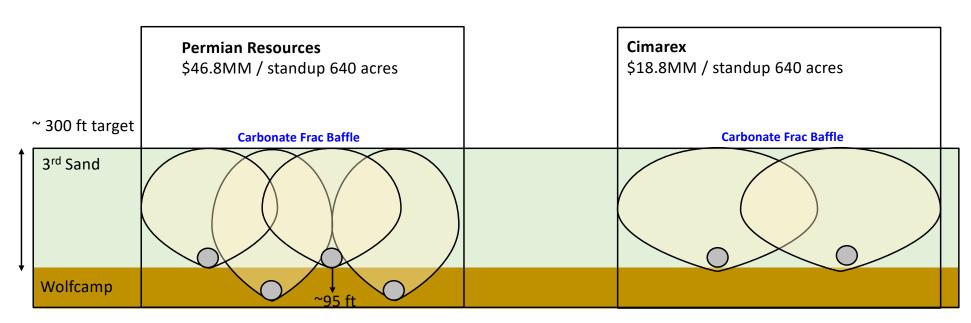
Permian Resources Operating, LLC 300 N. Marienfeld St., 5te. 1000 Midland, TX 79701 Phone (432) 695-4222 • Fax (432) 695-4063 ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

DATE:	2.17.2023 Joker 5-8 Federal Com 2	<u>MH</u>		AFE NO.: FIELD:	1 Tonto; Wolfcam
WELL NAME:		04H		_	
LOCATION:	Section 5, T20S-R34E			MD/TVD:	21,181 / 10,896
COUNTY/STATE:	Lea County, New Mexic	20		LATERAL LENGTH:	10,000'
Permian WI:				DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY			COMPLETION DAYS:	19
	Drill a horizontal WCX	r well and complete wi	th 44 stages. AFE includ	les drilling, completions,	flowback and Initia
REMARKS:	AL install cost	<u> </u>			
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBL		COSTS	COSTS	COSTS	COSTS
TLand / Legal / Regulatory		59,066	•	37,500	\$ 96
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11 Drilling 12 Drill Bits		753,820	<u> </u>		753
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14 Cementing & Float Equi	-	243,296	723,001		
15 Completion Unit, Swab,		243,270	·····	15,000	
16 Perforating, Wireline, St			393,136		
17 High Pressure Pump Tru			123,274		123
18 Completion Unit, Swab,			146,484		146
20 Mud Circulation System		105,209			105
21 Mud Logging		17,529	·····	<u> </u>	
22 Logging / Formation Eva	luation	7,2/0	8,339		
23 Mud & Chemicals		361,835	438,185	10,000	
24 Water		43,459	661,625	300,000	1,005
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26 Stimulation Flowback &	Disn	<u> </u>	121,606	150,000	
28 Mud / Wastewater Disp		193,104	61,151		
30 Rig Supervision / Engine		121,196	133,420	21,667	
32 Drig & Completion Ove		10,423			n
35 Labor		153,358	69,489	101,667	32
54 Proppant			1,255,227		1,255
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99 Plugging & Abandonme	nt	· · · ·			
	TOTAL INTANGIBLES	3,516,419	5,367,000	772,167	9,65
		DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
TANGIBLE	COSTS	122,234			
60 Surface Casing 61 Intermediate Casing		344,284	<u> </u>	<u> </u>	
		344,204	<u> </u>	·	
62 Drilling Liner		687,039	<u> </u>	<u> </u>	
63 Production Casing 64 Production Liner		667,039	<u> </u>	<u> </u>	
65 Tubing		<u> </u>	<u> </u>	140,000	
66 Wellhead		64,820	<u>.</u>	40,000	
67 Packers, Liner Hangers		14,732	<u>.</u>	20,000	
68 Tanks		14,132		45,833	
69 Production Vessels				126,667	
70 Flow Lines			<u> </u>	65,667	
71 Rod string		<u> </u>			
72 Aritificial Liit Equipmen	,	<u> </u>	<u> </u>	90.000	
73 Compressor	•			5,833	
74 Installation Costs					
75 Surface Pumps				61,667	6
76 Downhole Pumps		·		61,007	
77 Measurement & Meter I:		·		116,667	
76 Gas Conditioning / Deh				110,007	
79 Interconnecting Facility				20,000	
50 Gathering / Bulk Lines	, ibrild	<u> </u>	<u> </u>	20,000	
51 Valves, Dumps, Control	lera			108,333	
52 Tank / Facility Contains				43,333	
3 Flare Stack				15,567	16
54 Electrical / Grounding				50,000	
5 Communications / SCAI	JA .	<u> </u>	<u> </u>	36,667	
6 Instrumentation / Satety		<u> </u>	<u> </u>	833	
	TOTAL TANGIBLES	1,233,109	0	989,167	2,22
	TOTAL COSTS	4,749,528	5,367,000	1,761,334	11,87
PARED BY Permian Be	sources Operating, LLC:				
	· · · · · · · · · · · · · · · · · · ·	-		••••	
Drilling Engine	er: PS				
Completions Engine	er: ML				
Production Engine	er. DC				
nian Resources Operatio	N. LLC APPROVAL		·	· -·	
			· · ·		
Co-CI		C+-C	EO	VP - Oper	
	WH		JW		CRM
VP - Land & Leg	BG	VP - Geoscien	so		
OPERATING PARTN	ER APPROVAL:		· · · ·		
			Working Fathers (M)		
N OPERATING PARTN Company Nan			Working Interest (%):	т	ax ID:

Date: ed by: Approval: Yes Title: No (mark one)

ayed up to a year after the well has been to ting this AFE, the Perticipant agrees to pay its -

Diagram of Staggered Landing Wolfcamp + 3rd SS vs. 3rd SS Flat

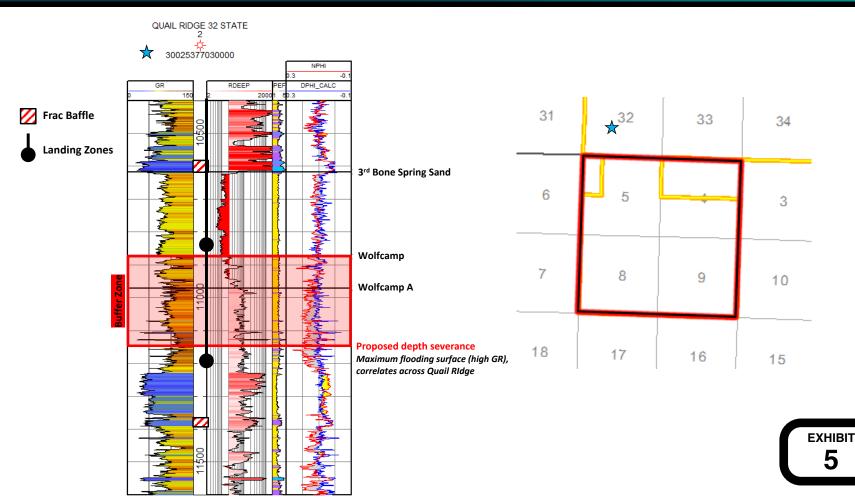


- Cimarex has experience developing as many as 8 landings within a DSU successfully in Lea county with 9th drilling now, 35 to 38 wells / section. The difference is the combination of geology (barriers, reservoir height, and flow units) don't support the proposed staggers at Mighty Pheasant Loosey Goosey as demonstrated by area developments like Black and Tan.
- 3rd and Wolfcamp landed this close together are equivalent to 8 WPS flat in the 3rd Sand, double the AOI proven density.
- A wealth of data from the DOE and industry funded Hydraulic Fracture Test Site 2 supports an upper Wolfcamp buffer zone in this specific location to protect proven 3rd Sand correlative rights and prevent capital waste.



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Proposed Wolfcamp Depth Severance to Minimize Interaction with 3rd Bone Spring Sand



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State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division 1220 S. St Francis Dr. Santa Fe, NM 87505

QUESTIONS

	OGRID:			
CIMAREX ENERGY CO. 6001 Deauville Blvd	215099 Action Number:			
Midland, TX 79706	240064			
	Action Type:			
	[HEAR] Prehearing Statement (PREHEARING)			
QUESTIONS				
Testimony				

Please assist us by provide the following information about your testimony.				
Number of witnesses	4			
Testimony time (in minutes)	48			

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