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

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

APPLICATION OF MEWBOURNE OIL COMPANY FOR A NONSTANDARD SPACING AND PRORATION UNIT AND COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO.

Case No. 16312

VERIFIED STATEMENT OF JOSH ANDERSON

Josh Anderson, being duly sworn upon his oath, deposes and states:

- 1. I am a landman for Mewbourne Oil Company ("Mewbourne"), and have personal knowledge of the matters stated herein. I have been qualified by the Division as an expert petroleum landman.
- 2. Pursuant to NMAC 19.15.4.12.A(1), the following information is submitted in support of the compulsory pooling application filed herein:
 - (a) The purpose of this application is to force pool working interest owners into the Wolfcamp horizontal spacing unit described below, and in wells to be drilled in the unit.
 - (b) No opposition is expected because the interest owners being pooled have been contacted regarding the proposed well, but have simply failed or refused to voluntarily commit their interests to the wells.
 - (c) A plat outlining the unit being pooled is attached hereto as Attachment A. Mewbourne seeks an order approving a 480 acre horizontal spacing unit in the Wolfcamp formation comprised of the SW/4 of Section 21 and the W/2 of Section 28, Township 24 South, Range 28 East, NMPM, and pooling all mineral interests in the Wolfcamp formation underlying the unit. The unit will be dedicated to (i) the Kansas 21/28 W0LM Fed. Well No. 2H, and (ii) the Kansas 21/28 W2LM Fed. Well No. 1H. Both wells are horizontal wells with surface locations in the NW/4SW/4 of Section 21, and last take points in the SW/4SW/4 of Section 28
 - (d) The parties being pooled and their interests are set forth in Attachment B. Their current and correct addresses are also set forth.



- (c) Attachment C contains a summary of contacts with the interest owners, together with copies of the proposal letters sent to the interest owners.
- (f) Mewbourne has made a good faith effort to obtain the voluntary joinder of the working interest owners in the proposed wells.
- (g) Mewbourne has the right to pool the overriding royalty owners in the well unit.
- (h) Attachment D contains the Authorizations for Expenditure for the proposed wells. The estimated costs of the wells set forth therein are fair and reasonable, and comparable to the costs of other wells of similar depth and length drilled in this area of Eddy County.
- (i) Mewbourne requests overhead and administrative rates of \$8000/month for a drilling well and \$800/month for a producing well. These rates are fair, and comparable to the rates charged by other operators for wells of this type in this portion of Eddy County. They are also the rates set forth in the Joint Operating Agreement for the well unit. Mewbourne requests that these rates be adjusted periodically as provided in the COPAS Accounting Procedure.
- (j) Mewbourne requests that the maximum cost plus 200% risk charge be assessed against non-consenting working interest owners.
- (k) Mewbourne requests that it be designated operator of the wells.
- (l) The attachments to this affidavit were prepared by me, or compiled from Company business records.
- (m) The granting of this application is in the interests of conservation and the prevention of waste.

VERIFICATION

STATE OF TEXAS)
) ss.
COUNTY OF MIDLAND)

Josh Anderson, being duly sworn upon his oath, deposes and states that: He is a landman for Mewbourne Oil Company; he is authorized to make this verification on its behalf; he has read the foregoing statement, and knows the contents thereof; and the same is true and correct to the best of his knowledge, information, and belief.

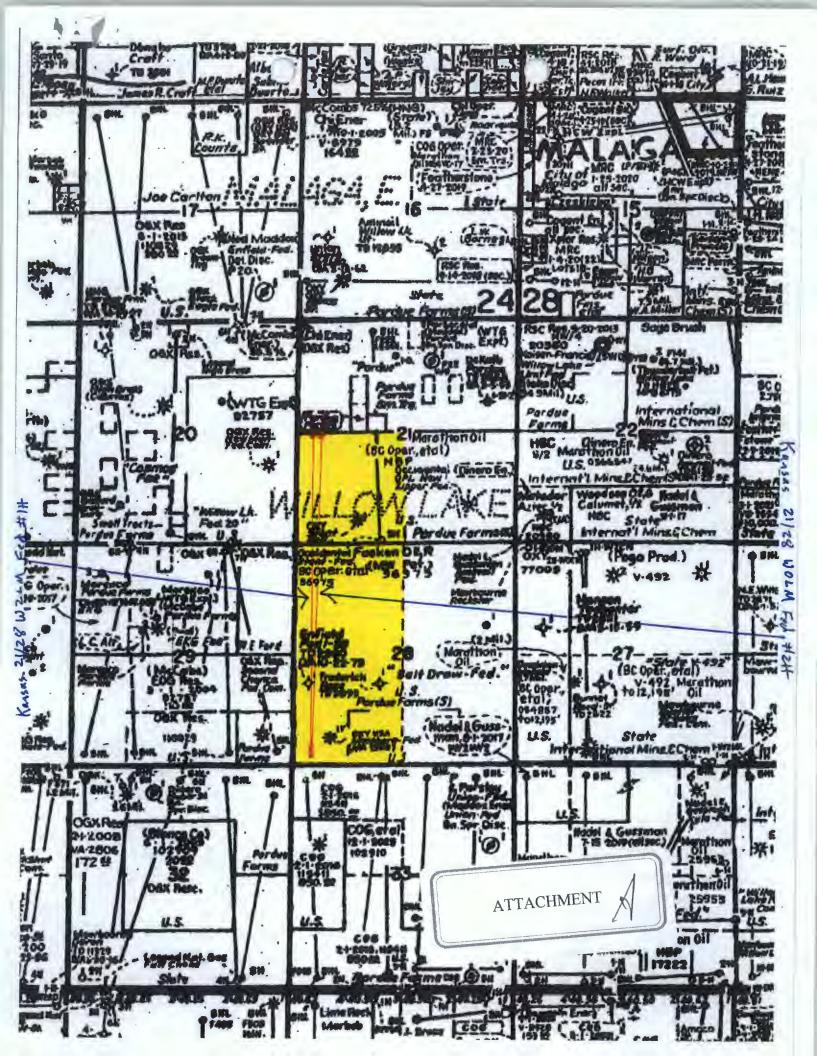
Josh Anderson

SUBSCRIBED AND SWORN TO before me this Z5th day of July, 2018 by Josh Anderson.

My Commission Expires: 8-44-4

Notary Public

JUDY K. TAYLOR Notary ID# 1027187 My Commission Expires August 28, 2019



District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1	API Number	r		² Pool Code		³ Pool Name				
4Property Code				SProperty Name 6 W KANSAS 21/28 W2LM FEDERAL					Well Number	
7OGRID	7 OGRID NO. 8 Operator Name MEWBOURNE OIL COMPANY							⁹ Elevation 3031		
					¹⁰ Surface	Location				
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/Wo	est line	County
E	21	24S	28E		2635	NORTH	330	WES	ST	EDDY
			"]	Bottom H	ole Location	If Different Fro	om Surface			
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/Wo	est line	County
M	28	24S	28E		330	SOUTH	330	WE	ST	EDDY
2 Dedicated Acre	s 13 Joint	or Infill 14 (Consolidation	Code 15 O	order No.					

No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

	(E)	S 89°07'15"	W 5282.54°	(F))	
72,	16 1	·		 	GEODETIC DATA NAD 83 GRID — NM EAST	17 OPERATOR CERTIFICATION thereby certify that the information contained herein is true and complete
2671.		ĺ	Ì		SURFACE LOCATION N: 437784.6 - E: 613465.2	o the best of my knowledge and belief, and that this organization either
¥	L	;		!_		owns a working interest or unleased mineral interest in the land including
2.04	635			 	1000 101100170710	he proposed bottom bole location or has a right to drill this well at this
00.17.04	26.	1	I	I 1	8 BOTTOM HOLE N: 430062.9 - E: 613522.2	ocation pursuant to a contract with an owner of such a mineral or working
>	S.L.	;	. '	i I ©	LAI: 32.1821055 N	nterest, or to a voluntary pooling agreement or a compulsory pooling
	© -330'	2	<i>1</i>	⁻ - 		order heretofore entered by the division.
0.77	© -330 	1	Ì		CORNER DATA NAD 83 GRID - NM EAST	
2670.		į	i	l I	A: FOUND BRASS CAP "1942"	Signature Date
*		 		! !	à N 429730.8 − E 613195.2	Printed Name
00'16'56		1	į		B: FOUND BRASS CAP "1942" N 432401.1 — E 613172.0	
N 00.	İ	į	i	 	C: FOUND BRASS CAP "1942"	E-mail Address
`	S 89°18'34" W	2645.07	S 89°16'36	W 2642.92'	N 435072.6 - E 613148.6	18 SURVEYOR CERTIFICATION
,	©	1	U i	i ⊕	D: FOUND BRASS CAP "1942" N: 437742.8 E: 613135.4	I hereby certify that the well location shown on this
2672.24		1		! ! !	E: CALCULATED CORNER N: 440413.8 - E: 613122.2	plat was plotted from field notes of actual surveys
¥	. -		;		F: CALCULATED CORNER N: 440494.9 — E: 618402.9	made by me or under my supervision, and that the
,50,		1	1	 	N: 440494.9 - E: 616402.9 G: FOUND BRASS CAP "1942"	same is true and correct to the best of my belief.
00.30,02		i	!	l	N: 437828.1 — E: 618399.6	4-05-2018
>	i	1	,	! 		Date of Survey
	® '	28	,	0	i: FOUND BRASS CAP "1942"	Signature and Scal operational Survives
7.02	1	i	!	I	N 432451.2 — E 618480.9	R & 0 7
2671.			i	1 i	J: FOUND BRASS CAP "1942" N 429768.0 - E 618526.6	19680)
3. 11				⊦	K: FOUND BRASS CAP "1942"	10000
729,23	<i>_</i> −330' ¦	i	1	 	1-0	19680 Certificate Number
N 00	B.H. 3.30		1		L: FOUND BRASS CAP "1942" N 435104.5 - E 615792.9	ONAL 50
4		2667.18'	€ S 89°35′24″	W 2665 54'	D	
	S 89°36'37" W	2007.10	3 09 33 24	# 2000.04	RRC – Job No.:	LS1804445

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION 1220 South St. Francis Dr. Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1	API Number	r		² Pool Code	е		me		
⁴ Property Cod	le		K	ANSAS	⁵ Property N 21/28 WOL	ame FEDERAL			6 Well Number
7 OGRID NO.				MEW	8 Operator N BOURNE OI	ame L COMPANY			⁹ Elevation 3031
					10 Surface	Location			
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet From the	East/West line	County
E	21	24S	28E		2635	NORTH	360	WEST	EDDY
			11]	Bottom F	Hole Location	If Different Fre	om Surface		
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	28	24S	28E		330	SOUTH	400	WEST	EDDY
12 Dedicated Acres	13 Joint	or Infill	Consolidation	Code 15	Order No.				

No allowable will be assigned to this completion until all interest have been consolidated or a non-standard unit has been approved by the division.

	<u>E</u>	S 89°07'15" W	y 5282.54°	(E)		
N 00'17'04" W 2671.72'	2635'			0	GEODETIC DATA NAD 83 GRID - NM EAST SURFACE LOCATION N: 437785.1 - E: 613495.1 LAT: 32.2033330 N LONG: 104.1000417 W BOTTOM HOLE N: 430063.4 - E: 613592.2 LAT: 32.1821064 N	17 OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling
00'16'56" W 2670.77'	© 360'	21	' - - 	<u>©</u>	LONG: 104.0997821' W CORNER DATA NAD 83 GRID - NM EAST A: FOUND BRASS CAP "1942" N 429730.8 - E 613195.2 B: FOUND BRASS CAP "1942" N 432401.1 - E 613172.0	order heretofore entered by the division. Signature Date Printed Name
" W 2672.24" N	5 89°18'34" W	2645.07'	5 89°16′36°	' W 2642.92'	C: FOUND BRASS CAP "1942" N 435072.6 - E 613148.6 D: FOUND BRASS CAP "1942" N: 437742.8 - E: 613135.4 E: CALCULATED CORNER N: 440413.8 - E: 613122.2 F: CALCULATED CORNER N: 440494.9 - E: 618402.9	E-mail Address 18 SURVEYOR CERTIFICATION I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the
2671.02' N 00'30'05	B I	 	 		G: FOUND BRASS CAP "1942" N: 437828.1 - E: 618399.6 H: FOUND BRASS CAP "1942" N: 435137.9 - E: 618435.0 I: FOUND BRASS CAP "1942" N 432451.2 - E 618480.9	same is true and correct to the best of my belief. 4-05-2018 Date of Survey Signature and Seal of Processor all Survey 19680
N 00'29'53" W 2	-400' B.H. -330' S 89'36'37" W		 	V 2665.54'	J: FOUND BRASS CAP "1942" N 429768.0 - E 618526.6 K: FOUND BRASS CAP "1942" N 429748.9 - E 615861.7 L: FOUND BRASS CAP "1942" N 435104.5 - E 615792.9 **RRC - Job No.:**	19680 Certificate Number

TRACT OWNERHSIP
Kansas "21/28" W2LM Fed No. 1H
Kansas "21/28" W0LM Fed No. 2H
W/2 of Section 28 & SW/4 of Section 21
Township 24 South, Range 28 East
Eddy County, New Mexico

W/2 of Section 28 & SW/4 of Section 21: Wolfcamp formation:

% Leasehold Interest

46.22341%
44.14038%
6.25000%
0.70049%
0.70049%
0.63030%
0.44242%
0.27293%
0.20833%
0.12500%
0.07918%
0.06458%
0.06458%
0.06458%
0.03333%
100.00000%

^{*} Total interest being pooled: 46.27129%



COG Operating LLC 600 W. Illinois Avenue Midland, Texas 79701 Attn: Outside Operated Properties

Crown Oil Partners V, LP; Crump Energy Partners II, LLC; Nadel and Gussman Delaware, LLC P.O. Box 50820 Midland, Texas 79710 Attn: Brian Arnold Fasken Land and Minerals, Ltd. 6101 Holiday Hill Road Midland, Texas 79707 Attn: Ms. Linda Hicks

T.I.G. Properties, L.P. P.O. Box 1343 Midland, Texas 79702

Marathon Oil Permian LLC 5555 San Felipe Street Houston, Texas 77056 Attn: Mr. Matt Brown

From:

Josh Anderson

Sent:

Friday, April 13, 2018 3:49 PM 'Brown, Matthew D. (MRO)'

To: Subject:

RE: Kansas 21-28 Prospect, T24S-R28E, Eddy Co., NM

Thanks Matt!

From: Brown, Matthew D. (MRO) [mailto:mbrown3@marathonoil.com]

Sent: Friday, April 13, 2018 3:29 PM

To: Josh Anderson

Subject: RE: Kansas 21-28 Prospect, T24S-R28E, Eddy Co., NM

Josh,

I reviewed the PSA and it appears we acquired a very small interest (~1.5 net acres) in NMNM-36975 in Section 21-24S-28E only. It's possible that BC assigned their interest to another company prior to our acquisition or inadvertently omitted the tract from the PSA.

Thanks,

Matt Brown, CPL
Marathon Oil Corporation
Land - Permian
Ph# 713.296.3408 / Cell# 281.468.8833
5555 San Felipe St. / Houston, TX 77056

From: Josh Anderson < janderson@Mewbourne.com >

Sent: Friday, April 13, 2018 2:55 PM

To: Brown, Matthew D. (MRO) < mbrown3@marathonoil.com > Subject: [External] Kansas 21-28 Prospect, T24S-R28E, Eddy Co., NM

Beware of links/attachments.

Matt.

We're showing Devon conveying an interest in OGL USA NMNM-36975 to Crown Oil Partners V, LP, Crump Energy Partners II, LLC, & Nadel and Gussman Delaware, LLC in the W/2 of Sec. 28-24S-28E, Eddy Co., NM, but can't find that subsequently conveyed to Marathon.

Is it possible that it was in the PSA but accidently left of any Assignments to you guys?

Thanks,

Josh Anderson

Petroleum Landman <u>500 West Texas Ave., Suite 1020</u> Midland, TX 79701 Phone: (432) 682-3715 | Fax: (432) 685-4170

Cell: (405) 406-8982

From:

Josh Anderson

Sent:

Monday, May 14, 2018 11:38 AM

To:

'Gorman, Jessica (MRO)'

Subject:

RE: Kansas Federal 1H and 2H

Jessica,

Any update on the Kansas wells? Anything I can help with?

Thanks,

Josh Anderson

Petroleum Landman <u>500 West Texas Ave., Suite 1020</u> Midland, TX 79701 Phone: (432) 682-3715 | Fax: (432) 685-4170 Cell: (405) 406-8982



From: Josh Anderson

Sent: Thursday, February 22, 2018 10:53 AM

To: 'Gorman, Jessica (MRO)'

Subject: RE: Kansas Federal 1H and 2H

We do not have a Title Opinion yet, but will be getting started on it soon.

Right now, it's looking like early 4th quarter, but as always, it's subject to change depending on how fast we can get them ready.

If you have any other questions, don't hesitate to ask.

Thanks,

Josh Anderson

Petroleum Landman <u>500 West Texas Ave., Suite 1020</u> Midland, TX 79701 Phone: (432) 682-3715 | Fax: (432) 685-4170 Cell: (405) 406-8982



From: Gorman, Jessica (MRO) [mailto:jqorman1@marathonoil.com]

Sent: Thursday, February 22, 2018 10:11 AM

To: Josh Anderson

Subject: Kansas Federal 1H and 2H

Josh,

I am in receipt of the 2 well proposals for the Kansas Federal 1H and 2H, I was wondering if you guys have a Title Opinion for these sections?

Also what time frame are you guys planning to spud these wells?

Respectfully,

Jessica Gorman



Advanced Land Specialist — Permian Telephone: 713-296-3024 5555 San Felipe St. Houston, Texas 77056

From:

Josh Anderson

Sent:

Thursday, June 07, 2018 4:30 PM

To:

'Gorman, Jessica (MRO)'

Subject:

Kansas 21/28 Fed Com #1H & #2H, & Kansas 21/28 Federal #1H & #2H

Jessica,

Just touching base to see where we are at on these and if there is anything I can help with.

If you have any questions, let me know.

Thanks,

Josh Anderson

Petroleum Landman <u>500 West Texas Ave., Suite 1020</u> Midland, TX 79701 Phone: (432) 682-3715 | Fax: (432) 685-4170

Cell: (405) 406-8982

MEWBOURNE OIL COMPANY

From:

Josh Anderson

Sent:

Wednesday, June 20, 2018 4:21 PM

To:

'Brown, Matthew D. (MRO)'

Cc:

'Gorman, Jessica (MRO)'

Subject:

W/2 Kansas 21/28 JOA dated 4/15/18, Eddy Co., NM, Exhibit "A"

Attachments:

Kansas 21-28 West Unit JOA Exhibit A.pdf

Matt,

Attached is the Exhibit "A" for the JOA captioned above.

Please add this to your file, and if you have any questions or concerns, please advise.

Thanks,

Josh Anderson

Petroleum Landman 500 West Texas Ave., Suite 1020 Midland, TX 79701 Phone: (432) 682-3715 | Fax: (432) 685-4170

Cell: (405) 406-8982



From:

Josh Anderson

Sent:

Tuesday, July 17, 2018 4:20 PM

To:

'Brown, Matthew D. (MRO)'

Subject:

Kansas 21/28 W/2 JOA Replacement Pages

Attachments:

Kansas 21-28 W2 JOA Changes.pdf; MRO Cover Letter Kansas 21-28 W2 JOA Changes

.pdf

Matt,

Attached are the JOA replacement pages and corresponding cover letters, for the above captioned prospect.

If you have any questions, don't hesitate to ask.

Thanks,

Josh Anderson

Petroleum Landman 500 West Texas Ave., Suite 1020 Midland, TX 79701

Phone: (432) 682-3715 | Fax: (432) 685-4170

Cell: (405) 406-8982



MEWBOURNE OIL COMPANY

500 WEST TEXAS AVENUE, SUITE 1020 MIDLAND, TEXAS 79701-4279

> TELEPHONE (432) 682-3715 FACSIMILE (432) 685-4170

April 13, 2018

Via Certified Mail

COG Operating LLC 600 W. Illinois Avenue Midland, Texas 79701 Attn: Scott Tomlinson

Re:

Kansas "21/28" W2LM Federal No. 1H 2435' FSL & 330' FWL (SL) (Sec. 21) 330' FSL & 330' FWL (BHL) (Sec. 28) Section 21/28, T24S, R28E Eddy County, New Mexico

Scott:

Mewbourne Oil Company ("Mewbourne") as Operator hereby proposes to form a 480.00 acre Working Interest Unit ("WIU") covering the SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 for oil and gas production. The targeted interval for the proposed unit is the Wolfcamp formation. Apparently COG Operating LLC ("COG") owns 32.421125% interest in the SW/4 of the captioned Section 21 (160.00 gross acres) & COG owns 50.00000% interest in the W/2 of the captioned Section 28 (320.00 gross acres). Accordingly, COG would own 44.14038% working interest in the proposed WIU ((32.421125% interest X 160.00 gross acres = 51.8738 net acres + 50.00000% interest X 320.00 gross acres = 160.00 net acres) / 480.00 gross acres = 44.14038% interest in the WIU).

Mewbourne as Operator hereby proposes to drill the captioned well at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 10,515 feet subsurface to evaluate the Wolfcamp Formation. The proposed well will have a measured depth (MD) of approximately 17,760 feet. The SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 will be dedicated to the well as the proration unit.

Regarding the above, enclosed for your further handling is our AFE dated March 19, 2018 for the captioned proposed well. In the event your firm elects to participate in the proposed well, please execute the enclosed AFE and return to me within thirty (30) days. Our Joint Operating Agreement to follow.

Should you have any questions regarding the above, please email me at <u>janderson@mewbourne.com</u> or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY

Josh Anderson Landman

ful Oberhamme

MEWBOURNE OIL COMPANY

500 WEST TEXAS AVENUE, SUITE 1020 MIDLAND, TEXAS 79701-4279

TELEPHONE (432) 682-3715 FACSIMILE (432) 685-4170

April 13, 2018

Via Certified Mail

COG Operating LLC 600 W. Illinois Avenue Midland, Texas 79701 Attn: Scott Tomlinson

Re: Kansas "21/28" W0LM Federal No. 2H 2435' FSL & 380' FWL (SL) (Sec. 21)

330' FSL & 400' FWL (BHL) (Sec. 28)

Section 21/28, T24S, R28E Eddy County, New Mexico

Scott:

Mewbourne Oil Company ("Mewbourne") as Operator hereby proposes to form a 480.00 acre Working Interest Unit ("WIU") covering the SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 for oil and gas production. The targeted interval for the proposed unit is the Wolfcamp formation. Apparently COG Operating LLC ("COG") owns 32.421125% interest in the SW/4 of the captioned Section 21 (160.00 gross acres) & COG owns 50.00000% interest in the W/2 of the captioned Section 28 (320.00 gross acres). Accordingly, COG would own 44.14038% working interest in the proposed WIU ((32.421125% interest X 160.00 gross acres = 51.8738 net acres + 50.00000% interest X 320.00 gross acres = 160.00 net acres) / 480.00 gross acres = 44.14038% interest in the WIU).

Mewbourne as Operator hereby proposes to drill the captioned well at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 9,475 feet subsurface to evaluate the Wolfcamp Formation. The proposed well will have a measured depth (MD) of approximately 16,765 feet. The SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 will be dedicated to the well as the proration unit.

Regarding the above, enclosed for your further handling is our AFE dated March 19, 2018 for the captioned proposed well. In the event your firm elects to participate in the proposed well, please execute the enclosed AFE and return to me within thirty (30) days. Our Joint Operating Agreement to follow.

Should you have any questions regarding the above, please email me at <u>janderson@mewbourne.com</u> or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY

Josh Anderson Landman

ful Andrew



Date: April 17, 2018

Simple Certified:

The following is in response to your April 17, 2018 request for delivery information on your Certified Mail™/RRE item number 9414810699945030691338. The delivery record shows that this item was delivered on April 17, 2018 at 12:21 pm in MIDLAND, TX 79701. The scanned image of the recipient information is provided below.

Signature of Recipient:

grature X

Period F. Rubalcado

Address of Recipient:

Detreey 100 W children

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

Sincerely, United States Postal Service

> COG Operating LLC attn: Scott Tomilson 600 W ILLINOIS AVE ONE CONCHO CENTER MIDLAND, TX 79701

Reference #: Kansas "21/28" W2LM FED NO. 1H JA Item ID: Kansas 21 28 W2LM NO 1

MEWBOURNE OIL COMPANY

500 WEST TEXAS AVENUE, SUITE 1020 MIDLAND, TEXAS 79701-4279

TELEPHONE (432) 682-3715 FACSIMILE (432) 685-4170

April 18, 2018

Via Certified Mail

COG Operating LLC 600 W. Illinois Avenue Midland, Texas 79701 Attn: Scott Tomlinson

Re:

Working Interest Unit

Mewbourne's Kansas 21/28 Prospect

Section 21/28, T24S, R28E Eddy County, New Mexico

Scott:

Enclosed for your further handling regarding the captioned prospect and lands is our Operating Agreement dated April 15, 2018, along with an extra set of signature pages. The Operating Agreement is to coincide with the well proposal/AFE I sent by letter dated April 13, 2018.

Regarding the above, please have the AFE, Operating Agreement and extra set of signature pages executed and return only the extra set of signature pages and AFE to me whereby you will retain the Operating Agreement for your file.

Should you have any questions regarding the above, please email me at <u>janderson@mewbourne.com</u> or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY

Josh Anderson Landman

ful amh



Date: April 20, 2018

Simple Certified:

The following is in response to your April 20, 2018 request for delivery information on your Certified Mail™/RRE item number 9402810699945030791590. The delivery record shows that this item was delivered on April 20, 2018 at 1:28 pm in MIDLAND, TX 79701. The scanned image of the recipient information is provided below.

Signature of Recipient:

Address of Recipient:

6, va. 11.00sl

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

Sincerely, United States Postal Service

> Attn: Scott Tomlinson COG Operating LLC 600 W ILLINOIS AVE MIDLAND, TX 79701 Reference #: Kansas

Reference #: Kansas 21/28 Prospect JA Item ID: Kansas 21 28 Prospect

From:

Scott Tomlinson <stomlinson@concho.com>

Sent:

Tuesday, April 24, 2018 8:10 AM

To:

Josh Anderson

Subject:

Kansas

Good Morning Josh,

I tried calling but no one answered. Can you give me a call when you have a minute?

Scott Tomlinson

Scott S. Tomlinson, CPL
Senior Staff Landman, Outside Operated Properties

COG OPERATING LLC One Concho Center, Room 556 600 W. Illinois Avenue Midland, Texas 79701 Direct 432.818.2234





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From:

Scott Tomlinson <stomlinson@concho.com>

Sent:

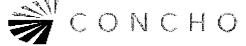
Monday, June 18, 2018 4:40 PM

To: Subject: Josh Anderson RE: Kansas West

OK

Scott S. Tomlinson, CPL Senior Staff Landman, Outside Operated Properties

COG OPERATING LLC One Concho Center, Room 556 600 W. Illinois Avenue Midland, Texas 79701 Direct 432.818.2234





From: Josh Anderson [mailto:janderson@Mewbourne.com]

Sent: Monday, June 18, 2018 4:38 PM

To: Scott Tomlinson

Subject: [External] RE: Kansas West

**** External email. Use caution. ****

Not yet, getting title.

Josh Anderson

Petroleum Landman 500 West Texas Ave., Suite 1020 Midland, TX 79701

Phone: (432) 682-3715 | Fax: (432) 685-4170

Cell: (405) 406-8982



From: Scott Tomlinson [mailto:stomlinson@concho.com]

Sent: Monday, June 18, 2018 4:09 PM

To: Josh Anderson **Subject:** Kansas West

There is no Ex A??

Scott S. Tomlinson, CPL
Senior Staff Landman, Outside Operated Properties

COG OPERATING LLC One Concho Center, Room 556 600 W. Illinois Avenue Midland, Texas 79701 Direct 432.818.2234





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From:

Drew Robison

Sent:

Tuesday, June 19, 2018 12:59 PM

To:

Travis Cude; Josh Anderson; Tyler Jolly FW: Sledgehammer Well Proposals

Subject: Attachments:

Well Prop to Mewb - Sledgehammer 701H, 801H, 811H, 711H.PDF; Well Prop to Mewb - Sledgehammer 802H, 702H, 803H, 812H.PDF; Well Prop to Mewb - Sledgehammer

804H, 703H, 805H, 813H.PDF; Well Prop to Mewb - Sledgehammer 806H, 704H, 807H,

815H.pdf

From: Mitch Robb

Sent: Tuesday, June 19, 2018 12:58 PM **To:** Drew Robison; Corey Mitchell

Subject: Fw: Sledgehammer Well Proposals

FYI... COG's proposed wells on our Kansas 28 prospect.

From: Ashley Roush < <u>ARoush@concho.com</u>> Sent: Tuesday, June 19, 2018 12:30 PM

To: Mitch Robb

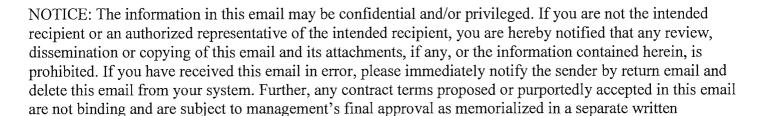
Subject: Sledgehammer Well Proposals

Mitch.

Attached are the well proposals for the Sledgehammer wells in the SW of Section 21 and W2 of Section 28 & 33, 24S-28E. Originals were put in the mail yesterday.

Thank you,

Ashley Roush, RPL Landman COG OPERATING LLC One Concho Center 600 W. Illinois Ave Midland, Texas 79701 (432) 818-2358



instrument, excluding electronic correspondence, executed by an authorized representative of COG Operating LLC or its affiliates.



June 18, 2018

Via CMRRR No. 91 7199 9991 7038 7697 2227 Mewbourne Oil Company 500 W. Texas, Suite 1020 Midland, TX 79701

Re: Sledgehammer Fed Com #701H, #801H, #811H, #711H

SW/4 of Section 21 and W/2 Sections 28 & 33, T24S-R28E

Eddy County, New Mexico

Dear Sir or Madam:

COG Operating, LLC ("COG") hereby proposes the drilling of the following horizontal wells with productive laterals located in the SW/4 of Section 21 and W/2 of Sections 28 & 33, T24S-R28E, Eddy County, New Mexico. The surface pad locations will be located in the NE/4 SW/4 of Section 21, T24S-R28E (subject to change).

- Sledgehammer Fed Com #701H, to be drilled to a depth sufficient to test the WFMP A Shale formation at a total measured depth of 22,600°. The surface location for this well is proposed at a legal location in Unit K of Section 21, and a bottom hole location at a legal location in Unit N of Section 33. The dedicated project area with be the SW/4 of Section 21 and the W/2 of Sections 28 & 33, T24S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$11,900,000, as shown on the attached Authority for Expenditure ("AFE").
- Sledgehammer Fed Com #801H, to be drilled to a depth sufficient to test the WFMP D formation at a total measured depth of 23,700'. The surface location for this well is proposed at a legal location in Unit K of Section 21, and a bottom hole location at a legal location in Unit N of Section 33. The dedicated project area with be the SW/4 of Section 21 and the W/2 of Sections 28 & 33, T24S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$12,140,000, as shown on the attached AFE.
- Sledgehammer Fed Com #811H, to be drilled to a depth sufficient to test the WFMP C formation at a total measured depth of 23,200'. The surface location for this well is proposed at a legal location in Unit K of Section 21, and a bottom hole location at a legal location in Unit N of Section 33. The dedicated project area with be the SW/4 of Section 21 and the W/2 of Sections 28 & 33, T24S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$12,140,000, as shown on the attached AFE.
- Sledgehammer Fed Com #711H, to be drilled to a depth sufficient to test the WFMP B formation at a total measured depth of 22,900'. The surface location for this well is proposed at a legal location in Unit K of Section 21, and a bottom hole location at a legal location in Unit N of Section 33. The dedicated project area with be the SW/4 of Section 21 and the W/2 of Sections 28 & 33, T24S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$11,900,000, as shown on the attached AFE.

COG is proposing this well under the terms of a new Operating Agreement which will follow under separate cover.

If we do not reach an agreement within 30 days of the date of this letter, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a spacing unit for the proposed well.

June 18, 2018 – Page 2 Sledgehammer Fed Com #701, #801H, #811H, #711H

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 aroush@concho.com. Should you have any questions, please do not hesitate to contact me at 432.818.2358.

Sincerely,

Ashley Roush, Landman	Ley Roush
AR:bh Enc	
A rest channels, case of the Published Assessment and the Control of the Control	I/We hereby elect to participate in the drilling and completion of the Sledgehammer Fed Com #701H.
	I/We hereby elect <u>not</u> to participate in the drilling and completion of the Sledgehammer Fed Com #701H .
a.year.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.	I/We hereby elect to participate in the drilling and completion of the Sledgehammer Fed Com #801H.
N/20/2002	I/We hereby elect <u>not</u> to participate in the drilling and completion of the Siedgehammer Fed Com #801H.
perconnection of the belief and decrease and the	I/We hereby elect to participate in the drilling and completion of the Siedgehammer Fed Com #811H.
pagagamahanahanahanahanahanahanahanahanahanah	I/We hereby elect <u>not</u> to participate in the drilling and completion of the Sledgehammer Fed Com #811H.
***	I/We hereby elect to participate in the drilling and completion of the Sledgehammer Fed Com #711H.
	I/We hereby elect <u>not</u> to participate in the drilling and completion of the Sledgehammer Fed Com #711H.
Title:	
Data	

Summary of Communications Kansas 21/28 W2LM Fed No. 1H &

Kansas 21/28 W0LM Fed No. 2H

Marathon Oil Permian LLC

- 4/13/18 Mailed Kansas W2LM Fed #1H & W0LM Fed #2H well proposal letters with AFEs via certified mail dated 4/13/18.
- 4/23/18 Received green card signed by Richard?.
- 4/18/18 Mailed Kansas 21/28 W/2 JOA with cover letter via certified mail dated 4/18/18.
- 4/23/18 Received green card signed by Richard?.
- 4/13/18 Emailed Matthew Brown to follow up with Marathon's interest and discuss title issues.
- 5/1/18 Received phone call from Marathon to discuss prospect.
- 5/14/18 Emailed Jessica Gorman to follow up on all Kansas Prospects, received no response.
- 5/21/2018 Received 10 Well Proposals and corresponding AFEs from Marathon in the E/2 of Section 16 & Section 21, T24S, R28E.
- 6/7/18 Emailed Jessica Gorman to follow up on all Kansas Prospects, received no response.
- 6/19/18 Received a letter Marathon retracting the 10 Well Proposals, citing that Mewbourne Oil Company does not own a Working Interest in the lands and/or depths covered by these wells.
- 6/20/18 Emailed an updated JOA Exhibit "A", showing the interests of all the Working Interest Parties.
- 7/17/18 Emailed changes to the W/2 JOA to Marathon.
- 2/22/18-7/17/18 Various email correspondence with Marathon.

COG Operating LLC

- 4/13/18 Mailed Kansas W2LM Fed #1H & W0LM Fed #2H well proposal letters with AFEs via certified mail dated 4/13/18.
- 4/17/18 Received green card signed by E. Rubalcado.
- 4/18/18 Mailed Kansas 21/28 W/2 JOA with cover letter via certified mail dated 4/18/18.
- 4/20/18 Received green card signed by illegible name.
- 4/24/18 Received email from Scott Tomlinson about the Kansas Prospect, followed up with multiple phone calls to discuss the Prospect.
- 5/21/18 Called Scott and followed up and to discuss the Prospect.
- 6/18/18 Received email from Scott Tomlinson asking for an Exhibit "A" for the W/2 JOA, explained that we were waiting on title.
- 6/19/2018 Received 16 Well Proposals and corresponding AFEs from Concho covering the S/2 of Section 21, and all of Sections 28 & 33, T24S, R28E.



- 6/20/18 Emailed an updated JOA Exhibit "A", showing the interests of all the Working Interest Parties.
- 6/26/18 Met with Concho to discuss potential trade proposals.
- 6/29/18 Received potential trade offer from Concho.
- 7/13/18 Sent potential trade offer to Concho.
- 7/17/18 Emailed changes to the W/2 JOA to Concho.
- 4/24/18-7/17/18 Various email correspondence with Concho.

Crown Oil Partners V, LP, Crump Energy Partners II, LLC, & Nadel and Gussman Delaware, LLC

- 4/18/18 Mailed Kansas W2LM Fed #1H & W0LM Fed #2H well proposal letters with AFEs and JOA via certified mail dated 4/18/18.
- 4/20/18 Received green card signed by Rachel?.
- 6/20/18 Emailed an updated JOA Exhibit "A", showing the interests of all the Working Interest Parties.
- 6/21/18 Called Brian Arnold to discuss prospect, no answer, and left message.
- 6/29/18 Called Brian Arnold and discussed the Prospect, said they would execute everything and hoped to wrap it up soon.
- 7/16/18 Received email from Brian Arnold discussing potential title issue, addressed it in an email response.
- 7/17/18 Emailed changes to the W/2 JOA to Crown, Crump, & Nadel.
- 7/18/18 Called Brian Arnold to discuss prospect, no answer, left message.
- 6/20/18-7/23/18 Various email correspondence with Crown, Crump, & Nadel.

T.I.G. Properties, LP

- 3/28/18 Called Pam Burke to discuss the Prospect, no answer, left message.
- 4/5/18 Called Pam Burke to discuss the Prospect, no answer, left message
- 4/11/18 Called Pam Burke to discuss the Prospect, no answer, left message
- 4/13/18 Mailed Kansas W2LM Fed #1H & W0LM Fed #2H well proposal letters with AFEs and JOA via certified mail dated 4/18/18.
- 5/2/18 Received green card signed by Pam Burke.
- 4/18/18 Mailed Kansas 21/28 W/2 JOA with cover letter via certified mail dated 4/18/18.
- 4/18/18 Received green card signed by Pam Burke.
- 4/25/18 Talked to Pam Burke, discussed prospect.
- 6/7/18 Called Pam Burke to follow up, no answer, left message

6/20/18 – Emailed an updated JOA Exhibit "A", showing the interests of all the Working Interest Parties.

7/16/18 – Received phone call from Andy Iverson, says they are going to participate.

7/17/18 – Mailed changes to the W/2 JOA to T.I.G. Properties, LP.

7/17/18 – Received executed AFEs from T.I.G. Properties, LP.

4/25/18-7/17/18 - Various email correspondence with T.I.G. Properties, LP.

MEWBOURNE OIL COMPANY

500 WEST TEXAS AVENUE, SUITE 1020 MIDLAND, TEXAS 79701-4279

> TELEPHONE (432) 682-3715 FACSIMILE (432) 685-4170

April 13, 2018

Via Certified Mail

Marathon Oil Permian LLC 5555 San Felipe Street Houston, Texas 77056 Attn: Mr. Matt Brown

Re:

Kansas "21/28" W2LM Federal No. 1H 2435' FSL & 330' FWL (SL) (Sec. 21) 330' FSL & 330' FWL (BHL) (Sec. 28) Section 21/28, T24S, R28E Eddy County, New Mexico

Gentlemen:

Mewbourne Oil Company ("Mewbourne") as Operator hereby proposes to form a 480.00 acre Working Interest Unit ("WIU") covering the SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 for oil and gas production. The targeted interval for the proposed unit is the Wolfcamp formation. Apparently Marathon Oil Permian LLC ("MRO") owns 0.23755% interest in the SW/4 of the captioned Section 21 (160.00 gross acres). Accordingly, MRO would own 0.07918% working interest in the proposed WIU (0.23755% interest X 160.00 gross acres = 0.38008 net acres / 480.00 gross acres = 0.07918% interest in the WIU).

Mewbourne as Operator hereby proposes to drill the captioned well at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 10,515 feet subsurface to evaluate the Wolfcamp Formation. The proposed well will have a measured depth (MD) of approximately 17,760 feet. The SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 will be dedicated to the well as the proration unit.

Regarding the above, enclosed for your further handling is our AFE dated March 19, 2018 for the captioned proposed well. In the event your firm elects to participate in the proposed well, please execute the enclosed AFE and return to me within thirty (30) days. Our Joint Operating Agreement to follow.

Should you have any questions regarding the above, please email me at <u>janderson@mewbourne.com</u> or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY

Josh Anderson Landman

ful Auchin

MEWBOURNE OIL COMPANY

500 WEST TEXAS AVENUE, SUITE 1020 MIDLAND, TEXAS 79701-4279

TELEPHONE (432) 682-3715 FACSIMILE (432) 685-4170

April 13, 2018

Via Certified Mail

Marathon Oil Permian LLC 5555 San Felipe Street Houston, Texas 77056 Attn: Mr. Matt Brown

Re:

Kansas "21/28" W0LM Federal No. 2H 2435' FSL & 380' FWL (SL) (Sec. 21) 330' FSL & 400' FWL (BHL) (Sec. 28) Section 21/28, T24S, R28E Eddy County, New Mexico

Gentlemen:

Mewbourne Oil Company ("Mewbourne") as Operator hereby proposes to form a 480.00 acre Working Interest Unit ("WIU") covering the SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 for oil and gas production. The targeted interval for the proposed unit is the Wolfcamp formation. Apparently Marathon Oil Permian LLC ("MRO") owns 0.23755% interest in the SW/4 of the captioned Section 21 (160.00 gross acres). Accordingly, MRO would own 0.07918% working interest in the proposed WIU (0.23755% interest X 160.00 gross acres = 0.38008 net acres / 480.00 gross acres = 0.07918% interest in the WIU).

Mewbourne as Operator hereby proposes to drill the captioned well at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 9,475 feet subsurface to evaluate the Wolfcamp Formation. The proposed well will have a measured depth (MD) of approximately 16,765 feet. The SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 will be dedicated to the well as the proration unit.

Regarding the above, enclosed for your further handling is our AFE dated March 19, 2018 for the captioned proposed well. In the event your firm elects to participate in the proposed well, please execute the enclosed AFE and return to me within thirty (30) days. Our Joint Operating Agreement to follow.

Should you have any questions regarding the above, please email me at <u>janderson@mewbourne.com</u> or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY

Josh Anderson

ful Auchine

Landman



Date: April 23, 2018

Simple Certified:

The following is in response to your April 23, 2018 request for delivery information on your Certified Mail™/RRE item number 9414810699945030691642. The delivery record shows that this item was delivered on April 23, 2018 at 2:59 pm in HOUSTON, TX 77056. The scanned image of the recipient information is provided below.

Signature of Recipient:

Address of Recipient:

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

Sincerely, United States Postal Service

> Attn: Mr. Matt Brown Marathon Oil Permian LLC 5555 SAN FELIPE ST HOUSTON, TX 77056

Reference #: Kansas "21/28" W2LM FED NO. 1H A
Item ID: Kansas 21 28 W2LM NO 1

MEWBOURNE OIL COMPANY

500 WEST TEXAS AVENUE, SUITE 1020 MIDLAND, TEXAS 79701-4279

TELEPHONE (432) 682-3715 FACSIMILE (432) 685-4170

April 18, 2018

Via Certified Mail

Marathon Oil Permian LLC 5555 San Felipe Street Houston, Texas 77056 Attn: Mr. Matt Brown

Re:

Working Interest Unit

Mewbourne's Kansas 21/28 Prospect

Section 21/28, T24S, R28E Eddy County, New Mexico

Gentlemen:

Enclosed for your further handling regarding the captioned prospect and lands is our Operating Agreement dated April 15, 2018, along with an extra set of signature pages. The Operating Agreement is to coincide with the well proposal/AFE I sent by letter dated April 13, 2018.

Regarding the above, please have the AFE, Operating Agreement and extra set of signature pages executed and return only the extra set of signature pages and AFE to me whereby you will retain the Operating Agreement for your file.

Should you have any questions regarding the above, please email me at <u>janderson@mewbourne.com</u> or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY

Josh Anderson Landman

Jul auch



Date: April 23, 2018

Simple Certified:

The following is in response to your April 23, 2018 request for delivery information on your Certified Mail™/RRE item number 9402810699945030792412. The delivery record shows that this item was delivered on April 23, 2018 at 2:59 pm in HOUSTON, TX 77056. The scanned image of the recipient information is provided below.

Signature of Recipient:

Address of Recipient:

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

Sincerely, United States Postal Service

> Attn: Mr. Matt Brown Marathon Oil Permian LLC 5555 SAN FELIPE ST HOUSTON, TX 77056 Reference #: Kansas Prospect 21/28 JA Item ID: Kansas Prospect 21 28

COG OPERATING LLC AUTHORITY FOR EXPENDITURE Drill & Complete

Well Name SLEDGEHAMMER FED COM 701H 5HL 2450 FSL, 2360 FWL or UNIT K SECTION 21 8HL 2400 FSL, 2310 FWL or UNIT K SECTION 33 Formston Worksemp A Shale Legal 21, 28, 33, 245-28E AFE Number 1

State & County Objective Depth Tomshawk 2428 NEW MEXICO, ECDY COUNTY Drif & Complete 22,600 9,636

ost Description	Code	Cost	Revision	
irigible Costs Surface Casing	401	\$48,000.00	\$0.00	\$48,000
Intermed Csg	402	\$376,000.00	50.00	\$376,000
Production Casing/Liner	403	\$405,000.00	\$0.00	\$405.000
-Welhead Equip	405	\$40,000.00	\$0.00	\$40,000
-Tubing	504	\$47,300.00	\$0.00	\$47,300
-Wathead Equip EQ-Pumping Unit	505 506	\$27,500.00 \$96,000.00	\$0.00 \$0.00	\$27,500 \$96,000
EQ-Rods	508	\$35,000.00	\$0.00	\$35,000
24nT.8	510	\$56,000.00	00.02	\$56,000
B-Flowlines/Pipelines	511	\$117,000.00	50.00	\$117,000
B+Rr Tru/Seprir	512	\$117,000.00	\$0.00	\$117.000
B-Electrical System/Equipment	513	\$88,000.00	\$0.00	\$88,00
Pckrs/Anchors/Hgrs	514	\$66,000.00	\$0.00	\$66,000
B-Couplings/Fillings/Valves	515	\$165,000.00	\$0,00	\$165,000
B-Gas Lift/Compression -Miscoffaneous	518 519	\$35,000.00	\$0.00 \$0.00	\$35,000
	521	\$80,000.00 \$18,000.00	\$0.00	\$80,90 \$18.00
B-Meters/Lacts	525	\$32,000.00	\$0.00	\$32.00
B-Flares/Combusters/Emission	528	\$31,000.00	\$0.00	\$31,00
Gas Lift/Compression	527	\$15,000.00	\$0.00	\$15,00
EQ-instrumentation/SCADA/POC	529	\$7,000.00	\$0.00	\$7,00
EQ-Tubing	530	\$5,000.00	\$0.00	\$5,00
EQ-Weinead Equipment	531(\$3,000,00	\$0.00	\$3,00
EQ-Pumps	532[533]	\$5,000.00 \$15,000.00	\$0.00 \$0.00	\$5,000 \$15.000
EQ-Electrical System EQ-Packers/Anchors/Hangers	534	\$2,000.00	\$0.00	\$2,00
EQ-Miscelaneous	535	\$3,000.00	\$0.00	\$3,00
otal Tangible Costs		\$1,934,800.00	\$0.00	\$1,934,80
langible Coets				
S-Tale/Permits	201	\$11,000.00	\$0.00	\$11,00 \$4,00
Insurance 5-Damages/ROW	202 203	\$4,900.00 \$5,000.00	\$0.00 \$0.00	\$4,00 \$5,00
S-Damagas/KOW S-Survey/Stake Lotn	203	\$5,000.00	\$0.00	\$6.00
Letr/Pits/Roads	205	\$112,000,00	\$0.00	\$112,00
Dritting Overhead	206	\$9.000.00	\$0.00	\$9,00
Caywork Contract	209	\$850,000.00	\$0,00	\$650,00
Directional Drig Services	210	\$270,000.00	\$0.00	\$270,00
Fuel & Power	211	\$150,000,00	\$0.00	\$150,00
Water	212	\$55,000.00	\$0.00	\$55.00
Bits Mud & Chemicals	213 214	\$104,000.00 \$245,000.00	\$0.00 \$0.00	\$104,00 \$245.00
Coment Surface	217	\$30,000.00	\$0.00	\$30.00
Cement Intermed	218	\$80,000.00	\$0.00	\$80.00
Prod-2nd Int Cmt	219	\$105,000.00	\$0,00	\$105,00
-Float Equipment & Centralizers	221	\$40,000.00	\$0.00	\$40,00
Csg Crews & Equip	222	\$50,000.00	\$0.00	\$50,00
Contract Labor	225	\$6.500.00	\$0.00	\$6.50
Company Sprvsn	226 227	\$72,000.00	\$0.00 \$0.00	\$72,00 \$110.00
-Contract Sprvsn -Tsig Csg/Tbg	228	\$110,000.00 \$30,000.00	\$0.00	\$30,00
-Mud Logging Unit	229	\$40,000.00	\$0.00	\$40.00
Perf/Wraine Syc	231	\$4,000.00	\$0.00	\$4.00
Rentals-Surface	235	\$150,000.00	\$0.00	\$150,00
-Rentals-Subaric	236	\$150,000.00	\$0.00	\$150,00
-Trucking/Forkit/Rig Mob	237	\$140,000.00	\$9.00	\$140,00
-Walting Services	238	\$3,500.00	\$0.00	\$3,50
Contingency	243 244	\$44,000.00 \$255,000.00	\$0.00 \$0.00	\$44,00 \$255,00
Environt/Clad Loop Lcin/Pas/Roads	305	\$10,000.00	\$0.00	\$10.00
Frac Equipment	307	\$1,432,000.00	\$0.00	\$1,432,00
Frac Chemicals	308	\$776,000.00	\$0.00	\$776,00
Frac Proppant	309	\$1,150,000.00	\$0.00	\$1,150,00
-Frac Proppant Transportation	310	\$148,000 00	\$0.00	\$148,00
Fuel & Power	311	\$5,000.00	\$0.00	\$5,00
-Water	312	\$930,000.00	\$0.00	\$930,00
-Bels - Belod & Chamicala	313 314	\$9,000.00 \$25,000.00	\$0.00 \$0.00	\$9.00 \$25.00
-Mud & Chemicals -Contract Labor	314	\$25,000.00	\$0.00	\$25,00
-Contract Caper -Company Sprvsn	326	\$15,000.00	\$0.00	\$15.00
-Contract Sprvsn	327	\$134,000.00	\$0.00	\$134.00
-Tsig Csg/Tbg	328	\$5,000.00	\$0.00	\$5.00
Perf/Wirekine Svc	331	\$500,000.00	\$0.00	\$500.00
-Stimulation/Treating	332	\$12,000.00	50.00	\$12.00
-Completion Unit -Rentals-Surface	333 335	\$80,000.00 \$286,000.00	\$0.00 \$0.00	\$60,00 \$286,00
-Rentals-Surface -Rentals-Subtific	335	\$288,000.00	\$0.00	\$200,00
-runkung-suburc -Truckung/Forki/f/Rig Mob	337	\$22,500.00	\$0.00	\$22.50
-Welding Services	338	\$5,000,00	\$0.00	\$5,00
Water Disposal	339	\$60,000,00	\$0.00	\$60.00
Contingency	343	\$250,000.00	\$0.00	\$250.00
Environti/Clad Loop	344	\$5,000.00	\$0.00	\$5.00
Dyed Diesel	345 346	\$435,000.00	\$0.00	\$435,00
Coil Tubing Flowback Craws & Equip	345 347	\$422,000.00 \$48,900.00	\$0.00 \$0.00	\$422.00 \$48.00
Provided Crews & Equip 3-Location/Pits/Roads	353	\$73,800.00	\$0.00	\$73.00
B-Contract Labor	358	\$69,000.00	\$0.00	\$69,00
3-Water Disposal	362	\$135,000.00	\$0.00	\$135,00
EQ-Contract Labor	374	\$8,500.00	\$0.00	\$6,50
EQ-Contract Supervision	378	\$5,000.00	\$0.00	\$5.00
EQ-Completion Unit	381	\$8,000,00	\$0.00	\$5.00
EQ-Rentats-Surface	383	\$7,000,00	\$0.00	\$7.00
Q-Trkg/Forkkri/Rig Mobilization	385	\$3,000,00	\$0.00	\$3,00
		\$10,055,200.00	\$0.00	\$10,055,20
stal Intengible Costs				
otal Intengible Costs stal Gross Cost		311,990,000.00	\$0.00	\$11,990,00

COG OPERATING LLC AUTHORITY FOR EXPENDITURE Drill & Complete

 Well Name 5LEDGEHAMMER FED COM 801H
 Prospect
 Tomatizek 2428

 SNL 2459 FSL, 2350 FWL or UNIT K, SECTION 21
 State & County
 NEW MEXICO, EDDY COUNTY

 BHL 200 FSL, 2310 FWL or UNIT N, SECTION 33
 Objective
 Dn8 & Complete

 Formation Windfeaten D
 Depth
 23,700

 Legal 21, 28, 33, 245-28E
 TVD
 10,530

10,530	
Revision	<u></u>
\$0,00	\$48,000
\$0.00	\$376,000 \$405,000
\$0.00	\$40,000
\$0.00	\$47,300
\$0.00	\$27,500
\$0.00 \$0.00	\$96,000 \$35,000
\$0.00	\$56,000
\$0.00	\$117,000
\$0.00	\$117,000
\$0.00	\$88,000
\$0.00	\$66,000
\$0.00	\$165,000 \$35,000
\$0.00	\$80,000
\$0.00	\$18,000
\$0.00	\$32,000
\$0.00	\$31,000 \$15,000
\$0.00	\$7,000
\$0.00	\$5,000
\$0.00	\$3,000
\$0.00	\$5,000
\$0.00	\$15,000
\$0.00	\$2,000 \$3,000
\$0.00	\$1,934,800
\$0.00	\$11,000 \$4,000
\$0.00	\$4,000
\$0.00	18,000
\$0.00	\$112,000
\$0.00	\$9.000
\$0.00	\$670,000
\$0.00 \$0.00	\$275,000 \$150,000
\$0.00	\$55,000
\$0.00	\$104,000
\$0.00	\$250,000
\$0.00	\$30.000
\$0.00	\$50,000 \$105,000
\$0.00	\$40,000
\$0.00	\$50,000
\$0.00	\$6,500
\$0.00 (\$72.00
\$0.00	\$110,00 \$30.00
\$0.00	\$40,00
\$0.00	\$4,00
\$0.00	\$150,000
\$0.00	\$150,000
\$0.00	\$140,000 \$3.500
\$0.00	\$49,000
\$0.00	\$255,000
\$0.00	\$10.00
\$0.00	\$1,472.00
\$0.00 \$0.00	\$786,00 \$1,159,00
\$0.00	\$148.00
30.00	\$5,00
\$0.00	\$935,00
\$0.00	\$9,00
\$0.00	\$25.00 \$8,20
\$0.00	\$15,00
\$0.00	\$134,00
\$0.00	\$5,00
\$0.00	\$508.00
\$0.00	\$12,00 \$60,00
\$0.00	\$296,00
\$0.00	\$65,00
\$0.00	\$22,50
\$0.00	\$5,00
\$0.00 \$0.00	\$60,00 \$250,00
\$0.00	\$5,00
\$0.00	\$455.00
\$0.00	\$435,00 \$48,00
\$0.00 \$0.00	\$73,00
\$0.00	\$59.00
\$0.00	\$135,00
\$0.00	\$6,50
\$0,00	\$5,00
\$0.00	\$8,00 \$7,00
	\$3,00
\$0.02	\$10,205,20
	£12 410 M
******	\$12,140,00
	\$0.00

COG Operating LLC

By:

COG Operating LLC

We approve:

5x Working Interest

Company:

By:

Company:

By:

This AFE is only an estmate. By signing you agree to pay your share of the actual costs incurred.

COG OPERATING LLC AUTHORITY FOR EXPENDITURE Drill & Complete

. . .

Well Name SLEDGEHAMMER FED COM 811H SHL 2450, 2320 FWL or UNIT K SECTION 21 BHL 200 FSL, 2310 FWL or UNIT N SECTION 33 Tomahawk 2428 NEW MEXICO, EDDY COUNTY Dris & Commerce

BRL 200 FSL, 2310 FWL or UNIT N SECTION 33 Formation Wolfcamp C			State & County Objective Depth	NEW MEXICO, EDDY COUNTY Dris & Complete 23,200	
Legal 21, 28, 33, 245-28E AFE Numbers			TVD	10,245	
Coal Description	Code	Coer	Revision	Total	
Tangible Costs D-Surface Casing	4017	\$48,000.00	\$0.00	\$48,000.00	
D-Interned Csg	402	\$378,000,00	\$0.00	\$376,000.00	
D-Production Casing/Liner D-Wellnead Equip	403	\$405,000.00 \$40,000.00	\$0.00		
C-Tubing	504	\$47,300.00	\$0.00	\$47,300.00	
C-Wethead Equip PEO-Pumping Unit	505 506	\$27,500.00 \$96,000.00	\$0.00 \$0.00	\$27,500,00 \$96,000.00	
PEQ-Rods	508	\$35,000.00	\$0.00	\$35,000.00	
IB-Tanks IB-Flowings/Pipelines	510 511	\$58,000.00 \$117,000.00	\$0.00	\$56,000.00	
IB-Hir Trir/Seprir	512	\$117,000.00	\$0.00	\$117,000.00	
FB-Electrical System/Equipment C-Pokrs/Anchons/Hgrs	513	\$88,000.00 \$68,000.00	\$0.00	\$88,000.00	
FB-Coupings/Fittings/Valves	514 515	\$165,000.00	\$0.00 \$0.00	\$66,000.00 \$165,000.00	
B-Gas Lift/Compression	516	\$35,000.00	\$0.00	\$35,000.00	
C-Miscellaneous IB-Pumps-Surface	519 521	\$80,000.00 \$18,000.00	\$0.00	\$80,000.00 \$18,000.00	
B-Meters/Lacis	525	\$32,000.00	\$0.00	\$32,000.00	
18-Flares/Combusters/Emission C-Gas Lift/Compression	526 527	\$31,000.00 \$15,000.00	\$0.00 \$0.00	\$31,000.00	
PEO-Instrumentation/SCADA/POC	529	\$7,000.00	\$0.00	\$7,000.00	
°EO-Tubing °EO-Welthead Equipment	530	\$5,000.00 \$3,000.00	\$0.00 \$0.00	\$5,000.00 \$3,000.00	
EQ-Pumps	532	\$5,000.00	\$0.00	\$5,000.00	
PEQ-Electrical System PEQ-Packers/Anchors/Hangers	533 534	\$15,000.00	\$0.00	\$15,000.00	
EQ-Miscellaneous	535	\$2,000.00 \$3,000.00	\$0,00	\$2,000.00 \$3,000.00	
otal Yangible Costs		\$1,934,800.00	\$0.00	\$1,834,800.00	
ntangible Costs S-Tds/Permes	201	\$11,000.00	\$0.00	\$11,000.00	
Hisurance	202	\$4,000.00	\$0.00	\$4,000.00	
'S-Damages/ROW 'S-Survey/Stake Lots	203	\$5,000.00 \$6,000.00	\$0.00 \$0.00	\$5,000.00	
-Lctn/Pits/Roads	205	\$112,000.00	\$0.00	\$6,000.00 \$112,000.00	
-Drilling Overhead	206	\$9,000.00	\$0.00	\$9,000.00	
D-Daywork Contract D-Directional Drig Services	209	\$670,000.00 \$275,000.00	\$0.00 \$0.00	\$870,000.00 \$275,000.00	
Fuel & Power	211	\$150,000.00	\$0.00	\$150,000.00	
- PM DT W	212	\$55,000.00 \$104,000.00	\$0.00 \$0.00	\$55.000.00 \$104,000.00	
-Mud & Chemicals	214	\$250,000.00	\$0.00	\$250,000.00	
-Cament Surface -Cament Intermed	217	\$30,000.00	\$0.00 \$0.00	\$30,000.00	
-Prod-2nd Int Cmt	218	\$105,000.00	\$0.00	\$105,000,00	
P-Float Equipment & Cantralizers P-Csg Crews & Equip	221	\$40,000.00 \$50,000.00	\$0.00 \$0.00	\$40,000.00 \$50,000.00	
-Contract Labor	225	\$6,500.00	\$0.00	\$6,500.00	
D-Company Sprvsn D-Contract Sprvsn	226 227	\$72,000.00 \$110,000.00	\$0.00	\$72,000.00	
P-Tatg Cag/Tog	228	\$30,000.00	\$0.00 \$0.00	\$110,000.00 \$30,000.00	
-Mud Logging Unit	229	\$40,000.00	\$0.00	\$40,000.00	
PerlWireline Svc Pentals-Surface	231	\$4,000.00 \$150,000.00	\$0.00	\$4,000.00 \$150,000.00	
-Rentals-Subsific	236	\$150,000.00	\$0.00	\$150,000,00	
P-Tructung/Forkitt/Rig Mob P-Wolding Services	237 238	\$140,000.00	\$0.00	\$140,000,00 \$3,500.00	
3-Contingency	243	\$49,000.00	\$0.00	\$49,000,00	
-Envmm#Clsd Loop -LeuvPhs/Roads	305	\$255,000.00 \$10.000.00	\$0.00 \$0.00	\$255,000,00 \$10,000,00	
Frac Equipment	307	\$1,472,000.00	\$0.00	\$1,472,000.00	
-Frac Chemicals -Frac Proppani	308 309	\$786,000.00 \$1,159,000.00	\$0.00	\$785,000.00 \$1,159,000.00	
Frac Proppant Transportation	310	\$148,000.00	\$0.00	\$148,000.00	
Fuel & Power	311	\$5,000.00 \$935.000.00	30.00	\$5,000.00	
-Water -Bris	312 313	\$935,000.00	\$0.00	\$935,000.00 \$9,000.00	
-Akid & Chemicals	314	\$25,000.00	\$0,00	\$25,000.00	
-Contract Labor -Company Sprvsn	325 326	\$8,200.00 \$15,000.00	\$0.00 \$0.00	\$8,200.00	
-Contract Sprvsn	327	\$134,000.00	\$0.00	\$134,000.00	
-Tstg Csg/Tbg -Pert/Wireling Svc	328 331	\$5,000.00 \$508,000.00	\$0.00 \$0.00	\$5,000.00 \$508,000.00	
-Stimutation/Treating	332	\$12,000.00	\$0.00	\$12,000.00	
-Completion Unit -Rentals-Surface	333 335	\$60,000.00 \$298,000.00	\$0.00 \$0.00	\$60,000.00 \$296,000.00	
-Rentals-Subsric	336	\$65,000.00	\$0.00	\$85,000.00	
-Trucking/Forkid/Rig Meb -Weiding Services	337 338	\$22,500.00 \$5,000.00	\$0.00 \$0.00	\$22,500.00 \$5,000.00	
-Water Disposal	339	\$80,000.00	\$0.00	\$60,000,00	
-Contingency -Enymmt#Ctsd Loop	343 344	\$250,000 00 \$5,000 00	\$0.00 \$0.00	\$250,000.00 \$5,000.00	
-Dyed Desei	345	\$455,000 00	\$0.00	\$455,000.00	
-Coil Tubing -Flowback Crews & Equip	346 347	\$435,000.00 \$48,000.00	\$0.00 \$0.00	\$435,000.00 \$48,000.00	
B-Location/Pits/Roacs	353	\$73,000.00	\$0.00	\$73,000.00	
B-Contract Labor	356 362	\$69,000,00	\$0.00 \$0.00	\$69,000.00	
B-Water Disposal EO-Contract Labor	374	\$135,000.00 \$6,500.00	\$0.00	\$135,000.00 \$6,500.00	
EO-Contract Supervision	376	\$5,000.00	\$0.00	\$5,000.00	
'EQ-Completion Unit 'EQ-Rentals-Surface	381 383	\$8,000.00 \$7,000.00	\$0.00 \$0.00	\$8,000.00 \$7,000.00	
EQ-Triug/Forksit/Rig Mobilization	385	\$3,000.00	\$0.00	\$3,000.00	
otal Intangible Costs		\$10,205,200.00	\$0.00	\$10,205,200.00	
oul Gross Cost	T I	\$12,140,000.00	\$0.00	\$12,140,000.00	
tote: The above costs are estimates only. Actual costs will in	JULIEU AS INC	nerto.			
			Date Prenaves		
Y			Date Prepared	daniel de la constante de la c	
Va seerina			COG Operating LLC		

We approve: % Working Interest By Company By This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

Page 1 of 1

COG OPERATING LLC AUTHORITY FOR EXPENDITURE Drill & Complete

Well Name SLEDGEHAMMER FED COM 711H SHL 2450 FSL, 2290 FWL or UNIT K SECTION 21 BHL 200 FSL, 1890 FWL or UNIT N SECTION 33 Tomahawk 2428 NEW MEXICO, EDDY COUNTY Drd & Complete Prospect State & County Objective

BHL 200 FS1, 1880 FWL or UNIT N SECTION 33 Formation Wolfcamp B			Objective Depth	Drs & Complete 22,900
Legal 21, 28, 33, 245-28E AFE Numbers			TVD	9,872
Cost Description	Code	Cost	Revision	Total
Tangible Costs D-Surface Casing	401	\$48,000.00	\$0.00	\$48,000.00
D-Intermed Csg	402	\$378,000.00	\$0.00	\$376,000.00
D-Production Casing/Liner D-Welthead Equip	403 405	\$405,000.00	\$0.00 \$0.00	\$405,000.00
C-Tubing	504	\$47,300.00	\$0,00	\$47,300.00
C-Welfnead Equip PEO-Pumping Unit	505 506	\$27,500.00 \$96,000.00	\$0.00	\$27,500.00 \$96,000.00
PEO-Rocs .	508	\$35,000.00	\$0.00	\$35,000.00
TB-Tanks TB-Flowlines/Pipelines	510 511	\$56,000.00 \$117,000.00	\$0.00 \$0.00	\$56,000.00 \$117,000.00
TB-Htr TratSeprir	512		\$0.00	\$117,000.00
TB-Electrical System/Equipment	513	\$88,000.00	\$0.00	\$88,000.0
C-Pakrs/Anchors/Hgrs TB-Couplings/FitIngs/Valves	514 515		\$0.00 \$0.00	\$66,000.00 \$165,000.00
TB-Gas LiftCompression	516	\$35,000.00	\$0.00	\$35,000.00
C-Mrscataneous	519	\$80,000.00	\$0.00	
FB-Pumps-Surface FB-Meters/Lacts	521 525	\$18,000.00 \$32,000.00	\$0.00 \$0.00	\$18,000,00 \$32,000.00
TB-Flams/Combusters/Emission	526	\$31,000.00	\$0.00	\$31,000.00
C-Gas Lift/Compression PEO-Instrumentation/SCADA/POC	527 529	\$15,000.00	\$0.00 \$0.00	\$15,000.00 \$7,000.00
EQ-Tubeq	530	\$5,000.00	\$0.00	\$5,000.0
EQ-Welhead Equipment	531	\$3,000.00	\$0.00	\$3.000.0
PEO-Pumps PEO-Electrical System	532 533	\$5,000.00 \$15,000.00	\$0.00	\$5,000.00 \$15,000.00
*EQ-Packers/Anchors/Hangers	534	\$2,000.00	\$0.00	
EO-Mscetaneous	535	\$3,000.00	\$0.00	\$3,000.0
fotal Tangible Costs		\$1,934,600.00	\$0.00	\$1,934,800.0
ntangible Costs				
PS-Title/Permits	201	\$11,000.00	\$0.00	\$11,000.0
D-Insurance PS-Damages/ROW	202	\$4,000.00 \$5,000.00	\$0.00 \$0.00	\$4,000.00 \$5,000.00
PS-Survey/Stake Lcin	204	\$6,000.00	\$0.00	\$6,000.0
D-Lcm/Pris/Roads	205	\$112,000.00	\$0.00	\$112,000.0
D-Driffing Overhead D-Daywork Contract	206 209	\$9,000.00 \$650,000.00	\$0.00 \$0.00	\$9,000.0 \$650,000.0
D-Directional Drig Services	210	\$270,000.00	\$0.00	\$270.000.0
D-Fuel & Power	211	\$150,000.00	\$0.00	\$150,000.0
D-Water D-Bils	212 213	\$55,000.00 \$104,000.00	\$0.00 \$0.00	\$55,000.0 \$104,000.0
D-Mud & Charmools	214	\$245,000.00	\$0.00	\$245,000.00
D-Coment Surface	217	\$30,000.00	\$0.00	\$30,000.00
D-Cement Intermed D-Prod-2nd Int Cmt	218 219		\$0.00 \$0.00	\$80,003.00 \$105,000.00
D-Float Equipment & Contralizers	221	\$40,000.00	\$0.00	\$40,000,00
D-Csg Crews & Equip	222	\$50,000.00	\$0.00	\$50,000.00
D-Contract Labor D-Company Sprvsn	225 226	\$8,500.00 \$72,000.00	\$0.00 \$0.00	\$6,500.00 \$72,000.00
D-Contract Sprvsn	227	\$110,000.00	\$0.00	\$110,000,0
D-Tatg Cap/Tbg	228 229	\$30,000.00 \$40,000.00	\$0.00	\$30,000.00 \$40,000.00
D-Mud Logging Unit D-Perf/Wiretine Svc	231	\$4,000 00	\$0.00	\$4,000.0
D-Remais-Surface	235	\$150,000 00	\$0.00	\$150,000.00
D-Rentais-Subaric D-Tructung/Forkih/Rig Mob	236 237	\$150,000.00 \$140,000.90	\$0.00	\$150,000.00 \$140,000.00
D-Welding Services	238	\$3,500.00	\$0.00	\$3,500.0
D-Contingency	243	\$44,000.00	\$0.00	\$44,000.0
D-EnvirontifClsd Loop C-Extr/Pks/Roads	244 305	\$255,000.00 \$10,000.00	\$0.00	\$255,000.0 \$10,000.0
C-Prac Equipment	307	\$1,432,000.00	\$0.00	\$1,432,000.0
C-Frac Chamicals	308	\$778,000.00	\$0.00	\$776,900.0
C-Frac Proppant C-Frac Proppant Transportation	309 310	\$1,150,000.00 \$148,000.00	\$0.00 \$0.00	\$1,150,900.00 \$148,000.00
C-Fuel & Power	311	\$5,000.00	\$0.00	\$5,000.00
C-Water	312	\$930,000.00	\$0.00	\$930,000.0
C-Bits C-Mud & Chemicals	313 314	\$9,000.00 \$25,000.00	\$0.00	\$9,000.00 \$25,000.00
C-Contract Labor	325	\$8,200.00	\$0.00	\$8,200.0
Company Sprvsn	326	\$15,000,00	\$0.00	\$15,000.0
C-Contract Sprvsn C-Tstg Csg/Tbg	327 328	\$134,000.00 \$5,000.00	\$0.00 \$0.00	\$134,000.00 \$5,000.00
C-PeriAvrebne Svc	331	\$500,000 00	\$0,00	\$500,000.0
C-Stimulation/Treating	332	\$12,000.00	\$0.00	
C-Completion Unit C-Rentals-Surface	333 335	\$60,000.00 \$286,000.00	\$0.00 \$0.00	\$50,000.0 \$286,000.0
C-Rentals-Subside	336	\$85,000 00	\$0.00	\$65,000.0
C-Trucking/Forkith/Rig Moti C-Welding Services	337 338	\$22,500 90 \$5,000 00	\$0.00 \$0.00	\$22,500.0 \$5,000.0
C-Water Disposal	339	\$50,000.00	\$0.00	\$60,000.0
C-Contrigency	343	\$250,000.00	\$0.00	\$250,000.00
C-Environit/Ctsd Loop C-Dyad Diesel	344 345	\$5,000.00 \$435,000.00	\$0.00	\$5,000.00 \$435,000.00
C-Coil Tubing	346	\$422,000.00	\$0.00	\$422,000.0
-Flowback Crews & Equip	347	\$48,000.00	\$0.00	\$48,000.0
TB-Location/Pite/Roads TB-Contract Labor	353 356	\$73,000.00 \$69,000.00	\$0.00 \$0.00	\$73,000.00 \$89,000.00
FB-Water Disposal	362	\$135.000.00	\$0,20	\$135,000.00
PEO-Contract Labor	374 376	\$6,500.00	\$0.00	\$6,500.00 \$5,000.00
PEO-Contract Supervision PEO-Completion Unit	376	\$5,000.00 \$6,000.03	\$0.00	
EO-Rentals-Surface	383	\$7,000.00	\$0.00	\$7,000.0
PEQ-Tritg/Forkit/VRig Mobilization	385	\$3,000.00	\$0.00	\$3,000.0
Folal Intangible Costs		\$10,055,200.00	\$0.00	\$10,055,200.00
Total Gross Cost		\$11,990,000.00	\$0.00	\$11,990,000,00
lote: The above costs are estimates only. Actual costs	will be billed as a			
COG Operating ELC				
Sy			Date Prepared.	

Date Prepared. COG Operating LLC We approve
% Working Interest Ву Company: By: This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

Page 1 of 1



June 18, 2018

Via CMRRR No. 91 7199 9991 7038 7697 2227 Mewbourne Oil Company 500 W. Texas, Suite 1020 Midland, TX 79701

Re: Sledgehammer Fed Com #802H, #702H, #803H, #812H

SW/4 of Section 21 and W/2 Sections 28 & 33, T24S-R28E

Eddy County, New Mexico

Dear Sir or Madam:

COG Operating, LLC ("COG") hereby proposes the drilling of the following horizontal wells with productive laterals located in the SW/4 of Section 21 and W/2 of Sections 28 & 33, T24S-R28E, Eddy County, New Mexico. The surface pad locations will be located in the NE/4 SW/4 of Section 21, T24S-R28E (subject to change).

- Sledgehammer Fed Com #802H, to be drilled to a depth sufficient to test the WFMP D formation at a total measured depth of 23,400'. The surface location for this well is proposed at a legal location in Unit K of Section 21, and a bottom hole location at a legal location in Unit N of Section 33. The dedicated project area with be the SW/4 of Section 21 and the W/2 of Sections 28 & 33, T24S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$12,140,000, as shown on the attached Authority for Expenditure ("AFE").
- Sledgehammer Fed Com #702H, to be drilled to a depth sufficient to test the WFMP A Sand formation at a total measured depth of 22,400°. The surface location for this well is proposed at a legal location in Unit K of Section 21, and a bottom hole location at a legal location in Unit N of Section 33. The dedicated project area with be the SW/4 of Section 21 and the W/2 of Sections 28 & 33, T24S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$11,900,000, as shown on the attached AFE.
- Sledgehammer Fed Com #803H, to be drilled to a depth sufficient to test the WFMP D formation at a total measured depth of 23,700°. The surface location for this well is proposed at a legal location in Unit K of Section 21, and a bottom hole location at a legal location in Unit N of Section 33. The dedicated project area with be the SW/4 of Section 21 and the W/2 of Sections 28 & 33, T24S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$12,140,000, as shown on the attached AFE.
- Sledgehammer Fed Com #812H, to be drilled to a depth sufficient to test the WFMP C formation at a total measured depth of 23,200'. The surface location for this well is proposed at a legal location in Unit K of Section 21, and a bottom hole location at a legal location in Unit N of Section 33. The dedicated project area with be the SW/4 of Section 21 and the W/2 of Sections 28 & 33, T24S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$12,140,000, as shown on the attached AFE.

COG is proposing this well under the terms of a new Operating Agreement which will follow under separate cover.

If we do not reach an agreement within 30 days of the date of this letter, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a spacing unit for the proposed well.

June 18, 2018 – Page 2 Sledgehammer Fed Com #802, #702H, #803H, #812H

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 aroush@concho.com. Should you have any questions, please do not hesitate to contact me at 432.818.2358.

Sincerely,

COG Operatin	ng LLC
Ashley Roush, Landman	y Rash
AR:bh Enc	
	I/We hereby elect to participate in the drilling and completion of the Sledgehammer Fed Com #802H.
	I/We hereby elect <u>not</u> to participate in the drilling and completion of the Sledgehammer Fed Com #802H.
**************************************	I/We hereby elect to participate in the drilling and completion of the Sledgehammer Fed Com #702H.
	I/We hereby elect <u>not</u> to participate in the drilling and completion of the Sledgehammer Fed Com #702H.
	I/We hereby elect to participate in the drilling and completion of the Sledgehammer Fed Com #803H.
***************************************	I/We hereby elect <u>not</u> to participate in the drilling and completion of the Sledgehammer Fed Com #803H.
	I/We hereby elect to participate in the drilling and completion of the Sledgehammer Fed Com #812H.
	I/We hereby elect <u>not</u> to participate in the drilling and completion of the Sledgehammer Fed Com #812H .
Name:	The second secon
Title:	

COG OPERATING LLC AUTHORITY FOR EXPENDITURE Drill & Complete

 Well Name SLEDGENAMMER FED COM 802H
 Prospect
 Tonahawk 2428

 SHL 2450 FSL, 1720 FWL or UNIT K SECTION 21
 State & County
 NEW MEXICO, EDDY COUNTY

 BHL 200 FSL, 1980 FWL or UNIT N SECTION 33
 Objective
 Dre & Complete

 Formation Workcamp D
 Opath
 23,400

 Legal 21, 24, 33, 245-26E
 TVD
 10,365

mai 21, 26, 33, 245-26E			Depth TVD	23,400 10,365
FE Numbers out Description	Code	Cost	Revision	T
angible Costs				
Surface Casing Intermed Cap	401	\$48,000.08 \$376,000.00	\$0.00 \$0.00	\$48,900 \$378,000
Production Casing/Liner	403	\$405,000.00	\$0.00	\$405.000
Welhead Equip	405	\$40,000.00	\$0.00	\$40,000
Tubing	504	\$47,300.00	\$0.00	\$47,300
-Wethead Equip EO-Pumping Unit	505 506	\$27,500.00 \$96,000.00	\$0.00 \$0.00	\$27,500
EQ-Rods	508	\$35,000.00	\$0.00	\$96,000
3-Tanks	510	\$56,000,00	\$0.00	\$58,000
3-Flowfines/Pipelines	511	\$117,000,00	\$0.00	\$117,000
HR Trusepur	512 513	\$117,000.00	\$0.00 \$0.00	\$117,000
-Electrical System/Equipment Pckrs/Anchors/Higrs	514	\$88,000.00	\$0.00	\$88,090 \$66,000
Couplings/Fittings/Valves	515	\$165,000.00	\$0.00	\$165,000
-Gas Lift/Compression	516	\$35,000.00	\$0.00	\$35,000
Miscelaneous	519	\$80,000.00	\$0.00	\$80,000
Pumps-Surface -Merers/Lacts	521 525	\$18,000.00	\$0.00 \$0.00	\$18,000 \$32,000
-Flares/Combusters/Emission	526	\$32,000.00 \$31,000.00	\$0.00	\$31,000
Gas Lift/Compression	527	\$15,000.00	\$0.00	315.000
Q-Instrumentation/SCADA/POC	529	\$7,000.00	\$0.00	\$7,000
O-Tubing	530	\$5,000.00	\$0.00	\$5,000
Q-Wethead Equipment Q-Pumps	531 532	\$5,000.00	\$0.00	\$3,000 \$5,000
O-Electrical System	533	\$15,000.00	\$0.00	\$15,000
O-Packers/Anchors/Hangers	534	\$2,000.00	\$0.00	\$2,000
Q-Miscellaneous	535	\$3,000.00	\$0.00	\$3,000
al Tangible Costs		\$1,934,800,00	\$0.00	\$1,934,800
inglible Costs Title/Permits	2011	\$11.000 cm	\$0.00	F 7.00
-Tale/Pormits NSW/2nCt	201	\$11,000.00	\$0.00	\$11,000
-Damages/ROW	203	\$5,000.00	\$0.00	\$5,000
Survey/Stake Loto	204	\$6,000.00	\$0,08	\$6.000
ctvPits/Roads	205	\$112,000.00	\$0.00	\$112,000
hilling Overhead	206	\$9,000.00	\$0.00 \$0.00	\$9,000 \$670,000
Daywork Contract Directional Drig Services	210	\$275,000.00	\$0.00	\$275,000
uel & Power	211	\$150,000.00	\$0.00	\$150,000
Vater	212	\$55,000.00	\$0.00	\$55,000
iks .	213	\$104,000.08	\$0.00	\$104,000
Aud & Chemicals Sement Surface	214	\$250,000.00 \$30,000.00	\$0.00 \$0.00	\$250.000 \$30,000
oment Interned	218	\$80,000.00	\$0.00	\$80,000
Prod-2nd Int Cmt	219	\$105,000.00	\$0.00	\$105.000
loat Equipment & Centralizers	221	\$40,000.00	\$0.00	\$40.000
Seg Crews & Equap	222	\$50,000,00	\$0.00	\$50,000 \$6,500
Contract Labor Company Sprvsn	226	\$72,000.00	\$0.00	\$72,000
Contract Sprvsn	227	\$110,000.00	\$0.00	\$310,000
sig Csg/Tbg	228	\$30,000.00	\$0.00	\$30,000
Aud Logging Unk	229	\$40,000.00	\$0.00	\$40,000 \$4,000
Perl/Wireland Svc Rentals-Surface	231	\$4,000.00 \$150,000.00	\$0.00 \$0.00	\$150,000
Remats-Subsric	236	\$150,000.00	\$0.00	
rucking/Forkhfi/Rig Mob	237	\$140,000.00	\$0.00	\$140,000
Valding Services	238	\$3,500.00	\$0.00	\$3,50
Contingency	243	\$49,000.00	\$0.00	\$49,00
invirint/Clsd Loop	244 305	\$255,000.00 \$10,000.00	\$3.00 \$0,00	\$255.00 \$10,00
.cin/Piss/Roads frac Equipment	307	\$1,472,000.00	\$0.00	\$1,472,00
rac Chemicals	308	\$788,000.00	\$0.00	\$785,000
rac Proppant	309	\$1,159,000.00	\$6.00	\$1,159.00
rac Proppant Transportation	310	\$148,000.00	\$0.00	\$148,00
uel & Power	311	\$5,000.00	\$0.00 \$0.00	\$5.00 \$935,00
Valer 34s	312	\$935,000.00	\$0.00	
ors dud & Chemicats	314	\$25,000.00	\$0.00	\$25,000
Contract Labor	325	\$8,200.00	\$0.00	\$8,20
Company Sprvan	326	\$15,000.00	\$0.00	\$15,00
Contract Sprvsn	327	\$134,000,00 \$5,000.00	\$0.00	\$134,00 \$5,00
Istg Csg/Tbg Perl/Wireline Svc	328	\$508,000.00	\$0.00	
timulation/Treating	332	\$12,000.00	\$0.00	\$12,00
Completion Unit	333	\$60,000.00	\$0.00	\$60,00
Rentats-Surface	335	\$298,000.00	\$0.00	
Rentals-Subsric	336 337	\$65,000.00 \$22,500.00	\$0.00	
rucking/Fork#IVRig Mob Velding Services	338	\$5,000.00	\$0.00	
Vater Disposal	339	\$60,000,00	\$0.00	\$60.00
Contingency	343	\$250,000.00		
nymmt//Ctsd Loop	344	\$5,000.00		
Dyed Deset Coil Yubing	345	\$455,000.00 \$435,000.00		
Rowback Crews & Equip	347	\$48,000.00	\$0.00	\$48.00
-Location/Pks/Roads	353	\$73,000.00	\$0.00	\$73.00
-Contract Labor	356	\$89,000.00	\$0.00	
-Water Disposal	362 374	\$135,000.00	\$0.00	
O-Contract Labor O-Contract Supervision	376	\$5,000.00		
	381	\$8,000.00		
	383	\$7,000.00	\$0.00	\$7,00
O-Completion Unit O-Rantata-Surface			40.00	\$3,00
O-Completion Unit O-Rentals-Surface O-Trig/Forkitt/Rig Modifization	385	\$3,000.00		
Q-Completion Unit O-Rentati-Surface O-TriggForkit/Rig Mobilization		\$3,000.00 \$10,205,200.00		
Q-Completion Unit Q-Rentati-Surface			\$0.00	\$10,205,20

Note: The above costs are estimates any Action costs we be delect as security.

By

Oute Prepared

COG Operating LLC

We approve

% Working Interest

Congany

By

Proted Name
Tale
Tale

Date
Provided Name
The provide and provide any an astimate By signing you agree to pay your share of the actual costs incurred.

COG OPERATING LLC AUTHORITY FOR EXPENDITURE Drill & Complete

Well Name SLEDGEHAMMER FED COM 702H SHL 2450 FSL, 1690 FWL or UNIT K SECTION 21 BHI, 200 FSL, 1850 FWL or UNIT N SECTION 33 Tomanewk 2428 NEW MEXICO, EDDY COUNTY Drit & Complete Prospect State & County Objective

Service Casing 4-07 Final Control Charge (14) Final Char	401 402 403 405 504 505 506 508 510 511 512 513 514 515 516 517 527 529 530 531 532 532 533 534 535 532 532 533 534 535 546 527 529 529 520 520 521 521 522 523 532 533 534 535 536 537 537 537 537 537 537 537 537	\$48,000.00 \$375,000.00 \$405,000.00 \$40,000.00 \$47,300.00 \$40,000.00 \$57,000.00 \$50,000.00 \$510,000.00	Revision \$0.00	\$40,000. \$376,000. \$376,000. \$4075,000. \$40,000. \$40,000. \$47,000. \$47,000. \$35,000.
Page	401 402 403 405 504 505 506 508 510 511 512 513 514 515 516 517 527 529 530 531 532 532 533 534 535 532 532 533 534 535 546 527 529 529 520 520 521 521 522 523 532 533 534 535 536 537 537 537 537 537 537 537 537	\$48,000.00 \$375,000.00 \$405,000.00 \$40,000.00 \$47,300.00 \$40,000.00 \$57,000.00 \$50,000.00 \$510,000.00	\$0.00 \$0.00	\$48,000. \$376,000. \$376,000. \$405,000. \$405,000. \$407,000.
Solves Crany	402 403 405 506 508 508 510 511 512 513 514 515 516 519 527 529 520 520 520 521 522 523 532 532 533 533 531 532 532 533 533 534 535 536 527 529 529 520 520 521 522 523 533 534 535 536 527 529 529 520 520 521 522 523 524 525 526 527 529 529 520 520 521 522 523 524 525 526 527 529 529 520 520 521 522 523 524 525 526 527 529 529 520 520 521 522 523 524 525 526 527 529 529 520 520 521 522 523 524 525 526 527 529 529 520 520 520 521 522 523 524 525 526 527 529 529 520 520 520 520 520 520 520 520	\$376,000,00 \$40,000,00 \$40,000,00 \$47,300,00 \$47,300,00 \$36,000,00 \$36,000,00 \$51,000,00	\$0.00 \$0.00	\$376,000. \$405,000. \$405,000. \$407,000.
Production Campularum Westward Ecop. 60 127,500,100 10.00 1	403 405 504 505 506 508 510 511 512 513 514 515 516 519 521 522 523 523 520 521 202 203 204 205 206 207 207 208 209 209 209 209 210 211 212 213 214 217 218 219 211 212 213 214 217 218 218 219 211 212 213 214 217 218 218 218 218 218 218 218 218	\$405,000,00 \$40,000,00 \$47,300,00 \$47,300,00 \$27,500,00 \$35,000,00 \$35,000,00 \$35,000,00 \$31,000,00 \$48,000,00	\$0.00 \$0.00	\$405,000. \$405,000.
Welchard Education	405 504 505 506 508 510 511 512 513 514 515 516 517 527 529 520 520 521 522 523 533 534 535 532 532 532 532 533 534 535 536 527 529 520 520 520 521 522 523 533 534 535 536 527 529 520 520 520 520 520 520 520 520	\$40,000,00 \$47,300,00 \$27,500,00 \$39,000,00 \$39,000,00 \$117,000,00 \$46,000,00 \$46,000,00 \$46,000,00 \$115,000,00 \$150,000,00 \$150,000,00 \$150,000,00 \$150,000,00 \$150,000,00	\$0.00 \$0.00	\$40,000. \$47,300. \$47,300. \$27,500. \$39,000. \$31,000. \$117,000. \$46,000. \$117,000. \$46,000. \$117,000. \$46,000. \$117,000. \$40,000. \$4
Withhard Equipment	505 506 508 510 511 512 513 514 515 516 519 521 522 529 520 521 522 523 533 534 535 535 536 527 529 520 520 521 522 523 533 534 535 536 527 529 520 520 520 520 520 521 522 523 533 534 535 536 527 528 529 520 520 520 520 520 520 520 520	\$27,500,00 \$39,000,00 \$35,000,00 \$35,000,00 \$35,000,00 \$35,000,00 \$3117,000,00 \$46,000,00 \$46,000,00 \$35,000,00 \$35,000,00 \$31,000,000 \$31,000,000 \$31,000,000 \$31,000,000 \$31,000,000 \$31,000,000	\$0.00 \$0.00	\$27,500.0 \$96,000. \$96,000. \$35,000. \$117,000. \$117,000. \$46,000. \$135,000. \$150,000. \$35,000. \$150,000.
Signature Section S	508 508 508 510 511 512 513 514 515 518 519 521 525 526 527 529 529 520 521 522 523 522 523 522 523 524 525 526 527 529 529 520 521 521 522 523 524 525 526 527 529 529 520 521 521 522 523 524 525 526 527 529 529 520 521 521 522 523 524 525 526 526 527 529 529 520 521 521 522 523 524 525 526 527 529 529 520 521 522 523 524 525 526 527 529 529 520 521 522 523 524 527 522 523 524 525 526 527 529 529 520 521 522 523 524 522 523 522 523 524 522 523 524 522 523 524 522 523 523	\$99,000,00 \$39,000,00 \$59,000,00 \$59,000,00 \$117,000,00 \$46,000,00 \$117,000,00 \$46,000,00 \$116,900,00 \$31,000,00	\$0.00 \$0.00	\$96,000. \$35,000. \$35,000. \$35,000. \$15,000. \$117,000. \$35,000. \$15,000. \$35,000. \$35,000. \$31,000.
Trees	510 511 512 513 514 515 516 519 521 525 526 527 529 530 531 532 532 533 534 535 526 527 529 520 520 521 202 203 204 205 205 206 207 208 208 209 210 211 212 213 214 217 218 218 218 218 218 218 218 218	\$50,000,500 \$117,000,000 \$450,000,000	\$3,000 \$0	\$66,000.1 \$117,000.0 \$117,000.0 \$117,000.0 \$155,000.0
Figures 11 11 17 17 18 18 18 18	511 512 513 514 515 516 519 521 525 526 527 529 530 531 532 533 534 535 535 535 536 527 229 230 201 202 203 204 205 206 207 207 207 208 209 210 211 212 213 214 217 218 219 219 210 211 212 213 214 217 218 219 219 219 210 210 210 210 210 210 210 210	\$117,000,00 \$117,000,00 \$38,000,00 \$46,000,00 \$165,000,00 \$15,000,00 \$17,000,00	\$0.00 \$0.00	\$117,000. \$117,000. \$117,000. \$117,000. \$150,000.
Februaries System 1912 334,000.00 30.00 34.000.00 30.00 34.000.00 30.00 34.000.00 30.00 34.000.00 30.00 34.000.00 30.00 34.000.00	513 514 515 516 516 519 521 525 526 527 529 530 531 532 533 534 533 534 535 201 202 203 204 205 206 207 211 212 212 213 214 217 218 217 218 217 218 217 218 217 218 217 218 218 218 218 218 218 218 218 218 218	\$88,000,00 \$46,000,00 \$165,000,00 \$105,000,00 \$20,000,00 \$20,000,00 \$21,000,00	\$0.00 \$0.00	\$48,000.0 \$486,000.0 \$165,000.0 \$315,000.0 \$315,000.0 \$310,000.0 \$
Postal Antonical Programs 918	514 515 516 517 527 528 529 530 531 532 532 533 534 535 532 533 534 535 532 532 532 532 532 532 532	\$46,000,000 \$15,000,000 \$35,000,000 \$35,000,000 \$31,00	\$0.00 \$0.00	\$66,000.0 \$165,000.0 \$165,000.0 \$35,000.0 \$30,000.0 \$31,000.0 \$31,000.0 \$31,000.0 \$3
15	516 519 521 525 526 527 529 530 531 532 533 533 534 535 201 202 203 204 205 209 211 212 213 214 217 218 219 221 219	\$35,000,00 \$40,000,00 \$13,000,00 \$31,000,00 \$31,000,00 \$31,000,00 \$35,000,00 \$3,000,00	\$0.00 \$0.00	\$35,000. \$50,000. \$18,000. \$18,000. \$31,000. \$31,000. \$37,000. \$50,000. \$50,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000.
Macestaneous	5215 526 5275 528 528 530 531 532 533 534 535 535 532 533 534 535 535 535 535 535 535 535 535	\$40,000,000 \$13,000,000 \$12,000,000 \$15,000,000 \$15,000,000 \$15,000,000 \$15,000,000 \$15,000,000 \$15,000,000 \$15,000,000 \$15,000,000 \$100,000,000	\$0.00 \$0.00	\$60,000.1 \$18,000.1 \$18,000.1 \$31,000.1 \$31,000.1 \$31,000.1 \$37,000.1 \$3,00
Absentive 15	205 526 527 527 529 530 531 532 533 534 535 203 204 205 209 209 211 212 213 214 217 218 219 221 219 221 219 221 219 221 219 219	\$12,000,00 \$11,000,00 \$7,000,00 \$5,000,00 \$3,000,00 \$3,000,00 \$1,5,000,00 \$1,5,000,00 \$1,5,000,00 \$1,000,00	\$0.00 \$0.00	\$32,000. \$31,000. \$31,000. \$15,000. \$7,000. \$3,000. \$3,000. \$3,000. \$5,000. \$3,000.
Section Sect	527 529 530 531 532 533 534 535 201 202 203 204 205 206 209 210 211 212 213 214 214 217 218 219 221 221 221 222 222 222 223	\$31,000,00 \$15,000 00 \$7,000,00 \$35,000,00 \$35,000,00 \$15,000,00 \$1,000,00 \$1,834,000,00 \$11,000 00 \$44,000,00 \$5,000,00 \$112,000,00 \$5,000,00 \$112,000,00 \$112,000,00 \$5,000,00	\$0.00 \$0.00	\$31,000.01 \$15,000.0 \$7,000.0 \$7,000.0 \$3,000.0 \$3,000.0 \$5,000.0 \$2,000.0 \$1,934,000.0 \$1,934,000.0 \$4,000.0 \$5,000.0 \$3,000.0 \$
Colored Colo	529 530 531 532 533 534 535 202 203 204 205 206 209 211 212 213 214 217 218 219 221 221 222 223	\$7,000,00 \$5,000,00 \$3,000,00 \$15,000,00 \$15,000,00 \$2,000,00 \$1,000,00 \$1,000,00 \$4,000,00 \$5,000,00 \$5,000,00 \$5,000,00 \$55,000,00	\$0.00 \$0.00	\$7,000. \$5,000.
Schemen Sol \$3,000 \$6.00 \$1,000 \$1.0	531 532 533 534 535 201 202 203 204 205 206 209 210 211 212 213 214 217 218 219 221 221 222 222 222	\$3,000,00 \$5,000,00 \$15,000,00 \$2,000,00 \$3,000,00 \$11,000,00 \$4,000,00 \$5,0	\$0.00 \$0.00	\$3,000. \$5,000. \$5,000. \$1,000. \$2,000. \$1,000. \$1,934,800. \$4,000. \$5,000. \$112,000. \$1,000. \$5,000. \$112,000. \$5,000. \$110. \$5,000. \$5,000. \$110. \$1,000. \$5,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000. \$1,000.
Commons Comm	532 533 534 535 201 202 203 204 205 206 209 210 211 212 213 214 217 218 219 221 221 222 222	\$5,000,00 \$15,000,00 \$2,000 00 \$3,000 00 \$1,000 00 \$1,000 00 \$4,000,00 \$5,000,00 \$6,000,00 \$112,000,00 \$50,000,00	\$0.00 \$0.00	\$5,000. \$15,000. \$2,000. \$2,000. \$1,500. \$1,534,600. \$1,534,600. \$11,000. \$4,000. \$5,000. \$112,000. \$3,000. \$150,000. \$150,000. \$50,000.
16-Packen/Anchora/Hargers SA	534 535 201 202 203 204 205 209 210 211 212 213 214 217 218 219 221 221 221 221 222 225	\$2,000,000 \$3,000,000 \$1,834,800,000 \$11,000,000 \$4,000,000 \$5,000,000 \$5,000,000 \$112,000,000 \$270,000,000 \$55,000 \$55,000,000 \$55,000,000 \$55,000,000 \$55,000,000 \$55,000,000 \$55,000,000 \$55,000 \$5	\$0.00 \$0.00	\$2,000.1 \$3,000.8 \$1,034,000.1 \$11,000.4 \$4,000.1 \$5,000.0 \$112,000.0 \$35,000.0 \$270,000.0 \$150,000.0 \$550,000.0
Substitution	201 202 203 204 205 206 209 211 212 213 214 217 218 219 221 221 222 223	\$1,000.00 \$1,834,800.00 \$1,000.00 \$4,000.00 \$6,000.00 \$100.00 \$9,000.00 \$270,000.00 \$19,000.00 \$19,000.00 \$19,000.00 \$19,000.00 \$19,000.00 \$19,000.00 \$245,000.00 \$100,000.00 \$40,000.00	\$0.00 \$0.00	\$3,000.0 \$1,934,000.0 \$1,934,000.0 \$4,000.0 \$5,000.0 \$112,000.0 \$112,000.0 \$270,000.0 \$270,000.0 \$150,000.0 \$350,000.0 \$350,000.0 \$350,000.0 \$350,000.0
Section Sect	202 203 204 205 206 209 210 211 212 213 214 217 218 219 221 222 225	\$11,000 DO \$4,000,00 \$5,000,00 \$6,000,00 \$112,000,00 \$3,000,00 \$270,000,00 \$150,000,00 \$55,000,00 \$545,000,00 \$150,000,00 \$150,000,00 \$150,000,00 \$150,000,00 \$40,000,00 \$40,000,00	\$0.00 \$0.00	\$11,000. \$4,000. \$5,000. \$5,000. \$112,000. \$112,000. \$550,000. \$270,000. \$150,000. \$555,000.
1	202 203 204 205 206 209 210 211 212 213 214 217 218 219 221 222 225	\$4,000,00 \$5,000,00 \$6,000,00 \$112,000,00 \$19,000,00 \$270,000,00 \$150,000,00 \$150,000,00 \$245,000,00 \$245,000,00 \$30,000,00 \$100,000,00 \$100,000,00 \$100,000,00 \$44,000,00	\$0.00 \$0.00	\$4 000.4 \$5,900.4 \$6,000.5 \$112,000.5 \$9,000.5 \$270,000.5 \$150,000.6 \$55,000.5 \$55,000.5
Description	202 203 204 205 206 209 210 211 212 213 214 217 218 219 221 222 225	\$4,000,00 \$5,000,00 \$6,000,00 \$112,000,00 \$19,000,00 \$270,000,00 \$150,000,00 \$150,000,00 \$245,000,00 \$245,000,00 \$30,000,00 \$100,000,00 \$100,000,00 \$100,000,00 \$44,000,00	\$0.00 \$0.00	\$4 000.4 \$5,900.4 \$6,000.5 \$112,000.5 \$9,000.5 \$270,000.5 \$150,000.6 \$55,000.5 \$55,000.5
SurveyState Licin	204 205 206 209 210 211 212 213 214 217 218 219 221 222 222	\$6,000.00 \$112,000.00 \$8,000.00 \$270,000.00 \$150,000.00 \$150,000.00 \$140,000.00 \$245,000.00 \$30,000.00 \$100,000.00 \$100,000.00 \$100,000.00	\$0,00 \$0,00 \$0,00 \$0,00 \$0,00 \$0,00 \$0,00 \$0,00 \$0,00 \$0,00	\$6,000. \$112,000. \$3,000. \$3,000. \$550,000. \$270,000. \$150,000. \$550,000. \$550,000.
Lamphish Robusts 200 \$112,000 \$0.00 \$111,000	205 206 209 210 211 212 213 214 217 218 219 221 221 222	\$112,000,00 \$9,000,00 \$850,000,00 \$270,000,00 \$150,000,00 \$150,000,00 \$104,000,00 \$245,000,00 \$80,000,00 \$105,000,00 \$105,000,00 \$40,000,00	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$112,000. \$3,000. \$550,000. \$270,000. \$150,000. \$55,000. \$51,000.
Capywink Contract 206 \$55,000.00 \$60,00 \$350.0	209 210 211 212 213 214 217 218 219 221 222	\$850,000.00 \$270,000.00 \$150,000.00 \$55,000.00 \$104,000.00 \$245,000.00 \$30,000.00 \$80,000.00 \$105,000.00	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$550,000.6 \$270,000.6 \$150,000.6 \$55,000.6 \$104,000.6
Directional Drig Services 210 \$277,000.00 \$0.00 \$1370,000	210 211 212 213 214 217 218 219 221 222	\$270,000.00 \$150,000.00 \$55,000.00 \$104,000.00 \$245,000.00 \$30,000.00 \$80,000.00 \$105,000.00 \$40,000.00	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$270,000. \$150,000. \$55,000. \$104,000.
Mare 218 \$55,000.00 \$50,00 \$45,000.00 \$10,000 \$104,000.0	212 213 214 217 218 219 221 222 225	\$55,000.00 \$104,000.00 \$245,000.00 \$30,000.00 \$80,000.00 \$105,000.00 \$40,000.00	\$0.00 \$0.00 \$0.00	\$55,000.0 \$104,000.0
Sect 13	213 214 217 218 219 221 222 225	\$104,000.00 \$245,000.00 \$30,000.00 \$80,000.00 \$105,000.00 \$40,000.00	\$0.00 \$0.00	\$104,000
Cement Interimed 218	217 218 219 221 222 222	\$30,000.00 \$80,000.00 \$105,000.00 \$40,000.00		\$245,000
Carment Intermed 118	218 219 221 222 225	\$80,000.00 \$105,000.00 \$40,000.00		
Fixed Edupment & Centralizers	221 222 225	\$40,000.00	\$0.00	\$80,000.0
Carp Company \$ 5 Courpe 222 \$55,000.00 \$50,000 \$55,000.00 Company Sproan 226 \$72,000.00 \$50,000 \$112,000.00 227 \$110,000.00 \$50,000 \$112,000.00 228 \$35,000.00 \$50,000 \$112,000.00 229 \$35,000.00 \$50,000 \$112,000.00 230 \$50,000 \$50,000 \$12,000.00 230 \$50,000 \$50,000 \$12,000.00 230 \$50,000 \$50,000 \$50,000 \$10,000 \$10,000 240 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 241 \$50,000 \$50,000 \$50,000 \$50,000 242 \$55,000 \$50,000 \$50,000 \$50,000 243 \$50,000 \$50,000 \$50,000 \$50,000 244 \$550,000 \$50,000 \$50,000 \$50,000 244 \$550,000 \$50,000 \$50,000 \$50,000 244 \$550,000 \$50,000 \$50,000 \$50,000 244 \$550,000 \$50,000 \$50,000 \$50,000 244 \$550,000 \$50,000 \$50,000 \$50,000 244 \$550,000 \$50,000 \$50,000 \$50,000 244 \$550,000 \$50,000 \$50,000 \$50,000 244 \$550,000 \$50,000 \$50,000 \$50,000 244 \$550,000 \$50,000 \$50,000 \$50,000 244 \$550,000 \$50,000 \$50,000 \$50,000 244 \$550,000 \$50,000 \$50,000 \$50,000 244 \$550,000 \$50,000 \$50,000 \$50,000 245 \$50,000 \$50,000 \$50,000 \$50,000 246 \$50,000 \$50,000 \$50,000 \$50,000 247 \$50,000 \$50,000 \$50,000 \$50,000 248 \$50,000 \$50,000 \$50,000 \$50,000 248 \$50,000 \$50,000 \$50,000 \$50,000 248 \$50,000 \$50,000 \$50,000 \$50,000 248 \$50,000 \$50,000 \$50,000 \$50,000 248 \$50,000 \$50,000 \$50,000 \$50,000 248 \$50,000 \$50,000 \$50,000 \$50,000 248 \$50,000 \$50,000 \$50,000 \$50,000 248 \$50,000 \$50,000 \$50,000 \$50,000 249 \$50,000 \$50,000 \$50,000 \$50,000 249 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,000 240 \$50,000 \$50,000 \$50,00	222 225			\$105,000.0
Company Sproan 226 \$72,000.00 \$0,000 \$120,000 \$110,000		\$50,000.00		\$50.000.0
Contract Spring	226			\$6,500.0
### 120 \$40,000.00 \$0.00 \$40,000. ### 201 \$40,000.00 \$0.00 \$40,000 \$40,	227		\$0.00	\$110,000,0
Part Name Sin Sec				
Remust Subseric Tricking/Froid/Prick Nob 237 \$140,000.00 \$0.00 \$140,000 Welding Services 236 \$3,500,00 \$0.00 \$140,000 Welding Services 237 \$140,000.00 \$0.00 \$140,000 Welding Services 238 \$3,500,00 \$0.00 \$1,500 EnvironmentClad Loop 244 \$45,000.00 \$0.00 \$150,000 EnvironmentClad Loop 244 \$555,000,00 \$0.00 \$10,000 \$150,000 \$110,000 \$110,000 \$110,000 \$10,000 \$10,000 \$10,000 \$10,000 \$110,000 \$110,000 \$11,432,000,00 \$0.00 \$11,432,000 \$1776,000 \$11,432,000,00 \$0.00 \$11,432,000 \$1776,000 \$11,432,000,00 \$0.00 \$11,432,000 \$1776,000 \$11,432,000,00 \$0.00 \$11,432,000 \$11,432,000,00 \$10,000 \$11,432,000 \$11,432,000,00 \$10,000 \$11,432,000 \$11,432,000,00 \$10,000 \$11,432,000 \$11,432,000,00 \$10,000 \$11,432,000 \$11,432,000,00 \$10,000 \$11,432,000 \$11,432,000,00 \$10,000 \$11,432,000 \$11,432,000,00 \$10,000 \$11,432,000 \$11,432,000,00 \$10,000 \$10,000 \$11,432,000 \$11,432,000,00 \$10,000 \$10,000 \$10,000 \$10,000 \$11,400,000 \$11,400,000 \$11,400,000 \$10,000 \$10,000 \$10,000 \$10,000 \$11,400,000 \$11,400,000 \$10	231	\$4,000.00	\$0.06	\$4,000.6
Centingery	237	\$140,000.00	\$0.00	\$140,000.0
Environment Land Loop				
Frac Chargerials 307 \$1,432,000.00 \$0.00 \$1,472,000. Frac Proposition 308 \$775,000,00 \$0.00 \$776,000. Frac Proposition 309 \$1,150,000.00 \$0.00 \$11,150,000. Frac Proposition 309 \$1,150,000.00 \$0.00 \$1,150,000. Frac Proposition 310 \$1,480,000.00 \$0.00 \$1,150,000. Frac Proposition 311 \$5,000.00 \$0.00 \$1,150,000. Frac Proposition 311 \$5,000.00 \$0.00 \$53,000 \$1,150,000. Frac Proposition 311 \$5,000.00 \$0.00 \$53,000 \$1,000 \$1,150,000. Frac Proposition 311 \$5,000.00 \$0.00 \$1,000 \$1	244	\$255,000.00	\$0,00	\$255,000.0
Frac Charmosts 308 \$776,000.00 \$0.00 \$776,000.00 \$1,150,000.00 \$1,000.00				
Fine Proposent Transportation 310 \$148,000 00 \$30,00 \$148,000 Water 311 \$5,000 00 \$0,00 \$55,000 Water 312 \$90,000 00 \$0,00 \$50,00 Bits 313 \$90,000 00 \$0,00 \$50,00 Bits 313 \$90,000 00 \$0,00 \$50,00 S0,00 \$25,000 S0,00 \$35,000	308	\$776,000.00	\$0.00	\$776,000.
Fine 8 Power 311 \$5,000.00 \$0,00 \$5,000			\$0.00 \$0.00	\$1,150,000.
Bila	311	\$5,000.00	\$0.00	\$5,000
Mail of Chemicals				\$930,000.
Company Sprish 326 \$15,000,00 \$0,00 \$15,000	314	\$25,000.00	\$0.00	\$25,000
Signature Sign		\$8,200.00		
PerfUnified Suc 331 \$500,000.00 \$0.00 \$500,00	327	\$134,000.00	\$0.00	\$134,000
Completion Use: Aprila's Surface 333 \$80,000,00 \$0,00 \$20,000 \$20,000 \$12,000 Rentals Subarface 336 \$85,000,00 \$0,00 \$25,000 Rentals Subarface 336 \$85,000,00 \$0,00 \$25,000 Trucking/PortstryRig Mob 337 \$22,500 00 \$5,000 \$22,500 Water Disposal 339 \$50,000,00 \$50,000 \$20,000 \$50,000 \$20,000 Water Disposal 339 \$50,000,00 \$50,000 \$20,000 \$				\$5,000
Rentials Surface 335 \$266,000.00 \$0.00 \$265,000 \$50.00 \$55,00			\$0.00	\$12,000.
Remtals Substrift Trucking/Protist/Righ Mob 337 527,500 00 55,000 522,500 Weking Senrices 338 \$5,000,00 \$5,000 \$5,000 \$5,000 Water Bisposal 339 \$60,000,00 \$0,000 \$5,000 School \$60,000 \$60,000 \$60,000 \$60,000 \$60,000 Remtals Charles Substrict Environmental Charles Substrict Su				\$50,000.
Welding Services 338 \$5,000.00 \$0.00 \$5,000 \$5,000 \$6,000 \$		\$65,000.00	\$0.00	\$65,000.
Water Disposal 339 \$60,000,00 \$0,00 \$20,000			\$0.00 \$0.00	\$5,000.
EnvironChad Loop 344 \$3,000,00 \$0,00 \$5,000 \$5,000 \$0,000 \$5,000	339	\$60,000.00	\$0.00	\$60,000.
Open Diservil 345 \$435,000.00 \$00.00 \$435,000 Cert Tubing 346 \$422,000.00 \$0.00 \$422,000 Prowhack Crevis & Equip 347 \$84,000.00 \$0.00 \$42,000 Flowhack Crevis & Equip 351 \$31,000.00 \$0.00 \$40,000 Flowhord Labor 350 \$50,000.00 \$0.00 \$90,000 Flowhord Labor 362 \$133,000.00 \$0.00 \$173,000 OC-Contract Labor 374 \$5,000.00 \$0.00 \$153,000 OC-Contract Labor 376 \$5,000.00 \$0.00 \$5,000 OC-Completion Unit 381 \$6,000.00 \$0.00 \$5,000 CO-Rangiarion Unit 383 \$7,000.00 \$0.00 \$5,000 CO-Intraffonkifivitig Mebbization 385 \$3,000.00 \$0.00 \$5,000 Cott Instructing Medibization 385 \$3,000.00 \$0.00 \$10,005 Instructing Medibization 385 \$3,000.00 \$0.00 \$10,005 Instructing Medibization	344	\$5.000.00	\$0.00	\$5,000.
Rowhack Crew A Equip 347 \$48,000 C \$0,00 \$48,000	345	\$435,000.00	\$0.00	\$435,000.
Hubban H	347	\$48,000 CC	\$0.00	\$48,000.
Water Dapecsal 362 \$135,000 00 \$0,00 \$135,000	353	\$73,000.00	\$0.00	\$73,000.
C-Centract Libber 374 \$8,500.00 \$0,000 \$5,500. -C-Centract Libber 374 \$8,500.00 \$0,000 \$5,500. -C-Centract Libber 376 \$5,000.00 \$0,000 \$5,000. -C-Centract Souther 381 \$8,000.00 \$0,000 \$8,000. -C-Rentals-Surface 383 \$7,000.00 \$0.00 \$7,000. -C-Rentals-Surface 383 \$7,000.00 \$0.00 \$7,000. -C-Rentals-Surface \$10,005,200.00 \$0.00 \$1,000. -C-Rentals-Surface \$10,005,200.00 \$0.00 \$1,000. -C-Rentals-Surface \$10,005,200.00 \$0.00 \$1,005,200. -C-Rentals-Surface \$11,990,000.00 \$0.00 \$11,990,000. -C-Rentals-Surface \$11,990,000.00 \$10.00 \$11,990,000. -C-Rentals-Surface \$11,990,000.00 \$10.00 \$10.00 \$11,990,000. -C-Rentals-Surface \$11,990,000.00 \$10.00 \$10.00 \$11,990,000. -C-Rentals-Surface \$11,990,000.00 \$10.00 \$	362	\$135,000.00	\$0,50	\$135,000.
CO-Completion Unit 381 \$8,000 00 \$0,000 \$8,000. **O-Ranial-Surface 383 \$7,000 00 \$0 00 \$7,000. **O-TriagFordstrilling Melobilization 385 \$3,000 00 \$0 00 \$7,000. **O-TriagFordstrilling Melobilization 385 \$3,000 00 \$0 00 \$5,000. **Eat Gross Cost \$10,055,200.00 \$0.00 \$10,000 \$10,000. **Eat Gross Cost \$11,990,000.00 \$0.00 \$11,990,000. **Eat Gross Cost \$11,990,000.00 \$0.00 \$11,990,000. **Cost The above costs are estimates only. Actual costs will be billed as incurred. **Cost Operating LLC.**		\$6,500.00	\$0.00	\$8,500.
Co-Raidas-Surface 383 \$7,000 CC \$0.00 \$7,000 CC 50.00 \$7,000 CC 50.00 \$7,000 CC 50.00 \$7,000 CC 50.00 \$7,000 CM	381	\$8,000.00	\$0.00	\$8,000.
ted briangible Costs \$10,055,200.00 \$0.00 \$10,055,200. ted Gross Cost \$11,990,000.00 \$0.00 \$11,990,000. Et a Gross Cost \$11,990,000.00 \$0.00 \$11,990,000. Et a Gross Cost \$11,990,000.00 \$0.00 \$11,990,000. Et a Gross Cost \$11,990,000.00 \$10.00 \$11,990,000. Et a Gross Cost \$11,990,000.00 \$10.00 \$11,990,000. Et a Cost \$11,990,000.00 \$10.00 \$	383			
tal Gross Cost \$11,990,000.00 \$0.00 \$11,990,000. SG Operating LLC Data Prepared: COG Operating LLC	363			\$10,055,200.
OG Operating LLC Date Prepared: COG Operating LLC			\$0.00	811,990,000.
Date Prepared: COG Operating LLC	led as incu	rred		
COG Operating LLC			Date Prepared:	
			COG Operating LLC	
			Ву	
ówbsu.		229 225 225 225 225 225 225 225 225 225	220 \$40,000,00 231 \$5,000,00 235 \$150,000,00 235 \$150,000,00 236 \$150,000,00 237 \$140,000,00 238 \$35,000,00 244 \$255,000,00 307 \$1,432,000,00 308 \$776,000,00 309 \$1,150,000,00 310 \$143,000,00 311 \$5,000,00 311 \$5,000,00 311 \$5,000,00 312 \$930,000,00 314 \$25,000,00 315 \$440,000,00 316 \$140,000,00 317 \$1,000,00 318 \$5,000,00 319 \$1,000,00 310 \$1,000,000 311 \$5,000,00 311 \$5,000,00 312 \$930,000,00 313 \$5,000,00 314 \$25,000,00 326 \$15,000,00 327 \$132,000,00 328 \$5,000,00 329 \$12,000,00 330 \$5,000,00 331 \$500,000,00 332 \$12,000,00 333 \$500,000,00 334 \$25,000,00 335 \$55,000,00 336 \$55,000,00 337 \$25,000,00 338 \$50,000,00 339 \$60,000,00 340 \$435,000,00 341 \$35,000,00 342 \$15,000,00 343 \$25,000,00 344 \$35,000,00 345 \$45,000,00 347 \$46,000,00 347 \$46,000,00 347 \$46,000,00 348 \$50,000,00 349 \$50,000,00 340 \$15,000,00 341 \$50,000,00 341 \$50,000,00 342 \$15,000,00 343 \$15,000,00 344 \$50,000,00 345 \$45,000,00 347 \$46,000,00 348 \$50,000,00 349 \$50,000,00 340 \$15,000,00 341 \$50,000,00 341 \$50,000,00 342 \$15,000,00 343 \$50,000,00 344 \$50,000,00 345 \$50,000,00 346 \$50,000,00 347 \$60,000,00 348 \$50,000,00 349 \$50,000,00 340 \$50,000,00 341 \$50,000,00 341 \$50,000,00 342 \$50,000,00 343 \$50,000,00 344 \$50,000,00 345 \$50,000,00 346 \$50,000,00 347 \$60,000,00 348 \$50,000,00 349 \$50,000,00 340 \$50,000,	229 \$40,000.00 \$0.00 225 \$150,000.00 \$0.00 225 \$150,000.00 \$0.00 237 \$140,000.00 \$0.00 237 \$140,000.00 \$0.00 237 \$140,000.00 \$0.00 238 \$35,000.00 \$0.00 244 \$355,000.00 \$0.00 307 \$1,432,000.00 \$0.00 307 \$1,432,000.00 \$0.00 308 \$1775,000.00 \$0.00 309 \$1,150,000.00 \$0.00 311 \$5,000.00 \$0.00 311 \$5,000.00 \$0.00 311 \$5,000.00 \$0.00 311 \$5,000.00 \$0.00 312 \$930,000 \$0.00 313 \$930,000 \$0.00 314 \$25,000 \$0.00 315 \$500,000 \$0.00 316 \$150,000.00 \$0.00 317 \$100,000.00 \$0.00 318 \$100,000.00 \$0.00 319 \$1,000.00 \$0.00 310 \$1,000.00 \$0.00 311 \$5,000.00 \$0.00 312 \$530,000 \$0.00 313 \$200,000.00 \$0.00 314 \$25,000 \$0.00 315 \$10,000.00 \$0.00 316 \$150,000.00 \$0.00 317 \$150,000.00 \$0.00 318 \$250,000.00 \$0.00 319 \$150,000.00 \$0.00 310 \$150,000.00 \$0.00 311 \$200,000.00 \$0.00 312 \$150,000.00 \$0.00 313 \$200,000.00 \$0.00 314 \$25,000.00 \$0.00 315 \$200,000.00 \$0.00 316 \$150,000.00 \$0.00 317 \$150,000.00 \$0.00 318 \$10,000.00 \$0.00 318 \$10,000.00 \$0.00 318 \$10,000.00 \$0.00 318 \$250,000.00 \$0.00 319 \$250,000.00 \$0.00 310 \$250,000

This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

COG OPERATING LLC AUTHORITY FOR EXPENDITURE Dril! & Complete

Weil Name SLEDGEHAMMER FED COM 803H SHL 2450 FSL, 1680 FWL or UNIT K SECTION 21 BHL 200 FSL, 1690 FWL or UNIT N SECTION 33 Formation Wolficams D Legal 21, 28, 33, 245-26E

. . . .

Prospect
State & County
Objective
Depth
TVD

Tomahawk 2428 NEW MEXICO, EDDY COUNTY Dril & Complete 23,700 10,530

oet Description	Code	Cost	Revision	
angible Costs				
Surface Casing	401	\$48,000,00	\$0.00	\$48.00
Intermed Csg Production Casing/Liner	402 403	\$376,000.00 \$405,000.00	\$0.00 \$0.00	\$376,000 \$405,000
Welhead Equip	405	\$40,000.00	\$0.00	\$40,00
Tubrig	504	\$47 300 00	\$0.00	\$47,30
Wethead Equip	505	\$27,500 00	\$0.00	\$27,500
EO-Pumping Und	506 508	\$96 000 00	\$0.00 \$0.00	\$96,00 \$35,00
EQ-Rods 3-Tanks	510	\$35,000.00 \$56,000.00	\$0.00	\$56.00
3-Flowlines/Pipelines	511	\$117,000.00	\$0.00	\$117,00
3-Hr Tru/Sepro	512	\$117,000.00	\$0.00	\$117,00
3-Electrical System/Equipment	513	\$88,000,00	\$0.00	\$88,00
Pckrs/Anchors/Hgrs 3-Couplings/Fittings/Valves	514 515	\$66,000.00 \$165,000.00	\$0.00 \$0.00	\$66,00 \$165,00
s-Couplings/Finings/Varves 3-Gas Lift/Compression	516	\$35,000.00	\$0.00	\$35,00
Macellaneous	519	\$80,000.00	\$0.00	\$80,00
3-Pumps-Surface	521	\$18,000.00	\$0.00	\$18,00
3-Meters/Lacts	525	\$32,000.00	\$0.00	\$32.00
3-Flares/Combusters/Emission	526	\$31,000.00	\$0.00 \$0.00	\$31,00 \$15,00
Gas Lift/Compression EQ-Instrumentation/SCADA/POC	527 529	\$15,000.00 \$7,000.00	\$0.00	\$7,00
EQ-Tubng	530	\$5,000.00	\$0.00	\$5.00
EQ-Wethsad Equipment	531	\$3,000.00	\$0.00	\$3.00
EQ-Pumps	532	\$5,000.00	\$0.00	\$5,00
EQ-Electrical System	533	\$15,000.00	\$0.00	\$15.00
EO-Packers/Anchors/Hangers	534	\$2,000.00	\$0.00	\$2.00 \$3.00
EO-Miscellaneous	535	\$3,000.00	\$0.00	\$1,934,80
otti Tangible Coets		\$1,934,800.00	\$0.00	31,834,60
tangible Costs				
S-Tille/Pernvis	201	\$11,000.00	\$0.00	\$11,00
-Insurance S-Damages/ROW	202 203	\$4,000.00 \$5,000.00	\$0.00 \$0.00	\$4.0X \$5,00
S-Damages/ROW S-Survey/Stake Loto	203	\$8,000.00 \$8,000.00	\$0.00	\$8,00
Lctn/Pis/Roads	205	\$112,000.00	\$0.00	\$112,00
-Driting Overhead	206	\$9,000.00	\$0.00	\$9,00
-Daywork Contract	209	\$670,000,00	\$0,00	\$670.00
-Directional Drig Services	210	\$275,000.00	\$0.00	\$275.00
Fuel & Power	211	\$150,000.00	\$0.00 \$0.00	\$150,00 \$55,00
-Water -Bds	212 213	\$55,000.00 \$104,000.00	\$0.00	\$104.00
-bus -Mud & Chemicals	214	\$250,000.00	\$0.00	\$250,00
Cement Surface	217	\$30,000.00	\$0.00	\$30,00
Coment Intermed	218		\$0.00	\$80,00
-Prod-2nd Int Cmt	219		\$0.00	\$105,00
Float Equipment & Centralizers	221 222	\$40,000.00 \$50,000.00	\$0.00 \$0.00	\$40,00 \$50,00
-Csg Crews & Equip -Contract Labor	225	\$6,500.00	\$0.00	\$6,50
-Company Sprvsn	226	\$72,000.00	\$0,00	\$72,00
Contract Sprvsn	227	\$110,000.00	\$0.00	\$110,00
-Tstg Csg/Tbg	228	\$30,000.00	\$0.00	
-Mud Logging Unit	229		\$0.00	\$40,00 \$4,00
PertWreine Svc	231 235	\$4,000.00 \$150.000.00	\$0.00	\$150,0
-Rentals-Surface -Rentals-Subsific	236	\$150,000.00	\$0.00	\$150,DX
-Trucking/Forkit/Rig Mob	237	\$140,000.00	\$0.00	\$140,00
-Watong Services	238		\$0.00	\$3.5
Contingency	243		\$0.00	\$49.00
-Envmmt/Cisd Loop	244 305		\$6.00	\$255.00 \$10.00
-LcivPes/Roads	305 307	\$10,000.00 \$1,472,000.00	\$0.00	\$1,472,0
-Frac Equipment -Frac Chemicats	308	\$786,000.00	\$0.00	\$788.0
Frac Propoant	309		\$0.00	\$1,159.0
-Frac Proppant Transportation	310		\$0.00	\$148,0
-Fuel & Power	311		\$0,00	\$5,0
-Water	312		\$0.00	\$935.0
-Bis	313 314		\$0.00	\$9.0 \$25,0
-Mud & Chemicals -Contract Extor	314 325		\$0.00	
-Company Sprvan	325	\$15,000.00	\$0.00	\$15.0
-Contract Sprvsn	327	\$134,000.00	\$0.00	\$134.0
-Tsig Csg/Tbg	328		\$0.00	
-Perl/Wirefine Svc	331 332	\$508,000.00 \$12,000.00	\$0.00	
-Stimulation/Treating -Completion Unit	332		\$0.00	
-Completion Unit -Ramsis-Surface	335		\$0.00	\$296,0
-Ramais-Subsric	336	\$65,000.00	\$0.00	\$65.0
-Trucking/Forkhft/Rig Mob	337		\$0.00	
-Welding Services	336 339			
-Water Disposal -Contingency	339 343			
-Lontingency -Environti/Clad Loop	344		\$0.00	\$5,0
-Dyed Desel	345	\$455,000.00	50.00	\$455,0
-Coil Tubing	346			
-Flowback Crews & Equip	347			\$48.0
B-Location/Pits/Roads	353			
B-Contract Labor B-Water Disposal	355 362			
B-Water Disposal /EQ-Contract Labor	374	\$6,500.00	\$0.00	
EQ-Contract Supervision	376		\$0.00	\$5,0
EO-Completion Unit	381	\$8,000.00	\$0.00	
	383	\$7,000.00		
EQ-Renulti-Surface		** ***		
EG-Trkg/Forktifl/Rig Mobilization obal tritangible Costs	385	\$3,000.00 \$10,205,200.00		

Note: The above costs are estimates only. Actual costs will be bitted as incurred.

COG Operating LLC

By

Date Prepared

COG Operating LLC

We approve:

5 Working Interest

By

Company

By

This AFE is only an estimate. By arguing you agree to pay your share of the actual costs incurred.

COG OPERATING LLC AUTHORITY FOR EXPENDITURE Drill & Complete

 Will Name SLEDGEHAMMER FED COM 612H
 Prospect
 Tomphewx 2428

 SHL 2450 FSL 1630 FWL or UNIT K SECTION 21
 State & County
 NEW MEXICO, EDDY COUNTY

 BHL, 200 FSL 1650 FWL or UNIT N SECTION 33
 Objective
 Drill & Complete

 Formation Wolfcamp C
 Debth
 23,200

 Legal 21, 28, 33, 245-28E
 TVD
 10,245

page 21, 28, 33, 245-28E E Numbers Stat Description nightle Costs Surface Casen Intermed Cay Production Casing/Liner Weithread Cayin Tubing T	Code 4011 402 405 405 506 506 507 511 512 513 514 515 518 526 527 520 520 520 520 520 520 520 520 520 520	Cost \$44,000.00 \$376,000.00 \$400,000.00 \$40,000.00 \$40,000.00 \$47,300.00 \$50,000.00 \$50,000.00 \$55,000.00 \$5117,000.00	\$0.00 \$0.00	10,245 \$48,000 \$375,000 \$495,000 \$495,000 \$447,300 \$487,300 \$56,000 \$5117,000 \$5117,000 \$58,000 \$5117,000
systance Costs Surface Costs Intermed Cog Production Casing/Liner Wathread Equip Tubing O-Production Casing/Liner Wathread Equip O-Production Casing/Liner Wathread Equip O-Production O-Pr	4010 4020 4000 5040 5040 5050 5000 5000 5100 512 513 513 513 514 515 517 525 527 527 527 527 527 527 527 527 52	\$44,000.00 \$476,000.00 \$476,000.00 \$440,000.00 \$440,000.00 \$47,300.00 \$547,300.00 \$586,000.00 \$586,000.00 \$586,000.00 \$5117,000.00 \$5117,000.00 \$5117,000.00 \$5117,000.00 \$5117,000.00 \$5117,000.00 \$510,000.00	\$0.00 \$0.00	\$40,0000 \$376,000 \$40,000 \$47,300 \$47,300 \$48,000 \$47,300 \$56,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000
Surface Casang Intermed Cay Production Casing/Liner Westhead Equip Tubing Westhead Equip Co-Pumping Unit Co-Rods - Franks - Flowinss/Positines - Flowinss/Po	402 400 405 506 60 506 60 506 60 506 60 506 60 506 60 500 60 50 50 50 50 50 50 50 50 50 50 50 50 50	\$376,000,00 \$40,000,00 \$41,000,00 \$47,300,00 \$47,300,00 \$57,300,00 \$56,000,00 \$56,000,00 \$5117,000,00 \$5117,000,00 \$5117,000,00 \$510,000,000 \$510,000,000	\$0.00 \$0.00	\$375,000 \$405,000 \$41,300 \$41,300 \$41,300 \$41,300 \$41,300 \$41,300 \$41,300 \$41,300 \$41,300 \$41,300 \$41,000 \$41,
Production Casing/Liner Wethread Equip Tubring Wethread Equip O-Pumping Unit O-Pumping Unit O-Pumping Unit O-Pumping Unit O-Pumping Unit Forwisser/Positions Filter Trun's Equipment Filter Trun's Equipment Filter Trun's Equipment Filter Equipmen	400 405 504 605 500 60	\$405,000,00 \$40,000,00 \$47,300,00 \$27,500,00 \$55,000,00 \$55,000,00 \$5117,000,00 \$5117,000,00 \$60,000,00 \$5105,000,00	\$0.00 \$0.00	\$495,0000 \$47,000 \$47,000 \$47,000 \$57,000 \$55,600 \$55,600 \$117,000 \$48,000 \$518,000
Wethead Equip Tuben Wethead Equip Co-Pumping Unit Co-Pods 1-Tanks 1-Ta	405 504 505 506 500 510 511 612 513 514 515 518 519 521 527 527 529 530 530 530 530 531 534 535 532 533 534 535 536 530 530 530 530 530 530 530 530 530 530	\$40,000,00 \$47,300,00 \$27,500,00 \$56,000,00 \$56,000,00 \$117,000,00 \$317,000,00 \$36,000,00 \$36,000,00 \$35,000,00 \$35,000,00 \$35,000,00 \$35,000,00 \$35,000,00 \$31,000,00	\$3.00 \$5.00 \$2.00 \$0.00 \$3.00	\$40,000 \$47,200 \$27,600 \$27,600 \$35,600 \$55,6000 \$111,000 \$48,000 \$35,600 \$318,000 \$318,000 \$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 \$31,000 \$31,000
Tubing Wallhand Equip GO-Pumpang Unit GO-Rods Franks Frank	504 506 506 510 511 512 513 514 515 525 526 527 529 530 531 533 534 535 536 537 537 532 533 534 535	\$47,300,00 \$27,500,00 \$56,000,00 \$15,000,00 \$117,000,00 \$117,000,00 \$117,000,00 \$56,000,00 \$165,000,00 \$165,000,00 \$165,000,00 \$15,000,00	\$2.00 \$0.00	\$47,300 \$27,500 \$96,000 \$35,600 \$117,600 \$48,000 \$48,000 \$165,000 \$15,000 \$33,000 \$31,
CA-Pumping Unit CA-Rods I-Tanks I-Tank	506 508 510 511 512 513 514 515 518 518 517 527 527 527 527 529 530 531 532 533 534 535 532 533 534 535 532 533 534 535 532 533 534 535 535 536 537 537 537 537 537 537 537 537 537 537	\$96,000,00 \$15,000,00 \$15,000,00 \$117,000,00 \$117,000,00 \$35,000,00 \$165,000,00 \$165,000,00 \$35,000,00 \$35,000,00 \$15,000,00	\$0.00 \$0.00	\$96,0000 \$35,0000 \$35,0000 \$117,000 \$46,000 \$117,000 \$46,000 \$116,000 \$310,000
O-Rodos I-Tranka Flowinses/Postures Flowinses/Postures Flowinses/Postures Flowinses/Postures Febra Transcript Flowinses/Postures Flowinses/Postures Flowinses/Postures Flowinses/Postures Flowinses/Postures Flowinses/Postures Flowinses/Postures Flowinses/Postures Gas Litt/Compression Gas Litt/	508) 510: 511: 512: 513: 514: 518: 519: 525: 527: 529: 530: 531: 535: 534: 535: 535: 536: 537: 537: 538: 538: 538: 538: 538: 538: 538: 538	\$35,000,00 \$56,000,00 \$117,000,00 \$117,000,00 \$217,000,00 \$26,000,00 \$56,000,00 \$35,000,00 \$35,000,00 \$31,000,00	\$0.00 \$0.00	\$35,000 \$56,000 \$117,000 \$58,000 \$517,000 \$58,000 \$58,000 \$35,000 \$35,000 \$31,000 \$31,000 \$31,000 \$31,000 \$31,000 \$31,000 \$31,000 \$31,000 \$31,000 \$31,000 \$31,000
N-Tanks N-Tanks Provines/Pipetnes Har TrurSepty Electrical System/Equipment Petris/Anchors/Highs Couplings/Fittings/Valves Ges Lit/Compression Miscelaneous N-Purings Surface N-Mesers/Locs Harares/Combusters/Emission Ges Lit/Compression Ges Lit/Co	511 512 513 514 515 518 519 521 525 526 527 527 529 530 531 532 534 535 534 535	\$56,000,00 \$117,000,00 \$117,000,00 \$26,000,00 \$117,000,00 \$26,000,00 \$165,000,00 \$30,000,00 \$30,000,00 \$31,000,00	\$0.00 \$0.00	\$56,0000 \$117,000 \$48,000 \$117,000 \$48,000 \$185,000 \$185,000 \$35,000 \$40,0000 \$15,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000 \$51,000
Hith Trit/Septs Lell-etincal System/Equipment Petins/Anchors/Highs -Couplings/Estings/Valves -Couplings/Estings/Valves -Couplings/Estings/Valves -Coas Lit/Compression -Miscelaneous -Phumors Southace -Miscelaneous -Phumors Southace -Miscelaneous -Phumors Southace -Miscelaneous -Phumors -Co-Institution	512 513 514 515 518 519 521 525 526 527 529 530 531 532 533 534 535 535 532 535 532 533 534 532 533 534 532 533 534 532 533 534 533 534 534 535 535 536 537 537 537 537 537 537 537 537 537 537	\$117,000,00 \$56,000,00 \$165,000,00 \$155,000,00 \$315,000,00 \$30,000,00 \$31,000,00 \$31,000,00 \$15,000,00 \$3,	\$0.00 \$0.00	\$117,000 \$86,000 \$86,000 \$185,000 \$25,000 \$20,000 \$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 \$31,000 \$31,000 \$31,000 \$31,000 \$31,000
Electrical System/Equipment Petra/Anchors/Highs L-Couplings/Fitings/Valves L-Couplings/Fitings/Valves L-Couplings/Fitings/Valves L-Couplings/Fitings/Valves L-Couplings/Fitings/Valves L-Couplings/Fitings/Valves L-Paras/Combusters/Emission Gas Litt/Compression Ga	513 514 5155 518 519 521 525 526 527 529 530 531 532 533 534 535	\$86,000,00 \$66,000,00 \$155,000,00 \$35,000,00 \$35,000,00 \$18,000,00 \$31,000,00 \$15,000,00 \$15,000,00 \$3,000	\$0.00 \$0.00 \$1.00 \$1.00 \$0.00	\$46,0000 \$46,0000 \$165,000 \$35,000 \$115,000 \$115,000 \$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
Pclus Machorshigs L'Couping Michiga Makes L'Gas LAVCompression Michiganeous -Pourps Sortice -Pourps Sortice -Neirra Lacia -Pourps Sortice Gas Lill Compression Gas Lill	514 515 518 519 521 525 526 527 529 530 531 534 535 201 202 203 204 205	\$86,000,00 \$185,000,00 \$35,000,00 \$30,000,00 \$31,000,00 \$31,000,00 \$15,000,00 \$3,000,0	\$0.00 \$0.00	\$66,0000 \$165,0000 \$35,000 \$30,0000 \$31,0000
I-Coupings/Estings/Valves I-Coupings/Estings/Valves I-Coupings/Estings/Valves I-Coupings/Estin	518 519 521 525 526 527 529 530 531 532 533 534 535 201 202 203 204 205	\$165,000,00 \$35,000,00 \$50,000 00 \$15,000,00 \$31,000,00 \$15,000 00 \$7,000 00 \$5,000 00 \$3,000 00 \$15,000 00	\$0.00 \$0.00	\$165,0000 \$15,0000 \$15,0000 \$15,0000 \$15,0000 \$31,0000
Maccalineous I-Pumps Surface I-Materia Lacu I-Pumps Surface I-Pumps I-	519 521 525 526 527 529 530 531 532 534 535 201 202 203	\$80,000 00 \$18,000,00 \$32,000 00 \$31,000 00 \$115,000 00 \$5,000 00 \$3,000 00 \$5,000 00 \$15,000 00 \$15,000 00 \$1,000 00 \$1,000 00 \$1,000 00 \$1,000 00 \$1,000 00 \$2,000 00 \$1,000 00 \$2,000 00 \$1,000 00 \$2,000 0	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$80,000 \$15,000 \$31,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$1,000 \$2,000 \$2,000
P-Pumps Surface Melerrufuscs HPares/Combusters/Emission Gas L/PUCompression Mail Yamp@de Costa tamp@de Costa	521- 525- 526- 527- 529- 530- 531- 532- 533- 533- 535- 535- 201- 202- 203- 204- 205-	\$18,000,00 \$32,000 00 \$31,000 00 \$15,000 00 \$1,000 00 \$2,000 00 \$3,000 00 \$1,000 00 \$2,000 00 \$2,000 00 \$1,000 00 \$1,000 00 \$4,000,00 \$5,000 00 \$1,000 00 \$2,000 00 \$2	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$18,000 \$32,000 \$31,000 \$15,000 \$7,000 \$3,000 \$3,000 \$15,000 \$2,000 \$3,000 \$3,000 \$3,000 \$3,000
	525 526 527 529 530 531 533 534 535 201 202 203 204 205	\$32,000 00 \$31,000 00 \$15,000 00 \$7,000 00 \$3,000 00 \$3,000 00 \$5,000 00 \$15,000 00 \$3,000 00 \$3,000 00 \$3,000 00 \$1,834,600 00 \$4,000 00 \$5,000 00	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$32,000 \$31,000 \$15,000 \$7,000 \$3,000 \$3,000 \$5,000 \$5,000 \$2,000 \$2,000 \$2,000
Gas Lit/Compression CADAPOC CATUbing CAWahned Equipment CAPathese System CAPathors/Anchors/Hongers CAPathors/Anchors/Hongers CAPathors/Anchors/Hongers CAPathors/Anchors/Hongers CAPathors/Anchors/Hongers CAPathors/Anchors/Hongers CAPathors/Anchors/Hongers CAPathors/Anchors/Hongers CAPathors/Anchors/Hongers CAPathors/Hongers CAPATHORS/ANCHORS/HONGERS CAPATHORS/HONGERS CAP	527 529 530 531 532 534 535 201 202 203 204 205	\$31,000 00 \$15,000 00 \$2,000 00 \$3,000 00 \$3,000 00 \$3,000 00 \$1,500 00 \$2,000 00 \$3,000 00 \$3,000 00 \$1,934,500 00 \$4,000 00 \$5,000 00	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$15,000 \$7,000 \$5,000 \$3,000 \$5,000 \$15,000 \$22,000 \$3,000
C-Instrumentation/SCADA/POC CI-Tubing CQ-Welthead Equipment CQ-Purison CQ-Beatincal System CQ-Packers/Anchors/Hengers CQ-Asscetamous stal Yang@Se Costs tangible Costs Tride/Parmiss	529 530 531 532 533 534 535 201 202 203 204 205	\$7,000.00 \$5,000.00 \$3,000.00 \$3,000.00 \$15,000.00 \$2,000.00 \$1,834,500.00 \$1,000.00 \$4,000.00 \$5,000.00	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$7,000 \$5,000 \$3,000 \$5,000 \$15,000 \$2,000 \$3,000
C-Tubing C-Weihead Equipment C-Purins C-Belenical System C-Belenical System C-Beschalt System C-Bescha	530 531 532 533 535 535 201 202 203 204 205	\$5,000.00 \$3,000.00 \$3,000.00 \$15,000.00 \$2,000.00 \$3,000.00 \$1,834,800.00 \$4,000.00 \$5,000.00	\$0.00 \$0.00 \$4.00 \$2.00 \$0.00 \$0.00 \$0.00	\$5,000 \$3,000 \$5,000 \$15,000 \$2,000 \$3,000
C-Weinhead Equipment Ch-Pumps Ch-Pumps Ch-Beetincat System Tamp@ble Costs trail Tamp@ble Costs Tridel/Parimits Insurance	531 532 533 534 535 201 202 203 204 205	\$3,000.00 \$5,000.00 \$15,000.00 \$2,000.00 \$3,000.00 \$1,834,800.00 \$11,000.00 \$4,000.00 \$5,000.00	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$3,000 \$5,000 \$15,000 \$2,000 \$3,000
O-Purros G-Delicina System O-Packers/Archors/Hongers G-Miscettaneous dal Tampible Costs Langible Costs Langible Costs Linderparries Insurance	532 533 534 535 535 201 202 203 204 205	\$5,000,00 \$15,000,00 \$2,000,00 \$3,000,00 \$11,834,800,00 \$11,000,00 \$4,000,00 \$5,000,00	\$0.00 \$0.00 \$0.00 \$0.00 \$0.00	\$5,000 \$15,000 \$2,000 \$3,000
Co-Beichnest System Co-Perchandrons/Hongers Co-Assessations del Yang@de Costs tang@ble Costs Tolany armsts Tolany armsts Tolany armsts Tolany armsts	533 534 535 535 201 202 203 204 205	\$15,000 00 \$2,000 00 \$3,000.00 \$1,834,800.00 \$1,000.00 \$4,000.00 \$5,000.00	\$0.00 \$0.00 \$0.00 \$0.00	\$15,000 \$2,000 \$3,000
CI-Missettaneous tell Tampillo Costs tampillo Costs tampillo Costs Trial/Parmis Insurance	201 202 203 204 205	\$3,000.00 \$1,934,800.00 \$1,000.00 \$4,000.00 \$5,000.00	\$0.00 \$0.00	\$3,000
rtal Yangible Costs tangible Costs - TeleParmis Insurance	201 202 203 204 205	\$1,834,800.00 \$11,000.00 \$4,000.00 \$5,000.00	\$0.00	
cangible Costs - Tide/Parmis Insurance	202 203 204 205	\$11,000.00 \$4,000.00 \$5,000.00		\$1,934,500
-Tida/Permis Insurance	202 203 204 205	\$4,000.00 \$5,000.00		
-Tida/Permis Insurance	202 203 204 205	\$4,000.00 \$5,000.00		
	203 204 205	\$5,000.00	\$0.00	\$11,000
	204 205		\$0.00	\$4,000
i-Damages/ROW i-Survey/Slake Loin	205	\$6,000.00	\$0.00 \$0.00	\$5,000 \$6,000
Lcin/Pis/Roads		\$112,000.00	\$0.00	\$112,000
Dritting Overnead	206	\$9,000,00	\$0.00	\$9,000
Daywork Contract	209	\$670,000.00	\$0.00	\$670,000
Directional Drig Services Fuel & Power	210	\$275,000.00 \$150,000.00	\$0.00	\$275,000 \$150,000
Water	211	\$55,000.00	\$0.00	\$55.000
Bits	213	\$104,000.00		\$104,000
Mud & Chemicals	214	\$250,000.00	\$0.00	\$250,000
Cement Surface	217	\$30,000.00	\$0.00	\$30,000 \$80,000
Cement Intermed Prod-2nd Int Cmt	218 219	\$80,000.00 \$105,000.00	\$0.00 \$0.00	\$105,000
Floet Equipment & Centralizers	221	\$40,000.00	\$0.00	\$40,000
Csg Crews & Equip	222	\$50,000,00	\$0.00	\$50,000
Contract Labor	225	\$6,500.00	\$0.00	\$6,500
Company Sprvsn Contract Sprvsn	226 227	\$72,000.00 \$110,000.00	\$0.00	\$72,000
Tsig Cag/Tog	228	\$30,000.00	\$0.00	\$30,000
Mud Logging Unit	229	\$40,000.00	\$0.00	\$40,000
Perl/Wireline Svc	231	\$4,000.00	\$0.00	\$4,000
Rentals-Sudace Rentals-Subside	235 236	\$150,000,00 \$150,000,00	\$0.00	\$150,000 \$150,000
Trucking/Fortdit/Rig Mob	237	\$140,000.00	\$0.00	\$140,000
Welding Services	235	\$3,500.00	\$0.00	\$3,500
Contingency	243	\$49,000.00	\$0.00	\$49,000
Environt//Clad Loop	244 305	\$255,000.00 \$10,000.00	\$0.00	\$255,000 \$10.000
Lctv/Pits/Roads Frac Equipment	307	\$1,472,000.00	\$0.00	\$1,472.000
Frac Chemicals	308	\$786,000.00	\$0.00	\$786,000
Frac Proppant	309	\$1,159,000.00	\$0.00	\$1,159,000
Frac Proppant Transportation	310	\$148.000.00	\$0.00	\$148,000 \$5,000
Fuel & Power Water	311 312	\$5,000.00 \$935.000.00	\$0.00 \$0.00	\$935,000
643	313	\$9,000.00	\$0.00	\$9.000
Mud & Chemicals	314	\$25,000.00	\$0.00	\$25,000
Contract Labor	325 326	\$8,200.00	\$0.00 \$0.00	\$8,200 \$15,000
Company Sprvsn Contract Sprvsn	325	\$15,000.00 \$134,000.00	\$0.00	\$134.000 \$134.000
Tstg Cag/Tbg	328	\$5,000.00		\$5,000
PeriMireline Svc	331	\$508,000.00	\$0.00	\$508,000
Stimulation/Treating	332 333	\$12,000.00 \$60,000.00	\$0.00 \$0.00	\$12,000 \$60,000
Completion Unit Rentals-Surface	335	\$296,000.00	\$0.00	\$296,00
Rentals-Subsric	336	\$65,000.00	\$0.00	\$85,000
Tructung/Fortall/Rig Mob	337 338	\$22,500.00 \$5,000.00	\$0.00 \$0.00	\$22,500 \$5,000
Walding Services Water Disposal	339	\$80,000.00	50.00	\$60,000
Contingency	343	\$250,000.00	\$0.00	\$250,000
Environt/Clsd Loop	344	\$5,000.00	\$0.00	\$5,000
Dyed Clesel Coll Tubing	345 348	\$455,000.00 \$435,000.00	\$0.00 \$0.00	\$455,000 \$435,000
Coll Tubing Flowback Craws & Equip	347	\$48,000.00	\$0.00	\$48,000
-Location/P4s/Roads	353	\$73,000.00	\$0.00	\$73,000
l-Contract Labor	358	\$69,000.00	\$0.00	\$59,000
-Water Disposal	362	\$135,000.00 \$6,500.00	\$0.00	\$135,000 \$6,500
Q-Contract Labor Q-Contract Supervision	374 376	\$5,000.00	\$0.00 \$0.00	
EQ-Completion Unit	381	\$8,000.00	\$0.00	\$6,000
Q-Rentals-Surface	383	\$7,000.00	\$0.00	\$7,000
O-Tritg/Forkist/Rig Mobilization	385	\$3,000.00	\$0.00	\$3,000
stal Intengible Costs		\$10,205,200.00	\$0.00	\$10,206,200
		********	1 20	P. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.
that Gross Cost one: The above costs are astimates only. Actual costs will be to	hilled	\$12,140,000.00	\$0.90	\$12,140,000

The AFE is only an estimate By sugging you agree to pay your share of the actual costs incurred.



June 18, 2018

Via CMRRR No. 91 7199 9991 7038 7697 2227 Mewbourne Oil Company 500 W. Texas, Suite 1020 Midland, TX 79701

Re: Sledgehammer Fed Com #804H, #703H, #805H, #813H SW/4 of Section 21 and W/2 of Sections 28, & 33, T24S-R28E

Eddy County, New Mexico

Dear Sir or Madam:

COG Operating, LLC ("COG") hereby proposes the drilling of the following horizontal wells with productive laterals located in the SW/4 of Section 21 and the W/2 of Sections 28 & 33, T24S-R28E, Eddy County, New Mexico. The surface pad locations will be located in the NW/4 SW/4 of Section 21, T24S-R28E (subject to change).

- Sledgehammer Fed Com #804H, to be drilled to a depth sufficient to test the WFMP D formation at a total measured depth of 23,400'. The surface location for this well is proposed at a legal location in Unit L of Section 21, and a bottom hole location at a legal location in Unit M of Section 33. The dedicated project area with be the SW/4 of Section 21 and the W/2 of Sections 28 & 33, T245-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$12,140,000, as shown on the attached Authority for Expenditure ("AFE").
- Sledgehammer Fed Com #703H, to be drilled to a depth sufficient to test the WFMP A Shale formation at a total measured depth of 22,600°. The surface location for this well is proposed at a legal location in Unit L of Section 21, and a bottom hole location at a legal location in Unit M of Section 33. The dedicated project area with be the SW/4 of Section 21 and the W/2 of Sections 28 & 33, T24S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$11,990,000, as shown on the attached Authority for Expenditure ("AFE").
- Sledgehammer Fed Com #805H, to be drilled to a depth sufficient to test the WFMP D formation at a total measured depth of 23,700'. The surface location for this well is proposed at a legal location in Unit L of Section 21, and a bottom hole location at a legal location in Unit M of Section 33. The dedicated project area with be the SW/4 of Section 21 and the W/2 of Sections 28 & 33, T24S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$12,140,000, as shown on the attached Authority for Expenditure ("AFE").
- Sledgehammer Fed Com #813H, to be drilled to a depth sufficient to test the WFMP C formation at a total measured depth of 23,200'. The surface location for this well is proposed at a legal location in Unit L of Section 21, and a bottom hole location at a legal location in Unit M of Section 33. The dedicated project area with be the SW/4 of Section 21 and the W/2 of Sections 28 & 33, T24S-R28E, Eddy County, New Mexico. The total estimated cost to drill and complete said well is \$12,140,000, as shown on the attached Authority for Expenditure ("AFE").

COG is proposing this well under the terms of a new Operating Agreement which will follow under separate cover.

If we do not reach an agreement within 30 days of the date of this letter, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a spacing unit for the proposed well.

June 18, 2018 – Page 2 Sledgehammer Fed Com #804, #703H, #805H, #813H

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 aroush@concho.com. Should you have any questions, please do not hesitate to contact me at 432.818.2358.

Sincerely,

COG Operating	g LLC
apple	y Ranh
Ashley Roush, Landman	RPL
AR:bh Enc	
ACCUSE OF THE COLOR OF THE COLO	I/We hereby elect to participate in the drilling and completion of the Sledgehammer Fed Com #804H.
	I/We hereby elect <u>not</u> to participate in the drilling and completion of the Sledgehammer Fed Com #804H.
	I/We hereby elect to participate in the drilling and completion of the Sledgehammer Fed Com #703H.
	I/We hereby efect <u>not</u> to participate in the drilling and completion of the Sledgehammer Fed Com #703H.
	I/We hereby elect to participate in the drilling and completion of the Sledgehammer Fed Com #805H.
	I/We hereby elect <u>not</u> to participate in the drilling and completion of the Sledgehammer Fed Com #805H.
	I/We hereby elect to participate in the drilling and completion of the Sledgehammer Fed Com #813H.
	I/We hereby elect \underline{not} to participate in the drilling and completion of the Sledgehammer Fed Com #813H.
Ву:	
Name:	
Title:	

COG OPERATING LLC AUTHORITY FOR EXPENDITURE Drill & Complete

Well Name SLEDGEHAMMER FED COM 894H SHL 2459 FSL 1020 FWL or UNIT L SECTION 21 BHL 200 FSL 1310 FWL or UNIT M SECTION 33 Formation Worksamp D Legal 21, 28, 33, 243-28E

Prospect State & County Objective Depth TVD

Tomahawk 2428 NEW MEXICO, EDDY COUNTY Driff & Complete 23,400 10,365

Legal 21, 28, 33, 249-28E AFE Numbers		TVD	10.	.365
Cost Description	Code	Cost	Revision	
Fanglible Costs D-Surface Casing	401	#44.000.00.I		
O-Intermed Csg	402	\$48,000.00 \$376,000.00	\$0.00 \$0.00	\$48,000
2-Production Casing/Liner	403	\$405.000.00	\$0.00	\$378,600
>Welhead Equip	405	\$40,000.00	\$0.00	\$405,000 \$40,000
C-Tubing	504	\$47,300.00	\$0.00	\$47,300
-Wellhead Equip	505	\$27,500.00	\$0.00	\$27,500
EQ-Pumping Unit	506	\$96,000.00	\$0.00	\$95,000
EQ-Rods	508	\$35,000.00	\$0.00	\$35,000
B-Tanks	510	\$56,000.00	\$0.00	\$58,000
B-FlowIntes/Pipelines	511	\$117,000.00	\$0.00	\$117,000
B-Hir Tru/Seprir	512	\$117,000.00	\$0.00	\$117,000
B-Electrical System/Equipment	513	\$88,000.00	\$0.00	\$88,000
-Pckrs/Anchors/Hgrs	514	\$66,000.00	\$0.00	\$66,000
B-Couplings/Filtings/Valves	515	\$165,000.00	\$0.00	\$165,000
B-Gas Lift/Compression	516	\$35,000.00	\$0.00	\$35,000
-Miscellaneous	519	\$80,000.00	\$0.00	\$80,000
B-Pumps-Surface	521	\$18.000.00	\$0.00	\$18,000
B-Meters/Lacts	525	\$32,000.00	\$0.00	\$32,000
8-Flates/Combusters/Emission	528	\$31,000.00	\$0.00	\$31,000
-Gas till/Compression	527	\$15,000.00	\$0.00	\$15,000
EO-Instrumentation/SCADA/POC	529	\$7,000.00	\$0.00	
EQ-Tubing	530	\$5,000.00		\$7,000.
EQ-Welchead Equipment	531	\$3,000.00	\$0.00	\$5,000.
EQ-Pumps	532	\$5,000.00	\$0.00	\$3,000
EO-Electrical System	533		50.00	\$5.000.
EO-Packers/Anchors/Hangers	534	\$15,000.00 \$2,000.00	\$0.00	\$15,000.
EQ-Miscellaneous	535		\$0.00	\$2,000.
otal Tangible Costs		\$3,000.00	\$0.00	\$3,000.
		\$1,834,806.00	\$0.00	\$1,934,800.
rtangible Costs				
S-Tida/Parmis	201	\$11,000.00	\$0.00	\$11,000.
Hinsurance	202	\$4,000.00	\$0.00	\$4,000.
S-Damages/ROW	203	\$5.000.00	\$0.00	\$5,000.
'S-Survey/Stake Lctn	204	\$8,000.00	\$0.00	\$6,000.
-LeuvPits/Roads	205	\$112,000.00	\$0.00	\$112,000.
-Ording Overhead	206	\$9.000.00	\$0.00	\$9.000.
-Daywork Contract	209	\$670,000.00	\$0.00	\$670,000.
+Directional Drtg Services	210	\$275,000.00	\$0.00	\$275,000.
-Fuel & Power	211	\$150,000.00	\$0.00	\$150,000.
-Water	212	\$55,000.00	\$0.00	\$55,000.
+8/ts	213	\$104,000.00	\$0.00	\$104,000.
-Mud & Chemicals	214	\$250,000,00	\$0.00	\$250,000
-Cament Surface	217	\$30,000.00	\$0.00	\$30,000.
-Cement Intermed	218	\$80,000.00	\$0.00	\$80,000
-Prod-2nd Ini Crit	219	\$105,000.00	\$0.00	\$105,000.
-Float Equipment & Centralizers	221	\$40,000.00	\$0.00	\$40,000.
-Csg Crews & Equip	222	\$50,000.00	\$0.00	\$50,000
-Contract Labor	225	\$6,500.00	\$0.00	\$6,500.
-Company Sprvsn	226	\$72,000.00	\$0.00	\$72,000.
-Contract Sprvsn	227	\$110,000.00	\$0.00	
-Tsig Csg/Tbg	228	\$30,000.00	\$0.00	\$110,000. \$30,000.
-Mud Logging Unit	229	\$40,000.00	\$0.00	\$40,000
-Perl/Wireline Svc	231	\$4,000.00	\$0.00	\$4,000.
-Rentals-Surface	235	\$150,000.00	\$0.00	\$150,000
-Rentals-Subsric	236	\$150,000.00	\$0.00	
-Trucking/Forkit/Rig Mob	237	\$140,000.00		\$150,000,
- Welding Services	238		\$0.00	\$140,000.
		\$3,500.00	50.00	\$3,500,
Contingency	243	\$49,000.00	\$0.00	\$49,000.
Environt/Clad Loop	244	\$255,000.00	\$0.00	\$255,000.
-Letn/Pits/Roads	305	\$10,000,00	\$0.00	\$10,000.
-Frac Equipment	307	\$1,472,000.00	\$0.00	\$1,472,000.0
Frac Chemicals	308	\$786,000.00	\$0.00	\$788,000.
-Frac Propoant	309	\$1,159,000.00	\$0.00	\$1,159,000
-Frac Proppant Transportation	310	\$148,000.00	\$0.00	\$148,000.
-Fuel & Power	311	\$5,000,00	\$0.00	\$5,000.0
-Water	312	\$935,000.00	50.00	\$935.000.
-Birts	313	\$9,000.00	\$0.00	\$9.000.
Mud & Chemicals	314	\$25,000.00	\$0.00	\$25,000.
-Contract Labor	325	\$8,200.00	\$0.00	\$8,200.
-Company Sprvsn	326	\$15,000,00	\$0.00	\$15,000.
Contract Sprvsn	327	\$134,000.00	\$0.00	\$134,000.
-Tstg Csg/Tog	328	\$5,000.00	\$0.00	\$5,000.
Perl/Wireline Svc	331	\$508,000,00	\$0.00	\$508,000.
-Stimulation/Treating	332	\$12,000.00	\$0.00	\$12,000.
Completion Unit	333	\$60,000.00	\$0.00	\$50,000
Rentals-Surface	335	\$296,000.00	\$0.00	\$296,000.0
Rentals-Suboric	336	\$85,000.00	\$6.00	\$65,000.
Trucking/Forkit/Rig Mob	337	\$22,500.00	\$0.00	\$22,500
Welding Services	338	\$5,000.00	\$0.00	\$5,000.0
Water Disposal	339	\$50,000.00	\$0.00	\$60,000.
Contingency	343	\$250,000,00	\$0.00	\$250,000.0
Envrnmti/Clad Loop	344	\$5,000.00	\$0.00	\$5,000.0
Dyed Diesel	345	\$455,000.00	\$0.00	\$455,000.0
Coil Tubing	346	\$435,000.00	\$0.00	\$435,000.0
Flowback Crews & Equip	347	\$48,000 00	\$0.00	\$48,000.0
3-Location/Pils/Roads	353	\$73,000.00	\$0.00	\$73,000.0
3-Contract Labor	358	\$69,000.00	\$0.00	\$89,000.0
B-Water Disposal	362	\$135,000.00	\$0.00	\$135,000.0
EQ-Contract Labor	374	\$6,500.00	\$0.00	\$6,500.0
EO-Contract Supervision	376	\$5,000.00	\$0.00	\$5,000.8
EO-Completion Unit	381	\$8,000.00	\$0.00	\$8,000.6
EQ-Rantals-Surface	383	\$7,000.00	\$0.00	\$7,000.0
EQ-Trkg/Forkirl/Rig Mobilization	385	\$3.000.00	\$0.00	33,000,62
		\$10,205,200.00	\$0.00	\$10,205,200.1
tat Intentible Costs				
tat Intengible Costs		414,500,500.20		
tal intengible Costs sal Gross Cost		\$12,140,000.00	\$0.00	\$12,140,000.6

COG Operating LLC Date Prepared COG Operating LLC We approve: % Working interest Company By: This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

COG OPERATING LLC AUTHORITY FOR EXPENDITURE Drill & Complete

Well Name SLEDGEHAMMER FED COM 703H SHL 2450 FSL, 950 FWL or UNIT IL SECTION 21 BHL 200 FSL, 950 FWL or UNIT M SECTION 33 Formation Wolfcamp A Shale

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Prospect State & County Objective Dopth Tomshawk 2428
NEW MEXICO, EDDY COUNTY
Drill & Complete
22,600
9,636

egal 21, 28, 33, 245-25E FE Numbers			170	9,635
ost Description angible Costs	Code	Cost	Revision	T
angible Costs -Surface Casing	401	£41.000.00		
Fintermed Cag	401 402	\$48,000.00 \$376,000.00	\$0.00 \$0.00	\$48,000 \$376,000
Production Casing/Liner	403	\$405,000.00	\$0.00	
-Wethead Equip	405	\$40,000,00	\$0.00	
-Tubing	504	\$47,300.00	\$0.00	\$47,300
-Welthead Equip	505	\$27,500.00	\$0.00	\$27,500
EQ-Pumping Unit	506	\$96,000.00	\$0,00	\$96,000
EO-Rods B-Tanks	508	\$35,000.00	\$0.00	\$35,000
o-i anis B-Flowines/Pipelines	510 511	\$56,000.00 \$117,000.00	\$0.00 \$0.00	\$56,000 \$117,000
B-Htr Trtr/Septir	512	\$117,000.00	\$0.00	\$117,000
B-Electrical System/Equipment	513	00.000.882	\$0.00	\$88,000
Pckrs/Anchors/Hgrs	514	\$66,000.00	\$0.00	\$65,000
B-Couplings/Fittings/Valves	515	\$165,000.00	\$0.00	\$165,000
B-Gas Lift/Compression	516	\$35,000.00	\$0.00	\$35,000
-Miscellaneous B-Pumos-Surface	519 521	\$80,000.00 \$18,000.00	\$0.00 \$0.00	\$80,000
B-Meters/Lacts	525	\$32,000.00	\$0.00	\$32,000
B-Flares/Combusters/Emission	526	\$31,000.00	\$0.00	\$31,000
Gas LituCompression	527	\$15,000.00	\$0.00	\$15,000
EQ-Instrumentation/SCADA/PQC	529	\$7,000.00	\$0.00	\$7,000
EQ-Tubing	530	\$5,000.00	\$0.02	\$5,000
EQ-Wetherd Equipment	531	\$3,000.00	\$0,00	\$3,000
EC-Pumps	532	\$5,000,00	\$0.00	\$5,000
EQ-Electrical System EQ-Packers/Anchors/Nangers	533 534	\$15,000.00 \$2,000.00	\$9.00 \$0.00	\$15,000 \$2,000
EQ-Miscellaneous	535	\$3,000.00	\$0.00	\$3,000
etal Tangible Costs		\$1,934,800.00	\$0.00	\$1,934,800
tangihis Costs				
S-Trite/Permits	201	\$11,000.00	\$0.00	\$11,000
Insurance	202	\$4,000,00	\$0.00	\$4,000
5-Damages/ROW 5-Survey/Stake Lotn	203 204	\$5,000.00	\$0.00 \$0.00	\$5,000
-Lan/Pita/Roads	205	\$6,000.00 \$112,000.00	\$0.00	\$6,000 \$112,000
-Driting Overhead	206	\$9,000.00	\$0.00	\$9,000
Daywork Contract	209	\$650,000.00	\$0.00	\$650,000
Orectional Drig Services	210	\$270,000.00	\$0.00	\$270,000
Fuel & Power	211	\$150,000,00	\$0.00	\$150,000
Water	212	\$55,000.00	\$0.00	\$55,000
Bets	213	\$104,000.00	\$0.00	\$104,000
Mud & Chemicals	214	\$245,000.00	\$0.00	\$245,000
Cement Surface Cement Intermed	217 218	\$30,000.00	\$0.00 \$0.00	\$30,000 \$80,000
Prod-2nd Int Cmt	219	\$105,000.00	\$0.00	\$105,000
Float Equipment & Centralizers	221	\$40,000.00	\$0.00	\$40,000
Csg Crews & Equip	222	\$50,000.00	\$0.00	\$50,000
Contract Labor	225	\$6,500.00	\$0.00	\$6,500
Company Sprvsn	226	\$72,000.00	\$0.00	\$72,000
Contract Sprvsn	227	\$110,000.00	\$0.00	\$110,000
Tsig Csg/Tbg	228	\$30,000.00	\$0.00	\$30,000
Mud Logging Unit Perl/Wireline Svc	229	\$40,000,00	\$0.00 \$0.00	\$40,000 \$4,000
Rentals Surface	235	\$4,000.00 \$150.000.00	\$0.00	\$150,000
Rentals-Subaric	235	\$150,000.00	\$0.00	\$150,000
Trucking/Forkir/Rig Mob	237	\$140,000.00	\$0.00	\$140,000
Welding Services	238	\$3,500.00	\$0.00	\$3,500
Contingency	243	\$44,000.00	\$0.00	\$44,000
Environt/Clsd Loop	244	\$255,000.00	\$0.00	\$255,000
Lctn/Pits/Roads	305	\$10,000.00	\$0.00	\$10,000
Frac Equipment	307(308	\$1,432,000.00	\$0.00	\$1,432,000 \$776,000
Frac Chemicats	309	\$776,000.00	\$0.00	\$1,150,000
Frac Proppant Frac Proppant Transportation	310	\$1,150,000.00	\$0.00	\$148,000
Fuel & Power	311	\$5,000.00	\$0.00	\$5,000
Water	312	\$930,000.00	\$0.00	\$930,000
Bits	313	\$9,000.00	\$0.00	
Mud & Chemicals	314	\$25,000.00	\$0.00	
Contract Labor	325	\$8,200.00	\$0.00	\$8,200
Company Sprvsn	326 327	\$15,000.00	\$0.00 \$0.00	\$15,000 \$134,000
Contract Sprvsn Talg Cag/Tog	327 <u>1</u> 328	\$134,000.00 \$5,000.00	\$0.00	\$134,000
PertWireline Svc	331	\$500,000.00	\$0.00	
Statutation/Training	332	\$12,000.00	\$0.00	
Completion Unit	333	\$60,000.00	\$0.00	\$50,000
Rentals-Surface	335	\$288,000.00	\$0.00	\$286,000
Rentals-Subsric	336	\$65,000.00	\$0.00	\$85,000
Trucking/ForkitURig Mob	337	\$22,500.00	\$0.00	
Welding Services	338 339	\$5,800.00 \$60,000.00	\$0.00 \$0.00	\$5,000
Water Disposal	339	\$250,000.00	\$0.00	
Contingency Environ/Clad Loop	344	\$5,000.00	\$0.00	
Dyed Desei	345	\$435,000.00	\$0.00	\$435,000
Coil Tubing	346	\$422,000.00	\$0.00	\$422,000
Flowback Craws & Equip	347	\$48,000.00	\$0.00	\$48,000
3-Location/Pris/Roads	353	\$73,000.00	\$0.00	\$73,000
3-Contract Labor	356	\$69,000.00	\$0.00	
B-Water Disposal	362	\$135,000.00	\$0.00	
EQ-Contract Labor	374	\$6,500.00	\$0.00	\$8,500
EQ-Contract Supervision	376	\$5,000,00	\$0.00	
EQ-Completion Unit	381 383	\$8,000.00 \$7,000.00	\$0.00	\$8,000 \$7,000
EO-Rentals-Surface	383		\$0.00 \$0.00	
EQ-Trkg/Forditt/Rig Mobilization	385	\$3,000.00	\$0.00	
otal Intangible Costs		414,030,240.00	20,00	10,003,200
oral Gross Cost		\$11,990,000.00	\$0.00	\$11,990,000

Total Gross Cost

Note: The above costs are estimates only. Actual costs will be billed as incurred.

COG Operating LLC

By

Date Prepared:

COG Operating LLC

We approve:

Ye Working Interes!

Company:

By

Printed Name:

Title.

Date Prepared:

The AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred.

COG OPERATING LLC AUTHORITY FOR EXPENDITURE Drift & Complete

Well Name SLEDGEHAMBIER FED COM 805H SHL 2430 FSL, 980 FWL or UNIT M SECTION 31 BHL 200 FSL, 980 FWL or UNIT M SECTION 33 Formadon Workcamp D Lapat 21, 28, 33, 245-28E AFE Number 1

Prospect State & County Objective Depth TVD

Tomahawk 2428 NEW MEXICO EDDY COUNTY Ord & Complete 23,700 10,530

AFE Numbers		110	10,550	
Cost Description	Code	Cost	Revision	
Tangible Costs			A PARTE LOSS	Tatat
D-Surface Casing	401	\$48,000,00	\$0.00	\$48,000.00
D-Intermed Csg	402	\$376,000.00	\$0.00	
D-Production Casing/Liner	403	\$405,000.00	\$0,50	\$375,000.00
D-Welthead Equip	405	\$40,000.00	\$0.00	\$405,000.00
C-Tubing	504	\$47,300.00	\$0.00	\$40,000.00
C-Welhead Equip	505	\$27,500.00	\$0.00	\$47,300,00
PEQ-Pumping Unit	506	\$96,000.00	\$0.00	\$27,500.00
PEO-Rods	508	\$35,000.00	\$0.00	\$96,000.00
TB-Tanks	510	\$56,000.00	\$0.00	\$35,000.00 \$56,000.00
TS-Flowlines/Papeines	511	\$117,000.00	\$0.00	\$117,000.00
TB-Hir TrutSeprir	512	\$117,000.00	\$0.00	
TB-Electrical System/Equipment	513	\$88,000.00	\$0.00	\$117,000.00
C-Pckrs/Anchors/Hors	514	\$86,000.00	\$0.00	\$83,000.00
TB-Couplings/Fittings/Valves	515	\$165,000.00	\$0.00	\$66,000.00
TB-Gas Litt/Compression	516	\$35,000.00	\$0.00	\$165,000.00
C-Macetoneous	519	\$80,000.00	\$0.00	\$35,000.00
TB-Pumps-Surface	521	\$18,000.00	\$0.00	\$80,000.00
TB-Meters/Lacts	525	\$32,000,00	\$0.00	\$18,000.00
TB-Flares/Combusters/Emusion	526	\$31,000.00		\$32,000.00
C-Gas Lift/Comoression	527	\$15,000.00	\$0,00	\$31.000.00
PEQ-Instrumentation/SCADA/POC	529	\$7,000.00	\$0.00	\$15,000.00
PEQ-Tubrig	530	\$5,000.00	\$0.00	\$7,000.00
PEO-Welhead Equipment	531	\$3,000.00	\$0.00	\$5,000.00
PEQ-Pumos	532		50 00	\$3,000,00
PEQ-Electrical System	533	\$5,000,00	\$0.00	\$5,000.00
PEO-Packers/Anchors/Hangers	534	\$15,000.00	\$0.00	\$15,000.00
PEQ-Miscellaneous	535	\$2,000.00	\$0.00	\$2,000,00
Total Tangible Costs	235	\$3,000.00	\$0.00	\$3,000.00
rocal ranging Costs		\$1,934,800.00	\$0.00	\$1,934,800.00
ntangible Costs				
PS-Title/Permits	201	\$11 000 00	\$0.00	\$11,000.00
D-Insurance	202	\$4,000.00	\$0.00	\$4,000,00
PS-Damages/ROW	203	\$5,000.00	30.00	\$5,000,00
S-Survey/Stake Lotte	204	\$6,000.00	\$0.00	\$6,000.00
O-Letn/Pits/Roads	205	\$112,000,00	50.00	\$112,000,00

Intengible Costs PS-Trie/Permits				
	201	\$11 000 00	\$0.00	\$11.000
D-Insurance	202	\$4,000.00	\$0.00	\$4,000
PS-Damages/ROW	203	\$5,000.00	30.00	\$5,000
S-Survey/Stake Loth	204	\$5,000.00	\$0.00	\$6,000
D-Lein/Pits/Roads	205	\$112,000.00	\$0.00	\$112,000
D-Onling Overhead	206	\$9,000.00	\$0.00	\$9,000
D-Daywork Contract	209	\$670,000.00	\$0.00	\$670,000
D-Directional Drig Services	210	\$275,000.00	\$0.00	\$275,000
D-Fuel & Power	211	\$150,000.00	\$0.00	\$150,000
2-Water	212	\$55,000.00	\$0,00	\$55,000
D-8/IS	213	\$104,000.00	\$0.00	\$104.000
Hud & Chemicals	214	\$250,000,00	\$0.00	\$250,000
-Cement Surface	217	\$30,000.00	50.00	\$30,000
-Cement Interned	218	\$80,000.00	\$0.00	\$80,000
-Prod-2nd Int Cmt	219	\$105,000.00	\$0.00	\$105,000
P-Float Equipment & Centralizers	221	\$40,000.00	\$0.00	\$40,000
HCtsg Craws & Equip	222	\$50,000.00	\$0.00	\$50,000
+Contract Labor	225	\$6,500.00	\$0.00	\$6,500
-Company Sprvsn	226	\$72,000.00	\$0.00	\$72,000
-Contract Sprvsn	227	\$110,000.00	\$0.00	\$110,000
-Tstg Csg/Tbg	228	\$30,000.00	\$0.00	\$30,000
-Mud Logging Unit	229	\$40,000.00	\$0.00	\$40,000
Perl/Wireline Svc	231	\$4,000.00	\$0.00	\$4,000
-Rentats-Surface	235	\$150,000,00	\$0.00	\$150,000
-Rentals-Subsric	236	\$150,000.00	\$0.00	\$150,000
-Trucking/Forklift/Rig Mob	237	\$140,000.00	\$0.00	\$140,000
Welding Services	238	\$3,500.00	\$0.00	\$3,500
Contingency	243	\$49,000.00	\$0.00	\$49,000
Environt/Clad Loan	244	\$255,000.00	\$0.00	\$255,000
Lein/Pits/Roads	305	\$10,000.00	\$6.00	\$10,000
Frac Equipment	307	\$1,472,000.00	\$0.00	\$1,472,000
Frac Chemicals	308	\$785,000.00	\$0.00	\$788,000
Frac Proppant	309	\$1,159,000.00	\$0.00	\$1,159,000
Frac Proppant Transportation	310	\$148,000.00	\$0.00	\$148,000
Fuel & Power	311	\$5,000.00	\$0.00	\$5,000
-Water	312	\$935,000.00	\$0,00	\$935,000
-Bas	313	\$9,000,00	\$0.00	39,000
-Med & Chemicals	314	\$25,000.00	\$0.00	\$25,000.
Contract Labor	325	\$8,200.00	\$0.00	\$8,200
Company Sprvsn	326	\$15,000.00	\$0.00	\$15,000
Contract Servan	327	\$134,000.00	\$0.00	\$15,000. \$134,000.
Tsig Cso/Tbg	328	\$5,000.00	\$0.00	\$5,000
Perl/Myreline Svc	331	\$508,000.00	\$0.00	\$508,000
Stimulation/Treating	332	\$12,000.00	50 00	\$12,000.
Completion Unit	333	\$60,000.00	\$0.00	\$60,000.
Rentals-Surface	335	\$296,000.00	\$0.00	\$295,000.
Rentals-Subsric	338	\$65,000,00	\$0.00	\$65,000.
Trucking/Forkidt/Rig Mob	337	\$22,500.00	\$0.00	
Welding Senaces	338	\$5,000.00	50 00	\$22,500. \$5,000.
Water Disposal	339	\$60,000.00	\$0.00	\$60,000.
Contingency	343	\$250,000.00	50.00	\$250,000
Environit/Clad Loop	344	\$5,000.00	\$0.00	\$250,000, \$5,000.
Dyed Diesel	345	\$455,000.00	\$0.00	
Cod Tubino	348	\$435,000.00	\$0.00	\$455,000.
Flowback Crews & Equip	347	\$48,000.00	\$0.00	\$435,000.
-Location/Pits/Roads	353	\$73,000.00	\$0.00	\$48,000.
-Contract Labor	358	\$69,000.00		\$73,000.
-Water Disposa:	382		\$0.00	\$89,000.
G-Contract Labor		\$135,000.00	\$0.00	\$135,000.
C-Contract Supervision	374	\$8,500.00	\$0.00	\$6,500.
CI-Contract Supervision CI-Completion Unit	376	\$5,000.00	\$0.00	\$5,000.
-Ci-Completion Unit -Ci-Rentats-Surface	381	\$8,000.00	\$0.00	\$8,000.0
	383	\$7,000.00	\$0.00	\$7,000.0
Q-Trkg/Forkift/Rug Mobilization	385	\$3,000.00	\$0.00	\$3,000.0
otal Intangible Costs	303	\$10,205,200.00	\$0.00	\$10,206,

Total Gross Cost \$12,140,000.00 |

Note: The above costs are estimates only. Actual costs will be billed as incurred. COG Operating LLC Date Prepared: COG Operating LLC We approve: % Working Injerest Ву Company By

This AFE is only an estimate. By signing you agree to pay your share of the actual costs incurred

\$0.00

\$12,140,000,00

COG OPERATING LLC AUTHORITY FOR EXPENDITURE Drill & Complete

Well Name SLEDGEHAMMER FED COM 813H SHL 2450 FSL, 938 FWL or UNIT IL SECTION 21 BHL 250 FSL, 930 FWL or UNIT M SECTION 33 Formation Wolfcamp C Legal 21, 23, 33, 245-282 AFE Numbers Prospect State & County Objective Dapth TVD Tomatigwik 2428 NEW MEXICO, EDDY COUNTY DRIB & Complete 23,200 10,245

Cost Description .	Code	Cost	Revision	Total
Tampible Costs				
D-Surface Casing	401	\$48,000.00	\$0.00	\$48,000.00
D-Intermed Csg	402	\$378,000.00	\$0.00	\$376,000.00
D-Production Casing/Liner	403	\$405,000.00	\$0.00	\$405,000.00
D-Wellhead Equip	405	\$40,000.00	\$0.00	\$40,000.00
C-Tubing	504	\$47,300.00	\$0.00	\$47,300.00
C-Wellhead Equip	505	\$27,500.00	\$0.00	\$27,500.00
PEO-Pumping Unit	508	\$96,000.06	\$0.00	\$96,000.00
PEQ-Rods	508	\$35,000.00	\$0,00	\$35,000.00
TB-Tanks	510	\$56,000.00	\$0.00	\$56,000.00
TB-Flowlines/Pipel-nes	511	\$117,000.00	\$0.00	\$117,000.00
TB-Hy Try/Septir	512	\$117,000.00	\$0.00	\$117,000.00
TB-Electrical System/Equipment	513	\$58,000 00	\$0.00	\$88,000.00
C-Petra/Anchors/Hors	514	\$66,000 00	\$0.00	\$66,000.00
TB-Cougants/Fattnos/Valves	515	\$165,000 00	\$0.00	\$165,000.00
TB-Gas Lift/Compression	516	\$35,000 00	\$0.00	\$35,000.00
C-Macellaneous	519	\$80,000 00	\$0.00	\$80,000.00
TB-Pumps-Surface	521	\$18,000 00	\$0.00	\$18,000.00
TB-Maters/Lacis	525	\$32,000 00	\$0.00	\$32,000.00
T8-Flares/Combusters/Emission	526	\$31,000.00	\$0.00	\$31,000.00
C-Gas Litt/Compression	527	\$15,000 00	\$0.00	\$15,000.00
PEO-Instrumentation/SCADA/POC	529	\$7,000 00 1	\$0.00	\$7,000.00
PEO-Tubeng	530	\$5,000 00	\$0.00 [\$5,000.00
PEO-Welthead Equipment	531	\$3,000 00	\$0.00	\$3,000.00
PEO-Pumps	532	\$5,000 00	\$0.00	\$5,000.00
PEQ-Electrical System	533	\$15,000 00	\$0.00	\$15,000.00
PEQ-Packers/Anchors/Hangers	534	\$2 000 00	\$0.00	\$2,000.00
PEQ-Miscellaneous	535	\$3,000 00	\$0.00	\$3,000.00
Total Tangible Costs		\$1,934,800.00	\$0.00	\$1,934,800.00

PEQ-Miscellaneous	535	\$3,000 00	\$0.00	\$3,000.00
Total Tangible Costs		\$1,934,800.00	\$0.00	\$1,934,800.00
Intangible Costs	201	\$11,000.00	\$0.00	\$11,000.00
PS-Title/Permits	201	\$4,000.00	\$0.00	\$4,000.00
D-Insurance PS-Damages/ROW	203	\$5,000.00	\$0.00	\$5,000.00
PS-Survey/Stake Lctn	204	\$6,000.00	\$0.00	\$6,000.00
D-Letn/Pits/Roads	205	\$112,000.00	\$0.00	\$112,000.00
D-Briding Overhead	206	\$9,000.00	\$0.00	\$9,000.00
D-Daywork Contract	209	\$670,000.00	\$0.00	\$670,000.00
D-Drectional Drtg Services	210	\$275,000.00	\$0.00	\$275,000,00
D-Fuel & Power	211	\$150,000.00	\$0.00	\$150,000,00
D-Water	212	\$55,000,00	\$0.00	\$55,000.00
O-Bas	213	\$104,000.00	\$0.00	\$104,000.00
D-Mud & Chemicals	214	\$250,000.00	\$0.00	\$250,000.00 \$30,000.00
D-Cément Surface	217	\$30,000.00	\$0.00 \$0.00	\$80,000.00
D-Coment Intermed	215 219	\$80,000.00	\$0.00	
D-Prod-2nd Int Crnt	219	\$40,000.00	\$0.00	\$40,000.00
D-Float Equipment & Centralizers D-Csq Craws & Equip	222	\$50,000.00	\$0.00	\$50,000.00
D-Contract Labor	225	\$6,500.00	\$0.00	
D-Company Sprvsn	226	\$72,000.00	\$0.00	
D-Contract Sprvsn	227	\$110,000.00	\$0.00	\$110,000.00
D-Tsig Cag/Tog	228	\$30,000.00	\$0.00	\$30,000.00
D-Mud Logging Unit	229	\$40,000.00	\$0,00	
D-Parl/Weeking Svc	231	\$4,000.00	\$0.00	\$4,000.00
D-Renials-Surface	235	\$150,000.00	\$0.00	\$150,000.00
D-Rentals-Subsric	235	\$150,000.00	\$0.00	\$150,000.00
D-Trucking/Forklt/Rig Mob	237	\$140,000.00	\$0.00	\$140,000.00
D-Welding Services	238	\$3,500.00	\$0.00	\$3,500.00
D-Contingency	243	\$49,000.00	\$0.00	\$49,000.00
D-Environtl/Clad Loop	244	\$255,000.00	\$0.00	
C-Letri/Pits/Roads	305	\$10,000.00	\$0.00 \$0.00	\$10,000.00 \$1,472,000.00
C-Frac Equipment	307 308	\$1,472,000.00 \$786,000.00	\$0.00	\$786,000.00
C-Frac Chemicals	309	\$1,159,000.00	\$0.00	
C-Frac Proppant C-Frac Proppant Transportation	310	\$148,000.00	\$0.00	\$148,000.00
C-Fuel & Power	311	\$5,000.00	\$0.00	\$5,000.00
C-Water	312	\$935,000.00	50.00	\$935,000.00
C-Bita	313	\$9,000.00	\$0.00	\$9,000,00
C-Mud & Chamicais	314	\$25,000.00	\$0.00	\$25,000.00
C-Contract Labor	325		\$0.00	\$8,200.00
C-Company Sprvsn	326	\$15,000.00	\$0.00	\$15,000.00
C-Contract Sprvsn	327	\$134,000.00	\$0.00	\$134,000.00 \$5,000.00
C-Tsig Csg/Tbg	328	\$5,000.00	\$0.00	\$508,000.00
C-Perl/Wirekne Svc	331	\$508,000.00	\$0.00 \$0.00	\$12,000.00
C-Stimulation/Treating	332 333	\$12,000.00 \$60,000.00	\$0.00	\$60,000.00
C-Completion Unit	333		\$0.00	\$296,000.00
C-Rentals-Surface C-Rentals-Subaric	336		\$0.00	
C-Trucking/Forkint/Rig Mob	337	\$22,500.00	\$0.00	\$22,500.00
C-Welding Services	338	\$5,000.00	\$0.00	\$5,000.00
C-Water Disposar	339	\$60,000,00	\$0.00	\$80,000.00
C-Conlingency	343	\$250,000.00	\$0.00	\$250,000.00
C-EnvironMVClad Loop	344	\$5,000.00	\$0.00	\$5,000.00
C-Dyed Diesel	345	\$455,000.00	\$0.00	
C-Call Tubing	346		\$0.00	\$435,000,00 \$48,000,00
C-Flowback Crews & Equip	347 353	\$48,000,00	\$0.00 \$0.00	
TB-Location/Pits/Roads	353 356	\$73 000.00 \$69,000 00	\$0.00	
TB-Contract Labor TB-Water Disposal	359 352	\$135,000 00	\$0.00	
PEO-Contract Labor	374	\$6 500 00	\$0.00	
PEQ-Contract Cabor PEQ-Contract Supernsion	376		\$0.00	
PEO-Completion Unit	381	\$6 000 00	\$0.00	
PEQ-Rentals-Surface	383		\$0.00	\$7,000.00
PEQ-Trisg/Forkit/Rig Mobilization	385	\$3 000 00	\$0.00	\$3,000.00
Total Intengible Costs		\$10,295,200.00	\$0.00	\$10,205,200.00

Total Gross Cost	\$12,140,000.00	\$0.00	\$12,140,000.00
Note: The above costs are estimates only. Actual costs will be b	alled as incurred.		
COG Operating LLC			
By:		Date Prepared:	
		COG Operating LLC	
We approve: % Working Interest		Ву:	
Company: By:			
Printed Name: Title: Oxfe'	Page 1 of 1	This AFE is only an estimate. By sig- your share of the actual costs incurre	

Josh Anderson

From:

Scott Tomlinson <stomlinson@concho.com>

Sent:

Wednesday, June 20, 2018 4:44 PM

To:

Josh Anderson

Cc:

Mollie McAuliffe

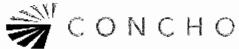
Subject:

RE: W/2 Kansas 21/28 JOA dated 4/15/18, Eddy Co., NM, Exhibit "A"

Thank you, Josh.

Scott S. Tomlinson, CPL Senior Staff Landman, Outside Operated Properties

COG OPERATING LLC One Concho Center, Room 556 600 W. Illinois Avenue Midland, Texas 79701 Direct 432.818.2234





From: Josh Anderson [mailto:janderson@Mewbourne.com]

Sent: Wednesday, June 20, 2018 4:29 PM

To: Scott Tomlinson **Cc:** Mollie McAuliffe

Subject: [External] W/2 Kansas 21/28 JOA dated 4/15/18, Eddy Co., NM, Exhibit "A"

**** External email. Use caution. ****

Scott,

Attached is the Exhibit "A" for the JOA captioned above.

Please add this to your file, and if you have any questions or concerns, please advise.

Thanks,

Josh Anderson

Petroleum Landman 500 West Texas Ave., Suite 1020 Midland, TX 79701

Phone: (432) 682-3715 | Fax: (432) 685-4170

Cell: (405) 406-8982



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Josh Anderson

From:

Josh Anderson

Sent:

Tuesday, July 17, 2018 4:18 PM

To:

'Scott Tomlinson'

Subject:

Kansas 21/28 W/2 JOA Replacement Pages

Attachments:

COG Cover Letter Kansas 21-28 W2 JOA Changes .pdf; Kansas 21-28 W2 JOA

ı

Changes.pdf

Scott,

Attached are the JOA replacement pages and corresponding cover letters, for the above captioned prospect.

If you have any questions, don't hesitate to ask.

Thanks,

Josh Anderson

Petroleum Landman <u>500 West Texas Ave., Suite 1020</u> Midland, TX 79701 Phone: (432) 682-3715 | Fax: (432) 685-4170

Cell: (405) 406-8982



500 WEST TEXAS AVENUE, SUITE 1020 MIDLAND, TEXAS 79701-4279

TELEPHONE (432) 682-3715 FACSIMILE (432) 685-4170

April 18, 2018

Via Certified Mail

Crown Oil Partners V, LP P.O. Box 50820 Midland, Texas Attn: Brian Arnold

Re: Kansas "21/28" W2LM Federal No. 1H

2435' FSL & 330' FWL (SL) (Sec. 21) 330' FSL & 330' FWL (BHL) (Sec. 28)

Section 21/28, T24S, R28E Eddy County, New Mexico

Gentlemen:

Mewbourne Oil Company ("Mewbourne") as Operator hereby proposes to form a 480.00 acre Working Interest Unit ("WIU") covering the SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 for oil and gas production. The targeted interval for the proposed unit is the Wolfcamp formation. Apparently Crown Oil Partners V, LP ("Crown") owns 1.05074% interest in the W/2 of the captioned Section 28 (320.00 gross acres). Accordingly, Crown would own 0.70049% working interest in the proposed WIU (1.05074% interest X 320.00 gross acres = 3.36237 net acres / 480.00 gross acres = 0.70049% interest in the WIU).

Mewbourne as Operator hereby proposes to drill the captioned well at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 10,515 feet subsurface to evaluate the Wolfcamp Formation. The proposed well will have a measured depth (MD) of approximately 17,760 feet. The SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 will be dedicated to the well as the proration unit.

Regarding the above, enclosed for your further handling is our AFE dated March 19, 2018 for the captioned proposed well. In the event your firm elects to participate in the proposed well, please execute the enclosed AFE and return to me within thirty (30) days. Our Joint Operating Agreement is enclosed.

Should you have any questions regarding the above, please email me at <u>janderson@mewbourne.com</u> or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY

Josh Anderson Landman

ful almhum

500 WEST TEXAS AVENUE, SUITE 1020 MIDLAND, TEXAS 79701-4279

TELEPHONE (432) 682-3715 FACSIMILE (432) 685-4170

April 18, 2018

<u>Via Certified Mail</u>

Crown Oil Partners V, LP P.O. Box 50820 Midland, Texas Attn: Brian Arnold

Re: Kansas "21/28" W0LM Federal No. 2H

2435' FSL & 380' FWL (SL) (Sec. 21) 330' FSL & 400' FWL (BHL) (Sec. 28)

Section 21/28, T24S, R28E Eddy County, New Mexico

Gentlemen:

Mewbourne Oil Company ("Mewbourne") as Operator hereby proposes to form a 480.00 acre Working Interest Unit ("WIU") covering the SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 for oil and gas production. The targeted interval for the proposed unit is the Wolfcamp formation. Apparently Crown Oil Partners V, LP ("Crown") owns 1.05074% interest in the W/2 of the captioned Section 28 (320.00 gross acres). Accordingly, Crown would own 0.70049% working interest in the proposed WIU (1.05074% interest X 320.00 gross acres = 3.36237 net acres / 480.00 gross acres = 0.70049% interest in the WIU).

Mewbourne as Operator hereby proposes to drill the captioned well at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 9,475 feet subsurface to evaluate the Wolfcamp Formation. The proposed well will have a measured depth (MD) of approximately 16,765 feet. The SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 will be dedicated to the well as the proration unit.

Regarding the above, enclosed for your further handling is our AFE dated March 19, 2018 for the captioned proposed well. In the event your firm elects to participate in the proposed well, please execute the enclosed AFE and return to me within thirty (30) days. Our Joint Operating Agreement is enclosed.

Should you have any questions regarding the above, please email me at <u>janderson@mewbourne.com</u> or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY

Josh Anderson Landman

ful blubum

500 WEST TEXAS AVENUE, SUITE 1020 MIDLAND, TEXAS 79701-4279

TELEPHONE (432) 682-3715 FACSIMILE (432) 685-4170

April 18, 2018

Via Certified Mail

Crump Energy Partners II, LLC P.O. Box 50820 Midland, Texas Attn: Brian Arnold

Re: Kansas "21/28" W2LM Federal No. 1H

2435' FSL & 330' FWL (SL) (Sec. 21) 330' FSL & 330' FWL (BHL) (Sec. 28)

Section 21/28, T24S, R28E Eddy County, New Mexico

Gentlemen:

Mewbourne Oil Company ("Mewbourne") as Operator hereby proposes to form a 480.00 acre Working Interest Unit ("WIU") covering the SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 for oil and gas production. The targeted interval for the proposed unit is the Wolfcamp formation. Apparently Crump Energy Partners II, LLC ("Crump") owns 1.05074% interest in the W/2 of the captioned Section 28 (320.00 gross acres). Accordingly, Crump would own 0.70049% working interest in the proposed WIU (1.05074% interest X 320.00 gross acres = 3.36237 net acres / 480.00 gross acres = 0.70049% interest in the WIU).

Mewbourne as Operator hereby proposes to drill the captioned well at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 10,515 feet subsurface to evaluate the Wolfcamp Formation. The proposed well will have a measured depth (MD) of approximately 17,760 feet. The SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 will be dedicated to the well as the proration unit.

Regarding the above, enclosed for your further handling is our AFE dated March 19, 2018 for the captioned proposed well. In the event your firm elects to participate in the proposed well, please execute the enclosed AFE and return to me within thirty (30) days. Our Joint Operating Agreement is enclosed.

Should you have any questions regarding the above, please email me at <u>janderson@mewbourne.com</u> or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY

Josh Anderson Landman

ful Oludina

500 WEST TEXAS AVENUE, SUITE 1020 MIDLAND, TEXAS 79701-4279

> TELEPHONE (432) 682-3715 FACSIMILE (432) 685-4170

April 18, 2018

Via Certified Mail

Crump Energy Partners II, LLC P.O. Box 50820 Midland, Texas Attn: Brian Arnold

Re:

Kansas "21/28" W0LM Federal No. 2H 2435' FSL & 380' FWL (SL) (Sec. 21) 330' FSL & 400' FWL (BHL) (Sec. 28) Section 21/28, T24S, R28E

Eddy County, New Mexico

Gentlemen:

Mewbourne Oil Company ("Mewbourne") as Operator hereby proposes to form a 480.00 acre Working Interest Unit ("WTU") covering the SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 for oil and gas production. The targeted interval for the proposed unit is the Wolfcamp formation. Apparently Crump Energy Partners II, LLC ("Crump") owns 1.05074% interest in the W/2 of the captioned Section 28 (320.00 gross acres). Accordingly, Crump would own 0.70049% working interest in the proposed WIU (1.05074% interest X 320.00 gross acres = 3.36237 net acres / 480.00 gross acres = 0.70049% interest in the WIU).

Mewbourne as Operator hereby proposes to drill the captioned well at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 9,475 feet subsurface to evaluate the Wolfcamp Formation. The proposed well will have a measured depth (MD) of approximately 16,765 feet. The SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 will be dedicated to the well as the proration unit.

Regarding the above, enclosed for your further handling is our AFE dated March 19, 2018 for the captioned proposed well. In the event your firm elects to participate in the proposed well, please execute the enclosed AFE and return to me within thirty (30) days. Our Joint Operating Agreement is enclosed.

Should you have any questions regarding the above, please email me at janderson@mewbourne.com or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY

Josh Anderson Landman

ful Andrew

500 WEST TEXAS AVENUE, SUITE 1020 MIDLAND, TEXAS 79701-4279

TELEPHONE (432) 682-3715 FACSIMILE (432) 685-4170

April 18, 2018

Via Certified Mail

Nadel and Gussman Delaware, LLC P.O. Box 50820 Midland, Texas Attn: Brian Arnold

Re:

Kansas "21/28" W2LM Federal No. 1H 2435' FSL & 330' FWL (SL) (Sec. 21) 330' FSL & 330' FWL (BHL) (Sec. 28) Section 21/28, T24S, R28E Eddy County, New Mexico

Gentlemen:

Mewbourne Oil Company ("Mewbourne") as Operator hereby proposes to form a 480.00 acre Working Interest Unit ("WIU") covering the SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 for oil and gas production. The targeted interval for the proposed unit is the Wolfcamp formation. Apparently Nadel and Gussman Delaware, LLC ("Nadel") owns 0.66363% interest in the W/2 of the captioned Section 28 (320.00 gross acres). Accordingly, Nadel would own 0.44242% working interest in the proposed WIU (0.66363% interest X 320.00 gross acres = 2.12362 net acres / 480.00 gross acres = 0.44242% interest in the WIU).

Mewbourne as Operator hereby proposes to drill the captioned well at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 10,515 feet subsurface to evaluate the Wolfcamp Formation. The proposed well will have a measured depth (MD) of approximately 17,760 feet. The SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 will be dedicated to the well as the proration unit.

Regarding the above, enclosed for your further handling is our AFE dated March 19, 2018 for the captioned proposed well. In the event your firm elects to participate in the proposed well, please execute the enclosed AFE and return to me within thirty (30) days. Our Joint Operating Agreement is enclosed.

Should you have any questions regarding the above, please email me at <u>janderson@mewbourne.com</u> or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY

Josh Anderson Landman

ful Charles

500 WEST TEXAS AVENUE, SUITE 1020 MIDLAND, TEXAS 79701-4279

TELEPHONE (432) 682-3715 FACSIMILE (432) 685-4170

April 18, 2018

<u>Via Certified Mail</u>

Nadel and Gussman Delaware, LLC P.O. Box 50820 Midland, Texas Attn: Brian Arnold

Re:

Kansas "21/28" W0LM Federal No. 2H 2435' FSL & 380' FWL (SL) (Sec. 21) 330' FSL & 400' FWL (BHL) (Sec. 28) Section 21/28, T24S, R28E Eddy County, New Mexico

Gentlemen:

Mewbourne Oil Company ("Mewbourne") as Operator hereby proposes to form a 480.00 acre Working Interest Unit ("WIU") covering the SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 for oil and gas production. The targeted interval for the proposed unit is the Wolfcamp formation. Apparently Nadel and Gussman Delaware, LLC ("Nadel") owns 0.66363% interest in the W/2 of the captioned Section 28 (320.00 gross acres). Accordingly, Nadel would own 0.44242% working interest in the proposed WIU (0.66363% interest X 320.00 gross acres = 2.12362 net acres / 480.00 gross acres = 0.44242% interest in the WIU).

Mewbourne as Operator hereby proposes to drill the captioned well at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 9,475 feet subsurface to evaluate the Wolfcamp Formation. The proposed well will have a measured depth (MD) of approximately 16,765 feet. The SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 will be dedicated to the well as the proration unit.

Regarding the above, enclosed for your further handling is our AFE dated March 19, 2018 for the captioned proposed well. In the event your firm elects to participate in the proposed well, please execute the enclosed AFE and return to me within thirty (30) days. Our Joint Operating Agreement is enclosed.

Should you have any questions regarding the above, please email me at <u>janderson@mewbourne.com</u> or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY

Josh Anderson

ful Amhum

Landman



Date: April 20, 2018

Simple Certified:

The following is in response to your April 20, 2018 request for delivery information on your Certified Mail™/RRE item number 9402810699945030802029. The delivery record shows that this item was delivered on April 20, 2018 at 10:24 am in MIDLAND, TX 79705. The scanned image of the recipient information is provided below.

Signature of Recipient:

Address of Recipient:

5082*0* 79710

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

Sincerely, United States Postal Service

> Attn: Brian Arnold Crown Oil Partners V,LP PO BOX 50820 MIDLAND, TX 79710 Reference #: Kansas Propspect 21/28 JA Item ID: Kansas Propspect 21 28



Date: April 20, 2018

Simple Certified:

The following is in response to your April 20, 2018 request for delivery information on your Certified Mail™/RRE item number 9402810699945030801862. The delivery record shows that this item was delivered on April 20, 2018 at 10:24 am in MIDLAND, TX 79705. The scanned image of the recipient information is provided below.

Signature of Recipient:

Address of Recipient:

50820 79710

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

Sincerely, United States Postal Service

> Attn: Brian Arnold Nadel and Gussman Delaware, LLC PO BOX 50820 MIDLAND, TX 79710 Reference #: Kansas Propspect 21/28 JA Item ID: Kansas Propspect 21 28

Josh Anderson

From:

Josh Anderson

Sent:

Tuesday, July 17, 2018 4:20 PM

To:

'Brian Arnold'

Subject:

Kansas 21/28 W/2 JOA Replacement Pages

Attachments:

BC Cover Letter Kansas 21-28 W2 JOA Changes .pdf; Kansas 21-28 W2 JOA Changes.pdf

Brian,

Attached are the JOA replacement pages and corresponding cover letters, for the above captioned prospect.

If you have any questions, don't hesitate to ask.

Thanks,

Josh Anderson

Petroleum Landman <u>500 West Texas Ave., Suite 1020</u> Midland, TX 79701 Phone: (432) 682-3715 | Fax: (432) 685-4170 Cell: (405) 406-8982



Josh Anderson

From:

Josh Anderson

Sent:

Monday, July 23, 2018 11:18 AM

To:

'Brian Arnold'

Subject:

RE: W/2 Kansas 21/28 JOA dated 4/15/18, Eddy Co., NM, Exhibit "A"

Brian,

We did, but when it was prepared, Devon was still in title. We are having Federal abstracts being prepared currently that should be here any day. When those get in, I will let you know.

Thanks,

Josh Anderson

Petroleum Landman 500 West Texas Ave., Suite 1020 Midland, TX 79701 Phone: (432) 682-3715 | Fax: (432) 685-4170

Cell: (405) 406-8982



From: Brian Arnold [mailto:barnold@bcoperating.com]

Sent: Thursday, July 19, 2018 2:58 PM

To: Josh Anderson

Subject: RE: W/2 Kansas 21/28 JOA dated 4/15/18, Eddy Co., NM, Exhibit "A"

Josh,

One more question on this deal and hopefully I can get this put to bed, has MOC conducted title at the Federal level on NMNM-36975 as it pertains to the W/2 of Section 28? And if so does that title reflect ownership in Crown V, Crump III and N&G?

Thank you,

Brian Arnold, Jr.

From: Josh Anderson < janderson@Mewbourne.com >

Sent: Tuesday, July 17, 2018 8:43 AM

To: Brian Arnold < barnold@bcoperating.com >

Subject: RE: W/2 Kansas 21/28 JOA dated 4/15/18, Eddy Co., NM, Exhibit "A"

Brian,

We show that interest going to MRO as well. We actually show you guys owning an interest in the W/2 of Section 28, that was derived from Devon.

We're showing Devon conveying an interest in OGL USA NMNM-36975 to Crown Oil Partners V, LP, Crump Energy Partners II, LLC, & Nadel and Gussman Delaware, LLC in the W/2 of Sec. 28-24S-28E, Eddy Co., NM, but can't find that subsequently conveyed to Marathon.

I also asked Matt Brown at MRO about it, and he said that it wasn't in the PSA either.

Thanks,

Josh Anderson

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Petroleum Landman
500 West Texas Ave., Suite 1020
Midland, TX 79701
Phone: (432) 692 3715 L Foy: (432)

Phone: (432) 682-3715 | Fax: (432) 685-4170

Cell: (405) 406-8982



From: Brian Arnold [mailto:barnold@bcoperating.com]

Sent: Monday, July 16, 2018 4:29 PM

To: Josh Anderson

Subject: RE: W/2 Kansas 21/28 JOA dated 4/15/18, Eddy Co., NM, Exhibit "A"

Good Afternoon Josh – I am still working on this proposal, the interest that you show as owned by Crown V, Crump II and N&G is in the SW/4 of Section 21, T24S-R28E correct?

I have attached a curative assignment from BC et al to MRO for the leases in Section 21, let me know if this does not clear up the interest.

Thank you,

Brian Arnold, Jr.

From: Josh Anderson < <u>janderson@Mewbourne.com</u>>

Sent: Wednesday, June 20, 2018 4:27 PM
To: Brian Arnold barnold@bcoperating.com

Subject: W/2 Kansas 21/28 JOA dated 4/15/18, Eddy Co., NM, Exhibit "A"

Brian,

Attached is the Exhibit "A" for the JOA captioned above.

Please add this to your file, and if you have any questions or concerns, please advise.

Thanks,

Josh Anderson

Petroleum Landman <u>500 West Texas Ave., Suite 1020</u> Midland, TX 79701 Phone: (432) 682-3715 | Fax: (432) 685-4170

Cell: (405) 406-8982

500 WEST TEXAS AVENUE, SUITE 1020 MIDLAND, TEXAS 79701-4279

TELEPHONE (432) 682-3715 FACSIMILE (432) 685-4170

April 13, 2018

Via Certified Mail

T.I.G. Properties, L.P. P.O. Box 10508 Midland, TX 79702

Re:

Kansas "21/28" W2LM Federal No. 1H 2435' FSL & 330' FWL (SL) (Sec. 21) 330' FSL & 330' FWL (BHL) (Sec. 28) Section 21/28, T24S, R28E Eddy County, New Mexico

Gentlemen:

Mewbourne Oil Company ("Mewbourne") as Operator hereby proposes to form a 480.00 acre Working Interest Unit ("WIU") covering the SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 for oil and gas production. The targeted interval for the proposed unit is the Wolfcamp formation. Apparently T.I.G. Properties L.P. ("TIG") owns 0.62500% interest in the SW/4 of the captioned Section 21 (160.00 gross acres). Accordingly, TIG would own 0.20833% working interest in the proposed WIU (0.62500% interest X 160.00 gross acres = 1.00000 net acres / 480.00 gross acres = 0.20833% interest in the WIU).

Mewbourne as Operator hereby proposes to drill the captioned well at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 10,515 feet subsurface to evaluate the Wolfcamp Formation. The proposed well will have a measured depth (MD) of approximately 17,760 feet. The SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 will be dedicated to the well as the proration unit.

Regarding the above, enclosed for your further handling is our AFE dated March 19, 2018 for the captioned proposed well. In the event your firm elects to participate in the proposed well, please execute the enclosed AFE and return to me within thirty (30) days. Our Joint Operating Agreement to follow.

Should you have any questions regarding the above, please email me at <u>janderson@mewbourne.com</u> or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY

Josh Anderson Landman

ful Auch

500 WEST TEXAS AVENUE, SUITE 1020 MIDLAND, TEXAS 79701-4279

TELEPHONE (432) 682-3715 FACSIMILE (432) 685-4170

April 13, 2018

<u>Via Certified Mail</u>

T.I.G. Properties, L.P. P.O. Box 10508 Midland, TX 79702

Re:

Kansas "21/28" W0LM Federal No. 2H 2435' FSL & 380' FWL (SL) (Sec. 21) 330' FSL & 400' FWL (BHL) (Sec. 28) Section 21/28, T24S, R28E Eddy County, New Mexico

Gentlemen:

Mewbourne Oil Company ("Mewbourne") as Operator hereby proposes to form a 480.00 acre Working Interest Unit ("WIU") covering the SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 for oil and gas production. The targeted interval for the proposed unit is the Wolfcamp formation. Apparently T.I.G. Properties L.P. ("TIG") owns 0.62500% interest in the SW/4 of the captioned Section 21 (160.00 gross acres). Accordingly, TIG would own 0.20833% working interest in the proposed WIU (0.62500% interest X 160.00 gross acres = 1.00000 net acres / 480.00 gross acres = 0.20833% interest in the WIU).

Mewbourne as Operator hereby proposes to drill the captioned well at the above referenced surface location (SL) to the referenced bottom hole location (BHL). The proposed well will be drilled to an approximate true vertical depth (TVD) of 9,475 feet subsurface to evaluate the Wolfcamp Formation. The proposed well will have a measured depth (MD) of approximately 16,765 feet. The SW/4 of the captioned Section 21 and the W/2 of the captioned Section 28 will be dedicated to the well as the proration unit.

Regarding the above, enclosed for your further handling is our AFE dated March 19, 2018 for the captioned proposed well. In the event your firm elects to participate in the proposed well, please execute the enclosed AFE and return to me within thirty (30) days. Our Joint Operating Agreement to follow.

Should you have any questions regarding the above, please email me at <u>janderson@mewbourne.com</u> or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY

Josh Anderson

ful Anhum

Landman



Date: May 2, 2018

Simple Certified:

The following is in response to your May 2, 2018 request for delivery information on your Certified Mail™/RRE item number 9414810699945030693776. The delivery record shows that this item was delivered on May 2, 2018 at 10:07 am in MIDLAND, TX 79701. The scanned image of the recipient information is provided below.

Signature of Recipient:

Address of Recipient:

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

Sincerely, United States Postal Service

> T.I.G Properties, L.P. PO Box 10508 Midland, TX 79702

Reference #: Kansas "21/28" W2LM FED NO. 1H JA

Item ID: Kansas 21 28 W2LM NO 1

500 WEST TEXAS AVENUE, SUITE 1020 MIDLAND, TEXAS 79701-4279

TELEPHONE (432) 682-3715 FACSIMILE (432) 685-4170

April 18, 2018

Via Certified Mail

T.I.G. Properties, L.P. P.O. Box 10508 Midland, TX 79702

Re:

Working Interest Unit

Mewbourne's Kansas 21/28 Prospect

Section 21/28, T24S, R28E Eddy County, New Mexico

Gentlemen:

Enclosed for your further handling regarding the captioned prospect and lands is our Operating Agreement dated April 15, 2018, along with an extra set of signature pages. The Operating Agreement is to coincide with the well proposal/AFE I sent by letter dated April 13, 2018.

Regarding the above, please have the AFE, Operating Agreement and extra set of signature pages executed and return only the extra set of signature pages and AFE to me whereby you will retain the Operating Agreement for your file.

Should you have any questions regarding the above, please email me at <u>janderson@mewbourne.com</u> or call me at (432) 682-3715.

Sincerely,

MEWBOURNE OIL COMPANY

Josh Anderson

Jul amhum

Landman



Date: April 23, 2018

Simple Certified:

The following is in response to your April 23, 2018 request for delivery information on your Certified Mail™/RRE item number 9402810699945030795932. The delivery record shows that this item was delivered on April 23, 2018 at 12:11 pm in MIDLAND, TX 79701. The scanned image of the recipient information is provided below.

Signature of Recipient:

You Durke

Address of Recipient:

80300008

Thank you for selecting the Postal Service for your mailing needs.

If you require additional assistance, please contact your local Post Office or postal representative.

Sincerely, United States Postal Service

T.I.G Properties, L.P.
PO Box 10508
Midland, TX 79702
Reference #: Kansas 21/28 Prospect JA
Item ID: Kansas 21 28 Prospect

Josh Anderson

From:

Josh Anderson

Sent:

Tuesday, June 26, 2018 10:38 AM

To:

Pam Burke

Subject:

RE: Kansas 28/21 Prospect, Sec. 28 & 21-24S-28E, Eddy Co., NM

Sounds good, thanks Pam!

-Josh

From: Pam Burke [mailto:pam@iversongroup.net]

Sent: Tuesday, June 26, 2018 10:01 AM

To: Josh Anderson

Subject: RE: Kansas 28/21 Prospect, Sec. 28 & 21-24S-28E, Eddy Co., NM

Josh

Andy has been in and out of the office. I will shoot him an email to see if the Iverson's have come to any conclusions on TIG Properties participating, or not, on all of the Mewbourne wells.

Pam

From: Josh Anderson [mailto:janderson@Mewbourne.com]

Sent: Thursday, June 21, 2018 3:57 PM **To:** Pam Burke <pam@iversongroup.net>

Subject: RE: Kansas 28/21 Prospect, Sec. 28 & 21-24S-28E, Eddy Co., NM

Pam,

Just following up to see if you guys are close to executing the AFEs and JOA.

Thanks,

Josh Anderson

Petroleum Landman 500 West Texas Ave., Suite 1020 Midland, TX 79701

Phone: (432) 682-3715 | Fax: (432) 685-4170

Cell: (405) 406-8982



From: Josh Anderson

Sent: Wednesday, April 25, 2018 4:21 PM

To: pam@iversongroup.net

Subject: Kansas 28/21 Prospect, Sec. 28 & 21-24S-28E, Eddy Co., NM

Pam,

Per our conversation, attached are the corresponding AFEs for all four of the wells to be drilled, and signature pages for the E/2 JOA for the above captioned prospect.

If you have any questions or comments, please don't hesitate to ask.

Sorry again for the mix up.

Thanks,

Josh Anderson

1 15 1 14

Petroleum Landman <u>500 West Texas Ave., Suite 1020</u> Midland, TX 79701 Phone: (432) 682-3715 | Fax: (432) 685-4170 Cell: (405) 406-8982

MEWBOURNE

OIL COMPANY

Josh Anderson

From:

Josh Anderson

Sent:

Tuesday, July 17, 2018 10:49 AM

To:

'Pam Burke'

Subject:

RE: Kansas 28/21 Prospect, Sec. 28 & 21-24S-28E, Eddy Co., NM

Pam,

Thanks for all of those. Yes, I still need your signature pages for the W/2 Kansas JOA that is dated April 15, 2018.

Also, if you would go ahead and mail us the originals, I'd appreciate it!

Thanks,

Josh Anderson

Petroleum Landman 500 West Texas Ave., Suite 1020 Midland, TX 79701

Phone: (432) 682-3715 | Fax: (432) 685-4170

Cell: (405) 406-8982



From: Pam Burke [mailto:pam@iversongroup.net]

Sent: Tuesday, July 17, 2018 10:30 AM

To: Josh Anderson

Subject: RE: Kansas 28/21 Prospect, Sec. 28 & 21-24S-28E, Eddy Co., NM

Josh,

I apologize for taking so long in getting the AFEs and JOA signature pages back to you on the four wells in the Kansas 21/28 Prospect. We have received a total of 30 AFEs under TIG Properties ownership under Section 21, this includes the 8 Mewbourne proposed wells. Thus, it has taken a while to evaluate and figure out just what is going on with all the wells proposed (by three different companies). I guess the NMOCD is the determining factor in who gets the drilling permits, etc.?

Attached are the four AFEs for the Kansas wells, along with signature pages from the Joint Operating Agreements. Please go over the signature pages, as I am not sure that these cover both the JOA's. Let me know if there are other pages that need to be signed and I can pull them out of the complete JOA for Andrew to sign.

Pam

From: Josh Anderson [mailto:janderson@Mewbourne.com]

Sent: Thursday, June 21, 2018 3:57 PM
To: Pam Burke pam@iversongroup.net>

Subject: RE: Kansas 28/21 Prospect, Sec. 28 & 21-24S-28E, Eddy Co., NM

Pam,

Just following up to see if you guys are close to executing the AFEs and JOA.

Thanks,

Josh Anderson

Petroleum Landman 500 West Texas Ave., Suite 1020 Midland, TX 79701

Phone: (432) 682-3715 | Fax: (432) 685-4170

Cell: (405) 406-8982



From: Josh Anderson

Sent: Wednesday, April 25, 2018 4:21 PM

To: pam@iversongroup.net

Subject: Kansas 28/21 Prospect, Sec. 28 & 21-24S-28E, Eddy Co., NM

Pam,

Per our conversation, attached are the corresponding AFEs for all four of the wells to be drilled, and signature pages for the E/2 JOA for the above captioned prospect.

If you have any questions or comments, please don't hesitate to ask.

Sorry again for the mix up.

Thanks,

Josh Anderson

Petroleum Landman <u>500 West Texas Ave., Suite 1020</u> Midland, TX 79701 Phone: (432) 682-3715 | Fax: (432) 685-4170

Cell: (405) 406-8982



MEWBOURNE OIL COMPANY

AUTHORIZATION FOR EXPENDITURE

Well Name: Kansas 21/28 W2LM Fed #1H	spect: V	olfcamp D Sh	ale	
Location: SL: 2435' FSL & 330' FWL (21); BHL: 330' FSL & 330' FWL (28)	County: E	ddy		ST: NM
Sec. 21/28 Blk: Survey: TWP: 24S	_ ` _		TVD: 10515	TMD: 17760
	<u> </u>	T		T T T T T T T T T T T T T T T T T T T
INTANGIBLE COSTS 0180	CODE		CODE	СС
Regulatory Permits & Surveys Location / Road / Site / Preparation	0180-01		000 0180-0200 000 0180-0205	
Location / Restoration	0180-01		000 0180-0205	
Daywork / Turnkey / Footage Drilling 34 days drlg / 4 days comp @ \$19000/d	0180-01		00 0180-0210	
Fuel 1500 gal/day @ 2.40/gal	0180-01		00 0180-0214	
Mud, Chemical & Additives	0180-01		00 0180-0220	
Horizontal Drillout Services Coil Tbg Drillout	_		0180-0222	
Cementing	0180-01			
Logging & Wireline Services Casing / Tubing / Snubbing Service	0180-01		00 0180-0230	
Mud Logging	0180-01		00 0180-0234	\$80,000
Stimulation 45 Stg 18.0 MM gal / 18.0 MM lb	0180-01	β20,C	0180-0241	\$2,710,000
Stimulation Rentals & Other			0180-0242	
Water & Other	0180-01		000 0180-0245	
Bits	0180-01		000 0180-0248	
Inspection & Repair Services	0180-01		000 0180-0250	
Misc. Air & Pumping Services	0180-01		0180-0254	
Testing & Flowback Services Completion / Workover Rig	0180-01	58] \$15,0	0180-0258	
Rig Mobilization	0180-01	64 \$120,0	0180-0260	\$10,500
Transportation	0180-01		000 0180-0265	\$20,000
Welding Services	0180-01	68 \$5,0	000 0180-0268	
Contract Services & Supervision	0180-01	70 \$55,5	00 0180-0270	
Directional Services Includes Vertical Control	0180-01			
Equipment Rental	0180-01		0180-0280	
Well / Lease Insurance	0180-01		000 0180-0284	
Intangible Supplies	0180-01		00 0180-0285 00 0180-0288	
	0180-01		000 0180-0280	
ROW & Easements ATTACHMENT	0180-01		0180-0292	
Pipeline Interconnect			0180-0293	
Company Supervision	0180-01			
Overhead Fixed Rate	0180-01		000 0180-0296	
Well Abandonment	0180-01		0180-0298	
Contingencies 10% (TCP) 10% (CC)	0180-01		700 0180-0299	
TOTA		\$2,977,8	500	\$5,149,700
TANGIBLE COSTS 0181	0404.07			
Casing (19.1" - 30") Casing (10.1" - 19.0")	0181-07		200	
Casing (8.1" - 10.0") 2500' - 9 5/8" 40# N-80 LT&C @ \$27.61/ft	0181-07			
Casing (6.1" - 8.0") 10940' - 7" 26# P-110 LT&C @ \$27.76/ft	0181-07			
Casing (4.1" - 6.0") 8000' - 4 1/2" 13.5# P-110 LTC @ \$13.66/ft			0181-0797	7 \$116,800
Tubing (2" - 4")			0181-0798	3
Drilling Head	0181-08	60 \$40,0		
Tubing Head & Upper Section	-		0181-0870	
Horizontal Completion Tools Completion Liner Hanger Sucker Rods			0181-0871	
Subsurface Equipment			0101-0075	<u>'</u>
	11		0181-0880	1
Artificial Lift Systems			0181-0880	
Artificial Lift Systems Pumping Unit				1
Pumping Unit Surface Pumps & Prime Movers 1/2 VRU/SWD Pump/Circ Pump			0181-0884 0181-0885 0181-0886	4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Pumping Unit Surface Pumps & Prime Movers 1/2 VRU/SWD Pump/Circ Pump Tanks - Oil 3 - 750 bbl			0181-0884 0181-0886 0181-0886 0181-0890	4 55 \$35,000 \$55,000
Pumping Unit Surface Pumps & Prime Movers 1/2 VRU/SWD Pump/Circ Pump Tanks - Oil 3 - 750 bbl Tanks - Water 3 - 750 bbl			0181-0884 0181-0885 0181-0890 0181-0890	4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Pumping Unit Surface Pumps & Prime Movers 1/2 VRU/SWD Pump/Circ Pump Tanks - Oil 3 - 750 bbl Tanks - Water 3 - 750 bbl Separation / Treating Equipment 30"x10'x1k# 3 ph/36"x15'x1k# Hor 3ph/Gun bbl			0181-0885 0181-0886 0181-0886 0181-0890 0181-0891	4 55 56 \$35,000 \$55,000 1 \$60,000 55 \$45,000
Pumping Unit Surface Pumps & Prime Movers Tanks - Oil Tanks - Water Separation / Treating Equipment Heater Treaters, Line Heaters 1/2 VRU/SWD Pump/Circ Pump 3 - 750 bbl 3 - 750 bbl 3 - 750 bbl 30"x10'x1k# 3 ph/36"x15'x1k# Hor 3ph/Gun bbl			0181-0884 0181-0885 0181-0886 0181-0890 0181-0891 0181-0895 0181-0897	4
Pumping Unit Surface Pumps & Prime Movers Tanks - Oil 3 - 750 bbl Tanks - Water Separation / Treating Equipment Heater Treaters, Line Heaters Metering Equipment 1/2 VRU/SWD Pump/Circ Pump 3 - 750 bbl 3 - 750 bbl 3 - 750 bbl 3 - 750 bbl 8'x20'x75# HT Metering Equipment			0181-0885 0181-0886 0181-0886 0181-0890 0181-0891	4
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Pumping Unit Surface Pumps & Prime Movers Tanks - Oil Tanks - Water Separation / Treating Equipment Heater Treaters, Line Heaters Metering Equipment Line Pipe & Valves - Gathering Fittings / Valves & Accessories Cathodic Protection 1/2 VRU/SWD Pump/Circ Pump 3 - 750 bbl 3 - 750 bbl 30"x10'x1k# 3 ph/36"x15'x1k# Hor 3ph/Gun bbl 8'x20'x75# HT Metering Equipment 1/4 Mile Gas & 12" Wtr			0181-0886 0181-0886 0181-0896 0181-0890 0181-0891 0181-0897 0181-0898 0181-0900	4
Pumping Unit Surface Pumps & Prime Movers Tanks - Oil Tanks - Water Separation / Treating Equipment Heater Treaters, Line Heaters Metering Equipment Line Pipe & Valves - Gathering Fittings / Valves & Accessories Cathodic Protection Electrical Installation 1/2 VRU/SWD Pump/Circ Pump 3 - 750 bbl 3 - 750 bbl 30"x10'x1k# 3 ph/36"x15'x1k# Hor 3ph/Gun bbl 8'x20'x75# HT Mile Gas & 12" Wtr Fittings / Valves & Accessories Cathodic Protection Electrical Installation			0181-0886 0181-0886 0181-0896 0181-0897 0181-0897 0181-0897 0181-0898 0181-0900 0181-0906 0181-0908	4
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Pumping Unit Surface Pumps & Prime Movers Tanks - Oil Tanks - Water Separation / Treating Equipment Heater Treaters, Line Heaters Metering Equipment Line Pipe & Valves - Gathering Fittings / Valves & Accessories Cathodic Protection Electrical Installation Pipeline Construction 1/2 VRU/SWD Pump/Circ Pump 3 - 750 bbl 3 - 750 bbl 30"x10"x1k# 3 ph/36"x15'x1k# Hor 3ph/Gun bbl 8'x20'x75# HT Mile Gas & 12" Wtr 1/4 Mile Gas & 12" Wtr		\$455, \$3,433,	0181-0886 0181-0886 0181-0886 0181-0896 0181-0897 0181-0897 0181-0896 0181-0906 0181-0906 0181-0906 0181-0906 0181-0910 0181-0920	4
Pumping Unit Surface Pumps & Prime Movers Tanks - Oil Tanks - Water Separation / Treating Equipment Heater Treaters, Line Heaters Metering Equipment Line Pipe & Valves - Gathering Tittings / Valves & Accessories Cathodic Protection Electrical Installation Equipment Installation Pipeline Construction TOTAL Movers April 1/2 VRU/SWD Pump/Circ Pump 3 - 750 bbl 3 - 750 bbl 3 - 750 bbl 30"x10'x1k# 3 ph/36"x15'x1k# Hor 3ph/Gun bbl 8'x20'x75# HT Metering Equipment 1/4 Mile Gas & 12" Wtr TOTAL SUBTOTA		\$3,433,	0181-0886 0181-0886 0181-0886 0181-0896 0181-0897 0181-0897 0181-0896 0181-0906 0181-0906 0181-0906 0181-0906 0181-0910 0181-0920	4
Pumping Unit Surface Pumps & Prime Movers Tanks - Oil Tanks - Water Separation / Treating Equipment Heater Treaters, Line Heaters Metering Equipment Line Pipe & Valves - Gathering Fittings / Valves & Accessories Cathodic Protection Electrical Installation Equipment Installation Pipeline Construction 1/4 Mile Steel & Poly TOTA	ortionate s n up and re	\$3,433, thare of the prendrilling as estimate.	0181-0884 0181-0886 0181-0896 0181-0897 0181-0897 0181-0897 0181-0898 0181-0906 0181-0906 0181-0906 0181-0906 0181-0906 0181-0907 0181-0907 0181-0907 0181-0908	4
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Pumping Unit Surface Pumps & Prime Movers Tanks - Oil 3 - 750 bbl Tanks - Water 3 - 750 bbl Separation / Treating Equipment Heater Treaters, Line Heaters 8'x20'x75# HT Metering Equipment Line Pipe & Valves - Gathering Tittings / Valves & Accessories Cathodic Protection Electrical Installation Equipment Installation Pipeline Construction TOTA SUBTOTA TOTAL WELL COST Extra Expense Insurance I elect to be covered by Operator's Extra Expense Insurance and pay my prop Operator has secured Extra Expense Insurance policy. If neither box is checked above, non-operating working interest owner elects to be covered by Operator's well co Prepared by: T. Cude 1 Cude T. Cude Tanks - Valves A - 750 bbl 3 - 750 bbl 4 Wille Starl Fix Hor 3ph/Gun bbl 4 Wille Gas & 12" Wtr 4 Wille Gas & 12" Wtr 4 Wille Gas & 12" Wtr 5 Wtr 5 Wtr 6 Water And A Mile Steel & Poly TOTAL TOTAL WELL COST Extra Expense Insurance and pay my prop Operator has secured Extra Expense Insurance covering costs of well control, clean 1 elect to purchase my own well control insurance policy. If neither box is checked above, non-operating working interest owner elects to be covered by Operator's well control insurance policy.	ortionate s n up and re ntrol insurance te: 3/19/	\$3,433, thare of the prendrilling as estimate.	0181-0884 0181-0886 0181-0896 0181-0897 0181-0897 0181-0897 0181-0898 0181-0906 0181-0906 0181-0906 0181-0906 0181-0906 0181-0907 0181-0907 0181-0907 0181-0908	4

MEWBOURNE OIL COMPANY

AUTHORIZATION FOR EXPENDITURE

Well Name: Kansas 21/28 W0LM Fed #2H Prosp	ect: Wol	fcamp Sand		
Location: SL: 2435' FSL & 380' FWL (21); BHL: 330' FSL & 400' FWL (28)	unty: Edd	у		ST: NM
Sec. 21/28 Blk: Survey: TWP: 24S		8E Prop. TVD	9475	TMD: 16765
INTANGIBLE COSTS 0180	CODE	TCP	CODE	СС
Regulatory Permits & Surveys Location / Road / Site / Preparation	0180-0100 0180-0105		0180-0200 0180-0205	
Location / Road / Site / Preparation Location / Restoration	0180-0105	\$75,000		
Daywork / Turnkey / Footage Drilling 28 days drlg / 4 days comp @ \$19000/d	0180-0106	\$599,000		
Fuel 1500 gal/day @ 2.40/gal	0180-0110	\$137,400		
Mud, Chemical & Additives	0180-0114	\$225,000		Ψ217,000
Horizontal Drillout Services Coil Tbg Drillout	0100-0		0180-0220	\$160,000
Cementing Coll 1 bg Drillout	0180-0125		0180-0222	
Logging & Wireline Services	0180-0130		0180-0225	
Casing / Tubing / Snubbing Service	0180-0134		0180-0234	
Mud Logging	0180-0137	\$20,000	0.00	
Stimulation 45 Stg 18.0 MM gal / 18.0 MM lb	0.00		0180-0241	\$2,710,000
Stimulation Rentals & Other			0180-0242	
Water & Other	0180-0145	\$50,000	0180-0245	
Bits	0180-0148		0180-0248	
Inspection & Repair Services	0180-0150		0180-0250	
Misc. Air & Pumping Services	0180-0154		0180-0254	
Testing & Flowback Services	0180-0158		0180-0258	
Completion / Workover Rig	0100 -		0180-0260	+
Rig Mobilization	0180-0164	\$120,000	0100	+
Transportation Transportation	0180-0165		0180-0265	\$20,000
Welding Services	0180-0168		0180-0268	
Contract Services & Supervision	0180-0170		0180-0208	
Directional Services Supervision Includes Vertical Control	0180-0170		0100-02.	400,
Equipment Rental	0180-0175		0180-0280	\$30,000
Well / Lease Legal	0180-0180		0180-0280	
Well / Lease Legal Well / Lease Insurance	0180-0184		0180-0284	
	0180-0185		0180-0285	
Intangible Supplies	0180-0188		0180-0288	
Damages ROW & Fasements	0180-0190		0180-0290	
ROW & Easements	0180-0102		0180-0292	
Pipeline Interconnect	2120 0195	\$148 800	0180-0293	
Company Supervision Overhead Fixed Pate	0180-0195		1	
Overhead Fixed Rate	0180-0196		0180-0296	
Well Abandonment	0180-0198		0180-0298 0180-0299	
Contingencies 10% (TCP) 10% (CC)	0180-0199			
TOTAL		\$2,658,900	<u> </u>	\$5,149,700
TANGIBLE COSTS 0181		1		
Casing (19.1" - 30")	0181-0793		d	
Casing (10.1" - 19.0") 450' - 13 3/8" 54.5# J-55 ST&C @ \$35.90/ft	0181-0794	\$17,300		
Casing (8.1" - 10.0") 2500' - 9 5/8" 40# N-80 LT&C @ \$27.61/ft	0181-0795	\$73,800		
Casing (6.1" - 8.0") 9900' - 7" 26# P-110 LT&C @ \$27.76/ft	0181-0796			
Casing (4.1" - 6.0") 8000' - 4 1/2" 13.5# P-110 LTC @ \$13.66/ft			0181-0797	\$116,800
Tubing (2" - 4") 9010' - 2 7/8" 6.5# L-80 EUE 8rd @ \$4.74/ft			0181-0798	-
Drilling Head	0181-0860	\$40,000		
Tubing Head & Upper Section			0181-0870	
Horizontal Completion Tools Completion Liner Hanger			0181-0871	1 \$70,000
Sucker Rods			0181-0875	
Subsurface Equipment			0181-0880	
Artificial Lift Systems Gas Lift Valves	<u> </u>		0181-0884	
Pumping Unit	<u> </u>		0181-0885	
Surface Pumps & Prime Movers 1/2 VRU/SWD Pump/Circ Pump			0181-0886	
Tanks - Oil 3 - 750 bbl	<u> </u>		0181-0890	
Tanks - Water 3 - 750 bbl	 		0181-0891	
Separation / Treating Equipment 30"x10'x1k# 3 ph/36"x15'x1k# Hor 3ph/Gun bbl			0181-0895	5 \$45,00
Heater Treaters, Line Heaters 8'x20'x75# HT			0181-0897	7 \$23,00
Metering Equipment	1		0181-0898	
Line Pipe & Valves - Gathering 1/4 Mile Gas & 12" Wtr			0181-0900	\$60,000
Fittings / Valves & Accessories			0181-0906	\$60,00
Cathodic Protection			0181-0908	8 \$8,000
Electrical Installation			0181-0909	9 \$50,00
Equipment Installation			0181-0910	0 \$40,00
Pipeline Construction 1/4 Mile Steel & Poly			0181-0920	
TOTAL		\$424,700		\$777,50
			1	
SUBTOTAL		\$3,083,600	<u>/ </u>	\$5,927,20
		\$9,0	010,800	
TOTAL WELL COST				
Extra Expense Insurance I elect to be covered by Operator's Extra Expense Insurance and pay my propo Operator has secured Extra Expense Insurance covering costs of well control, clean I elect to purchase my own well control insurance policy. If neither box is checked above, non-operating working interest owner elects to be covered by Operator's well control.	up and redri	nre of the premiur	m. in Line Item	1 0180-0185.
Extra Expense Insurance I elect to be covered by Operator's Extra Expense Insurance and pay my propo Operator has secured Extra Expense Insurance covering costs of well control, clean I elect to purchase my own well control insurance policy.	up and redri	illing as estimated	m. in Line Item	1 0180-0185.
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Extra Expense Insurance I elect to be covered by Operator's Extra Expense Insurance and pay my propo Operator has secured Extra Expense Insurance covering costs of well control, clean I elect to purchase my own well control insurance policy. If neither box is checked above, non-operating working interest owner elects to be covered by Operator's well control. Prepared by: T. Cude Date	trol insurance. a: 3/19/20	illing as estimated	m. in Line Item	1 0180-0185.

File: Kansas 21-28 W0LM Fed #2H AFE.xlsx

Revised: 10/20/2017

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

APPLICATION OF MEWBOURNE OIL COMPANY FOR A NON-STANDARD SPACING AND PRORATION UNIT AND COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO.

COUNTY OF SANTA FE)

Case No. 16312

EXHIBIT

AFFIDAVIT OF NOTICE

STATE OF NE) ss. EW MEXICO)
James F	Bruce, being duly sworn upon his oath, deposes and states:
1.	I am over the age of 18, and have personal knowledge of the matters stated herein.
2.	I am an attorney for Mewbourne Oil Company.
	Mewbourne Oil Company has conducted a good faith, diligent effort to find the rect addresses of the interest owners entitled to receive notice of the application
	Notice of the application was provided to the interest owners, at their last known certified mail. Copies of the notice letter and certified return receipts are attached thment Λ .
5.	Applicant has complied with the notice provisions of Division Regulations. August James Bruce
SUBSO Bruce. My Commission	RIBED ANIDIS WARSNATO before me this
	popularity of the second of th

JAMES BRUCE ATTORNEY AT LAW

POST OFFICE BOX 1056 SANTA FE, NEW MEXICO 87504

369 MONTEZUMA, NO. 213 SANTA FE, NEW MEXICO 87501

(505) 982-2043 (Phone) (505) 660-6612 (Cell) (505) 982-2151 (Fax)

jamesbrue@aol.com

July 2, 2018

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

To: Persons on Exhibit A

Ladies and gentlemen:

Enclosed is a copy of an application for compulsory pooling, filed with the New Mexico Oil Conservation Division by Mewbourne Oil Company, regarding Wolfcamp wells in the SW/4 of Section 21 and the W/2 of Section 28, Township 24 South, Range 28 East, NMPM, Eddy County, New Mexico.

This matter is scheduled for hearing at 8:15 a.m. on Thursday, July 26, 2018, in Porter Hall at the Division's offices at 1220 South St. Francis Drive, Santa Fe, New Mexico 87505. You are not required to attend this hearing, but as an owner of an interest who may be affected by the application, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from contesting this matter at a later date.

A party appearing in a Division case is required by Division Rules to file a Pre-Hearing Statement no later than Thursday, July 19, 2018. This statement must be filed with the Division's Santa Fe office at the above address, and should include: The names of the party and his or her attorney; a concise statement of the case; the names of the 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 need to be resolved prior to the hearing

ery truly yours

James Bruce

Attorney for Mewbourne Oil Company

ATTACHMENT/

EXHIBIT A

COG Operating LLC 600 W. Illinois Avenue Midland, Texas 79701 Attn: Outside Operated Properties

Crown Oil Partners V, LP; Crump Energy Partners II, LLC; Nadel and Gussman Delaware, LLC P.O. Box 50820 Midland, Texas 79710 Attn: Brian Arnold Fasken Land and Minerals, Ltd. 6101 Holiday Hill Road Midland, Texas 79707 Attn: Ms. Linda Hicks

T.I.G. Properties, L.P. P.O. Box 1343 Midland, Texas 79702

Marathon Oil Permian LLC 5555 San Felipe Street Houston, Texas 77056 Attn: Mr. Matt Brown

U.S. Postal Service" CERTIFIED MAIL® RECEIPT COMMESTIC Mail Only For delivery information, visit our website at www.usps.com* Tutul-filty at 14 (141) Services & Fees (nees how and ten through the control flactoring) Set a Services & Fees (nees how and ten through the control flactoring) Control Mail Fee \$3.45 \$1.77 Flaum Receipt (neadon) Control Mail Fees (nees how and ten through the control flaum) Flaum Receipt (neadon) Set 1.10 Flaum Receipt (neadon) Flaum Receipt (neadon) Set 1.10 Flaum Receipt (neadon) Flaum Receipt (nea	Sent To GOD Operating LLC GOD W. Hinois Avenue Street and Apt. No. or PO 50x V Midhaul, Texas 1970; Oly, State, ZiP+4* Oly, State, ZiP+4* Est Foun Head Operations.	A Signature A Signature A Signature B. Received by (Printed Name) C. Date of Delivery C.
U.S. Post CERTIF CERTIF Domestic Ma Domestic Ma Domestic Ma CERTIF Domestic Ma Cordilacy in Cordinacy in Cordilacy in Cordinacy in	□ Priority Mail Express® □ Registered Mail™ □ Registered Mail™ □ Relivery □ Return Receipt for Merchandise Nechandise □ Signature Confirmation □ Signature Confirmation Restricted Delivery	SENDER: COMPLETE 1/S SECTION Complete items 1, 2, a.,d 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: COG(t) perating i.i.C fifth we illusus Avenue Midlend, Texas 1970; Article Number (Transfer from service label) 2. Article Number (Transfer from service label) 7 II.B IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII
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es Form Sedo, April 2015 FSN 7589-02-00x sov7

U.S. Postal Service" CERTIFIED MAIL® RECEINT Domestic Mail Only For delivery information, visit our website at www.usps.come For delivery information, visit our website at websit	21
COMPLETE THIS SECTION ON DELIVERY A. Signature A. Signat	3. Service Type Adult Signature Restricted Delivery Adult Signature Restricted Delivery Certified Mail® Certified Mail® Certified Mail® Certified Mail® Collect on Delivery In Restricted Delivery Collect on Deli
Complete items 1, 2,d 3. Complete items 1, 2,d 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:	2 Article Nimber Transfer from service label 23, 5 9 70.1 8 0.1 9.1 9.1 9.1 9.1 9.1 9.1 9.1 9.1 9.1 9

COMPLETE THIS SECTION ON DELIVERY A. Signature A. Signature A. Signature A. Signature A. Signature A. Signature Addressee Addressee B. Received by (Printed Name) C. Date of Delivery B. Received by (Printed Name) C. Date of Delivery Address different from item 17 I YES, enter delivery address below:		1	Signature Confirmation Collect on Collect or Signature Confirmation Signature Confirmation	M Kill Domestic Return Receipt
 SENDER: COMPLETE 4/1S SECTION Complete items 1, 2, 1d 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: 	Marathon Ol Perman LLC 8555 San Fépp Steet Haiston, Texas 77056	9590 9402 3452 7275 9587 82	2. Article Number Manefor from marini 12.2. 21.87	PS Form 3811, July 2015 PSN 7530-02-000-9053
With the second	Conflict Mail Feet \$3.45	Chair Stream Restrand Painers 5 Postuge \$0.71 Total Postage and Figer \$6.71 \$6.71 \$6.71 \$6.71 \$6.71 \$6.71 \$6.71 \$6.71 \$6.71 \$6.71 \$6.71 \$6.71	Sent 70 Factor Lant and Muscrels, Ltd Street and Act Wood 1927 Midhad, Lovis 1970?	Ony. State. ZiP+4* Dos Four (2001) Amiliants Resolved and Amilian Statement (2007)

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City, State, ZIF+4%	

Name) C. Date of Delivery Name C. Date of Delivery			d Delivery □ Signature Confirmation □ Signature Confirmation □ Signature Confirmation □ Restricted Delivery	Domestic Return Receip!
Complete THIS SECTION ON DELIVERY A. Signature X. Total B. Received by (Printed Name) C. D. St. Charles address different from item 1? if YES, enter delivery address below:		3. Service Type Adult Signature Adult Signature Restricted Delivery Greetflied Mail® Certifled Mail Restricted Delivery Collect on Delivery	☐ Collect on Delivery Restricted Delivery Stricted Delivery	M-Kan
SENDER: COMPLETE THIS SECTION 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.	U.G. Properties, I. P. P.O. Box 1841 Maltand, Texas, 79 702	9590 9402 3452 7275 9587 99	2. Article Number (Transfer from service label) 701.8 0350 0000 21.87 5042	PS Form 3811, July 2015 PSN 7530-02-000-9053

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

APPLICATION OF MEWBOURNE OIL COMPANY FOR A NON-STANDARD SPACING AND PRORATION UNIT AND COMPULSORY POOLING, EDDY COUNTY, NEW MEXICO.

Case No. 16312

VERIFIED STATEMENT OF CHARLES CROSBY

COUNTY OF MIDLAND)
) ss.
STATE OF TEXAS)

Charles Crosby, being duly sworn upon his oath, deposes and states:

- 1. I am over the age of 18, and have personal knowledge of the matters stated herein.
- 2. I am a geologist for Mewbourne Oil Company ("Mewbourne"), and I am familiar with the geological matters involved in this case. I have been qualified by the Division as an expert petroleum geologist.
 - 3. The following geological plats are attached hereto:
 - (a) Attachment A is a structure map on the top of the Wolfcamp formation. It shows that structure dips gently to the east. It also shows Wolfcamp wells in the area, and a line of cross-section.
 - (b) Attachment B is a north-south cross section. The well logs on the cross-section give a representative sample of the Wolfcamp formation in this area. The target zone for the Kansas 21/28 W0LM Fed. Well No. 2H is the upper Wolfcamp sand, and for the Kansas 21/28 W2LM Fed. Well No. 1H it is a lower Wolfcamp shale. Both zones are continuous and uniformly thick across the well unit.
 - 4. I conclude from the maps that:
 - (a) The horizontal spacing unit is justified from a geologic standpoint.
 - (b) Each quarter section in the unit, whether in the Wolfcamp sand well or the Wolfcamp shale well, will contribute more or less equally to production.
 - (c) There is no faulting or other geologic impediment on the area which will affect the drilling of the subject wells.

EXHIBIT 3

- 5. Attachment C contains information from other Wolfcamp wells drilled in this area. There are both standup and laydown wells in this area, and Mewbourne sees no difference in production whether wells are standup or laydown.
- 6. Attachment D contains the horizontal drilling plans for the two proposed wells. The producing interval each proposed well will be orthodox.

Charles Crosby

VERIFICATION

STATE OF TEXAS)
) ss.
COUNTY OF MIDLAND)

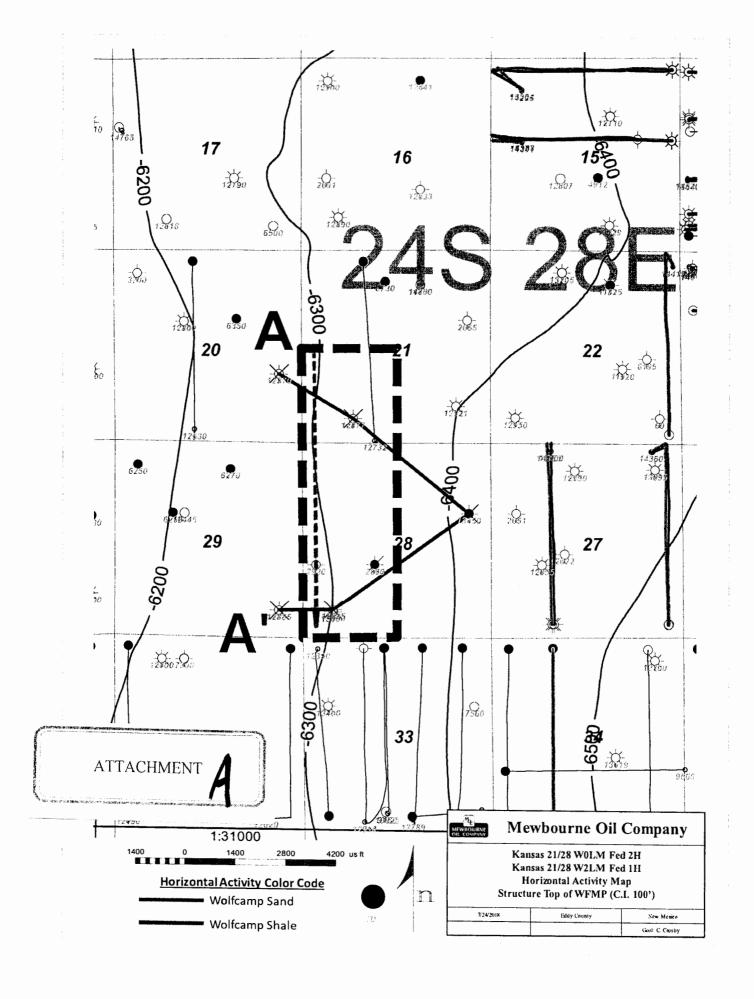
Charles Crosby, being duly sworn upon his oath, deposes and states that: He is a geologist for Mewbourne Oil Company; he is authorized to make this verification on its behalf; he has read the foregoing statement, and knows the contents thereof; and the same is true and correct to the best of his knowledge, information, and belief.

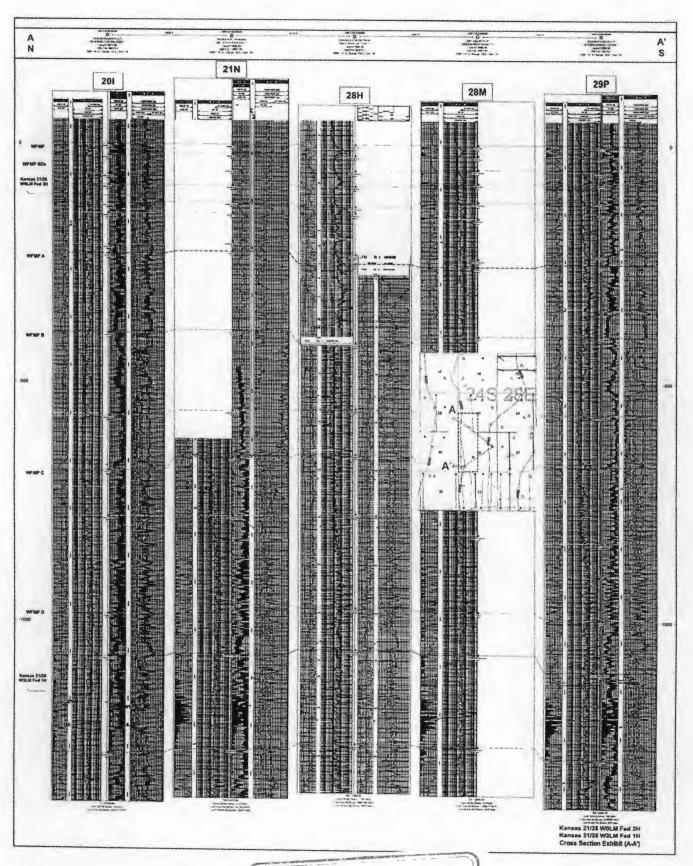
Charles Crosby

SUBSCRIBED AND SWORN TO before me this $\underline{25\epsilon L}$ day of July, 2018 by Charles Crosby.

My Commission Expires: 8-26-19

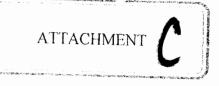
JUDY K. TAYLOR Notary ID# 1027187 Notary Public





ATTACHMENT **B**

14 12 - 141	20402040	idv	Location	WEMP Comp Date Cum Oil	(Mbo)	Cum Gas (BCF)	Cum Water (mbw)	NS/EW	WFMP Zone
Well realist	Marathon	30015478870000	224/245/28F		Pen	line		NS	WFMP Sand
Pock Sour 22 M/2CN State Com 1H	Mewholime	30015432120000 2257/2	27C/24S/28F	6/30/2017	152.2	1.6	489.1 NS	INS	WFMP D Shale
Note 30 Enders Com 34	Marathon	30015434050000 34N/24S/28E	34N/24S/28E	1/9/2018		Pending		NS	WFMP Sand
Anno Com 15 345 28E BR 221H	Matador	30015438990000 15D/2	15D/24S/28E	11/21/2016	105		455.6	455.6 EW	WFMP D Shale
Posts Com 23 243 205 NO 22211	Mowbourne	30015440640000 275/2	27C/24S/28F	6/30/2017	235.3	9.0	621.8 NS	SNS	WFMP Sand
Rock Spul Z/ Woch State Colli zn	Mowbourne	30015440920000 274 / 245 / 28E	274/245/28F		Pen	Pending		NS	WFMP D Shale
Rock Spur 27 WZAP State In	ואובאסחוווב	20077-1-0020000	702/542/472		God	Donding		NS	WFMP Sand
Rock Spur 27 WOAP State 2H	Mewbourne	30015440930000 27A / 245 / 28E	2/A/24S/28E		101	9			
Anne Com 15 245 28E RB 201H	Matador	30015442100000 15D/2	15D/24S/28E	10/6/2017	127.8	0.3	342.5	342.9 EW	WFMP Sand
Appe Com 15 245 28E RB 202H	Matador	30015444170000 15E/2	15E/24S/28E	1/7/2018	119.8	0.3	343.5	343.9 EW	WFMP Sand
Anne Com 15 245 28E BB 222H	Matador	30015444210000 15E/24S/28E	15E/24S/28E	12/23/2017	47.8	2.0	203.4	203.4 EW	WFMP D Shale



Mewbourne Oil Company

Eddy County, New Mexico NAD 83 Kansas 21/28 W0LM Fed #2H Sec 21, T24S, R28E

SL: 2635' FNL & 360' FWL, Sec 21 BHL: 330' FSL & 400' FWL, Sec 28

Plan: Design #1

Standard Planning Report

27 April, 2018



Database:

Hobbs

Company:

Mewbourne Oil Company

Project:

Eddy County, New Mexico NAD 83 Kansas 21/28 W0LM Fed #2H

Site: Well:

Wellbore:

BHL: 330' FSL & 400' FWL, Sec 28

Design:

Sec 21, T24S, R28E

Design #1

Local Co-ordinate Reference:

TVD Reference:

MD Reference: North Reference:

Survey Calculation Method:

Site Kansas 21/28 W0LM Fed #2H

WELL @ 3058.0usft (Original Well Elev)

WELL @ 3058.0usft (Original Well Elev)

Grid

Minimum Curvature

Project

Eddy County, New Mexico NAD 83

Map System:

US State Plane 1983

North American Datum 1983

Geo Datum: Map Zone:

New Mexico Eastern Zone

System Datum:

Mean Sea Level

Site

Kansas 21/28 W0LM Fed #2H

Site Position: From:

Мар

Northing:

437,785.00 usft

Latitude:

Longitude:

32.2033329

Position Uncertainty:

Easting:

613,495.00 usft

-104.1000422

+N/-S

+E/-W

0.0 usft Slot Radius: 13-3/16 "

Grid Convergence:

0.12°

Well

Sec 21, T24S, R28E

Well Position

0.0 usft 0.0 usft Northing:

Easting:

Wellhead Elevation:

437,785.00 usft 613,495.00 usft

3,058.0 usft

Latitude: Longitude: Ground Level:

32.2033329 -104.1000422

3,031.0 usft

Position Uncertainty

0.0 usft

BHL: 330' FSL & 400' FWL, Sec 28

Wellbore Magnetics

Model Name

Design #1

Sample Date

Declination (°)

Dip Angle (°)

Field Strength

(nT)

IGRF2010

4/26/2018

6.98

59.91

47.866

Design **Audit Notes:**

Version:

Phase:

PROTOTYPE

Tie On Depth:

0.0

Vertical Section:

Depth From (TVD) (usft) 0.0

+N/-S (usft) +E/-W (usft) 0.0

Direction (°) 179.28

Plan Sections

Measured			Vertical			Dogleg	Build	Turn		
Depth (usft)	Inclination (°)	Azimuth (°)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Rate (°/100usft)	Rate (°/100usft)	Rate (°/100usft)	TFO (°)	Target
(4514)	()	()	(4511)	(4311)	(4511)	(/ / 0000011)	(, , , , , , , , , , , , , , , , , , ,	(, , , , , , , , , , , , , , , , , , ,	()	12.901
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,523.6	0.35	90.00	2,523.6	0.0	0.1	1.50	1.50	0.00	90.00	
8,969.0	0.35	90.00	8,968.9	0.0	39.9	0.00	0.00	0.00	0.00	
8,992.7	0.00	0.00	8,992.5	0.0	40.0	1.50	-1.50	0.00	180.00	KOP @ 8993'
9,743.5	90.10	179.58	9,470.0	-478.3	43.5	12.00	12.00	0.00	179.58	
16,987.4	90.10	179.58	9,457.0	-7,722.0	97.0	0.00	0.00	0.00	0.00	BHL: 330' FSL & 400'

Database:

Hobbs

Company:

Mewbourne Oil Company

Project: Eddy

Eddy County, New Mexico NAD 83 Kansas 21/28 W0LM Fed #2H

Site: Well:

Sec 21, T24S, R28E

Wellbore: Design: BHL: 330' FSL & 400' FWL, Sec 28

Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference: North Reference:

Survey Calculation Method:

Site Kansas 21/28 W0LM Fed #2H WELL @ 3058.0usft (Original Well Elev) WELL @ 3058.0usft (Original Well Elev)

Grid

Minimum Curvature

Planned Survey

leasured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Aminouth	Depth	. N/ C	.54.14	Section			
(usft)	inclination (°)	Azimuth (°)	(usft)	+N/-S (usft)	+E/-W (usft)	(usft)	Rate (°/100usft)	Rate (°/100usft)	Rate (°/100usft)
0.0	0.00			• •	• •		• • • •		
	0.00 IL & 360' FWL, S	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	400.0	0.0	0.0		0.00		2.00
			100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00							
			1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,523.6	0.35	90.00	2,523.6	0.0	0.1	0.0	1.50	1.50	0.00
2,600.0	0.35	90.00	2,600.0	0.0	0.5	0.0	0.00	0.00	0.00
2,700.0	0.35	90.00	2,700.0	0.0	1.2	0.0	0.00	0.00	0.00
2,800.0	0.35	90.00	2,800.0	0.0	1.8	0.0	0.00	0.00	0.00
2,900.0	0.35	90.00	2,900.0	0.0					
3,000.0	0.35				2.4	0.0	0.00	0.00	0.00
		90.00	3,000.0	0.0	3.0	0.0	0.00	0.00	0.00
3,100.0	0.35	90.00	3,100.0	0.0	3.6	0.0	0.00	0.00	0.00
3,200.0	0.35	90.00	3,200.0	0.0	4.3	0.1	0.00	0.00	0.00
3,300.0	0.35	90.00	3,300.0	0.0	4.9	0.1	0.00	0.00	0.00
3,400.0	0.35	90.00	3,400.0	0.0	5.5	0.1	0.00	0.00	0.00
3,500.0	0.35	90.00	3,500.0	0.0	6.1	0.1	0.00	0.00	0.00
3,600.0	0.35	90.00	3,600.0	0.0	6.7	0.1	0.00	0.00	0.00
3,700.0	0.35	90.00	3,700.0	0.0	7.3	0.1	0.00	0.00	0.00
3,800.0	0.35	90.00	3,800.0	0.0	8.0	0.1	0.00	0.00	0.00
3,900.0	0.35	90.00	3,900.0	0.0	8.6	0,1	0.00	0.00	0.00
4,000.0	0.35	90.00	4,000.0	0.0	9.2	0.1	0.00	0.00	0.00
4,100.0	0.35	90.00	4,100.0	0.0					
4,200.0	0.35				9.8	0.1	0.00	0.00	0.00
4,200.0	0.35	90.00 90.00	4,200.0 4,300.0	0.0 0.0	10.4	0.1	0.00	0.00	0.00
					11.1	0.1	0.00	0.00	0.00
4,400.0	0.35	90.00	4,400.0	0.0	11.7	0.1	0.00	0.00	0.00
4,500.0	0.35	90.00	4,500.0	0.0	12.3	0.2	0.00	0.00	0.00
4,600.0	0.35	90.00	4,600.0	0.0	12.9	0.2	0.00	0.00	0.00
4,700.0	0.35	90.00	4,700.0	0.0	13.5	0.2	0.00	0.00	0.00
4,800.0	0.35	90.00	4,800.0	0.0	14,1	0.2	0.00	0.00	0.00
4,900.0	0.35	90.00	4,900.0	0.0	14.8				
5,000.0	0.35	90.00	5,000.0	0.0	15.4	0.2 0.2	0.00 0.00	0.00 0.00	0.00
_,,,,,,,	0.00	20.00	0,000.0	0.0	13.4	0.2	0.00	0.00	0.00

Database:

Hobbs

Company:

Mewbourne Oil Company

Project:

Eddy County, New Mexico NAD 83

Site:

Kansas 21/28 W0LM Fed #2H

Well: Wellbore: Sec 21, T24S, R28E

Design:

BHL: 330' FSL & 400' FWL, Sec 28

Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference:

Survey Calculation Method:

Site Kansas 21/28 W0LM Fed #2H WELL @ 3058.0usft (Original Well Elev)

WELL @ 3058.0usft (Original Well Elev) Grid

Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,200.0	0.35	90.00	5,199.9	0.0	16.6	0.2	0.00	0.00	0.00
5,300.0	0.35	90.00	5,299.9	0.0	17.2	0.2	0.00	0.00	0.00
5,400.0	0.35	90.00	5,399.9	0.0	17.9	0.2	0.00	0.00	0.00
5,500.0	0.35	90.00	5,499.9	0.0	18.5	0.2	0.00	0.00	0.00
5,600.0	0.35	90.00	5,599.9	0.0	19.1	0.2	0.00	0.00	0.00
5,700.0	0.35	90.00	5,699.9	0.0	19.7	0.2	0.00	0.00	0.00
5,800.0	0.35	90.00	5,799.9	0.0	20.3	0.3	0.00	0.00	0.00
5,900.0	0.35	90.00	5,899.9	0.0	21.0	0.3	0.00	0.00	0.00
6,000.0	0.35	90.00	5,999.9	0.0	21.6	0.3	0.00	0.00	0.00
6,100.0	0.35	90.00	6,099.9	0.0	22.2	0.3	0.00	0.00	0.00
6,200.0	0.35	90.00	6,199.9	0.0	22.8	0.3	0.00	0.00	0.00
6,300.0	0.35	90.00	6,299.9	0.0	23.4	0.3	0.00	0.00	0.00
6,400.0	0.35	90.00	6,399.9	0.0	24.0	0.3	0.00	0.00	0.00
6,500.0	0.35	90.00	6,499.9	0.0	24.7	0.3	0.00	0.00	0.00
6,600.0	0.35	90.00	6,599.9	0.0	25.3	0.3	0.00	0.00	0.00
6,700.0	0.35	90.00	6,699.9	0.0	25.9	0.3	0.00	0.00	0.00
6,800.0	0.35	90.00	6,799.9	0.0	26.5	0.3	0.00	0.00	0.00
6,900.0	0.35	90.00	6,899.9	0.0	27.1	0.3	0.00	0.00	0.00
7,000.0	0.35	90.00	6,999.9	0.0	27.8	0.3	0.00	0.00	0.00
7,100.0	0.35	90.00	7,099.9	0.0	28.4	0.4	0.00	0.00	0.00
7,200.0	0.35	90.00	7,199.9	0.0	29.0	0.4	0.00	0.00	0.00
7,300.0	0.35	90.00	7,299.9	0.0	29.6	0.4	0.00	0.00	0.00
7,400.0	0.35	90.00	7,399.9	0.0	30.2	0.4	0.00	0.00	0.00
7,500.0	0.35	90.00	7,499.9	0.0	30.8	0.4	0.00	0.00	0.00
7,600.0	0.35	90.00	7,599.9	0.0	31.5	0.4	0.00	0.00	0.00
7,700.0	0.35	90.00	7,699.9	0.0	32.1	0.4	0.00	0.00	0.00
7,800.0	0.35	90.00	7,799.9	0.0	32.7	0.4	0.00	0.00	0.00
7,900.0	0.35	90.00	7,899.9	0.0	33.3	0.4	0.00	0.00	0.00
8,000.0	0.35	90.00	7,999.9	0.0	33.9	0.4	0.00	0.00	0.00
8,100.0	0.35	90.00	8,099.9	0.0	34.6	0.4	0.00	0.00	0.00
8,200.0	0.35	90.00	8,199.9	0.0	35.2	0.4	0.00	0.00	0.00
8,300.0	0.35	90.00	8,299.9	0.0	35.8	0.4	0.00	0.00	0.00
8,400.0	0.35	90.00	8,399.9	0.0	36.4	0.5	0.00	0.00	0.00
8,500.0	0.35	90.00	8,499.9	0.0	37.0	0.5	0.00	0.00	0.00
8,600.0	0.35	90.00	8,599.9	0.0	37.6	0.5	0.00	0.00	0.0
8,700.0	0.35	90.00	8,699.9	0.0	38.3	0.5	0.00	0.00	0.0
8,800.0	0.35	90.00	8,799.9	0.0	38.9	0.5	0.00	0.00	0.00
8,900.0	0.35	90.00	8,899.9	0.0	39.5	0.5	0.00	0.00	0.00
8,969.0	0.35	90.00	8,968.9	0.0	39.9	0.5	0.00	0.00	0.00
8,992.7	0.00	0.00	8,992.5	0.0	40.0	0.5	1,50	-1.50	0.00
KOP @ 899 : 9,000.0	0.88	179.58	9 000 0	0.4	40.0		10.00	10.00	
9,100.0	12.88	179.58	8,999.9 9,099.0	-0.1 -12.0	40.0 40.1	0.6 12.5	12.00 12.00	12.00 12.00	0.00
									0.00
9,200.0 9,300.0	24.88	179.58	9,193.4	-44.3	40.3	44.8	12.00	12.00	0.0
9,400.0	36.88 48.88	179.58	9,279.1	-95.5	40.7	96.0	12.00	12.00	0.0
9,500.0	48.88 60.88	179.58 179.58	9,352.2	-163.5	41.2	164.0	12.00	12.00	0.0
9,600.0	72.88	179.58	9,409.7 9,448.8	-245.1 -336.0	41.8	245.6	12.00	12.00	0.00
				-336.9	42.5	337.4	12.00	12.00	0.00
9,630.1	76.50	179.58	9,456.8	-366.0	42.7	366.5	12.00	12.00	0.0
	FSL & 400' FWL,		0.155						
9,700.0 9,743.5	84.88	179.58	9,468.1	-434.8	43.2	435.4	12.00	12.00	0.0
	90.10 SL & 400' FWL, S	179.58	9,470.0	-478.3	43.5	478.8	12.00	12,00	0.0

Database:

Hobbs

Company: Project: Mewbourne Oil Company Eddy County, New Mexico NAD 83 Kansas 21/28 W0LM Fed #2H

Site: Well:

Sec 21, T24S, R28E

Wellbore: Design: BHL: 330' FSL & 400' FWL, Sec 28

Design #1

Local Co-ordinate Reference:

TVD Reference: MD Reference:

North Reference:

Survey Calculation Method:

Site Kansas 21/28 W0LM Fed #2H WELL @ 3058.0usft (Original Well Elev) WELL @ 3058.0usft (Original Well Elev)

Grid

Minimum Curvature

			vey	

The state of the s									San Adding the
Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
9,800.0	90.10	179.58	9,469.9	-534.8	43.9	535.3	0.00	0.00	0.00
9,900.0	90.10	179.58	9,469.7	-634.8	44.7	635.3	0.00	0.00	0.00
10,000.0	90.10	179.58	9,469.5	-734.8	45.4	735.3	0.00	0.00	0.00
10,100.0		179.58	9,469,4	-834.8	46.2	835.3	0.00	0.00	0.00
10,200.0		179.58	9,469.2	-934.8	46.9	935.3	0.00	0.00	0.00
10,300.0		179.58	9,469.0	-1,034.8	47.6	1,035.3	0.00	0.00	0.00
10,400.0		179.58	9,468.8	-1,134.8	48.4	1,135.3	0.00	0.00	0.00
10,500.0	90.10	179.58	9,468.6	-1,234.8	49.1	1,235.3	0.00	0.00	0.00
10,600.0	90.10	179.58	9,468.5	-1,334.8	49.9	1,335.3	0.00	0.00	0.00
10,700.0	90.10	179.58	9,468.3	-1,434.8	50.6	1,435.3	0.00	0.00	0.00
10,800.0	90.10	179.58	9,468.1	-1,534.8	51.3	1,535.3	0.00	0.00	0.00
10,900.0	90.10	179.58	9,467.9	-1,634.8	52.1	1,635.3	0.00	0.00	0.00
11,000.0		179.58	9,467.7	-1,734.8	52.8	1,735.3	0.00	0.00	0.00
11,100.0		179.58	9,467.6	-1,834.8	53.5	1,835.3	0.00	0.00	0.00
11,200.0		179.58	9,467.4	-1,934.7	54.3	1,935.3	0.00	0.00	0.00
11,300.0		179.58	9,467.2	-2,034.7	55.0	2,035.3	0.00	0.00	0.00
11,400.0	90.10	179.58	9,467.0	-2,134.7	55.8	2,135.3	0.00	0.00	0.00
11,500.0		179.58	9,466.8	-2,234.7	56.5	2,235.3	0.00	0.00	0.00
11,600.0	90.10	179.58	9,466.7	-2,334.7	57.2	2,335.3	0.00	0.00	0.00
11,700.0	90.10	179.58	9,466.5	-2,434.7	58.0	2,435.3	0.00	0.00	0.00
11,800.0	90.10	179.58	9,466.3	-2,534.7	58.7	2,535.3	0.00	0.00	0.00
11,900.0	90.10	179.58	9,466.1	-2,634.7	59.4	2,635.3	0.00	0.00	0.00
12,000.0	90.10	179.58	9,466.0	-2,734.7	60.2	2,735.3	0.00	0.00	0.00
12,100.0	90.10	179.58	9,465.8	-2,834.7	60.9	2,835.3	0.00	0.00	0.00
12,200.0	90.10	179,58	9,465.6	-2,934.7	61.7	2,935.3	0.00	0.00	0.00
12,300.0	90.10	179.58	9,465.4	-3,034.7	62.4	3,035.3	0.00	0.00	0.00
12,400.0	90.10	179.58	9,465.2	-3,134.7	63.1	3,135.3	0.00	0.00	0.00
12,500.0	90.10	179.58	9,465.1	-3,234.7	63.9	3,235.3	0.00	0.00	0.00
12,600.0	90.10	179.58	9,464.9	-3,334.7	64.6	3,335.3	0.00	0.00	0.00
12,700.0	90.10	179.58	9,464.7	-3,434.7	65.4	3,435.3	0.00	0.00	0.00
12,800.0	90.10	179.58	9,464.5	-3,534.7	66,1	3,535.3	0.00	0.00	0.00
12,900.0	90.10	179.58	9,464.3	-3,634.7	66.8	3,635.3	0.00	0.00	0.00
13,000.0	90.10	179.58	9,464.2	-3,734.7	67.6	3,735.3	0.00	0.00	0.00
13,100.0	90.10	179.58	9,464.0	-3,834.7	68.3	3,835.2	0.00	0.00	0.00
13,200.0		179.58	9,463.8	-3,934.7	69.0	3,935.2	0.00	0.00	0.00
13,300.0		179.58	9,463.6	-4,034.7	69.8	4,035.2	0.00	0.00	0.00
13,400.0	90.10	179.58	9,463.4	-4,134.7	70.5	4,135.2	0.00	0.00	0.00
13,500.0	90.10	179.58	9,463.3	-4,234.7	71.3	4,235.2	0.00	0.00	0.00
13,600.0		179.58	9,463.1	-4,334.7	72.0	4,335.2	0.00	0.00	0.00
13,700.6		179.58	9,462.9	-4,434.7	72.7	4,435.2	0.00	0.00	0.00
13,800.0		179.58	9,462.7	-4,534.7	73.5	4,535.2	0.00	0.00	0.00
13,900.0	90.10	179.58	9,462.5	-4,634.7	74.2	4,635.2	0.00	0.00	0.00
14,000.		179.58	9,462.4	-4,734.7	74.9	4,735.2	0.00	0.00	0.00
14,100.		179.58	9,462.2	-4,834.7	75.7	4,835.2	0.00	0.00	0.00
14,200.		179.58	9,462.0	-4,934.7	76.4	4,935.2	0.00	0.00	0.00
14,300.		179.58	9,461.8	-5,034.7	77.2	5,035.2	0.00	0.00	0.00
14,400.	90.10	179.58	9,461.6	-5,134.7	77.9	5,135.2	0.00	0.00	0.00
14,500.	90.10	179.58	9,461.5	-5,234.7	78.6	5,235.2	0.00	0.00	0.00
14,600.		179.58	9,461.3	-5,334.7	79.4	5,335.2	0.00	0.00	0.00
14,700.		179.58	9,461.1	-5,434.6	80.1	5,435.2	0.00	0.00	0.00
14,800.		179.58	9,460.9	-5,534.6	80.9	5,535.2	0.00	0.00	0.00
14,900.		179.58	9,460.7	-5,634.6	81.6	5,635.2	0.00	0.00	0.00
15,000.		179.58	9,460.6	-5,734.6	82.3	5,735.2	0.00	0.00	0.00
15,100.	0 90.10	179.58	9,460.4	-5,834.6	83.1	5,835.2	0.00	0.00	0.00

Database:

Hobbs

Company:

Mewbourne Oil Company

Project:

Eddy County, New Mexico NAD 83

Site:

Kansas 21/28 W0LM Fed #2H

Well:

Sec 21, T24S, R28E

Wellbore: Design: BHL: 330' FSL & 400' FWL, Sec 28

Design #1

BHL: 330' FSL & 400' FWL, Sec 28

Local Co-ordinate Reference:

TVD Reference:

MD Reference: North Reference:

Survey Calculation Method:

Site Kansas 21/28 W0LM Fed #2H

WELL @ 3058.0usft (Original Well Elev) WELL @ 3058.0usft (Original Well Elev)

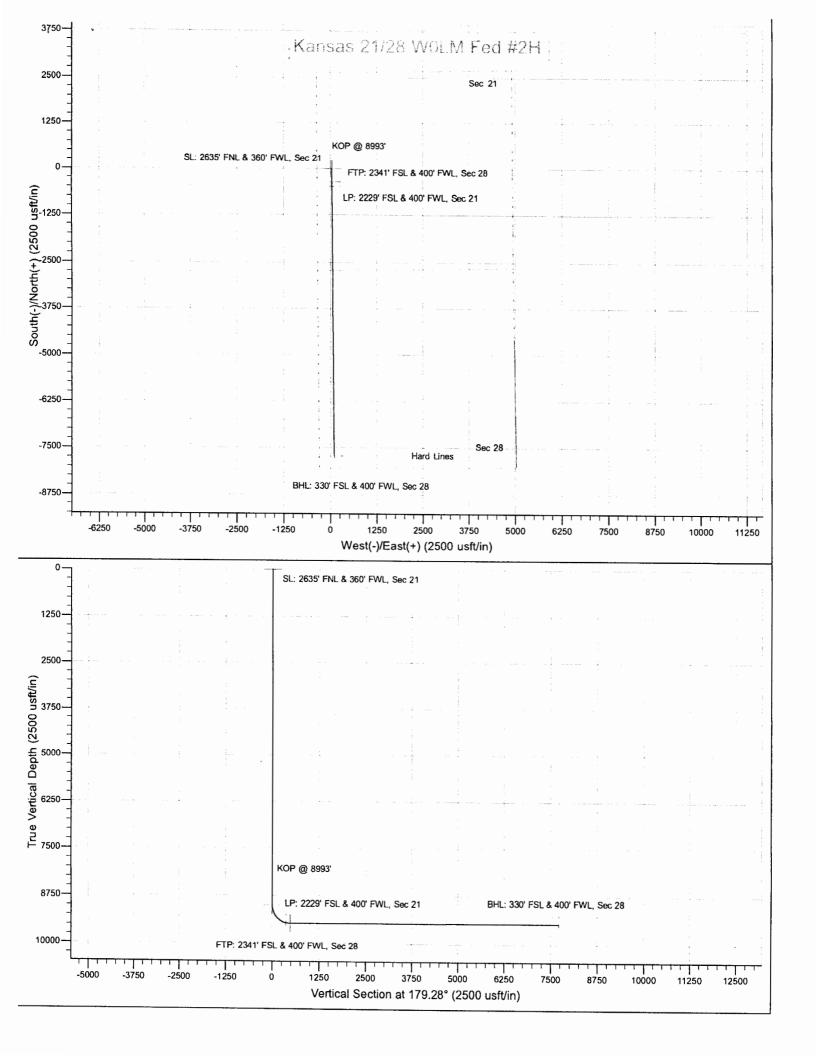
Grid

Minimum Curvature

Planned Survey

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
15,200.0	90.10	179.58	9,460.2	-5,934.6	83.8	5,935.2	0.00	0.00	0.00
15,300.0	90.10	179.58	9,460.0	-6,034.6	84.5	6,035.2	0.00	0.00	0.00
15,400.0	90.10	179.58	9,459.8	-6,134.6	85.3	6,135.2	0.00	0.00	0.00
15,500.0	90.10	179.58	9,459.7	-6,234.6	86.0	6,235.2	0.00	0.00	0.00
15,600.0	90.10	179.58	9,459.5	-6,334.6	86.8	6,335.2	0.00	0.00	0.00
15,700.0	90.10	179.58	9,459.3	-6,434.6	87.5	6,435.2	0.00	0.00	0.00
15,800.0	90.10	179.58	9,459.1	-6,534.6	88.2	6,535.2	0.00	0.00	0.00
15,900.0	90.10	179.58	9,459.0	-6,634.6	89.0	6,635.2	0.00	0.00	0.00
16,000.0	90.10	179.58	9,458.8	-6,734.6	89.7	6,735.2	0.00	0.00	0.00
16,100.0	90.10	179.58	9,458.6	-6,834.6	90.4	6,835.2	0.00	0.00	0.00
16,200.0	90.10	179.58	9,458.4	-6,934.6	91.2	6,935.2	0.00	0.00	0.00
16,300.0	90.10	179.58	9,458.2	-7,034.6	91.9	7,035.2	0.00	0.00	0.00
16,400.0	90.10	179.58	9,458.1	-7,134.6	92.7	7,135.2	0.00	0.00	0.00
16,500.0	90.10	179.58	9,457.9	-7,234.6	93.4	7,235.2	0.00	0.00	0.00
16,600.0	90.10	179.58	9,457.7	-7,334.6	94,1	7,335.2	0.00	0.00	0.00
16,700.0	90.10	179.58	9,457.5	-7,434.6	94.9	7,435.2	0.00	0.00	0.00
16,800.0	90.10	179.58	9,457.3	-7,534.6	95.6	7,535.2	0.00	0.00	0.00
16,900.0	90.10	179.58	9,457.2	-7,634.6	96.4	7,635.2	0.00	0.00	0.00
16,987.4	90.10	179.58	9,457.0	-7,722.0	97.0	7,722.6	0.00	0.00	0.00

Design Targets									AND THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TO THE PERSON NAMED IN COLU
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SL: 2635' FNL & 360' FV - plan hits target cente - Point	0.00 er	0.00	0.0	0.0	0.0	437,785.00	613,495.00	32.2033329	-104.1000422
KOP @ 8993' - plan hits target cente - Point	0.00 er	0.00	8,992.5	0.0	40.0	437,785.00	613,535.00	32.2033326	-104.0999129
FTP: 2341' FSL & 400' F - plan hits target cente - Point	0,00 er	0.00	9,456.8	-366.0	42.7	437,419.00	613,537.71	32.2023265	-104.0999067
BHL: 330' FSL & 400' FV - plan hits target cente - Point	0.00 er	0.00	9,457.0	-7,722.0	97.0	430,063.00	613,592.00	32.1821053	-104.0997828
LP: 2229' FSL & 400' FV - plan hits target cente - Point	0.00 er	0.00	9,470.0	-478.3	43.5	437,306.70	613,538.50	32.2020178	-104.0999049



Mewbourne Oil Company

SURVEY CALCULATION REPORT Minimum Curvature Calculations

Operator: Mewbourne Oil Company
Lease Name: Kansas 21/28 W2LM Fed 1H
KOP 9929.04
SL: 2635 FNL & 330 FWL See 21-24S-28E

BHL: 330 FSL & 330 FWL Sec 28-24S-28E

Target KBTVD: Target Angle:

10,502 Feet 10502.00 89.94 Degrees 89.94

Section Plane: Declination Corrected to True North: 179.68 Degrees 6.63 Degrees

Bit to Survey Offset:

44 Feet

Su-man.	Measured	Drift	Azimuth	C	TVD			·P/W	au.					+Above			
No.	Depth-ft	(Deg.)	(Deg.)	Course Length	(Feet)	Vertical Section	+N/-S (Feet)	+E/-W (Feet)	Closure Distance	Closure Direction	BUR	DLS	KBTVD	-Below Target	DRIFT (RADIANS)	AZIMUTI (RADIANS	
T/1	9929.04	0.00	179.68	N/A	9929.0	0.0	0,0	0.0	0.0	0.0	N/A	N/A	9929.0	573.0	1E-12	3.14	#VALUE!
1	10018.99	8.99	179.68	89.94428	10018.6	7.0	-7.0	0.0	7.0	179.7	10.0	10.0	10018.6	483.4	0.15698238	3.14	0.15698238
2	10108.93	17.99	179.68	89.94428	10106.0	28.0	-28.0	0.2	28.0	179.7	10.0	10.0	10106.0	396.0	0.31396477	3.14	0.15698238
3	10198.88	26.98	179.68	89.94428	10189.0	62.4	-62.4	0.3	62.4	179.7	10.0	10.0	10188.9	313.1	0.47094715	3.14	0.15698238
4	10288,82	35.98	179.68	89.94428	10265.6	109.3	-109.3	0.6	109.3	179.7	10.0	10.0	10265.5	236.5	0.62792953	3.14	0.15698238
5	10378,76	44.97	179,68	89.94428	10334.0	167.6	-167.6	0.9	167.6	179.7	10.0	10.0	10333.8	168.2	0.78491191	3.14	0.15698238
6	10468,71	53.97	179,68	89.94428	10392.4	235.9	-235.9	1.3	235.9	179.7	10.0	10.0	10392.1	109.9	0.9418943	3.14	0.15698238
7	10558,65	62.96	179.68	89.94428	10439.4	312.5	-312.5	1.7	312.5	179.7	10.0	10.0	10439.1	62.9	1.09887668	3.14	0.15698238
8	10648.60	71.96	179.68	89.94428	10473.8	395.5	-395.5	2.2	395.5	179.7	10.0	10.0	10473.4	28.6	1.25585906	3.14	0.15698238
9	10738.54	80.95	179.68	89.94428	10494.9	482.8	-482.8	2.7	482.8	179.7	10.0	10.0	10494.4	7.6	1.41284145	3.14	0.15698238
10	10828.49	89.94	179.68	89.94428	10502.0	572.4	-572.4	3.2	572.4	179.7	10.0	10.0	10501.4	0.6	1.56982383	3.14	0.15698238
- 11	10900.00	89.94	179,68	71.514996	10502.1	643.9	-643.9	3.6	643.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
12	11000.00	89.94	179.68	100	10502.2	743.9	-743.9	4.1	743.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
13	11100.00	89.94	179.68	100	10502.3	843.9	-843.9	4.7	843.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	HE-10
∤4	11200.00	89.94	179,68	100	10502.4	943.9	-943.9	5.2	943.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	IE-10
15	11300.00	89,94	179,68	100	10502.5	1043.9	-1043.9	5.8	1043.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	IE-10
16	11400.00	89.94	179,68	100	10502.6	1143.9	-1143.9	6.3	1143.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
17	11500.00	89.94	179,68	100	10502.7	1243.9	-1243.9	6.9	1243.9	179.7	0.0	0,0	10501.4	0.6	1.56982383	3.14	16-10
18	11600.00	89.94	179.68	100	10502.8	1343.9	-1343.9	7.4	1343.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	16-10
19	11700.00	89.94	179.68	100	10502.8	1443.9	-1443.9	8.0	1443.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
20	11800.00	89.94	179.68	100	10502.9	1543.9	-1543.9	8.5	1543.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	IE-10
21	11900.00	89,94	179.68	100	10503.0	1643.9	-1643.9	9.1	1643.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
22	12000.00	89.94	179.68	100	10503.1	1743.9	-1743.9	9.7	1743.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
23	12100.00	89.94	179.68	100	10503.2	1843.9	-1843.9	10.2	1843.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
24	12200.00	89.94	179.68	100	10503.3	1943.9	-1943.9	10.8	1943.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
25	12300.00	89.94	179.68	100	10503.4	2043.9	-2043.9	11.3	2043.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	15-10
26	12400.00	89.94	179.68	100	10503.5	2143.9	-2143.9	11.9	2143.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	15-10
27	12500,00	89,94	179.68	100	10503.6	2243.9	-2243.9	12.4	2243.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	115-10
28	12600.00	89.94	179,68	100	10503.7	2343.9	-2343.9	13.0	2343.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
29	12700.00	89.94	179.68	100	10503.8	2443.9	-2443.9	13.5	2443.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
30	12800.00	89.94	179.68	100	10503.9	2543.9	-2543.9	14.1	2543.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
31	12900.00	89.94	179.68	100	10504.0	2643.9	-2643.9	14.6	2643.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
32	13000,00	89.94	179.68	100	10504.1	2743.9	-2743.9	15.2	2743.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
33	13100.00	89.94	179.68	100	10504.2	2843.9	-2843.9	15.7	2843.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
34	13200.00	89.94	179.68	100	10504.3		-2943.9	16.3	2943.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
35	13300.00	89.94	179.68	100	10504.4		-3043.9	16.8	3043.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	115-10
36		89.94		100	10504.5		-3143.9	17.4	3143.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	115-10
37	13500.00	89.94		100	10504.6		-3243.9	18.0			0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
38		89.94		100	10504.7		-3343.9	18.5			0,0	0,0	10501.4	0.6	1.56982383	3.14	IE-10
39	13700,00	89.94		100	10504.8		-3443.9	19.1			0.0	0.0	10501.4	0.6	1.56982383	3.14	18-10
40		89.94		100	10504.9		-3543.9	19.6			0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
41	13900.00	89.94		100	10505.0		-3643.9	20.2			0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
42		89.94		100	10505.1		-3743.9	20.7			0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
43	14100,00	89.94		100	10505.2		-3843.9	21.3	3843.9		0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
44	14200.00	89.94		100	10505.3		-3943.9	21.8			0.0	0.0	10501.4	0.6	1.56982383	3.14	IE-10
45		89.94		100	10505.4		-4043.9	22.4			0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
46		89.94		100	10505.5		4143.9	22.9			0.0	0.0	10501.4	0.6	1.56982383	3.14	IE-10
47	14500,00	89.94		100	10505.6		-4243.8	23.5			0.0	0.0	10501.4	0.6			1E-10
48 49	14600.00	89.94		100	10505.7		-4343.8	24.0			0.0	0.0	10501.4		1.56982383		1E-10
	14700.00	89.94		100	10505.8		-4443.8	24.6			0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
50		89.94		100	10505.9		-4543.8	25.1			0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
51	14900.00	89.94		100	10506,0		-4643.8	25.7			0.0	0.0	10501.4	0.6	1.56982383	3.14	16-10
52		89.94		100	10506.1	4743.9	-4743.8	26.3			0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
53		89.94		100	10506.2		-4843.8	26.8			0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
54	15200,00	89.94		100	10506.3		-4943.8	27.4			0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
55		89.94		100	10506.3		-5043.8	27.9		179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
56	15400.00	89.94	179.68	100	10506.4	5143.9	-5143.8	28.5	5143.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10

57	15500.00	89.94	179.68	100	10506.5	5243.9	-5243.8	29.0	5243.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
58	15600.00	89.94	179.68	100	10506.6	5343.9	-5343.8	29.6	5343.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
59	15700.00	89.94	179,68	100	10506.7	5443.9	-5443.8	30.1	5443.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
60	15800.00	89,94	179,68	100	10506.8	5543.9	-5543.8	30.7	5543.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	IE-10
61	15900.00	89.94	179.68	100	10506.9	5643.9	-5643.8	31.2	5643.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	IE-10
62	16000.00	89.94	179.68	100	10507.0	5743.9	-5743.8	31.8	5743.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	IE-10
63	16100,00	89.94	179,68	100	10507.1	5843.9	-5843.8	32.3	5843.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	IE-10
64	16200.00	89,94	179.68	100	10507.2	5943.9	-5943.8	32.9	5943.9	179.7	0.0	0.0	10501.4	0,6	1.56982383	3.14	IE-10
65	16300,00	89.94	179.68	100	10507.3	6043.9	-6043.8	33.5	6043.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	IE-10
66	16400.00	89.94	179.68	100	10507.4	6143.9	-6143.8	34.0	6143.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
67	16500.00	89.94	179.68	100	10507.5	6243.9	-6243.8	34.6	6243.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
68	16600.00	89.94	179.68	100	10507.6	6343.9	-6343.8	35.1	6343.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
69	16700.00	89.94	179,68	100	10507.7	6443.9	-6443.8	35.7	6443.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	IE-10
70	16800.00	89.94	179.68	100	10507.8	6543.9	-6543,8	36.2	6543.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
71	16900,00	89.94	179.68	100	10507.9	6643.9	-6643.8	36.8	6643.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
72	17000.00	89.94	179.68	100	10508.0	6743.9	-6743.8	37.3	6743.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
73	17100.00	89.94	179.68	100	10508.1	6843.9	-6843.8	37.9	6843.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
7-1	17200.00	89,94	179.68	100	10508.2	6943.9	-6943.8	38.4	6943.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
75	17300.00	89.94	179.68	100	10508.3	7043.9	-7043.8	39.0	7043.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3,14	1E-10
76	17400.00	89.94	179.68	100	10508.4	7143.9	-7143.8	39.5	7143.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
77	17500.00	89.94	179.68	100	10508.5	7243.9	-7243.8	40.1	7243.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	tE-10
78	17600.00	89.94	179.68	100	10508.6	7343.9	-7343.8	40.6	7343.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
79	17700.00	89.94	179.68	100	10508.7	7443.9	-7443.8	41.2	7443.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
80	17800.00	89.94	179.58	100	10508.8	7543.9	-7543.8	41.8	7543.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
81	17900.00	89.94	179.68	100	10508.9	7643.9	-7643.8	42.3	7643.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
82	18000,00	89.94	179.68	100	10509.0	7743.9	-7743.8	42.9	7743.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
83	18026.99	89.94	179.68	26.993435	10509.0	7770.9	-7770.8	43.0	7770.9	179.7	0.0	0.0	10501.4	0.6	1.56982383	3.14	1E-10
84	18026.99	89.94	179.66	0	10509.0	7770.9	-7770.8	43.0	7770.9	179.7	#DIV/0!	#DIV/0!	10501.4	0.6	1.56982383	3.14	1E-10

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