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

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

Cimarex Energy Co., ("Cimarex"), through its undersigned attorneys, considering the complex questions and issues of first impression raised in Cimarex's Brief Providing Foundation for Evaluating A Single Reservoir Situated in the Third Bone Spring without Frac Baffles Between Formations, Under the Oil and Gas Act, NMSA 1978 §§ 70-2-1 et al. ("Brief")," moves the New Mexico Oil Conservation Division ("Division") to dismiss its prior "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," submitted to the Division on July 18, 2022, ("Prior Motion") in the above-referenced cases. At this point in the proceedings involving the above-referenced cases, Cimarex had requested and was granted leave to submit the Brief in order to provide the Division with background information regarding the novelty of the above-referenced

cases that Cimarex believes is essential for their evaluation in a contested hearing. In lieu of its Prior Motion, Cimarex requests that the Division consider and grant as its replacement this "Amended Motion for an Order to Prohibit the Drilling of Wells in the Upper Wolfcamp to Protect Correlative Rights and Optimize Production of the Subject Lands" ("Amended Motion").

In support of its Amended Motion, Cimarex submits the following:

I. Factual and procedural background:

1. The facts and background are much the same as in the Prior Motion and are presented as follows with certain additions to account for any updates pursuant to Cimarex's Brief.

2. Cimarex has been preparing to develop Sections 4, 5, 8 and 9, Township 20 South, Range 34 East, NMPM, Lea County, New Mexico ("Subject Lands") since 2018. Based on its detailed analysis of the specific geology and reservoir characteristics of this area, Cimarex filed on March 9, 2023, 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. Cimarex in its Brief presented Option 1 for the compulsory pooling of the Bone Spring formation but not the Wolfcamp formation and presented Option 2 for the compulsory pooling of both the Bone Spring formation and the Wolfcamp formation. In accordance with Option 2, Cimarex filed applications in Case Nos. 23594 through 23601 for pooling the Wolfcamp formation. *See* Cimarex's Brief at Section I. p. 10, for a full description of Option 1, and at Section II. p. 15, for a full description of Option 2.

3. 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 Bone Spring Sand but also that the Upper Wolfcamp reservoir under the Subject Lands and surrounding area

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("Subject Area") was significantly below average in quality and potentially rendering Wolfcamp wells economically unfeasible. *See* Exhibit 1, attached hereto, showing that the consensus landing for optimal development is the Third Bone Spring Sand, not the Upper Wolfcamp. Cimarex respectfully submits that this is why operators¹ in the Subject area overwhelmingly pool the Bone Spring formation only and not the Wolfcamp formation.

4. Cimarex has also determined that there is no baffle between the Third Bone Spring Sand and Upper Wolfcamp that would normally prevent communication between the two formations, resulting in a single reservoir as a common source of supply. Due to the absence of the baffle between the Third Bone Spring Sand and the Upper Wolfcamp, Cimarex has concluded that if Upper Wolfcamp wells were to be completed while drilling and developing the Third Bone Spring Sand, those wells would drain much of the reserves in the Third Bone Spring Sand, where the best reserves are located and would likely result in permanent damage to the target reservoir in the Third Bone Spring Sand.

5. Thus, in Option 1, Cimarex limits its proposed development and applications for compulsory pooling to the Bone Spring and does not seek to pool the Upper Wolfcamp. Option 1 comports to how other operators are developing the surrounding areas that share the same three fundamental characteristics, *viz.*, excellent reserves in the Third 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 and the dearth and

¹ Consider that searches in the OCD database appears to show that Permian Resources began actively filing a series of applications for compulsory units in the Subject Area beginning in 2020. Outside of the above-referenced cases it filed with the OCD for the contested hearing with Cimarex, Permian Resources appears to have filed at total of 11 applications to pool units in the Subject Area. Ten of the 11 applications proposed to pool only the Bone Spring and not the Wolfcamp, and only one application pools the Wolfcamp but not the Bone Spring. *See* Case Nos. 23508, 23509, 23510, 23511, 23524, 23525, 23526, 23527, 23528, 23529, and 23530.

rarity of the Wolfcamp development.

6. 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 23516-19. Permian Resources also filed applications for drilling and pooling the Wolfcamp formation in Case Nos. 23512-23515 and 23520-23523, proposing to drill wells in the Upper Wolfcamp despite the fact that those wells would drain the Third 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.

7. Given the poor quality of the Upper Wolfcamp reservoir, the lack of the baffle that would otherwise minimize drainage of the Third 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 dollars² 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.

8. 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

² 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.

reservoir data, that the Upper Wolfcamp should not be drilled with additional wells 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.

9. Consequently, Cimarex provided the Division with its Option 2, that involved 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 Third Bone Springs Sand, the same wells proposed by Cimarex's Bone Spring applications and prohibit the drilling of wells in Upper Wolfcamp. Under Option 2, the "drainage" of the Wolfcamp would be classified as "production" once the Wolfcamp formation is pooled. 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 Third Bone Spring Sand, and not in the Upper Wolfcamp, in order preserve the Upper Wolfcamp from being drilled and thereby protect the common source of supply from drainage and damage.

II. Argument:

A. The optimal development of the Subject Lands is to drill wells in the Third Bone Spring Sand and either select Cimarex's Option 2 or, in the alternative, select Option 1 with a protective buffer zone that would prohibit the drilling of wells in the Upper Wolfcamp.

10. In order to protect the abundant reserves in the Third Bone Spring Sand, and resolve the dilemma created by Permian Resources, the Division, if it finds Cimarex's position in these matters persuasive, should either approve Cimarex's Option 1 or Option 2. If Option 1 is selected for pooling only the Bone Spring formation, this could potentially leave the Upper Wolfcamp open and vulnerable to future applications for drilling and pooling, and therefore, Cimarex under Option 1, if selected, respectfully requests the Division to 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 been repeatedly demonstrated over the years by the fact that operators who were free to drill in both the Bone Spring and Wolfcamp decided to develop the Third Bone Spring Sand and to forego drilling any Upper Wolfcamp wells. *See* Exhibits 1 and 2, attached hereto.

11. Cimarex filed its Wolfcamp applications 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. In its competing Wolfcamp applications, Cimarex emphasized that only the Third Bone Spring Sand 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.

12. Cimarex submits that if Option 1 is pursued, the best course of action for the Division to follow in order to ensure achieving optimal production from the rich reserves located in the Third Bone Spring Sand and to protect the correlative rights would be to allow the drilling of the Third 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 Third Bone Spring, thus protecting the correlative rights of the owners in the Third Bone Spring. In addition, the protective zone would save tens of millions of dollars for wells that would not add to EUR and would likely damage the reservoir. Cimarex has carefully analyzed the need for such a protective buffer zone and provides in Exhibit 4, attached hereto, a graphic depiction and quantification of the area and extent of the Upper Wolfcamp that needs to be protected.

13. In the alternative, Cimarex submits that Option 2, as explained in Cimarex's Brief,

is a fully viable option for the development of the Third Bone Spring for achieving optimal production, preventing waste, and protecting correlative rights. If the Division should decide to select Cimarex's Option 2, then Cimarex would be pooling and spacing the Bone Spring formation as well as the Wolfcamp formation based on the dedication of its Third Bone Spring wells to both units. The granting of operatorship to Cimarex of the Wolfcamp unit, if pooled and spaced, would allow Cimarex to produce the Upper Wolfcamp from its Third Bone Spring Wells, and thereby protect the common source of supply from the drilling of unnecessary wells into the Upper Wolfcamp.

14. The Division has the clear authority under NMSA 1978 Section 70-2-11 to fashion such necessary solutions provided either by Cimarex's Option 2 or Option 1 including the protective buffer zone, as Section 70-2-11 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 Resources in the Upper Wolfcamp are clearly unnecessary, wasteful, and unwarranted based on the geological and reservoir data.

III. Conclusion:

15. Cimarex provides this Amended Motion as an update to and replacement for Cimarex's Prior Motion filed July 18, 2023. The Division granted Cimarex's recent Motion for Continuance of the above-referenced cases to provide additional time to prepare for the hearing to be held August 9-10, 2023, pursuant to a special docket, including allowing Cimarex to submit a Brief that describes the cases from Cimarex's position and allowing Permian Resources to provide a response. In the Brief, Cimarex describes two options, Option 1 and Option 2, based on Cimarex's current applications in place for the Bone Spring formation and the Wolfcamp formation. Cimarex has been grappling with the question of which of its applications best apply to

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the Subject Lands to allow the Division to choose the best development plan between Cimarex and Permian Resources. In its Brief, Cimarex shows that both sets of applications can apply depending on which Option the Division would select if it were persuaded that Cimarex's development plan is the one that would best prevent waste, protect correlative rights, and avoid the drilling of unnecessary wells.

16. As a result, Cimarex requests that the Division dismiss its Prior Motion, prior to the contested hearing, and give consideration to this Amended Motion during the hearing along with Cimarex's Brief that describes the Options to be decided at the conclusion of the Division's review of the contested cases when the Division makes it final ruling between Cimarex's development plan and Permian Resources' development plan.

17. If the Division should select Cimarex's Option 2 in its ruling, then Cimarex would receive pooling orders for both the Bone Spring formation and the Wolfcamp formation, and as a consequence of the orders received, the Wolfcamp formation would be protected from drilling. The protective buffer zone requested herein would not be needed, and this Amended Motion would become moot.

18. However, in the alternative, if the Division should select Cimarex's Option 1, then Cimarex would receive an order for the compulsory pooling of just the Bone Spring formation, and in that case, Cimarex respectfully asks the Division to grant its request in this Amended 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, as these applications apply only to Option 2 and not Option 1; (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

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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 target the Lower Wolfcamp, and not the Upper Wolfcamp.

Respectfully submitted,

ABADIE & SCHILL, PC

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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

Oil Conservation Division and was served on counsel of record via electronic mail on July 28,

2023:

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/s/ Darin C. Savage

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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 25 te bench 20 te bench 15 nd 5	2010	2011	2012	2013	2014	2015			2018		S:	2021	2022	2023	2015	W		1P:	2019	2020
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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				
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READ & STEVENS INC						2			2				1							
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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

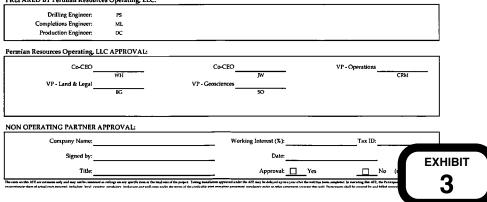
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Permian Resources Operating, LLC 300 N. Marienfeld St., Ste. 3000 Midland, TX 79701 Phone (432) 695-4222 • Fax (432) 695-4063

DATE: 2	17.2023		DRIZATION FOR EXPEND	AFE NO .:	1
	ane 4-9 Federal Com 201	н		FIELD:	Tonto; Wolfcamp
	atie 4-9 Federal Colli 201 ection 4, T20S-R34E	<u> </u>		MD/TVD:	21,210' / 10,925'
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	ea County, New Mexico			_	
ermian WI:				DRILLING DAYS:	19.6
	/CXY			COMPLETION DAYS:	19
D	rill a horizontal WCXY v	vell and complete wit	th 44 stages. AFE include	s drilling, completions,	flowback and Initial
REMARKS: A	L install cost				
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBLE CO	STS	COSTS	COSTS	COSTS	COSTS
Land/Legal/Regulatory	5	59,066	-	37,500	\$ 96,
Location, Surveys & Damages		288,079	18,067	2,500	308,
Freight/Transportation		47,628	43,778	25,000	116,-
Rental - Surface Equipment	-	124,327	215,417	105,000	444,
Rental - Downhole Equipmen	-	205,424	59,805 54,480	<u> </u>	265,
Rental - Living Quarters	-	48,083	54,480		429,
0 Directional Drilling, Surveys 1 Drilling	-	753,820	<u> </u>	<u> </u>	
2 Drill Bits	-	100,176			100,
13 Fuel & Power	-	188.935	725,061		913,9
14 Cementing & Float Equip	-	243,296			243,
15 Completion Unit, Swab, CTU	-		<u> </u>	15,000	
6 Perforating, Wireline, Slickli		· · ·	393,136		393,
7 High Pressure Pump Truck	-		123,274	-	123,
8 Completion Unit, Swab, CTL		· · ·	146,484	-	146,
20 Mud Circulation System	-	105,209		· · · · ·	105,
21 Mud Logging	-	17,529	· ·	-	17,
22 Logging/Formation Evaluati	on	7,270	8,339		15,0
23 Mud & Chemicals		361,835	438,185	10,000	810,0
24 Water		43,459	661,625	300,000	1,005,0
25 Stimulation		· ·	814,033	·	814,0
26 Stimulation Flowback & Dis	P _	-	121,606	150,000	271,
28 Mud/Wastewater Disposal	-	193,104	61,151		254.
30 Rig Supervision / Engineerin		121,196 10,423	133,420	21,667	10,4
32 Drlg & Completion Overhead 35 Labor	· _	153,358	69,489	101,667	324,
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95 Insurance	-	14,660			
97 Contingency	-		24,421	3,833	28.
99 Plugging & Abandonment	-	<u> </u>			
	TOTAL INTANGIBLES >	3,516,419	5,367,000	772.167	9,655
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59 Surface Casing 50 Surface Casing 50 Diffing Liner 53 Dubling Long 54 Production Liner 55 Tubing 56 Weilhead 57 Packers, Liner Hangers 58 Tunks 59 Production Vessels 59 Production Vessels 71 Rod string 72 Antificial Lift Equipment 73 Antificial Lift Equipment 74 Installation Costs 75 Surface Pumps 76 Downhole Pumps 76 Downhole Pumps 76 Goomhole Pumps 76 Goomhole Romps 79 Interconnecting Facility Pips 80 Cathering, Bulk Lines 81 Valves, Dumps, Controllers	ion -	344.284 687/039 		140,000 440,000 20,000 45,833 122,667 66,667 90,000 5,833 61,667 116,667 20,060	687/ 1400 1644, 34, 45, 166, 666, 950, 5, 61, 116, 220, 108,
49 Surface Casing 51 Interrediste Casing 52 Drilling Liner 53 Production Liner 54 Production Liner 55 Tubing 56 Wellhread 67 Packers, Liner Hangers 58 Tanks 59 Production Vessels 70 Plow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 73 Compressor 75 Surface Pumps 75 Surface Pumps 75 Surface Pumps 75 Omorhole Pumps 79 Interconnecting Facility Plpi 80 Cathering, J Bulk Lines 81 Valves, Dumps, Controllers 82 Tank / Scothly Constainment	ion -	344.284 667.039 		140,000 40,000 20,000 42,833 126,667 66,667 90,000 5,833 61,667 116,677 116,778 116,7788 1	687. 1400 104, 34, 45, 126, 66, 390, 5, 61, 116,
49 Surface Casing 51 Intermediate Casing 52 Drilling Liner 53 Production Casing 54 Drilling Liner 55 Tubing 56 Wellhead 57 Packers, Liner Hangers 58 Tanks 50 Production Vessels 50 Production Vessels 50 Production Vessels 71 Rod string 72 Artificial Lift Equipment 73 Compressor 73 Unitace Pumps 74 Installation Costs 75 Surface Pumps 76 Downhole Pumps 76 Downhole Pumps 77 Measurement & Meter Instal 79 Interconnecting Facility Pipli 50 Gathering, P Bulk Lines 51 Yalves, Dumps, Controllers 52 Tank / Facility Containment 38 Flare Stack	ion -	344.284 687/039 		140,000 440,000 220,000 45,833 122,647 66,647 	687/ 1400 1644, 34, 45, 166, 666, 950, 5, 5, 61, 1166, 220, 1068, 433, 166,
63 Surface Casing 64 Surface Casing 62 Drilling Liner 63 Production Casing 64 Production Liner 65 Tubing 66 Wellhead 67 Packers, Liner Hangers 68 Tanks 69 Production Vessels 70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 73 Compressor 73 Compressor 75 Surface Pumps 75 Surface Pumps 75 Surface Pumps 75 Downhole Pumps 75 Measurement & Meter Instal 78 Gas Conditioning, / Dehydrai 79 Interconnecting Facility Plpi 80 Cathering, / Bulk Lines 81 Valves, Dumps, Controllers 82 Tank / Facility Containment 84 Electrici (Grounding	ion -	344.284 687/039 		140,000 40,000 20,000 42,833 126,667 66,667 90,000 5,833 61,667 116,667 116,667 116,667 116,667 116,667 116,667 116,667 116,667 116,667 116,667 108,333 138,333 16,667 50,000	344. 687/ 1400 104/ 34, 453 1256 662 900 5, 5, 61, 116, 2200 108, 433, 16, 108, 16, 300 30, 31, 31, 31, 31, 31, 31, 31, 31, 31, 31
63 Surface Casing 64 Surface Casing 62 Drilling Liner 63 Production Casing 64 Droduction Liner 65 Tubing 66 Wellhead 67 Packers, Liner Hangers 69 Production Vessels 70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 75 Surface Pumps 75 Surface Pumps 75 Surface Pumps 76 Gaovahole Pumps 77 Messaucement & Meter Instal 76 Gaovahole Pumps 77 Messaucement & Meter Instal 78 Gas Conditionalog / Dehydra 79 Interconnecting Facility Pipla 80 Cathering / Bulk Lines 81 Valves, Dumps, Controllers 82 Tank / Facility Containment 84 Flextical / Grounding 85 Communications / SCADA	ion -	344.284 687/039 		140,000 40,000 20,000 45,833 126,667 66,667 90,000 5,833 61,667 116,667 20,088 108,333 108,333 108,333 108,333 106,667 50,000 33,667	687/ 1400 104, 34, 34, 35, 36, 300 50, 50, 50, 50, 50, 50, 50, 5
63 Surface Casing 64 Surface Casing 62 Drilling Liner 63 Production Casing 64 Production Liner 65 Tubing 66 Wellhead 67 Packers, Liner Hangers 68 Tanks 69 Production Vessels 70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 73 Compressor 73 Compressor 75 Surface Pumps 75 Surface Pumps 75 Surface Pumps 75 Downhole Pumps 75 Measurement & Meter Instal 78 Gas Conditioning, / Dehydrai 79 Interconnecting Facility Plpi 80 Cathering, / Bulk Lines 81 Valves, Dumps, Controllers 82 Tank / Facility Containment 84 Electrici (Grounding	ion -	344.284 687/039 		140,000 40,000 20,000 42,833 126,667 66,667 90,000 5,833 61,667 116,667 116,667 116,667 116,667 116,667 116,667 116,667 116,667 116,667 116,667 108,333 138,333 16,667 50,000	687/ 1400 104/ 343 1256 662 300 357 611 1166 200 1063 433 1665 1665 1665 1675 1665 1675 1775 1



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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: 2.1	7.2023			AFE NO.:	1
	ne 4-9 Federal Com 202	н		FIELD;	Tonto; Wolfcamp
	ction 4, T20S-R34E	<u>. </u>		MD/IVD:	21,210' / 10,925'
	a County, New Mexico			LATERAL LENGTH:	10,000'
Permian WI:	a county, new mexico			DRILLING DAYS:	19.6
	CXY			COMPLETION DAYS:	19
			th 44 stages. AFE includes		
	L install cost	ven and complete wi	n 44 suges. And actione	s uning, completions,	nowback and nutian
REMARKS: A	L Instan cost				
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBLE COS	TS	COSTS	COSTS	COSTS	COSTS
Land/Legal/Regulatory	5	59,066		37,500	5 96,5
Location, Surveys & Damages	-	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	444,7 265,2
Rental - Downhole Equipment	-	205,424 48,083	59,805 54,480	<u> </u>	102,5
Rental - Living Quarters O Directional Drilling, Surveys	_	429,543	34,400	<u> </u>	429,5
1 Drilling	-	753,820	<u> </u>	<u> </u>	753,8
2 Drill Bits	-	100,176			100,1
3 Fuel & Power	-	188,935	725,061	•	913,9
4 Cementing & Float Equip	-	243,296	-		243,2
5 Completion Unit, Swab, CTU	-	-		15,000	15,0
6 Perforating, Wireline, Slicklin	le 🔤		393,136	·	393,1
17 High Pressure Pump Truck	_	· · ·	123,274	· .	123,2
18 Completion Unit, Swab, CTU	-	405 000	146,484	<u> </u>	146,4
20 Mud Circulation System 21 Mud Logging	-	105,209		<u>.</u>	17,5
22 Logging / Formation Evaluation		7,270	8,339	<u> </u>	15,6
23 Mud & Chemicals		361,835	438,185	10,000	810,0
4 Water	-	43,459	661,625	300,000	1,005,0
5 Stimulation	-		814,033		814,0
6 Stimulation Flowback & Disp	-	-	121,606	150,000	271,6
28 Mud/Wastewater Disposal		193,104	61,151		254.2
80 Rig Supervision / Engineering	3	121,196	133,420	21,667	276,2
32 Drig & Completion Overhead	_	10,423	69,489	101,667	10,4
15 Labor 54 Proppant	-	133,336	1,255,227		1,255,2
95 Insurance	-	14,660			14,6
97 Contingency	-		24,421	3,833	28,2
99 Plugging & Abandonment	-			<u> </u>	
	OTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,655,
		DRILLING	COMPLETION	PRODUCTION	TOTAL
TANGIBLE COS	re	COSTS	COSTS	COSTS	COSTS
50 Surface Casing	13 (122,234			S 122.2
1 Intermediate Casing	-	344,284			344,2
2 Drilling Liner	-				
3 Production Casing	-	687,039	· · ·	-	687,0
4 Production Liner			<u> </u>		
i5 Tubing	_			140,000	140,0
6 Wellhead	-	64,820		40,000	104,8
67 Packers, Liner Hangers 68 Tanks	-	14,732	<u> </u>	45,833	45,8
9 Production Vessels	-	<u>.</u>	<u> </u>	126,667	126,6
10 Flow Lines	-	<u> </u>		66,667	66,0
71 Rod string	-	<u> </u>	<u> </u>		
2 Artificial Lift Equipment	-	<u> </u>		90,000	90,0
73 Compressor	-		<u> </u>	5,833	5,8
74 Installation Costs	-			· ·	
75 Surface Pumps	-			61,667	61,6
76 Downhole Pumps		<u> </u>		-	
7 Measurement & Meter Install		-	<u> </u>	116,667	116,0
8 Gas Conditioning / Dehydrat 9 Interconnecting Facility Pipir		<u> </u>	<u> </u>	20,000	20,0
© Gathering / Bulk Lines	- ^	<u> </u>	<u> </u>		20,0
1 Valves, Dumps, Controllers	-		<u> </u>	108,333	108,
2 Tank / Facility Containment	-	-		43,333	43,
3 Flare Stack	-	•		16,667	16,0
64 Electrical/Grounding	-	•		50,000	50,0
5 Communications/SCADA	-		<u> </u>	36,667	36,0
86 Instrumentation / Safety				833	
	TOTAL TANGIBLES >	1,233,109	0	989,167	2,222, 11,877,
	TOTAL COSTS >	4,749,528	5,367,000	1,761,334	

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

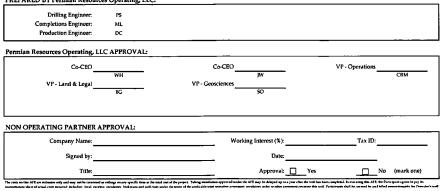
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Permian Resources Operating, LLC

300 N. Marienfeld St., Ste. 1000 Midland, TX 79701 Phone (432) 695-4222 • Fax (432) 695-4063

DATE:	2.17.2023		DRIZATION FOR EXPEND	AFE NO.:	1
				FIELD:	Tonto; Wolfcamp
WELL NAME:	Bane 4-9 Federal Com 203	H		_	
LOCATION:	Section 4, T205-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			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	ten ana complete m	ar ar suges. In 2 menue	o canang, completione,	no vouce una natur
MEMAKKA	Achievanteest				_
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBL	E CORTO	COSTS	COSTS	COSTS	COSTS
INTANGIBL Land/Legal/Regulatory		59,066	0010	37,500	s 96,5
Location, Surveys & Dan		288,079	18,067	2,500	308,6
Freight/Transportation	-	47,628	43,778	25.000	116.4
Rental - Surface Equipm	ent –	124.327	215,417	105,000	444,7
Rental - Downhole Equi		205,424	59,805		265,2
Rental - Living Quarters		48,083	54,480		102,5
0 Directional Drilling, Su	rvevs –	429,543			429,5
1 Drilling	-	753,820	<u> </u>	· ·	753,8
2 Drill Bits	-	100,176	-		100,1
3 Fuel & Power	-	188,935	725,061		913,9
14 Cementing & Float Equ	ip -	243,296	-		243,2
15 Completion Unit, Swab			· ·	15,000	15,0
16 Perforating, Wireline, S			393,136	-	393,1
17 High Pressure Pump Tr	uck -	-	123,274	•	123,2
8 Completion Unit, Swab	, CTU -		146,484	•	146,4
20 Mud Circulation System	n -	105,209		-	105,2
21 Mud Logging	-	17,529		-	17,5
22 Logging / Formation Ev	aluation	7,270	8,339		15,6
23 Mud & Chemicals		361,835	438,185	10,000	810,0
24 Water		43,459	661,625	300,000	1,005,0
25 Stimulation		· · ·	814,033	-	814,0
26 Stimulation Flowback &			121,606	150,000	271,6
28 Mud/Wastewater Disp		193,104	61,151	-	254,2
30 Rig Supervision / Engir		121,196	133,420	21,667	276,2
32 Drlg & Completion Ove	erhead	10,423	·	•	10,4
35 Labor	_	153,358	69,489	101,667	324.5
54 Proppant	-	-	1,255,227	<u> </u>	1,255,2
95 Insurance	-	14,660	-	-	14,6
97 Contingency	-	<u> </u>	24.421	3,833	
99 Flugging & Abandonm		-			
	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	•	•	\$ 122,2
61 Intermediate Casing	-	344,284	-	•	344,2
62 Drilling Liner	-	•	· · ·	-	
63 Production Casing	-	687,039		•	687,0
64 Production Liner	-		·	-	
65 Tubing	-	•	-	140,000	140,0
66 Wellhead	-	64,820	·	40,000	104,8
67 Packers, Liner Hangers		14,732		20,000	34,3
68 Tanks				45,833	45,8
69 Production Vessels		<u> </u>	-	126,667	126,6
70 Flow Lines			<u> </u>	66,667	66,0
71 Rod string			<u> </u>	·	
72 Artificial Lift Equipmen	nt	•		90,000	90,
73 Compressor		<u> </u>		5,833	5,
74 Installation Costs		-			
75 Surface Pumps	-	<u> </u>		61,667	61,0
76 Downhole Pumps		<u> </u>			
77 Measurement & Meter		-	<u> </u>	116,667	116,6
78 Gas Conditioning / Del		<u> </u>	<u> </u>		
79 Interconnecting Facility	Piping	·		20,000	20,0
80 Gathering/Bulk Lines				-	
81 Valves, Dumps, Contro	llers	-	· ·	108,333	108,
82 Tank / Facility Contain	ment	-	<u> </u>	43,333	43,
83 Flare Stack	-	<u> </u>	<u> </u>	16,667	16,
84 Electrical/Grounding		<u> </u>	<u> </u>	50,000 36,667	50,0
85 Communications / SCA	DA -	<u> </u>	<u> </u>	36,667	
86 Instrumentation / Safet					
	TOTAL TANGIBLES >	1,233,109	0	989,167	2,222
	TOTAL COSTS >	4,749,528	5,367,000	1,761,334	11,877,



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

	300	N. Marienfeld St., Ste. 1 Phone (432) 695-4222 •			
	ESTIMATE C		RIZATION FOR EXPENDI	TURE	
DATE:	2.17.2023			AFE NO.:	1
	Bane 4-9 Federal Com 20	4H		FIELD;	Tonto; Wolfcamp
	Section 4, T20S-R34E	<u> </u>		MD/TVD:	21,210 / 10,925
	Lea County, New Mexico			LATERAL LENGTH	10.000'
Permian WI:	Dea Courity, INEW MEXICO	·		DRILLING DAYS	19.6
					19.6
	WCXY	wall and complete wil	h 44 stages. AFE includes	COMPLETION DAYS:	
	AL install cost			uning, completions, i	
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBLE C	OSTS	COSTS	COSTS	COSTS	COSTS
1 Land/Legal/Regulatory	5515 S	59,066		37,500	S 96,56
Location, Surveys & Damage	5	288.079	18,067	2,500	308,64
4 Freight / Transportation		47,628	43,778	25,000	116,40
5 Rental - Surface Equipment		124,327	215,417	105,000	444,74
6 Rental - Downhole Equipme	nt .	205,424	59,805	· ·	265,22
7 Rental - Living Quarters		48,083	54,480	-	102,56
10 Directional Drilling, Survey	/s	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	·		243,29
15 Completion Unit, Swab, CI			-	15,000	15,00
16 Perforating, Wireline, Slick	line .	<u> </u>	393,136	<u> </u>	393,13
17 High Pressure Pump Truck			123,274 146,484	<u> </u>	123,27
18 Completion Unit, Swab, CT	U .	105,209			146,48
20 Mud Circulation System		105,209	<u> </u>		17,52
21 Mud Logging		7,270	8,339	<u>_</u>	15,60
22 Logging / Formation Evalua 23 Mud & Chemicals	idon .	361,835	438,185	10,000	810,02
23 Mote & Chemicais 24 Water		43,459	661,625	300,000	1,005,08
25 Stimulation			814,033		814.03
26 Stimulation Flowback & Di	SD .		121,606	150,000	271,60
28 Mud/Wastewater Disposal		193,104	61,151		254,25
30 Rig Supervision / Engineer		121,196	133,420	21,667	276,28
32 Drig & Completion Overhe		10,423	<u> </u>		10,42
35 Labor		153,358	69,489	101,667	324,51
54 Proppant		•	1,255,227	· ·	1,255,22
95 Insurance		14,660	<u> </u>	· ·	14,66
97 Contingency		-	24,421	3,833	28,25
99 Plugging & Abandonment		<u> </u>			· ·
	TOTAL INTANGIBLES >	3,516,419 DRILLING	5,367,000 COMPLETION	772,167 PRODUCTION	9,655,51 TOTAL
TANGIBLE CO	STS	COSTS	COSTS	COSTS	COSTS
60 Surface Casing	5	122,234	•	-	\$ 122,23
61 Intermediate Casing		344,284			344,28
62 Drilling Liner		•		· ·	-
63 Production Casing		687,039			687,03
64 Production Liner			······		
65 Tubing				140,000	140,00
66 Wellhead		64,820	<u> </u>	40,000	104,82
67 Packers, Liner Hangers		14,732	-	20,000	34,73
68 Tanks		-	· .	45,833	45,83
69 Production Vessels		<u> </u>		126,667	126,66
70 Flow Lines			·	66,667	66,66
71 Rod string		·	<u> </u>	90,000	- 90,00
72 Artificial Lift Equipment 73 Compressor		<u> </u>			5,83
		<u> </u>	<u> </u>	5,833	5,83
			<u> </u>		61,66
74 Installation Costs		<u> </u>	···- ·····	A1 AA7	
74 Installation Costs 75 Surface Pomps			<u>.</u>	61,667	
74 Installation Costs 75 Surface Pumps 76 Downhole Pumps	allation		<u> </u>	•	
74 Installation Costs 75 Surface Pomps 76 Downhole Pumps 77 Measurement & Meter Inst			<u>.</u>	61,667	
74 Installation Costs 75 Surface Pumps 76 Downhole Pumps 77 Measurement & Meter Inst 78 Gas Conditioning/Dehydr	ation			•	116,66
74 Installation Costs 75 Surface Pomps 76 Downhole Pumps 77 Measurement & Meter Inst 78 Gas Conditioning / Dehydr 79 Interconnecting Facility Pip	ation			116,667	116,66
74 Installation Costs 75 Surface Pomps 76 Downhole Pumps 77 Measurement & Meter Inst 78 Gas Conditioning / Dehydr 79 Interconnecting Facility Pip 80 Gathering / Bulk Lines	ation bing			116,667	116,66
74 Installation Costs 75 Surface Pomps 76 Downhole Pumps 77 Measurement & Meter Inst 78 Gas Conditioning / Dehyda 79 Interconnecting Facility Pip 80 Gathering / Bulk Lines 81 Valves, Dumps, Controllers	ation ping	·		20,000	116,66
74 Installation Costs 75 Surface Pumps 76 Downhole Pumps 77 Measurement & Meter Inst 78 Gas Conditioning / Dehydi 79 Interconnecting Facility Pi 80 Gathering / Bulk Lines 81 Valves, Domps, Controllers 81 Valves, Domps, Controllers 82 Tank / Facility Containmen	ation ping	·		20,000 108,333	116,66 20,00 108,33 43,33
74 Instillation Costs 75 Surface Pamps 75 Surface Pamps 77 Messurement & Meter Inst. 78 Gas Conditioning, / Dehydr 79 Interconnecting Facility Pir 80 Gathering / Bulk Lines 81 Valves, Domps, Controller 82 Tank / Facility Containmen 83 Flare Stack 84 Electrical / Grounding	ation Jing S t	·		116,667 20,000 108,333 43,333 16,667 50,000	116,66 20,00 108,33 43,33 16,660 50,00
74 Instillation Costs 75 Surface Pamps 76 Downhole Pumps 77 Measurement & Meter Inst 78 Gas Conditioning / Dehydi 79 Interconnecting Facility Fij 80 Gatherding / Bulk Lines 81 Valves, Dømps, Controllen 82 Tank / Facility Ontsimmen 83 Flare Stack 84 Electrical / Grounding 85 Commenications / SCADN	ation Jing S t			116,667 20,000 108,333 43,333 16,667 50,000 36,667	116,66 20,000 108,33 43,33 16,66 50,000 36,66
74 Instillation Costs 75 Surface Pranps 76 Downhole Pumps 77 Messurement & Meter Inst 78 Gas Conditioning / Dehydi 79 Interconnecting Facility Fi 80 Gathering / Bulk Lines 81 Valves, Dromps, Controllen 82 Tank / Facility Containmen 83 Flare Stack 84 Electrical / Grounding 85 Commenications / SCADA	ation Jing S t			116,667 20,000 108,333 43,333 16,667 50,000	116,66 20,00 108,33 43,33 16,66 50,00 36,66
74 Instillation Costs 75 Surface Pamps 75 Saurface Pamps 77 Messurement & Meter Inst. 76 Gas Conditioning, / Dehydr 79 Interconnecting Facility Pir 80 Gatherfng/ Bulk Lines 81 Valves, Domps, Controller 82 Tank / Facility Containmen 83 Flare Stack 84 Electrical / Grounding	ation Jing S t			116,667 20,000 108,333 43,333 16,667 50,000 36,667	116,66 28,000 0 343,33 16,66 50,00 35,666 833 2,222,2

Drilling Engineer:	PS		
Completions Engineer:	ML		
Production Engineer:	DC		
an Resources Operating, LL	C APPROVAL:		
Co-CEO		Co-CEO	VP - Operations
VP - Land & Legal	WH	JW VP - Geosciences	CRM
	BG	50	
OPERATING PARTNER A	PPROVAL:		
Company Name:		Working Interest (%):	Tax ID:
Signed by:		Date:	
		Approval:	Yes 🗍 No (mark one

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

ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

	2 17 2023			AFE NO.:	1
DATE:	2.17.2023	217.1		FIELD:	Tonto; Wolfcamp
WELL NAME:	Joker 5-8 Federal Com 2			MD/TVD:	21,211' / 10,926'
LOCATION:	Section 5, T20S-R34E				10.000
COUNTY/STATE:	Lea County, New Mexic	o		LATERAL LENGTH:	19.6
Permian WI:				DRILLING DAYS:	19.8
GEOLOGIC TARGET:	WCXY			COMPLETION DAYS:	
	Drill a horizontal WCXY	well and complete wit	th 44 stages. AFE include	es drilling, completions,	flowback and Initia
REMARKS:	AL install cost				
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBLE	COSTS	COSTS	COSTS	COSTS	COSTS
1 Land/ Legal/ Regulatory		59,066	•	37,500	- 5 - 96,
2 Location, Surveys & Dama	<u>ges</u>	288,079	18,067	2,500	308,
4 Freight/Transportation		47,628	43,778	25,000	116,
5 Kental - Surtace Equipmen		124,32/	215,417	105,000	444,
6 Rental - Downhole Equips	lent	205,424	59,805	-	265,
7 Kental - Living Quarters		48,083	54,480		102,
10 Directional Drilling, Surv	eys	429,543	· · ·		429,
11 Orilling		753,820	<u> </u>	<u> </u>	753,
12 Orill Bits		100,176	-	<u> </u>	100,
13 Fuel & Power		188,935	725,061	-	913
14 Cementing & Float Equip		243,296	<u> </u>	-	243,
15 Completion Unit, Swab, C		<u> </u>		15,000	
16 Pertorating, Wireline, Slid			393,136		
17 High Pressure Pump Truc			123,274	<u> </u>	123
18 Completion Unit, Swab, C	.10		146,484		146
20 Mud Circulation System		105,209		•	
21 Mud Logging		17,529	-		- 17
22 Logging / Formation Evalu	lation	7,270	8,339	-	
23 Mud & Chemicals		361,835	438,185	10,000	810
24 Water		43,459	661,625	300,000	
25 Stimulation		<u> </u>	814,033		
26 Stimulation Flowback & I	nep	193,104	121,605	150,000	271,
28 Mud / Wastewater Dispos	a1		61,151		
30 Rig Supervision / Engine		121,196	133,420	21,667	
32 Drig & Completion Over	lead	10,423	69,489	101,667	
35 Labor		133,330		101,007	1,255
54 Proppant 95 Insurance		11.64	1,255,227	<u> </u>	
		14,660	24,421	3,833	
97 Contingency		<u> </u>	24/421	3,033	
99 Plugging & Abandonmen					
	TOTAL INTANGIBLES	3,516,419	5,367,000	772,167	9,655
		DRILLING	COMPLETION	PRODUCTION	TOTAL
TANGIBLE C	OSTS	COSTS	COSTS	COSTS	COSTS
60 Surface Casing		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		40,000	104
67 Packers, Liner Hangers		14,732	•	20,000	34
68 Tanks			-	45,833	45
69 Production Vessels					
70 Flow Lines		-		126,667	126
					126
				126,667	126
72 Artiticial Litt Equipment				90,000	
72 Artiticial List Equipment 73 Compressor				126,667	
72 Artificial Lift Equipment 73 Compressor 74 Installation Costs				126,667 65,667 90,000 5,833	90
72 Artiticial Litt Equipment 73 Compressor 74 Installation Costs 75 Surface Pumps				90,000	90
72 Artificial Liit Equipment 73 Compressor 74 Installation Costs 75 Surface Pumps 76 Downhole Pumps				126,667 66,667 90,000 5,833 61,667	90
72 Artificial Liit Equipment 73 Compressor 74 Installation Costs 75 Surface Pumps 76 Jownhole Pumps 77 Measurement & Meter Ins				126,667 65,667 90,000 5,833	90
72 Artificial Lift Equipment 73 Compressor 74 Installation Costs 75 Surface Pumps 76 Downhole Pumps 76 Downhole Pumps 77 Measurement & Meter Ins 78 Gas Conditioning / Debys	tration			126,667 66,667 90,000 5,833 61,667 116,667	126, 66, 90, 5 61, 116,
72 Artificial Litt Equipment 73 Compressor 74 Installation Costs 75 Surface Pumps 76 Downhole Pumps 77 Measurement & Meter Int 78 Gas Conditioning / Dehyd 79 Interconnecting Facility P	tration			126,667 66,667 90,000 5,833 61,667	126, 66, 90, 5 61, 116,
72 Artificial Lift Equipment 73 Compressor 74 Installation Costs 75 Surface Pumps 76 Downhole Pumps 77 Measurement & Meter Im 78 Gas Conditioning / Dehys 79 Interconnecting Facility P 80 Gathering / Bulk Lines	tration iping			126,667 65,667 90,800 5,833 61,667 116,667 20,000	126, 66, 90, 5 61, 116, 20,
72 Artificial Litt Equipment 73 Compressor 75 Surface Pumps 76 Downhole Pumps 76 Downhole Pumps 77 Messurement & Meter Int 78 Gas Conditioning / Dehy 79 Interconnecting Facility P 80 Gathering / Bulk Lines 81 Valves, Dumps, Control	tration iping rs			126,667 56,567 90,000 5,833 61,567 116,567 20,000 108,333	126, 665 900 5 611 1160 200
72 Artificial Litt Equipment 73 Compressor 74 Installation Cosis 75 Surtace Pumps 76 Downhole Pumps 77 Measurement & Meter In: 78 Gas Conditioning / Vehys 79 Interconnecting Facility / Vehys 79 Interconnecting Facility / 80 Gathering / Butk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containme	tration iping rs			126,667 66,667 90,000 5,833 	126, 66, 900 5 61, 116, 200
72 Artiticial Litt Equipment 73 Compresson 74 Installation Costs 75 Surface Yumps 76 Downhole Yumps 77 Messurement & Meter In: 78 Gas Conditioning / Ueby 79 Interconnecting Facility P 80 Gathering / Bulk Lines 81 Valves, Jumps, Controlle 82 Tank / Facility Containen 83 Plare Stack	tration iping rs			126,667 66,667 90,000 5,833 61,667 116,667 20,000 108,333 45,333 16,667	126 66, 900
72 Artificial Lift Equipment 73 Compressor 74 Installation Costs 75 Surface Pumps 76 Downhole Pumps 77 Measurement & Meter Int 78 Gas Conditioning / Deby 79 Interconnecting Facility P 80 Gathering / Buik Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containme 83 Plare Stack 84 Electrical / Grounding	tration iping rs nt			126,667 66,667 90,000 5,833 61,667 116,667 20,000 108,333 43,333 16,667 50,000	126 66 90 5 61 116 20 108 43 15 50 50
72 Artificial Litt Equipment 73 Compressor 74 Installation Costs 75 Surface Yumps 75 Ournhole Yumps 77 Messurement & Meter Ini 78 Gas Conditioning / Deby 79 Interconnecting Facility P 80 Gathering / Butk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containnes 83 Face Stace 84 Electrical / Grounding 85 Communications / SCAD	tration iping rs nt			126,667 66,667 90,000 5,833 	126 66 90 5 116 20 70 116 120 116 130 16 150 16 50 50 53 55
72 Artificial Litt Equipment 73 Compressor 74 Installation Costs 75 Surface Yumps 75 Ournhole Yumps 77 Messurement & Meter Ini 78 Gas Conditioning / Deby 79 Interconnecting Facility P 80 Gathering / Butk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containnes 83 Face Stace 84 Electrical / Grounding 85 Communications / SCAD	tration iping rs nt			126,667 56,667 90,000 5,833 61,667 116,567 20,000 108,333 43,333 16,667 50,000 36,667 30,000 36,667 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 30,0	126 66, 900 61, 116 200 108 433 16, 510 350 350
72 Artiticial Litt Equipment 73 Compressor 75 Installation Costs 75 Juratee Yumps 76 Downhole Yumps 77 Messuverment & Meter Ini 78 Gas Conditioning / Dehy 79 Interconnecting Yacility P 80 Gathering / Butk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containnes 83 Pare Stack 84 Electrical / Grounding 85 Communications / SCAD	tration rs nt TOTAL TANGIBLES >	1,233,109		126,667 66,667 90,000 5,833 	126 66 900 5 61 116 20 108 43 50 50 50 50 2222
72 Artiticial Litt Equipment 73 Compressor 75 Installation Costs 75 Surface Yumps 76 Downhole Yumps 77 Messuverment & Meter Ini 78 Gas Conditioning / Dehy 79 Interconnecting Yacility P 80 Gathering / Butk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containnes 83 Pare Stack 84 Electrical / Grounding 85 Communications / SCAD	tration iping rs nt	1,233,109		126,667 56,667 90,000 5,833 61,667 116,567 20,000 108,333 43,333 16,667 50,000 36,667 30,000 36,667 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 36,657 30,000 30,0	126 66 900 5 61 116 20 108 43 50 50 50 50 2222
72 Artificial Litt Equipment 73 Compressor 74 Installation Costs 75 Surface Pumps 75 Surface Pumps 75 Obownhole Pumps 77 Messurement & Meter Int 76 Gas Conditioning / Dehy 79 Interconnecting Facility F 80 Gathering / Butk Lines 80 Gathering / Butk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containen 83 Flare Stack 84 Electrical / Grounding 85 Communications / SCAD. 86 Instrumentation / Satety PARED BY Permian Rese	tration iping rs nt TOTAL TANGIBLES = TOTAL COSTS = purces Operating, LLC:	1,233,109		126,667 66,667 90,000 5,833 	126 66 900 5 61 116 20 108 43 50 50 50 50 2222
72 Artificial Litt Equipment 73 Compressor 74 Installation Costs 75 Surface Yumps 75 Surface Yumps 77 Messurement & Meter In: 77 Messurement & Meter In: 77 Messurement & Meter In: 77 Messurement & Meter In: 78 Gas Conditioning / Deby 80 Cathering / Butk Lines 81 State State 81 State State 81 State State 84 Electrical / Grounding 85 Communications / SCAD 86 Instrumentation / Salety PARED BY Permian Reso Drilling Engineer	tration iping rs nt TOTAL TANGIBLES > TOTAL COSTS > purces Operating, LLC: : P5	1,233,109		126,667 66,667 90,000 5,833 	126 66 90 5 61 116 20 108 43 15 5 5 5 5 6 222 222
72 Artificial Litt Equipment 73 Compressor 74 Installation Costs 75 Surface Yumps 75 Burkhole Yamps 77 Messurement & Meter Int 77 Messurement & Meter Int 78 Gas Conditioning / Jobik 79 Interconnecting Facility P 80 Galhering / Bulk Lines 80 Tantes State 81 Valves, Dumps, Controlle 82 Tank / Facility Containing 85 Communications / SCAD, 86 Instrumentation / Safety PARED BY Permian Ress Drilling Engineer Completions Engineer	tration iping rs nt TOTAL TANGIBLES = TOTAL COSTS = Ources Operating, LLC: PS NL	1,233,109		126,667 66,667 90,000 5,833 	126 66 90 5 61 116 20 108 43 15 5 5 5 5 6 222 222
72 Artiticial Litt Equipment 73 Compressor 74 Installation Costs 75 Surface Yumps 76 Downhole Yumps 77 Messurement & Meter In: 77 Messurement & Meter In: 78 Gas Conditioning / Deby 79 Interconnecting Yacility P 79 Interconnecting Yacility P 80 Gathering / Butk Lines 81 Gathering / Butk Lines 82 Tank Yacility Containing 83 Finer Stack 84 Electrical / Grounding 85 Communications / SCAD 85 Communications / ScAD 85 Communications / ScAD 86 Communications / ScAD 87 Communications / ScAD 80 Commun	tration iping rs nt TOTAL TANGIBLES = TOTAL COSTS = Ources Operating, LLC: PS NL	1,233,109		126,667 66,667 90,000 5,833 	126 66 90 5 61 116 20 108 43 15 5 5 5 5 6 222 222
72 Artificial Litt Equipment 73 Compressor 74 Installation Costs 75 Surface Yumps 75 Surface Yumps 77 Messurement & Meter In: 77 Messurement & Meter In: 77 Messurement & Meter In: 77 Messurement & Meter In: 78 Gas Conditioning / Deby 79 Interconnecting Yacility P 79 Interconnecting Yacility P 80 Gameruications / SCAD 80 Gameruications / SCAD 85 Communications / ScAD 86 Communications / ScAD 86 Communications / ScAD 86 Communications / ScAD 86 Communications / ScAD 87 Communications / ScAD 86 Communications / ScAD 87 Communications / ScAD 86	tration iping rs nt TOTAL TANGIBLES > TOTAL COSTS > TOTAL COSTS > Durces Operating, LLC: PS ML DC	1,233,109		126,667 66,667 90,000 5,833 	126 68 90 5 61 116 20 70 8 3 3 6 5 5 5 5 5 6 20 20 20 20 5 5 6 10 6 10 10 10 10 10 10 10 10 10 10 10 10 10
72 Artificial Litt Equipment 73 Compressor 74 Installation Costs 75 Surface Yumps 75 Surface Yumps 77 Messurement & Meter Ini 77 Messurement & Meter Ini 78 Gas Conditioning / Dehy 79 Interconnecting Facility P 80 Gathering / Butk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility P Surk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containnes 83 Pare Stack 84 Electrical / Grounding 84 Electrical / Grounding 85 Communications / SCADu 86 Instrumentation / Satety PARED BY Permian Ress Drilling Engineer Completions Engineer Production Engineer	tration iping rs nt TOTAL TANGIBLES > TOTAL COSTS > Durces Operating, LLC: PS ML C DC ; LLC APPROVAL:		5,367,000	126,667 66,667 90,000 5,833 	126 66 90 5 61 116 20 70 83 16 83 16 50 90 90 90 90 90 90 90 90 90 90 90 90 90
72 Artificial Litt Equipment 73 Compressor 74 Installation Costs 75 Surface Yumps 75 Surface Yumps 77 Messurement & Meter In: 77 Messurement & Meter In: 77 Messurement & Meter In: 77 Messurement & Meter In: 78 Gas Conditioning / Deby 89 Instructure 80 Cathering / Butk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containing 85 Communications / SCAD 86 Instrumentation / Salety PARED BY Permian Reso Drilling Engineer Completions Engineer Production Engineer	tration iping rs nt TOTAL TANGIBLES > TOTAL COSTS > Durces Operating, LLC: PS ML C DC ; LLC APPROVAL:	1,233,109	5,367,000	126,667 66,667 90,000 5,833 	126 66 90 5 5 61 115 20 108 433 15 50 30 50 2,222 11,877 11,877
Completions Engineer Production Engineer nian Resources Operating	tration iping rs nt TOTAL TANGIBLES = TOTAL COSTS = TOTAL		5,367,000	126,667 66,667 90,000 5,833 	126 66 90 5 61 116 20 70 83 16 83 16 50 90 90 90 90 90 90 90 90 90 90 90 90 90

NON OPERATING PARTNER APPROVAL:

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 ordings an any specific Stern or the total cost of the project. Tableg installa	ation approved under the AFE may be delayed up to a year after the well has been comple	ted. In executing this AFE, the Participant agrees to pay its

The measure of a function of the second seco

Permian Resources Operating, LLC 300 N. Marienfeld 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			AFE NO.:	1
WELL NAME:	Joker 5-8 Federal Com 20	2H		FIELD:	Tonto; Wolfcam
LOCATION:	Section 5, T20S-R34E			MD/TVD:	21,211' / 10,926
COUNTY/STATE:	Lea County, New Mexico	······································		LATERAL LENGTH:	10,000
	Lea County, New Mexico	· · · · · · · · · · · · · · · · · · ·		_	19.6
Permian WI:				DRILLING DAYS:	
GEOLOGIC TARGET:	WCXY			COMPLETION DAYS:	19
REMARKS:	Drill a horizontal WCXY AL install cost	well and complete wi	th 44 stages. AFE include	s drilling, completions, I	flowback and Initia
INTANGIBLE C	mere	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
Land/Legal/Regulatory	5515	59,066	<u> </u>	37,500	5 96
2 Location, Surveys & Damag	es	288,079	18,067	2,500	
4 Freight/Transportation		47,628	43,778	25.000	
5 Kental - Surface Equipment		124,327	215,417	105,000	444
6 Kental - Downhole Equipme		205,424	59,805		265
7 Rental - Living Quarters		48,083	54,480		102
10 Directional Dritling, Surve	V5	429,543		·	429
11 Drilling	•	753,820			753
12 Drill Bits		100,176		<u> </u>	100
13 Fuel & Fower		188,935	725,061		
14 Cementing & Float Equip		243,296			243
15 Completion Unit, Swab, C.	ru .		<u> </u>	15,000	15
16 Pertorating, Wireline, Slick	dine	<u> </u>	393,136		
17 High Pressure Pump Truck			123,274	<u> </u>	
18 Completion Unit, Swab, C			146,484		
20 Mud Circulation System		105,209			
21 Mud Logging		17,529		<u> </u>	
22 Logging / Formation Evalu	ation	7,270	8,339	_	
23 Mud & Chemicais		361,833	438,185	10,000	
24 Water		43,459	661,625	300.000	1,005
25 Stimulation		13/137	814,033		814
26 Stimulation Flowback & D	dra.		121,606	150,000	
28 Mud / Wastewater Disposa	isp i		61,151	130,000	
				······	276
30 Rig Supervision / Engineer		121,196	133,420	21,667	
32 Drig & Completion Overho	ad		69,489		
35 Labor		153,358		101,667	
54 Proppant			1,255,227	· · · ·	1,255
95 Insurance		14,660	-	·	
97 Contingency			24,421	3,833	28
99 Plugging & Abandonment		<u> </u>	<u> </u>	··	
	TOTAL INTANGIBLES >	3,516,419	5,367,000	772,167	9,65
TANGIBLE CO	1575	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
50 Surface Casing	.515	122,234			5 122
61 Intermediate Casing	-	344,284	<u> </u>	·	
62 Drilling Liner		011,001			
63 Production Casing		687,039			
64 Production Liner		007,039	<u> </u>	·	
		<u> </u>		140,000	
65 Tubing		54,820			
55 Weilhead			<u> </u>	40,000	
67 Packers, Liner Hangers		14,732	·	45,833	
8 Tanks		-	•		45
		<u> </u>		126,667	
70 Flow Lines		<u> </u>	<u>_</u>		
70 Flow Lines 71 Rod string				126,667	126
70 Flow Lines 71 Rod string 72 Artificial Lift Equipment				126,667 66,667 90,000	
70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor				126,667	
70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 74 Installation Costs				126,667 66,667 90,000 5,833	
70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 75 Compressor 75 Surface Pumps				126,667 66,667 90,000	90
70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 74 Installation Costs 75 Surtace Pumps 76 Downhole Pumps				125,667 65,667 90,000 5,833 61,667	566 900 5 61
70 Flow Lines 71 Rod string 72 Artiticlal Litt Equipment 73 Compressor 74 Installation Costs 75 Surlace Pumps 76 Downhole Pumps 76 Downhole Pumps				126,667 66,667 90,000 5,833	566 900 5 61
70 Flow Lines 71 Rod string 72 Artikical Lit Equipment 73 Compressor 74 Installation Costs 75 Surface Pumps 76 Downhole Pumps 77 Measurement & Meter Insi 78 Gas Conditioning / Dehydr	ration			126,667 66,667 90,000 5,833 61,667 116,667	5 5 61 116
70 Flow Lines 71 Rod siring 72 Artitical Litt Equipment 73 Compressor 74 Installation Costs 75 Suriace Pumps 76 Downhole Pumps 77 Messurement & Meter Inst 78 Gas Conditioning / Dehydr 79 Interconnecting Facility PJ 19 Interconnecting Facility PJ	ration			125,667 65,667 90,000 5,833 61,667	566 900 5 61
70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 74 Installation Costs 75 Suntace Pumps 76 Downhole Pumps 76 Downhole Pumps 77 Measurement & Meter Inst 78 Gase Conditioning, J Ochydd 79 Interconnecting Facility Pi 91 Gathering 7 Bulk Lines	ration ping			126,667 66,667 90,000 3,833 61,667 116,567	66 90 5 61 116 20
70 How Lines 71 Rod string 72 Artitical Litt Equipment 73 Compressor 74 Installation Costs 75 Suriace Pumps 76 Downhole Pumps 77 Measurement & Meter Inst 78 Gas Conditioning / Dehyda 79 Interconnecting Facility # 90 Gathering / Buk Lines 81 Valves, Dumps, Controller	ration ping s			128,667 66,667 90,000 5,833 61,667 116,667 20,000 108,533	
70 How Lines 71 Rod string Litit Equipment 73 Compressor 74 Installation Costs 75 Suritace Pumps 76 Downhole Pumps 77 Measurement & Meter Insi 78 Gas Conditioning / Dehyd 79 Interconnecting Jacility Pi 80 Gathering / Bulk Lines 81 Valves, Dumps, Controllen 81 Valves, Dumps, Controllen	ration ping s			125,667 66,667 90,000 5,853 61,667 116,667 20,000 108,533 43,533	
70 How Lines 71 Rod string 72 Artiticla Litt Equipment 73 Compressor 74 Installation Costs 75 Suriace Pumps 75 Marta Pumps 77 Messurement & Meter Inst 87 Gas Conditioning / Detych 79 Inferconnecting Facility Pij 80 Gathering / Joluk Lines 81 Valves, Dumps, Controller 82 Tank / Facility Conlaiment 83 Hare Stack	ration ping s			128,567 66,667 90,000 5,833 61,667 116,667 20,000 108,333 43,533 16,667	
70 How Lines 71 Rod string 72 Artificial Lill Equipment 73 Compressor 74 Installation Costs 75 Suritace Pumps 76 Downhole Pumps 77 Measurement & Meter Inst 78 Gas Conditioning / Dehyd 79 Interconnecting iscillity PJ 80 Gathering / Bulk Lines 81 Valves, Dumps, Controllen 82 Tank / Facility Conlainmer 83 Hare Stack 84 Electrical / Grounding	ration ping s st			126,667 66,667 90,000 5,833 61,667 116,667 20,000 100,533 45,333 16,667 5,0000	
70 How Lines 71 Rod string 72 Artificial Lill Equipment 73 Compressor 74 Installation Costs 75 Suritace Pumps 76 Downhole Pumps 77 Measurement & Meter Inst 78 Gas Conditioning / Dehyd 79 Interconnecting iscillity PJ 80 Gathering / Bulk Lines 81 Valves, Dumps, Controllen 82 Tank / Facility Conlainmer 83 Hare Stack 84 Electrical / Grounding	ration ping s st			128,567 66,667 90,000 5,833 61,667 116,667 20,000 108,333 43,533 16,667	66 90 5 61 116 20 109 109 109 109 109 109 109 109 109 10
69 Production Vessels 71 Rod string 72 Artificial Lil Equipment 73 Compressor 74 Installation Costs 75 Suriace Pumps 76 Downhole Pumps 76 Downhole Pumps 79 Gasturement & Meter Insi 78 Gas Conditioning / Uchydd 79 Interconnecting Jacility PJ 80 Gathering / Butk Lines 81 Yalves, Dumps, Controller 83 Plare Stack 4 Electrical / Grounding 85 Communications / SCADA	ration ping s st			126,667 66,667 90,000 5,833 61,667 116,667 20,000 100,533 45,333 16,667 5,0000	
70 Flow Lines 71 Rod string 72 Artiticial Lift Equipment 73 Compressor 74 Installation Costs 75 Suriace Pumps 75 Downhole Pumps 76 Downhole Pumps 79 Gatescring Acadity Pij 80 Gathering A Ushy Lines 81 Valves, Dumps, Controllen 82 Tark / Facility Consistmen 83 Flare Stack 44 Electrical / Grounding 85 Communications / SCADN	retion ping s at			125,667 66,667 90,000 5,833 61,667 115,667 20,000 108,533 16,567 50,000 36,667 833	66 94 3 61 116 24 100 42 42 55 56
70 Flow Lines 71 Rod string 72 Artiticial Lift Equipment 73 Compressor 74 Installation Costs 75 Suriace Pumps 75 Downhole Pumps 76 Downhole Pumps 79 Gatescring Acadity Pij 80 Gathering A Ushy Lines 81 Valves, Dumps, Controllen 82 Tark / Facility Consistmen 83 Flare Stack 44 Electrical / Grounding 85 Communications / SCADN	ration ping s st	1,233,109		125,667 66,667 90,000 5,833 61,667 116,667 20,000 109,333 45,333 45,333 16,667 50,000 35,667	66 90 5 61 116 22 100 43 16 100 43 16 55
70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor 74 Instalation Costs 75 Suriace Pumps 75 Downhole Pumps 75 Lownhole Pumps 75 Caster & Marcon 79 Gathering / Butk Lines 81 Valves, Dumps, Controllen 82 Tark / Facility Containmen 83 Flare Stack 84 Electrical / Grounding 85 Communications / SCADA 86 Instrumentation / Satety	ration plag s tt TOTAL TANGIBLES > TOTAL COSTS >	1,233,109		125,667 66,667 90,000 5,853 61,667 116,667 108,533 108,553 108,553 108,553 108,553 108,553 10,567 50,000 36,667 833	66 99 3 61 116 20 49 49 100 49 50 38 20 20 20
70 Flow Lines 71 Rod string 72 Rot string 73 Compressor 74 Installation Costs 75 Suriace Pumps 76 Downhole Pumps 76 Downhole Pumps 79 Gast Conditioning / Dehyd 79 Gasturement & Meter Inst 79 Gast Conditioning / Dehyd 79 Gasturement & Meter Inst 90 Gathering / Butk Lines 91 Valves, Dumps, Controller 92 Tank / Facility Conlainmer 33 Flare Stack 4 Electrical / Grounding 95 Communications / SCADA 56 Instrumentation / Salety PARED BY Permian Reso	ration plag s t TOTAL TANGIBLES > TOTAL COSTS > urces Operating, LLC:	1,233,109		125,667 66,667 90,000 5,853 61,667 116,667 108,533 108,553 108,553 108,553 108,553 108,553 10,567 50,000 36,667 833	66 99 66 110 22 100 43 33 222
70 Flow Lines 71 Riod string 72 Artificial Lift Equipment 73 Compressor 74 Installation Costs 75 Suriace Pumps 76 Downhole Pumps 76 Downhole Pumps 77 Measurement & Meter Inst 78 Gas Conditioning / Dehyd 79 Interconnecting Facility Pij 80 Gathering / Bulk Lines 81 Valves, Dumps, Controllen 81 Valves, Dumps, Controllen 81 Cathering / Bulk Lines 81 Valves, Dumps, Controllen 82 Tank / Facility Consistence 83 Flare Stack 44 Electrical / Grounding 85 Communications / SCADN	ration ping s tt TOTAL TANGIBLES > TOTAL COSTS > urres Operating, LLC: P5	1,233,109		125,667 66,667 90,000 5,853 61,667 116,667 108,533 108,553 108,553 108,553 108,553 108,553 10,567 50,000 36,667 833	66 99 3 61 116 20 49 49 100 49 50 38 20 20 20

Permian Resources Operating, LLC APPROVAL:

		50	VP - Geo: BG	VP - Land & Legal
NON OPERATING PARTNER APPROVAL:	,		APPROVAL:	NON OPERATING PARTNER A
Company Name: Tax ID: Tax ID:	Tax ID:	Working Interest (%):		Company Name:
Signed by: Date:		Date:		Signed by:
Title: Approval:YesNo (mark one)			,,,, ,	

De name and BATE en relation in any de la part as to construe en entrage any specific han and the value of the opposite of participant of any specific han and the value of the opposite of the specific and the s

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

DATE:	2.17.2023			AFE NO.:	1
WELL NAME:	Joker 5-8 Federal Com 2	03H		FIELD:	Tonto; Wolfcam
LOCATION:	Section 5, T20S-R34E			MD/TVD:	21,191' / 10,906
COUNTY/STATE:	Lea County, New Mexic	0		LATERAL LENGTH:	10,000'
Permian WI:	Dua County, rees intend	· · · · · · · · · · · · · · · · · · ·		DRILLING DAYS:	19.6
	14/CVV			_	19
GEOLOGIC TARGET:	WCXY			COMPLETION DAYS:	
REMARKS:	AL install cost	well and complete wi	th 44 stages. AFE include	s arilling, completions, i	nowback and initia
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBLE	COSTS	COSTS	COSTS	COSTS	COSTS
1 Land/ Legal/ Regulatory		59,066	-	37,500	5 96
2 Location, Surveys & Dame	iges	288,079	18,067	2,500	308
4 Freight / Transportation		47,628	43,778	25,000	116
5 Rental - Surface Equipment		124,32/	215,417	105,000	444
6 Rental - Downhole Equips	ment	205,424	59,805		26
7 Kental - Living Quarters		48,083	54,480	<u> </u>	10.
10 Directional Drilling, Sur	veys	429,543	<u> </u>	·	
11 Drilling 12 Drill Bits		100,176	<u> </u>	<u> </u>	100
12 Drui Bits 13 Fuel & Power		188,935	725,061		
13 Fuel & Fower 14 Cementing & Float Equip	_	243,296	725,061		
14 Cementing & Float Equip 15 Completion Unit, Swab,		243,230		15,000	
16 Periorating, Wireline, Sil			393,136	15,000	
16 Feriorating, Witeline, Su 17 High Pressure Pump Tru	ekine	<u> </u>	123.274		
17 right riessure rump thu	(R)		146,484		
18 Completion Unit, Swab, 20 Mud Circulation System		105,209			
20 Mud Circulation System 21 Mud Logging		17,529	<u> </u>	·····	
	lustion	7,270	8,339	<u> </u>	
22 Logging / Formation Eval 23 Mud & Chemicals	INSTATI	361,835	438,185	10,000	
24 Water		43,459	661,625	300,000	1,00
24 water 25 Stimulation		43/437	814,033		
26 Stimulation Flowback &	Disp		121,606	150,000	
28 Mud / Wastewater Dispo		193,104	61,151		
30 Rig Supervision / Engine		121,196	133,420	21,667	
32 Drig & Completion Over	head	10,423			
35 Labor		153,358	69,489	101,667	32
54 Proppant			1,255,227		1,25
5 Insurance		14,660		<u> </u>	
97 Contingency			24,421	3,833	
99 Plugging & Abandonmer	nt		<u> </u>	<u> </u>	
	TOTAL INTANGIBLES	3,516,419	5,367,000	772,167	9,65
		DRILLING	COMPLETION	PRODUCTION	TOTAL
TANGIBLE	OFTE	COSTS	COSTS	COSIS	COSTS
O Surface Casing		122.234			\$ 12
61 Intermediate Casing	•	344,284		······	344
62 Drilling Liner		379,209		<u> </u>	
63 Production Casing		687,039			687
64 Production Liner		007,007			007
5 Tubing				140,000	140
66 Wellhead		64,820		40,000	
67 Packers, Liner Hangers		14,732		20,000	
So Tanks		14,732		45,833	
9 Production Vessels				126,667	120
0 Flow Lines				66,667	66
71 Rod string					
2 Artiticial Lift Equipment				90,000	
73 Compressor				5,833	
4 Installation Costs				3,833	
5 Surface Pumps		<u> </u>		61,667	61
76 Downhole Pumps			<u> </u>		
7 Measurement & Meter In	stallation	<u> </u>	<u> </u>	116,667	
'8 Gas Conditioning / Dehy		·	<u> </u>		
			-	-	
9 Interconnecting Facility F	liping	<u> </u>		20.000	
79 Interconnecting Facility F	liping	<u> </u>		20,000	
9 Interconnecting Facility F Ø Gathering / Bulk Lines	liping	<u>.</u>		<u> </u>	
9 Interconnecting Facility F 10 Gathering / Bulk Lines 11 Valves, Dumps, Controli	'lping ers			108,333	108
79 Interconnecting Facility F 80 Gathering / Bulk Lines 81 Valves, Dumps, Controlit 82 Tank / Facility Containme	'lping ers			108,333	108
79 Interconnecting Facility F 40 Gathering / Bulk Lines 61 Valves, Dumps, Controllo 62 Tank / Facility Containm 63 Flare Stack	'lping ers			108,333 43,333 16,667	108 43 16
79 Interconnecting Facility F 40 Gathering / Bulk Lines 11 Valves, Dumps, Controll 12 Tank / Facility Containm 13 Flare Stack 14 Electrical / Grounding	'iping ers ent			108,333 43,333 16,667 50,000	102 43 16 50
79 Interconnecting Facility F 40 Gathering / Bulk Lines 11 Valves, Dumps, Controlh 12 Tank / Facility Containne 13 Flare Stack 14 Electrical / Grounding 15 Communications / SCAD	'iping ers ent			108,333 43,333 16,667 50,000 36,667	108 43 16 50
79 Interconnecting Facility F 40 Gathering / Bulk Lines 11 Valves, Dumps, Controlh 12 Tank / Facility Containne 13 Flare Stack 14 Electrical / Grounding 15 Communications / SCAD	'Iping 2rs ent A			108,333 43,333 16,667 50,000 36,667 833	108 43 16 50 36
9 Interconnecting Facility F 10 Gathering / Bulk Lines 11 Valves, Dumps, Controlh 12 Tank / Facility Containm 13 Flare Stack 14 Electrical / Grounding 15 Communications / SCAD	'lping ent A TOTAL TANGIBLES >			108,333 43,333 16,667 50,000 36,667 833 989,167	100 43 10 50 36
79 Interconnecting Facility F 40 Gathering / Bulk Lines 11 Valves, Dumps, Controlh 12 Tank / Facility Containne 13 Flare Stack 14 Electrical / Grounding 15 Communications / SCAD	'Iping 2rs ent A	1,233,109 4,749,528	 	108,333 43,333 16,667 50,000 36,667 833	100 43 10 50 36
79 Interconnecting Facility E 89 Gathering / Boik Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containn 83 Plare Stack 84 Electrical / Grounding 85 Communications / SCAD 86 Instrumentation / Satety	iping rs at TOTAL TANGIBLES > TOTAL COSTS >			108,333 43,333 16,667 50,000 36,667 833 989,167	100 43 10 50 36
79 Interconnecting Facility E 89 Gathering / Boik Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containn 82 Hare Stack 84 Electrical / Grounding 85 Communications / SCAD 86 Instrumentation / Satety	iping ent A TOTAL TANGIBLES > TOTAL COSTS > ources Operating, LLC:			108,333 43,333 16,667 50,000 36,667 833 989,167	100 43 10 50 36
79 Interconnecting Facility E 89 Gathering / Bolk Lines 81 Valves, Dumps, Controlle 82 Tank / Facility Containnes 83 Flare Stack 84 Electrical / Grounding 85 Communications / SCAD 86 Instrumentation / Satety PARED BY Permian Res Drilling Enginee	tiping rs A TOTAL TANGIBLES > TOTAL COSTS > ources Operating, LLC: r. PS			108,333 43,333 16,667 50,000 36,667 833 989,167	
79 Interconnecting Facility E 80 Gathering / Bulk Lines 80 Gathering / Bulk Lines 81 Valves, Journs, Controll 82 Tank J, Facility Containnus 83 Flare Stack 84 Electrical / Grounding 85 Communications / Salety 86 Instrumentation / Salety PARED BY Permian Res	iping rs ent A TOTAL TANGIBLES > TOTAL COSTS > ources Operating, LLC: r. PS r. ML			108,333 43,333 16,667 50,000 36,667 833 989,167	
79 Interconnecting Facility E 89 Gathering / Bolk Lines 81 Valves, Dumps, Controlle 21 Tank / Facility Containnus 81 Flare Stack 84 Electricat / Grounding 85 Communications / SCAD 86 Instrumentation / Satety PARED BY Permian Res Drilling Enginee Completions Enginee Production Enginee	Iping Its A TOTAL TANGIBLES > TOTAL COSTS > ources Operating, LLC: C PS C ML C DC			108,333 43,333 16,667 50,000 36,667 833 989,167	
79 Interconnecting Facility E 89 Gathering / Boik Lines 81 Valves, Dumps, Controll 82 Tank / Facility Containm 82 Nare Stack 84 Electrical / Grounding 85 Communications / SCAD 86 Instrumentation / Satety PARED BY Permian Res Drilling Enginee Completions Enginee Production Enginee	iping irs a TOTAL TANGIBLES > TOTAL COSTS > ources Operating, LLC: r. PS r. ML r. DC g, LLC APPROVAL:	4,749,528	5,367,000	108,333 4,5,333 16,667 30,667 83,3 989,167 1,761,334	100 44 100 33 2,22 11,87
79 Interconnecting Facility E 80 Gathering / Bolk Lines 81 Valves, Dumps, Controlls 82 Tank / Facility Containnus 83 Flare Stack 84 Electrical / Grounding 85 Communications / ScAD 86 Instrumentation / Satety PARED BY Permian Ress Drilling Enginee Completions Enginee	Viping Present A TOTAL TANGIBLES - TOTAL COSTS - OUTCES Operating, LLC: c. PS r. ML c. PS r. ML c. DC g, LLC APPROVAL: D		5,367,000	108,333 43,333 16,667 50,000 36,667 833 989,167	108 43 10 30 30 2,22 11,87
79 Interconnecting Facility E 89 Gathering / Buik Lines 81 Valves, Dumps, Controll 82 Tank / Facility Containm 83 Flare Stack 84 Electrical / Goundling 85 Communications / SCAD 86 Instrumentation / Satety PARED BY Permian Res Drilling Enginee Completions Enginee Production Enginee	Viping 215 Ent A TOTAL TANGIBLES > TOTAL COSTS > Ources Operating, LLC: r. PS r. ML r. DC g, LLC APPROVAL: D WH	4,749,528	5,367,000 EOJw	108,333 4,5,333 16,667 30,667 83,3 989,167 1,761,334	108 43 16 30 36 2,22 11,87

NON OPERATING PARTNER APPROVAL:

Company Name:	Working Interest (%):	ng Interest (%): Tax ID:			
Signed by:	Date:				
Title:	Approval: Yes	No (mark one)			
The costs on this AFE on relationships indicate states and the control of the control of the project relation and provide listic and provide material back and the project relation and t					

providential data of strate more strategies provides dynamics and strategies and

Permian Resources Operating, LLC 300 N. Marienfeld 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			AFE NO.:	1
DATE:		20411			
WELL NAME:	Joker 5-8 Federal Com	204H		FIELD:	Tonto; Wolfcamp
LOCATION:	Section 5, T20S-R34E			MD/TVD:	21,181 / 10,896
COUNTY/STATE:	Lea County, New Mexi	co		LATERAL LENGTH:	10,000'
Permian WI:				DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY			COMPLETION DAYS:	19
	Drill a horizontal WCX	Y well and complete wi	ith 44 stages. AFE includ	es drilling, completions,	flowback and Initial
REMARKS:	AL install cost				
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBL	ECOSTS	COSTS	COSTS	COSTS	COSTS
1 Land / Legal / Regulatory		5 59,066	······································	- 37,500	\$ 96,565
2 Location, Surveys & Dam	ages	288,079	18,067	2,500	
4 Freight / Transportation	0	47,628	43,778	25,000	116,406
5 Rental - Suriace Equipme	nt	124,327	215,417	105,000	444,744
6 Rental - Downhole Equip	ment	205,424	59,805		265,229
7 Rental - Living Quarters		48,083	54,480	<u> </u>	102,562
10 Directional Drilling, Su	veys	429,543		· · ·	429,543
11 Drilling	-	753,820	· · · ·		/53,820
12 Drill Bits		100,176	······································	•	100,176
13 Fuel & Power		188,935	725,061	•	913,996
14 Cementing & Float Equi		243,296		· · ·	243,296
15 Completion Unit, Swab,				15,000	15,000
16 Pertorating, Wireline, 51		•	393,136		393,136
17 High Pressure Pump Tru			123,274		123,274
18 Completion Unit, Swab,			146,484	-	146,484
20 Mud Circulation System	1	105,209	<u> </u>	•	105,209
21 Mud Logging		17,529		•	17,529
22 Logging / Formation Eva	luation	7,270	8,339	•	15,609
23 Mud & Chemicals		361,835	438,185	10,000	810,020
24 Water		43,459	661,625	300,000	1,005,083
25 Stimulation			814,033		814,033
26 Stimulation Flowback &		•	121,605	150,000	271,608
28 Mud / Wastewater Dispo		793,104	61,151	-	254,254
30 Rig Supervision / Engin		121,196	133,420	21,667	276,283
32 Drig & Completion Ove	rhead	10,423			10,423
35 Labor		153,358	69,489	101,667	324,514
54 Proppant		•	1,255,227		1,255,227
95 Insurance		14,660			14,660
97 Contingency			24,421	3,833	28,254
99 Plugging & Abandonme	nt	•		•	
	TOTAL INTANGIBLES	> 3,516,419	5,367,000	772,167	9,655,58
		DRILLING	COMPLETION	PRODUCTION	TOTAL
		COSTS	COSTS	COSTS	COSTS
TANGIBLE	COSTS		0313	COSIS	
60 Surface Casing		5 122,234	· ·	· · · ·	5 122,234
61 Intermediate Casing		344,284	•	•	344,284
62 Drilling Liner		•	·	•	•
63 Production Casing		687,039	<u> </u>	<u> </u>	687,039
64 Production Liner			<u>·</u>		
65 Tubing		·		140,000	140,000
66 Wellhead		64,820		40,000	104,820
67 Packers, Liner Hangers		14,732	· · · ·	20,000	34,732
68 Tanks		·	·•	45,833	45,833
69 Production Vessels			· · ·	126,667	126,667
70 Flow Lines			•	65,667	66,667
71 Rod string					-
72 Artiticial Litt Equipmen	1			90,000	90,000
73 Compressor				5,833	5,833
74 Installation Costs		<u> </u>			
75 Surface Pumps				61,667	61,667
76 Downhole Pumps		·			
77 Measurement & Meter I				116,667	116,667
78 Gas Conditioning / Deh					·
79 Interconnecting Facility	Piping			20,000	20,000
60 Gathering / Bulk Lines					-
81 Valves, Dumps, Control		· ·		108,333	108,333
82 Tank / Facility Containn	ient			43,333	43,333
83 Flare Stack			•	16,667	16,667
64 Electrical / Grounding			· · ·	50,000	50,000
55 Communications / SCA1				36,667	36,667
66 Instrumentation / Satety			· .	833	833
	TOTAL TANGIBLES	> 1,233,109	0	989,167	2,222,27
	TOTAL COSTS	> 4,749,528	5,367,000	1,761,334	11,877,86
PARED BY Permian Re	sources Operating, LLC:				
Drilling Engine	er: PS				
Completions Engine	er: ML				
Production Engine			·		
			· · · · · ·		
uan Resources Operatio	A LIC APPROVAL				
dan Nesources Operation	ig LLC AITROVAL				
Co-C1	·0	64	CEO	VP - Oper	ations
0-01		CA(1W	vi - Oper	CRM
			•		CKM
VP - Land & Leg	3al	VP - Geoscie	nces		
	BG				
<u> </u>			· · · · · · · · · · · · · · · · · · ·		
OPERATING PARTN	ER APPROVAL:		· · · · · · · · · · · · · · · · · · ·		
N OPERATING PARTN Company Nan			Working Interest (%):	т	ax ID:
		·····	Working Interest (%):	T	'ax ID:
N OPERATING PARTN Company Nan Signed I	ne:		Working Interest (%):	T	ax ID:

Title:

rd up to a year after the well has ing this AFE, the Per eni opera lo per la

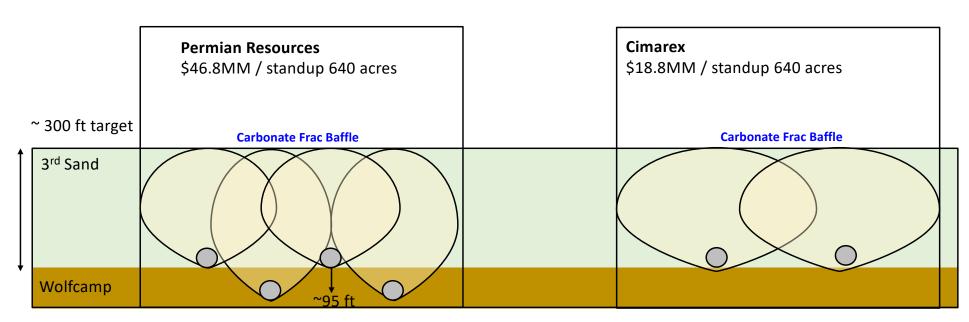
Approval: Yes

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No (mark one)

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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