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

Northern Oil and Gas, Inc.

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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.

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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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

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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%.

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- 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

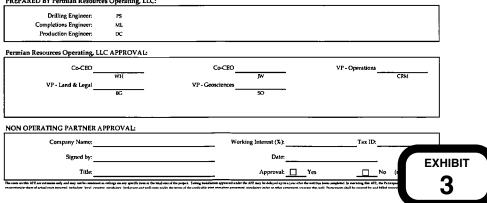
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Permian Resources Operating, LLC 300 N. Marienfeld St., Ste. 3000 Midland, TX 79701 Phone (432) 695-4222 • Fax (432) 695-4063

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>	100,1
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>	
	-			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 Such CTI	-	243,296	<u> </u>	15,000	243,
5 Completion Unit, Swab, CTU 6 Perforating, Wireline, Silckli	,	<u> </u>	393,136	15,000	
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

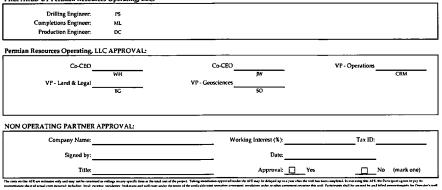
Drilling Engineer:	PS		
Completions Engineer.	ML		
Production Engineer:	DC		
mian Resources Operating, LL	.C APPROVAL:		
Co-CEO		Co-CEO	VP - Operations
	WH	jw	CRM
VP - Land & Legal	BG	VP - Geosciences SO	
	20	~	
N OPERATING PARTNER A	PPROVAL:		
Company Name:		Working Interest (%):	Tax ID:
		. .	
Signed 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	-	· ·		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

		N. Marienfeld St., Ste. 1 Phone (432) 695-4222 *			
	ESTIMATE C		RIZATION FOR EXPENDI	TURE	
DATE	2.17.2023			AFE NO.:	11
WELL NAME:	Bane 4-9 Federal Com 20	4H		FIELD:	Tonto; Wolfcamp
LOCATION:	Section 4, T20S-R34E			MD/TVD:	21,210' / 10,925'
COUNTY/STATE:	Lea County, New Mexico	,		LATERAL LENGTH:	10,000
Permian WI:				DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY		c	COMPLETION DAYS	19
REMARKS:		well and complete wit	h 44 stages. AFE includes		
	The neutron				
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBLE	COSTS	COSTS	COSTS	COSTS	COSTS
1 Land/Legal/Regulatory	5	39,066 288,079	- 18,067	37,500	\$ <u>96,56</u> 308,64
Location, Surveys & Dama	iges .	47,628	43,778	25,000	116,40
i Freight / Transportation 5 Rental - Surface Equipmer		124,327	215,417	105,000	444,74
5 Rental - Downhole Equiptier		205,424	59,805		265,22
7 Rental - Living Quarters		48,083	54,480	<u> </u>	102,56
10 Directional Drilling, Surv	(evs	429,543			429,54
11 Drilling	· ·	753,820	· · ·		753,82
12 Drill Bits		100,176		-	100,17
13 Fuel & Power	•	188,935	725,061		913,99
14 Cementing & Float Equip	, '	243,296	<u>.</u>		243,29
15 Completion Unit, Swab, (сти .	· · ·	<u> </u>	15,000	15,00
16 Perforating, Wireline, Sli		-	393,136		393,13
17 High Pressure Pump True		•	123,274		123,27
18 Completion Unit, Swab, (сти	-	146,484		146,48
20 Mud Circulation System		105,209	<u> </u>	-	105,20
21 Mud Logging		17,529	-		17,52
22 Logging / Formation Eval	uation	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	DI		814,033	150,000	814,03 271,60
26 Stimulation Flowback &		193,104	121,606 61,151	150,000	254,25
28 Mud / Wastewater Dispo: 30 Rig Supervision / Engine		121,196	133,420	21,667	276,28
32 Drig & Completion Over		10,423	135/120	21,007	10.42
35 Labor	ilead .	153,358	69,489	101,667	324,51
54 Proppant			1,255,227	101,007	1,255,22
95 Insurance		14,660		<u> </u>	14,66
97 Contingency			24,421	3,833	28,25
	at	<u> </u>			
			5,367,000		9,655,5
	TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	
99 Plugging & Abandonmes	TOTAL INTANGIBLES >	DRILLING	COMPLETION	PRODUCTION	TOTAL
99 Plugging & Abandonmes TANGIBLE (TOTAL INTANGIBLES >	DRILLING COSTS			TOTAL COSTS
99 Plugging & Abandonmes TANGIBLE (60 Surface Casing	TOTAL INTANGIBLES >	DRILLING COSTS 122,234	COMPLETION	PRODUCTION	TOTAL COSTS \$ 122,22
99 Plugging & Abandonmes TANGIBLE (60 Surface Casing 61 Intermediate Casing	TOTAL INTANGIBLES >	DRILLING COSTS	COMPLETION	PRODUCTION COSTS	TOTAL COSTS \$ 122,22
99 Plugging & Abandonmes TANCIBLE (60 Surface Casing 61 Intermediate Casing 62 Drilling Liner	TOTAL INTANGIBLES >	DRILLING COSTS 122,234 344,284	COMPLETION	PRODUCTION	TOTAL COSTS \$ 122,23 344,28
99 Plugging & Abandonmer TANGIBLE (60 Surface Casing 61 Intermediate Casing 62 Drilling Liner 63 Production Casing	TOTAL INTANGIBLES >	DRILLING COSTS 122,234	COMPLETION	PRODUCTION COSTS	TOTAL COSTS 5 122,23 344,28
79 Plugging & Abandonmer TANCIBLE (60 Surface Casing 61 Intermediate Casing 62 Drilling Liner 63 Production Casing 64 Production Liner	TOTAL INTANGIBLES >	DRILLING COSTS 122,234 344,284 	COMPLETION	PRODUCTION	TOTAL COSTS 5 122,22 344,28
59 Plugging & Abandonmer TANCIBLE (50 Surface Casing 51 Intermediate Casing 52 Drilling Liner 63 Production Casing 64 Production Liner 65 Tubing	TOTAL INTANGIBLES >	DRILLING COSTS 122.234 344.284 	COMPLETION	PRODUCTION COSTS	TOTAL COSTS 5 122,22 344,28
99 Plugging & Abandonmer TANCIBLE (60 Surface Casing 61 Intermediate Casing 62 Drilling Liner 63 Production Casing 64 Production Liner 65 Tubing 66 Wellhead	TOTAL INTANGIBLES >	DRILLING COSTS 122,234 344,284 		PRODUCTION COSTS	TOTAL COSTS 5 122,22 344,22 687,0 687,0 140,00 104,83 34,77
99 Plugging & Abandonmer TANCIBLE (50 Surface Casing 51 Intermediate Casing, 62 Drilling Liner 63 Production Casing, 64 Production Liner 65 Tubing, 66 Wellhead 67 Packers, Liner Hangers 68 Tanks	TOTAL INTANGIBLES >	DRILLING COSTS 122.234 344.284 	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS 5 12222 344,22 687,00 7 140,00 104,8 34,77 45,82
99 Plagging & Abandonmer TANCIBLE (60 Surface Casing 61 Intermediate Casing 62 Drilling Liner 63 Production Casing 64 Production Liner 65 Tubing 66 Wellhead 67 Packers, Liner Hangers 66 Tanks 69 Production Vessels	TOTAL INTANGIBLES >	DRILLING COSTS 122.234 344.284 	COMPLETION COSTS	PRODUCTION COSTS 	TOTAL COSTS 5 12223
99 Plugging & Abandonmer TANCIBLE (60 Surface Casing 61 Intermediate Casing 62 Drilling Liner 63 Production Casing 64 Production Casing 66 Weilthead 67 Packers, Liner Hangers 68 Panka 69 Production Vessels 70 Flow Lines	TOTAL INTANGIBLES >	DRILLING COSTS 122.234 344.284 	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS 5 122,22 344,22
99 Plugging & Abandonmen TANCIBLE (50 Surface Casing 51 Intermediate Casing 52 Drilling Liner 53 Production Casing 64 Production Liner 55 Tubing 66 Weilhead 67 Packers, Liner Hangers 68 Tanks 69 Production Vessels 70 Rod string	TOTAL INTANGIBLES >	DRILLING COSTS 122.234 344.284 	COMPLETION COSTS 	PRODUCTION COSTS 140,000 40,000 20,000 45,833 122,667 65,667	TOTAL COSTS \$ 122.22 344.22 687.02 140.00 104.83 347.7 45.80 125.64 666.64
99 Plugging & Abandonmen TANCIBLE (50 Surface Casing 51 Intermediate Casing 52 Drilling Liner 53 Production Casing 54 Production Casing 56 Weilhead 56 Weilhead 57 Packers, Liner Hangers 58 Tanks 59 Production Vessels 59 Production Vessels 70 Flow Lines 71 Rod string 72 Artificial Lift Equipment	TOTAL INTANGIBLES >	DRILLING COSTS 122.234 344.284 647.039 64.820 14.732 	COMPLETION COSTS	PRODUCTION COSTS 	TOTAL COSTS \$ 122/2 344,22
99 Plugging & Abandonmer TANCIBLE (50 Surface Casing 51 Intermediate Casing 52 Drilling Liner 53 Production Liner 55 Tubing 54 Production Liner 55 Tubing 56 Wellhead 57 Packers, Liner Hangers 58 Tanks 59 Production Vessels 50 Tokot Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor	TOTAL INTANGIBLES >	DRILLING COSTS 122.234 344.284 	COMPLETION COSTS 	PRODUCTION COSTS 140,000 40,000 20,000 45,833 122,667 65,667	TOTAL COSTS \$ 122/2 344,22
99 Plugging & Abandonmer TANCIBLE (50 Surface Casing 51 Intermediate Casing 52 Drilling Liner 53 Production Casing 54 Production Casing 56 Wellhead 57 Packers, Liner Hangers 56 Tabing 57 Packers, Liner Hangers 58 Tanks 59 Production Vessels 50 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 74 Installation Costs	TOTAL INTANGIBLES >	DRILLING COSTS 122.234 344.284 647.039 64.820 14.732 	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS \$ 1222 344,22
99 Plugging & Abandonmer TANCIBLE (50 Surface Casing 51 Intermediate Casing, 52 Drilling Liner 53 Production Casing, 54 Production Casing, 54 Production Liner 55 Tubing, 56 Wellhead 57 Packers, Liner Hangers 58 Tanks 59 Production Vessels 70 Flow Lines 71 Rod sving, 72 Ardificial Lift Equipment 73 Compressor 74 Instillation Costs 75 Surface Pamps	TOTAL INTANGIBLES >	DRILLING COSTS 122.234 344.284 647.039 64.820 14.732 	COMPLETION COSTS	PRODUCTION COSTS 	TOTAL COSTS \$ 1222 344,22
79 Plugging & Abandonmer TANCIBLE (50 Surface Casing 51 Intermediate Casing 52 Drilling Liner 53 Production Casing 54 Production Casing 56 Wellhead 57 Packers, Liner Hangers 50 Fackers, Liner Hangers 50 Production Vessels 70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 74 Installator Costs 75 Surface Pumps 75 Downhole Pumps	TOTAL INTANGIBLES > COSTS 5	DRILLING COSTS 122.234 344.284 647.039 64.820 14.732 	COMPLETION COSTS	PRODUCTION COSTS 140,000 40,000 20,000 45,833 122,667 66,667 90,000 5,833 - 61,667	TOTAL COSTS \$ 12222 344.22
99 Plugging & Abandonmer TANCIBLE (50 Surface Casing 51 Intermediate Casing 52 Drilling Liner 53 Production Casing 54 Production Casing 56 Weilthead 57 Packers, Liner Hangers 56 Tanks 59 Foduction Vessels 70 Flow Lines 71 Rod stving 72 Artificial Lift Equipment 73 Compressor 74 Installation Costs 75 Surface Pamps 76 Downhole Pumps 76 Downhole Pumps	TOTAL INTANGIBLES >	DRILLING COSTS 122.234 344.284 687.039 64.820 14.732 	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS \$ 12222 344.22
99 Plugging & Abandonmer TANCIBLE (60 Surface Casing 61 Intermediate Casing 62 Drilling Liner 63 Production Casing 64 Production Liner 65 Tubing 66 Wellhead 67 Packers, Liner Hangers 68 Tanks 69 Production Vessels 70 How Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 74 Installation Costs 75 Surface Pumps 75 Downhole Pumps 75 Gas Conditioning / Deby	TOTAL INTANGIBLES >	DRILLING COSTS 122.234 344.284 647.039 64.820 14.732 	COMPLETION COSTS	PRODUCTION COSTS 	TOTAL COSTS \$ 12222 344.22
99 Plugging & Abandonmer TANCIBLE (60 Surface Casing 61 Intermediate Casing 62 Drilling Liner 63 Production Casing 64 Production Casing 66 Wellhead 67 Packers, Liner Hangers 66 Manks 69 Production Vessels 70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 74 Installation Costs 75 Surface Pumps 76 Downhole Pumps 76	TOTAL INTANGIBLES >	DRILLING COSTS 122.234 344.284 687.039 64.820 14.732 	COMPLETION COSTS	PRODUCTION COSTS 140,000 40,000 20,000 45,833 122,667 66,667 90,000 5,833 - 61,667	TOTAL COSTS \$ 12222 344.22
99 Plugging & Abandonmer TANCIBLE (60 Surface Casing 61 Intermediate Casing 62 Drilling Liner 63 Production Casing 64 Production Liner 65 Tabing 66 Weilhead 67 Packers, Liner Hangers 68 Tanka 69 Production Vessels 70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 74 Instillation Costs 75 Surface Pomps 75 Omyte Pomps 77 Measurement & Meter Int 76 Gas Conditioning / Dehy 79 Interconsecting Facility 1	TOTAL INTANGIBLES > COSTS \$ stallation dration Viping	DRILLING COSTS 122.234 344.284 687.039 64.820 14.732 	COMPLETION COSTS	PRODUCTION COSTS 	TOTAL COSTS \$ 12222 344,22
99 Plugging & Abandonmer TANCIBLE (60 Surface Casing 61 Intermediate Casing 62 Drilling Liner 63 Production Casing 64 Production Casing 64 Production Liner 65 Tubing 66 Wellhead 67 Packers, Liner Hangers 66 Wellhead 67 Packers, Liner Hangers 67 Packers, Liner Hangers 68 Tubing 70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 74 Installation Costs 75 Surface Pamps 77 Measurement & Meter In 76 Gaswnhole Fumps 77 Interconneering Facility Johey 79 Interconneering Facility Johey 79 Interconneering Facility Johey 80 Gathering/ Bulk Lines 81 Valves, Domps, Controll	TOTAL INTANGIBLES > COSTS Sublicition distion Piping ers	DRILLING COSTS 122234 344,284 687,039 64,820 14,732 	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS \$ 1222 344.22
99 Plugging & Abandonmer TANCIBLE (60 Surface Casing 61 Intermediate Casing 62 Drilling Liner 63 Production Casing 64 Production Liner 65 Tabing 66 Weilhead 67 Packers, Liner Hangers 68 Tanks 69 Production Vessels 70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 74 Instillation Costs 75 Surface Pumps 76 Downhole Pumps 76 Measurement & Metrin 77 Measurement & Metrin 78 Gas Conditioning / Dehy 79 Interconnecting Facility 1 80 Gathering / Buik Lines 81 Valves, Domps, Controll 81 Tark / Facility Continu	TOTAL INTANGIBLES > COSTS Sublicition distion Piping ers	DRILLING COSTS 122234 344,284 687,039 64,820 14,732 	COMPLETION COSTS	PRODUCTION COSTS 140,000 40,000 20,000 45,833 122,667 66,667 66,667 116,667 116,667 116,667 116,667 116,667 116,857 116,857 11	TOTAL COSTS \$ 1222 344,22
99 Plugging & Abandonmer TANCIBLE (60 Surface Casing 61 Intermediate Casing 62 Drilling Liner 63 Production Casing 64 Production Casing 66 Wellhead 67 Packers, Liner Hangers 68 Tabing 67 Wellhead 69 Production Vessels 70 Flow Lines 71 Rod string 72 Ardificial Lift Equipment 73 Compressor 74 Insulation Costs 75 Surface Pomps 77 Measurement & Meter In 76 Gas Conditioning / Deby 79 Junterconnecting Facility I 80 Gathering / Bulk Lines 81 Valves, Domps, Controll 82 Tank / Facility Containing 83 Plare Stack	TOTAL INTANGIBLES > COSTS Sublicition distion Piping ers	DRILLING COSTS 122234 344,284 687,039 64,820 14,732 	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS \$ 12223 344.28 687.03 740,00 104.82 347,73 45,73 126,66 66,66 66,66 60,00 5,83 16,66 61,66,66 116,66 1
99 Plugging & Abandonmer TANCIBLE (60 Surface Casing 61 Intermediate Casing 62 Drilling Liner 63 Production Casing 64 Production Casing 64 Production Casing 64 Production Liner 65 Tabing 66 Weilhead 67 Packets, Liner Hangers 68 Tanks 69 Production Vessels 70 Flow Lines 71 Rod stving 72 Artificial Lift Equipment 73 Compressor 74 Instillation Cosis 75 Surface Paups 76 Downhole Pumps 76 Downhole Pumps 76 Downhole Pumps 76 Downhole Pumps 76 Downhole Pumps 79 Interconnerting Racilly J 70 Interventing Racilly Controlls 81 Valves, Domps, Controlls 82 Tank / Facility Containg 83 Pare Stack 84 Electrical/Grounding	TOTAL INTANGIBLES > COSTS S statistion dration Piping ers ent	DRILLING COSTS 112,234 344,284 687,039 	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS \$ 12223 344,28
99 Plugging & Abandonmer TANCIBLE (60 Surface Casing 61 Intermediate Casing 62 Drilling Liner 63 Production Casing, 64 Production Casing, 64 Production Liner 65 Tubing 66 Weilhead 67 Packers, Liner Hangers 68 Production Vessels 70 Flow Lines 71 Rod string, 72 Artificial Lift Equipment 73 Compressor 74 Installation Cosis 75 Surface Pamps 77 Measurement & Meter In 76 Gas Conditioning / Deby 79 Insternet, Exility Contain 80 Flaw Exility Contains 81 Valves, Domps, Controll 82 Tank / Facility Contains 83 Flare Stack	TOTAL INTANGIBLES > COSTS S statistion dration Piping ers ent	DRILLING COSTS 112,234 344,284 687,039 	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS \$ 12223 344.28 687.03 740,00 104.82 347,73 45,73 126,66 66,66 66,66 60,00 5,83 16,66 61,66,66 116,66 1
99 Plugging & Abandonmer TANCIBLE (60 Surface Casing 61 Intermediate Casing 62 Drilling Liner 63 Production Casing 64 Production Casing 64 Production Casing 64 Production Liner 65 Tabing 66 Weilhead 67 Packets, Liner Hangers 68 Tanks 69 Production Vessels 70 Flow Lines 71 Rod stving 72 Artificial Lift Equipment 73 Compressor 74 Instillation Cosis 75 Surface Paups 76 Downhole Pumps 76 Downhole Pumps 76 Downhole Pumps 76 Downhole Pumps 76 Downhole Pumps 79 Interconnerting Racilly J 70 Interventing Racilly Controlls 81 Valves, Domps, Controlls 82 Tank / Facility Containg 83 Pare Stack 84 Electrical/Grounding	TOTAL INTANGIBLES > COSTS S statistion dration Piping ers ent	DRILLING COSTS 112,234 344,284 687,039 	COMPLETION COSTS	PRODUCTION COSTS 	TOTAL COSTS \$ 12223 344.28

Drilling Engineer:	PS			
Completions Engineer:	ML			
Production Engineer:	DC			
n Resources Operating, LL	C APPROVAL:			
Co-CEO		Co-CEO	VP - Operations	
	WH	JW		CRM
VP - Land & Legal	BG	VP - Geosciences		
PERATING PARTNER A	PPROVAL:			
Company Name:		Working Interest (%):	Tax ID:	_
		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	2H		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 WI:	county, mexico	<u> </u>		DRILLING DAYS:	19.6
••••••	WOW			****	19.0
GEOLOGIC TARGET:	WOXY			COMPLETION DAYS:	
REMARKS:	Drill a horizontal WCXY AL install cost	well and complete wit	th 44 stages. AFE include	s arilling, completions, l	nowback and Initia
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBLE	CORTE	COSTS	COST5	COSTS	COSTS
	LUSIS	59,066		37,500	5 96.
I Land/ Legal/ Regulatory 2 Location, Surveys & Dama	>	288,079	18,067	2,500	3
2 Location, Surveys & Dama; 4 Freight/Transportation	<u>zes</u>	47,628	43,778	25.000	
s Freight/ Transportation 5 Kental - Surlace Equipmen		124,327	215,417	105,000	
6 Kental - Downhole Equipmen		205.424	59.805	100,000	
7 Kental - Living Quarters	Jerna	48,083	54,480		102
10 Directional Dritting, Surv	and .	429,543			429
11 Drilling	ejs	753,820			
12 Drill Bits		100,176			100,
13 Fuel & Power		188,935	725,061		
14 Cementing & Float Equip		243,296	725,001		
15 Completion Unit, Swab, C	773.1	243,270		15,000	
16 Pertorating, Wireline, Slic		<u>.</u>	393,136		
18 Fertorating, Wireinie, Sic			123,274		
17 Fligh Pressure Pump Truc 18 Completion Unit, Swab, C		<u> </u>	125,274		125
	.10	105,209	140,404		105
20 Mud Circulation System 21 Mud Logging		105,209	<u> </u>	<u>.</u>	
22 Logging / Formation Evalu	untion	7,270	8,339		
23 Mud & Chemicals	Lacion	361,833	438,185		810
24 Water			661,625	300.000	1.005
25 Stimulation		43,459	814,033		814
	N		121,606		
to Stimulation Flowback & I				150,000	254,
25 Mud / Wastewater Dispos		193,104	61,151		234,
80 Rig Supervision / Enginee	ang	121,196	133,420	21,667	
2 Drig & Completion Over	lead	10,423	69,489		
15 Labor		153,358		101,667	1,255
54 Proppant		14.660	1,255,227	· · ·	
75 Insurance		14,660		•	
7 Contingency		<u> </u>	24,421	3,833	
99 Plugging & Abandonmen	TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,655
	TOTAL INTANGIBLES >				
		DRILLING	COMPLETION	PRODUCTION	TOTAL COSTS
TANGIBLE C	OSTS	COSTS	COSTS	COSTS	
50 Surface Casing	5	122,234	-		5 122
51 Intermediate Casing		344,284		·	344,
52 Drilling Liner		•			
3 Production Casing		687,039	•	•	687
A Production Liner		· · ·		· ·	
5 Tubing			-	140,000	140
56 Weilhead		64,820		40,000	104,
57 Packers, Liner Hangers		14,/32		20,000	
8 Tanks					
		•		45,833	
9 Production Vessels		<u> </u>	<u>-</u>		
70 Flow Lines		<u> </u>	<u>;</u>	45,833	126
U Flow Lines				45,833	126, 66,
70 Flow Lines 71 Rod string 72 Artificial Litt Equipment				45,833 126,667 66,667 90,000	
70 Flow Lines 71 Rod string 72 Artificial Litt Equipment				45,833	
70 Flow Lines 71 Rod string 72 Artificial Liff Equipment 73 Compressor				45,833 126,667 66,667 90,000	
10 Flow Lines 11 Rod string 12 Artificial Lift Equipment 13 Compressor 14 Installation Costs				45,833 126,667 66,667 90,000	
TO Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 74 Installation Costs 75 Surface Pamps				45,833 126,667 66,667 90,000 5,833	
U How Lines 1 Rod string 12 Artiticial Litt Equipment 13 Compressor 14 Installation Costs 15 Surface Pumps 16 Downhole Pumps	Hailatton			45,833 126,667 66,667 90,000 5,833 61,667	126, 66, 90, 5, 61,
U Flow Lines 1 Rod string 2 Artitical Litt Equipment 3 Compressor 4 Installation Costs 5 Surface Pumps 6 Downhole Pumps 7 Measurement & Meter Inc				45,833 126,667 66,667 90,000 5,833	126, 66, 90, 5, 61,
U Flow Lines 1 Rod string 2 Artitical Lit Equipment 3 Compressor 4 Installation Costs 5 Surface Pumps 6 Downhole Pumps 7 Measurement & Meter Int 8 Gas Conditioning / Debys	dration			45,833 126,667 66,667 90,000 5,833 61,667	126, 66, 90, 5, 61, 116,
U Flow Lines 1 Rod string 2 Artiticial Lit Equipment 3 Compressor 4 Installation Costs 5 Souriace Pumps 6 Downhole Pumps 7 Messurement & Meter Int 8 Gas Conditioning / Debyg 9 Interconnecting Facility P	dration			45,833 126,667 66,667 90,000 5,833 61,667 116,667	126, 66, 90, 5, 61, 116,
U How Lines 1 Rod string 2 Artitical Litt Equipment 3 Compressor 4 Instalation Costs 5 Surtace Pumps 7 Measurement & Meter Ini 8 Cas Conditioning / Dehy 9 Interconnecting Facility P 9 Interconnecting Facility P 8 Valves, Dumps, Controller 1 Valves, Dumps, Controller	dration iping rs			45,833 126,657 66,567 90,000 5,833 61,667 116,667	126, 66, 90, 5, 61, 116, 20,
70 How Lines 71 Rod string 72 Artitictal Litt Equipment 73 Compressor 74 Installation Costs 75 Surtace Pumps 75 Hownhote Pumps 77 Measurement & Metter Int 78 Gas Conditioning / Debty 79 Interconnecting Facility P 90 Gathering / Balk Lines 91 Valves, Dumps, Controlle	dration iping rs			45,833 125,667 66,667 90,000 5,833 61,667 116,667 20,000	
70 How Lines 71 Rod string 72 Artiticial Liti Equipment 73 Compressor 74 Installation Costs 75 Surtace Pumps 76 Downhole Fumps 76 Downhole Fumps 77 Messurement & Meter Inn 78 Gas Conditioning / Dehy 79 Inferconnecting Facility P 90 Gathering / Bulk Lines 81 Valves, Dumps, Controlle 23 Tark / Facility Containme	dration iping rs			43,833 126,667 66,667 90,000 5,833 61,667 110,667 20,000 108,533 43,533	126 665 900 61, 116, 200 1083 433
70 How Lines 71 Rod string 72 Artiticial Liti Equipment 73 Compressor 75 Surtace Pumps 75 Surtace Pumps 75 Surtace Pumps 76 Cas Conditioning / Deby 79 Interconnecting Facility P 80 Gathering / Bulk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containme 83 Hare Stack	dration iping rs			43,833 126,667 66,667 90,000 5,833 61,667 116,667 20,000	126,6 66, 300, 5, 61, 116, 200, 108, 433, 16,
99 Production Vessels 70 How Lines 71 Kod string 72 Artitickal Litt Equipment 73 Compressor 74 Installation Costs 75 Sourtace Pamps 75 Downhole Pumps 75 Downhole Pumps 75 Gas Conditioning / Deby 79 Interconnecting Facility P 80 Gatheritg / Butk Lines 81 Gatheritg / Butk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containne 84 Electrical / Grounding 85 Communications / SCAD	dration ipIng rs mt			43,833 126,667 66,687 90,000 5,833 61,667 20,000 20,000 108,833 43,533 16,667 50,000	66, 1125, 66, 90, 5, 61, 116, 249, 108, 433, 16, 50, 35, 35,
70 How Lines 71 Rod string 72 Artiticial Litt Equipment 73 Compressor 74 Installation Cosis 75 Surface Pumps 76 Downhole Pumps 76 Downhole Pumps 79 Interconnecting Facility P 80 Gathering / bulk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containme 83 Plare Slack 44 Electrical / Grounding 85 Communications / SCADD	dration ipIng rs mt			43,833 126,667 66,667 90,000 5,833 61,667 116,667 20,000 100,533 16,567	126, 665, 900, 5, 61, 116, 220, 108, 45, 161, 500, 500, 500, 500, 500, 500, 500, 50
70 How Lines 71 Rod string 72 Rod string 73 Artiticial Litt Equipment 73 Compressor 74 Installation Costs 75 Surtace Pumps 75 Downhole Pumps 76 Downhole Pumps 70 Measurement & Meter Int 78 Gas Conditioning J Weby 79 Interconnecting Facility P 80 Gathering / Bulk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containme 83 Hare Stack 4 Electrical / Grounding	dration iping rs ent			43,833 126,667 66,667 5,853 61,667 116,667 20,000 20,000 100,533 16,667 50,000 36,667 833	126 66 900 5 61, 116 220 108 43 5 16 50 50 50 50 50 50 50 50 50 50 50 50 50
70 How Lines 71 Rod string 72 Artiticial Litt Equipment 73 Compressor 74 Installation Cosis 75 Surface Pumps 76 Downhole Pumps 76 Downhole Pumps 79 Interconnecting Facility P 80 Gathering / bulk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containme 83 Plare Slack 44 Electrical / Grounding 85 Communications / SCADD	tration iping rs nt A TOTAL TANGIBLES >			43,833 126,667 66,667 90,000 5,833 61,667 116,667 20,000 20,000 108,333 43,533 16,667 50,000 36,667 833 43,533	126 66 900 5 16 16 20 108 43 16 50 35 222
70 How Lines 71 Rod string 72 Artiticial Litt Equipment 73 Compressor 74 Installation Cosis 75 Surface Pumps 76 Downhole Pumps 76 Downhole Pumps 79 Interconnecting Facility P 80 Gathering / bulk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containme 83 Plare Slack 44 Electrical / Grounding 85 Communications / SCADD	dration iping rs ent	1,233,109		43,833 126,667 66,667 5,853 61,667 116,667 20,000 20,000 100,533 16,667 50,000 36,667 833	126 65 900 5 61 716 20 70 8 6 8 90 90 90 90 90 90 90 90 90 90 90 90 90
U Flow Lines 1 Rod string 2 Artiticial Liti Equipment 3 Compressor 4 Installation Costs 5 Surtace Pumps 5 Surtace Pumps 7 Measurement & Meter Int 8 Gas Conditioning / Deby 9 Inferconnecting Facility P 10 Gathering / Bulk Lines 10 Gathering / Bulk Lines 10 Valves, Dumps, Controllen 10 Flare Stack 4 Electrical / Grounding 8 Communications / SCALD 16 Instrumentation / Satety	tration iping rs nt A TOTAL TANGIBLES > TOTAL COSTS >			43,833 126,667 66,667 90,000 5,833 61,667 116,667 20,000 20,000 108,333 43,533 16,667 50,000 36,667 833 43,533	126 66 900 5 16 16 20 108 43 16 50 35 222
U Flow Lines 1 Rod string 2 Artificial Lift Equipment 3 Compressor 4 Installation Costs 5 Surface Pumps 5 Downhole Pumps 7 Measurement & Meter Int 8 Gas Conditioning / Deby 9 Interconnecting Facility / Deby 9 Interconnecting Facility / Deby 9 Interconnecting Facility / Deby 19 Valves, Dumps, Controlle 2 Tank / Facility Containme 3 Flare Stack 4 Electrical / Grounding 15 Communications / SCAD. 16 Instrumentation / Satety PARED BY Permian Rese	tration iping rs nt TOTAL TANGIBLES > TOTAL COSTS > purces Operating, LLC:			43,833 126,667 66,667 90,000 5,833 61,667 116,667 20,000 20,000 108,333 43,533 16,667 50,000 36,667 833 43,533	126 66 900 5 16 16 20 108 43 16 50 35 222
U Flow Lines 1 Rod string 2 Artiticial Litt Equipment 3 Compressor 4 Instalation Costs 5 Surface Pumps 6 Downhole Pumps 7 Measurement & Meter Int 8 Gas Conditioning, Yoehy 9 Interconnecting Facility P 10 Gathering / bulk Lines 11 Valves, Dumps, Controlle 21 Tank / Facility Containme 20 Flare Stack 4 Electrical / Grounding 5 Communications / SCAD	tration iping rs TOTAL TANGIBLES > TOTAL COSTS > Durres Operating, LLC: r. P5			43,833 126,667 66,667 90,000 5,833 61,667 116,667 20,000 20,000 108,333 43,533 16,667 50,000 36,667 833 43,533	126 66 900 5 61 116 20 088 433 16 50 085 50 6 50 6 50 6 50 6 50 50 50 50 50 50 50 50 50 50 50 50 50

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 ATE may be delayed up to a year after the well has b egulatory under or other accounted concerns the well tog this AF2, the Participant ogrees to pay its

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

DATE:	2.17.2023	211		AFE NO.:	1 Tonto; Wolfcamp
WELL NAME:	Joker 5-8 Federal Com 20	3H			
LOCATION:	Section 5, T20S-R34E			MD/TVD:	21,191' / 10,906'
COUNTY/STATE:	Lea County, New Mexico)		LATERAL LENGTH:	10,000'
Permian WI:		·		DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY			COMPLETION DAYS:	19
REMARKS:	Drill a horizontal WCXY AL install cost	well and complete wi	-	s drilling, completions,	flowback and Initia
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBLE	COSTS	COSTS	COSTS	COST5	COSTS
1 Land/ Legal/ Regulatory	5	59,066	· · ·	37,500	S 96
2 Location, Surveys & Dama	ges	288,079	18,067	2,500	308
4 Freight / Transportation		47,628	43,778	25,000	116
5 Kental - Surface Equipmen		124,32/	215,417	105,000	444
6 Kental - Downhole Equips	nent	205,424 48,083	59,805 54,480		265
7 Kental - Living Quarters 10 Directional Drilling, Surv		48,083	34,460		429
11 Drilling	veys .	753,820		·	753
12 Drill Bits		100,176		<u> </u>	100
13 Fuel & Power		188,935	725,061	<u> </u>	913
14 Cementing & Float Equip	,	243,296			243
15 Completion Unit, Swab,	CTU		•	15,000	
16 Periorating, Wireline, Sil		•	393,136	•	393
17 High Pressure Pump Tru		·	123,2/4	•	123
18 Completion Unit, Swab,	210	-	146,484	· · · ·	146
20 Mud Circulation System		105,209			105
21 Mud Logging 22 Logging/ Formation Eval	ration	17,529	8,339	<u> </u>	
22 Logging/ Formation Eval 23 Mud & Chemicals		361,835	438,185	10,000	
24 Water		43,459	661,625	300,000	1,005
25 Stimulation			814,033	<u>.</u>	814
26 Stimulation Flowback &	Disp		121,506	150,000	2/1
28 Mud / Wastewater Dispo:		193,104	61,151		
30 Rig Supervision / Engine	ering	121,196	133,420	21,667	276
32 Drig & Completion Over	head	10,423		·	10
35 Labor		153,358	69,489	101,667	324
54 Proppant		<u> </u>	1,255,227		1,255
95 Insurance		14,660	-		14
97 Contingency		•	24,421	3,833	
99 Plugging & Abandonmer	TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,65
		DRILLING COSTS	COMPLETION COSTS	PRODUCTION	TOTAL COSTS
TANGIBLE (60 Surface Casing	-0515	122,234		(0313	\$ 122
61 Intermediate Casing	3	344,284	<u> </u>		3 122
62 Drilling Liner					
63 Froduction Casing		687,039	·		687
64 Production Liner				<u> </u>	
65 Tubing		· · ·		140,000	
66 Wellhead		64,820	· · ·	40,000	104
67 Packers, Liner Hangers		14,732		20,000	
68 Tanks				45,833	45
69 Production Vessels		•		126,667	126
70 Flow Lines		- "	-	66,667	66
71 Rod string		•	-		
72 Artificial Lift Equipment		<u> </u>	-	90,000	
73 Compressor 74 Installation Costs				5,833	
74 Installation Costs 75 Surface Pumps					
76 Downhole Pumps		<u> </u>	<u> </u>	61,667	61
77 Measurement & Meter in	stallation		<u> </u>	116,667	T16
78 Gas Conditioning / Dehy		······			
79 Interconnecting Facility P		•	<u> </u>	20,000	
80 Gathering / Bulk Lines	-	•			
51 Valves, Dumps, Controlle		•	-	108,333	108
52 Tank / Facility Containme	ent			43,333	43
53 Flare Stack		•		16,667	16
H Electrical / Grounding		•		50,000	50
65 Communications / SCAD	A	<u> </u>		36,667	36
66 Instrumentation / Safety			<u> </u>	833	
	TOTAL TANGIBLES >	1,233,109	0	989,167	2,22
	TOTAL COSTS >	4,749,528	5,367,000	1,761,334	11,877
PARED BY Permian Res	ources Operating, LLC:				
Drilling Engineer					
Completions Engineer					
Production Engineer					
	LLC APPROVAL:				
ulan Resources Operatin;					
alan Resources Operating		6-0	EO	VP - Opera	tions
alan Resources Operating Co-CEC VP - Land & Lega	о wн	Co-C VP - Geoscien	jw	VP - Opera	ationsCRM

NON OPERATING PARTNER APPROVAL:

Company Name:	Working Interest (%)	Tax ID:		
Signed by:	Date			
Title:	Approval	السط		
The costs on this APE are reliantice only and may not be construed as colleage on any specific lines or the total cost of the project. Turking installation approved under the APE care be deleyed up to a year other the avec line in the construction (in a recenting the APE, the Perstedent scores to pay to				

proportionales dates of solution to source, and solution provides dynamics and and construction on provide source and provide s

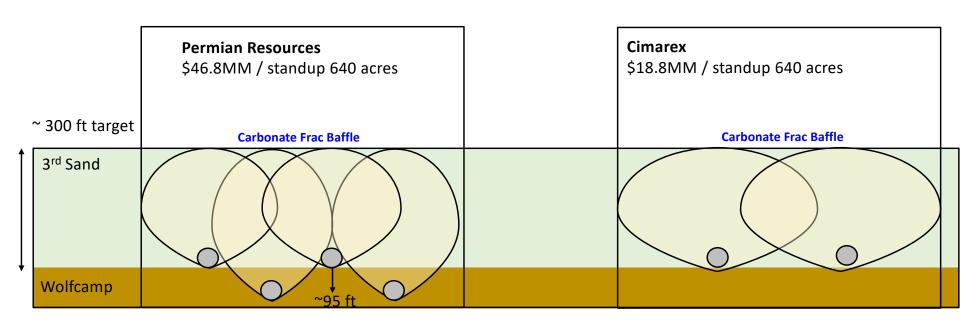
Permian Resources Operating, LLC 300 N. Marienfeld St., 5te. 1000 Midland, TX 79701 Phone (432) 695-4222 • Fax (432) 695-4063 ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

LOCATION: G GOUNT//STATE: L Permlan WI: GEOLOGIC TARGET: W BEOLOGIC TARGET: W D REMARKS: A INTANGIBLE CO: T Land / Legal / Regulatory 2 Location, Surveys & Danages 4 Height / Tansportation 5 Kental - Survase Equipment 6 Kental - Downhole Equipment 6 Kental - Divide Quarters 10 Directional Dritting, Surveys 11 Deriting	L install cost	0	th 44 stages. AFE includ	FIELD: MD/TVD: LATERAL LENGTH: DRILLING DAYS: COMPLETION DAYS: es drilling, completions, l PRODUCTION	Tonto; Wolfcamj 21,181' / 10,896' 10,000' 19.6 19 flowback and Initia
COUNTY/STATE: L Permian WI: GEOLOGIC TARGET: W D REMARKS: A INTANGIBLE CO: 1 Land / Legal / Regulatory 2 Location, Surveys & Damages 4 Height / Tansportation 5 Kental - Surviace Equipment 6 Kental - Downhote Equipment 10 Directional Drilling, Surveys 11 Drilling, Surveys	ea County, New Mexico /CXY rill a horizontal WCXY L install cost	Well and complete wil DRILLING COSTS	COMPLETION	LATERAL LENGTH: DRILLING DAYS: COMPLETION DAYS: es drilling, completions, l	10,000' 19.6 19
Permian WI: GEOLOGIC TARGET: W D REMARKS: A INTANGIBLE CO: I Land / Legal / Regulatory 2 Location, Surveys & Damages 4 Areight / Transportation 5 Kental - Downhole Equipment 6 Kental - Downhole Holipment 7 Kental - Living Quarters 10 Directional Drilling, Surveys 11 Derilling	/CXY rill a horizontal WCXY L install cost	Well and complete wil DRILLING COSTS	COMPLETION	DRILLING DAYS: COMPLETION DAYS: es drilling, completions, l	19.6 19
GEOLOGIC TARGET: W D REMARKS: A INTANGIBLE CO: 1 Land / Legal / Regulfatory 2 Location, Surveys & Damages 4 reght/ 1 ransportation 5 Kental - Suriace Equipment 6 Kental - Downhole Equipment 7 Kental - Living Quarters 10 Directional Drilling, Surveys 11 Derilling, Surveys	rill a horizontal WCXY L install cost	DRILLING COSTS	COMPLETION	COMPLETION DAYS:	19
GEOLOGIC TARGET: W D REMARKS: A INTANGIBLE CO: I Land/ Legal/ Kegulatory 2 Location, Surveys & Damages 4 height / Tansportation 5 Kental - Suriace Equipment 6 Kental - Downhole Equipment 7 Kental - Living Quarters 10 Directional Drilling, Surveys 11 Derilling	rill a horizontal WCXY L install cost	DRILLING COSTS	COMPLETION	es drilling, completions, l	
INTANGIBLE CO: I Land/ Legal/ Regulatory 2 Location, Surveys & Damages 4 Height/ Transportation 5 Kental - Surlace Equipment 6 Rental - Downhote Equipment 7 Kental - Living Quarters 10 Directional Drilling, Surveys 11 Derilling	rill a horizontal WCXY L install cost	DRILLING COSTS	COMPLETION	es drilling, completions, l	
INTANGIBLE CO: ILand/Legal/Regulatory 2 Location, Surveys & Damages 4 height/Tansportation 5 Kental - Surviace Equipment 6 Kental - Downhote Equipment 7 Kental - Livring Quarters 10 Directional Drilling, Surveys 11 Drilling	L install cost	DRILLING COSTS	COMPLETION		
1 Land / Legal / Regulatory 2 Location, Surveys & Damages 4 Freight / Transportation 5 Kental - Surlace Equipment 6 Kental - Downhole Equipment 7 Kental - Living Quarters 10 Directional Drilling, Surveys 11 Defiling	5T5 \$	COST5		PRODUCTION	
1 Land / Legal / Regulatory 2 Location, Surveys & Damages 4 Freight / Transportation 5 Kental - Surlace Equipment 6 Kental - Downhole Equipment 7 Kental - Living Quarters 10 Directional Drilling, Surveys 11 Defiling	5T5 \$	COST5		PRODUCTION	TOTAL
I Land / Legal / Regulatory 2 Location, Surveys & Damages 4 Freight / Transportation 5 Rental - Surlace Equipment 6 Rental - Downhole Equipment 7 Rental - Living Quarters 10 Directional Drilling, Surveys 11 Deilling	5			COSTS	COSTS
2 Location, Surveys & Damages 4 Freight/ Transportation 5 Rental - Surlace Equipment 6 Rental - Downhole Equipment 7 Rental - Living Quarters 10 Directional Dulling, Surveys 11 Drilling			.	- 37,500	\$ 96
4 Freight / Transportation 5 Rental - Suriace Equipment 6 Rental - Downhole Equipment 7 Rental - Living Quarters 10 Directional Drilling, Surveys 11 Drilling		288,079	18,067	2,500	
5 Kental - Surlace Equipment 6 Kental - Downkole Equipment 7 Kental - Living Quarters 10 Directional Drilling, Surveys 11 Drilling		47,628	43,778	25,000	116
6 Kental - Downhole Equipment 7 Kental - Living Quarters 10 Directional Drilling, Surveys 11 Drilling		124,327	215,417	105.000	444
7 Kental - Living Quarters 10 Directional Drilling, Surveys 11 Drilling		205,424	59,805		265
10 Directional Drilling, Surveys 11 Drilling		48,083	54,480		102
11 Drilling		429,543		·····	429
		753,820	······································		/53
12 Drill Bils		100,176	······································	· · · · ·	100
13 Fuel & Power		188,935	725,061		913
14 Cementing & Float Equip		243,296			243
15 Completion Unit, Swab, CIU			······································	15,000	
16 Pertorating, Wireline, Slicklin			393,136	·	393
17 High Pressure Pump Truck		· · ·	123,274		123
18 Completion Unit, Swab, CIU			146,484		146
20 Mud Circulation System		105,209			105
21 Mud Logging		17,529	·····	<u> </u>	
22 Logging / Formation Evaluation	on	7,270	8,339	·	
23 Mud & Chemicals		361,835	438,185	10,000	
24 Water		43,459	661,625	300,000	1,00:
25 Stimulation			814,033		814
26 Stimulation Flowback & Disp	,	— <u> </u>	121,606	150,000	
25 Mud / Wastewater Disposal		193,104	61,151		
30 Rig Supervision / Engineering	7	121,196	133,420	21,667	
32 Drig & Completion Overhead		10,423			n
35 Labor		153,358	69,489	101,667	324
54 Proppant		135,550	1,255,227		
95 Insurance		14,660			
97 Contingency			24.421	3,833	
99 Plugging & Abandonment					
	TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,65
	OTAC LATALIGISCUS -				
		DRILLING	COMPLETION	PRODUCTION	TOTAL
TANGIBLE COS	rs	COSTS	COSTS	COSTS	COSTS
60 Surface Casing		122,234	· ·	•	-5 12
61 Intermediate Casing		344,284			
62 Drilling Liner		•	•	· ·	
63 Production Casing		687,039			68/
64 Production Liner		· · ·			· · · · ·
65 Tubing			<u> </u>	T40,000	
66 Wellhead		64,820		40,000	104
67 Packers, Liner Hangers		14,732		20,000	- 34
68 Tanks		· ·	· · · ·	45,833	
69 Production Vessels		· ·	· · ·	126,667	126
70 Flow Lines			·	65,667	
71 Rod string		<u> </u>		<u> </u>	
72 Artificial Lift Equipment				90,000	
73 Compressor		· · · ·		5,833	
74 Installation Costs			_		
75 Surface Pumps				61,667	67
76 Downhole Pumps		<u> </u>			
77 Measurement & Meter Install	ation	<u> </u>		116,667	
76 Gas Conditioning / Dehydrati		<u> </u>			
79 Interconnecting Facility Pipin		<u> </u>	<u> </u>	20.000	
60 Gathering / Bulk Lines	8	<u> </u>	<u> </u>		
51 Valves, Dumps, Controtters		<u> </u>	<u> </u>	108,333	108
52 Tank / Facility Containment				43,333	
83 Flare Stack			<u> </u>	16,667	
64 Electrical / Grounding		<u> </u>		50,000	
55 Communications / SCADA		<u> </u>	<u> </u>	36,667	
6 Instrumentation / Satety		<u> </u>		833	
of and and matching charty	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 Resour	es Operating, LLC:	P		· · · ·	
Drilling Engineer:	P5				
	ML				
00	DC ·				
Completions Engineer. Production Engineer.			· · · · ·		
Completions Engineer: Production Engineer:					
Completions Engineer: Production Engineer:	LC APPROVAL:				
Completions Engineer: Production Engineer:		Co-C		VP - Opera	
Completions Engineer: Production Engineer: nian Resources Operating, L Co-CEO	LC APPROVAL:		JW	VP - Opera	CRM
Completions Engineer: Production Engineer: mian Resources Operating, L		Co-C VP - Geoscien	JW	VP - Opera	
Completions Engineer: Production Engineer: nlan Resources Operating, L Co-CEO			JW	VP - Opera	
Completions Engineer: Production Engineer: Idan Resources Operating, L Co-CEO			JW	VP - Oper	
Completions Engineer: Production Engineer: ulan Resources Operating, L Co-CEO			JW	VP - Open	
Completions Engineer: Production Engineer: nlan Resources Operating, L Co-CEO	WH BG		JW	VP - Oper	

Date ed by: Approval: Yes Title: No (mark one) isyed up to a year after the well has b

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.



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

Released to Imaging: 7/13/2023 5:00:46 PM



District I 1625 N. French Dr., Hobbs, NM 88240 Phone:(575) 393-6161 Fax:(575) 393-0720 District II

811 S. First St., Artesia, NM 88210 Phone:(575) 748-1283 Fax:(575) 748-9720

District III

1000 Rio Brazos Rd., Aztec, NM 87410 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV 1220 S. St Francis Dr., Santa Fe, NM 87505 Phone: (505) 476-3470 Fax: (505) 476-3462

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

QUESTIONS

- 1	OGRID:					
CIMAREX ENERGY CO.	215099					
	Action Number:					
Midland, TX 79706	240066					
	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			

Page 28 of 28

Action 240066