



COG OPERATING LLC

Brot Helm Federal Com
601H,602H,603H,701H,702H,703H,704H
Section 35 &2-T24S-34E
Lea County, New Mexico



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

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

CASE NO. 20205 & 20206

AFFIDAVIT OF MATT SOLOMON IN SUPPORT OF CASE NOS. 20205 & 20206

Matt Solomon, of lawful age and being first duly sworn, declares as follows:

- My name is Matt Solomon. I work for COG Operating LLC ("COG") as a
 Landman.
- 2. I have previously testified before the New Mexico Oil Conservation Division as an expert witness in petroleum land matters. My credentials as a petroleum landman have been accepted by the Division and made a matter of record.
- 3. I am familiar with the application filed by COG in this case, and I am familiar with the status of the lands in the subject area.
- 4. None of the proposed parties to be pooled in this case has indicated opposition, and therefore I do not expect any opposition at the hearing.
- 5. COG is seeking an order (a) pooling all uncommitted interests in the Bone Spring and Wolfcamp formations in the 640-acre horizontal spacing units comprised of the E/2 of Section 35, Township 24 South, Range 34 East and the E/2 of Section 2, Township 25 South, Range 34 East, NMPM, Lea County, New Mexico; and (b) dedicating the horizontal spacing units to the proposed Brot Helm Fed Com Nos. 601H, 602H, 603H Wells (Bone Spring) and the 701H, 702H, 703H, and 704H Wells (Wolfcamp) (collectively called the "Wells").

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Case Nos. 20205 & 20206 Exhibit No. A
Submitted by:
COG OPERATING LLC

Hearing Date: February 7, 2019

1

6. COG has prepared draft Forms of C-102 to file with the Division for the proposed Wells. The draft C-102s are attached as COG Exhibit A-1. The assigned Pool Codes are:

Lower Bone Spring – RED HILLS; BONE SPRING, EAST [97369] Wolfcamp – WC-025 G-09 S253402N; WOLFCAMP [98116]

- 7. The completed intervals for the proposed Wells will comply with the Division's setback requirements.
 - 8. There are no depth severances in the Bone Spring and Wolfcamp Formations.
- 9. COG Exhibit A-2 is an exhibit prepared by me that identifies the tracts of land comprising the horizontal spacing units. These horizontal spacing units include federal and state lands, which I have depicted on the exhibit. This exhibit shows the interest owners and the percentage of their interest by tract. A unit recapitulation, showing the percentage of ownership interests in the proposed spacing unit, is also included on the exhibit. COG is only seeking to pool working interest owners, in particular only EOG Resources, Inc. ("EOG"). There are no unleased mineral interest owners.
- 10. COG Exhibit A-3 is an Affidavit of Notice dated February 4, 2019, signed by yourself which attaches a copy of the certified return receipt reflecting that EOG received notice of COG's applications on January 8, 2019.
 - 11. COG is not seeking to pool any overriding royalty interest owners.
- 12. COG sent well proposal letters to EOG. AFEs for each well were included with the well proposal letters. The costs reflected in the AFEs are consistent with what other operators have incurred for drilling similar horizontal wells in the area. A copy of the well proposal letters, along with the AFEs, is attached as COG Exhibit A-4.
- 13. COG has made an estimate of overhead and administrative costs for drilling and producing the proposed wells. It is \$7,000/month while drilling, and \$700/month while

producing. These costs are consistent with what other operators are charging in this area for these types of wells. COG respectfully requests that these administrative and overhead costs be incorporated into any orders entered by the Division in this case.

- 14. In my opinion, COG has made good faith efforts to reach an agreement with the party it is seeking to pool. If COG reaches an agreement with it before the Division enters an order, I will let the Division know.
- 15. I provided my hearing counsel with the name and address for the proposed pool party, which is included in Exhibit C. There were no unlocatable parties.
- 16. COG Exhibits A-1 through A-4 were either prepared by me or compiled under my direction and supervision.

MATT SOLOMON

STATE OF TEXAS)) ss. COUNTY OF MIDLAND)

SUBSCRIBED and SWORN to before me this 4th day of February, 2019 by Matt Solomon.

NOTARY PUBLIC

My Commission Expires:

Oiga Kovacich
Notary Public, State of Texas
Notary ID 13155306-8
My Commission Exp. 05-02-2022

DISTRICT I
1020 N. FERNCH DR., HOBBS, NM 88240
Phone: (575) 583-6161 Fau: (575) 593-6720
DISTRICT II
811 S. FIRST ST., ARTESIA, NM 88210
Phone: (575) 746-1223 Fau: (575) 746-9720

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION

CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR.

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

DISTRICT III 1000 RIO BRAZOS RD., AZTEC, NM 87410 Phone: (805) 334-8178 Fax: (805) 334-8170 Santa Fe, New Mexico 87505

☐ AMENDED REPORT

DISTRICT IV 1220 5. ST. FRANCIS DR. SANTA FE, NM 67505 Phone: (605) 476-3460 Fax: (605) 476-3462

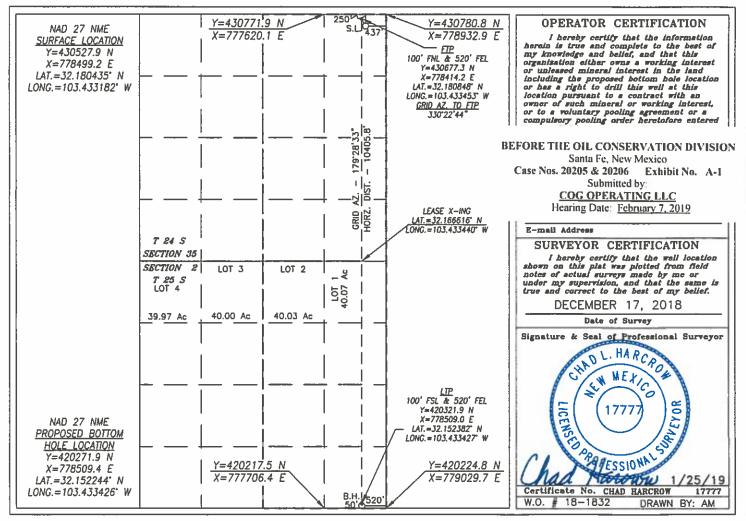
. , ,	WELL LOCATION AND ACREAGE DEDICATION PLAT							
API Number	Pool Code Pool Name							
Property Code	Property Name	Well Number						
	BROT HELM FEDERAL COM	601H						
OGRID No.	GRID No. Operator Name COG OPERATING, LLC							
Surface Location								

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Α	35	24 - S	34-E		250	NORTH	437	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	2	25-S	34-E		50	SOUTH	520	EAST	LEA
Dedicated Acres Joint or Infill Consolidation Code		Code Or	der No.						



DISTRICT I
1025 N. PRINCH DR., HOBBS, NM 86840
Phone: (675) 303-0101 Pax: (676) 383-0720

CIL CONSERVATION DIVISION
611 S. FIRST ST., ARTESIA, NM 86210
Phone: (575) 748-1203 Pax: (675) 748-9720

State of New Mexico

Resources Department
CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR. State of New Mexico

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

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

DISTRICT III 1000 RIO BRAZOS RD., AZTEC, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV 1220 S. St. FRANCIS DR., SANTA FE, NM 87805 Phone: (505) 476-3460 Fax: (505) 478-3482

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FH0H4: (505) 476-34	70 PEX: (000)		WELL LO	CATION	AND ACREA	GE DEDICATI	ON PLAT			
API	Number		1	Pool Code			Pool Name			
Property (Code	<u> </u>	Property Name					Well Number		
• •				BROT	HELM FEDI			602		
OGRID N				Operator Name Elevation COG OPERATING, LLC 3415.9'						
	Surface Location									
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
Α	35	24-S	34-E		250	NORTH	1225	EAST	LEA	
			Bottom	Hole Loc	eation If Diffe	erent From Sur	face			
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County	
P 2 25-S			34-E		50	SOUTH	1310	EAST	LĒA	
Dedicated Acres	Joint o	r Infill Co	nsolidation (Code Or	der No.	,		4		

NAD 27 NME <u>SURFACE LOCATION</u> Y=430522.5 N X=777711.1 E LAT.=32.180438' N LONG.=103.435729' W	Y=430771 9 N X=777620.1 E S.L. 1225' FIP 100' FNL & 1310' FEL Y=430672.0 N X=777624.3 E LAT.=32.180851' N LONG.=103.436006' W GRID AZ. TO FIP 32'49'41'	Y=430780.8 N X=778932.9 E	OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organisation 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofare entered by the division.
	T 24 S SECTION 35 SECTION 2 LOT 3 LOT 2 LOT 1 T 25 S LOT 4 39.97 Ac 40.00 Ac 40.03 Ac 40.07 Ac	LEASE X-ING LAT.=32.166619' N LONG.=103.435993' W	Printed Name E-mail Address 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 same is true and correct to the best of my belief. DECEMBER 17, 2018 Date of Survey
NAD 27 NME PROPOSED BOTTOM HOLE LOCATION Y=420267.6 N X=777719.4 E LAT.=32.152251 N LONG.=103.435979 W	Y=420217.5 N B.H. X=777706.4 E 50 1310'	100' FSL & 1310' FEL Y=420317.6 N X=777719.0 E LAT.=32.152388' N LONG.=103.435979' W Y=420224.8 N X=779029.7 E	Signature & Seal of Professional Surveyor HARCPO 17777 17777 1777 1777 1777 1777 1777 1777 1777 1777 1777 1777 1777 1777 1777 1777 1777 1777 1777 1777

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

State of New Mexico DISTRICT I

1825 N. FERNCH DR., HOBBS, NM 88240
FRON: (878) 383-0101 Fas: (878) 383-0780

Energy, Minerals & Natural Resources Department

CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR.

DISTRICT III 1000 RIO BRAZOS RD., AZTEC, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170

Santa Fe, New Mexico 87505

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3416.9'

DISTRICT IV 1220 S. ST. FRANCIS DR., SANTA FR. HM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462 WELL LOCATION AND ACREAGE DEDICATION PLAT API Number Pool Code Pool Name Property Code Property Name Well Number BROT HELM FEDERAL COM 603H OGRID No. Operator Name Elevation

COG OPERATING, LLC Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
В	35	24-S	34-E		250	NORTH	2205	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	2	25-S	34-E		50	SOUTH	2120	EAST	LEA
Dedicated Acres	Joint o	r Infill Co	nsolidation (Code Or	ler No.				

	Y=430763. 1 N	250	Y=430771		'ION
NAD 27 NME <u>SURFACE LOCATION</u> Y=430515.9 N X=776731.2 E LAT.=32.180443* N LONG.=103.438896* W	X=776307. ¹ 3 E	S.L. 2	205' X=777620 100' FNL & 21 Y=430666, X=776814, LAT.=32,1808	O.1 E I hereby certify that the information herein is true and complete to the my knowledge and belief, and that cognitation either owns a working or unleased mineral interest in the including the proposed bottom hole or has a right to drill this well at the complete of the complete o	mation best of this interest land location this
		179.28,33" - 10403.8'	LONG = 103.434 GRID AZ. TO 28'53'16	0047 W or to a voluntary pooling agreement	or a entered
		AZ DIST.		Signature Date	
		HORZ I		Printed Name	
	T 24 S		LEASE X-II LAT.=32,1666; LONG.=103.438	22' N E-mail Address	ON
	SECTION 35	LOT 2 40.03 Ac	LOT 1	I hereby certify that the weil shown on this plat was plotted from notes of ectual surveys made by me under my supervision, and that the true and correct to the best of my	field or same is
	39.97 Ac 40.00 Ac	1 24	40.07 Ac		
	39.97 Ac 40.00 Ac		40.07 10.0	Date of Survey Signature & Seal of Professional	C
			_	CHAO L. HARCROWN	\
NAD 27 NME <u>PROPOSED BOTTOM</u> <u>HOLE LOCATION</u> Y=420263.2 N X=776909.5 E			100' FSL & Y=4203. X=77690 LAT.=32.15 LONG.=103.4	13.1 N 09.0 E 52394' N 438596' W	
LAT.=32.152257* N LONG.=103.438596* W	<u>Y=420210.3 N</u> X=776383,1 E	B.H. 21:	Y=4202 X=7777	217.5 N Certificate No. CHAD HARCROW	/25/19 17777 BY: AM

DISTRICT I 1625, N. FERNCH DR., HOBBS, NM 88240 Thomas (575) 393-6161 Page (676) 393-9720

State of New Mexico Energy, Minerals & Natural Resources Department

CONSERVATION DIVISION

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

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

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

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DISTRICT IV 1220 S. ST. FRANCIS DR., SANTA FE. NM 87505 Phone: (505) 476-3460 Fax: (505) 476-3462

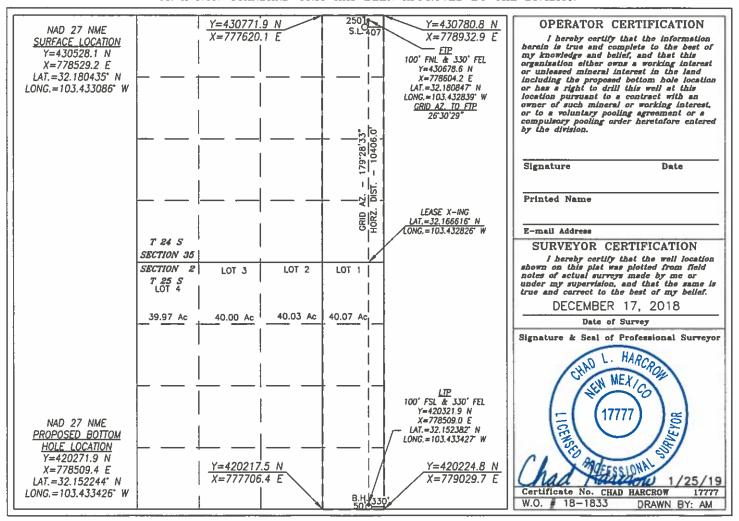
WELL LOCATION AND ACREAGE DEDICATION PLAT API Number Pool Code **Property Code** Property Name Well Number BROT HELM FEDERAL COM 701H OGRID No. Operator Name Elevation COG OPERATING, LLC 3420.2

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Α	35	24-S	34-E		250	NORTH	407	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Р	2	25 - S	34-E		50	SOUTH	330	EAST	LEA
Dedicated Acres Joint or Infill Consolidation Code			Code Or	der No.		\ <u>-</u>			



State of New Mexico DISTRICT I

1025 N. FRENCH DR., HOBBS, Nu 88240
Fhone: (878) 583-0161 Fax: (678) 583-0720

Energy, Minerals & Natural Resources Department CONSERVATION DIVISION

DISTRICT II 611 S. FIRST ST., ARTESIA, NM 68210 Phone: (575) 746-1283 Pag: (575) 748-9720

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

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DISTRICT III 1000 RIO BRAZOS RD., AZTEC, NM 87410 Phone: (605) 334-8178 Faz: (605) 334-8170 DISTRICT IV 1220 S. ST. FRANCIS DR., SANTA FR. NM 87505 Phone: (505) 478-3480 Fax: (505) 478-3482

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WELL LOCATION AND ACREAGE DEDICATION PLAT API Number Pool Code Property Code Well Number Property Name BROT HELM FEDERAL COM 702H Elevation Operator Name OGRID No. COG OPERATING, LLC 3416.3

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Α	35	24-S	34-E		250	NORTH	1195	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
Р	2	25-S	34-E		50	SOUTH	1000	EAST	LEA
Dedicated Acres	Dedicated Acres Joint or Infill Consolidation C		Code Or	ier No.					

 					
NAD 27 NME SURFACE LOCATION		Y=430771.9 N X=777620.1 E	S.L. 195	Y=430780.8 N X=778932.9 E FIP 100' FNL & 1000' FEL Y=430674.1 N X=777934.2 E LAT.=32.180850' N LONG.=103.435004' W GRID AZ. TO FTP 51'54'59"	OPERATOR CERTIFICATION I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organisation either owns a working interest or unleased mineral interest in the land including the proposed bettom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.
Y=430522.8 N X=777741.2 E LAT.=32.180438' N LONG.=103.435632' W			GRID AZ - 179'28'33" HORZ. DIST 10405.2'		Signature Date Printed Name
1 5	T 24 S SECTION 35 SECTION 2 T 25 S LOT 4	LOT 3	LOT 2 LOT	LEASE X-ING LAT.=32.166618* N LONG.=103.434991* W	E-mail Address 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 same is true and correct to the best of my belief.
NAD 27 NME	39.97 Ac	40.00 Ac 4	0.03 Ac 40.07	Ac	DECEMBER 17, 2018 Date of Survey Signature & Seal of Professional Surveyor
PROPOSED BOTTOM HOLE LOCATION Y=420269.3 N X=778029.4 E LAT.=32.152248 N LONG.=103.434977 W				100' FSL & 1000' FEL Y=420319.3 N X=778029.0 E LAT.=32.152386' N LONG.=103.434977' W	CHIND L. HARCROWN MEXICO 80 17777 80 17777 80 17777 1777
		<u>Y=420217.5 N</u> X=777706.4 E		Y=420224.8 N X=779029.7 E	Certificate No. CHAD HARCROW 17777 W.O. # 18-1835 DRAWN BY: AM

DISTRICT II 811 S. FIRST ST., ARTESIA, NM 88210 Phone: (875) 748-1283 Fax: (575) 748-8720

State of New Mexico DISTRICT I State of New Mexico

1625 N. Frence Dr. Hobbs, NM 58246 Energy, Minerals & Natural Resources Department

Pages (578) 303-6161 Face (578) 303-0728

CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR.

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DISTRICT III 1000 RIO BRAZOS RD., AZTEC, NM 87410 Phone: (505) 334-6178 Fax: (505) 334-6170

Santa Fe, New Mexico 87505

☐ AMENDED REPORT

DISTRICT IV 1220 S. ST. FRANCIS DR., SANTA FR. NM 67605 Phone: (500) 476-3460 Fax: (505) 476-3462

	WELL LOCATION AND A	CREAGE DEDICATION PLAT	
API Number	Pool Code	Pool Name	
Property Code	Proper	rty Name	Well Number
	BROT HELM	FEDERAL COM	703H
OGRID No.		tor Name	Elevation
	COG OPER	RATING, LLC	3415.9

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	35	24-S	34-E		250	NORTH	1255	EAST	LEA

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
0	2	25-S	34-E		50	SOUTH	1650	EAST	LEA
Dedicated Acres	s Joint o	r Infill Co	nsolidation	Code Or	der No.				

V=430771 0 N 250' Y=430780.8 N OPERATOR CERTIFIC	
Y=430771.9 N 1 50-30 1 1055' V-430780.0 N OPERATOR CERTIFIC	CATION
X=777620.1 E X=777620.1 E X=778932.9 E I hereby certify that the is herein is true and complete to my knowledge and belief, and the	the best of
organization either owns a working or unleased mineral interest in including the proposed bottom in the proposed bottom including the proposed bottom or has a right to drill this well	the land note location
X=777284.3 E - SURFACE LOCATION location pursuant to a contract LAT=32.180857 N V=430522.3 N owner of such mineral or working	with an
GRID AZ. TO FIP 290"22"16" LAT. = 32.180438" N campulsary pooling order hereton by the division.	fore entered
LONG.=103.435826 W	
LONG.=103.435826 W	Date
Printed Name	
T 24 S Control of the control of	meast
SECTION 35 SURVEYOR CERTIFICA LONG.=103.437091' W SURVEYOR CERTIFICA	
SECTION 2 LOT 3 LOT 2 LOT 1 shown on this plat was plotted to notes of actual surveys made by under my supervision, and that true and correct to the best of	rom field me or
DECEMBER 17. 20	
39.97 Ac 40.00 Ac 40.03 Ac 40.07 Ac NAD 27 NME Date of Survey	
PROPOSED BOTTOM Signature & Seal of Profession	al Surveyor
HOLE LOCATION Y=420265.7 N	
Y=420265.7 N X=777379.4 E LAT.=32.152253' N LONG = 103.437077' W	1
	D .
100° FSL & 1650° FEL (17777)	YOR
100' FSL & 1650' FEL Y=420315.7 N	
LONG.=103.437077 W LIP 100' FSL & 1650' FEL Y=420315.7 N X=777379.0 E LAT.=32.152391' N LONG.=103.437077 W Y=420210.3 N Y=420217.5 N Certificate No. CHAR HARCRO!	
D.H. T. LEED!	1/25/19 W 17777 N BY: AM

State of New Mexico DISTRICT I
State of New Mexico
1925 N. FRENCH DR. HOBBS, NM 86240
Phone: (675) 593-6161 Faz: (676) 593-0720
Energy, Minerals & Natural Resources Department OIL CONSERVATION DIVISION

DISTRICT II 811 5. FIRST ST., ARTESIA, NM 88210 Phone: (575) 748-1283 Fax: (575) 748-9720

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

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EAST

LEA

DISTRICT HI 1000 RIO BRAZOS RD., AZTEC, NM 87410 Phone: (506) 334-5178 Fax: (505) 334-5170

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DISTRICT IV 1220 S. ST. FRANCIS DR., SANTA FE, NM 67505 Phone: (505) 476-3460 Fex: (505) 476-3462

0

Dedicated Acres

25-S

Joint or Infill

34-E

Consolidation Code

WELL LOCATION AND ACREAGE DEDICATION PLAT

SOUTH

2310

API	Number			Pool Code			Pool Name		
Property (Code		:		Property Nam	10	···········	Well Num	ber
			BROT HELM FEDERAL COM 704H						1H
OGRID No	D.		Operator Name Elevation						n
			COG OPERATING, LLC 3418.1'						3.1'
Surface Location									
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
В	35	24-S	34-E		250	NORTH	2235	EAST	LEA
Bottom Hole Location If Different From Surface									
UL or lot No.	Section	Township	Range	Lot idn	Feet from the	North/South line	Feet from the	East/West line	County

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

50

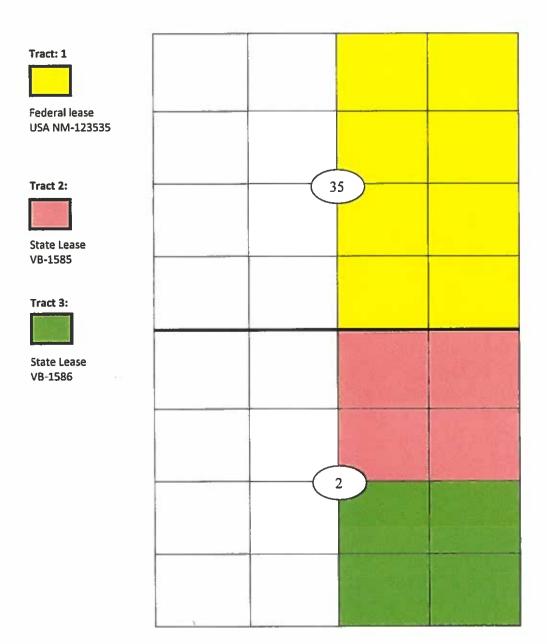
Order No.

NAD 27 NME	Y=430763.1 N	1250' S.L.	2235'	Y=430771.9 N	OPERATOR CERTIFICATION
SURFACE LOCATION Y=430515.7 N X=776701.2 E LAT.=32.180443* N LONG.=103.438994* W	X=776307,3 E FIP 100' FNL & 2310' FEL Y=430665.2 N X=776624.3 E LAT=32.180855' N LONG.=103.439238' W GRID AZ. TO FIP 332'46'33'	- 10403.5	2235	X=777620.1 E	I hereby certify that the information herein is true and complete to the heat of my knowledge and belief, and that this organisation 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.
		AZ 179			Signature Date
		GRID A			Printed Name
				LEASE X-ING _LAT.=32.166623* N	E-mail Address
	T 24 S SECTION 35			LONG.=103.439224" W	SURVEYOR CERTIFICATION
	SECTION 2 LOT 3 T 25 S LOT 4	LOT 2	LOT 1		I bereby 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 same is true and correct to the best of my belief.
		1	40.07.4		DECEMBER 17, 2018
	39.97 Ac 40.00 Ac	40.03 Ac	40.07 Ac		Date of Survey
					Signature & Seal of Professional Surveyor
			<u> </u>		CHAO L. HARCROW
NAD 27 NME <u>PROPOSED BOTTOM</u> <u>HOLE LOCATION</u> Y=420262.1 N X=776719.5 E				LIP 100' FSL & 2310' FEL Y=420312.1 N X=776719.0 E LAT.=32.152396' N LONG.=103.439210' W	TORREST TORRES
LAT.=32.152258* N LONG.=103.439210* W	Y=420210.3 N X=776383.1 E	3.HJ 50	2310'	Y=420217.5 N X=777706.4 E	1/25/19 Certificate No. CHAD HARCROW 17777 W.O. 18-1838 DRAWN BY: AM

Case No. 20205

Brot Helm Federal Com 601H, 602H, 603H,

E2 of Section 35, T24S-R34E, NMPM & E2 of Section 2, T25S-R34E, NMPM, Lea County, New Mexico



Unit Working Interest

 COG Operating LLC
 50.003125%

 EOG Resources, Inc.
 49.996875%

 Total
 100.000000%

Tract 1 - E2 of Section 35

COG Operating LLC 100.000000%

Tract 2 -NE4 of Section 2

EOG Resources, Inc. 100.000000%

<u>Tract 3 –SE4 of Section 2</u> EOG Resources, Inc.

EOG Resources, Inc. 100.000000%

Pooling Notification List

Working Interest Owners

EOG Resources, Inc. 5509 Champions Drive Midland, TX 79706

Case No. 20206

Brot Helm Federal Com 701H, 702H, 703H, 704H

E2 of Section 35, T24S-R34E, NMPM & E2 of Section 2, T25S-R34E, NMPM, Lea County, New Mexico

Tract: 1 Federal lease USA NM-123535			
Tract 2:	3	5	
State Lease VB-1585 Tract 3:			
State Lease VB-1586			

Unit Working Interest

 COG Operating LLC
 50.003125%

 EOG Resources, Inc.
 49.996875%

 Total
 100.000000%

Tract 1 – E2 of Section 35

COG Operating LLC 100.000000%

Tract 2 -NE4 of Section 2

EOG Resources, Inc. 100.00000%

Tract 3 -SE4 of Section 2

EOG Resources, Inc. 100.000000%

Pooling Notification List

Working Interest Owners

EOG Resources, Inc. 5509 Champions Drive Midland, TX 79706

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

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

CASE NOS. 20205 & 20206

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STATE OF NEW MEXICO	
COUNTY OF SANTA FE) ss)

Elizabeth A. Ryan, attorney and authorized representative of COG Operating LLC, the Applicant herein, being first duly sworn, upon oath, states that the above-referenced Application was provided under the notice letter and proof of receipt attached hereto.

Elizabeth A. Ryan

SUBSCRIBED AND SWORN to before me this 4th day of February 2019 by Elizabeth A. Ryan.



BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico

Case Nos. 20205 & 20206 Exhibit No. A-3 Submitted by:



January 4, 2019

CERTIFIED MAIL RETURN RECEIPT REQUESTED

TO: EOG Resources Inc.

> Attn: Charles Moran 5509 Champions Drive Midland, Texas 79706

Applications of COG Operating LLC for Compulsory Pooling, Lea County, New Re:

Mexico. Brot Helm Fed Com 601H, 602H, 603H, 701H, 702H, 703H & 704H Wells.

Dear Mr. Moran:

This letter is to advise you that COG Operating LLC has filed the enclosed applications with the New Mexico Oil Conservation Division seeking a non-standard spacing and proration unit and compulsory pooling, Lea County New Mexico.

Although, these applications reflect they are set for the January 24, 2019 docket, recent changes being implemented by the New Mexico Oil Conservation Division to address its back-logged docket. will place these applications for hearing before a Division Examiner at 8:15 a.m. on February 7. 2019. The hearing will be held in Porter Hall in the Oil Conservation Division's Santa Fe Office located at 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505. You are not required to attend this hearing, but as an owner of an interest that may be affected by these applications, you may appear and present testimony. Failure to appear at that time and become a party of record will preclude you from challenging the matter at a later date.

Parties appearing in cases are required by Division Rule 19.15.4.13(B) to file a Pre-Hearing Statement four days in advance of a scheduled hearing. This statement must be filed at the Division's Santa Fe office at the above-specified address and should include: the names of the parties and their attorneys; a concise statement of the case; the names of all witnesses the party will call to testify at the hearing; the approximate time the party will need to present its case; and identification of any procedural matters that are to be resolved prior to hearing.

Thank you for your time and attention to these matters.

Sincerely,

Elizabeth A. Ryan Senior Counsel

COG Operating LLC

U.S. Postal Service CERTIFIED MAIL® RECEIPT

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For delivery information, visit our website at www.usps.com.

Bod HolwClubs SE

Certified Mail Fee

Extra Services & Fees (check box, add fee as appropriate)

Return Receipt (hardcopy)

Return Receipt (hardcopy)

Return Receipt (hardcopy)

Adult Signature Required

Adult Signature Required

Adult Signature Restricted Delivery \$

Postage

EOG Resources Inc.

Attn: Charles Moran

5509 Champions Drive

Midland, Texas 79706

PSTEINTERBUO, PAPITIE DITS PORT 75504-025000-20047

SUB REVERSE for Instructions

SENDER: COMPLETE THIS SECTION	COMPLETE THIS SECTION ON	DELIVERY
■ Complete items 1, 2, and 3. ■ Print your name and address on the reverse so that we can return the card to you. ■ Attach this card to the back of the mailplece, or on the front if space permits. 1. Article Addressed to: EOG Resources Inc. Attn: Charles Moran 5509 Champions Drive Midland, Texas 79706	A. Signature X B. Received by (Printed Warne) D. Is delivery address different from If YES, enter delivery address	
Midiand, Texas /9/00		



October 24, 2018

Via Certified Mail: 91 7199 9991 7038 7628 2906

EOG Resources Inc. 5509 Champions Drive Midland, TX 79706

Re: Brot Helm Federal Com #601H, #602H & #603H

Sec 35: E/2 E/2 - T24S-R34E Sec 2: E/2 E/2 - T25S-R34E Lea County, New Mexico

Dear Sir/Madam:

COG Operating LLC ("COG"), as Operator, hereby proposes to drill the following wells located in the E/2 of Section 35, 24S-34E and E/2 of Section 2, 25S-34E, Lea County, New Mexico:

The Brot Helm Federal Com #601H well has a surface hole location of 250' FNL and 407' FEL of Section 35, 24S-34E, and a bottom hole location of 50' FSL and 520' FEL of Section 2, 25S-34E, or at a legal location as approved by the governing regulatory agency, to a TVD of approximately 12,550' and a MD of approximately 22,910' to test the Bone Spring formation ("Operation"). The total cost of the Operation is estimated to be \$9,952,616, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

The Brot Helm Federal Com #602H well has a surface hole location of 250' FNL and 1225' FEL of Section 35, 24S-34E, and a bottom hole location of 50' FSL and 1310' FEL of Section 2, 25S-34E, or at a legal location as approved by the governing regulatory agency, to a TVD of approximately 12,550' and a MD of approximately 22,910' to test the Bone Spring formation ("Operation"). The total cost of the Operation is estimated to be \$9,952,616, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

The Brot Helm Federal Com #603H well has a surface hole location of 250' FNL and 2205' FEL of Section 35, 24S-34E, and a bottom hole location of 50' FSL and 2120' FEL of Section 2, 25S-34E, or at a legal location as approved by the governing regulatory agency, to a TVD of approximately 12,550' and a MD of approximately 22,910' to test the Bone Spring formation ("Operation"). The total cost of the Operation is estimated to be \$9,952,616, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

COG is proposing to drill these wells under the terms of the modified 1989 AAPL form of Operating Agreement which is enclosed for your review and approval. The Operating Agreement covers Sec 35: E/2 - T24S-R34E and Sec 2: E/2 - T25S-R34E. It has the following general provisions:

- 100/300 Non-Consenting Penalty
- \$7,000/\$700 Drilling and Producing Rate
- COG Operating LLC named as Operator

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Case Nos. 20205 & 20206 Exhibit No. A-4
Submitted by:
COG OPERATING LLC
Hearing Date: February 7, 2019

Please indicate your participation elections in the spaces provided below, sign and return this letter, along with a signed copy of the enclosed AFEs and a copy of your geologic well requirements. A self-addressed, postage paid envelope is enclosed for your convenience. If you do not wish to participate, COG proposes to acquire your interest via term assignment. It has the following general provisions:

- 3 year primary term
- Delivering a 75% NRI, proportionately reduced
- \$5,000 per net acre bonus consideration

The Term Assignment offer terminates December 1, 2018 and is subject to the approval of COG's management and verification of title. If an agreement cannot be reached 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 if uncommitted at such time.

If you have any questions, please do not hesitate to contact the undersigned at (432) 685-4352 or msolomon@concho.com.

Respectfully,

Matt	Solomon
Staff	Landman

	Brot Helm Federal Com #601H
	I/We hereby elect to participate in the Brot Helm Federal Com 601H.
	I/We hereby elect <u>not</u> to participate in the Brot Helm Federal Com 601H.
	Brot Helm Federal Com #602H
	I/We hereby elect to participate in the Brot Helm Federal Com 602H.
	I/We hereby elect <u>not</u> to participate in the Brot Helm Federal Com 602H.
	Brot Helm Federal Com #603H
	I/We hereby elect to participate in the Brot Helm Federal Com 603H.
	I/We hereby elect <u>not</u> to participate in the Brot Helm Federal Com 603H.
Company:	EOG Resources Inc.
Ву:	
Name:	
Title:	
Datas	

WELL NAME: BI	ROT HELM FED COM #601H	PROSPECT NAME:	Buildog 2434 (717040)
SHL S	ec 35; 250 FNL & 407 FEL	STATE & COUNTY:	New Maxico, Lea
BHL: Se	ec 2: 50 FSL & 520 FEL	OBJECTIVE:	Drill and Complete
FORMATION: 3r	rd Bone Spring	DEPTH:	22,910
LEGAL! Se	ec 35: 24S-34E	TVD:	12,550

		Dria - Ria				Tank Btty		Pmpa,	
INTANGIBLE COSTS		Release(D)		Completion(C)		Constrctn(TB)		Equipment(PEQ)	TOTAL
Title/Curetive/Permit	201	20.000		Provide to the fig.		Comment of the last			20,000
Insurance	202	2,500	302						2,500
Damages/Right of Way	203	20,000	303		351				20,000
Survey/Stake Location	204	7,000		A-royles	352				7,000
Location/Pits/Road Expense	205	135.000	305	10,000	353	40,950	366		185,950
Orilling / Completon Overheed	208	11,100	306	15,000		MANUFACTURE CONTROL		Policy (Section 1988)	26,100
Turnkey Contract	207	0						Contract of	0
Footage Contract	208	0				form the same of			0
Daywork Contract	209	923,000		1				400	923,000
Directional Drilling Services	210	442,000		2				N. 11	442,000
Frac Equipment			307	679,000					679,000
Frac Chemicals			308	224,000				1000	224,000
Frac Proppert			309	365,000				Section 1911	365,000
Frac Proppert Transportation		444.000	310	189,000					189,000
Fuel & Power	211	211,000	311	35,000 494,000	354	and the second	367		248,000
Water	212	111,000	312	4,500			368		554,000 115,500
Mud & Chemicals	213	275,000	314	25.000			370		300.000
Driff Stern Teet	215	0	315				0,0	A CONTRACTOR OF THE PARTY OF	0
Corng & Analysis	216	- 0	0.0						D
Cement Surface	217	28,000							28.000
Correct Intermediate	218	75.000							75,000
Cornent 2nd Intermediate/Production	218	115,000							115.000
Cornent Squeeze & Other (Kickoff Plug)	220	0		A CONTRACTOR OF THE PARTY OF TH			371		D
Float Equipment & Controlizors	221	65,000							65,000
Casing Crews & Equipment	222	70,000							70.000
Fishing Tools & Service	223	0	323			NATA TO A STATE OF THE STATE OF	372		0
Geologic/Engineering	224	11,400	324		355		373		11,400
Contract Labor	225	6,500	325	20,000	356	111,671	374	6,500	144.871
Company Supervision	226	88,600	326	15,000	357		375		81,600
Contract Supervision	227	157,000	327	188,000	358		376	5.000	330,000
Testing Casing/Tubing	228	30,000	328	5,000		The second	377		35,000
Mud Logging Unit	229	52,000	329						52,000
Logging	230	- 0				4.4	378		0
Perforsting/Wreline Services	231	4 000	331	267,000		Production of the second	379		271.000
Stimulation/Treating			332	12,000			380		12,000
Completon Unit			333	50,000			381	8,800	58.800
Swebbing Unit	-	400.000	334	200.000	359		362	7.000	497,000
Rentale-Surface Rentale-Subsurface	235 236	190,000	335	300,000	32569		384	7,000	180,000
Trucking/Forkit/Rig Mobilization	237	200,000	337	30,000	380		385	3,000	223,000
Weking Services	237	3,000	336	5.000	361		386	3,000	8.000
Weter Disposal	239	3.00		80,000	362	122.850	387		182,850
Plug to Abundan	240	0			June	124.000	2011		0
Source Analysis	241	0						649	
Macelaneous	242	0					389		0
Continguescy	243	69,900	343	100,000	363		390		169,900
Clased Loop & Enveronmental	244	330.000	344	5,000	364		388		335,000
Dyad Dissal	245		345	229,000		150			
Coll Tutang			346	390,000					350,000
Flowback Crews & Equip			347			AT A TOTAL PROPERTY.			40.000
				48,000					48.000
Offset Oructoral/Frac	248		348				391		0
	248	3,841,000		3,744,500		275.671	391	30.300	
Offset Directoral/Frac TOTAL INTANGIBLES	248	3,841.000				275.671	391	30.300	0
Offset Directorel/Free						275.671	391	30.300	7,891 471
Offset Directoral/Frec TOTAL INTAMGIBLES YANGIBLE COSTS Surface Caserg	401	52,000				275.671	391	\$0.300	7,891 471 52,000
Other Directional/Free TOTAL INTANGIBLE TANGIBLE COSTS Surface Casing Intermediate Casing	401 402	52,000 565,000				275.671	301	30.300	7,891 471 52,000 555,000
Offset Ornottonal Frag TOTAL, BYTANGEBLES YANGIBLE COSTS Surface Casing Intermediate Casing Production Clasing/Liner	401	52,000	348	3,744.800		275.671	li H		7,891 471 52,000 585,000 516,000
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Offset Directorus/Friso TOTAL INTANGIBLE B TANGIBLE COSTS Surface Claining Intermediate Ceaning Production Ceaning/Liner Tubring Wellbed Equipment	401 402	52,000 565,000	504	1,744,800 52,000 22,000		275.671	530 531	5,000 3,000	52,000 585,000 510,000 57,000
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Othert Directional/Freio TOTAL INTANGIBLE D TANGIBLE COSTS Surface Casing Intermediate Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Pumping Unit	401 402 403	52,000 565,000 510,000	504	3,744 500 62,000 22,000 0 0		275.671	530 531 508 507	8,000 3,000 98,000	52,000 585,000 516,000 57,000 100,000 86,000
Offset Directorus/Friso TOTAL BYTANGIBLE B TANGIBLE COSTS Surface Caving Intermediate Caving Production Caving/Liner Tutang Wellmed Equipment Pumping Unit Pumping Unit Prime Mover Rods	401 402 403	52,000 565,000 510,000	504 506	1,744,500 62,000 22,000 0		275.671	530 531 508 507 508	8,000 3,000 98,000	0 7,891 471 52,000 585,000 516,000 57,000 100,000 98,000 0 35,000
Offset Ornectional Freio YOTAL BYLANGUBLER TANGUBLE COSTS Surface Casing Intermediate Cesting Production Casing/Uner Tuturing Wellbred Equipment Pumping Unit Pumping Unit Prima Mover Rods Pumpin-Bub Surface (8H)	401 402 403	52,000 565,000 510,000	504	3,744 500 62,000 22,000 0 0	510		530 531 508 507	8,000 3,000 98,000	52,000 525,000 555,000 516,000 100,000 86,000 0 25,000
Other Directorus/Friso TOTAL INTANGIBLE B TANGIBLE COSTS Surface Cearing Intermediate Cearing Intermediate Cearing Production Caaring/Liner Tubering Wellhand Equipment Pumping Unit Prime Mover Rods Rods Pumpis-Bub Burface (BH) Tanks	401 402 403	52,000 565,000 510,000	504 506	3,744 500 62,000 22,000 0 0	510	\$7,017	530 531 508 507 508	8,000 3,000 98,000	0 7.891.471 52,000 565,000 516,000 67,000 98,000 0 35,000 57,917
Offset Directorus/Friso TOTAL BYTANGIBLE B TANGIBLE COSTS Burface Caving Intermediate Caving Production Caving/Liner Tutaring Wellbund Equipment Pumping Unit Prime Mover Rods Pumpin-Bub Burface (BH) Tanks Flowlines	401 402 403	52,000 565,000 510,000	504 506	3,744 500 62,000 22,000 0 0	510 511 512		530 531 508 507 508	8,000 3,000 98,000	0 7,881 471 52,000 565,000 510,000 100,000 90,000 0 0 25,000 5,000 57,001 7,420
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Offset Directorus/Friso TOTAL BYTANGIBLE B TANGIBLE COSTS Burface Caving Intermediate Caving Production Caving/Liner Tutaring Wellbund Equipment Pumping Unit Prime Mover Rods Pumpin-Bub Burface (BH) Tanks Flowlines	401 402 403	52,000 565,000 510,000	504 506	3,744,500 62,000 22,000 0 0 0	511 512	57,917 24,200 127,400	530 531 508 507 508 532	5,000 3,000 98,000 95,000 5,000	0 7,881 471 52,000 565,000 510,000 100,000 90,000 0 0 25,000 5,000 57,001 7,420
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Other Cirrictional Freio TOTAL INTANGIBLE B TANGIBLE COSTS Surface Caerg Intermediate Ceerg Production Caergi Liner Tutorig Wellhead Equipment Pumping Line Floorings Health Treater (BH) Tankla Floorings Health Treater (Spannitor Electrical System Declaration Floorings Lineral System Lineral Lin	401 402 403 405 414 414 415	\$2,000 956,000 \$16,000 75,000	504 505 506 514 516 526	3,744,500 62,000 22,000 0 0 0 085,000	511 512 513 515 517 518 521 522 523 524 525	\$7,917 24,200 127,406 118,300 93,077 4,292 9,535 4,799 22,892 21,491 55,263	530 531 508 507 508 532 534	5,000 3,000 94,000 5,000 1,000 2,000 7,000 3,000	0 7.891 471 52,000 565,000 57,000 67,000 100,000 98,000 57,917 24,200 127,400 98,007 00 133,300 98,000 133,300 98,000 127,400 127,400 127,400 127,400 127,400 127,400 127,400 127,400 127,400 127,400 127,400 127,400 127,400 128,201 14,202 15,200 16,200 17,769 18,200 17,769 18,200 17,769 18,200 18,
Offset Directorus/Free TOTAL INTANGIBLE B TANGIBLE COSTS Surface Casing Intermediate Casing Production Casing/Liner Tutarig Wellmed Equipment Purping Unit Purpi	401 402 403 405 414 414 415	\$2,000 \$65,000 \$16,000 75,000	504 505 506 506 514	3,744,500 62,000 22,000 0 0 0 0 0 15,000 155,000	511 512 513 515 517 518 521 522 523 524 525 526	\$7,917 24,200 127,400 118,300 93,077 4,202 9,535 4,769 22,802 21,461 53,263 5377,115	530 531 508 507 508 532 534 534	5,000 3,000 94,000 5,000 5,000 15,000 2,000 3,000	0 7.891 471 52,000 565,000 57,000 100,000 6,000 35,000 57,917 24,200 127,406 133,300 6,000 6,000 7,917 24,200 127,406 133,300
Other Cirrictional Freio TOTAL INTANGIBLE B TANGIBLE COSTS Surface Caerg Intermediate Ceerg Production Caergi Liner Tutorig Wellhead Equipment Pumping Line Floorings Health Treater (BH) Tankla Floorings Health Treater (Spannitor Electrical System Declaration Floorings Lineral System Lineral Lin	401 402 403 405 414 414 415	\$2,000 956,000 \$16,000 75,000	504 505 506 506 514	3,744,500 62,000 22,000 0 0 0 085,000	511 512 513 515 517 518 521 522 523 524 525 526	\$7,917 24,200 127,406 118,300 93,077 4,292 9,535 4,799 22,892 21,491 55,263	530 531 508 507 508 532 534 534	5,000 3,000 94,000 5,000 1,000 2,000 7,000 3,000	0 7.891 471 52,000 565,000 57,000 100,000 6,000 35,000 57,917 24,200 127,406 133,300 6,000 6,000 7,917 24,200 127,406 133,300
Offset Directorus/Free TOTAL INTANGIBLE B TANGIBLE COSTS Surface Casing Intermediate Casing Production Casing/Liner Tutarig Wellmed Equipment Purping Unit Purpi	401 402 403 405 414 414 415	\$2,000 \$65,000 \$16,000 75,000	506 506 506 516 516 526	3,744,500 62,000 22,000 0 0 0 0 0 15,000 155,000	511 512 513 515 517 518 521 522 523 524 525 526	\$7,917 24,200 127,400 118,300 93,077 4,202 9,535 4,769 22,802 21,461 53,263 5377,115	530 531 508 507 508 532 534 534	5,000 3,000 94,000 5,000 5,000 15,000 2,000 3,000	0 7.891 471 52,000 565,000 57,000 100,000 6,000 35,000 57,917 24,200 127,406 133,300 6,000 6,000 7,917 24,200 127,406 133,300
Offset Cirrectorus/Free TOTAL INTANGIBLE COSTS Surface Casing Intermediate Casing Production Casing/Liner Tubring Wellheid Equipment Pumping Unit Pu	401 402 403 405 414 414 415	\$2,000 965,000 516,000 75,000	506 506 506 516 516 526	3,744.500 62,000 22,000 0 0 0 0 0 0 0 15,000 155,000 3,900,000	511 512 513 515 517 518 521 522 523 524 525 526	\$7,917 24,200 127,400 118,300 93,077 4,292 9,538 4,769 22,862 21,461 53,263 537,115 812,766	530 531 508 507 508 532 534 534	5,000 3,000 94,000 55,000 5,000 15,000 2,000 7,000 3,000	0 7.891 471 52,000 565,000 57,000 100,000 6,000 35,000 57,917 24,200 127,406 133,300 6,000 6,000 7,917 24,200 127,406 133,300
Othert Directional Freio TOTAL INTANGIBLE D TANGIBLE COSTS Surface Casing Intermediate Casing Intermediate Casing Intermediate Casing Intermediate Casing Intermediate Casing Wellhand Equipment Purings Unit Purings Unit Purings Unit Purings But Burface (8H) Tanks Flowfreio Rods Intermediate September Comment Flowfreio Couplings Freight Vision Intermediate September Couplings Freight Vision Instrumentation September Couplings Freight Vision Instrumentation SCADA/POC Intermediate Couplings Freight Vision TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost	401 402 403 405 414 414 415	\$2,000 \$66,000 \$16,000 75,000 1,196,000 5,000,000	506 506 506 516 516 526	3,744,500 62,000 22,000 9,0 0 0 0 15,000 155,000 3,900,000	511 512 513 515 517 518 521 522 523 524 525 526	\$7,917 24,200 127,400 118,300 93,077 4,292 9,538 4,769 22,862 21,461 53,263 537,115 812,766	530 531 508 507 508 532 534 534	5,000 3,000 94,000 55,000 5,000 15,000 2,000 7,000 3,000	0 7.891 471 52,000 565,000 57,000 100,000 6,000 35,000 57,917 24,200 127,406 133,300 6,000 6,000 7,917 24,200 127,406 133,300
Othert Directional Freio TOTAL INTANGIBLE D TANGIBLE COSTS Surface Casing Intermediate Casing Intermediate Casing Intermediate Casing Intermediate Casing Intermediate Casing Wellhand Equipment Purings Unit Purings Unit Purings Unit Purings But Burface (8H) Tanks Flowfreio Rods Intermediate September Comment Flowfreio Couplings Freight Vision Intermediate September Couplings Freight Vision Instrumentation September Couplings Freight Vision Instrumentation SCADA/POC Intermediate Couplings Freight Vision TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost	401 402 403 405 414 414 415	\$2,000 965,000 516,000 75,000	506 506 506 516 516 526	3,744.500 62,000 22,000 0 0 0 0 0 0 0 15,000 155,000 3,900,000	511 512 513 515 517 518 521 522 523 524 525 526	\$7,917 24,200 127,400 118,300 93,077 4,292 9,538 4,769 22,862 21,461 53,263 537,115 812,766	530 531 508 507 508 532 534 534	5,000 3,000 94,000 55,000 5,000 15,000 2,000 7,000 3,000	0 7.881 471 52,000 585,000 57,000 100,000 6,000 35,000 57,917 24,200 127,406 133,300 6,000 6,000 7,917 0 14,202 15,500 7,769 0 22,882 21,461 68,283 2,081,145
Othert Directional Freio TOTAL INTANGIBLE D TANGIBLE COSTS Surface Casing Intermediate Casing Intermediate Casing Intermediate Casing Intermediate Casing Intermediate Casing Wellhand Equipment Purings Unit Purings Unit Purings Unit Purings But Burface (8H) Tanks Flowfreio Rods Intermediate September Comment Flowfreio Couplings Freight Vision Intermediate September Couplings Freight Vision Instrumentation September Couplings Freight Vision Instrumentation SCADA/POC Intermediate Couplings Freight Vision TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost	401 402 403 405 414 414 415	\$2,000 \$65,000 \$16,000 75,000 1,199,000 6,009,000 61%	506 506 506 516 516 526	3,744,500 62,000 22,000 9,0 0 0 0 15,000 155,000 3,900,000	511 512 513 515 517 518 521 522 523 524 525 526	\$7,917 24,200 127,400 118,300 93,077 4,292 9,538 4,769 22,862 21,461 53,263 537,115 812,766	530 531 508 507 508 532 534 534	5,000 3,000 94,000 55,000 5,000 15,000 2,000 7,000 3,000	0 7.881 471 52,000 585,000 57,000 100,000 6,000 35,000 57,917 24,200 127,406 133,300 6,000 6,000 7,917 0 14,202 15,500 7,769 0 22,882 21,461 68,283 2,081,145
Offset Directorus/Fring TOTAL INTANGIBLE B TANGIBLE COSTS Burface Cearry Intermediate Intermediate Cearry Intermediate Intermedia	401 402 403 405 414 414 415	\$2,000 \$66,000 \$16,000 75,000 1,196,000 5,000,000	506 506 506 516 516 526	3,744,500 62,000 22,000 9,0 0 0 0 15,000 155,000 3,900,000	511 512 513 515 517 518 521 522 523 524 525 526	\$7,917 24,200 127,400 118,300 93,077 4,292 9,538 4,769 22,862 21,461 53,263 537,115 812,766	530 531 508 507 508 532 534 534	5,000 3,000 94,000 55,000 5,000 15,000 2,000 7,000 3,000	0 7.891 471 52,000 565,000 57,000 100,000 6,000 35,000 57,917 24,200 127,406 133,300 6,000 6,000 7,917 24,200 127,406 133,300
Offset Directorus/Frinc TOTAL INTANGIBLE B TANGIBLE COSTS Surface Casing Intermediate Casing Intermediate Casing Intermediate Casing Intermediate Casing Intermediate Casing Intermediate Casing Wellmand Equipment Purpage Livet Purpage Livet Purpage Livet Purpage Sub Burface (8H) Tanta Flowtines Plantines Flowtines Flowtines Plantines Flowtines Dehydriterial System Pactions/Archorus/Rengen Coupinger® Rengal/Nelvee Dehydriterial Reaction ParticCo2 Equipment Purpas-Surface Instrumentation/SCADA/POC Miscolemeaus Contingency Meteral/LACT Filterac/Combuston/Emission Ges Lift/Compression Ges Lift/Compression Cod Operating LLC We approve	401 402 403 405 414 414 415	\$2,000 \$45,000 \$16,000 75,000 1,198,000 6,009,000 61% Date Prepared	506 506 506 516 516 526	3,744,500 62,000 22,000 0 0 0 0 0 15,000 155,000 3,900,000 3,900,000	511 512 513 515 517 518 521 522 523 524 525 526	\$7,917 24,200 127,400 118,300 93,077 4,292 9,538 4,769 22,862 21,461 53,263 537,115 812,766	530 531 508 507 508 532 534 534	5,000 3,000 94,000 55,000 5,000 15,000 2,000 7,000 3,000	0 7.891 471 52,000 565,000 57,000 100,000 6,000 35,000 57,917 24,200 127,406 133,300 6,000 6,000 7,917 24,200 127,406 133,300
Othert Directional/Freio TOTAL INTANGIBLE D TANGIBLE COSTS Surface Cearing Intermediate Cearing Intermediate Cearing Intermediate Cearing Intermediate Cearing Wellhand Equipment Furning Wellhand Equipment Furning Wellhand Equipment Furning Furning Wellhand Equipment Furning Wellhand Equipment Furning Wellhand Equipment Furning Wellhand Cod Cod Cod Cod Cod Cod Cod Cod Cod Co	401 402 403 405 414 414 415	\$2,000 \$65,000 \$16,000 75,000 1,199,000 6,009,000 61%	506 506 506 516 516 526	3,744,500 62,000 22,000 9,0 0 0 0 15,000 155,000 3,900,000	511 512 513 515 517 518 521 522 523 524 525 526	\$7,917 24,200 127,400 118,300 93,077 4,292 9,538 4,769 22,862 21,461 53,263 537,115 812,766	530 531 508 507 508 532 534 534	5,000 3,000 94,000 55,000 5,000 15,000 2,000 7,000 3,000	0 7.891 471 52,000 565,000 57,000 100,000 6,000 35,000 57,917 24,200 127,406 133,300 6,000 6,000 7,917 24,200 127,406 133,300
Othert Directorus/Frinc TOTAL INTANGIBLE D TANGIBLE COSTS Surface Casing Intermediate Casing Intermediate Casing Intermediate Casing Intermediate Casing Intermediate Casing Intermediate Casing Wellhead Equipment Purings Unit Purings Unit Purings Unit Purings But Surface (8H) Tanks Flowtines Health Trainart-Superator Electrical System Packaru-Anchorus-Nergen Couplings Tempa-Valves Dehydration Lyection Plantic Capings Interest Purings-Outhers Instrumentation/SCADA/POC Miscellenous Contingency Metern/LACT Flores/Combustors/Erresson Gae Lift/Compresson TOTAL TANGIBLES TOTAL WELL COSTS **Y of Total Well Cost COG Operating Lic We sporove % Vorking Interest Correctly: EDG RESOURCES INC.	401 402 403 405 414 414 415	\$2,000 \$45,000 \$16,000 75,000 1,198,000 6,009,000 61% Date Prepared	506 506 506 516 516 526	3,744,500 62,000 22,000 0 0 0 0 0 15,000 155,000 3,900,000 3,900,000	511 512 513 515 517 518 521 522 523 524 525 526	\$7,917 24,200 127,400 118,300 93,077 4,292 9,538 4,769 22,862 21,461 53,263 537,115 812,766	530 531 508 507 508 532 534 534	5,000 3,000 94,000 55,000 5,000 15,000 2,000 7,000 3,000	0 7.891 471 52,000 565,000 57,000 100,000 6,000 35,000 57,917 24,200 127,406 133,300 6,000 6,000 7,917 24,200 127,406 133,300
Other Directorus/Free TOTAL INTANGIBLE B TANGIBLE COSTS Surface Caerg Intermediate Ceerg Production CaergiLiner Tutorig Wellheid Equipment Pumping Unit Violation Unit Vio	401 402 403 405 414 414 415	\$2,000 \$45,000 \$16,000 75,000 1,198,000 6,009,000 61% Date Prepared	506 506 506 516 516 526	3,744,500 62,000 22,000 0 0 0 0 0 15,000 155,000 3,900,000 3,900,000	511 512 513 515 517 518 521 522 523 524 525 526	\$7,917 24,200 127,400 118,300 93,077 4,292 9,538 4,769 22,862 21,461 53,263 537,115 812,766	530 531 508 507 508 532 534 534	5,000 3,000 94,000 55,000 5,000 15,000 2,000 7,000 3,000	0, 7,891 471 52,000 565,000 57,000 100,000 57,000 57,000 57,917 24,200 65,000 6
Othert Directional/Freig TOTAL INTANGIBLE D TANGIBLE COSTS Surface Casing Intermediate Cesting Production Casing/Liner Tuturing Well-based Equipment Pumping Line Pumping Lin	401 402 403 405 414 414 415	\$2,000 \$45,000 \$16,000 75,000 1,198,000 6,009,000 61% Date Prepared	506 506 506 516 516 526	3,744,500 62,000 22,000 0 0 0 0 0 15,000 155,000 3,900,000 3,900,000	511 512 513 515 517 518 521 522 523 524 525 526	\$7,917 24,200 127,400 118,300 93,077 4,292 9,538 4,769 22,862 21,461 53,263 537,115 812,766	530 531 508 507 508 532 534 534	5,000 3,000 94,000 55,000 5,000 15,000 2,000 7,000 3,000	0 7.891 471 52,000 565,000 57,000 100,000 6,000 35,000 57,917 24,200 127,406 133,300 6,000 6,000 7,917 24,200 127,406 133,300
Other Directorus/Frinc TOTAL INTANGIBLE D TANGIBLE COSTS Surface Casing Intermediate Cealing Intermediate Cealing Intermediate Cealing Intermediate Cealing Intermediate Cealing Wellhead Equipment Pumping Unit Pum	401 402 403 405 414 414 415	\$2,000 \$65,000 \$19,000 75,000 1,199,000 6,009,000 61% Oate Prepared COG Operating LLC Bg:	504 505 506 514 516 520	3,744,500 62,000 22,000 0 0 0 0 0 15,000 155,000 3,900,000 3,900,000 3,900,000	511 512 513 515 517 518 521 522 524 525 526 516	57,917 24,200 112,400 118,300 99,077 4,202 9,536 4,769 22,802 21,401 53,233 537,115 812,766	530 531 508 507 508 532 534 534	5,000 3,000 94,000 55,000 5,000 15,000 2,000 7,000 3,000	0, 7,891,471 52,000 585,000 516,000 57,000 60,000 9,000 9,000 177,406 133,000 90,007 0 4,202 16,538 7,789 0 22,802 21,481 60,203 20,81,455
Othert Directional/Freig TOTAL INTANGIBLE D TANGIBLE COSTS Surface Casing Intermediate Cesting Production Casing/Liner Tuturing Well-based Equipment Pumping Line Pumping Lin	401 402 403 405 414 414 415	\$2,000 \$65,000 \$19,000 75,000 1,199,000 6,009,000 61% Oate Prepared COG Operating LLC Bg:	504 506 506 514 516 520	3,744,500 62,000 22,000 0 0 0 0 0 15,000 155,000 3,900,000 3,900,000	511 512 513 515 517 518 521 522 524 525 526 516	57,917 24,200 112,400 118,300 99,077 4,202 9,536 4,769 22,802 21,401 53,233 537,115 812,766	530 531 508 507 508 532 534 534	5,000 3,000 94,000 55,000 5,000 15,000 2,000 7,000 3,000	0, 7,891,471 52,000 585,000 516,000 57,000 60,000 9,000 9,000 177,406 133,000 90,007 0 4,202 16,538 7,789 0 22,802 21,481 60,203 20,81,455

WELL NAME:	BROT HELM FED COM #602H	PROSPECT NAME:	Bulldog 2434 (717040)
SHL	Sec 35: 250 FNL & 1225 FEL	STATE & COUNTY:	New Mexico, Lea
BHL	Sec 2: 50 FSL & 1310 FEL	OBJECTIVE:	Drill and Complete
FORMATION:	3rd Bone Spring	DEPTH:	22,910
LEGAL	Sec 35: 24S-34E	TVD:	12,550

						10,000			
INTANGIBLE COSTS		Drig - Rig Release(D)		Completion(C)		Tank Btty Constrctn(TB)		Pmpa Equipment(PEQ)	TOTAL
Title/Curative/Permit	201	20,000				Personal Control of the		Section and second	20,000
Imputimos	202	2,500	302						2.500
Darrages/Right of Wisy Survey/Stake Location	203 204	7,000	303		351				7.000
Locaton/Pris/Road Expense	205	135.000	305	10.000	353	40.950	386		185,950
Drilling / Completion Overhead	206	11,100	306	15.000	-	10.000		P	26.100
Turnlay Contract	207	0							
Footage Contract	208	0							
Daywork Contract	208	923,000				- 1			923.000
Directional Ording Services	210	442,000				PH 19			442.000
Frac Equipment		particle services	307	679,000				(A)	679,000
Frec Chemicals		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	308	224,000					224.000
Free Proposet			309	385,000					385,000
Frac Proppent Transportation Fuel & Power	211	211,000	311	35,000	354		367		248,000
Weter	212	80.000	312	494,000	304		368		554.00
Box	213	111,000	313	4.500		The second second second	389		115,50
Mud & Chemicale	214	275.000	314	25,000			370		300,00
Ordi Stem Teet	215	0	315					A CONTRACTOR	-
Coring & Analysis	218								-
Cornent Surface	217	28.000						F 200	28,00
Corrunt Intermediate	218	75.000							75,00
Cement 2nd Intermediate/Production	219	115,000				factoring of			115,00
Cerrent Squeeze & Other (Kickoff Plug)	220	0				CASIFICATION AND AND AND AND AND AND AND AND AND AN	371		
Float Equipment & Centralizers	221	65.000						1111	65.00
Casing Crews & Equipment	222	70,000	-	PERSONAL PROPERTY.				1	70,00
Fishing Tools & Service	223	41.400	323		355	- 13	372		21.40
Geologic/Engineering	224	11,400	324	20,000	355	111,871	373	6,500	11,40
Company Supervision	Z25 Z25	8,500	325	15,000	357	111,0/1	375	9,500	81,80
Contract Supervision	227	157.000	327	185,000	358		376	5,000	330,00
Testing Chang/Fubing	228	30,000	328	5.000			377		35.00
Mud Logging Unit	229	52,000	329	- 0.000			,		62,000
Loggra	230	0		الأست والمراجع المراجع			378		
Perforating/Wireline Services	231	4.000	331	267.000			379		271,000
Strmulebon/Treeting			332	12.000			380		12.00
Completion Unit		1 1 1 1 1	333	\$0,000			381	8.800	58,60
Swebbing Unit			334			Martin Tourist (Substitute)	362		
Rentals-Surface	235	190,000	335	300.000	359		363	7,000	497,00
Rentale-Subsurface	236	150,000	336	30,000			384		160,00
Trucking/Forkilft/Rig Mobilization	237	200,000	337	20,000	360		385	3,000	223.00
Welding Services	238 239	3,000	338	5,000	361	122.850	365		8,00
Water Disposal	240	0	340	00,000	302	122.630	367		182,85
Plug to Abendon Seismic Analysia	241		341			Land College		primary data in a data of	
Macelaneous	242	0	342			and the same of the same	389		
Contingency	243	69,900	343	100,000	363		390		189,90
Closed Loop & Environmental	244	330,000	344	5,000	364		388		336.00
Dyud Dresel	245		345	229,000					
Coll Tubing		No. of Contrast of	346	350,000		MONTH PARTY			350,00
Flowback Crews & Equip			347	48,000		1.305,00.004		NAME OF TAXABLE	48,00
Offset Deectoral/Frac	248		348			Walter Shares	391		
TOTAL INTANCIBLES		3,841,000		3,744,500		275,671		30.300	7,891.47
TANGIBLE COSTS									
Surface Casing	401	52,000		Contract of the City		por mineral management			52,000
Intermediate Casing	402	555,000		ACT OF THE O					558.00
Production Casing/Liner	403	516,000		111 -0 -110		111 (60		0.00	516.00
Tubing			504	52,030			530	5,000	57,03
Welhead Equipment	405	75,000	505			0 = 5	531	3.000	100,00
Pumping Unit				0			506	95,000	96,00
Prene Mover				D			507		
Rods				D			508	35,000	35,00
Pumps-Sub Surface (BH)			500				532	5.000	5,00
Tanks				Personal Services	510	57.917			57,91
Flowines					511	24,200			24,20
Heater Treater/Separator					512 513	127,405	144	15 000	127.40
Electrical System Packers/Anchors/Hengers	414		514	66,000	113	118.300	534	2.000	133,30
Packers/Ancress/Hengers Couplings/Fittings/Velves	414		914	90,000	515	93,077	-274	2.007	93,07
Dehydration	413				517	63,017			83,07
Injection Plant/CO2 Equipment					518				
Pumpe-Surface		V/2 - G/ - INVIG			521	4,292		f - a	4,29
Instrumentation/SCADA/POC		e a militario del			522	9.538	529	7,000	16,53
Mucellaneous	419		518		523	4,789			7,78
Contingency	420		520		524		536		
Meters/LACT		C		N	625	22,692		to white I do will be	22.60
Flerse/Combustant/Emeson					626	21,481			21,46
Gee Lift/Compression		1000	527		518		528		66.26
TOTAL TANGIBLES		1,198,000		155.030		537,115		171,000	2,081,14
TOTAL WELL COSTS		5,039,000		3,900.000		812,786		201.300	9,952,61
% of Total Well Cost		81%		39%		8%		2%	
COG Operating LLC									
		Date Prepared:	_	9/26/18	,				
		COG Operating LLC							
We approve:				663 Jan - 11 Jan					
% Working Interest		Ву		JH4KL-JHOL-PS				_	
Company: EOG RESOURCES INC.									
By:									
Printed Name.									
Title				By signing you agree to pr	ly you	r share			
Date:		of the actual costs incur	ed.						

WELL NAME:	BROT HELM FED COM #603H	PROSPECT NAME:	Buildog 2434 (717040)
SHL:	Sec 35: 250 FNL & 2205 FEL	STATE & COUNTY:	New Mexico, Lea
BHL	Sec 2: 50 FSL & 2120 FEL	OBJECTIVE:	Drill and Complete
FORMATION:	3rd Bone Spring	DEPTH:	22,910
LEGAL:	Sec 35: 24S-34E	TVD:	12,550

							_		
NTANGIBLE COSTS		<u>Drig - Rig</u> Release(D)		Completion(C)		Tank Bitty Constrctn(TB)		Pmpa. Equipment(PEQ)	TOTAL
Title/Curative/Fermit	201	20,000		P		Continue the line of		STREET, STREET	20.
Insurance	202	2,500	3022						2.
Demages/Right of Way	203	20,000	303		351			V	20.
Survey/Stake Location	204 205	7,000	305	10,000	352	40.950	386	-	7,185.1
Location/Pits/Road Expense Drilling / Completion Overhead	206	11,100	308	15.000	333	40.800	300		28.
Furnish Contract	207	11,100	300	15.000				C .	20.
Cotage Contract	208	0		(C)					
Daywork Contract	209	623,000		7				AL HOUSE THE	923.
Directional Drilling Services	210	442.000							442,
rac Equipment			307	679,000					679
rec Chemicals		y 1 7	308	224,000				la march	224
rec Proppent		District of the last of the	309	385.000					385
rac Prospent Transportation			310	189.000				(Carle 1994)	189
uel & Power	211	211.000	311	35,000	354		367		246.
d spiner	212	60.000	312	494.000			268		554.
ta	213	111,000	313	4.500			369		115.
ud & Chemicals	214	275,000	314	25,000			370		300.
rill Stern Tool	215		315						
oring & Analysis	216	0		MANAGEMENT OF THE PARTY OF THE					
ement Surface	217	29,000							28.
ement Intermediate ement 2nd Intermediate/Production	218 219	75,000 115,000							75.
	220	119,000		1000			371	• • • • • • • • • • • • • • • • • • • •	115,
nment Squeeze & Other (Kickoff Plug) out Equipment & Centralizers	221	65,000					ur I		65,
asing Crews & Equipment	222	70,000				V			70.
shing Tools & Service	223	0	323				372		70.
eriogic/Engineering	224	11.400	324		355		373		11.
ordract Labor	775	6.500	325	20,000	358	111,671	374	6,500	144
ompany Supervision	228	66,600	328	15,000	357	***,411	375	- Maroja	81.
ontract Supervision	227	157.000	327	168.000	358		378	5,000	330
esting Casing/Tubing	228	30.000	328	5,000		FURTHER PROPERTY	377		35
fud Logging Unit	229	52,000	329			Maria and a		1	52
ASSING CHIEF	230	0				No.	378		
Perforating/Wireline Services	231	4 000	331	267,000		From the second	379		271
turnistan/Treating			332	12,000			360		12
Completion Unit			333	50,000		The same of the	381	8,800	58.
webbing Unit			334				362		
entale-Surface	235	190,000	335	300,000	359		363	7,000	497
entals-Subsurface	236	150,000	336	30,000		No-company of the Child	364		180,
uciung/Forkif//Rig Mobilization	237	200,000	337	20,000	360		305	3,000	223.
felding Services	238	3,000	338	5,000	361		386		- 8
feter Disposal	239	0	339	60,000	362	122.650	387		182
fug to Abendon	240	0	340						
earnic Analysis	241	0	341						
Aucelaneous	242	0	342				369		
Contingency	243	69,900	343	100.000	363		390		169
Closed Loop & Environmental	244	330,000	344	5.000	384		388		335
Oyed Deseil	245		345	229,000					-
Coll Tubing			346	350,000					360
Flowback Crews & Equip Offset Directonal/Frac	248		347	48,000			391		
TOTAL INTANGIBLES	240	3,841,000		3,744,500		275,671	301	30,300	7.891
TOTAL STEPHENDLES				4,144,400		2.0,071			7.00
TANGIBLE COSTS									
Surface Casing	401	52,000		Acatemicountmines.					52
Hermediate Casing	402	555,000		C. III		(2) (a) (b)			865
roduction Ceeing/Liner	403	516,000							510.
lubing			504	52,030			530	5.000	57
Velineed Equipment	405	75,000	505	22.000		(0)	531	3,000	100.
umping Unit		PARTIE LA LIFE MATERIA		0			506	98,000	98
rene Mover		175 Sept. 15		0			507		
Rods				.0			508	36.000	35
Pumpe-Bub Surface (BH)			509			W	532	5.000	5
Tanks				7-11-11	510	57,917			57
Towtnes				tops page 1	511			F 9	24
featur Treater/Separator					512				127
lectrical System					513	118,300		15,000	133
Packers/Anchors/Hengers	414		514	66 000		SALES AND SALES AND SALES	534	2.000	68
Couplings/Fittings/Velvee	415				515				93
Dehydration					517				
njecton Plant/CO2 Equipment					518				
Pumpe-Surface		alde de les committes de la committe		The second secon	521				4
httrumentation/SCADA/POC					522			7,000	16
Ascalin vous	419		519		523			3,000	7
Contingently Setup ACT	420		520		524 525		536		22
		parameter and							21
Inne/Combuston/Erreston		and the same of th	527	15,000	526 516		520		88
TOTAL TANGIBLES		1,198,000		155,030	010	537,115		171,000	2,081
TOTAL WELL COSTS		5.039,000		3,900,000		812,786		201,300	9,957
TOTAL TIELL CONTR		5.039,000	•	2,000,000		912,780		201,300	#,#Ch4
% of Total Well Cost OG Operating LLC		E1%		39%		8%		2%	
<u> </u>		Date Prepared:		9/26/16					
		COG Operating LLC							
Ne approve:		ning opening this							
% Working Interest		Ву		JH-KL-JHOL-PS				_	
Company: EOG RESOURCES INC.									
Company: EOG RESOURCES INC.									
Y									
By Provided Name: Tide:		Thus AFF in each an each	mare.	By signing you agree to pr	tel bear	r ahana			

Lea County, New Mexico

Dear Sir/Madam:

COG Operating LLC ("COG"), as Operator, hereby proposes to drill the following wells located in the E/2 of Section 35, 24S-34E and E/2 of Section 2, 25S-34E, Lea County, New Mexico:

The Brot Helm Federal Com #701H well has a surface hole location of 250' FNL and 437' FEL of Section 35, 24S-34E, and a bottom hole location of 50' FSL and 330' FEL of Section 2, 25S-34E, or at a legal location as approved by the governing regulatory agency, to a TVD of approximately 12,860' and a MD of approximately 23,320' to test the Wolfcamp formation ("Operation"). The total cost of the Operation is estimated to be \$10,552,616, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

The Brot Helm Federal Com #702H well has a surface hole location of 250' FNL and 1195' FEL of Section 35, 24S-34E, and a bottom hole location of 50' FSL and 1000' FEL of Section 2, 25S-34E, or at a legal location as approved by the governing regulatory agency, to a TVD of approximately 12,770' and a MD of approximately 23,230' to test the Wolfcamp formation ("Operation"). The total cost of the Operation is estimated to be \$10,552,616, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

The Brot Helm Federal Com #703H well has a surface hole location of 250' FNL and 1255' FEL of Section 35, 24S-34E, and a bottom hole location of 50' FSL and 1650' FEL of Section 2, 25S-34E, or at a legal location as approved by the governing regulatory agency, to a TVD of approximately 12,860' and a MD of approximately 23,320' to test the Wolfcamp formation ("Operation"). The total cost of the Operation is estimated to be \$10,552,616, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

The Brot Helm Federal Com #704H well has a surface hole location of 250' FNL and 2235' FEL of Section 35, 24S-34E, and a bottom hole location of 50' FSL and 2310' FEL of Section 2, 25S-34E, or at a legal location as approved by the governing regulatory agency, to a TVD of approximately 12,770' and a MD of approximately 23,230' to test the Wolfcamp formation ("Operation"). The total cost of the Operation is estimated to be \$10,552,616, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

COG is proposing to drill these wells under the terms of the modified 1989 AAPL form of Operating Agreement which is enclosed for your review and approval. The Operating Agreement covers Sec 35: E/2 - T24S-R34E and Sec 2: E/2 - T25S-R34E. It has the following general provisions:

- 100/300 Non-Consenting Penalty
- \$7,000/\$700 Drilling and Producing Rate
- COG Operating LLC named as Operator

Please indicate your participation elections in the spaces provided below, sign and return this letter, along with a signed copy of the enclosed AFEs and a copy of your geologic well requirements. A self-addressed, postage paid envelope is enclosed for your convenience. If you do not wish to participate, COG proposes to acquire your interest via term assignment. It has the following general provisions:

- 3 year primary term
- Delivering a 75% NRI, proportionately reduced
- \$5,000 per net acre bonus consideration

The Term Assignment offer terminates December 1, 2018 and is subject to the approval of COG's management and verification of title. If an agreement cannot be reached 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 if uncommitted at such time.

If you have any questions, please do not hesitate to contact the undersigned at (432) 685-4352 or msolomon@concho.com.

	Brot Helm Federal Com #701H
	I/We hereby elect to participate in the Brot Helm Federal Com 701H.
	I/We hereby elect <u>not</u> to participate in the Brot Helm Federal Com 701H.
	Brot Helm Federal Com #702H
	I/We hereby elect to participate in the Brot Helm Federal Com 702H.
	I/We hereby elect <u>not</u> to participate in the Brot Helm Federal Com 702H.
	Brot Helm Federal Com #703H
	I/We hereby elect to participate in the Brot Helm Federal Com 703H.
	I/We hereby elect <u>not</u> to participate in the Brot Helm Federal Com 703H.
	Brot Helm Federal Com #704H
	I/We hereby elect to participate in the Brot Helm Federal Com 704H.
	I/We hereby elect <u>not</u> to participate in the Brot Helm Federal Com 704H
Company:	EOG Resources Inc.
By:	
Name:	
Title:	
Date:	

WELL NAME:	BROT HELM FED COM #701H	PROSPECT NAME:	Buildog 2434 (717040)
SHL	Sec 35: 250 FNL & 437 FEL	STATE & COUNTY:	New Mexico, Lea
BHL	Sec 2: 50 FSL & 330 FEL	OBJECTIVE:	Drift and Complete
FORMATION:	Wolfcamp	DEPTH:	23,320
LEGAL:	Sec 35: 24S-34E	TVD:	12,860

INTANGIBLE COSTS		<u>Drig - Rig</u> Release(D)		Completion(C)		Tank Bitty Constrete(TB)		Pmpa Equipment(PEQ)	TOTAL
Title/Curative/Permit	201	20,000		323113131111111111111111111111111111111				Eddining Edd	20.000
Insurance	202	2,500	302						2,500
Derregen/Right of Way	203	20,000	303		351				20,000
Survey/Stake Location	204	7,000			352				7.000
Location/Pita/Road Expense	205	135,000	305		353	40.950	365		185,950
	206	14,100	305	15.000	330	40,650	300		29,100
Orilling / Completion Overhead			300	15.000				•	
Turnkey Contract	207	0							
Footage Contract	208	0							
Deywork Contract	209	1,148,000							1,148,000
Directional Drilling Services	210	548.000						100	548,000
Frec Equipment			307	679.000		EX SECULIAR		14	679,000
Frac Chemicals		9 3	308	224,000					224.000
Frec Proppers		01-14-14	309	385.000		LUNCIE ST		A	385,000
Frec Proppert Transportation		Literatura de la constitución de	310	189,000		DV COLUMN			189 000
Fuel & Power	211	288.000	311		354		367		303,000
Water	212	60,000	312	494.000	-		388		554,000
Brita	213	153,000	313	4.500			389		157,500
Mud & Chemicale	214	285,000	314	25,000		1.753	370		310,000
Drift Stern Test	215	0	315			The state of the s			
Corring & Analysis	216	0							
Cement Surface	217	28,000							28,000
Coment Intermediate	218	75.000		AW		0.00		7 400	75,000
Cement 2nd Intermediate/Production	219	115,000							115,000
Coment Squeeze & Other (Kickoff Plug)	220	0		F			371		170,000
Float Equipment & Centralizers	221	45,000						pro- III a di La casa	45,000
	221	70,000							
Casing Crews & Equipment			-				_		70.000
Fishing Tools & Service	223	0	323		m.c.*		372		
Geologic/Engineering	224	16,800	324		355		373		16,80
Contract Labor	225	8.500	325		356	\$11,871	374	6,500	144,87
Company Supervision	228	84.900	328	15,000	357		375		99,600
Contract Supervasion	227	185,000	327		358		378	5,000	366,000
Testing Ceang/Tubing	228	30,000	328	5,000			377		35,000
Mud Logging Unit	229	61,000	329	4,440		(d)	200	Addition to the same of	61,000
	230	0	w4.0				378		
Lougney Comments of the Commen	230	4,000	331	267,000		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	379		271,000
Perforating/Minutes Services	231	4,000							
Stirrulebon/Treeting			332	12,000			380		12,000
Completion Unit		THE REPORT OF	333	50,000		300 000 000	381	8.800	58,800
Swebbing Unit			334			45	382		
Rentals-Surface	235	230.000	335	300,000	350		383	7.000	537.000
Rentale-Subsurface	236	185,000	336	30,000		By the second	384		215.000
Trucking/Forkit/Rig Mobilization	237	200,000	337	20,000	360		385	3,000	223.000
			338		381		386	3.000	
Welding Services	238	3,000		5.000					8.00
Water Disposel	239	0	339	60,000	362	122,850	387		182.850
Plug to Abendon	240	0	340						
Seismic Analysis	241	0	341			Mary Mary Street			
Mucellaneous	242	. 0	342			150	369		
Contingency	243	81,500	343	100.000	363		390		181,500
Closed Loop & Environmental	244	350,000	344	5,000	384		388		366.000
Dyed Desei	245		345	229,000		Linear Contract			
Col Tubrig	240		345	360,000					350.000
Flowback Crews & Equip			347	48,000					48,000
Offset Directional/Frac	248		345			1777	391		
TOTAL INTANGIBLES		4,441,000	,	3,744.500		275.671		30,300	8.491.471
TANGIBLE COSTS									
Surface Cosing	401	52,000		Total Control of		Francisco Company			52,000
	402	566,000							555.000
Intermediate Casing	400	\$18 CDO						11.	
Intermediate Casing Production Casing/Uner	403	\$18,000	804	27,000			gan	8 000	\$18.000
Intermediate Cooling Production Cooling/Liner Tubing			504	52,030			530	5.000	\$18.000 57.030
Intermediate Casing Production Ceang/Liner Tubing Wellhead Equipment	403 405	\$18.000 75.000	504 505	22,000			531	3.000	\$18,000 57,000 100,000
Intermediate Casing Production Ceeing/Liner Tubing Wellhead Equipment Pumping Unit				22,000			531 508		\$18,000 57,030 100,000 98,000
Intermediate Casing Production Casing/Liner Tubing Wallhadd Equipment Pumping Unit Prims Mover				22,000 0			531 508 507	3.000 98.000	\$18.000 \$7.000 100,000 98.000
Intermediate Casing Production Ceeing/Liner Tubing Wellhead Equipment Pumping Unit				22,000			531 508	3.000	\$18.000 \$7.000 100,000 98.000
Intermediate Casing Production Cearg/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rode				22,000 0			531 508 507	3.000 98.000	\$18,000 57,030 100,000 98,000
Intermediate Casing Production Cearg/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rode			505	22,000 0	510	57.017	531 506 507 508	\$.000 96.000 36,000	\$18.00 57.03 100,00 98.00 5,00
Intermediate Casing Production Casing Inter Tubing Wallhead Equipment Pumping Unit Prime Mover Rode Pumping Sub Surface (BH) Tentas			505	22,000 0	510 511		531 506 507 508	\$.000 96.000 36,000	\$18.00 \$7.03 100,00 98.00 35,00 5,00
Intermediate Casing Production Casing/Liner Tubing Wallhead Equipment Pumping Unit Prima Mover Rode Pumping Rus Buffere (BH) Tanks Flowlance			505	22,000 0	510 511 512	24,200	531 506 507 508	\$.000 96.000 36,000	\$18.00 \$7.03 100,00 98.00 35,00 5,00 57.91
Intermediate Casing Production Ceany Liner Tuting Wellhead Equipment Pumping Unit Prims Mover Rode Pumpe Sub Surface (SH) Tanks Flowlens Heater Treater/Separator			505	22,000 0	512	24,200 127,408	531 508 507 508 532	3.000 96.000 35,000 5.000	\$18.00 57.03 100.00 98.00 35.00 57.91 24.20
Intermediate Casing Production Cearing Unior Tuting Wallhead Equipment Pumping Unif Phress Mover Rode Pumping-Sub Surface (BH) Tenha Flovelma Hoeser Treater/Separator Electrical System	405		505	22,000 0 0 0 0		24,200	531 506 507 508 532 533	3,000 98,000 38,000 5,000	\$18.00 57.03 100.00 98.00 35.00 57.91 24.20 127.40 133.30
Intermediate Casing Production Ceasing/Liner Tubing Wellhead Equipment Pumping Unit Phima Mover Rode Pumping Sub Surface (BH) Tenha Flowland Flowla	405		505	22,000 0	512 513	24,200 127,408 118,300	531 508 507 508 532	3.000 96.000 35,000 5.000	\$18,000 57,030 100,000 98,000 35,000 57,911 24,200 127,401 133,300 68,000
Intermediate Casing Production Ceang/Liner Tuting Wellhard Equipment Pumpang Unit Prima Mover Rode Prima Mover Rode Pumpa-Sub Surface (BH) Tanks Flowfare Heater Treater/Separator Electrical System Peach Archaruh/Pengers Coudings/Fittings/Yahves	405		505	22,000 0 0 0 0	512 513 515	24,200 127,408	531 506 507 508 532 533	3,000 98,000 38,000 5,000	\$18.00 57.09 100,000 98.000 55.000 57.911 24.200 127.401 88.000
Intermediate Casing Production Cearry Liner Tuting Walfined Equipment Pumping Lint Prima Mover Rode Pumping Lint Calculation Lint Calculati	405		505	22,000 0 0 0 0	512 513 515 517	24,200 127,408 118,300	531 506 507 508 532 533	3,000 98,000 38,000 5,000	\$18.00 57.00 98.00 98.00 55.00 57.91 24.20 127.40 133.30 88.00
Intermediate Casing Production Cearry Liner Tuting Walfined Equipment Pumping Lint Prima Mover Rode Pumping Lint Calculation Lint Calculati	405		505	22,000 0 0 0 0	512 513 515	24,200 127,408 118,300	531 506 507 508 532 533	3,000 98,000 38,000 5,000	\$18.00 57.00 98.00 98.00 55.00 57.91 24.20 127.40 133.30 88.00
Intermediate Casing Production Cearry Liner Tuting Walfined Equipment Pumping Lint Prima Mover Rode Pumping Lint Calculation Lint Calculati	405		505	22,000 0 0 0 0	512 513 515 517	24,200 127,408 118,300	531 506 507 508 532 533	3,000 98,000 38,000 5,000	\$18.00 57.09 100,000 98.000 35.000 57.91 24.200 127.40 133.300 68.000
Intermediate Casing Production Cearing Inner Tubing Wallhead Equipment Prima Mover Rode Prima Mover Rode Pumper Sub Surface (BH) Fanita Flowfinum Heater Treater/Separator Electrical System Pacharut/Archons/Hengers Couplings/Finitys/Moves Daitys/articon Interaction Pigrachon P	405		505	22,000 0 0 0 0	512 513 515 517 518	24,200 127,408 118,300 93,077	531 506 507 508 532 533	3,000 98,000 38,000 5,000	\$18,000 57,030 100,000 98,000 5,000 57,911 24,200 127,40 133,300 68,000 69,077
Informediate Casing Production Cearing Infor Tuting Walfhead Equipment Pumping Unit Phrima Mover Rode Pumping Unit Phrima Mover Rode Pumping Sub Surface (BH) Tenha Flovidriae Hoeter Treater/Supariator Electrical System Pachara/Anchons/Hengese Couldings/Fittings/Valvies Couldings/Fittings/Va	405 414 415		508	22,000 0 0 0 0 0 0	512 513 515 517 518 521 522	24,200 127,408 118,300 93,077 4,292 9,538	531 506 507 508 532 534 529	3,000 98,000 38,000 5,000 15,000 2,000	\$18 000 57,000 100,000 98,000 5,000 5,000 127,401 127,401 133,300 68,000 4,207 4,220 14,220
Informedate Casing Production Ceaing/Liner Tuting Wellhead Equipment Pumping Unit Prima Mover Rode Prima Mover Rode Prima Mover Rode Pumping-Sub Surface (BH) Teinlas Floovines Heater Treater/Separator Electrical System Peter Landershore/Hengers Couplings/Fittings/Valves Dehydristion Impaction Plant/COZ Equipment Pumping-Surface Fasture Petershore/Pet	414 415		505 509 514	22,000 0 0 0 0 0 0	512 513 515 517 518 521 522 523	24,200 127,408 118,300 93,077	531 506 507 508 532 534 529 535	3,000 98,000 38,000 5,000 15,000 2,000	\$18.00 \$7.03 100.00 98.00 35.00 5.00 57.91 127.40 133.30 68.00 93.07 4.20 14.20 16.53 7.76
Intermediate Casing Production Ceasing Inter Tubing Wallhead Equipment Pumpang Unit Prima Mover Rode Pumpang Unit Prima Mover Rode Pumpan-Sub Surface (BH) Tentas Flowfarus Heater Treater/Separator Electrical System Pachard Anchora/Pengers Couplings/Fiftings/Moves Daitys/attion Prigrat/COZ Equipment Pumpan-Sub Surface Instrumentation/SCADA/POC Macquilangs/Fiftings Instrumentation/SCADA/POC Macquilangs/Fiftings Conforgerication United States Instrumentation/SCADA/POC	405 414 415		508	22,000 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524	24,200 127,400 118,300 93,077 4,292 9,538 4,789	531 506 507 508 532 534 529	3,000 98,000 38,000 5,000 15,000 2,000	\$18 000 \$7.000 \$100,000 \$9.000 \$9.000 \$5.000 \$5.000 \$5.000 \$127.400 \$133.300 \$68,000 \$0.007 \$1.000 \$
Intermediate Casing Production Cearing Tuner Tuting Wallhead Equipment Purryang Unit P	414 415		505 509 514	22,000 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525	24,200 127,400 118,300 83,077 4,292 0,538 4,789	531 506 507 508 532 534 529 535	3,000 98,000 38,000 5,000 15,000 2,000	\$18 000 57,000 100,000 98,000 98,000 5,000 5,000 127,400 133,300 68,000 93,077 14,282 14,280 14,280 15,7,786
Infermedate Casing Production Ceaning Infer Tuting Wellhased Equipment Pumpang Unit Prima Mover Rode Prima Mover Rode Pumpa-Sub Surface (BH) Tanks Flowfree Heater Treater/Separator Electrical System Packer/Anchors/Hengers Cauchings/Fathyas/Valves Dehydraton Personal System Packer/Anchors/Hengers Cauchings/Fathyas/Valves Dehydraton Personal System P	414 415		505 509 514 519 520	22,000 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,405 118,300 83,077 4,252 8,538 4,789 22,862 21,461	531 506 507 508 532 534 529 535 536	3,000 98,000 5,000 15,000 2,000 7,000 3,000	\$18,000 \$7,000 100,000 98,000 36,000 57,911 24,200 127,401 133,300 68,000 64,200 4,200 4,200 16,500 16,500 17,781 16,500 17,781 16,500 17,781 16,500 17,781 17,781 18,500 18,5
Intermediate Casing Production Ceaning Inner Tuting Wallhead Equipment Prime Mover Rode Prime Mover Rode Primes Mover Rode Pumper-Sub Surface (BH) Tentas Flooring Electrical System Pachara Machanish Perges Countings Fittings Africa Countings Fittings Africa Injury Countings Fittings Fitt	414 415	75.000	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525	24,200 127,405 118,300 83,077 4,222 8,536 4,789 22,862 21,461 53,263	531 506 507 508 532 534 529 535	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000	\$18 000 57.000 100,000 98,000 35,000 5,000 127,400 133,300 68,000 6,000 14,220 16,531 7,781 22,800 22,800
Intermediate Casing Production Cesing/Liner Futuring Wellhead Equipment Purping Wellhead Equipment Perma Mover Rode Prime Mover Rode Prime Mover Rode Prime Mover Rode Prime Mover Rode Prime-Sub Surface (BH) Fanics Flowfore Flowf	414 415	75.000	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,400 118,300 93,077 4,252 9,538 4,789 22,862 21,461 53,263 537,115	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000	\$18,000 57,000 100,000 98,000 57,911 24,200 133,300 68,000 93,07 4,252 16,53 7,76 22,66 21,46 68,26 21,46 68,26 22,66 41,46 68,26 68
Intermediate Casing Production Casing/Liner Tubing Walthead Equipment Purpage Unit Priva Mover Rode Priva Mover Rode Pumper Sub Surface (BH) Fanks Flowfare Blectrical System Pacters Anchors/Petragers Coultings/Fittings/Natives Dehydration Injection Plant/COZ Equipment Pumper-Sub Rode Instrumentation/SCADA/POC Maccellings/Fittings/Natives Dehydration Injection Plant/COZ Equipment Pumper-Surface Instrumentation/SCADA/POC Maccellings/Fittings/Natives Dehydration Opensory Materia/ACT Petragery Materia/ACT Petragesory Gas LIFCorressesors	414 415	75.000	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,405 118,300 83,077 4,222 8,536 4,789 22,862 21,461 53,263	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000	\$18,000 57,000 100,000 98,000 57,911 24,200 133,300 68,000 93,07 4,252 16,53 7,76 22,66 21,46 68,26 21,46 68,26 22,66 41,46 68,26 68
Intermediate Casing Production Casing Unior Tubing Walfleed Equipment Pumping Unif Physica Mover Rode Rode Pumping Sun Sunface (BH) Forking Fo	414 415	1.198.000 5.038.000	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,405 118,300 83,077 4,252 6,536 4,789 22,862 21,461 53,263 537,115 812,786	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000 174,000 201,300	\$18,000 57,000 100,000 98,000 57,911 24,200 133,300 68,000 93,07 4,252 16,53 7,76 22,66 21,46 68,26 21,46 68,26 22,66 41,46 68,26 68
Intermediate Casing Production Ceaning/Liner Tutning Wellhead Equipment Pumpang Unit Perman Mover Rode Perma Mover Rode Rode Perma Mover Rode Rode Rode Rode Rode Rode Rode Rode	414 415	75.000	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,400 118,300 93,077 4,252 9,538 4,789 22,862 21,461 53,263 537,115	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000	\$18,000 57,000 100,000 98,000 57,911 24,200 133,300 68,000 93,07 4,252 16,53 7,76 22,66 21,46 68,26 21,46 68,26 22,66 41,46 68,26 68
Intermediate Casing Production Casing/Liner Libring Wellhead Equipment Pumpang Unit Prima Mover Rode Pumpang Unit Prima Mover Rode Pumpang-Sub Surface (SH) Tanks Flowlere Rodes Pumpang-Sub Surface (SH) Tanks Flowlere Rodes	414 415	1.198.000 5.038.000	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,405 118,300 83,077 4,252 6,536 4,789 22,862 21,461 53,263 537,115 812,786	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000 174,000 201,300	\$18,000 57,000 100,000 98,000 57,911 24,200 133,300 68,000 93,07 4,252 16,53 7,76 22,66 21,46 68,26 21,46 68,26 22,66 41,46 68,26 68
Intermediate Casing Production Casing/Liner Libring Wellhead Equipment Pumpang Unit Prima Mover Rode Pumpang Unit Prima Mover Rode Pumpang-Sub Surface (SH) Tanks Flowlere Rodes Pumpang-Sub Surface (SH) Tanks Flowlere Rodes	414 415	1.196.000 5.636.000	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,405 118,300 83,077 4,252 6,536 4,789 22,862 21,461 53,263 537,115 812,786	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000 174,000 201,300	\$16.00 \$7.00 100.00 96.00 \$5.00 \$7.91 24.20 133.30 68.00 93.07 4.22 16.53 7.76 22.60 69.25 21.46 69.26 20.01,14
Intermediate Casing Production Ceaning/Liner Tutning Wellhead Equipment Pumpang Unit Perman Mover Rode Perma Mover Rode Rode Perma Mover Rode Rode Rode Rode Rode Rode Rode Rode	414 415	1.198.000 5.038.000	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,405 118,300 83,077 4,252 6,536 4,789 22,862 21,461 53,263 537,115 812,786	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000 174,000 201,300	\$16.00 \$7.00 100.00 96.00 \$5.00 \$7.91 24.20 133.30 68.00 93.07 4.22 16.53 7.76 22.60 69.25 21.46 69.26 20.01,14
Intermediate Casing Production Casing/Liner Libring Wellhead Equipment Pumpang Unit Prima Mover Rode Pumpang Unit Prima Mover Rode Pumpang-Sub Surface (SH) Tanks Flowlere Rodes Pumpang-Sub Surface (SH) Tanks Flowlere Rodes	414 415	1.196.000 5.636.000	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,405 118,300 83,077 4,252 6,536 4,789 22,862 21,461 53,263 537,115 812,786	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000 174,000 201,300	\$18,000 57,000 100,000 98,000 57,911 24,200 133,300 68,000 93,07 4,252 16,53 7,76 22,66 21,46 68,26 21,46 68,26 22,66 41,46 68,26 68
Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumpan Qunit Prima Mover Rode Pumpan Sub Surface (BH) Tanks Flowlere Rode Pumpa-Sub Surface (BH) Tanks Flowlere Reder/Frester/Separator Electrical System Packers/Anchons/Hengers Couplings/Fiftings/Yahves Dehydriston Interton PlentifCO2 Equipment Pumpa-Surface Instrumentation/SCADAPOC Majorghoritation Fortings/Fiftings/Yahves Dehydriston Frester/Corporation Confortings/Fiftings/Yahves Dehydriston Fortings/Fiftings/Yahves Dehydriston Fortings/Fiftings/Fiftings/Yahves Dehydriston Fortings/Fiftings/Yahves Fortings/Fiftings/Yahves Fortings/Fiftings/Yahves Dehydriston Fortings/Fiftings/Yahves Fortings/F	414 415	1.196.000 5.636.000	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,405 118,300 83,077 4,252 6,536 4,789 22,862 21,461 53,263 537,115 812,786	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000 174,000 201,300	\$18,000 57,000 100,000 98,000 57,911 24,200 133,300 68,000 93,07 4,252 16,53 7,76 22,66 21,46 68,26 21,46 68,26 22,66 41,46 68,26 68
Infermedate Casing Production Ceaning Infermedate Casing Production Ceaning Unier Tutoring Wellhead Equipment Pumping Unit Prima Mover Rode Pumping Sub Surface (BH) Fanis Flowfune Heater Treater/Separator Electrical System Petcharr/Anchors/Hengers Couplings/Fittings/Valves Dehydria/Infermedate Pumping Surface Pumping	414 415	1.196.000 5.636.000	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,405 118,300 83,077 4,252 6,536 4,789 22,862 21,461 53,263 537,115 812,786	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000 174,000 201,300	\$16.00 \$7.00 100.00 96.00 \$5.00 \$7.91 24.20 133.30 68.00 93.07 4.22 16.53 7.76 22.60 69.25 21.46 69.26 20.01,14
Intermediate Casing Production Ceaning Production Ceaning/Liner Tubing Wellhead Equipment Purpur Mover Rode Purpur Sub Surface (BH) Tanks Flowfare Beater Treater/Separation Electrical System Packers/Anchorn/Parigers Country System Packers/Anchorn/Parigers Country System Packers/Anchorn/Parigers Country System Packers/Anchorn/Parigers Country System Packers/Anchorn/Parigers Dehydriston Purpus-Surface Instrumentation/SCADA/POC Majorghimatical Entertry System Purpus-Surface Instrumentation/SCADA/POC Majorghimatical Conforgericy Meters/LACT Parison TOTAL WELL COSTS % of Total Well Cost COG Operating LLC	414 415	1.196.000 5.636.000	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,405 118,300 83,077 4,252 6,536 4,789 22,862 21,461 53,263 537,115 812,786	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000 174,000 201,300	\$18,000 57,000 100,000 98,000 57,911 24,200 133,300 68,000 93,07 4,252 16,53 7,76 22,66 21,46 68,26 21,46 68,26 22,66 41,46 68,26 68
Intermediate Casing Production Ceasing Production Ceasing Unite Tubing Wellhead Equipment Prime Mover Rode Primping Unit Prime Mover Rode Primping Unit Prime Mover Rode Primping Sub Surface (BH) Tentas Flooting Electrical System Pachara/Anchors/Hergers Countings/Floogar/Anchors/Hergers Countings/Floogar/Anchors/Hergers Countings/Floogar/Anchors/Hergers Countings/Floogar/Anchors/Hergers Countings/Floogar/Anchors/Hergers Countings/Floogar/Anchors/Hergers Countings/Floogar/Anchors/Hergers Countings/Floogar/Anchors/Hergers Countings/Floogar/Anchors/Hergers Particle Countings/Floogar/Anchors/Floogar/Anch	414 415	1.198.000 5.636.000 63%.000 COG Operating LLC	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,405 118,300 83,077 4,252 6,536 4,789 22,862 21,461 53,263 537,115 812,786	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000 174,000 201,300	\$18,000 57,000 100,000 98,000 57,911 24,200 133,300 68,000 93,07 4,252 16,53 7,76 22,66 21,46 68,26 21,46 68,26 22,66 41,46 68,26 68
Infermedate Casing Production Ceaning Inter Tuting Wellhard Equipment Purpose Sub-Surface (BH) Tanks Rode Pumpa-Sub-Surface (BH) Tanks Flowlane Heater Treater/Separator Electrical System Packer/Anchors/Hengers Couchings/Fithings/Valves Dehydriston Hysichen Pieror/CQ2 Equipment Pumpa-Surface Instrumentation/SQADAPOC Maccallensure Instrumentation/SQADAPOC Maccallensure Fithings/Fathers Fithings/Fathers Controllensure/Fithings/Fithings/Fathers Controllensure/Fithings/Fi	414 415	1.198.000 5.636.000 63%.000 COG Operating LLC	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,405 118,300 83,077 4,252 6,536 4,789 22,862 21,461 53,263 537,115 812,786	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000 174,000 201,300	\$18,000 57,000 100,000 98,000 57,911 24,200 133,300 68,000 93,07 4,252 16,53 7,76 22,66 21,46 68,26 21,46 68,26 22,66 41,46 68,26 68
Intermediate Casing Production Casing/Liner Libring Wellhead Equipment Perman Unit Prime Mover Rode Pumper-Sub Surface (SH) Tents Flowform Rode Pumper-Sub Surface (SH) Tents Flowform Rode Pumper-Sub Surface (SH) Tents Flowform Rode Rode Rode Rode Rode Rode Rode Rode	414 415	1.198.000 5.636.000 63%.000 COG Operating LLC	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,405 118,300 83,077 4,252 6,536 4,789 22,862 21,461 53,263 537,115 812,786	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000 174,000 201,300	\$18,000 57,000 100,000 98,000 57,911 24,200 133,300 68,000 93,07 4,252 16,53 7,76 22,66 21,46 68,26 21,46 68,26 22,66 41,46 68,26 68
Intermediate Casing Production Gesing/Liner Tuting Wellhead Equipment Purpage Sub Surface (BH) Prima Mover Rode Rode Rode Rode Rode Rode Rode Rode	414 415	1.198.000 5.636.000 63%.000 COG Operating LLC	505 509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526	24,200 127,405 118,300 83,077 4,252 6,536 4,789 22,862 21,461 53,263 537,115 812,786	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000 174,000 201,300	\$18,000 57,000 100,000 98,000 57,911 24,200 133,300 68,000 93,07 4,252 16,53 7,76 22,66 21,46 68,26 21,46 68,26 22,66 41,46 68,26 68
Intermediate Casing Production Cearry Liner Tubing Wellhead Exponent Perman Unit Prima Move Rode Pumper Sub Surface (BH) Tanks Flowfrine Heater Treater/Separator Electrical System Packers/Anchorn/Hergers Couplings/Finga/Mives Dehydribon Physichon Plant/CO2 Equipment Pumper-Sub-Back Instrumentation/SCADA/POC Maccellanesus Confringering Meters/Co7 ToTAL WELL CO6TS % of Total Well Cost We approve: "% Warking Interest Company EoG RESOURCES INC. By- Printed Name EOG RESOURCES INC. By- Printed Name **Company EoG RESOURCES INC. By- **Com	414 415	1.198.000 1.198.000 5.039.000 6.3% Date Prepared: COG Operating LLC 81:	509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526 518	24,200 127,406 118,300 83,077 4,292 8,536 4,789 22,862 21,461 53,263 537,115 812,786	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000 174,000 201,300	\$16 000 57,000 100,000 98,000 98,000 57,911 24,200 127,400 133,300 68,000 60,077 6 4,220 16,534 7,766 62,260 22,600 23,461
Intermediate Casing Production Cearry Liner Tubing Wallhead Expresent Pumping Unit Permit Mover Rode Pumping Unit Permit Mover Rode Pumping-Sub Burface (BH) Tends Floodinate Electrical System Petchard/Anchors/Hengers Couclings-Flooga/Moves Dehydration Injection Plent/Co2 Equipment Pumping-Sub-Burface Instrumentation/SCADA/POC Maccalimenua Contriguery MotismA.CT Petras-ContribustricEmission Gos LPT-ContribustricEmission TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost COG Operating LLC We approve: % Working Interest	414 415	1.198.000 1.198.000 5.039.000 6.3% Date Prepared: COG Operating LLC 81:	509 514 519 520	22,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	512 513 515 517 518 521 522 523 524 525 526 518	24,200 127,406 118,300 83,077 4,292 8,536 4,789 22,862 21,461 53,263 537,115 812,786	531 506 507 508 532 534 529 535 536	3,000 98,000 38,000 5,000 15,000 2,000 7,000 3,000 174,000 201,300	\$10,000 \$7,000 \$1,000 \$1,000 \$1,000 \$1,000 \$5,000 \$5,000 \$1,27,400 \$1,33,300 \$63,007 \$1,27,400 \$1,33,300 \$2,27,766 \$2,200 \$1,421 \$1,534 \$1,534 \$1,534 \$1,535

WELL NAME:	9ROT HELM FED COM \$702H	PROSPECT NAME:	Buildog 2434 (717040)
SHL	Sec 35: 250 FNL & 1195 FEL	STATE & COUNTY:	New Mexico, Lea
BHL:	Sec 2: 50 FSL & 1000 FEL	OBJECTIVE:	Drill and Complete
FORMATION:	Wolfcamp	DEPTH:	23,230
LEGAL:	Sec 35: 24S-34E	TVD:	12,770

						12/110			
		<u>Dria - Ria</u>		=ttt0t		Tank Btty		Pmpq	TOTAL
INTANGIBLE COSTS		Release(D)		Completion(C)		Constrctn(TB)		Equipment(PEQ)	TOTAL 20,000
Title/Curebve/Permit	201	20,000	302						2,500
Damages/Right of Way	203	20,000	303		351			-	20,000
Survey/Stake Location	204	7.000		X-9-20-00-00-00-00-00-00-00-00-00-00-00-00-	352			CONTRACTOR OF THE	7,000
Location/Pits/Road Expense	205	135,000	305	10,000	353	40.950	386		185,950
Drilling / Completion Overhead	208	14,100	306	15,000		No			29,100
Turnisy Contract	207	0				17			Ð
Footage Contract	208	0		100		A 100			
Daywork Contract	209	1,148,000							1,148,000
Directional Drilling Services	210	548.000							548,000
Free Equipment			307	879.000 224.000					224,000
Frac Chemicals Frac Proppert			309	385,000					385,000
Frisc Proppint Transportation			310	189.000				110000000000000000000000000000000000000	189,000
Fuel & Power	211	268,000	311	35.000	354		367		303,000
Wedner	212	60,000	312	494,000			368		554,000
Bds	213	153,000	313	4.500			360		157,500
Mud & Chemicals	214	285.000	314	25,000			370		310,000
Drill Styrn Teat	215	0	315					124 14	0
Coring & Analysia	216	0							0
Cernent Surface	217	28.000				Principal Control			28.000
Cerrent Intermediate	218	75.000							75,000
Cement 2nd Intermediate/Production	219	115.000					371		115,000
Cernert Squeeze & Other (Kickoff Plug) Float Equipment & Centralizers	220 221	45,000					3/1		45,000
Cooling Crows & Equipment	221	70,000						Televisian and the second	70.000
Fishing Tools & Service	223	70,000	323			E TO THE REAL PROPERTY.	372		
Geologic/Engineering	224	18,800	324		356		373		16.600
Contract Labor	225	6.500	325	20,000	356	111,671	374	6,500	144.671
Company Supervision	228	64,600	326	15,000	357		375		99.600
Contract Supervision	227	195,000	327	188,000	358		376	5.000	368,000
Testing Casing/Tubing	228	30,000	326	5,000			377		36,000
Mud Logging Unit	229	61,000	329			24.3			61,000
Logong	230	- 0	-	personal and the same of the			378		0
Perforsting/Wireline Services	231	4.000	331	267,000			379		271,000
Starnulation/Treating		Annual Company of the Company	332	12,000		11 5231	380	0.000	12,000 58,800
Completion Unit			333	50,000			361	8.800	50,000
Swebbing Unit Rentate-Surface	235	290,000	335	300,000	359		383	7.000	537.000
Rentain-Subsurface	238	185,000	338	30,000		Phillipson Charles and Co.	384	13000	215,000
Trucking/Forkitt/Rig Mobilization	237	200,000	337	20,000	380		385	3,000	223,000
Welding Services	238	3,000	330	5,000	361		386		_ 8.000
Water Disposal	239	0	339	60,000	362	122.850	367		182,650
Plug to Alamdon	240	0	340						0
Searrat Analysis	241	. 0							0
Maçalımanın	242	0					369		0
Contingency	243	81,500		100,000	363		390		181.500
Closed Loop & Environmental	244	350,000		5,000	364		388		365.000
Dyed Dinsel	245		346						350,000
Cof Tubing		CONTRACTOR CONTRACTOR	347	48.000					48.000
Florenck Craws & Equp Offset Directional/Frac	248		348				391		0
TOTAL INTANGIBLES		4.441,000		3,744,500		275,671		30.300	8.491.471
			•						
TANGIBLE COSTS									
Surface Casing	401	52,000		Control of the last				A section of the sect	52,000
Intermediate Casing	402	586,000	•						\$55,000
Production Casing/Liner	403	516,000				1.4			516.000
Tubing			504	52,030		6	530	5.000	57.030
Wallhard Equipment	405	75.000	505				531	3,000	100,000
Pumping Unit							508	98,000	96,000
Prime Mover				0			507	ne don	35,000
Rode			509	0			508	35.000 5.000	35.000 5,000
Pumpe-Sub Surface (BH)			SUE	C = 11/1	510	57,917	344	5.000	57,917
Flowlines					511	24,200		1 15 C	24,200
Heater Treater/Separator					512			to the property of the party of	127.406
Electrical System					613			15,000	133,300
Packers/Anchors/Hengers	414		514	66.000		900000000000000000000000000000000000000	534	2,000	66,000
Couplings/Fittings/Velvee	415			6.3	515	93.077			93,077
Dehydration		The second second		L (1)	517				0
Injection Plant/CO2 Equipment		Machine Committee			518				0
Pumpe-Surface				- 19	521	4,292	-	8.66*	4.292
Instrumentation/SCADA/POC					522 523		529 535		18,536 7,769
Miscellaneous Contingency	419	-	519 520		523 524		536		7,750
Motors/LACT	-20		- Lack	F1 0	525				22,892
Flores/Combustors/Emesion					528			100	21,481
Ges Lift/Compression			527	15.000			528		66,263
TOTAL TANGIBLES		1,198,000		155,030	,	537,115		171.000	2,081,145
TOTAL WELL COSTS		5,639,000		3,900,000		612,788		201,300	10.552.616
A -4		83%		27%		8%		2%	
% of Total Well Cost COG Operating LLC		83%		27%		8%		Z%.	
www.wheeling.edu									
		Date Prepared		9/25/16					
_ _									
18/4		COG Operating LLC							
We approve:% Working Interest		Ву		JH-KL-JHOL-PS					
		-,	_	/ W / W				-	
Company: EOG RESOURCES INC.									
Вуг									
Prevised Narroe									
Title:		The AFE is only on estr	redio i	By signing you agree to pr	by you	r share			
		of the actual costs incur							
Dute:		0.010 00000 00000 0000	100						

WELL NAME: BROT HELM FED COM #703H	PROSPECT NAME:	Bulldog 2434 (717040)
SHL! Sec 35: 250 FNL & 1255 FEL	STATE & COUNTY:	New Mexico, Lea
BHL: Sec 2: 50 FSL & 1650 FEL	OBJECTIVE:	Orill and Complete
FORMATION: Wolfcamp	DEPTH:	23,320
LEGAL: Sec 35: 24S-34E	TVD:	12.660

				110.		. 12,000			
-									
		Orla - Ria				Tank Bttv		Pmpg	
INTANGIBLE COSTS		Release(D)		Completion(C)		Constrctn(TB)		Equipment(PEQ)	TOTAL
Title/Curative/Permit	201	20.000		Testidor, and area of		and distribution in the			20,000
Insurance	202	2,500	302			MESSAGE DETAILS OF THE		67,000	2,500
Demages/Right of Way	203	20.000	303		351			100	20,000
Survey/Stake Location	204	7.000			352				7.000
Location/Pita/Road Expense	205	135,000	305	10.000	353	40,950	306		185.950
Drilling / Completion Overhead	208	14.100	208	15.000					29.100
Turnley Contract	207					200			
Footage Contract	208	0		and the same of th					0
Daywork Contract	209	1,148,000							1,148,000
Drectoral Driling Services	210	548.000				0.00			548,000
Frag Equipment		-	307	679,000					679,000
Fran Chemicals			308	224,000					224,000
Frec Proppert			309	385,000					385,000
Frac Proppert Transportation			310	189,000					189,000
Fuel & Power	211	288,000	311	35,000	354		367		303,000
Water	212	80,000	312	494,000			368		554,000
BAs	213	153,000	313	4,500			369		157,500
Mud & Chemicals	214	285,000	314	25,000			370		310,000
Drill Stern Test	215	0	315						0
Coring & Analysis	216	0							0
Coment Surface	217	28,000							28,000
Cornent Intermediate	218	75,000							75,000
Cerneril 2nd Intermediate/Production	219	115,000							115,000
Cernent Squeeze & Other (Kickelf Plug)	220	45,000					371		- 0
Float Equipment & Controlizors	221								45,000
Ceang Crews & Equipment Fishing Tools & Service	222	70,000					-		70,000
	223 224	18.600	323 324		355		372		16,600
Geologic/Engineering						444.00			
Contract Labor	225	6.500	325	20,000	356	111.871	374	6.500	144.871
Company Supervision	226	84.600	326	15,000	357		375		99,600
Contract Supervision	227	195,000	327	166,000	358		376	5.000	368,000
Testing Casing/Tubing	228	30,000	328	6,000			317	100	35,000
Mud Logging Unit	229	81,000	329				-		81,000
Perforating/Whethe Services	230	0	941	287.000			378		271,000
	231	4.000	331						
Strruinton/Treating			332	12,000			360		12,000
Completion Unit			333	50,000			361	8,800	58,800
Swebbrg Unt	-	man dans	334		***		362	7 000	0
Rentali-Surface	235	230,000	335	300,000	359		363	7,000	537,000
Rentale-Subsurface	236	185,000	336	30,000			384		215,000
Trucking/Forkift/Rig Mobilization	237	200,000	337	20,000	360		365	3,000	223,000
Welding Services	238	3,000	338	5,000	361		388		8,000
Water Disposal	239	0	339	60.000	362	122.650	387		182,850
Plug to Abendon	240		340						0
Sessmic Analysis	241		341				389		0
Meceleneous	242	0 01 000	342	400,000	363		390		0
Contingency	243	81.500		100,000					181,500
Closed Loop & Environmental Dyed Dissel	744 245	350,000	344	5.000	364		388	Printed Community of the Community of th	365,000
	243		348						000 000
Coll Tubing				350,000					350,000
Flowback Crews & Equip			347	48,000					48,000
Offset Drectons/Frac YOTAL INTANGIBLES	248	4.441,000	348	3,744,500		275,671	391		0
TOTAL INTANGEDES		4,441,000		3,744,300		2/3,6/1		30.300	8.491.471
TANCIDI E COSTO									
TANGIBLE COSTS	404	en non							
Surface Casing	401	52,000							52,000
Intermediate Casing	402	555,000						-	
Production County/Liner	403	516,000	-	F7 000					519,000
Tubing		77.000	504 505	52,030			530	5,000	57,030
Welheed Equipment	405	75.000	DUD	22.000			531 508	3,000	100,000
Pumping Unit								98,000	98,000
Preme Mover Rods				0			507	35,000	35.000
		-	ren						
Pumpe-Sub Surface (BH)			509		840		532	5.000	5,000
t orno					210	57,917			57,917
Flowlines					511	24.200			24.200
Heater Treater/Separator							200	40.00	127.408
Electrical Bystem Packers/Anchors/Hengers	414		800	88.800	513	118,300		15,000	133,300
	415	$\overline{}$	514	88.000	g		534	2.000	000,69
Coupings/Fittings/Valves Dehydration	-13				515	93,077			93.077
Injection Plant/CO2 Equipment					517				0
Pumps-Buriace					521	4.292		•	
							-	2 000	4,292
Instrumentation/SCADA/POC Miscellaneous	419		E+c		522	9.538	529	7,000	16,538
	419		519 520		523 524	4.760	535 536	3.000	7,789
Contingency Meteor 8 ACT	4.03		200			200,000	233		22 802
Meters/LACT					525	22,892			22,892
Piares/Combustons/Emission Gas Lift/Compression			527	15,000	526 516	21,461 53.263	528		21,481
TOTAL TANGIBLES		1,198,000	341	155,000	310	537,115	200	171,000	
TOTAL WELL COSTS		5,639,000		3,900,000		812,788		201.300	2,061,145
FORM, TIGUL GURLE		3.639.000		3,900,000		812,780			10,352,618
% of Total Well Cost		63%		37%		8%		2%	
COG Operating LLC				91 M				6.41	
· -									
		Date Prepared		9/26/16					
444		COG Operating LLC							
We approve:		B. a		proper promo de la					
N Working Interest		Вуг		S4-JOHC-PHIL				-	
By: EOG RESOURCES INC.									
By: EOG RESOURCES INC.									
Printed Name									
By: Privried Name: Tate				By eigrang you agree to pe	A Aore	r shere			
Printed Name		This AFE is only an estim		By eighing you agree to pe	A Aore	chare			

WELL NAME:	BROT HELM FED COM \$764H	PROSPECT NAME	Buildog 2434 (717040)
SHL:	Sec 35: 250 FNL & 2235 FEL	STATE & COUNTY:	New Mexico, Lea
BHL:	Sec 2: 50 FSL & 2310 FEL	OBJECTIVE.	Onli and Complete
FORMATION:	Wolfcamp	DEPTH:	23,230
LEGAL:	Sec 35: 24S-34E	TVD:	12,770

			_					-	
		D.4- DI-				Front Date			
INTANCIPI E COSTE		<u>Drig - Rig</u>		Completion(C)		Tank Bity		Pmpg Feulement/PEOL	TOTAL
INTANGIBLE COSTS Title/Curstive/Permit	201	Release(D) 20,000		Completion(C)		Construtn(TB)		Equipment(PEQ)	TOTAL 20,000
Insurance	202	2,500	302						2,500
Demeges/Right of Wey	203	20,000	303		351				20,000
Survey/Stake Location	204	7.000			352				7,000
Location/Pits/Road Expense	205	135,000	305	10,000	353	40,950	388		165,950
Drilling / Completon Overhead	208	14.100	308	15.000		no and			29,100
Turnkey Contract	207	0							0
Footage Contract	208			Mr. is					0
Daywork Contract	308	1,148,000							1,148,000
Directional Ording Services	210	548.000						Limited and the second	548,000
Frac Equipment		S I I I	307	679,000					679,000
Frac Chemicals			308	224.000					224.000
Frac Proppert Frac Proppert Transportation		V. 1	309	385,000					385.000
Fuel & Power	211	266,000	310	35,000	354		367		303,000
Water	212	60,000	312	494,000	32,940		308		554,000
54a	213	153,000	313	4.500			369		157,500
Mud & Chemicals	214	285,000	314	25,000			370		310,000
Orill Stern Test	215	0	315					IT I FORCESTULES	0
Coring & Analysis	216	0						1.0	0
Comert Surface	217	28,000							28,000
Coment Intermediate	218	75,000							75,000
Cement 2nd Intermediate/Production	219	115,000							115,000
Cement Squeeze & Other (Rickoff Plug)	220	0		E 100			371		D
Float Equipment & Centralizers	221	45.000		100		parties and the			45,000
Casing Crews & Equipment	222	70,000							70,000
Fishing Tools & Service	223	- 0	323				372		- 0
Geologic/Engineering	224	16,600	324	man photon	355	***	373	4.00-	18,800
Contract Labor Company Supervision	775	84.800	325	20,000	356 357	111.871	374	6,500	144,871
Contract Supervision	226 227	195,000	327	168,000	357		378	5,000	365,000
Testing Casing/Tubing	228	30,000	328	5.000			377	5,000	36,000
Mud Lagging Unit	729	81,000	329	17.4000				Company of the same of	61,000
Logging	230	01.000		THE RESERVE			378		01.000
Perforating/Wireline Services	231	4.000	331	267 000			379		271,000
Streuiston/Treating			332	12,000		£2) (200)pt	380		12.000
Completion Unit			333	50,000			381	8,800	58,800
Swebbing Unit			334			E	382		0
Rentals-Surface	235	230,000	335	300,000	359		363	7.000	537.000
Rentals-Subsurfaçe	236	185,000	336	30,000			384		215,000
Trucking/Fertdft/Rig Mobilization	237	200,000	337	20,000	360		385	3,000	223,000
Welding Services	238	3,000	338	5,000	381		386		8.000
Water Disposal	239	- 0	339	80,000	362	122.660	387		182.850
Plug to Abandon	240		340						- 0
Sparric Analysis	241	0	342				389		- 0
Miscellaneous Contingency	243	81,500	343	100,000	363		390		181,500
Closed Loop & Environmental	244	350,000		5,000	364		388		355.000
Dyed Diesel	245		345	229,000					
Coll Tubing		pulpulpulpulpulpulpul	346	350,000				-	350,000
Flowback Crows & Equip		1 10	347	48,000				Hard Street Street	48.000
Offset Directorel/Frec	248		348				391		0
TOTAL INTANGIBLES		4,441,000		3,744,500		275,671		30,300	8.491.471
TANGIBLE COSTS									
Surface Ceang	401	52,000		MATERIA :		1 2000000000000000000000000000000000000			52,000
Intermediate Cooling	402	555,000						SATISFACTOR OF THE SALES	555,000
Production Casing/Liner	403	516,000		11112-00		100000			518.000
Tubing			504	52,030			530	5.000	57.030
Wellheed Equipment	405	75.000	505	22.000			531	3,000	100,000
Pumping Unit				0			508	99,000	98,000
Preme Mover				0			507 508	35.000	35,000
Pumpe-Sub Surface (BH)			509				532	5,000	5,000
Fanks			J. (1)		510	57,917	-raid	5,uaJ	57,917
Flowlines		According to the same			511	24,200			24,200
Heater Treater/Separator					512				127.408
Electrical System		Research Control of			513		533	15,000	133,300
Packers/Anchors/Hangers	414		514	66,000		CONTRACTOR OF THE PARTY OF THE	534	2,000	000,000
Couplings/Fittings/Valves	415				515	93.077		F	83,077
Dehydration		F			617				- 0
Injection Plant/CO2 Equipment			1		518			1	0
Pumps-Burface					521	4,292		1, 12	4.292
Instrumentation/SCADA/POC					522		529	7,000	10.530
Macelaneous	419		518		523		535	3,000	7,789
Contingency Marine A A C T	420		520		524 525		536		22,602
Meters/LACT Planes/Combustors/Emesson		100			526	22,892			22,692
Gas LIP/Compression			527	15,000	516		528		66,263
TOTAL TANGIBLES		1,198,000	_	155,030		537,115		171,000	2,061,145
TOTAL WELL COSTS		5,839,000		3,900,000		812,786		201,300	10,552,618
		3,000,000	•						
% of Total Well Cost		83%		37%		8%		2%	
COG Operating LLC									
		Date Branes		9/25/18					
		Date Prepared:	_	w.26/18	,				
		COG Operating LLC							
We approve:									
% Working Interest		By		JH-KL-JHOL-PS	_			-	
Company: EOG RESOURCES INC.									
By:									
									
Printed Name:									
Title:				By editand you agree to be	ılı korı	r ohere			
Date		of the actual costs incur	redi.						

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

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

CASE NO. 20205 & 20206

AFFIDAVIT OF CANDICE PETTLJOHN IN SUPPORT OF CASE NOS. 20205 & 20206

Candice Pettijohn, of lawful age and being first duly sworn, declares as follows:

- My name is Candice Pettijohn. I work for COG Operating LLC ("COG") as a Geologist.
- 2. I have previously testified before the New Mexico Oil Conservation Division as an expert witness in petroleum geology. My credentials as a petroleum geologist have been accepted by the Division and made a matter of record.
- 3. I am familiar with the application filed by COG in this case, and I have conducted a geologic study of the lands in the subject area.
 - 4. COG is targeting the Bone Spring and Wolfcamp formations.
- 5. COG Exhibit B-1is a locator map. It shows COG's acreage in yellow. The path of the proposed wellbores for the proposed Brot Helm Fed Com Nos. 601H, 602H, 603H Wells (Bone Spring) and the 701H, 702H, 703H, and 704H Wells (Wolfcamp) (collectively called the "Wells") are marked by a dashed line, and the surface hole location is denoted by a circle.
- 6. COG Exhibit B-2 is a subsea structure map that I prepared off the top of the Wolfcamp. I used the Wolfcamp structure map because it is a reliable regional marker and the target interval lies just above and below this marker. As with the locator map, the proposed wellbore path for the proposed Wells is depicted by a dashed line. The structure map shows that

1

the formations dip from west to east consistently across the project area. It also shows nearby

Bone Spring and Wolfcamp producing wells. The structure appears consistent in this section. I

do not observe any faulting, pinchouts, or other geologic hazards to developing a horizontal well.

- 7. COG Exhibit No. B-3 shows two wells used to construct a cross-section from A to A'. I consider these wells to be representative of the geology of the area.
- 8. COG Exhibit No. B-4 is a cross section prepared by me for the two representative wells from A to A'. For each well in the cross-section, the COG Exhibit shows the following logs: gamma ray, resistivity, and porosity. The proposed target intervals are labeled. The logs in the cross-section demonstrate that the target interval within the Bone Spring and Wolfcamp are consistent in thickness across the entire proposed spacing units.
- 9. Based on my geologic study of the areas, I have not identified any geologic impediments to drilling horizontal wells in the area.
- 10. In my opinion, each quarter-quarter section will be productive and contribute more-or-less equally to each 40-acre unit comprising the spacing units.
- 11. In my opinion, horizontal drilling will be the most efficient method to develop this acreage, to prevent the drilling of unnecessary wells, and to result in the greatest ultimate recovery.
- 12. In my opinion, the granting of COG's application in these cases will be in the best interest of conservation, the prevention of waste, and protection of correlative rights.
- 13. COG Exhibit B-1 through B-4 were either prepared by me or compiled under my direction and supervision.

Cardice Pettijohn

Notary Public, State of Texas

STATE OF TEXAS

COUNTY OF MIDLAND

SUBSCRIBED and SWORN to before me this 31st day of January 2019 by Candice Pettijohn.

NOTARY PUBLIC

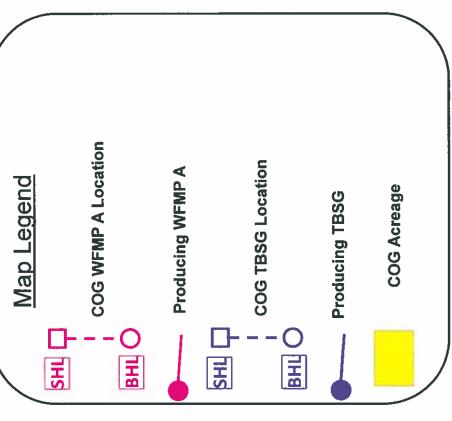
My Commission Expires:

9/9/2021

11850817_1

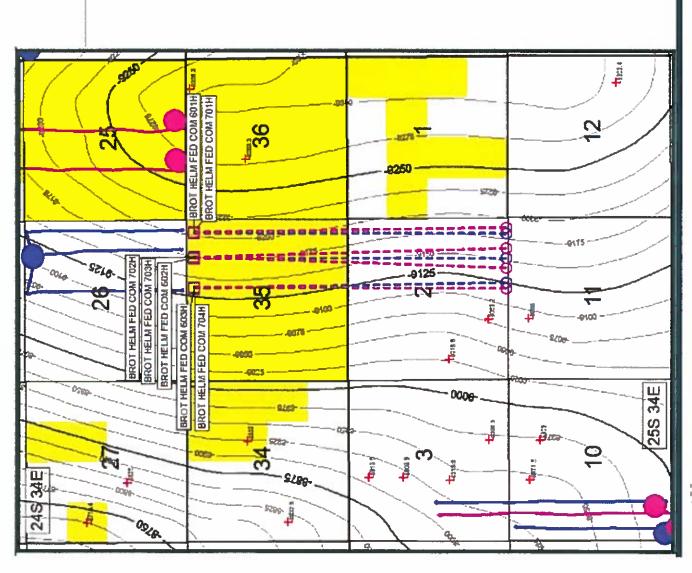


Woltcamp and Bone Spring Pools Brot Helm Federal Com 601H,602H,603H,701H,702H,703H,704H

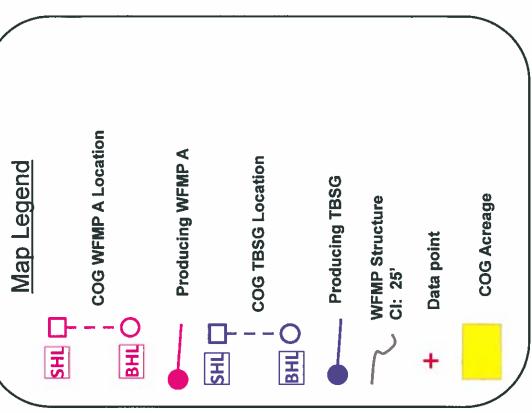




BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico
Case Nos. 20205 & 20206 Exhibit No. B-1
Submitted by:

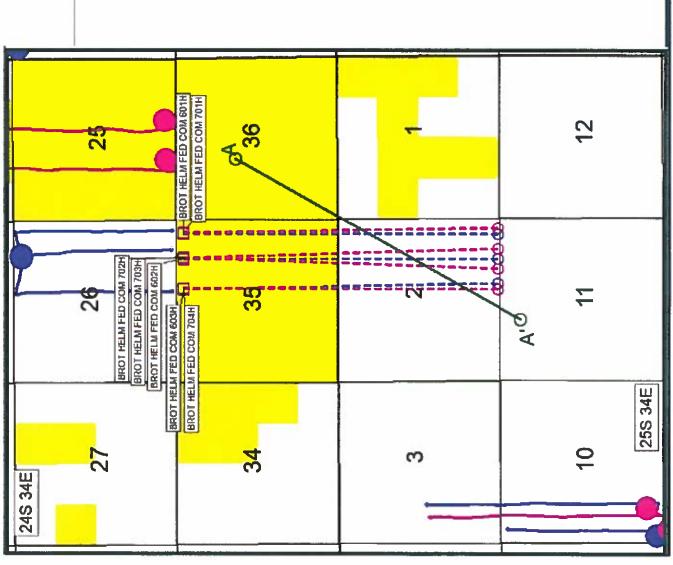


Brot Helm Federal Com 601H,602H,603H,701H,702H,703H,704H

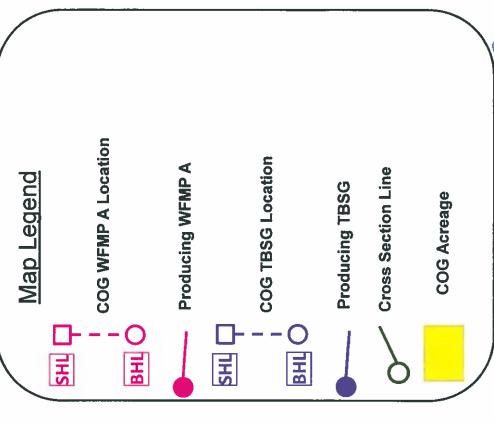


BEFORE THE OIL CONSERVATION DIVISION
Santa Fc, New Mexico
Case Nos. 20205 & 20206 Exhibit No. B-2
Submitted by:





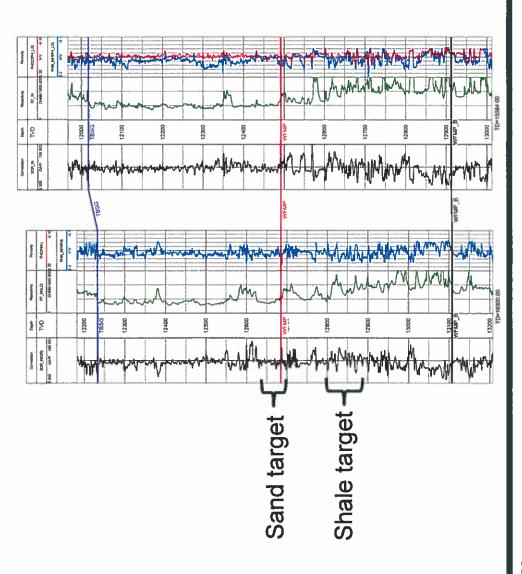
Woltcamp and Bone Spring Pools Brot Helm Federal Com 601H,602H,603H,701H,702H,703H,704H





BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico
Case Nos. 20205 & 20206 Exhibit No. B-3
Submitted by:







BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Case Nos. 20205 & 20206 Exhibit No. B-4
Submitted by: