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

APPLICATION OF COG OPERATING LLC FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO.

CASE NO. 22716

EXHIBIT INDEX

Compulsory Pooling Checklist for Case No. 22716

Exhibit A	Self-Affirmed Statement of Jeffrey S. Stout
A-1	Application & Proposed Notice of Hearing
A-2	C102s for Wells
A-3	Plat of Tracts, Ownership Interests, Uncommitted Interests to be Pooled
A-4	Sample Well Proposal Letter and AFEs
A-5	Chronology of Contact
Exhibit B	Self-Affirmed Statement of Jessica Pontiff
B-1	Regional Locator Map
B-2	Wolfcamp – Structure Map
B-3	Stratigraphic Cross-Section
Exhibit C	Self-Affirmed Statement of Dana S. Hardy
C-1	Sample Notice Letter to All Interested Parties and Overriding Royalty Interest Owners
C-2	Chart of Notice to All Interested Parties and Overriding Royalty Interest Owners
C-3	Certified Mail Receipts
C-4	Affidavit of Publication for April 15, 2022

COMPULSORY POOLING APPLICATION CHECKLIST

ALL INFORMATION IN THE APPLICATION MUST BE SUPPORTED BY SIGNED AFFIDAVITS

Case No.:	22716
Hearing Date:	5/5/2022
Applicant	COG Operating LLC
Designated Operator & OGRID	229137
Applicant's Counsel	Hinkle Shanor LLP
Case Title	Application of COG Operating LLC for Compulsory Pooling,
	Eddy County, New Mexico
Entries of Appearance/Intervenors	N/A
Well Family	Tomahawk
Formation/Pool	
Formation Name(s) or Vertical Extent	Wolfcamp
Primary Product (Oil or Gas)	Oil
Pooling this vertical extent	Wolfcamp
Pool Name and Pool Code	Purple Sage; Wolfcamp (Gas) 98220
Well Location Setback Rules	Purple Sage; Wolfcamp (Gas) 98220
Spacing Unit Size	640
Spacing Unit	
Type (Horizontal/Vertical)	Horizontal
Size (Acres)	640
Building Blocks	320 acres
Orientation	Laydown
Description: TRS/County	E/2 of Sections 18 and 19, Township 24 South, Range 28 East, Eddy
	County, New Mexico
Standard Horizontal Well Spacing Unit (Y/N), If No,	Yes
describe	
Other Situations	
Depth Severance: Y/N. If yes, description	No
Proximity Tracts: If yes, description	No
Proximity Tracts: If yes, description Proximity Defining Well: if yes, description	
Proximity Defining Well: if yes, description	No N/A
, , , , , , , , , , , , , , , , , , , ,	
Proximity Defining Well: if yes, description Well(s) Name & API (if assigned), surface and bottom hole	N/A
Proximity Defining Well: if yes, description Well(s)	N/A
Proximity Defining Well: if yes, description Well(s) Name & API (if assigned), surface and bottom hole location, footages, completion target, orientation,	N/A Add wells as needed
Proximity Defining Well: if yes, description Well(s) Name & API (if assigned), surface and bottom hole location, footages, completion target, orientation, completion status (standard or non-standard)	N/A Add wells as needed Tomahawk WC Unit 714H (API # pending)
Proximity Defining Well: if yes, description Well(s) Name & API (if assigned), surface and bottom hole location, footages, completion target, orientation, completion status (standard or non-standard)	N/A Add wells as needed
Proximity Defining Well: if yes, description Well(s) Name & API (if assigned), surface and bottom hole location, footages, completion target, orientation, completion status (standard or non-standard)	N/A Add wells as needed Tomahawk WC Unit 714H (API # pending) SHL: 500' FNL & 1079' FEL (Unit A) of Section 30, T24S, R28E
Proximity Defining Well: if yes, description Well(s) Name & API (if assigned), surface and bottom hole location, footages, completion target, orientation, completion status (standard or non-standard)	N/A Add wells as needed Tomahawk WC Unit 714H (API # pending) SHL: 500' FNL & 1079' FEL (Unit A) of Section 30, T24S, R28E BHL: 200' FNL & 148' FEL (Unit A) of Section 18, T24S, R28E
Proximity Defining Well: if yes, description Well(s) Name & API (if assigned), surface and bottom hole location, footages, completion target, orientation, completion status (standard or non-standard) Well #1	Add wells as needed Tomahawk WC Unit 714H (API # pending) SHL: 500' FNL & 1079' FEL (Unit A) of Section 30, T24S, R28E BHL: 200' FNL & 148' FEL (Unit A) of Section 18, T24S, R28E Completion Target: Wolfcamp A (Approximately 9374' TVD) Completion status: Standard
Proximity Defining Well: if yes, description Well(s) Name & API (if assigned), surface and bottom hole location, footages, completion target, orientation, completion status (standard or non-standard)	Add wells as needed Tomahawk WC Unit 714H (API # pending) SHL: 500' FNL & 1079' FEL (Unit A) of Section 30, T24S, R28E BHL: 200' FNL & 148' FEL (Unit A) of Section 18, T24S, R28E Completion Target: Wolfcamp A (Approximately 9374' TVD) Completion status: Standard Tomahawk WC Unit 715H (API # pending)
Proximity Defining Well: if yes, description Well(s) Name & API (if assigned), surface and bottom hole location, footages, completion target, orientation, completion status (standard or non-standard) Well #1	N/A Add wells as needed Tomahawk WC Unit 714H (API # pending) SHL: 500' FNL & 1079' FEL (Unit A) of Section 30, T24S, R28E BHL: 200' FNL & 148' FEL (Unit A) of Section 18, T24S, R28E Completion Target: Wolfcamp A (Approximately 9374' TVD) Completion status: Standard Tomahawk WC Unit 715H (API # pending) SHL: 500' FNL & 1109' FEL (Unit A) of Section 20, T24S, R28E
Proximity Defining Well: if yes, description Well(s) Name & API (if assigned), surface and bottom hole location, footages, completion target, orientation, completion status (standard or non-standard) Well #1	Add wells as needed Tomahawk WC Unit 714H (API # pending) SHL: 500' FNL & 1079' FEL (Unit A) of Section 30, T24S, R28E BHL: 200' FNL & 148' FEL (Unit A) of Section 18, T24S, R28E Completion Target: Wolfcamp A (Approximately 9374' TVD) Completion status: Standard Tomahawk WC Unit 715H (API # pending)

Received by OCD: 5/3/2022 10:02:10 AM Well #3	Tomahawk WC Unit 716H (API # pending)
Well #3	SHL: 500' FNL & 1139' FEL (Unit A) of Section 30, T24S, R28E
	·
	BHL: 200' FNL & 2070' FEL (Unit B) of Section 18, T24S, R28E
	Completion Target: Wolfcamp A (Approximately 9324' TVD)
	Completion status: Standard
Horizontal Well First and Last Take Points	Exhibit A-2
Completion Target (Formation, TVD and MD)	Exhibit A-4
AFE Capex and Operating Costs	0.000
Drilling Supervision/Month \$	8,000
Production Supervision/Month \$	800
Justification for Supervision Costs	Exhibit A
Requested Risk Charge	200%
Notice of Hearing	
Proposed Notice of Hearing	Exhibit A-1
Proof of Mailed Notice of Hearing (20 days before	
hearing)	Exhibits C-2, C-3
Proof of Published Notice of Hearing (10 days before	
hearing)	Exhibit C-4
Ownership Determination	
Land Ownership Schematic of Spacing Unit	Exhibit A-3
Tract List (including lease numbers & owners)	Exhibit A-3
Pooled Parties (including ownership type)	Exhibit A-3
Unlocatable Parties to be Pooled	None
Ownership Depth Severance	N/A
Joinder	
Sample Copy of Proposal Letter	Exhibit A-4
List of Interest Owners (ie Exhibit A of JOA)	Exhibit A-3
Chronology of Contact with Non-Joined Working Interes	rs Exhibit A-5
Overhead Rates In Proposal Letter	N/A
Cost Estimate to Drill and Complete	Exhibit A-4
Cost Estimate to Equip Well	Exhibit A-4
Cost Estimate for Production Facilities	Exhibit A-4
Geology	LAHIDIC A-4
Summary (including special considerations)	Exhibit B
Spacing Unit Schematic	Exhibit B-1
Gunbarrel/Lateral Trajectory Schematic	Exhibit B-1
Well Orientation (with rationale)	Exhibit B
Target Formation	Exhibit B
HSU Cross Section	Exhibit B-3
Depth Severance Discussion	N/A
Forms, Figures and Tables	
C-102	Exhibit A-2
Tracts	Exhibit A-3
Summary of Interests, Unit Recapitulation (Tracts)	Exhibit A-3
General Location Map (including basin)	Exhibit B-1
Well Bore Location Map	Exhibit B-1
C	Exhibit B-2
Structure Contour Map - Subsea Depth	
Cross Section Location Map (including wells)	Exhibit B-2
<u>.</u>	Exhibit B-2 Exhibit B-3

CERTIFICATION: I hereby certify that the information	
provided in this checklist is complete and accurate.	
Printed Name (Attorney or Party Representative):	Dana S. Hardy
Signed Name (Attorney or Party Representative):	/s/ Dana S. Hardy
Date:	5/3/2022

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

APPLICATION OF COG OPERATING LLC FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO.

CASE NO. 22716

SELF-AFFIRMED STATEMENT OF JEFFREY S. STOUT

- 1. I am a landman at COG Operating LLC ("COG") and am over 18 years of age. I have personal knowledge of the matters addressed herein and am competent to provide this Self-Affirmed Statement. I have previously testified before the New Mexico Oil Conservation Division ("Division") and my credentials as a petroleum land professional have been accepted and made a matter of record.
- 2. I am familiar with the land matters involved in the above-referenced case. Copies of COG's application and proposed hearing notice are attached as **Exhibit A-1**.
- 3. None of the parties proposed to be pooled in this case indicated opposition to this matter proceeding by affidavit, therefore I do not expect any opposition at hearing.
- 4. COG seeks an order pooling all uncommitted interests in the Purple Sage; Wolfcamp (Gas) (pool code 98220) within the Wolfcamp formation underlying a 640-acre, more or less, standard horizontal spacing unit comprised of the E/2 of Sections 18 and 19, Township 24 South, Range 28 East, Eddy County, New Mexico ("Unit").
 - 5. The Unit will be dedicated to the following wells ("Wells"):
 - a. Tomahawk WC Unit 714H and Tomahawk WC Unit 715H to be horizontally drilled from surface hole locations in the NE/4 NE/4 (Unit A) of Section 30 to bottom hole locations in the NE/4 NE/4 (Unit A) of Sections 18; and

COG Operating, LLC Case No. 22716 Exhibit A

- b. **Tomahawk WC Unit 716H** to be horizontally drilled from a surface hole location in the NE/4 NE/4 (Unit A) of Section 30 to a bottom hole location in the NW/4 NE/4 (Unit B) of Section 18.
- 6. The completed interval of the Tomahawk WC Unit 714H will be unorthodox. The completed intervals of the remaining Wells will be orthodox.
 - 7. **Exhibit A-2** contains the C-102 for the Wells.
- 8. **Exhibit A-3** contains a plat identifying ownership by tract in the Unit. This exhibit also includes any applicable lease numbers, a unit recapitulation, and the interests COG seeks to pool.
- 9. **Exhibit A-4** contains a sample well proposal letter and AFEs sent to working interest owners for the Well. The estimated costs reflected on the AFE are fair and reasonable and comparable to the cost of other wells of similar depth and length drilled in the subject formation in the area.
- 10. COG has conducted a diligent search of all county public records including phone directories and computer databases.
 - 11. All interest owners COG seeks to pool are locatable.
- 12. In my opinion, COG made a good-faith effort to reach voluntary joinder of uncommitted interests in the Well as indicated by the chronology of contact described in **Exhibit** A-5.
- 13. COG requests overhead and administrative rates of \$8,000 per month while the Well is being drilled and \$800 per month while the Well is producing. These rates are fair and are comparable to the rates charged by COG and other operators in the vicinity.

- 14. The attached exhibits attached were either prepared by me or under my supervision or were compiled from company business records.
- 15. In my opinion, the granting of COG's application would serve the interests of conservation, the protection of correlative rights, and the prevention of waste.
- 16. I understand this Self-Affirmed Statement will be used as written testimony in this case. I affirm that my testimony in paragraphs 1 through 15 above is true and correct and is made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date handwritten next to my signature below.

Jeffrey S. Stout

4/20/2022 Date

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

APPLICATION OF COG OPERATING LLC FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO

CASE NO.	22716
----------	-------

<u>APPLICATION</u>

Pursuant to NMSA § 70-2-17, COG Operating LLC ("Applicant") (OGRID No. 229137) applies for an order pooling all uncommitted interests within the Wolfcamp formation underlying a 640-acre, more or less, standard horizontal spacing unit comprised of the E/2 of Sections 18 and 19, Township 24 South, Range 28 East, Eddy County, New Mexico ("Unit"). In support of its application, Applicant states:

- 1. Applicant is a working interest owner in the Unit and has the right to drill wells thereon.
- 2. The Unit will be dedicated to the following wells ("Wells"):
 - a. Tomahawk WC Unit 714H and Tomahawk WC Unit 715H to be horizontally drilled from surface hole locations in the NE/4NE/4 (Unit A) of Section 30 to bottom hole locations in the NE/4NE/4 (Unit A) of Section 18, and
 - b. **Tomahawk WC Unit 716H** to be horizontally drilled from a surface hole location in the NE/4NE/4 (Unit A) of Section 30 to a bottom hole location in the NW/4NE/4 (Unit B) of Section 18.
- 3. The completed interval of the Tomahawk WC Unit 714H will be unorthodox. The completed intervals of the remaining Wells will be orthodox.

COG Operating, LLC Case No. 22716 Exhibit A-1

- 4. Applicant has undertaken diligent, good-faith efforts to obtain voluntary agreements from all interest owners to participate in the drilling of the Wells but has been unable to obtain voluntary agreements from all interest owners.
- 5. The pooling of uncommitted interests will avoid the drilling of unnecessary wells, prevent waste, and protect correlative rights.
- 6. In order to allow Applicant to obtain its just and fair share of the oil and gas underlying the subject lands, all uncommitted mineral interests in the Unit should be pooled and Applicant should be designated the operator of the Wells and Unit.

WHEREFORE, Applicant requests this application be set for hearing on May 5, 2022, and that after notice and hearing, the Division enter an order:

- A. Pooling all uncommitted interests in the Unit;
- B. Approving the Wells in the Unit;
- C. Designating Applicant as operator of the Unit and the Wells to be drilled thereon;
- D. Authorizing Applicant to recover its costs of drilling, equipping and completing the
 Wells;
- E. Approving the actual operating charges and costs of supervision while drilling and after completion, together with a provision adjusting the rates pursuant to the COPAS accounting procedures; and
- F. Imposing a 200% penalty for the risk assumed by Applicant in drilling and completing the Wells against any working interest owner who does not voluntarily participate in the drilling of the Wells.

Respectfully submitted,

HINKLE SHANOR LLP

/s/ Dana S. Hardy

Dana S. Hardy
Jaclyn McLean
P.O. Box 2068
Santa Fe, NM 87504-2068
Phone: (505) 982-4554
dhardy@hinklelawfirm.com
jmclean@hinklelawfirm.com
Counsel for COG Operating LLC

Application of COG Operating LLC for Compulsory Pooling, Eddy County, New Mexico. Applicant applies for an order pooling all uncommitted interests within the Wolfcamp formation underlying a 640-acre, more or less, standard horizontal spacing unit comprised of the E/2 of Sections 18 and 19, Township 24 South, Range 28 East, Eddy County, New Mexico ("Unit"). The Unit will be dedicated to the following wells ("Wells"): Tomahawk WC Unit 714H and Tomahawk WC Unit 715H to be horizontally drilled from surface hole locations in the NE/4NE/4 (Unit A) of Section 30 to bottom hole locations in the NE/4NE/4 (Unit A) of Section 18, and Tomahawk WC Unit 716H to be horizontally drilled from a surface hole location in the NE/4NE/4 (Unit A) of Section 30 to a bottom hole location in the NW/4NE/4 (Unit B) of Section 18. The completed interval of the Tomahawk WC Unit 714H will be unorthodox. The completed intervals of the remaining Wells will be orthodox. Also, to be considered will be the cost of drilling and completing the Wells and the allocation of the costs, the designation of Applicant as the operator of the Wells, and a 200% charge for the risk involved in drilling and completing the Wells. The Wells are located approximately 2.75 miles west of Malaga, New Mexico.

DISTRICT I

State of New Mexico Pages N. French Dr., Hobbs, Nu 88240 Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION

DISTRICT II 811 S. FIRST ST., ARTESIA, NM 68210 Phone: (676) 748-1283 Par: (676) 748-9720

1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

Form C-102 Revised August 1, 2011 Submit one copy to appropriate District Office

AMENDED REPORT

DISTRICT III 1000 RIO BRAZOS RD., AZTEC, NM 87410 Phone: (505) 334-8178 Fax: (505) 334-8170

OGRID No.

229137

DISTRICT IV 1220 S. ST. FRANCIS DR., SANTA FB. NW 87505 Phone: (505) 478-3460 Faz: (605) 478-3462 WELL LOCATION AND ACREAGE DEDICATION PLAT API Number Pool Code Pool Name Purple Sage; Wolfcamp (Gas) 30-015-47500 98220 Property Code Well Number Property Name 330184 3289(1) TOMAHAWK WC UNIT

714H Operator Name Elevation COG OPERATING, LLC 3071.6

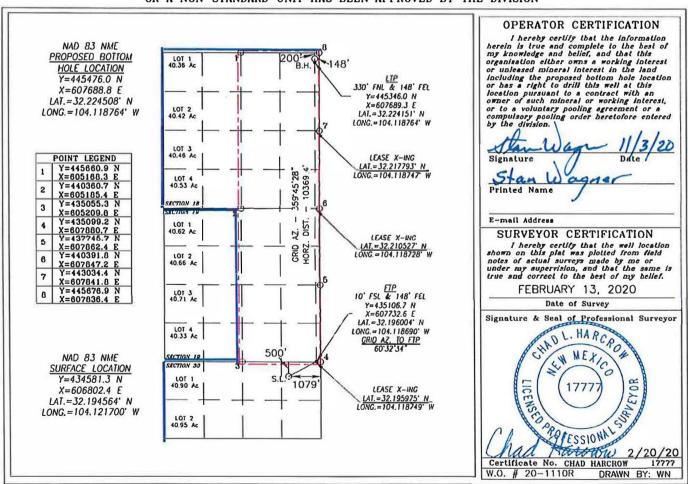
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	30	24-S	28-E		500	NORTH	1079	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section 18	Township 24-S		Lot Idn	Feet from the	North/South line NORTH	Feet from the	East/West line EAST	County EDDY
Dedicated Acre	s Joint o	or Infill	Consolidation	Code Or	der No.				1

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



COG Operating, LLC Case No. 22716 Exhibit A-2

DISTRICT I 1825 N. FRENCH DR., HOBBS, NM 88240 Phone: (676) 393-6181 Fax: (676) 393-0720 State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION

DISTRICT II 811 S. FIRST ST., ARTESIA, NM 88210 Phone: (575) 748-1283 Pax: (575) 748-9720

1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

DISTRICT III 1000 RIO BRAZOS RD., AZTEC, NM 87410 Phone: (505) 334-8178 Pax: (505) 334-8170 DISTRICT IV 1220 S. ST. FRANCIS DR. SANTA FE. NM 87505 Phone: (505) 478-3460 Pax: (505) 478-3462

AMENDED REPORT

API Number 30-015-47501		Pool Code 98220		Name Wolfcamp (Gas)
Property Code	330184		roperty Name AWK WC UNIT	Well Number 715H
OGRID No. 229137			perator Name PERATING, LLC	Elevation 3071.8'

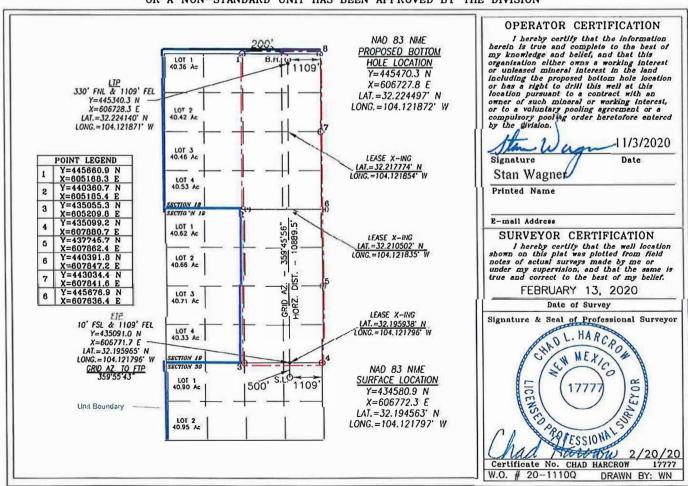
Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Α	30	24-S	28-E		500	NORTH	1109	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section 18	Township 24-S	Range 28-E	Lot Idn	Feet from the	North/South line NORTH	Feet from the	East/West line	County EDDY
Dedicated Acres	Joint o	or Infill C	onsolidation	Code Or	der No.				

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



DISTRICT I 1625 N. FRENCH DR., HOBBS, NM 86240 Phone: (676) 393-6161 Fax: (676) 393-0720

State of New Mexico Energy, Minerals & Natural Resources Department

DISTRICT II 811 S. PIRST ST., ARTESIA, NM 88210 Phone: (676) 748-1283 Pax: (575) 748-9720 L CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

DISTRICT III 1000 RIO BRAZOS RD., AZTEC, NM 67410 Phone: (505) 334-6178 Pax: (505) 334-6170 DISTRICT IV 1220 S. ST. FRANCIS DR., SANTA FE, NM 67505 Phone: (505) 476-3460 Pax: (505) 476-3462

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-47502		Pool Code 98220		Name Wolfcamp (Gas)
Property Code 328919	330184		erty Name	Well Number 716H
ogrid No. 229137			ator Name RATING, LLC	Elevation 3072.1'

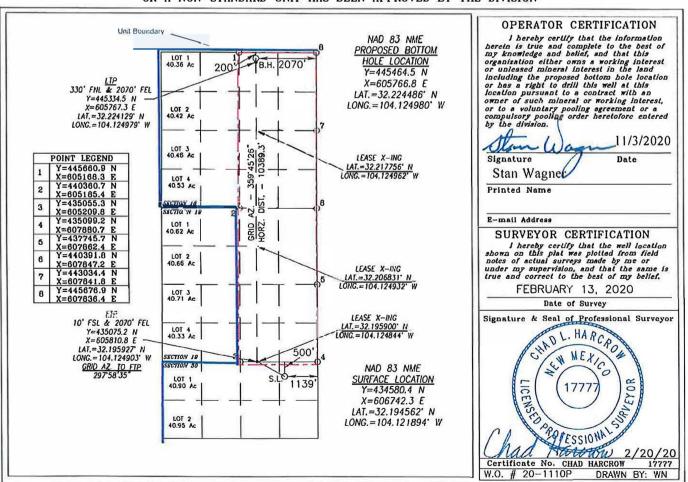
Surface Location

UL or lot No.	Section	Township	Range	Lot. Idn	Feet from the	North/South line	Feet from the	East/West line	County
Α	30	24-S	28-E		500	NORTH	1139	EAST	EDDY

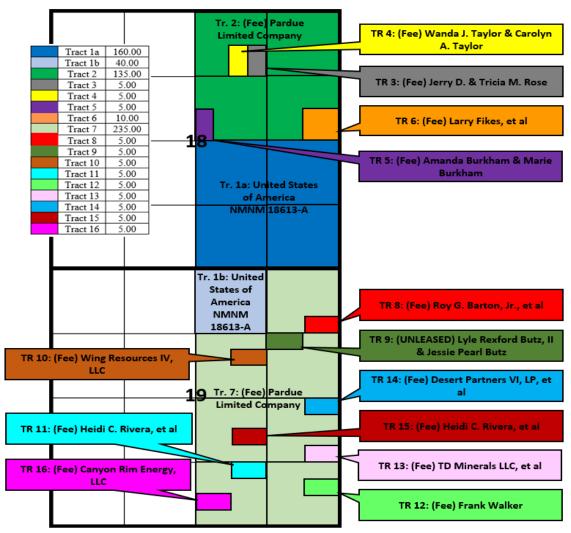
Bottom Hole Location If Different From Surface

UL or lot No.	Section 18	Township 24-S	Range 28-E	Lot Idn	Feet from the	North/South line NORTH	Feet from the 2070	East/West line EAST	County EDDY
Dedicated Acre	s Joint o	or Infili Co	onsolidation	Code Or	der No.			***	

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



TOMAHAWK WC UNIT #714H, #715H, & #716H - E/2 SECTIONS 18 & 19, T24S-R28E, EDDY COUNTY, NEW MEXICO



Tomahawk WC Unit 714H, 715H, 716H

E/2 of Sections 18 & 19 of T24S-R28E

2/2 01 300010113 1	2 01 Sections 16 & 15 01 1245-1426E															
	East Half of Sections 18 & 19 - Tract Leasehold Ownership															
	Tract 1	Tract 2	Tract 3	Tract 4	Tract 5	Tract 6	Tract 7	Tract 8	Tract 9	Tract 10	Tract 11	Tract 12	Tract 13	Tract 14	Tract 15	Tract 16
COG	97.964039%	97.96%	97.96%	97.96%		97.96%	97.96%	97.96%	97.96%	97.96%	97.96%	97.96%	97.96%	97.96%	97.96%	97.96%
CONCHO	0.292039%	0.292039%	0.292039%	0.292039%		0.292039%	0.292039%	0.292039%	0.292039%	0.292039%	0.292039%	0.292039%	0.292039%	0.292039%	0.292039%	0.2920399
FEATHERSTONE	0.100704%	0.100704%	0.100704%	0.100704%		0.100704%	0.100704%	0.100704%	0.100704%	0.100704%	0.100704%	0.100704%	0.100704%	0.100704%	0.100704%	0.1007049
BIG THREE	0.100704%	0.100704%	0.100704%	0.100704%		0.100704%	0.100704%	0.100704%	0.100704%	0.100704%	0.100704%	0.100704%	0.100704%	0.100704%	0.100704%	0.1007049
PARROT HEAD	0.134271%	0.134271%	0.134271%	0.134271%		0.134271%	0.134271%	0.134271%	0.134271%	0.134271%	0.134271%	0.134271%	0.134271%	0.134271%	0.134271%	0.1342719
NORTHERN OIL & GAS	0.833653%	0.833653%	0.833653%	0.833653%		0.833653%	0.833653%	0.833653%	0.833653%	0.833653%	0.833653%	0.833653%	0.833653%	0.833653%	0.833653%	0.8336539
PROSPECTOR	0.402813%	0.402813%	0.402813%	0.402813%		0.402813%	0.402813%	0.402813%	0.402813%	0.402813%	0.402813%	0.402813%	0.402813%	0.402813%	0.402813%	0.4028139
BRETT BARTON	0.051560%	0.051560%	0.051560%	0.051560%		0.051560%	0.051560%	0.051560%	0.051560%	0.051560%	0.051560%	0.051560%	0.051560%	0.051560%	0.051560%	0.0515609
HEIDI RIVERA	0.051560%	0.051560%	0.051560%	0.051560%		0.051560%	0.051560%	0.051560%	0.051560%	0.051560%	0.051560%	0.051560%	0.051560%	0.051560%	0.051560%	0.051560%
ROY BARTON JR	0.025645%	0.025645%	0.025645%	0.025645%		0.025645%	0.025645%	0.025645%	0.025645%	0.025645%	0.025645%	0.025645%	0.025645%	0.025645%	0.025645%	0.0256459
NORMA CHANLEY	0.025645%	0.025645%	0.025645%	0.025645%		0.025645%	0.025645%	0.025645%	0.025645%	0.025645%	0.025645%	0.025645%	0.025645%	0.025645%	0.025645%	0.025645%
ROY BARTON III	0.017368%	0.017368%	0.017368%	0.017368%		0.017368%	0.017368%	0.017368%	0.017368%	0.017368%	0.017368%	0.017368%	0.017368%	0.017368%	0.017368%	0.0173689
LYLE R. BUTZ II &																
JESSIE PEARL BUTZ					100%											

TOMAHAWK WC UNIT - SEC 18 & 19 SPACING UNIT WI RECAPITULATION					
OWNER	WORKING INTEREST				
COG OPERATING LLC*	97.453384%				
CONCHO OIL & GASS LLC*	0.290517%				
FEATHERSTONE DEVELOPMENT CORP*	0.100179%				
BIG THREE ENERGY GROUP*	0.100178%				
PARROT HEAD PROPERTIES LLC*	0.133571%				
NORTHERN OIL AND GAS, INC.*	0.829307%				
PROSPECTOR LLC*	0.400713%				
BRETT C. BARTON*	0.051292%				
HEIDI C. RIVERA*	0.051292%				
ROY BARTON JR*	0.025511%				
NORMA CHANLEY*	0.025511%				
ROY BARTON III*	0.017277%				
LYLE R. BUTZ II & JESSIE PEARL BUTZ	0.521268%				
	100.000000%				

TOMAHAWK WC UNIT SECTION 18 & 19 SPACING UNIT PARTIES TO POOL

LYLE R. BUTZ II & JESSIE PEARL BUTZ (UNLEASED MINERAL OWNER) Tract 5

SAP, LLC (OVERRIDING ROYALTY INTEREST OWNER) Tracts 1a & 1b

COG Operating, LLC Case No. 22716 Exhibit A-3

^{*}Working Interest Parties Committed to the Tomahawk WC Unit Agreement and Operating Agreement



February 28, 2022

Via CMRRR No. 91 7199 9991 7038 7772 3477

Jessie Pearl Butz, OR Heir(s) of Jessie Pearl Butz,

OR Personal Representative(s) of the Estate of Jessie Pearl Butz

6565 Clearwater Drive

Loveland, CO 80538-7037

Re: Tomahawk Fed Unit 714H, 715H, 716H

East-Half (E/2) of Sections 18 & 19, T24S-R28E

Eddy County, New Mexico

Dear Sir or Madam:

COG Operating, LLC ("COG"), as Operator, hereby proposes the drilling of the following horizontal wells with productive laterals located in East-Half (E/2) of Sections 18 & 19, Township 24 South, Range 28 East, Eddy County, New Mexico (collectively, the "Operation"). The surface pad locations will be located in Unit A of Section 30, T24S-R28E (subject to change).

- Tomahawk WC Unit 714H, to be drilled to a depth sufficient to test the Wolfcamp A formation at an approximate total vertical depth of 9,374'. The surface location for this well is proposed at a legal location in Unit A of Section 30, and a bottom hole location at a legal location in Unit A of Section 18. The dedicated horizontal spacing unit will be the East-Half (E/2) of Sections 18 & 19, T24S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$9,131,000.00, as shown on the attached Authority for Expenditure ("AFE").
- Tomahawk WC Unit 715H, to be drilled to a depth sufficient to test the Wolfcamp A formation at an approximate total vertical depth of 9,353'. The surface location for this well is proposed at a legal location in Unit A of Section 30, and a bottom hole location at a legal location in Unit A of Section 18. The dedicated horizontal spacing unit will be the East-Half (E/2) of Sections 18 & 19, T24S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$9,131,000.00, as shown on the attached AFE.
- Tomahawk WC Unit 716H, to be drilled to a depth sufficient to test the Wolfcamp A formation at an approximate total vertical depth of 9,324'. The surface location for this well is proposed at a legal location in Unit A of Section 30, and a bottom hole location at a legal location in Unit B of Section 18. The dedicated horizontal spacing unit will be the East-Half (E/2) of Sections 18 & 19, T24S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$9,131,000.00, as shown on the attached AFE.

COG Operating, LLC Case No. 22716 Exhibit A-4 February 28, 2022 – Page 2 Tomahawk WC Unit 714H – 716H

COG is proposing to drill these Federal Exploratory Unit Wells under the terms of the previously provided Tomahawk WC Unit Agreement and Tomahawk Joint Operating Agreement, which I have enclosed for your review. If you wish to participate in any current or future wells under the Tomahawk Federal Exploratory Unit Agreement, it will be necessary for you to execute said Unit Agreement and Operating Agreement. Also enclosed is a Federal Communitization Agreement for your signature as a Working Interest Owner OR Unleased Mineral Owner in this spacing unit.

Should you wish not to participate in this operation and would rather enter into an oil and gas lease as previously offered, please contact the undersigned.

Please indicate your participation elections in the space provided below, sign and return this letter, along with a signed copy of the enclosed AFEs and a copy of your geologic requirements, to my attention at the letterhead address or by email to jeff.s.stout@conocophillips.com. If you wish to further discuss the options of leasing or selling your minerals, please do not hesitate to contact me at 432.818.1372.

Sincerely,

COG Operating LLC

Jeffrey S. Stout Staff Land Negotiator

JSS:bh Enc February 28, 2022– Page 3 Tomahawk Fed Unit 714H – 716H

Please mark your elections below and execute where indicated:

WELL NAME	Election to	Election NOT TO	Election NOT TO
	PARTICIPATE in drilling	PARTICIPATE in drilling &	PARTICIPATE in drilling &
	& completion of well,	completion of well, but	completion of well, and
	and PARTICIPATE in the	PARTICIPATE in the	NOT TO PARTICIPATE in
	Tomahawk Fed	Tomahawk Fed	the Tomahawk Fed
	Exploratory Unit	Exploratory Unit	Exploratory Unit
	Agreement*	Agreement*	Agreement*
Tomahawk WC			
Unit 714H			80
Tomahawk WC	11-		
Unit 715H			
Tomahawk WC			
Unit 716H			

^{*} If you wish to participate in any current or future wells under the Tomahawk Federal Exploratory Unit Agreement, it will be necessary for you to execute said Unit Agreement.

<u>ka katanan manan </u>
JESSIE PEARL BUTZ
OR –
HEIR(S) OF JESSIE PEARL BUTZ
Name:
OR
PERSONAL REPRESENTATIVE(S) OF THE ESTATE OF JESSIE PEARL BUTZ
Name:

COG OPERATING LLC AUTHORITY FOR EXPENDITURE Drill & Complete

Well Name TOMAHAWK FED UNIT 714H SNL. A-30-245-28E BHL. A-18-245-28E Formation WOLFCAMP Legal E2 18 & 19, T245-R28E AFE Numbers

Prospect TOMAHAWX 2428
State & County HEW MEXICO, EDDY
Objective DRILL & COMPLETE

TVD 9,374

Description	Code	PreSpud (PS) Pre-Set Casing(PC) Drilling (DR)	Completions (C)	Tank Bity Constrctn(T8)	Pmpq Equip (PEQ)	Revision	944 - TO
igible Costs								
tr/Pits/Roads	205		\$ 91,000.00			\$	- \$	91,000.
Mong Overhead	206		\$ 7,000.00			\$	- \$	7,000.
ywork Contract	209		\$ 496,000.00			\$	- \$	496,000
rectional Drig Services rel & Power	210		\$ 265,000.00 \$ 86,000.00	-		\$	- S	265,000 86,000
ater	211					S		72,000
s .	213		\$ 72,000.00 \$ 91,000.00			S S	- \$	91,000
ud & Chemicals	214		\$ 91,000.00 \$ 187,000.00		****	\$	- S	187,000
ement Surface	217		S 19,000.00			5	- \$	19,000
ement Intermed	218		\$ 72,000.00			İ	• \$	72,000
od-2nd Int Cmt	219	Announting on the Heat of the annual contractions	\$ 106,000.00			Š	- \$	106,000
oat Equipment & Centra/zers	221		\$ 58,000.00			Š	- \$	58,000
g Crews & Equip	222		\$ 63,000.00			\$	- \$	63,000
onwact Labor	225		\$ 7,000.00			Š	- \$	7,000
ompany Sprvsn	226		\$ 42,000.00			\$	- \$	42,000
ontract Sprvsn	227		\$ 104,000.00			S	- \$	104,000
ilg Csg/Tbg	228		\$ 39,000.00			\$	- \$	39,000
ud Logging Unit	229	l l	\$ 39,000.00		- Y	\$	- \$	39,000
entals-Surface	235		\$ 161,000.00			\$	- \$	161,000
entals-Subsific	236		\$ 75,000.00			\$	- 15	75,000
ucking/Fork/ft/Rig Mob	237	<u> </u>	\$ 154,000.00			<u> </u>	- S	154.000
elding Services	238		\$ 3,000.00			\$	- \$	3,000
ontingency	243		\$ 58,000.00			S .	- \$	58,000
r/nmtl/Clsd Loop elbore Frac Prep	244 304		\$ 253,000.00	6 127 000 00	+	\$	- \$	253,000
tr/Pits/Roads	305		1	\$ 127,000.00		\$ \$	- S	127,000
ompletion OH	305			\$ 14,000.00		· · · · · · · · · · · · · · · · · · ·	- \$	20,000
ac Equipment	305					\$	- 5	865,000
ac Chemicais	308		-	\$ 865,000,00		\$	- 5	548,000
ac Proppant	309			\$ 249,000.00		\$	- \$	249,000
ac Proppant Transportation	310	2 2	Direction Resident	\$ 387,000.00		3	. \$	387.000
el Desvery & Services	311		T .	\$ 56,000.00		\$	- \$	55,000
aler	312			\$ 366,000.00		S .	- \$	386,000
ac Surface Rentals	315		1	\$ 345,000.00		5	- \$	345,000
พารact Labor	325			\$ 14,000.00	The same of the sa	Š	- 15	14,000
om pany Sprysn	326		·	\$ 14,000.00		\$	- \$	14,000
ontract Sprvsn	327	Assumation of the production of the state		\$ 184,000.00	2-04	Š	- \$	184,000
tificial Lift Install	329			\$ 60,000.00		\$	- \$	60,000
ertiWireline Svo	331		8	\$ 425,000.00		\$	- \$	425.000
ucking/Fork#fl/Rig Mob	337			\$ 14,000.00		\$	- \$	14,000
ater Disposal	339	4 1		\$ 53,000.00		\$	- \$	53,000
ntingency	343			\$ 99,000.00		S	- \$	99,600
yed Diesel	345			\$ 207,000.00		\$	- \$	207,000
illout	346			\$ 395,000.00		S	- \$	395,000
	351							
			1		\$ 2,000.00	S	- \$	
Damages/Right of Way ocation/Pits/Roads	353				\$ 40,000.00	\$ \$	- \$	2,000 40,000
.ocation/Pits/Roads Contract Labor	353 356					\$ \$	- S	40,000 216,000
Location/Pits/Roads Contract Labor I-Contract Labor	353 356 374				\$ 40,000.00	\$ \$ \$ 18,000.00 \$	- S - S - S	40,000 216,000 18,000
ocation/Pits/Roads Contract Labor I-Contract Labor I-Water Disposal	353 356 374 387				\$ 40,000.00	\$ \$ \$ \$ 18,000.00 \$ \$ 81,000.00 \$	- S - S - S - S	40,000 216,000 18,000 81,000
ecation/Pits/Roads Contract Labor I-Contract Labor I-Water Disposal I-HRZ Well Offset Frac	353 356 374		\$ ~2 kia 000 m	\$ 17/12 000 00	\$ 40,000.00 \$ 216,000.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S	40,000 216,000 18,000 81,000 9,000
ocation/Pits/Roads Contract Labor - Contract Labor - Water Disposal - HRZ Well Offset Frac	353 356 374 387	5 - 5 -	\$ 2,548,000.00	\$ 4,442,000,00	\$ 40,000.00 \$ 216,000.00	\$ \$ \$ \$ 18,000.00 \$ \$ 81,000.00 \$	- S - S - S - S	40,000 216,000
ecation/Pits/Roads Contract Labor	353 356 374 387	5 - 5 -			\$ 40,000.00 \$ 216,000.00 \$ 258,000.00	\$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S	40,000 216,000 18,000 81,000 9,000
ocation/Pits/Roads Contract Labor -Contract Labor -Water Disposal -HRZ Weit Offset Frac I Intangible Costs	353 356 374 387 391			\$ 4,442,000.00	\$ 40,000.00 \$ 216,000.00	\$ 18,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S	40,000 216,000 18,000 81,000 9,000 7,365,000
ocation/Pis/Roads Contract Labor	353 356 374 387 391				\$ 40,000.00 \$ 216,000.00 \$ 258,000.00	\$ 18,000.00 \$ \$ 81,000.00 \$ \$ 9,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 49,000.00 \$ \$	- S - S - S - S - S - S	40,000 216,000 18,000 81,000 9,000 7,366,000
ocation/Pits/Roads Dontrad Labor -Contrad Labor -Contrad Labor -Contrad Labor -Water Disposal -HRZ Wel Offset Frac I Intangible Costs jible Costs -Flowback Crews & Equip	353 356 374 387 391		\$ 21,000.00		\$ 40,000.00 \$ 216,000.00 \$ 258,000.00	\$ 18,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S	40,000 216,000 18,000 81,000 9,000 7,366,000 49,000 21,000
ocation/Pits/Roads Ochriact Labor -Contract Labor -Water Disposal -HRZ Wel Offset Frac I Intangible Costs gible Costs -Flonback Crens & Equip aface Castng termed Csg	353 356 374 387 391 391 392 401 402		\$ 21,000.00 \$ 159,000.00		\$ 40,000.00 \$ 216,000.00 \$ 258,000.00	\$ 18,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ 49,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	40,000 216,000 18,000 81,000 9,000 7,366,000 49,000 21,000 159,000
ocation/Pits/Roads Contract Labor -Contract Labor -Water Disposal -HRZ Wei Offset Frac I Intangible Costs pible Costs -Flowback Crews & Equip -face Casing	353 356 374 387 391 392 401 402 403		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00		\$ 40,000.00 \$ 216,000.00 \$ 258,000.00	\$ 18,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	40,000 216,000 18,000 81,000 9,000 7,366,000 49,000 21,000 159,000 395,000
ocation/Hs/Roads owtract Labor -Contract Labor -Water Disposal -HRZ Wel Diffset Frac -HRZ Wel Diffset Frac -HRZ Wel Diffset State -HRZ Wel Diffset Frac -HRZ Wel Diffset Frac -HRZ Well Diffset -HRZ Well -HRZ	353 356 374 387 391 392 401 402 403 403		\$ 21,000.00 \$ 159,000.00		\$ 40,000.00 \$ 216,000.00 \$ 258,000.00	\$ 18,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ 49,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	49,000 218,000 18,000 81,000 9,000 7,366,000 49,000 21,000 159,000 395,000 72,000
ocation/hts/Roads ochtact Labor -Contract Labor -Water Disposal -HRZ Wel Offset Frac -I Intangible Costs -Flowback Crews & Equip -frace Casting -free Castin	353 356 374 387 391 391 401 402 403 405 504		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00	\$ 40,000.00 \$ 216,000.00 \$ 258,000.00	\$ 18,000.00 \$ \$ 81,000.00 \$ \$ \$ 9,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	40,000 216,000 18,000 9,000 7,366,000 49,000 21,000 159,000 395,000 72,000 69,000
ocation/HsrNoads oontract Labor -Contract Labor -Water Disposal -HRZ Wet Offset Frac I Inlangible Costs	353 356 374 387 391 391 401 402 403 405 504		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00		\$ 40,000.00 \$ 216,000.00 \$ 256,000.00	\$ 18,000.00 \$ \$ 81,000.00 \$ \$ \$ 9,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	40,000 216,000 81,000 9,000 7,365,000 49,000 21,000 159,000 72,000 69,000 335,000 37,000
ocation/fist/Roads owtract Labor -Contract Labor -Water Disposal -HRZ Wel Offset Frac I Intangible Costs jible Costs -Flowback Crews & Equip rface Cashing ermed Csg odwelon Cashing/Liner ethead Equip bing ethead Equip anks	353 356 374 387 391 391 402 403 405 504 504 505 510		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00	\$ 40,000.00 \$ 215,000.00 \$ 258,000.00	\$ 18,000.00 \$ \$ 81,000.00 \$ \$ \$ 9,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	40,000 216,000 11,000 9,000 7,366,000 49,000 21,000 355,000 37,000 69,000
ocation/Pts/Roads ocutact Labor -Contract Labor -Water Disposal -HRZ Wel Offset Frac -HRZ Wel Offset Frac -HRZ Wel Offset State -HRZ Wel Offset Frac -HRZ Wel Offset Frac -HRZ Well Offset Frac -HRZ Well Offset Frac -HRZ Well -H	353 356 356 387 391 392 401 402 403 405 504 505 510		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00	\$ 40,000.00 \$ 216,000.00 \$ 256,000.00 \$ 5 69,000.00 \$ 31,000.00	\$ 18,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	40,000 18,000 18,000 18,000 9,000 7,366,000 49,000 21,000 159,000 72,000 335,000 72,000 69,000 69,000 31,000
ocation/hts/Roads owthat Labor -Contract Labor -Vater Disposal -HRZ Wel Offset Frac I Intangible Costs -Flowback Crews & Equip aface Casing erned Csg oduelon Casing/Liner ethead Equip anks owfse gripe fines In Tri/Seprir	353 356 356 387 391 392 401 402 402 403 505 510 511 512		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00	\$ 40,000.00 \$ 215,000.00 \$ 256,000.00 \$ 5 31,000.00 \$ 222,000.00	\$ 18,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	S	40,000 216,000 11,000 81,000 9,000 7,366,000 49,000 159,000 395,000 69,000 31,000 31,000 222,000
ocation/Hsr/Roads ochinact Labor -Contract Labor -Contract Labor -Water Disposal -HRZ Wei Offset Frac -I Intangible Costs -Plowback Crews & Equip -frace Casing -frace -frace Casing -frace -fr	353 356 374 387 391 392 401 403 405 504 505 510 511 512 512 513		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00	\$ 40,000.00 \$ 216,000.00 \$ 256,000.00 \$ 5 69,000.00 \$ 31,000.00	\$ 18,000.00 \$ \$ 81,000.00 \$ \$ 9,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	40,000 216,000 81,000 9,000 7,366,000 49,000 21,000 355,000 72,000 37,000 31,000 31,000 212,000
ocation/PlarRoads orothact Labor Contract Labor HRZ Wet Offset Frac Intangible Costs Jible Costs Flowback Crews & Equip frace Casing erned Csg odueton Cosing/Liner ethead Equip bing bing bing thead Equip anks for Tirl/Septr lecthical System/Equipment lecthical System/Equipment	353 356 374 387 391 392 392 401 402 403 405 504 505 504 511 512 513 513		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00	\$ 40,000.00 \$ 215,000.00 \$ 258,000.00 \$ 69,000.00 \$ 31,000.00 \$ 222,000.00 \$ 137,000.00	\$ 18,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	S	40,000 216,000 18,000 18,000 81,000 7,366,000 49,000 21,000 159,000 350,000 37,000 69,000 37,000 69,000 31,000 222,000 686,000
ocation/Pist/Roads owtract Labor -Contract Labor -Vater Disposal -HRZ Wel Offset Frac I Intangible Costs jible Costs -Flowback Crews & Equip -frace Cashing -ermed Csg odwelon Cashing-time -ethead Equip -bing -ethead Equip -ethead System/Equipment -trac/Rohors/Pigra -ethead System/Equipment -ethead Equip -ethead System/Equipment -ethead Couplings/Firthings/Valves	353 356 374 387 391 392 401 402 403 405 504 505 510 511 512 512 513		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00	\$ 40,000.00 \$ 215,000.00 \$ 258,000.00 \$ 258,000.00 \$ 31,000.00 \$ 222,000.00 \$ 232,000.00	\$ 18,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	40,000 216,000 18,000 81,000 9,000 7,366,000 49,000 21,000 355,000 37,000 69,000 31,000 69,000 22,000 65,000 22,000 65,000 22,000 65,000 22,000 65,000 22,000 65,000 22,000 65,000 22,000
ocation/Plst/Roads ochtract Labor	353 356 374 387 391 392 403 405 504 505 511 512 513 513 514 515 515 516		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00	\$ 40,000.00 \$ 216,000.00 \$ 256,000.00 \$ 256,000.00 \$ 31,000.00 \$ 137,000.00 \$ 232,000.00 \$ 31,000.00	\$ 18,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	S	40,000 216,000 18,000 81,000 9,000 7,366,000 49,000 159,000 159,000 72,000 69,000 31,000 222,000 222,000 231,000 231,000
ocation/Plat/Roads ocation/Plat/Roads ocitized Labor - Contract Labor - Water Disposal - HRZ Wet Offset Frac - Intangible Costs - Intangible Costs - Intangible Costs - Intangible Costs - Flowback Crews & Equip - Grace Casing - Grac	353 356 374 387 391 391 401 402 403 504 504 505 510 511 512 513 515 515 515 515 515 515		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00	\$ 40,000.00 \$ 215,000.00 \$ 256,000.00 \$ 256,000.00 \$ 31,000.00 \$ 222,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00	\$ 18,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	S	40,000 216,000 18,000 81,000 9,000 7,366,000 49,000 159,000 359,000 37,000 69,000 31,000 222,000 69,000 31,000 222,000 31,000 232,000 31,000 232,000
ocation/Hsr/Roads ochinal Labor -Contract Labor -Contract Labor -Water Disposal -HRZ Wel Offset Frac -Hintanglible Costs	353 354 387 387 391 392 401 402 402 403 504 505 511 512 513 513 514 515 515 515 516 517 517 518 518 518 518 518 518 518 518 518 518		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00	\$ 40,000.00 \$ 216,000.00 \$ 256,000.00 \$ 256,000.00 \$ 31,000.00 \$ 222,000.00 \$ 31,000.00 \$ 232,000.00 \$ 23,000.00 \$ 23,000.00	\$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 10,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	40,000 216,000 18,000 18,000 81,000 9,000 7,366,000 49,000 21,000 159,000 35,000 72,000 69,000 31,000 222,000 68,000 23,000 23,000 23,000 23,000 23,000
ocation/Pist/Roads ocation/Pist/Roads ocation/Pist/Roads overlack Labor -Contract Labor -Water Disposal -HRZ Wel Diffset Frac -HRZ Well -H	353 356 374 387 391 392 403 405 504 405 510 511 512 513 513 513 514 515 521 522 523 525 525		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00	\$ 40,000.00 \$ 215,000.00 \$ 256,000.00 \$ 256,000.00 \$ 31,000.00 \$ 222,000.00 \$ 31,000.00 \$ 31,000.00 \$ 232,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00	\$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 10,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	S	40,000 216,000 18,000 81,000 9,000 7,366,000 49,000 21,000 159,000 37,000 69,000 37,000 69,000 222,000 31,000 23,000 23,000 23,000 23,000 23,000 23,000 23,000
ocation/Pist/Roads ocutact Labor -Contract Labor -Contract Labor -HRZ Web Offset Frac -Intrangible Costs -Illinangible Costs -Illinangible Costs -Flowback Crews & Equip -frace Cashing -erned Csg -odvelon Cashingther -ethead Equip -bing -ethead Equip -bing -contract Cost -cost -contract Cost -cost -c	353 354 387 381 391 392 401 402 403 405 505 510 511 512 512 512 523 523 525 526		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86p00.00	\$ 40,000.00 \$ 216,000.00 \$ 256,000.00 \$ 256,000.00 \$ 31,000.00 \$ 222,000.00 \$ 31,000.00 \$ 232,000.00 \$ 23,000.00 \$ 23,000.00	\$ 18,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	S	40,000 216,000 18,000 18,000 9,000 7,366,000 49,000 21,000 159,000 37,000 22,000 37,000 222,000 23,000 31,000 23,000 31,000
ocation/Plat/Roads ocation/Plat/Roads ocation/Plat/Roads Water Disposal HRZ Web Offset Frac Hintangible Costs Jible Costs Flowback Crews & Equip frace Casing erned Csg oduedon Casing/Liner effended Equip bing erned Csg oduedon Casing/Liner effended Equip anks townsneu/Pipe Ernes In TriblSeptra icetical Systemic quipment text/Anchors/Hyrs outpings/Fritings/Valves unumps-Surface ristrumentalsen/SCADA/POC fisceRaneous telereria.cis laires/Combusters/Emission is tif/Vicompression	353 356 374 387 391 392 403 405 504 405 510 511 512 513 513 513 514 515 521 522 523 525 525		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00	\$ 40,000.00 \$ 215,000.00 \$ 256,000.00 \$ 256,000.00 \$ 31,000.00 \$ 222,000.00 \$ 31,000.00 \$ 31,000.00 \$ 232,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00	\$ 18,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	S	40,000 18,000 18,000 18,000 18,000 7,366,000 49,000 21,000 159,000 35,000 37,000 22,000 37,000 23,000 23,000 23,000 23,000 23,000 31,000 31,000 31,000 31,000 31,000 31,000 31,000
ocation/Plat/Roads ocation/Plat/Roads ocitized Labor - Contract Labor - Water Disposal - HRZ Wet Offset Frac - Intangible Costs	353 356 374 387 381 391 392 402 403 405 504 505 511 512 512 513 515 515 515 516 517 517 518 518 519 519 519 519 519 519 519 519 519 519		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86,000.00 \$ 33,000.00	\$ 40,000.00 \$ 215,000.00 \$ 256,000.00 \$ 256,000.00 \$ 31,000.00 \$ 222,000.00 \$ 31,000.00 \$ 232,000.00 \$ 23,000.00 \$ 23,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	40,000 216,000 18,000 81,000 9,000 7,366,000 49,000 159,000 359,000 37,000 69,000 31,000 222,000 232,000 232,000 31,000 37,000 33,000 33,000 37,000 37,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000
ocation/Plat/Roads orontract Labor Contract Labor Water Disposal HIRZ Wet Offset Frac Unitargible Costs Flowback Crews & Equip frace Casing errned Csg odueton Casing/Liner ethead Equip brig ethead Equip ethead Equip in 1711/Septur lectrical System/Equipment key/Anchors/HIPGs outpisses/Fritings/Valves umps-Surface sistumentales/InSchale/POC fisceRaneous letters/Lacts laires/Combusters/Emission s Unit/Compression	353 356 374 387 381 391 392 402 403 405 504 505 511 512 512 513 515 515 515 516 517 517 518 518 519 519 519 519 519 519 519 519 519 519		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86,000.00 \$ 33,000.00	\$ 40,000.00 \$ 215,000.00 \$ 256,000.00 \$ 256,000.00 \$ 31,000.00 \$ 222,000.00 \$ 31,000.00 \$ 232,000.00 \$ 23,000.00 \$ 23,000.00 \$ 31,000.00 \$ 31,000.00 \$ 31,000.00	\$ 18,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	40,000 216,000 18,000 81,000 9,000 7,366,000 49,000 159,000 359,000 37,000 69,000 31,000 222,000 232,000 232,000 31,000 37,000 33,000 33,000 37,000 37,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000 38,000
ocation/Plst/Roads ochtract Labor -Contract Labor -Contract Labor -Water Disposal -HRZ Wel Offset Frac -HRZ Wel Offset -Frac -HRZ Wel Offset -Frac -HRZ Wel Offset -Frac -HRZ Wel -H	353 356 374 387 381 391 392 402 403 405 504 505 511 512 512 513 515 515 515 516 517 517 518 518 519 519 519 519 519 519 519 519 519 519		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86000.00 \$ 33,000.00 \$ 225,000.00	\$ 40,000.00 \$ 215,000.00 \$ 256,000.00 \$ 31,000.00 \$ 33,000.00 \$ 23,000.00 \$ 23,000.00 \$ 37,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 1	S	40,000 216,000 18,000 18,000 18,000 7,366,000 49,000 21,000 159,000 37,000 69,000 31,000 222,000 31,000 23,000 31,000
ocation/Plst/Roads ocation/Plst/Roads ochtract Labor -Contract Labor -Contract Labor -Hor Disposal -HRZ Wel Offset Frac -HRZ Wel Offset -Flowback Crews & Equip -Flowback Crews & Flowback -Flowback Crews & Equip -Flow	353 356 374 387 391 391 392 402 403 405 504 505 510 511 512 512 521 522 523 525 525 527 531	\$. \$ \$	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86,000.00 \$ 33,000.00	\$ 40,000.00 \$ 215,000.00 \$ 256,000.00 \$ 31,000.00 \$ 33,000.00 \$ 23,000.00 \$ 23,000.00 \$ 37,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 1	- S - S - S - S - S - S - S - S - S - S	40,000 216,000 18,000 18,000 18,000 7,366,000 49,000 21,000 159,000 37,000 69,000 31,000 222,000 31,000 23,000 31,000
ocation/Pits/Roads Oorhact Labor - Contract Labor - Water Disposal - Intangible Costs - Intangible	353 356 374 387 391 391 392 402 403 405 504 505 510 511 512 512 521 522 523 525 525 527 531		\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86000.00 \$ 33,000.00 \$ 225,000.00	\$ 40,000.00 \$ 215,000.00 \$ 256,000.00 \$ 31,000.00 \$ 33,000.00 \$ 23,000.00 \$ 23,000.00 \$ 37,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 1	S	40,000 216,000 18,000 81,000 9,000 7,366,000 49,000 21,000 159,000
ocation/Pits/Roads Oorhact Labor L-Contract Labor L-Contract Labor L-Contract Labor L-Contract Labor L-Contract Labor L-Contract Labor L-RZ Well Offset Frac I Intangible Costs Jible Costs Flowback Crews & Equip aface Cassing termed Csp oduetion Casing/Liner eshead Equip bing ethead Equip ants Sint Trit/Seprir Servical System/Equipment Ecrulical System/Equipment Ecrulical System/Equipment Servical System/Equipment Jumps-Surface Instrumentation/SCADAP/OC Street-Servical Servical System/Equipment Jangible Costs Servical System/Equipment Jangible Costs Servical System/Equipment Servical	353 356 374 387 391 391 392 402 403 405 504 505 510 511 512 512 521 522 523 525 525 527 531	\$. \$ \$	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86000.00 \$ 33,000.00 \$ 225,000.00	\$ 40,000.00 \$ 215,000.00 \$ 256,000.00 \$ 31,000.00 \$ 33,000.00 \$ 23,000.00 \$ 23,000.00 \$ 37,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 1	S	40,000 18,000 18,000 18,000 18,000 18,000 7,366,000 49,000 21,000 159,000 35,000 37,000 69,000 222,000 137,000 232,000 233,000 23,000 31,000
ocation/Pits/Roads Oorhact Labor L-Contract Labor L-Contract Labor L-Contract Labor L-Contract Labor L-Contract Labor L-Contract Labor L-RZ Well Offset Frac I Intangible Costs Jible Costs Flowback Crews & Equip aface Cassing termed Csp oduetion Casing/Liner eshead Equip bing ethead Equip ants Sint Trit/Seprir Servical System/Equipment Ecrulical System/Equipment Ecrulical System/Equipment Servical System/Equipment Jumps-Surface Instrumentation/SCADAP/OC Street-Servical Servical System/Equipment Jangible Costs Servical System/Equipment Jangible Costs Servical System/Equipment Servical	353 356 374 387 391 391 392 402 403 405 504 505 510 511 512 512 521 522 523 525 525 527 531	\$. \$ \$	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86000.00 \$ 33,000.00 \$ 225,000.00	\$ 40,000.00 \$ 215,000.00 \$ 256,000.00 \$ 31,000.00 \$ 33,000.00 \$ 23,000.00 \$ 23,000.00 \$ 37,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 1	S	40,000 18,000 18,000 18,000 18,000 18,000 7,366,000 49,000 21,000 159,000 35,000 37,000 69,000 222,000 137,000 232,000 233,000 23,000 31,000
ocation/Pits/Roads Oorhact Labor L-Contract Labor L-Contract Labor L-Contract Labor L-Contract Labor L-Contract Labor L-Contract Labor L-RZ Well Offset Frac I Intangible Costs Jible Costs Flowback Crews & Equip aface Cassing termed Csp oduetion Casing/Liner eshead Equip bing ethead Equip ants Sint Trit/Seprir Servical System/Equipment Ecrulical System/Equipment Ecrulical System/Equipment Servical System/Equipment Jumps-Surface Instrumentation/SCADAP/OC Street-Servical Servical System/Equipment Jangible Costs Servical System/Equipment Jangible Costs Servical System/Equipment Servical	353 356 374 387 391 391 392 402 403 405 504 505 510 511 512 512 521 522 523 525 525 527 531	\$. \$ \$	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86,000.00 \$ 33,000.00 \$ 225,000.00 \$ 4,667,000.00	\$ 40,000.00 \$ 215,000.00 \$ 255,000.00 \$ 255,000.00 \$ 31,000.00 \$ 232,000.00 \$ 23,000.00 \$ 37,000.00 \$ 37,000.00 \$ 37,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 1	S	40,000 18,000 18,000 18,000 18,000 18,000 7,366,000 49,000 21,000 159,000 35,000 37,000 69,000 222,000 137,000 232,000 233,000 23,000 31,000
ocation/Pits/Roads Oorhact Labor L-Contract Labor L-Contract Labor L-Contract Labor L-Contract Labor L-Contract Labor L-Contract Labor L-RZ Well Offset Frac I Intangible Costs Jible Costs Flowback Crews & Equip aface Cassing termed Csp oduetion Casing/Liner eshead Equip bing ethead Equip ants Sint Trit/Seprir Servical System/Equipment Ecrulical System/Equipment Ecrulical System/Equipment Servical System/Equipment Jumps-Surface Instrumentation/SCADAP/OC Street-Servical Servical System/Equipment Jangible Costs Servical System/Equipment Jangible Costs Servical System/Equipment Servical	353 356 374 387 391 391 392 402 403 405 504 505 510 511 512 512 521 522 523 525 525 527 531	\$. \$ \$	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86,000.00 \$ 33,000.00 \$ 225,000.00 \$ 4,667,000.00	\$ 40,000.00 \$ 215,000.00 \$ 256,000.00 \$ 31,000.00 \$ 33,000.00 \$ 23,000.00 \$ 23,000.00 \$ 37,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 1	S	40,000 216,000 18,000 18,000 18,000 7,366,000 49,000 21,000 159,000 37,000 69,000 31,000 222,000 31,000 23,000 31,000
ocation/Pist/Roads Oorthact Labor I-Contract Labor I-Contract Labor I-Contract Labor I-Contract Labor I-Contract Labor I-Contract Labor I-Interpretation I Intangible Costs Gible Costs I Intangible Costs Gible Costs I-Flowback Crews & Equip Interpretation Interp	353 356 374 387 391 391 392 402 403 405 504 505 510 511 512 512 525 525 525 525 527 531	\$. \$ \$	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86p00.00 \$ 33,000.00 \$ 225,000.00 \$ 4,667,000.00	\$ 40,000.00 \$ 216,000.00 \$ 226,000.00 \$ 31,000.00 \$ 322,000.00 \$ 232,000.00 \$ 31,000.00 \$ 37,000.00 \$ 37,000.00 \$ 37,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 1	S	40,000 216,000 18,000 18,000 18,000 7,366,000 49,000 21,000 159,000 37,000 69,000 31,000 222,000 31,000 23,000 31,000
ocation/Pist/Roads Ochriact Labor L-Contract	353 356 374 387 391 391 392 402 403 405 504 505 510 511 512 512 525 525 525 525 527 531	\$. \$ \$	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86p00.00 \$ 33,000.00 \$ 225,000.00 \$ 4,667,000.00	\$ 40,000.00 \$ 215,000.00 \$ 255,000.00 \$ 255,000.00 \$ 31,000.00 \$ 232,000.00 \$ 23,000.00 \$ 37,000.00 \$ 37,000.00 \$ 37,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 1	S	40,000 216,000 18,000 18,000 18,000 7,366,000 49,000 21,000 159,000 37,000 69,000 31,000 222,000 31,000 23,000 31,000
ocation/Pis/Roads Donthact Labor L-Contract L-Con	353 356 374 387 391 391 392 402 403 405 504 505 510 511 512 512 525 525 525 525 527 531	\$. \$ \$	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86,000.00 \$ 33,000.00 \$ 225,000.00	\$ 40,000.00 \$ 216,000.00 \$ 226,000.00 \$ 31,000.00 \$ 31,000.00 \$ 222,000.00 \$ 31,000.00 \$ 37,000.00 \$ 37,000.00 \$ 37,000.00 \$ 37,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 1	S	40,000 216,000 18,000 18,000 18,000 7,366,000 49,000 21,000 159,000 37,000 69,000 31,000 222,000 31,000 23,000 31,000
ocation/Pits/Roads Oorhact Labor - Contract Labor - Water Disposal - Hinz Water Disposal - Hinz Water Disposal - Flowback Crews & Equip - Flowback Crews - Flowback - Flowback Crews - Flowback	353 356 374 387 391 391 392 402 403 405 504 505 510 511 512 512 525 525 525 525 527 531	\$. \$ \$	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86,000.00 \$ 33,000.00 \$ 225,000.00	\$ 40,000.00 \$ 216,000.00 \$ 226,000.00 \$ 31,000.00 \$ 322,000.00 \$ 232,000.00 \$ 31,000.00 \$ 37,000.00 \$ 37,000.00 \$ 37,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 1	S	40,000 216,000 18,000 18,000 18,000 7,366,000 49,000 21,000 159,000 37,000 69,000 31,000 222,000 31,000 23,000 31,000
ocation/PisrRoads Donthact Labor L-Contract	353 356 374 387 391 391 392 402 403 405 504 505 510 511 512 512 525 525 525 525 527 531	\$. \$ \$	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86,000.00 \$ 33,000.00 \$ 225,000.00	\$ 40,000.00 \$ 216,000.00 \$ 226,000.00 \$ 31,000.00 \$ 31,000.00 \$ 222,000.00 \$ 31,000.00 \$ 37,000.00 \$ 37,000.00 \$ 37,000.00 \$ 37,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 1	S	40,000 216,000 18,000 18,000 18,000 7,366,000 49,000 21,000 159,000 37,000 69,000 31,000 222,000 31,000 23,000 31,000
ocation/Pts/Poads ochinal Labor -Contract Labor -Contract Labor -Water Disposal -HRZ Wel Offset Frac -I Intangible Costs	353 356 374 387 391 391 392 402 403 405 504 505 510 511 512 512 525 525 525 525 527 531	\$. \$ \$	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86,000.00 \$ 33,000.00 \$ 225,000.00	\$ 40,000.00 \$ 216,000.00 \$ 226,000.00 \$ 31,000.00 \$ 31,000.00 \$ 222,000.00 \$ 31,000.00 \$ 37,000.00 \$ 37,000.00 \$ 37,000.00 \$ 37,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 1	S	40,000 216,000 18,000 18,000 18,000 7,366,000 49,000 21,000 159,000 37,000 69,000 31,000 222,000 31,000 23,000 31,000
ocation/Plat/hoads ocotian/Plat/hoads ocotian/Plat/hoads Ocotian/Clabor Water Disposal HRZ Wet Offset Frac Intlangible Costs Jible Costs Jible Costs Flowback Crews & Equip frace Casing erned Csg octuend Csg oct	353 356 374 387 391 391 392 402 403 405 504 505 510 511 512 512 525 525 525 525 527 531	\$. \$ \$	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86,000.00 \$ 33,000.00 \$ 225,000.00	\$ 40,000.00 \$ 216,000.00 \$ 226,000.00 \$ 31,000.00 \$ 31,000.00 \$ 222,000.00 \$ 31,000.00 \$ 37,000.00 \$ 37,000.00 \$ 37,000.00 \$ 37,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 1	S	40,000 216,000 18,000 18,000 18,000 7,366,000 49,000 21,000 159,000 37,000 69,000 31,000 222,000 31,000 23,000 31,000
ocation/Plat/hoads ocotian/Plat/hoads ocotian/Plat/hoads Ocotian/Comit	353 356 374 387 391 391 392 402 403 405 504 505 510 511 512 512 525 525 525 525 527 531	\$. \$ \$	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00 \$ 72,000.00	\$ 69,000.00 \$ 37,000.00 \$ 86,000.00 \$ 33,000.00 \$ 225,000.00 \$ 4,667,000.00	\$ 40,000.00 \$ 215,000.00 \$ 256,000.00 \$ 69,000.00 \$ 69,000.00 \$ 31,000.00 \$ 232,000.00 \$ 23,000.00 \$ 23,000.00 \$ 31,000.00 \$ 31,000.00 \$ 1,000.00 \$ 1,000.00 \$ 31,000.00 \$ 37,000.00 \$ 37,000.00 \$ 37,000.00	\$ 18,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 108,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ 18,000.00 \$ \$ \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ 18,000.00 \$ \$ \$ 1	S	40,000 216,000 18,000 18,000 18,000 7,366,000 49,000 21,000 159,000 37,000 69,000 31,000 222,000 31,000 23,000 31,000

COG OPERATING LLC AUTHORITY FOR EXPENDITURE Drill & Complete

Well Name TOMAHAWK FED UNIT 715H SHL A-30-245-28C BHL A-18-245-28E Formation WOIFCAMP Legal E2 18 & 19, 1245-R28E AFE Numbers

Prospect TOMAHAWK 2428
State & County NEW MEXICO, EDDY
Objective ORIEL & COMPLETE

TVD 9,353

Code 205	PreSpud (PS) Pre-Set Casing (PC) Drilling (0	Kii Completions (C)	Tank Bity ConstruinTBI	(CDA) alupa pam9	Revisioni	SERVICE STREET
	S 91,000.0		CACAMPANA PROPERTY OF THE PROP			
						\$ 91.00
206	\$ 7,000.0					\$ 7,00
209	\$ 496,000.0					\$ 496,00
211	\$ 265,000.0 \$ 86,000.0					\$ 265,000
						\$ 72,000
213						\$ 91,000
	\$ 187,000.0	00			\$ -	\$ 187,00
						\$ 19,00
						\$ 72,00
						\$ 106,000 \$ 58,000
222						\$ 63,00
						\$ 7,00
226	\$ 42,000.0			2 3		\$ 42,00
						\$ 104,00
						\$ 39,000
			-			\$ 39,00
						\$ 75,00
		00				\$ 154.00
238						\$ 3,000
	\$ 58,000.0	00			\$ -	\$ 58,00
244		00		Samuel and the St.	\$ -	\$ 253,00
304						\$ 127,00
						\$ 14,000 \$ 20,000
						\$ 865,00
						\$ 548,00
309						\$ 249,00
310		\$ 387,000.00			\$ -	\$ 387,00
311		\$ 56,000.00				\$ 56,00
		\$ 366,000.00				\$ 356,000
						\$ 345,00
						\$ 14,00 \$ 14,00
						\$ 184,00
329						\$ 60,000
331						\$ 425,00
		\$ 14,00000			\$ -	\$ 14,00
						\$ 53,00
		\$ 99,000.00				\$ 99,00
		\$ 207,000.00				\$ 207,000 \$ 395,000
		3 393,000.00				\$ 2,00
	- ASSESSMENT					\$ 40,00
			\$ 216,000,00		\$ -	\$ 216,000
374				\$ 18,000.00	\$ -	\$ 18,00
				\$ 81,000.00	S -	
391						\$ 81,000
100.000000	· 2 * 4 * 600 C	4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	9	\$ 9,000.00	\$	\$ 9,00
De PRIM	\$ - \$ - \$ 2,548,000.0	\$ 4,442,000.00	\$ 258,000.00	\$ 9,000.00	\$	
20.77.22	\$ - \$ - \$ 2,548,000.0	4,442,000.00	\$ 258,000.00	\$ 9,000.00	\$	\$ 9,00
302	\$ - \$ 2,848,000.0	4,442,000.00	\$ 258,000.00	\$ 9,000.00	\$ - \$ -	\$ 9,000 \$ 7,358,000
392 401		1	\$ 258,000.00	\$ 9,000.00 \$ 108,000.00 \$ 49,000.00	\$ - \$ -	\$ 9,000 \$ 7,358,000 \$ 49,000
401	\$ 21,000.0	00	258,000.00	\$ 9,000.00 \$ 108,000.00 \$ 49,000.00	\$ - \$ - \$ -	\$ 9,000 \$ 7,358,000 \$ 49,000 \$ 21,000
	\$ 21,000,0 \$ 159,000,1	00 00	3 258,000.00	\$ 9,000.00 \$ 108,000.00 \$ 49,000.00	\$ - \$ - \$ - \$ -	\$ 9,000 \$ 7,358,000 \$ 49,000
401 402 403 405	\$ 21,000,0 \$ 159,000,1	00 00 00 00	3 258,000.00	\$ 9,000.00 \$ 108,000.00 \$ 49,000.00	\$ - \$ - \$ - \$ - \$ - \$ -	\$ 9,000 \$ 7,358,000 \$ 49,00 \$ 21,000 \$ 159,00 \$ 395,00 \$ 72,00
401 402 403 405 504	\$ 21,000 \$ 159,000 \$ 395,000	00 00 00 00 00 00 00 00 00 00 00 00 00	258,000.00	\$ 9,000.00 \$ 108,000.00 \$ 49,000.00	\$ - \$ - \$ 5 - 5 5 - 5 5 - 5 5 - 5 5 - 5 5 - 5 5 - 5 5 - 5 5 5 5 - 5	\$ 9,000 \$ 7,358,000 \$ 49,00 \$ 21,000 \$ 159,000 \$ 72,000 \$ 69,000
401 402 403 405 504 505	\$ 21,000 \$ 159,000 \$ 395,000	00 00 00 00		\$ 9,000.00	\$ - \$ \$ \$ \$ \$ \$ \$ \$ \$	\$ 9,000 \$ 7,356,000 \$ 49,00 \$ 21,000 \$ 159,000 \$ 385,00 \$ 72,000 \$ 69,000 \$ 37,00
401 402 403 405 504 505 510	\$ 21,000 \$ 159,000 \$ 395,000	00 00 00 00 00 00 00 00 00 00 00 00 00	\$ 69,000.00	\$ 9,000.00 \$ 108,000.00 \$ 49,000.00	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 5	\$ 9,00 \$ 7,358,00 \$ 49,00 \$ 21,00 \$ 159,00 \$ 385,00 \$ 72,00 \$ 69,00 \$ 37,00 \$ 59,00
401 402 403 405 504 505 510 511	\$ 21,000 \$ 159,000 \$ 395,000	00 00 00 00 00 00 00 00 00 00 00 00 00	\$ 69,000.00 \$ 31,000.00	\$ 9,000.00	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 9,00 \$ 7,356,00 \$ 19,00 \$ 12,00 \$ 159,00 \$ 385,00 \$ 72,00 \$ 37,00 \$ 37,00 \$ 5,00 \$ 31,00
401 402 403 405 504 505 510 511	\$ 21,000 \$ 159,000 \$ 395,000	00 00 00 00 00 00 00 00 00 00 00 00 00	\$ 69,000.00 \$ 31,000.00 \$ 222,000.00	\$ 9,000.00	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ 5 - 5 5 - 5 5 5 5	\$ 9,000 \$ 7,356,000 \$ 49,000 \$ 21,000 \$ 159,000 \$ 385,000 \$ 69,000 \$ 37,000 \$ 31,000 \$ 31,000 \$ 222,000
401 402 403 405 504 505 510 511 512 513 514	\$ 21,000 \$ 159,000 \$ 395,000	00 00 00 00 00 00 00 00 00 00 00 00 00	\$ 69,000.00 \$ 31,000.00 \$ 222,000.00 \$ 137,000.00	\$ 9,000.00	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 9,00 \$ 7,356,00 \$ 19,00 \$ 12,00 \$ 159,00 \$ 385,00 \$ 72,00 \$ 37,00 \$ 37,00 \$ 5,00 \$ 31,00
401 402 403 405 504 505 510 511 512 513 514 515	\$ 21,000 \$ 159,000 \$ 395,000	00 00 00 00 00 00 00 00 00 00 00 00 00	\$ 69,000.00 \$ 31,000.00 \$ 222,000.00 \$ 137,000.00 \$ 232,000.00	\$ 9,000.00	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 9,00 \$ 7,356,00 \$ 49,00 \$ 21,00 \$ 159,00 \$ 385,00 \$ 72,00 \$ 385,00 \$ 69,00 \$ 31,00 \$ 222,00 \$ 137,00 \$ 222,20 \$ 222,20
401 402 403 405 504 505 510 511 512 513 514 515 521	\$ 21,000 \$ 159,000 \$ 395,000	00 00 00 00 00 00 00 00 00 00 00 00 00	\$ 69,000.00 \$ 31,000.00 \$ 222,000.00 \$ 137,000.00 \$ 232,000.00 \$ 31,000.00	\$ 9,000.00	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 9,00 \$ 7,356,00 \$ 19,00 \$ 21,00 \$ 159,00 \$ 385,00 \$ 37,00 \$ 69,00 \$ 31,00 \$ 222,00 \$ 322,00 \$ 31,00 \$ 31,00
401 402 403 405 504 505 510 511 512 513 514 515 521	\$ 21,000 \$ 159,000 \$ 395,000	00 00 00 00 00 00 00 00 00 00 00 00 00	\$ 69,000.00 \$ 31,000.00 \$ 222,000.00 \$ 137,000.00 \$ 232,000.00 \$ 31,000.00 \$ 23,000.00	\$ 9,000.00	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 9,000 \$ 7,356,000 \$ 21,000 \$ 159,000 \$ 385,000 \$ 72,000 \$ 69,000 \$ 31,000 \$ 222,200 \$ 86,000 \$ 232,200 \$ 31,000 \$ 31,200 \$ 322,200 \$ 331,000 \$ 322,200 \$ 331,000 \$ 322,200 \$ 331,000 \$ 322,200 \$ 331,000 \$ 331,000 \$ 322,200
401 402 403 403 504 505 510 511 512 513 514 515 521 522 522	\$ 21,000 \$ 159,000 \$ 395,000	00 00 00 00 00 00 00 00 00 00 00 00 00	\$ 69,000.00 \$ 31,000.00 \$ 222,000.00 \$ 137,000.00 \$ 33,000.00 \$ 33,000.00 \$ 23,000.00	\$ 9,000.00	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 9,00 \$ 7,356,00 \$ 19,00 \$ 12,00 \$ 159,00 \$ 385,00 \$ 37,00 \$ 5,00 \$ 37,00 \$ 322,00 \$ 322,00 \$ 323,00 \$ 323,00
401 402 403 405 504 505 510 511 512 513 514 4515 521 522 523 523	\$ 21,000 \$ 159,000 \$ 395,000	00 00 00 00 00 00 00 00 00 00 00 00 00	\$ 69,000.00 \$ 31,000.00 \$ 222,000.00 \$ 137,000.00 \$ 31,000.00 \$ 31,000.00 \$ 23,000.00 \$ 23,000.00 \$ 31,000.00	\$ 9,000.00	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 9,000 \$ 7,356,000 \$ 49,000 \$ 21,000 \$ 159,000 \$ 59,000 \$ 69,000 \$ 337,000 \$ 69,000 \$ 137,000 \$ 222,000 \$ 331,000 \$ 232,000 \$ 313,000 \$
401 402 403 405 504 505 511 512 513 514 515 521 522 522 525 526	\$ 21,000 \$ 159,000 \$ 395,000	50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$ 69,000.00 \$ 31,000.00 \$ 222,000.00 \$ 137,000.00 \$ 33,000.00 \$ 33,000.00 \$ 23,000.00	\$ 9,000.00	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 9,00 \$ 7,3\$6,00 \$ 19,00 \$ 121,00 \$ 159,00 \$ 385,00 \$ 72,00 \$ 385,00 \$ 37,00 \$ 31,00 \$ 222,00 \$ 31,00 \$ 322,00 \$ 31,00 \$ 31,00 \$ 323,00 \$ 31,00 \$ 31,00
401 402 403 405 504 505 510 511 512 513 514 4515 521 522 523 523	\$ 21,000 \$ 159,000 \$ 395,000	00 00 00 00 00 00 00 00 00 00 00 00 00	\$ 69,000.00 \$ 31,000.00 \$ 222,000.00 \$ 137,000.00 \$ 31,000.00 \$ 31,000.00 \$ 23,000.00 \$ 23,000.00 \$ 31,000.00	\$ 9,000.00	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 9,00 \$ 7,356,00 \$ 49,00 \$ 21,000 \$ 159,000 \$ 385,000 \$ 365,000 \$ 37,000 \$ 31,000 \$ 222,000 \$ 31,000 \$ 31,000 \$ 31,000 \$ 31,000 \$ 31,000 \$ 31,000 \$ 31,000 \$ 31,000 \$ 31,000 \$ 31,000 \$ 31,000 \$ 31,000 \$ 31,000 \$ 31,000
401 402 403 405 504 505 510 511 512 513 514 515 521 521 522 523 523 525 526 527 531	\$ 21,000.0 \$ 159,000.0 \$ 395,000.0 \$ 72,000.0	50 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	\$ 69,000.00 \$ 31,000.00 \$ 222,000.00 \$ 137,000.00 \$ 31,000.00 \$ 23,000.00 \$ 31,000.00 \$ 31,000.00	\$ 9,000.00	\$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ - \$ -	\$ 9,00 \$ 7,3\$6,00 \$ 19,00 \$ 121,00 \$ 159,00 \$ 385,00 \$ 72,00 \$ 385,00 \$ 37,00 \$ 31,00 \$ 222,00 \$ 31,00 \$ 322,00 \$ 31,00 \$ 31,00 \$ 323,00 \$ 31,00 \$ 31,00
	212 213 214 217 218 229 221 222 225 225 228 229 229 239 239 239 239 239 239 239 239	212	212	212	212 S	222

COG OPERATING LLC AUTHORITY FOR EXPENDITURE Drill & Complete

Well Name TOMAHAWK FED UNIT 716H SHL A-30-245-28E BHL B-18-245-28E Formation WOLFCAMP Legal E2 18 & 19, T245-R28E AFE Numbers

Prospect TOMAHAWK 2428
State & County HEV MEXICO, EDDY
Objective DRILL & COMPLETE

TVD 9,324

secreta los							
	reSoud (PS)! Pre-Set Cas inniPC	Delling (DR)	Completions (C	Tank Bith Constroin(IBI)	Pmpa Equip (PEQ)	Revision	
	responses a reservating o	tenning (DR)	Completion's (C	Talk Biy Consucering	Filling EquiptiFEGIT	Revision	
205		\$ 91,000.00	HOLD THE PROPERTY OF THE PARTY	Table 1		- IS	91,00
206					Š	- \$	7,00
		\$ 7,000.00 \$ 496,000.00					496,00
		\$ 265,000,00					265,00
				1		. 15	86,00
				William William Company			72,00
							91,00
214		\$ 187,000,00	Z Prilling to a service of	Connected from Titler of the Connected for			187,00
217						- İs	19,00
	a muutaa waxaa ka ahaa ahaa ahaa ahaa ahaa ahaa ah		11100				72,00
							106,00
							58,00
							63.00
							7,00
							42,00
							104,00
					S	- \$	39,00
				1	S	- I S	39,00
					S	- \$	161,00
236					Š		75,00
237			Develops overes control time		\$		154,00
238		\$ 3,000.00			S	- \$	3,00
243		\$ 58,000.00	Ann market		Š	- 5	58,00
244					Š	- \$	253,00
304		1	\$ 127,000.00		Š	- \$	127,00
305				7	Š	- 5	14,00
306			\$ 20,000.00	2000 - 20	Š	The same of the sa	20,00
307					Š	- \$	865,00
308					Š	- \$	548,00
					\$	- \$	249,00
310					Š	- \$	387,00
311			\$ 56,000.00		Š	. \$	56,00
312	7 10/11/11/11/11		\$ 366,000,00		\$	- \$	366,00
315	g 583				Š		345,00
325				1			14,00
326					\$		14,00
327							184,00
329			\$ 60,000,00				60,00
331				i		- 1 s	425,00
				7-7			14,00
							53,00
							99,00
345			\$ 207,000,00				207,00
		1		i			395,00
		1		\$ 2000.00			2,00
		-					40,00
356	0				Š		216,00
374					S 18,000,00 S		18,00
387	manage d	Market Democratic	Image managed 1157				81,00
391							
				l	\$ 9,000.00 \$. \$	9,00
3		\$ 2,548,900.00	\$ 4,442,000.00	\$ 258,000.00	\$ 9,000.00 \$ \$ 108,000,00 \$	- \$	9,00 7,366,00
3	. \$	\$ 2,548,000.00	\$ 4,442,000.00	\$ 258,000.00		- \$	9,00 7,356,00
	m American	\$ 2,548,000.00	\$ 4,442,000.00	\$ 258,000.00	\$ 108,000,00 \$	S \$	
		\$ 2,548,900.00	\$ 4,442,000.00		\$ 108,000,00 \$	\$	7,356,00
392	m American		\$ 4,442,000.00		\$ 108,000.00 \$ \$ 49,000.00 \$	- S - S	7,356,00
392 401	m American	\$ 21,000.00	\$ 4,442,000.00		\$ 108,000,00 \$ \$ 49,000.00 \$ \$	- S - S - S	7,366,00 49,00 21,00
392 401 402	m American	\$ 21,000.00	\$ 4,442,000.00		\$ 108,000.00 \$ \$ 49,000.00 \$ \$ \$ \$ \$	- S - S - S - S	7,\$66,00 49,00 21,00 159,00
392 401 402 403	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 4,442,000.00		\$ 49,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S	49,00 21,00 159,00 395,00
392 401 402 403 405	m American	\$ 21,000.00			\$ 108,000.00 \$ \$ 49,000.00 \$ \$ 5 \$ 5 \$ 5	- S - \$ - S - S - S - S - S	49,00 21,00 159,00 395,00 72,00
392 401 402 403 405 504	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69.000.00		\$ 49,000.00 \$ \$ 49,000.00 \$ \$ 5 \$ 5 \$ 5 \$ 5 \$ 5	- S - S - S - S - S - S - S - S	49,00 21,00 159,00 395,00 72,00 69,00
392 401 402 403 405 504 505	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00			\$ 108,000.00 \$ \$ 49,000.00 \$ \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5	- S - S - S - S - S - S - S - S	49,00 21,00 159,00 395,00 72,00 69,00 37,00
392 401 402 403 405 504 505 510	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69.000.00	\$ 69,000.00	\$ 49,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S	7,356,00 49,00 21,00 159,00 395,00 72,00 69,00 69,00
392 401 402 403 405 504 505 510	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69.000.00	\$ 69,000.00 \$ 31,000.00	\$ 49,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	7,386,00 49,00 21,00 159,00 395,00 72,00 69,00 37,00 69,00 31,00
392 401 402 403 405 504 505 510 511	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69.000.00	\$ 69,000,00 \$ 31,000,00 \$ 222,000,00	\$ 49,000.00 \$ \$ 49,000.00 \$ \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5	- S - S - S - S - S - S - S - S - S - S	7,385,00 49,00 21,00 159,00 395,00 72,00 69,00 37,00 69,00 31,00 222,00
392 401 402 403 405 504 505 510 511 512 513	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00	\$ 69,000.00 \$ 31,000.00	\$ 49,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	7,386,00 49,00 21,00 159,00 72,00 69,00 37,00 69,00 31,00 222,00 137,00
392 401 402 403 405 504 505 510 511 512 513	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69.000.00	\$ 69,000,00 \$ 31,000,00 \$ 222,000,00 \$ 137,000,00	\$ 108,000.00 \$ \$ 49,000.00 \$ \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5	- S - S - S - S - S - S - S - S - S - S	7,386,00 49,00 21,00 159,00 395,00 72,00 69,00 37,00 222,00 137,00 85,00
392 401 402 403 405 504 505 510 511 512 513 514 515	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00	\$ 69,000,00 \$ 31,000,00 \$ 222,000,00 \$ 137,000,00 \$ 232,000,00	\$ 49,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	7,386,00 49,00 21,00 159,00 395,00 72,00 69,00 37,00 69,00 222,00 137,00 85,00 232,00
392 401 402 403 405 504 505 510 511 512 513 514 515	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00	\$ 69,000.00 \$ 31,000.00 \$ 222,000.00 \$ 137,000.00 \$ 232,000.00 \$ 31,000.00	\$ 108,000.00 \$ \$ 49,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	7,386,00 49,00 21,00 159,00 72,00 69,00 31,00 222,00 48,00 232,00 31,
392 401 402 403 405 504 505 510 511 512 513 514 515 521	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00	\$ 69,000.00 \$ 31,000.00 \$ 222,000.00 \$ 137,000.00 \$ 232,000.00 \$ 31,000.00 \$ 23,000.00	\$ 49,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	7,386,00 49,00 21,00 159,00 72,00 69,00 37,00 69,00 11,00 222,00 137,00 85,00 232,00 232,00 233,00
392 401 402 403 405 504 505 510 511 512 513 514 515 521 522 523	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00	\$ 69,000,00 \$ 31,000,00 \$ 222,000,00 \$ 137,000,00 \$ 31,000,00 \$ 23,000,00 \$ 23,000,00	\$ 49,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	7,386,00 49,00 21,00 21,00 159,00 395,00 72,00 69,00 31,00 212,00 85,00 2137,00 23,00 23,00 23,00 23,00
392 401 402 403 405 504 505 510 512 512 513 514 515 524 522 523 525	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00	\$ 69,000,00 \$ 31,000,00 \$ 222,000,00 \$ 137,000,00 \$ 23,000,00 \$ 23,000,00 \$ 23,000,00 \$ 23,000,00 \$ 31,000,00	\$ 49,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	7,386,00 49,00 41,00 159,00 395,00 69,00 37,00 69,00 222,00 31,00 222,00 23,00 23,00 23,00 23,00 23,00
392 401 402 403 405 504 505 510 511 512 513 515 521 522 523 523 525 526	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00 \$ 85,000.00	\$ 69,000,00 \$ 31,000,00 \$ 222,000,00 \$ 137,000,00 \$ 31,000,00 \$ 23,000,00 \$ 23,000,00	\$ 49,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	7,866,00 49,00 21,00 21,00 159,00 995,00 69,00 37,00 31,00 22,00 20,00 31,00 23,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00
392 401 402 403 405 504 505 510 511 512 513 514 515 521 521 522 523 525 526	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00	\$ 69,000.00 \$ 31,000.00 \$ 222,000.00 \$ 137,000.00 \$ 31,000.00 \$ 23,000.00 \$ 23,000.00 \$ 23,000.00 \$ 31,000.00 \$ 37,000.00	\$ 49,000.00 \$ \$ 49,000.00 \$ \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5 \$ 5	- S - S - S - S - S - S - S - S - S - S	7,366,00 49,00 49,00 49,00 19,00 19,00 19,00 69,00 39,00 69,00 31,00 222,00 31,00 23,00 23,00 23,00 23,00 31,00 31,00 31,00 33,00
392 401 402 403 405 504 505 510 511 512 513 515 521 522 523 523 525 526	m American	\$ 21,000.00 \$ 159,000.00 \$ 395,000.00	\$ 69,000.00 \$ 37,000.00 \$ 85,000.00	\$ 69,000.00 \$ 31,000.00 \$ 222,000.00 \$ 137,000.00 \$ 31,000.00 \$ 232,000.00 \$ 23,000.00 \$ 23,000.00 \$ 31,000.00 \$ 31,000.00	\$ 49,000.00 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	- S - S - S - S - S - S - S - S - S - S	7,866,00 49,00 21,00 21,00 159,00 995,00 69,00 37,00 31,00 22,00 20,00 31,00 23,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00 31,00
	217 218 219 221 221 222 225 226 227 228 229 235 237 238 243 244 304 305 307 309 311 312 312 325 326 327 329 343 343 345 351 353 366 351 353 366 351 353 366 351 353 366 351 353 366 351 351 351 351 351 351 351 351 351 351	210 211 211 212 213 214 217 216 219 219 221 222 225 226 227 226 227 228 229 225 226 227 228 229 235 236 237 238 241 304 305 306 306 307 308 309 310 311 312 315 325 326 327 327 328 329 331 337 339 331 337 339 343 345 346 351 353 356	209 \$ 496,00.00 210 \$ 265,000.00 211 \$ 566,000.00 211 \$ 5 66,000.00 212 \$ 72,000.00 213 \$ 91,000.00 214 \$ 187,000.00 214 \$ 187,000.00 216 \$ 72,000.00 217 \$ 19,000.00 218 \$ 72,000.00 219 \$ 106,000.00 221 \$ 56,000.00 222 \$ 56,000.00 222 \$ 56,000.00 223 \$ 53,000.00 224 \$ 58,000.00 225 \$ 7,000.00 226 \$ 7,000.00 227 \$ 104,000.00 228 \$ 39,000.00 228 \$ 39,000.00 229 \$ 39,000.00 230 \$ 75,000.00 231 \$ 161,000.00 232 \$ 161,000.00 233 \$ 161,000.00 234 \$ 575,000.00 235 \$ 161,000.00 236 \$ 75,000.00 237 \$ 154,000.00 238 \$ 3,000.00 244 \$ \$ 253,000.00 244 \$ \$ 253,000.00 245 \$ 300.00 246 \$ 300.00 247 \$ 560.00 248 \$ 300.00 257 \$ 500.00 268 \$ 300.00 278 \$ 300.00 289 \$ 300.00 290.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.0	209	209	209	209

Received by OCD: 5/3/2022 10:02:10 AM

DATE	DESCRIPTION	ADDRESS	CMRRR	DELIVERY CONFIRMATION DATE
	Fed Comm Agreement to Lyle Rexford Butz and Jessie Pearl Butz			
	and/or Heirs or Estate of Lyle Rexford Butz II and Jessie Pearl	6565 Clearwater Drive,		
4/6/2022	Butz - 714H-716H	Loveland CO 80538	Overnight mail	4/7/2022
	Fed Comm Agreement to Lyle Rexford Butz and Jessie Pearl Butz			
	and/or Heirs or Estate of Lyle Rexford Butz II and Jessie Pearl	10939 Yukon St,		
4/6/2022	Butz - 714H-716H	Westminster CO 80021	Overnight mail	4/7/2022
	Fed Comm Agreement to Lyle Rexford Butz and Jessie Pearl Butz			
	and/or Heirs or Estate of Lyle Rexford Butz II and Jessie Pearl	222 Fashion Lane Suite		
4/6/2022	Butz - 714H-716H	205, Tustin CA 92780	Overnight mail	Unknown
	Tomahawk WC Unit 1st Revision to 2022 POD - Lyle Rexford			
	Butz II OR Heirs of Lyle Rexford Butz or Per Rep of Estate of Lyle	6565 Clearwater Drive,	91 7199 9991 7038	
3/14/2022	Rexford Butz II	Loveland CO 80538	7772 3422	3/18/2022
	Well proposal to Lyle Rexford Butz II OR Heirs of Lyle Rexford	222 Fashion Lane Suite	9489 0090 0027	
2/28/2022	Butz or Per Rep of Estate of Lyle Rexford Butz II - 714H-716H	205, Tustin CA 92780	6357 7567 71	"In transit"
	Well proposal to Lyle Rexford Butz II OR Heirs of Lyle Rexford	6565 Clearwater Drive,	91 7199 9991 7038	
2/28/2022	Butz or Per Rep of Estate of Lyle Rexford Butz II - 714H-716H	Loveland CO 80538	7772 3422	3/18/2022
	Well proposal to Jessie Pearl Butz OR Per Rep of Estate of Jessie	222 Fashion Lane Suite	91 7199 9991 7038	
2/28/2022	Pearl Butz - 714H-716H	205, Tustin CA 92780	7772 3484	3/22/2022
	Well proposal to Jessie Pearl Butz OR Per Rep of Estate of Jessie	6565 Clearwater Drive,	91 7199 9991 7038	
2/28/2022	Pearl Butz - 714H-716H	Loveland CO 80538	7772 3477	3/3/2022
2/17/2022	Attempted Phone Call to Lyle Eric Beutz; left message			
		4901 Whitney Lane,	9489 0090 0027	
5/11/2021	Ratification of Tomahawk WC Unit Agreement to SAP LLC	Roswell NM 88203	6171 4603 28	5/14/2021
	Well proposal to Lyle Rexford Butz II, et ux - 701H-705H & 709H-	10939 Yukon St,	91 7199 9991 7039	
5/7/2020	713H	Westminster CO 80021	8000 4272	5/11/2020
		10939 Yukon St,	91 7199 9991 7039	
5/6/2020	Revisions to OA - Page 5 - to Lyle Rexford Butz II, et ux	Westminster CO 80021	8000 4272	5/11/2021
		4901 Whitney Lane,	9489 0090 0027	
4/20/2020	Ratification of Tomahawk WC Unit Agreement to SAP LLC	Roswell NM 88203	6155 1854 14	4/23/2020
	Ratification of Tomahawk WC Unit Agreement to Lyle Rexford	10939 Yukon St,	9489 0090 0027	
4/20/2020	Butz II and Jesse Pearl Butz	Westminster CO 80021	6155 1854 52	4/23/2020

COG Operating, LLC Case No. 22716 Exhibit A-5

Received by OCD: 5/3/2022 10:02:10 AM

		11240 Sunburst St,	91 7199 9991 7039	
1/14/2020	Revisions to OA - Ex A - to Lyle Rexford Butz II, et ux	Sylmar CA 91342	7971 8579	Unknown
		4901 Whitney Lane,	9414 8149 0246	
7/30/2019	Ratification of Tomahawk WC Unit Agreement to SAP LLC	Roswell NM 88203	9822 0198 21	Unknown
		11240 Sunburst St,	9414 8149 0246	
7/30/2019	Revisions to OA - TOC, Pg 15 - to Lyle Rexford Butz II, et ux	Sylmar CA 91342	9822 0194 87	Unknown
	Letter proposing Unit Agreement - to Lyle Rexford Butz II and	11240 Sunburst St,	91 7199 9991 7039	
6/27/2019	wife, Jessie Pearl Butz	Sylmar CA 91342	1755 6492	Unknown

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

APPLICATION OF COG OPERATING LLC FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO.

CASE NO. 22716

SELF-AFFIRMED STATEMENT OF JESSICA PONTIFF

- 1. I am a geologist at COG Operating LLC ("COG") and am over 18 years of age. I have personal knowledge of the matters addressed herein and am competent to provide this Self-Affirmed Statement. I have previously testified before the New Mexico Oil Conservation Division ("Division"), and my credentials as an expert in petroleum geology matters were accepted and made a matter of record.
 - 2. I am familiar with the geological matters that pertain to this case.
- 3. **Exhibit B-1** is a location map for the proposed horizontal spacing units ("Unit") within the Wolfcamp formation. The approximate wellbore paths for the proposed **Tomahawk WC Unit 714H**, **Tomahawk WC Unit 715H**, and **Tomahawk WC Unit 716H** wells ("Wells") are represented by red dashed lines. Existing producing wells in the targeted interval are represented by light purple solid lines.
- 4. **Exhibit B-2** is a subsea structure map for the top of the formation that is representative of the targeted interval within the formation. The data points are indicated by red crosses. The approximate wellbore paths for the Wells are depicted by red dashed lines. The map demonstrates the formation is gently dipping to the east in this area. I do not observe any faulting, pinch-outs, or geologic impediments to developing the targeted intervals with horizontal wells.

COG Operating LLC Case No. 22716 Exhibit B

- 5. **Exhibit B-2** also identifies three wells penetrating the targeted interval I used to construct a stratigraphic cross-section from A to A'. I used these well logs because they penetrate the targeted interval, are of good quality, and are representative of the geology in the area.
- 6. **Exhibit B-3** is a stratigraphic cross-section using the representative wells identified on **Exhibit B-2**. It contains gamma ray, resistivity and porosity logs. The proposed landing zone for the Wells is labeled on the exhibit. This cross-section demonstrates the target interval is continuous across the Unit.
- 7. In my opinion, a standup orientation for the Wells is appropriate to properly develop the subject acreage configuration because of consistent rock properties throughout the Unit and equivalent orientation versus east and west offset producers.
- 8. Based on my geologic study of the area, the targeted interval underlying the Unit is suitable for development by horizontal wells and the tracts comprising the Unit will contribute more or less equally to the production of the Wells.
- 9. In my opinion, the granting of COG's application will serve the interests of conservation, the protection of correlative rights, and the prevention of waste.
- 10. The exhibits attached hereto were either prepared by me or under my supervision or were compiled from company business records.
- 11. I understand this Self-Affirmed Statement will be used as written testimony in this case. I affirm my testimony in paragraphs 1 through 10 above is true and correct and is made under penalty of perjury under the laws of the State of New Mexico. My testimony is made as of the date identified next to my signature below.

4. 22. 2022 Date

Jessica Pontiff

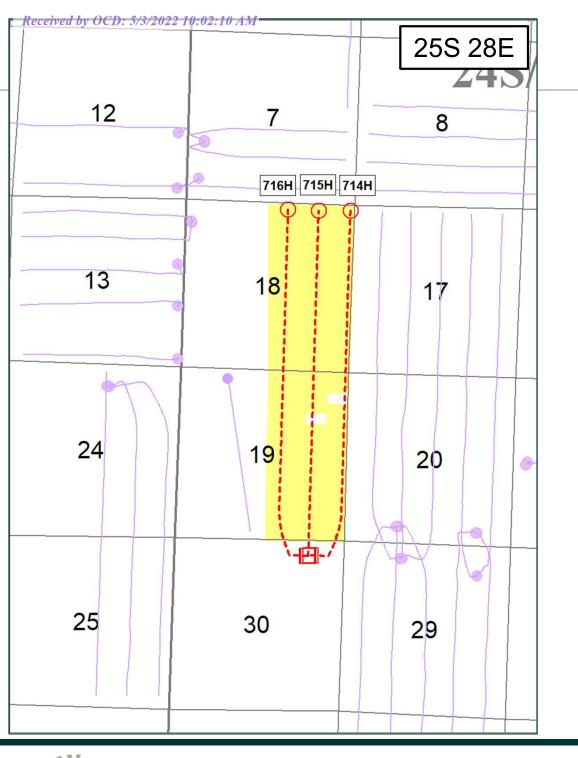


COG OPERATING LLC

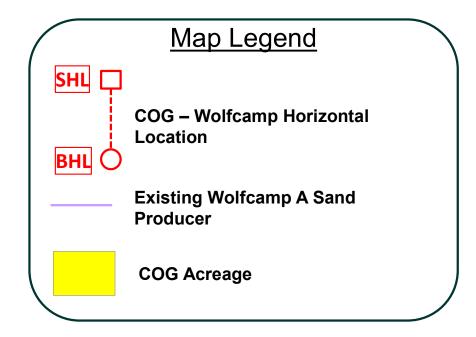
Tomahawk WC Unit 714H
Tomahawk WC Unit 715H
Tomahawk WC Unit 716H
Sections 30 (SHL), 19 and 18, T24S R28E
Eddy County, New Mexico



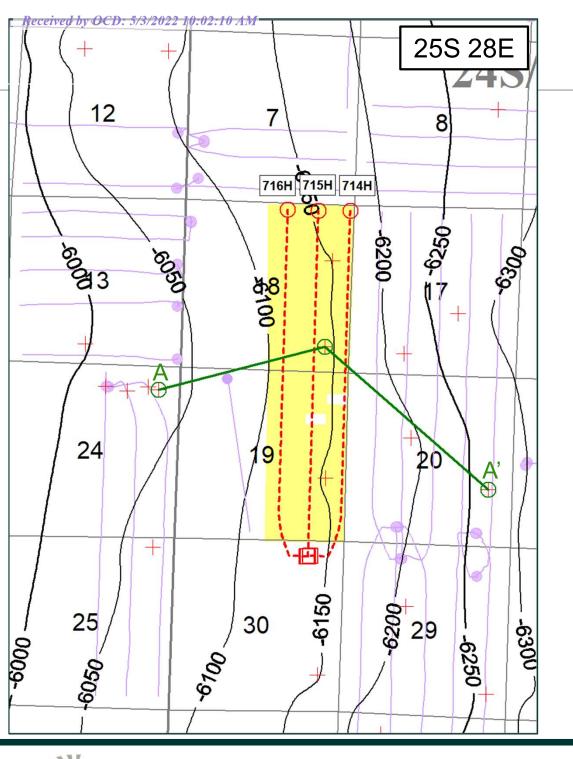




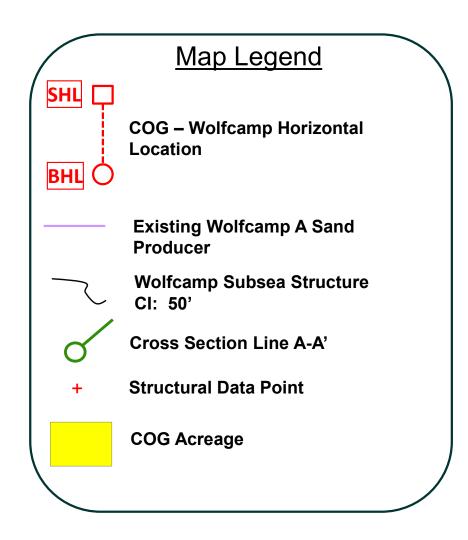
Wolfcamp Pool Tomahawk WC Unit 714H, 715H and 716H



COG Operating LLC Case No. 22716 Exhibit B-1



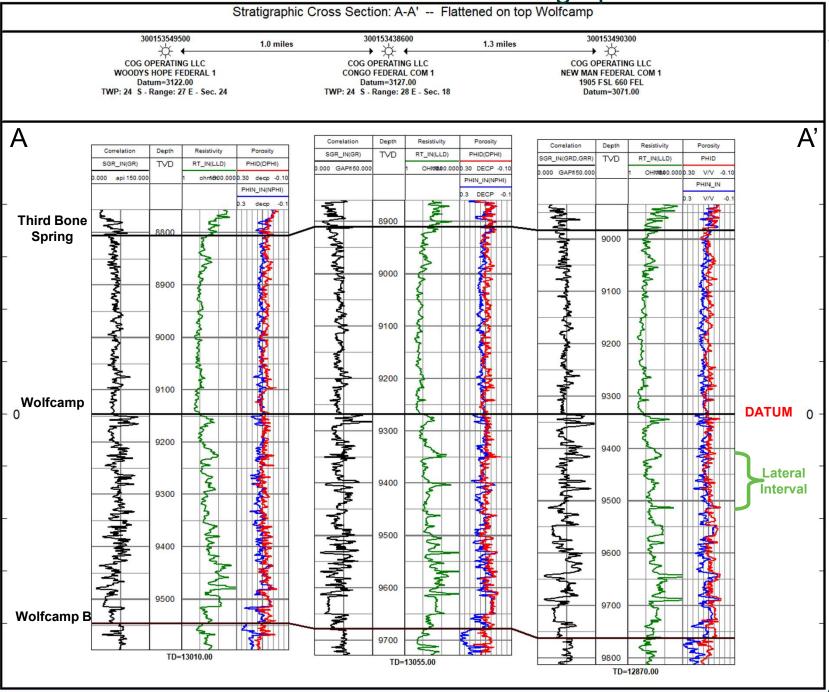
Wolfcamp Page 28 of 42 Pool Wolfcamp Structure Map



COG Operating LLC Case No. 22716 Exhibit B-2



Stratigraphic Cross Section A – A'



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

APPLICATION OF COG OPERATING LLC FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO.

CASE NO. 22716

SELF-AFFIRMED STATEMENT OF DANA S. HARDY

- 1. am attorney in fact and authorized representative of COG Operating LLC, the Applicant herein, and being first duly sworn, upon oath, state as follows.
- 2. I am familiar with the Notice Letter attached as **Exhibit C-1** and caused the Notice Letter to be sent to the parties set out in the chart attached as **Exhibit C-2**.
- 3. The above-referenced Application was provided, along with the Notice Letters, to the recipients listed in Exhibit C-2.
- 4. Exhibit C-2 also provides the date each Notice Letter was sent and the date each return was received.
- 5. Copies of the certified mail green cards and white slips are attached as **Exhibit C-3** as supporting documentation for proof of mailing and the information provided on Exhibit C-2.
- 6. On April 15, 2022, I caused a notice to be published to all interested parties in the Carlsbad Current Argus. An Affidavit of Publication from the Legal Clerk of the Carlsbad Current Argus, along with a copy of the notice publication, is attached as **Exhibit C-4**.

May 3, 2022

COG Operating, LLC Case No. 22716 Exhibit C



HINKLE SHANOR LLP

ATTORNEYS AT LAW
PO BOX 2068
SANTA FE, NEW MEXICO 87504
505-982-4554 (FAX) 505-982-8623

WRITER:

Dana S. Hardy, Partner dhardy@hinklelawfirm.com

April 1, 2022

VIA CERTIFIED MAIL RETURN RECEIPT REQUESTED

TO ALL INTEREST OWNERS SUBJECT TO POOLING PROCEEDINGS

Re: Case No. 22716 - Application of COG Operating, LLC for Compulsory Pooling, Lea County, New Mexico.

To whom it may concern:

This letter is to advise you that COG Operating, LLC filed the enclosed application with the New Mexico Oil Conservation Division. The hearing will be conducted on **May 5, 2022** beginning at 8:15 a.m.

During the COVID-19 Public Health Emergency, state buildings are closed to the public and hearings will be conducted remotely. To participate in the electronic hearing, see the instructions posted on the OCD Hearings website: http://www.emnrd.state.nm.us/OCD/announcements.html. You are not required to attend this hearing, but as an owner of an interest that may be affected by this application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date.

Pursuant to Division Rule 19.15.4.13.B, a party who intends to present evidence at the hearing shall file a pre-hearing statement and serve copies on other parties, or the attorneys of parties who are represented by counsel, at least four business days in advance of a scheduled hearing, but in no event later than 5:00 p.m. mountain time, on the Thursday preceding the scheduled hearing date. The statement must be filed at the Division's Santa Fe office or electronically submitted to ocd.hearings@state.nm.us and should include: the names of the parties and their attorneys, a concise statement of the case, the names of all witnesses the party will call to testify at the hearing, the approximate time the party will need to present its case, and identification of any procedural matters that are to be resolved prior to the hearing.

Please do not hesitate to contact me if you have any questions about this matter.

Sincerely,

/s/ Dana S. Hardy

Dana S. Hardy

Enclosure

COG Operating, LLC Case No. 22716 Exhibit C-1

PO BOX 10

ROSWELL, NEW MEXICO 88202

575-622-6510

(FAX) 575-623-9332

Released to Imaging: 5/3/2022 11:12:24 AM

PO BOX 2068 SANTA FE, NEW MEXICO 87504 505-982-4554 (FAX) 505-982-8623 7601 JEFFERSON ST NE • SUITE 180 ALBUQUERQUE, NEW MEXICO 87109 505-858-8320 (FAX) 505-858-8321



HINKLE SHANOR LLP

ATTORNEYS AT LAW
PO BOX 2068
SANTA FE, NEW MEXICO 87504
505-982-4554 (FAX) 505-982-8623

WRITER:

Dana S. Hardy, Partner dhardy@hinklelawfirm.com

April 5, 2022

<u>VIA CERTIFIED MAIL</u> RETURN RECEIPT REQUESTED

TO ALL OVERRIDING ROYALTY INTEREST OWNERS

Re: Case No. 22716 - Application of COG Operating, LLC for Compulsory Pooling, Lea County, New Mexico.

To whom it may concern:

This letter is to advise you that COG Operating, LLC filed the enclosed application with the New Mexico Oil Conservation Division. The hearing will be conducted on **May 5, 2022** beginning at 8:15 a.m.

During the COVID-19 Public Health Emergency, state buildings are closed to the public and hearings will be conducted remotely. To participate in the electronic hearing, see the instructions posted on the OCD Hearings website: http://www.emnrd.state.nm.us/OCD/announcements.html. You are not required to attend this hearing, but as an owner of an interest that may be affected by this application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date.

Pursuant to Division Rule 19.15.4.13.B, a party who intends to present evidence at the hearing shall file a pre-hearing statement and serve copies on other parties, or the attorneys of parties who are represented by counsel, at least four business days in advance of a scheduled hearing, but in no event later than 5:00 p.m. mountain time, on the Thursday preceding the scheduled hearing date. The statement must be filed at the Division's Santa Fe office or electronically submitted to ocd.hearings@state.nm.us and should include: the names of the parties and their attorneys, a concise statement of the case, the names of all witnesses the party will call to testify at the hearing, the approximate time the party will need to present its case, and identification of any procedural matters that are to be resolved prior to the hearing.

Please do not hesitate to contact me if you have any questions about this matter.

Sincerely,

/s/ Dana S. Hardy

Dana S. Hardy

Enclosure

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

APPLICATION OF COG OPERATING LLC FOR COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO

Case No. 22716

NOTICE LETTERS

PARTY	NOTICE LETTER SENT	RETURN RECEIVED
Jessie Pearl Butz, or Heir(s) of Jessie Pearl Butz or Personal	04/05/22	04/11/22
Representative(s) of the Estate		
6565 Clearwater Drive		
Loveland, CO 80538-7037		
Jessie Pearl Butz, or Heir(s) of	04/05/22	04/18/22
Jessie Pearl Butz or Personal		
Representative(s) of the Estate		
222 Fashion Lane, Suite 205		
Tustin, CA 92780-3318		
Lyle Rexford Butz II, or Heir(s) of	04/05/22	04/08/22
Lyle Rexford Butz II, or Personal		
Representative of the Estate		
6565 Clearwater Drive		
Loveland, CO 80538-7037		
Lyle Rexford Butz II, or Heir(s) of	04/05/22	04/18/22
Lyle Rexford Butz II, or Personal		
Representative of the Estate		
222 Fashion Lane, Suite 205		
Tustin, CA 92780-3318		
SAP, LLC	04/05/22	04/11/22
4901 Whitney Lane	04/03/22	04/11/22
Roswell, NM 88203		
NUSWEII, INIVI 002UJ		

COG Operating, LLC Case No. 22716 Exhibit C-2



HINKLE SHANOR LLP ATTORNEYS AT LAW POST OFFICE BOX 2068 SANTA FE, NEW MEXICO 87504



CERTIFIED MAIL

7021 0950 0002 0364 5372

ANK 19 TO

Lyle Rexford Butz, II and Jessie Pearl Butz and/or Heirs or Estate of Lyle Rexford Butz II and Jessie Pearl Butz 222 Fashion Lane, Suite 205 Tustin, CA 92780

NIXIE

NSN

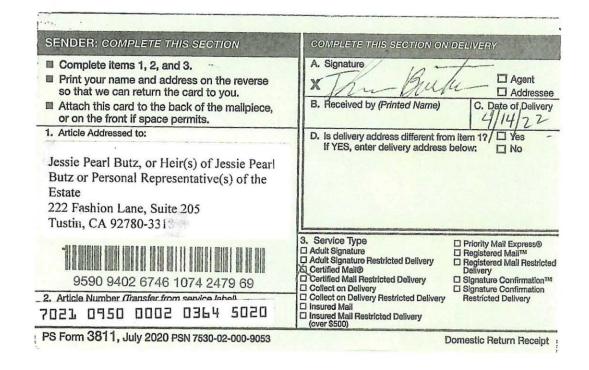
911

0004/14/22

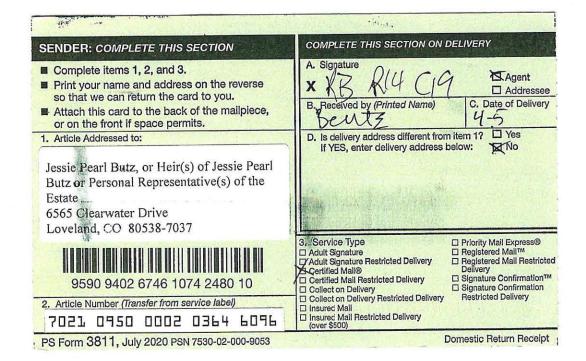
COG Operating, LLC Case No. 22716

Exhibit C-3









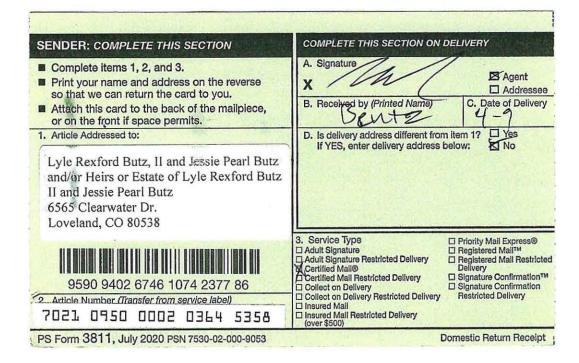






SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON DELIVERY
 Complete items 1, 2, and 3. Print your name and address on the reverse so that we can return the card to you. Attach this card to the back of the mailpiece, or on the front if space permits. Article Addressed to: 	A. Signature X B Agent Addressee B. Raceived by (Printed Name) C. Date of Delivery C. Date of Delivery C. Date of Delivery C. Date of Delivery
Lyle Rexford Butz II, or Heir(s) of Lyle Rexford Butz II, or Personal Representative of the Estate 6565 Clearwater Drive Loveland, CO 80538-7037	If YES, enter delivery address below:
9590 9402 6746 1074 2479 52 2. Article Number (Transfer from service Jabel) 7021 0950 0002 0364 5037	3. Service Type □ Adult Signature □ Adult Signature Restricted Delivery □ Certified Mail® □ Certified Mail Restricted Delivery □ Collect on Delivery □ Collect on Delivery □ Insured Mail Restricted Delivery □ Insured Mail Restricted Delivery □ Insured Mail Restricted Delivery (over \$500) □ Priority Mail Express® □ Registered Mail ™ □ Registered Mail Restricted Delivery □ Signature Confirmation Restricted Delivery
PS Form 3811, July 2020 PSN 7530-02-000-9053	Domestic Return Receipt







INKLE SHANOR LLP
ATTORNEYS AT LAW
POST OFFICE BOX 2068
ANTA FE, NEW MEXICO 87504

CERTIFIED MAIL



7021 0950 0002 0364 5365

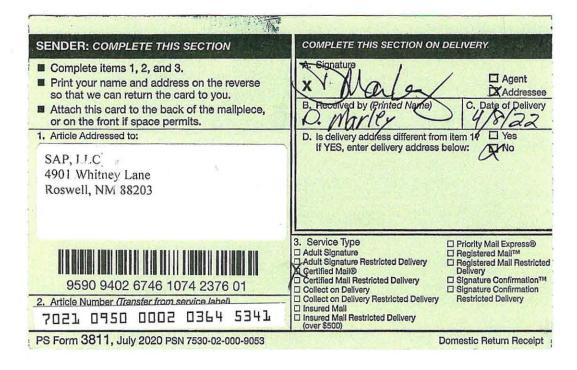
Lyle Rexford Butz, II and Jessie Pearl Butz and/or Heirs or Estate of Lyle Rexford Butz II and Jessie Pearl Butz 10939 Yukon Street Loveland, CO 80021

NIXIC 871 NFC 1 2210004/05/

RETURN TO SENDER
NOT DELIVERABLE AS ADDRESSED
UNARIE TO EDEWARD

BO8210452058





Carlsbad Current Argus.

Affidavit of Publication Ad # 0005215958 This is not an invoice

HINKLE SHANOR LLP 218 MONTEZUMA

SANTA FE, NM 87501

I, a legal clerk of the Carlsbad Current Argus, a newspaper published daily at the City of Carlsbad, in said county of Eddy, state of New Mexico and of general paid circulation in said county; that the same is a duly qualified newspaper under the laws of the State wherein legal notices and advertisements may be published; that the printed notice attached hereto was published in the regular and entire edition of said newspaper and not in supplement thereof in editions dated as follows:

04/15/2022

Legal Clerk

Subscribed and sworn before me this April 15, 2022:

State of WI, County of Brown NOTARY PUBLIC

My commission expires

KATHLEEN ALLEN Notary Public State of Wisconsin

Ad # 0005215958 PO #: # of Affidavits1

This is not an invoice

This is to notify all interested parties, including Jessie Pearl Butz; Heir(s) of Jessie Pearl Butz; Personal Representative of the Estate of Jessie Pearl Butz; Lyle Rexford Butz II; Heir(s) of Lyle Rexford Butz II; Personal Representative of the Estate of Lyle Rexford Butz II; SAP, LLC; and their successors and assigns, that the New Mexico Oil Conservation Division will conduct a hearing on an application submitted by COG Operating LLC (Case No. 22716). During the COVID-19 Public Health Emergency, state buildings are closed to the public and hearings will be conducted remotely. The hearing will be conducted on May 5, 2022 beginning at 8:15 a.m. To participate in the electronic hearing, see the instructions posted on the docket for the hearing date: http://www.emnrd.state.n m. us/OCD/hearings.html. Applicant applies for an order pooling all uncommitted interests within the Wolfcamp formation underlying a 640-acre, more or less, standard horizontal less, standard norizontal spacing unit comprised of the E/2 of Sections 18 and 19, Township 24 South, Range 28 East, Eddy County, New Mexico ("Unit"). The Unit will be dedicated to the following wells ("Weller"). following wells ("Wells"): Tomahawk WC Unit 714H and Tomahawk WC Unit 715H to be horizontally dril-led from surface hole locations in the NE/4NE/4 (Unit A) of Section 30 to bottom hole locations in the NE/4NE/4 (Unit A) of Section 18, and Tomahawk WC Unit 716H to be horizontally drilled from a surface hole location in the NE/4NE/4 (Unit A) of Section 30 to a bottom hole location in the NW/4NE/4 (Unit B) of Section 18. The completed in terval of the Tomahawk WC Unit 714H will be unorthodox. The completed intervals of the remaining Wells will be orthodox. Also, to be considered will be the cost of drilling and completing the Wells and the allocation of the costs, the designation of Applicant as the operator of the Wells, and a 200% charge for the risk involved in drilling and completing the Wells. The Wells are located approximately 2.75 miles west of Malaga, New #5215958, Current Argus, April 15, 2022

COG Operating, LLC Case No. 22716 Exhibit C-4 Released to Imaging: 5/3/2022 11:12:24 AM