# 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 3<sup>rd</sup> 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 3<sup>rd</sup> 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 3<sup>rd</sup> 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 3<sup>rd</sup> Bone Spring Sand and the Upper Wolfcamp, Cimarex has concluded that if Upper Wolfcamp wells were to be completed while drilling and developing the 3<sup>rd</sup> 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 3<sup>rd</sup> 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 3<sup>rd</sup> 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 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 3<sup>rd</sup> 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 3<sup>rd</sup> 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

<sup>&</sup>lt;sup>1</sup> 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<sup>rd</sup> 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<sup>rd</sup> Bone Spring Sands, and not in the Upper Wolfcamp, in order preserve the Upper Wolfcamp from being drilled and thereby protect the 3<sup>rd</sup> Bone Spring Sand from drainage and damage.

### II. Argument

- A. The optimal development of the Subject Lands is to drill wells in the 3<sup>rd</sup> 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 3<sup>rd</sup> 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 3<sup>rd</sup> 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 3<sup>rd</sup> 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.

- Wolfcamp based on wells drilled in 3<sup>rd</sup> 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 3<sup>rd</sup> Bone Spring Sand and to protect correlative rights, would be to allow the drilling of the 3<sup>rd</sup> 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 3<sup>rd</sup> Bone Spring, thus protecting the correlative rights of the owners in the 3<sup>rd</sup> 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

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 3<sup>rd</sup> 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 – 23455; (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

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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 13, 2023:

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/s/ Darin C. Savage

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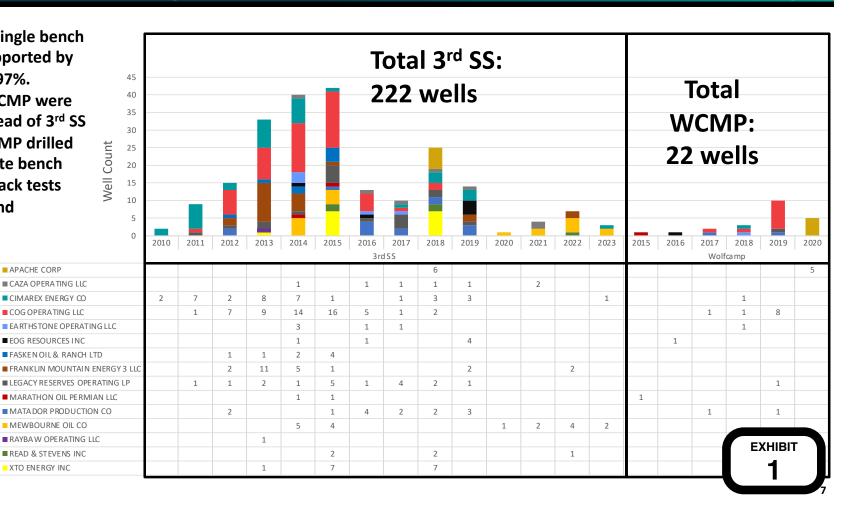


### Well Count by Landing and Operators Shows 3<sup>rd</sup> Sand is the Consensus Landing

- 3<sup>rd</sup> Sand / single bench landing supported by 236 wells, 97%.
- 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

APACHE CORP

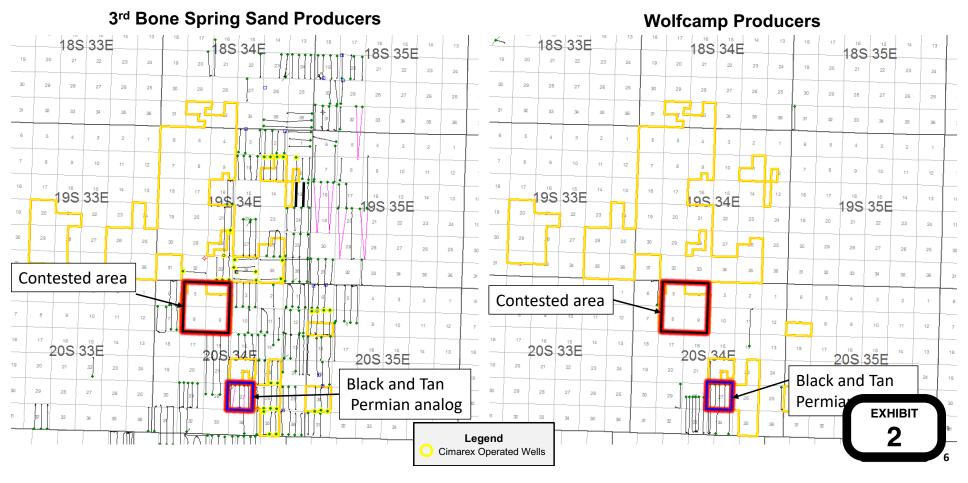
XTO ENERGY INC





### 3<sup>rd</sup> 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



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		ORIZATION FOR EXPENDI	AFE NO.:	1
ELL NAME:	Bane 4-9 Federal Com 20	nH		FIELD:	Tonto; Wolfcamp
CATION:	Section 4, T20S-R34E			MD/TVD:	21,210' / 10,925'
OUNTY/STATE:	Lea County, New Mexico	0		LATERAL LENGTH:	10,000'
ennian WI:				DRILLING DAYS:	19.6
EOLOGIC TARGET:	WCXY		•	COMPLETION DAYS:	19
		well and complete w	ith 44 stages. AFE include:	s drilling, completions,	flowback and Initial
MARKS:	AL install cost				
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBL		COSTS	COSTS	COSTS	COSTS
and/Legal/Regulatory		59,066	10.07	37,500	S 96,56 308,64
ocation, Surveys & Dan reight/Transportation	ages	288,079	18,067 43,778	2,500 25,000	116,40
Rental - Surface Equipme	ent	124,327	215,417	105,000	444,74
Rental - Downhole Equip	pment	205,424	59,805		265,22
tental - Living Quarters		48,083 429,543	54,480	<del></del>	102,56 429,54
Directional Drilling, Su Drilling	14649	753,820	<del></del>		753,82
Drill Bits		100,176		-	100,17
Fuel & Power		188,935	725,061		913,99
Cementing & Float Equ Completion Unit, Swab		243,296	<del></del>	15,000	15,00
Perforating, Wireline, S		—— <u> </u>	393,136	- 13,000	393,13
High Pressure Pump Tr	uck		123,274	-	123,27
Completion Unit, Swab		-	146,484	<u> </u>	146,48
Mud Circulation System Mud Logging	D	105,209	<del></del>		105,20 17,52
: Mud Logging ! Logging/Formation Ev	aluation	7,270	8,339	<del></del>	15,60
3 Mud & Chemicals		361,835	438,185	10,000	810,02
14 Water		43,459	661,625	300,000	1,005,08
5 Stimulation 6 Stimulation Flowback &	l Dien	<del></del>	814,033 121,606	150,000	814,03 271,60
15 Stimulation Flowback o 18 Mud/Wastewater Disp		193,104	61,151	230,000	254,25
O Rig Supervision / Engin	eering	121,196	133,420	21,667	276,28
2 Drig & Completion Ove	erhead	10,423	ZO 480	101 667	10,42
5 Labor 4 Proppant		153,358	69,489 1,255,227	101,667	324,51 1,255,22
5 Insurance		14,660	-	-	14,66
7 Contingency			24,421	3,833	28,25
9 Plugging & Abandonm			-	-	
	TOTAL INTANGIBLES >		5,367,000	772,167	9,655,5 TOTAL
TANGIBLE	COSTS	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	COSTS
Surface Casing	S	122,234			\$ 122,23
I Intermediate Casing		344,284			344,28
Orilling Liner Production Casing		687,039	<del></del>	<del></del>	687,03
Production Liner			<del></del>		
Tubing				140,000	140,00
Wellhead		64,820		40,000	104,82
Packers, Liner Hangers		14,732	<del></del>	20,000 45,833	34,73 45,83
Tanks Production Vessels		<del></del>	<del></del>	126,667	126,66
0 Flow Lines				66,667	66,66
1 Rod string					
2 Artificial Lift Equipmer 3 Compressor	n1	<del></del>	<del></del>	90,000 5,833	90,00
Installation Costs		<del></del>	<del></del>	- 3,833	5,63
			-	61,667	61,66
Surface Pumps			•		
Surface Pumps Downhole Pumps				116,667	116,66
Surface Pumps Downhole Pumps Measurement & Meter :				•	
Surface Pumps Downhole Pumps Measurement & Meter : Gas Conditioning/Deb	ydration	<del></del>	<del></del>	20,000	20,00
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S Surface Pumps 6 Downhole Pumps 7 Measurement & Meter : 8 Gas Conditioning / Deb 9 Interconnecting Facility 0 Gathering / Bulk Lincs 1 Valves, Dumps, Contro	ydraffon Piping Hers		-	108,333	108,33
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Surface Pumps Downhole Pumps Measurement & Meter Gas Conditioning/ Del Interconnecting Facility Gathering/ Bulk Lines Valves, Dumps, Contro Tank / Facility Contain Flare Stack Genmunications / SCA Instrumentation / Safet  Drilling Engine Completions Engine Production Engine an Resources Operation VF-Land & Le	pydration Piping  Illers ment  DA  y  TOTAL TANGIBLES > TOTAL COSTS >   ESOURCES Operating, LLC:  ESC. PS  ESC. ML  ESC. DC  ing, LLC APPROVAL:  ESC. WH  ESC. WH  ESC. BG  WH  BG	1,233,109 4,749,528		108,333 43,333 16,667 50,000 36,667 833 999,167 1,761,334	108,33 43,33 16,66 50,00 30,66 83 2,222,2 11,877,8
inface Pumps Openhole Pumps deasurement & Meter also Conditioning / Det alter onnecting Facility athering/ Bulk Lines Alves, Dumps, Contro ank / Facility Contain are Stack Electrical / Grounding Communications / SCA astrumentation / Safet  RED BY Permian R.  Drilling Engine Compeleions Engine Production Engine In Resources Operation Co-C  VP - Land & Le  OPPERATING PARTI	pydration Piping  Illers ment  DA  y  TOTAL TANGIBLES > TOTAL COSTS >  ESOURCES OPERATING, LLC:  ESO:  ESOURCES OPERATING, LLC:  ESO:  ESO:  WH  ESQ:  BG  WH  SQ:  WER APPROVAL:	1,233,109 4,749,528		108.333 43,333 16,667 50,000 36,667 833 989,167 1,761,334	108,33 43,33 16,66 50,00 30,66 83 2,222,2 11,877,8
urface Pamps ownhole Fumps feasurement & Meter as Conditioning / Det ster connecting Facility athering / Bulk Lines alves, Dumps, Contro ank / Facility Contains are Stack lectrical / Grounding communications / SCA astrumentation / Safety  Drilling Engine Completions Engine Production Engine Production Engine An Resources Operation  Co-C  VP - Land & Le	pydration Piping  Illers ment  DA  y  TOTAL TANGIBLES > TOTAL COSTS >  ESOURCES OPERATING, LLC:  ESO:  ESOURCES OPERATING, LLC:  ESO:  ESO:  WH  ESQ:  BG  WH  SQ:  WER APPROVAL:	1,233,109 4,749,528		108.333 43,333 16,667 50,000 36,667 833 989,167 1,761,334	108,33 43,33 16,66 50,00 30,66 83 2,222,2 11,877,8
Surface Pumps Downhole Pumps Measurement & Meter Gas Conditioning/ Deb Interconnecting Facility Gathering/ Bulk Lines Valves, Dumps, Contro Tank / Facility Contain Flare Stack Electrical/ Grounding Communications / SCA Instrumentation / Safet  Drilling Engine Completions Engine Completions Engine ARED BY Permian Re  OPPERATING PARTI  CO-C  VP - Land & Le  OPPERATING PARTI	pydration Piping  Illers ment  DA  y  TOTAL TANGIBLES > TOTAL COSTS >  ESOURCES OPERATING, LLC:  ESC: PS  ESC: ML  ESC: PS  ESC: ML  ESC: WH  ESC:	1,233,109 4,749,528		108.333 43.333 16.667 50,000 36.667 833 989,167 1,761,334	108,33 43,33 16,66 50,00 30,66 83 2,222,2 11,877,8
Surface Pamps Jownhole Pumps Jownhole Pumps Jownhole Pumps Jownhole Pumps Jownhole Pumps Jownhole Pumps Joseph John John John John John John John John John	pydration Piping  Illers ment  DA  y  TOTAL TANGIBLES > TOTAL COSTS >  ESOURCES OPERATING, LLC:  ESC: PS  ESC: ML  ESC: PS  ESC: ML  ESC: WH  ESC:	1,233,109 4,749,528		108.333 43.333 16.667 50.600 36.667 833 959,167 1,761,334	108,33 43,33 16,66 50,00 30,66 83 2,222,2 11,877,8

## Permian Resources Operating, LLC 300 N. Marienfeld St., Stc. 1000 Midland, TX 79701 Phone (432) 695-4022 • Fax (432) 695-4063

			DRIZATION FOR EXPEND		
DATE:	2.17.2023			AFE NO.:	1
WELL NAME:	Bane 4-9 Federal Com 20	D2H		FIELD:	Tonto; Wolfcamp
LOCATION:	Section 4, T20S-R34E			MD/TVD:	21,210' / 10,925'
COUNTY/STATE:	Lea County, New Mexic	0		LATERAL LENGTH:	10,000'
Permian WI:				DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY			COMPLETION DAYS:	19
REMARKS:	Drill a horizontal WCXY	well and complete wi	th 44 stages. AFE include	es drilling, completions,	flowback and Initial
		DRILLING	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
INTANGIBLE C	OSTS	COSTS	(0515		5 96,566
1 Land/Legal/Regulatory		59,066 288,079	18,067	37,500 2,500	308,647
2 Location, Surveys & Damag 4 Freight / Transportation	es.	47,628	43,778	25,000	116,406
5 Rental - Surface Equipment		124,327	215,417	105,000	444,744
6 Rental - Downhole Equipme	ent	205,424	59,805	-	265,229
7 Rental - Living Quarters		48,083	54,480	·	102,562
10 Directional Drilling, Surve	ys	429,543	<u> </u>		429,543 753,820
11 Drilling		753,820 100,176			100,176
12 Drill Bits 13 Fuel & Power		188,935	725,061	<del></del>	913,996
14 Cementing & Float Equip		243,296		<del></del>	243,296
15 Completion Unit, Swab, C	ru		-	15,000	15,000
16 Perforating, Wireline, Slick		<del></del>	393,136	•	393,136
17 High Pressure Pump Truck			123,274		123,274
18 Completion Unit, Swab, C	ru		146,484		146,484
20 Mud Circulation System		105,209			105,209
21 Mud Logging	atlan.	17,529 7,270	8,339		15,609
22 Logging / Formation Evalu 23 Mud & Chemicals	auon	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 & D	isp	-	121,606	150,000	271,606
28 Mud/Wastewater Disposa		193,104	61,151	-	254,254
30 Rig Supervision / Engineer	Ing	121,196	133,420	21,667	276,283
32 Drig & Completion Overh	ead	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	24,421	3,833	28,254
97 Contingency 99 Plugging & Abandonment		<del></del>	24,421	3,033	28,2,4
37 I lugging of Atomicuotiment	TOTAL INTANGIBLES:		5,367,000	772,167	9,655,58
		DRILLING	COMPLETION	PRODUCTION	TOTAL
TANGIBLE C	OSTS	COSTS	COSTS	COSTS	COSTS
60 Surface Casing	:	5 122,234			\$ 122,234
61 Intermediate Casing		344,284		-	344,284
62 Drilling Liner					- (07.010
63 Production Casing		687,039	<del></del>		687,039
64 Production Liner		<del></del>	<del></del>	140,000	140,000
65 Tubing 66 Wellhead		64,820	<del></del>	40,000	104,820
67 Packers, Liner Hangers		14,732	<del></del>	20,000	34,732
68 Tanks		<del></del>		45,833	45,833
69 Production Vessels			-	126,667	126,667
70 Flow Lines		<del></del>		66,667	66,667
71 Rod string			-		
72 Artificial Lift Equipment			<u>.</u>	90,000	90,000
73 Compressor			<u>-</u>	5,833	5,833
74 Installation Costs				61,667	61,667
75 Surface Pumps 76 Downhole Pumps		<del></del>	<del></del>	01,007	01,007
77 Measurement & Meter Ins	tallation	<del></del>	<del></del>	116,667	116,667
78 Gas Conditioning / Dehyd		<del></del>		- 110,000	110,000
79 Interconnecting Facility Pi				20,600	20,000
80 Gathering / Bulk Lines					
81 Valves, Dumps, Controller	5			108,333	108,333
82 Tank / Facility Containme	at			43,333	43,333
83 Flare Stack			-	16,667	16,667
84 Electrical/Grounding				50,000	50,000
85 Communications / SCADA		<del></del>	<u> </u>	36,667	36,667
86 Instrumentation / Safety	TOTAL TANGIBLES			989,167	2,222,27
_	TOTAL COSTS		5,367,000	1,761,334	11,877,86
-	TOTAL COSTS	4,147,320	3,000,1000	1,701,052	11,077,000
EPARED BY Permian Resc	urces Operating, LLC:				
Drilling Engineer	PS				
Completions Engineer					
Production Engineer					
mian Resources Operating	, LLC APPROVAL:				
Co-CEC		Co-C	CEO	VP - Oper	
	WH		JW		CRM
VP - Land & Lega	BG	VP - Geoscie	so		
N OPERATING PARTNE	R APPROVAL:				
Company Name	-		Working Interest (%):	Т	ax ID:
• •			-		
Signed by			Date:		
Title			Approval: [	Yes	☐ No (mark one)

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

		OF COSTS AND AUTHO	ORIZATION FOR EXPEND		
DATE:	2.17.2023			AFE NO.:	1
WELL NAME:	Bane 4-9 Federal Com 2	203H		FIELD:	Tonto; Wolfcamp
LOCATION:	Section 4, T20S-R34E			MD/TVD:	21,210' / 10,925'
COUNTY/STATE:	Lea County, New Mexi	co		LATERAL LENGTH:	10,000'
Permian WI:	.,,			DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY			COMPLETION DAYS:	19
GEOLOGIC I ARGE!		Y well and complete wi	ith 44 stages. AFE include	_	
REMARKS:	AL install cost				
INTANGIBLE C	COPTE	DRILLING COSTS	COMPLETION COSTS	PRODUCTION COSTS	TOTAL COSTS
1 Land/Legal/Regulatory		s 59,066		37,500	<b>5</b> 96,566
2 Location, Surveys & Damag	es	288,079	18,067	2,500	308,647
4 Freight / Transportation		47,628	43,778	25,000	116,406
5 Rental • Surface Equipment		124,327	215,417	105,000	444,744
6 Rental - Downhole Equipme	ent .	205,424	59,805 54,480	<del></del>	265,229 102,562
7 Rental - Living Quarters 10 Directional Drilling, Surve		48,083 429,543	54,480	<del></del>	429,543
10 Difettional Druining, Surve	ys .	753,820		<del></del>	753,820
12 Drill Bits		100,176			100,176
13 Fuel & Power		188,935	725,061		913,996
14 Cementing & Float Equip		243,296			243,296
15 Completion Unit, Swab, C			-	15,000	15,000
16 Perforating, Wireline, Slick		<u> </u>	393,136		393,136
17 High Pressure Pump Truck		<del></del>	123,274 146,484	<del></del>	123,274 146,484
18 Completion Unit, Swab, Cl 20 Mad Clevalation Swater	10	105,209	140/104	<del></del>	105,209
20 Mud Circulation System 21 Mud Logging		17,529	<del></del>	<del></del>	17,529
22 Logging / Formation Evalu	ation	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 & D		103 104	121,606	150,000	271,606 254,254
28 Mud/Wastewater Disposa		193,104	61,151 133,420	21,667	254,254
30 Rig Supervision / Engineer 32 Drig & Completion Overh		10,423	133,420	- 21,00/	10,423
32 Drig & Completion Oversi 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 & Abandonment			<u> </u>	<u>·</u>	-
	TOTAL INTANGIBLES	> 3,516,419	5,367,000	772,167	9,655,585
		DRILLING	COMPLETION	PRODUCTION	TOTAL
TANGIBLE CO	OSTS	COSTS	COSTS	COSTS	COSTS
60 Surface Casing		\$ 122,234	<u>-</u>	<del></del>	5 122,234 344,284
61 Intermediate Casing 62 Drilling Liner		344,284	<del></del>	<del></del>	344,284
63 Production Casing		687,039	<del></del>	<del></del>	687,039
64 Production Liner		•			
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			<del></del>	45,833 126,667	45,833 126,667
69 Production Vessels 70 Flow Lines		<del></del>	<del></del>	66,667	66,667
71 Rod string		<del></del>	<del></del>		
72 Artificial Lift Equipment		<del></del>	<del></del>	90,000	90,000
73 Compressor				5,833	5,833
74 Installation Costs					
75 Surface Pumps		<del></del>		61,667	61,667
76 Downhole Pumps			<del></del>	116,667	116,667
77 Measurement & Meter Inst 78 Gas Conditioning / Dehyd		<del></del>	<del></del>	110,007	110,007
79 Interconnecting Facility Pi		<del></del>		20,000	20,000
80 Gathering / Bulk Lines	r=-n	<del></del>	<del></del>		
81 Vaives, Dumps, Controller	3	<del></del>		108,333	108,333
82 Tank / Facility Containmen				43,333	43,333
83 Flare Stack			-	16,667	16,667
84 Electrical/Grounding		<u> </u>	<u> </u>	50,000	50,000 36,667
85 Communications / SCADA 86 Instrumentation / Safety	1	<del></del>	<del></del>	36,667 833	833
oo metrumentation/ Salety	TOTAL TANGIBLES	> 1,233,109		989,167	2,222,27
	TOTAL COSTS		5,367,000	1,761,334	11,877,86
		4,1,1	-77		
EPARED BY Permian Reso	urces Operating, LLC:				
Drilling Engineer.	. PS				
Completions Engineers					
Production Engineer:					
			-		
mian Resources Operating	LLC APPROVAL:		<u> </u>		
Co-CEO			CEO	VP - Open	ations
Co-CEO	' <del></del>	Co-C		vr - Open	CRM
VP - Land & Legal		VP - Geoscie	***		Ç
	BG		50		
N OPERATING PARTNE	R APPROVAL:				
Company Name			Working Interest (%):	т	ax ID:
Company Maine			_		
Signed by:	:		Date:		<del></del>
Signed by:			Date: Approval:		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		<del></del>		
DATE:	2.17.2023			AFE NO.:	1
WELL NAME:	Bane 4-9 Federal Com 2	04H		FIELD:	Tonto; Wolfcamp
LOCATION:	Section 4, T20S-R34E			MD/TVD:	21,210' / 10,925'
COUNTY/STATE:	Lea County, New Mexic			LATERAL LENGTH:	10,000
	Lea County, New Mexic	:0		_	
Permian WI:				DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY			COMPLETION DAYS:	19
REMARKS:	Drill a horizontal WCXY AL install cost	well and complete wi	th 44 stages. AFE includ	es drilling, completions,	flowback and Initial
		DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBLE C	CETE	COSTS	COSTS	COSTS	COSTS
1 Land/Legal/Regulatory	0313	5 39,066		37,500	s 96,566
2 Location, Surveys & Damag		288,079	18,067	2,500	308,647
4 Freight / Transportation	•	47,628	43,778	25,000	116,406
5 Rental - Surface Equipment		124,327	215,417	105,000	444,744
6 Rental - Downhole Equipme	-nt	205,424	59,805		265,229
7 Rental - Living Quarters		48,083	54,480		102,562
10 Directional Drilling, Surve	ys	429,543	<del></del>		429,543
11 Drilling		753,820			753,820
12 Drill Bits		100,176			100,176
13 Fuel & Power		188,935	725,061		913,9%
14 Cementing & Float Equip		243,296			243,296
15 Completion Unit, Swab, C			-	15,000	15,000
16 Perforating, Wireline, Slick		<u>·</u>	393,136		393,136
17 High Pressure Pump Truck			123,274		123,274
18 Completion Unit, Swab, C.	TU		146,484		146,484
20 Mud Circulation System		105,209			105,209
21 Mud Logging	****	17,529	8,339		17,529
22 Logging/Formation Evalu	ation	7,270		- 10.000	15,609
23 Mud & Chemicals 24 Water		361,835 43,459	438,185 661,625	10,000 300,000	810,020 1,005,083
24 syster 25 Stimulation		43/439	814,033	300,000	814,033
25 Stimulation 26 Stimulation Flowback & D	ien	<del></del>	121,606	150,000	271,606
28 Mud/Wastewater Disposa		193,104	61,151	150,000	254.254
30 Rig Supervision / Engineer		121,196	133,420	21,667	276,283
32 Drig & Completion Overh		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 & Abandonment				====	-
	TOTAL INTANGIBLES:	3,516,419	5,367,000	772,167	9,655,58
			COLUMN TOWNS	************	T0711
		DRILLING	COMPLETION	PRODUCTION	TOTAL.
TANGIBLE CO	OSTS	COSTS	COSTS	COSTS	COSTS
60 Surface Casing		\$ 122,234			\$ 122,234
61 Intermediate Casing		344,284			344,284
62 Drilling Liner 63 Production Casing		687,039	<del></del>		687,039
64 Production Liner		007,039	<del></del>	<u>-</u>	007,037
65 Tubing		<del></del>	<u> </u>	140,000	140,000
66 Wellhead		64,820	<del></del>	40,000	104,820
67 Packers, Liner Hangers		14,732		20,000	34,732
68 Tanks			<del></del>	45,833	45,833
69 Production Vessels		<del></del>	<del></del>	126,667	126,667
70 Flow Lines		<del></del>	<del></del>	66,667	66,667
71 Rod string		<del></del>	<del></del>		
72 Artificial Lift Equipment		<del></del>		90,000	90,000
73 Compressor		-	<del></del>	5,833	5,833
74 Installation Costs					
75 Surface Pumps				61,667	61,667
76 Downhole Pumps					-
77 Measurement & Meter Ins	aliation	-		116,667	116,667
78 Gas Conditioning / Dehyd	ration	<del></del>		-	-
79 Interconnecting Facility Pi		=		20,000	20,000
80 Gathering / Bulk Lines				-	
81 Valves, Dumps, Controller				108,333	108,333
82 Tank / Facility Containmen	nt			43,333	43,333
83 Flare Stack				16,667	16,667
84 Electrical / Grounding				50,000	50,000
85 Communications / SCADA		<u>-</u>	<del></del>	36,667	36,667
86 Instrumentation / Safety		<del></del>	<u>-</u>	833	833
	TOTAL TANGIBLES		0	989,167	2,222,27
	TOTAL COSTS	> 4,749,528	5,367,000	1,761,334	11,877,86
DABED BY D' P	www.commun.				
PARED BY Permian Reso				<del></del>	
Drilling Engineer:					
Completions Engineer:	ML				
Production Engineer:	DC				
nian Rasaumas Onorti-	IIC APPROVATA				
nian Resources Operating					
Co-CEO	WH	Co-C	TEO	VP - Oper	
			•		CRM
VP - Land & Legal	BG	VP - Geoscie	50 SO		
	P 4 PPPOVA				
Onto Attivo	R APPROVAL:				
N OPERATING PARTNE					
			Working Interest (%)	7	Tax ID:
N OPERATING PARTNE  Company Name			Working Interest (%):	1	Tax ID:
			Working Interest (%):	1	Tax ID:
			_		Fax ID:

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: WELL NAME: LOCATION:	2.17.2023			AFE NO.:	1
	Joker 5-8 Federal Com 2	M1H		FIELD:	Tonto; Wolfcamp
LOCATION:				MD/TVD:	21,211' / 10,926'
	Section 5, T20S-R34E				
COUNTY/STATE:	Lea County, New Mexic	00		LATERAL LENGTH:	10,000'
Permian WI:				DRILLING DAYS:	19.6
	TARGULA			COMPLETION DAYS:	19
GEOLOGIC TARGET:	WCXY				
	Drill a horizontal WCX	Y well and complete w	rith 44 stages. AFE include	s drilling, completions, :	flowback and Initial
REMARKS:	AL install cost	-	-		
REMARKS.	7115 22 00 00 00 00 00 00 00 00 00 00 00 00				
		DRILLING	COMPLETION	PRODUCTION	TOTAL
				COSTS	COSTS
INTANGIBLE	COSTS	COSTS	COSTS		
T Land / Legal / Regulatory	-	\$ 59,066	· · · · · ·	37,500	\$ 96,566
2 Location, Surveys & Damas		288,079	18,067	2,500	308,647
	,cs		43,778	25,000	116,406
4 Freight/Transportation		47,628			444,744
5 Kental - Surtace Equipmen		124,32/	215,417	105,000	
6 Rental - Downhole Equipm	ent	205,424	59,805	<u>-</u>	265,229
7 Kental - Living Quarters		48,083	54,480		102,562
10 Directional Drilling, Survey	rvs	429,543			429,543
11 Orilling	•	753,820	<del></del>	<del></del>	753,820
12 Ortil Bits		100,176			100,176
13 Fuel & Power		188,935	725,061		913,996
					243,296
14 Cementing & Float Equip		243,296			
15 Completion Unit, Swab, C	TU	•	•	15,000	15,000
16 Pertorating, Wireline, Silc	kline		393,136		393,136
17 High Pressure Pump Truc			123,274		123,274
18 Completion Unit, Swab, C		<del></del>	146,484		146,484
		105,209	110,101		105,209
20 Mud Circulation System					
21 Mud Logging		17,529			17,529
22 Logging / Formation Evalu	ation	7,2/0	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
				150,000	
26 Stimulation Flowback & I			121,606	130,000	271,606
28 Mud/Wastewater Dispos		193,104	61,151	•	254,254
30 Kig Supervision / Enginee	ring	121,196	133,420	21,667	276,283
32 Drig & Completion Over		10,423	<del></del>		10,423
35 Labor		153,358	69,489	101,667	324,514
		133,330		101,007	1,255,227
54 Proppant			1,255,227		
95 Insurance		14,66U	•	•	14,660
97 Contingency			24,421	3,833	28,254
99 Plugging & Abandonmen			<del></del>		
a. a		> 3,516,419	5,367,000	772,167	9,655,585
	TOTAL INTANGIBLES	3,316,419	5,307,000	//2,16/	7,033,363
		DRILLING	COMPLETION	PRODUCTION	TOTAL
T. 110mr -		COSTS	COSTS	COSTS	COSTS
TANGIBLE C	USIS		COS15	C0315	
60 Surface Casing		5 122,234	•	-	5 122,234
61 Intermediate Casing		344,284			344,284
62 Drilling Liner			<del></del>		
63 Production Casing		687,039			687,039
64 Production Liner					
					140,000
65 Tubing				140,000	
66 Wellhead		64,820	•	40,000	104,820
67 Packers, Liner Hangers		14,732	<del></del>	20,000	34,732
68 Tanks			<del></del>	45,833	45,833
69 Production Vessels			<del></del>	126,667	126,667
70 Flow Lines					
			<u>-</u> _	66,667	66,667
71 Rod string			•	•	
72 Artificial Lift Equipment		-	•—	90,000	90,000
73 Compressor				5,833	5,833
74 Installation Costs			<del></del>		
75 Surface Pumps			<del></del>	61,667	61,667
				01,007	01,007
76 Downhole Pumps					
77 Measurement & Meter Ins		-	-	116,667	116,667
78 Gas Conditioning / Dehyo	ration				
79 Interconnecting Facility P	ping	-		20,000	20,000
80 Gathering / Bulk Lines					<del></del>
81 Valves, Dumps, Controlle		<del></del>	<del></del>	108,333	108,333
82 Tank / Facility Containme	ш			43,333	43,333
83 Flare Stack			<del>-</del> _	16,667	15,667
84 Electrical / Grounding				50,000	50,000
85 Communications / SCAD	<b>\</b>	•		36,667	36,667
		<del></del>		833	833
86 Instrumentation / Salety			0	989,167	2,222,276
80 Instrumentation / Sarety	TOTAL TANGIBLES	4 749 528	5 367 000	1,761,334	11,877,862
80 Instrumentation / Safety	TOTAL TANGIBLES				
so instrumentation / Safety		1,117,080	3,507,000		
so instrumentation / Salety		- 4,17,020	3,547,000		
	TOTAL COSTS	4,17,020	3,507,000		
EPARED BY Permian Resc	TOTAL COSTS	1,11,040	5,507,000		
EPARED BY Permian Reso	TOTAL COSTS	1777	3,000,000		
EPARED BY Permian Reso	TOTAL COSTS  surces Operating, LLC:	1111/120	3,504,1000		
EPARED BY Permian Reso	TOTAL COSTS  surces Operating, LLC:	4,17,000	مامر بالمرد		
EPARED BY Permian Resc Drilling Engineer Completions Engineer	TOTAL COSTS: surces Operating, LLC: PS ML	7/17/000	3,507,000		
EPARED BY Permian Reso	TOTAL COSTS: surces Operating, LLC: PS ML	THE PLANT	3,507,000		
EPARED BY Permian Resc Drilling Engineer Completions Engineer Production Engineer	TOTAL COSTS:  urces Operating, LLC:  PS  ML  DC	31 4 7 7 660	3,507,000		
EPARED BY Permian Resc Drilling Engineer Completions Engineer Production Engineer	TOTAL COSTS:  urces Operating, LLC:  PS  ML  DC	THE POST	alan A Man		
EPARED BY Permian Resc Drilling Engineer Completions Engineer	TOTAL COSTS:  urces Operating, LLC:  PS  ML  DC	4,142,0400	3507,1000		
EPARED BY Permian Reso Drilling Engineer Completions Engineer Production Engineer	TOTAL COSTS  FOR THE PROPERTY OF THE PROPERTY	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Jan 17 Jan 18 Ja		
EPARED BY Permian Resc Drilling Engineer Completions Engineer Production Engineer	TOTAL COSTS  FS ML DC  LLC APPROVAL:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	CEO	VP - Oper	
EPARED BY Permian Reso Drilling Engineer Completions Engineer Production Engineer	TOTAL COSTS  FOR THE PROPERTY OF THE PROPERTY	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	CEO		ations
EPARED BY Permian Reso Drilling Engineer Completions Engineer Production Engineer Production Engineer rmian Resources Operating	TOTAL COSTS  FS ML DC  LLC APPROVAL:	Co-	)w		
EPARED BY Permian Reso Drilling Engineer Completions Engineer Production Engineer	TOTAL COSTS  FS ML DC LLC APPROVAL:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	jw		
EPARED BY Permian Reso Drilling Engineer Completions Engineer Production Engineer Production Engineer rmian Resources Operating	TOTAL COSTS  FS ML DC  LLC APPROVAL:	Co-	)w		
EPARED BY Permian Reso Drilling Engineer Completions Engineer Production Engineer Production Engineer rmian Resources Operating	TOTAL COSTS  FS ML DC LLC APPROVAL:	Co-	jw		
EPARED BY Permian Reso Drilling Engineer Completions Engineer Production Engineer Production Engineer rmian Resources Operating	TOTAL COSTS  FS ML DC LLC APPROVAL:	Co-	jw		
EPARED BY Permian Reso Drilling Engineer Completions Engineer Production Engineer Production Engineer rmian Resources Operating	TOTAL COSTS  FS ML DC LLC APPROVAL:	Co-	jw		
EPARED BY Permian Reso Drilling Engineer Completions Engineer Production Engineer rmian Resources Operating Co-CEC VP- Land & Lega	TOTAL COSTS  FS ML DC LLC APPROVAL: WH	Co-	jw		
EPARED BY Permian Reso Drilling Engineer Completions Engineer Production Engineer Production Engineer rmian Resources Operating	TOTAL COSTS  FS ML DC LLC APPROVAL: WH	Co-	jw		
EPARED BY Permian Reso Drilling Engineer Completions Engineer Production Engineer rmian Resources Operating Co-CEC VP- Land & Lega	TOTAL COSTS  FS ML DC LLC APPROVAL: WH	Co-	jw		
EPARED BY Permian Resc  Drilling Engineer Completions Engineer Production Engineer rmian Resources Operating Co-CEC  VP- Land & Lega	TOTAL COSTS  BUTCES Operating, LLC:  PS ML DC LLC APPROVAL:  WH  BG  R APPROVAL:	Co-	jw ences SO	VP - Oper	CRM
EPARED BY Permian Reso Drilling Engineer Completions Engineer Production Engineer rmian Resources Operating Co-CEC VP- Land & Lega	TOTAL COSTS  BUTCES Operating, LLC:  PS ML DC LLC APPROVAL:  WH  BG  R APPROVAL:	Co-	jw	VP - Oper	
EPARED BY Permian Reso  Drilling Engineer Completions Engineer Production Engineer rmian Resources Operating  Co-CEC  VP - Land & Lega  DN OPERATING PARTNE Company Name	TOTAL COSTS  FINANCES OPERATING, LLC:  FINANCE OF THE PROVINCE	Co-	yw so	VP - Oper	CRM
EPARED BY Permian Resc  Drilling Engineer Completions Engineer Production Engineer rmian Resources Operating Co-CEC  VP- Land & Lega	TOTAL COSTS  FINANCES OPERATING, LLC:  FINANCE OF THE PROVINCE	Co-	jw ences SO	VP - Oper	CRM
EPARED BY Permian Reso  Drilling Engineer Completions Engineer Production Engineer Production Engineer Co-CEC  VP- Land & Lega  DN OPERATING PARTNE  Company Name Signed by	TOTAL COSTS  PS ML DC , LLC APPROVAL:  WH BC  R APPROVAL:	Co-	SO  Working Interest (%):  Date:	VP-Oper	CRM
EPARED BY Permian Reso  Drilling Engineer Completions Engineer Production Engineer rmian Resources Operating  Co-CEC  VP - Land & Lega  DN OPERATING PARTNE Company Name	TOTAL COSTS  PS ML DC , LLC APPROVAL:  WH BC  R APPROVAL:	Co-	yw so	VP - Oper	CRM

Permian Resources Operating, LLC
300 N. Marienfeld St., Sia. 1000 Midland, TX 79701
Phone (432) 693-4222 • Fax (432) 693-4063
ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

DATE;	D 4 H 0000			AFE NO.:	1
	2.17.2023				
WELL NAME:	Joker 5-8 Federal Com 2	202H		FIELD:	Tonto; Wolfcamp
LOCATION:	Section 5, T20S-R34E			MD/TVD:	21,211 / 10,926
COUNTY/STATE:	Lea County, New Mexi-	co		LATERAL LENGTH:	10,000'
Permian WI:				DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY			COMPLETION DAYS:	19
GEOLOGIC TANGET:					
		y well and complete wi	th 44 stages. AFE include	s arming, completions, i	lowback and initial
REMARKS:	AL install cost				
		DRILLING	COMPLETION	PRODUCTION	TOTAL COSTS
INTANGIBLE	COSTS	COSTS	COSTS	COSTS	
1 Land/Legal/Regulatory		\$ 59,066		37,500	5 96,566
2 Location, Surveys & Damas	ges	288,079	18,067	2,500	308,647
4 Freight/Transportation		47,628	43,778	25,000	116,406
5 Kental - Suriace Equipmen		124,327	215,417	105,000	444,744
6 Kental - Downhote Equipm	ent	205,424	59,805		265,229
7 Kental - Living Quarters		48,083	54,480		102,562
10 Directional Dritting, Surv	eys	429,543			429,543
11 Drilling		753,820		<del></del>	753,820
12 Drill Bils		100,176	<del></del>		100,176
13 Fuel & Power		188,935	725,061		913,996
14 Cementing & Float Equip		243,296			243,296
15 Completion Unit, Swab, C	าเบ			15,000	15,000
16 Pertorating, Wireline, Slic	kiine		393,136		393,136
17 High Pressure Pump Truc	k	<del></del>	123,2/4	<del></del>	123,2/4
18 Completion Unit, Swab, C	าาบ		146,484		146,484
20 Mud Circulation System		105,209	-		105,209
21 Mud Logging		17,529			17,529
22 Logging / Formation Evalu	ation	7,270	8,339	<del></del>	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		<del></del>	814,033	<del></del>	814,033
26 Stimulation Flowback & L	)isp	<del></del>	121,606	150,000	271,606
25 Mud / Wastewater Dispos		193,104	61,151	<del></del>	254,254
30 Rig Supervision / Enginee		121,196	133,420	21,667	2/6,283
32 Drig & Completion Overh		10,423	<del></del>	<del></del>	10,423
35 Labor		153,358	69,489	101,667	324,514
54 Proppant		<del></del>	1,255,227	<del></del>	1,255,22/
95 Insurance		14,660	<del></del>		14,660
97 Contingency		<del></del>	24,421	3,833	28,254
99 Plugging & Abandonmen	ı	<del></del>		<del></del>	<del></del>
	TOTAL INTANGIBLES	> 3,516,419	5,367,000	772,167	9,655,585
	TOTALETTATORICES	_			
		DRILLING	COMPLETION	PRODUCTION	TOTAL
TANGIBLE C	OSTS	COSTS	COSTS	COSTS	costs
60 Surface Casing		5 122,234		•	5 122,234
61 Intermediate Casing		344,284	<del></del>	-	344,284
62 Drilling Liner			-		
63 Production Casing		687,039	<del></del>	-	687,039
64 Production Liner			<del></del>	<del></del>	
65 Tubing			<del></del>	140,000	140,000
66 Wellhead		64,820		40,000	104,820
67 Packers, Liner Hangers		14,/32	<del></del>	20,000	34,732
68 Tanks			<del></del>	45,833	45,833
69 Production Vessels		<del></del>		126,667	126,667
70 Flow Lines				66,667	66,667
71 Red string		<del></del>	<del></del>		
72 Artiticial Litt Equipment		<del></del>	<del></del>	90,000	90.000
73 Compressor		<del></del>		5,833	5,833
74 Installation Costs		<del></del>	<del></del>		
75 Surtace Pumps			<del></del>	61,667	61,667
76 Downhote Pumps			<u>-</u> -		
77 Measurement & Meter Ins	dallation			116,667	116,667
78 Gas Conditioning / Dehyo			<del></del>	110,007	110,007
79 Interconnecting Facility P				20,600	20,000
80 Gathering / Bulk Lines	hma			20,000	20,000
81 Valves, Dumps, Controlle			<del></del>	108,333	108,333
			<u> </u>		43,333
82 Tank / Facility Containme	nt	<u>.</u>		43,333	15,557
		<u> </u>	<del></del>	16,667 50,000	50,000
83 Flare Stack		-	•		JUJUU
84 Electrical / Grounding					TL ELT
84 Electrical / Grounding 85 Communications / SCADA	<b>\</b>		<del></del>	36,667	36,667
84 Electrical / Grounding				36,667 833	833
84 Electrical / Grounding 85 Communications / SCAD	TOTAL TANGIBLES			36,667 833 989,167	833 2,222,276
84 Electrical / Grounding 85 Communications / SCAD/			0 5,367,000	36,667 833	833
84 Electrical / Grounding 85 Communications / SCAD	TOTAL TANGIBLES		5,367,000	36,667 833 989,167	833 2,222,276
84 Electrical / Grounding 85 Communications / SCAD/ 86 Instrumentation / Satety	TOTAL TANGIBLES TOTAL COSTS		0 5,367,000	36,667 833 989,167	833 2,222,276
84 Electrical / Grounding 85 Communications / SCAD/ 86 Instrumentation / Satety	TOTAL TANGIBLES TOTAL COSTS		5,367,000	36,667 833 989,167	833 2,222,276
84 Electrical / Grounding 85 Communications / SCAD/ 86 Instrumentation / Safety EPARED BY Permian Reso	TOTAL TANGIBLES TOTAL COSTS  ources Operating, LLC:		0 5,367,000	36,667 833 989,167	833 2,222,276
84 Electrical / Grounding 85 Communications / SCAD: 86 Instrumentation / Satety  EPARED BY Permian Resc  Drilling Engineer	TOTAL TANGIBLES TOTAL COSTS  Durres Operating, LLC: : PS		0 5,367,000	36,667 833 989,167	833 2,222,276
94 Electrical / Grounding 85 Communications / SCAD. 96 Instrumentation / Satety EPARED BY Permian Resc Drilling Engineer Completions Engineer	TOTAL TANGIBLES TOTAL COSTS  Durces Operating, LLC: : PS : ML		0 5,367,000	36,667 833 989,167	833 2,222,276
84 Electrical / Grounding 85 Communications / SCAD/ 86 Instrumentation / Satety  EPARED BY Permian Resc  Drilling Engineer	TOTAL TANGIBLES TOTAL COSTS  Durces Operating, LLC: : PS : ML		5,367,000	36,667 833 989,167	833 2,222,276
94 Electrical / Grounding 85 Communications / SCAID. 86 Instrumentation / Satety 86 Instrumentation / Satety 87 EPARED BY Perrutan Reso Drilling Engineer Completions Engineer Production Engineer	TOTAL TANGIBLES TOTAL COSTS  Durces Operating, LLC: : PS : ML : DC		5,367,000	36,667 833 989,167	833 2,222,276
94 Electrical / Grounding 85 Communications / SCAD, 86 Instrumentation / Satety EPARED BY Perutian Reso Drilling Engineer Completions Engineer Production Engineer	TOTAL TANGIBLES TOTAL COSTS  Durces Operating, LLC: : PS : ML : DC		5,367,000	36,667 833 989,167	833 2,222,276
84 Electrical / Grounding 85 Communications / SCAD 86 Instrumentation / Satety  EPARED BY Permian Rese  Drilling Engineer Completions Engineer Production Engineer	TOTAL TANGIBLES TOTAL COSTS  Durkes Operating, LLC: : PS : ML : DC ; LLC APPROVAL:	> 4,749,528	5,367,000	36,657 833 989,167 1,761,334	833 2,222,276 11,877,862
94 Electrical / Grounding 85 Communications / SCAD. 86 Instrumentation / Satety EPARED BY Permian Resc Drilling Engineer Completions Engineer	TOTAL TANGIBLES TOTAL COSTS  Durces Operating, LLC:  FS ML DC LLC APPROVAL:		5,367,000	36,667 833 989,167	833 2,222,276 11,877,862
94 Electrical / Grounding 85 Communications / SCAD 86 Instrumentation / Satety  EPARED BY Permian Rese  Drilling Engineer Completions Engineer Production Engineer	TOTAL TANGIBLES TOTAL COSTS  Durkes Operating, LLC: : PS : ML : DC ; LLC APPROVAL:	> 4,749,528	5,367,000	36,657 833 989,167 1,761,334	833 2,222,276 11,877,862
94 Electrical / Grounding 85 Communications / SCAD 96 Instrumentation / Satety  EPARED BY Permian Resc  Drilling Engineer Completions Engineer Production Engineer maian Resources Operating	TOTAL TANGIBLES TOTAL COSTS  DURKES OPERATING, LLC:  FS ML DC LLC APPROVAL:  WH	> 4,749,528	5,367,000	36,657 833 989,167 1,761,334	833 2,222,276 11,877,862
84 Electrical / Grounding 85 Communications / SCAD 86 Instrumentation / Satety  EPARED BY Permian Rese  Drilling Engineer Completions Engineer Production Engineer	TOTAL TANGIBLES TOTAL COSTS  Durkes Operating, LLC: : FS : ML : DC ; LLC APPROVAL: 0WH	• 4,749,528 Co-C	5,367,000	36,657 833 989,167 1,761,334	33.3 2.222,76 11,877,862
94 Electrical / Grounding 85 Communications / SCAD 96 Instrumentation / Satety  EPARED BY Permian Resc  Drilling Engineer Completions Engineer Production Engineer maian Resources Operating	TOTAL TANGIBLES TOTAL COSTS  DURKES OPERATING, LLC:  FS ML DC LLC APPROVAL:  WH	• 4,749,528 Co-C	5,367,000	36,657 833 989,167 1,761,334	2.22/2/86 11,877,862
84 Electrical / Grounding 85 Communications / SCAD/ 86 Instrumentation / Satety  EPARED BY Perudan Resc  Drilling Engineer Completions Engineer Production Engineer undan Resources Operating	TOTAL TANGIBLES TOTAL COSTS  Durkes Operating, LLC: : FS : ML : DC ; LLC APPROVAL: 0WH	• 4,749,528 Co-C	5,367,000	36,657 833 989,167 1,761,334	835 2,222,276 11,877,862
94 Electrical / Grounding 85 Communications / SCAD/ 86 Instrumentation / Satety  EPARED BY Perudan Resc  Drilling Engineer Completions Engineer Production Engineer main Resources Operating	TOTAL TANGIBLES TOTAL COSTS  Durkes Operating, LLC: : FS : ML : DC ; LLC APPROVAL: 0WH	• 4,749,528 Co-C	5,367,000	36,657 833 989,167 1,761,334	2.22/2/86 11,877,862
94 Electrical / Grounding 85 Communications / SCAD/ 86 Instrumentation / Satety  EPARED BY Permian Resc  Drilling Engineer Completions Engineer Production Engineer mian Resources Operating  Co-CEC  VP - Land & Lega	TOTAL TANGIBLES TOTAL COSTS  Durres Operating, LLC:  PS ML COC LLC APPROVAL:  WH  BG	• 4,749,528 Co-C	5,367,000	36,657 833 989,167 1,761,334	33.3 2.222,76 11,877,862
94 Electrical / Grounding 85 Communications / SCAD 96 Instrumentation / Satety  EPARED BY Permian Resc  Drilling Engineer Completions Engineer Production Engineer maian Resources Operating	TOTAL TANGIBLES TOTAL COSTS  Durres Operating, LLC:  PS ML COC LLC APPROVAL:  WH  BG	• 4,749,528 Co-C	5,367,000	36,657 833 989,167 1,761,334	833 2,222,276 11,877,862
94 Electrical / Grounding 85 Communications / SCAD/ 86 Instrumentation / Satety  PARED BY Perrulan Rest  Drilling Engineer  Completions Engineer  Production Engineer  mulan Resources Operating  Co-CEC  VP - Land & Lega	TOTAL TANGIBLES TOTAL COSTS  Durves Operating, LLC: : PS : ML : DC ; LLC APPROVAL: 0	• 4,749,528 Co-C	5,367,000	36,667 833 989,167 1,761,334 VP - Opera	33.3 2.222,76 11,877,862
94 Electrical / Grounding 85 Communications / SCAD/ 86 Instrumentation / Satety  EPARED BY Permian Resc  Drilling Engineer Completions Engineer Production Engineer Indian Resources Operating  CO-CEC  VP - Land & Lega  N OPERATING PARTNE	TOTAL TANGIBLES TOTAL COSTS  Durves Operating, LLC: : PS : ML : DC ; LLC APPROVAL: 0	• 4,749,528 Co-C	5,367,000  EEO	36,667 833 989,167 1,761,334 VP - Opera	11,877,862 11,877,862
94 Electrical / Grounding 85 Communications / SCAD/ 86 Instrumentation / Satety  EPARED BY Permian Resc  Drilling Engineer Completions Engineer Production Engineer Indian Resources Operating  CO-CEC  VP - Land & Lega  N OPERATING PARTNE	TOTAL TANGIBLES TOTAL COSTS  DURCES OPERATING, LLC: PS ML DC LLC APPROVAL: BG R APPROVAL:	• 4,749,528 Co-C	5,367,000  EEO	36,667 833 989,167 1,761,334 VP - Opera	11,877,862 11,877,862
94 Electrical / Grounding 85 Communications / SCAD/ 96 Instrumentation / Sattly  PARED BY Permian Resc  Drilling Engineer Completions Engineer Production Engineer Production Engineer  VP - Land & Lega  N OPERATING PARTNE  Company Name Signed by	TOTAL TANGIBLES TOTAL COSTS  DURCES OPERATING, LLC:  PS ML CC LLC APPROVAL:  BG  R APPROVAL:	• 4,749,528 Co-C	5,367,000  EEO JW  aces SO  Warking Interest (%):  Date:	36,657 833 989,167 1,761,334 VP - Opera	11,877,862  11,877,862  Atlons  CRM
94 Electrical / Grounding 85 Communications / SCAD/ 86 Instrumentation / Satety  EPARED BY Permian Resc  Drilling Engineer Completions Engineer Production Engineer  Man Resources Operating  CO-CEC  VP - Land & Lega  N OPERATING PARTNE  Company Name	TOTAL TANGIBLES TOTAL COSTS  DURCES OPERATING, LLC:  PS ML CC LLC APPROVAL:  BG  R APPROVAL:	• 4,749,528 Co-C	5,367,000  EO	36,667 833 989,167 1,761,334 VP - Opera	11,877,862 11,877,862

DATE:

### 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 EXPENDITUR	E	
 2.17.2023	AFE NO.:	1
Joker 5-8 Federal Com 203H	FIELD:	Tonto; Wolfcamp
·	_	

WELL NAME: LOCATION: MD/TVD: 21,191' / 10,906' Section 5, T20S-R34E 10.000 COUNTY/STATE: Lea County, New Mexico LATERAL LENGTH: 19.6 Permian WI: DRILLING DAYS: COMPLETION DAYS: GEOLOGIC TARGET:

Drill a horizontal WCXY well and complete with 44 stages. AFE includes drilling, completions, flowback and Initial AL install cost REMARKS:

REMARKS: AL INSTAIL COST				
	DRILLING	COMPLETION	PRODUCTION	TOTAL
INTANGIBLE COSTS	COSTS	COSTS	COST5	COSTS
Land/Legal/Regulatory 5	59,066		37,500	96,56
2 Location, Surveys & Damages	288.079	18,067	2,500	308,64
4 Freight / Transportation	47,628	43,778	25,000	116,40
5 Kental - Surface Equipment	124,327	215,417	105,000	444,74
Kental - Downhole Equipment	205,424	59,805	<del></del>	265,22
7 Kental - Living Quarters	48,083	54,480		102,56
10 Directional Drilling, Surveys	429,543	•	<del></del>	429,54
11 Drilling	753,820		<del></del>	753,82
12 Drui Bits	100,176			100,17
13 Fuel & Power	188,935	725,061	<del></del>	913,99
14 Cementing & Float Equip	243,296	<del></del>		243,29
15 Completion Unit, Swab, CTU	<del></del>	-	15,000	15,00
16 Periorating, Wireline, Silckline	<del></del>	393,136	<del></del>	393,13
17 High Pressure Pump Truck	<del></del>	123,274		123,27
18 Completion Unit, Swab, CTU		146,484		146,48
20 Mud Circulation System	105,209		<del></del>	105,20
I Mud Logging	17,529	<del></del>		17,52
22 Logging / Formation Evaluation	7,270	8,339	<del></del>	15,60
23 Mud & Chemicals	361,835	438,185	10,000	810,0
24 Water	43,459	661.525	300,000	1,005,0
25 Stimulation		814,033		814,03
26 Stimulation Flowback & Disp	<del></del>	121,606	150,000	2/1,60
28 Mud / Wastewater Disposal	193,104	61,151		254,25
30 Rig Supervision / Engineering	121,196	133,420	21,667	2/6,28
32 Drig & Completion Overhead	10,423	133/420	21,007	10,42
15 Labor	153,358	69,489	101,667	324,5
54 Proppant	100,000	1,255,227	101,007	1,255,2
5 Insurance	14,660	1,230,227		14,68
77 Contingency	17,000	24,421	3,833	28.25
99 Plugging & Abandonment	<del></del>	24,441	3,633	20,20
TOTAL INTANGIBLES >	3,516,419	5,367,000		9,655,5
TOTAL INTANGIBLES>	DRILLING	COMPLETION	772,167	
TANGIBLE COSTS	COSTS	COSTS	PRODUCTION COSTS	TOTAL COSTS
50 Surface Casing 5	122,234			122.23
61 Intermediate Casing	344,284	<u>-</u>	·	
62 Drilling Liner	344,284		<u> </u>	344,28
63 Production Casing	-		<u>·</u>	
64 Production Casing	687,039	<u> </u>		687,03
	· · · · ·	<del></del>	-	-
55 Tubing			140,000	140,00
b6 Wellhead	64,820	· ·	40,000	104,82
57 Packers, Liner Hangers	14,732			
8 Tanks			20,000	
			45,833	45,83
			45,833 126,667	45,83
70 Flow Lines		-	45,833	45,83
70 Flow Lines 71 Rod string	-		45,833 126,667	45,83
70 Flow Lines 71 Rod string 72 Artiticial Llit Equipment			45,833 126,667	45,83 126,66 66,66
70 Flow Lines 71 Rod string 72 Artificial Lift Equipment 73 Compressor			45,833 126,667 66,667	45,83 126,66 66,66
'O Flow Lines 1 Rod string 2 Artificial Lift Equipment 3 Compressor 4 Installation Costs			45,833 126,667 66,667 90,000	45,83 126,66 66,60
'O Flow Lines 1 Rod string 2 Artificial Lift Equipment 3 Compressor 4 Installation Costs			45,833 126,667 66,667 90,000	45,8: 126,6: 66,6: 90,0: 5,8:
IV How Lines 7 Rod string 72 Artitickal Litti Equipment 73 Compressor 41 installation Costs 55 Surface Pumps			45,833 126,667 66,667 90,000 5,833	45,8: 126,6: 66,6: 90,0: 5,8:
IV How Lines 17 Rod string 17 Arditckia Litt Equipment 13 Compressor 14 Installation Costs 15 Sturface Pumps 16 Downchole Pumps			45,833 126,667 66,667 90,000 5,833	45,85 126,66 66,68 90,00 5,85 61,66
U Flow Lines 7 Kod string 7 Artiticial Litt Equipment 3 Compressor 4 Installation Costs 5 Surface Pumps 6 Downhole Pumps 7 Measurement & Meter Installation			45,833 126,667 66,667 90,000 5,833 61,667	45,82 126,68 66,68 90,00 5,83 61,66
IV How Lines  1 Rod string  7 Artiticial Liti Equipment  3 Compressor  4 Compressor  5 Surface Pumps  6 Downhole Pumps  76 Downhole Pumps  77 Measurement & Meter Installation  8 Cas Conditioning / Dehydration			45,833 126,667 66,667 90,000 5,833 61,667	45,83 126,68 66,66 90,00 5,83 61,66
IV Flow Lines 7 Rod string 7 Artiticial List Equipment 3 Compressor 4 Instillation Costs 75 Surface Pumps 6 Downhole Pumps 7 Measurement & Meter Installation 9 Gas Conditioning / Dehydration 9 Historing Facility Piping			45,833 126,667 66,667 90,000 5,833 61,667	45,83 126,68 66,66 90,00 5,83 61,66
IV How Lines 7 Antiticia IL dit Equipment 73 Compressor 4 Installation Costs 75 Surface Fumps 76 Downhole Fumps 76 Downhole Fumps 77 Measurement & Meter Installation 78 Gas Conditioning / Dehydration 91 Interconnecting Facility Piping 80 Cathering / Bulk Lines			45,833 126,667 66,667 90,000 5,833 61,667	45,83 125,65 66,66 90,00 5,83 61,66 116,66
IV blow Lines 7 Rod string 2 Artificial Lift Equipment 3 Compressor 4 Instillation Costs 5 Surface Pumps 6 Downhole Pumps 7 Measurement & Meter Installation 78 Gas Conditioning / Dehydration 9 Interconnecting Facility Piping 80 Gathering / Bolix Lines 11 Valves, Dumps, Controllers			43,833 126,667 66,667 90,000 5,833 61,667 116,667	45,8: 126,64 66,64 90,04 5,8: 61,64 - 116,68
IV blow Lines 7 Acutikial Lift Equipment 73 Compressor 4 Installation Costs 75 Surface Pumps 76 Demonstor 76 Wessurement & Meter Installation 78 Gas Conditioning / Dehydration 79 Interconnecting Facility Piping 80 Gathering / Bulk Lines 81 Cathering /			43,833 126,667 66,667 90,000 5,833 61,667 116,667 20,000	45,83 126,64 66,65 90,00 53,83 61,66 
10 How Lines 7 Rod string 7 Artiticial Litt Equipment 3 Compressor 4 Installation Costs 75 Surface Pumps 6 Downhole Pumps 7 Measurement & Meler Installation 78 Cas Conditioning, Juchystration 79 Interconnecting Facility Piping 80 Gathering / Bolk Lines 11 Valves, Dumps, Controllers 12 Tank, Facility Containment 3 Flace Stack			45,835 126,667 66,667 90,800 5,833 61,667 116,067	45,83 125,68 65,56 90,00 5,83 - - - - - - - - - - - - - - - - - - -
10 How Lines 7 Rod string 7 Actiticial List Equipment 3 Compressor 4 Installation Costs 75 Surface Fumps 6 Downshole Pumps 7 Meassurement & Meter Installation 18 Gas Conditioning / Dehydration 9 Heteromeeting Facility Piping 10 Gathering / Bolk Lines 10 Valves, Dumps, Controllers 12 Tank / Facility Containment 3 Flare Stack 4 Electrical / Gounding			43,833 126,667 66,667 90,000 5,833 61,667 116,667 20,000	45,83 126,64 66,64 90,00 5,83 61,66 116,66 20,00 10,8,33 43,33 16,66 50,00
70 Flow Lines 71 Rod string 72 Artiticia Liti Equipment 73 Compressor 74 Instilation Costs 75 Surtace Pumps 76 Downhole Pumps 76 Downhole Pumps 77 Measurement & Meter Installation 78 Gas Conditioning / Dehydration 79 Interconnecting Facility Piping 80 Gathering / Bulk Lines 81 Valves, Dumps, Controllers 82 Tank / Facility Containment 83 Flare Stack 84 Electrical / Grounding 85 Communications / SCADA			45,833 125,667 66,667 90,000 5,833 	34,73 43,83 125,86 66,66 90,00 5,83 - 61,66 - 116,16 - 20,00 188,53 43,33 16,66 50,00 36,66
70 Flow Lines 71 Rod string 72 Artiticial Lili Equipment 73 Compressor 74 Installation Cosis 75 Surface Pumps 75 Surface Pumps 76 Downhole Pumps 77 Measurement & Meter installation 79 Gas Conditioning / Dehydration 79 Interconnecting Facility Piping 80 Gathering / Bulk Lines 81 Valves, Dumps, Controllers 82 Tank / Facility Containment 83 Flare Stack 84 Electrical / Grounding 85 Communications / SCADA 85 Instrumentation / SACADA 85 Instrumentation / Satety			43,833 126,667 66,667 90,000 5,833 61,667 116,667 20,000 108,333 43,533 16,667 50,000 36,667 833	43,33 125,66 66,66 90,00 91,83 
69 Production Vessels 70 How Lines 71 Rod string 72 Articlas Lift Equipment 73 Activation Costs 73 Compressor 74 Installation Costs 75 Surface Fumps 76 Downhole Pumps 77 Surface Fumps 76 Downhole Pumps 77 Gas Conditioning / Dehydration 78 Gas Conditioning / Dehydration 79 Interconnecting Facility Piping 80 Gathering / Bulk Lines 81 Valves, Dumps, Controllers 81 Valves, Dumps, Controllers 82 Tank / Facility Containment 83 Flare Stack 84 Electrical / Grounding 85 Communications / SCADA 86 Instrumentation / Salety  TOTAL TANGIBLES >  TOTAL COSTS >			45,833 125,667 66,667 90,000 5,833 	45,83 126,66 66,66 - 99,00 1,83 - 61,66 - 20,00 108,33 43,33 10,65 50,00 36,66

PREPARED BY Permian Resources Operating, LLC: Drilling Engineer: PS Completions Engineer: Production Engineer: DC

Permian Resources Operating, LLC APPROVAL: Co-CEO\_ Co-CEO\_ CRM VP - Land & Legai

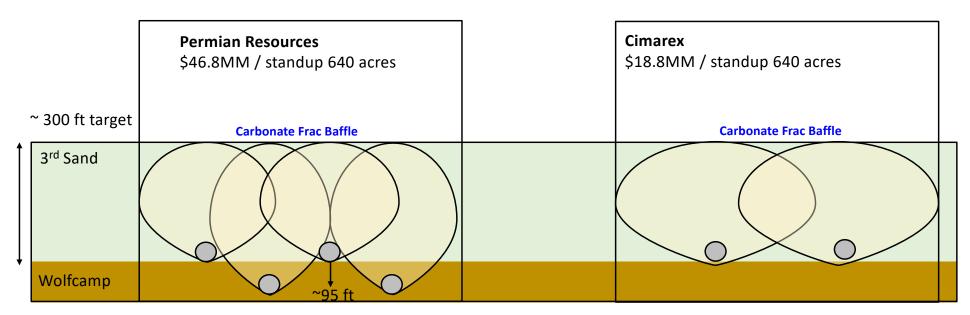
NON OPERATING PARTNER	APPROVAL:		
Company Name:		Working Interest (%):	Tax ID:
Signed by:		Date:	
Title:		Approval: Yes	No (mark one)

Permian Resources Operating, LLC
300 N. Marienfeld St., Ste. 1000 Midland, TX 79701
Phone (832) 695-4222 • Fax (832) 695-4063
ESTIMATE OF COSTS AND AUTHORIZATION FOR EXPENDITURE

DATE:	2.17.2023			AFE NO.:	1
WELL NAME:	Joker 5-8 Federal Com 2	:04H		FIELD:	Tonto; Wolfcamp
LOCATION:	Section 5, T20S-R34E			MD/TVD:	21,181' / 10,896'
COUNTY/STATE:	Lea County, New Mexic	20		LATERAL LENGTH:	10,000'
Permian WI:				DRILLING DAYS:	19.6
GEOLOGIC TARGET:	WCXY			COMPLETION DAYS:	19
•	Drill a horizontal WCX	Y well and complete	with 44 stages. AFE inclu	ides drilling, completions,	flowback and Initial
REMARKS:	AL install cost				
	-	DRILLING	COMPLETION	PRODUCTION	TOTAL
DATE MODING CO	0000	DRILLING COSTS	COSTS	PRODUCTION COSTS	COSTS
INTANGIBLE C T Land/ Legal/ Regulatory	0515	5 59,066		37,500	\$ 96,566
2 Location, Surveys & Damage	•	288,079	18,067	2,500	308,647
4 Freight/Transportation		47,628	43,778	25,000	116,406
5 Rental - Suriace Equipment		124,327	215,417	105,000	444,744
6 Rental - Downhole Equipme	nt	205,424	59,805		265,229
7 Kental - Living Quariers 10 Directional Drilling, Survey		48,083 429,543	54,480		102,562 429,543
11 Drilling	78	753,820	<del></del>	<del></del>	753,820
12 Drill Bils		100,176	<del></del>	<del></del>	100,176
13 Fuel & Power		188,935	725,061		913,996
14 Cementing & Float Equip		243,296			243,296
15 Completion Unit, Swab, C1			393,136	15,000	393,136
16 Perforating, Wireline, Slick 17 High Pressure Pump Truck	шие	<del></del>	123,274	<del></del>	123,2/4
18 Completion Unit, Swab, CI	ט	<del></del>	146,484	<del></del>	146,484
20 Mud Circulation System		105,209	<del></del>		105,209
21 Mud Logging		17,529	<del></del>	<del></del>	17,529
22 Logging / Formation Evalua	tion	7,270	8,339		15,609
23 Mud & Chemicals 24 Water		361,835 43,459	438,185	10,000 300,000	810,020 1,005,083
24 water 25 Stimulation		43,439	814,033	300,000	814,033
26 Stimulation Flowback & Di	<b>5</b> p	<del></del>	121,606	150,000	2/1,606
28 Mud/Wastewater Disposa		193,104	61,151		254,254
30 Rig Supervision / Engineer	ng	121,196	133,420	21,667	276,283
32 Drig & Completion Overhe	ad	10,423			10,423
35 Labor 54 Proppant		153,358	1,255,227	101,667	324,514
95 Insurance		14,660	1,233,227	<del></del>	1,235,227
97 Contingency			24,421	3,833	28,254
99 Plugging & Abandonment		$\overline{}$	<del></del>		
	TOTAL INTANGIBLES:	3,516,419	5,367,000	772,167	9,655,585
		DRILLING	COMPLETION	PRODUCTION	TOTAL
TANGIBLE CO	STS	COSTS	COSTS	COSTS	COSTS
60 Surface Casing		5 122,234			5 122,234
61 Intermediate Casing		344,284	<del></del>		344,284
62 Drilling Liner					
63 Production Casing		687,039			687,039
64 Production Liner 65 Tubing		<u> </u>		T40,000	140,000
66 Wellhead		64,820	<del></del>	40,000	104,820
67 Packers, Liner Hangers		14,732	<del></del>	20,000	34,732
68 Tanks			<del></del>	45,833	45,833
69 Production Vessels				126,667	126,667
70 Flow Lines				66,667	66,667
71 Rod string 72 Artificial Lift Equipment		<del></del>		90,000	90,000
73 Compressor		<del></del>	<del></del>	5,833	5,833
74 Installation Costs		<del></del>		<del></del>	-
75 Surtace Pumps			-	61,667	61,667
76 Downhole Pumps				-	
77 Measurement & Meter Inst 78 Gas Conditioning / Dehydr			<u>-</u> _	116,667	116,667
79 Interconnecting Facility Pip		<u>_</u>	<del>.</del>	20,000	20,000
80 Gathering / Bulk Lines	-0				
81 Valves, Dumps, Controllers		-		108,333	108,333
82 Tank / Facility Containmen	1		•	43,333	43,333
83 Flare Stack				16,667	16,667
84 Electrical / Grounding 85 Communications / SCADA		<del></del>	<del></del>	50,000	36,667
86 Instrumentation / Satety		<del></del>	<del></del>	833	833
	TOTAL TANGIBLES:	1,233,109		989,167	2,222,276
	TOTAL COSTS:		5,367,000	1,761,334	11,877,862
				*,, 0.2003	
manen nve ' "					
PARED BY Permian Resor	rces Operating, LLC:	-			
Drilling Engineer:	PS				
Completions Engineer:	ML				
	DC				
Production Footness					
Production Engineer:					
·	LLC APPROVAL:				
·	LLC APPROVAL:		·		<del></del>
·	LLC APPROVAL:	C	o-CEO	VP - Oper	ations
mian Resources Operating,	LLC APPROVAL:		JW	VP - Oper	ations
mian Resources Operating,	WH	Co VP - Geosc	iences	VP - Open	
mian Resources Operating,	WH		JW	VP - Oper	
mian Resources Operating,	WH		iences	VP - Oper	
nian Resources Operating,	WH		iences	VP - Oper	
ndan Resources Operating, Co-CEO VP - Land & Legal	WH BG		iences	VP - Open	
ndan Resources Operating, Co-CEO VP - Land & Legal	WH BG		iences	VP - Oper	
ndan Resources Operating, Co-CEO VP - Land & Legal	WH BG		jw so		CRM
ndan Resources Operating, Co-CEO VP - Land & Legal	WH BG		iences		
ndan Resources Operating, Co-CEO VP - Land & Legal N OPERATING PARTNER	WH BG APPROVAL:		jw so		CRM
Co-CEO  VP - Land & Legal  N OPERATING PARTNEF  Company Name: Signed by:	WH BG APPROVAL:		Working Interest (%):		CRM
CO-CEO  VP - Land & Legal  N OPERATING PARTNER  Company Name:	WH BG APPROVAL:		Working Interest (%):		CRM

## O

## Diagram of Staggered Landing Wolfcamp + 3<sup>rd</sup> SS vs. 3<sup>rd</sup> SS Flat



- Cimarex has experience developing as many as 8 landings within a DSU successfully in Lea county with 9<sup>th</sup> 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.
- 3<sup>rd</sup> and Wolfcamp landed this close together are equivalent to 8 WPS flat in the 3<sup>rd</sup> 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 3<sup>rd</sup> Sand correlative rights and prevent capital waste.

EXHIBIT 4

## O

## Proposed Wolfcamp Depth Severance to Minimize Interaction with 3<sup>rd</sup> Bone Spring Sand

