

October 18, 2018

U.S. CERTIFIED MAIL - 91 7199 9991 7038 7703 4825

EOG Resources Inc. 5509 Champions Drive Midland, TX 79706 Attention: Land Department

RECEIVED

OCT 22 2018

BOG RESOURCES, INC

MIDLAND DIVISION

Re: Well Proposal – Mastiff Federal Com #701H

Sec 4: Lot 1, SE/4NE/4, and E/2 SE/4 - T24S-R32E

Sec 9: E/2 E/2 - T24S-R32E

Approximate First Take Point: 100' FNL / 330' FEL, Sec.4-T24S-R32E Approximate Last Take Point: 100' FSL / 330' FEL, Sec.9-T24S-R32E

Lea County, New Mexico

Dear Sir/Madam:

COG Operating LLC (COG), as Operator, hereby proposes the drilling and completion of the Mastiff Federal Com #701H well as a horizontal well at the above-captioned location, or at a legal location as approved by the governing regulatory agency, to a TVD of approximately 12,300' and a MD of approximately 22,860' to test the Wolfcamp Formation ("Operation"). Surface Hole Location and Bottom Hole Location to be determined in accordance with COG's operating plans and surface restrictions on the property. The total cost of the Operation is estimated to be \$13,904,855.00, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

COG is proposing to drill this well under the terms of the modified 1989 AAPL form of Operating Agreement which is enclosed for your review and approval. The Operating Agreement's contract lands will cover the Lots 1, 2, S2NE and SE/4 of Sec. 4-T24S-R32E and the E/2 of Sec. 9-T24S-R32E. 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 election in the space provided below, sign and return this letter, along with a signed copy of the enclosed AFE 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 would like to term assign your leasehold under the following general terms:

- Reservation unto Assignor of the positive difference, if any, between existing burdens and 20%
- 3 Year Primary Term
- \$3,000/ Net Acre Bonus Consideration

The term assignment offer is subject to the approval of COG's management and verification of title.



If you have any que	estions, please do not hesitate to contact the undersigned at (432) 685-2515.
Respectfully,	
Adam C. Reker Landman	
Zandman	
I/V	We hereby elect to participate in the Mastiff Federal Com #701H.
I/V	We hereby elect <u>not</u> to participate in the Mastiff Federal Com #701H.
Company: EOG	Resources Inc.
Ву:	
Name:	
Title:	
Date:	



5509 Champions Drive Midland, TX 79706

Attention: Land Department

RECEIVED

OCT 22 2018

BOG RESOURCES, INC MIDLAND DIVISION

Well Proposal - Mastiff Federal Com #702H

Sec 4: Lot 1, SE/4NE/4, and E/2 SE/4 - T24S-R32E

Sec 9: E/2 E/2 - T24S-R32E

Approximate First Take Point: 100' FNL / 843' FEL, Sec.4-T24S-R32E Approximate Last Take Point: 100' FSL / 843' FEL, Sec.9-T24S-R32E

Lea County, New Mexico

Dear Sir/Madam:

Re:

COG Operating LLC (COG), as Operator, hereby proposes the drilling and completion of the Mastiff Federal Com #702H well as a horizontal well at the above-captioned location, or at a legal location as approved by the governing regulatory agency, to a TVD of approximately 12,400' and a MD of approximately 22,960' to test the Wolfcamp Formation ("Operation"). Surface Hole Location and Bottom Hole Location to be determined in accordance with COG's operating plans and surface restrictions on the property. The total cost of the Operation is estimated to be \$13,904,855.00, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

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- \$7,000/\$700 Drilling and Producing Rate
- COG Operating LLC named as Operator

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Respectfully,	
18th	M
Adam C. Reker	
Landman	
	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	I/We hereby elect to participate in the Mastiff Federal Com #702H.
	I/We hereby elect <u>not</u> to participate in the Mastiff Federal Com #702H.
Company: EC	OG Resources Inc.
Ву:	
Name:	
Title:	
Date:	



5509 Champions Drive Midland, TX 79706

Attention: Land Department

RECEIVED

OCT 22 2018

BOG RESOURCES, INC MIDLAND DIVISION

Re:

Well Proposal - Mastiff Federal Com #703H

Sec 4: Lot 2, SW/4NE/4, W/2SE/4 - T24S-R32E

Sec 9: W/2 E/2 - T24S-R32E

Approximate First Take Point: 100' FNL / 1356' FEL, Sec.4-T24S-R32E Approximate Last Take Point: 100' FSL / 1356' FEL, Sec.9-T24S-R32E

Lea County, New Mexico

Dear Sir/Madam:

COG Operating LLC (COG), as Operator, hereby proposes the drilling and completion of the Mastiff Federal Com #703H well as a horizontal well at the above-captioned location, or at a legal location as approved by the governing regulatory agency, to a TVD of approximately 12,300' and a MD of approximately 22,860' to test the Wolfcamp Formation ("Operation"). Surface Hole Location and Bottom Hole Location to be determined in accordance with COG's operating plans and surface restrictions on the property. The total cost of the Operation is estimated to be \$13,904,855.00, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

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espectfully,
AL M
dam C. Reker
andman
I/We hereby elect to participate in the Mastiff Federal Com #703H.
I/We hereby elect <u>not</u> to participate in the Mastiff Federal Com #703H.
Company: EOG Resources Inc.
Ву:
Name:
Title:
Date:



5509 Champions Drive Midland, TX 79706

Attention: Land Department

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OCT 22 2018

EOG RESOURCES, INC MIDLAND DIVISION

Re:

Well Proposal - Mastiff Federal Com #704H

Sec 4: Lot 2, SW/4NE/4, W/2SE/4 - T24S-R32E

Sec 9: W/2 E/2 - T24S-R32E

Approximate First Take Point: 100' FNL / 1869' FEL, Sec.4-T24S-R32E Approximate Last Take Point: 100' FSL / 1869' FEL, Sec.9-T24S-R32E

Lea County, New Mexico

Dear Sir/Madam:

COG Operating LLC (COG), as Operator, hereby proposes the drilling and completion of the Mastiff Federal Com #704H well as a horizontal well at the above-captioned location, or at a legal location as approved by the governing regulatory agency, to a TVD of approximately 12,400° and a MD of approximately 22,960° to test the Wolfcamp Formation ("Operation"). Surface Hole Location and Bottom Hole Location to be determined in accordance with COG's operating plans and surface restrictions on the property. The total cost of the Operation is estimated to be \$13,904,855.00, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

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5509 Champions Drive Midland, TX 79706

Attention: Land Department

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OCT 22 2018

EOG RESOURCES, INC MIDLAND DIVISION

Well Proposal - Mastiff Federal Com #705H

Sec 4: Lot 2, SW/4NE/4, W/2SE/4 - T24S-R32E

Sec 9: W/2 E/2 - T24S-R32E

Approximate First Take Point: 100' FNL / 2382' FEL, Sec.4-T24S-R32E Approximate Last Take Point: 100' FSL / 2382' FEL, Sec.9-T24S-R32E

Lea County, New Mexico

Dear Sir/Madam:

Re:

COG Operating LLC (COG), as Operator, hereby proposes the drilling and completion of the Mastiff Federal Com #705H well as a horizontal well at the above-captioned location, or at a legal location as approved by the governing regulatory agency, to a TVD of approximately 12,300' and a MD of approximately 22,860' to test the Wolfcamp Formation ("Operation"). Surface Hole Location and Bottom Hole Location to be determined in accordance with COG's operating plans and surface restrictions on the property. The total cost of the Operation is estimated to be \$13,904,855.00, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

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espectfully,
11 111
dam C. Reker
andman
I/We hereby elect to participate in the Mastiff Federal Com #705H.
I/We hereby elect <u>not</u> to participate in the Mastiff Federal Com #705H.
ompany: EOG Resources Inc.
By:
Name:
Title:
Date:



October 18, 2018

U.S. CERTIFIED MAIL - 91 7199 9991 7038 7703 4795

EOG Resources Inc. 5509 Champions Drive Midland, TX 79706 Attention: Land Department

Re: Well Proposal - Mastiff Federal Com #706H

Sec 4: Lot 3, SE/4NW/4, E/2SW/4 - T24S-R32E

Sec 33: E/2 W/2 - T23S-R32E

Approximate First Take Point: 100' FSL / 2385' FWL, Sec.4-T24S-R32E Approximate Last Take Point: 100' FSL / 2385' FWL, Sec.33-T23S-R32E

Lea County, New Mexico

Dear Sir/Madam:

COG Operating LLC (COG), as Operator, hereby proposes the drilling and completion of the Mastiff Federal Com #706H well as a horizontal well at the above-captioned location, or at a legal location as approved by the governing regulatory agency, to a TVD of approximately 12,400' and a MD of approximately 22,960' to test the Wolfcamp Formation ("Operation"). Surface Hole Location and Bottom Hole Location to be determined in accordance with COG's operating plans and surface restrictions on the property. The total cost of the Operation is estimated to be \$13,904,855.00, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

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Respectfully,

Adam C. Reker
Landman

I/We hereby elect to participate in the Mastiff Federal Com #706H.

I/We hereby elect not participate in the Mastiff Federal Com #706H.

Company: EOG Resources Inc.

By:

Name:

Title:

Date:



5509 Champions Drive Midland, TX 79706

Attention: Land Department

Re: Well Proposal - Mastiff Federal Com #707H

Sec 4: Lot 3, SE/4NW/4, E/2SW/4 - T24S-R32E

Sec 33: E/2 W/2 - T23S-R32E

Approximate First Take Point: 100' FSL / 1872' FWL, Sec.4-T24S-R32E Approximate Last Take Point: 100' FSL / 1872' FWL, Sec.33-T23S-R32E

Lea County, New Mexico

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Respectfully,	
All M	
1110/11/0	
Adam C. Reker Landman	
Landman	
I/We hereby elect to participate in the M	lastiff Federal Com #707H.
I/We hereby elect <u>not</u> to participate in the	e Mastiff Federal Com #707H.
Company: EOG Resources Inc.	
Ву:	
Name:	
Title:	
Date:	



5509 Champions Drive Midland, TX 79706

Attention: Land Department

Re: Well Proposal – Mastiff Federal Com #708H

Sec 4: Lot 3, SE/4NW/4, E/2SW/4 - T24S-R32E

Sec 33: E/2 W/2 - T23S-R32E

Approximate First Take Point: 100' FSL / 1359' FWL, Sec.4-T24S-R32E Approximate Last Take Point: 100' FSL / 1359' FWL, Sec.33-T23S-R32E

Lea County, New Mexico

Dear Sir/Madam:

COG Operating LLC (COG), as Operator, hereby proposes the drilling and completion of the Mastiff Federal Com #708H well as a horizontal well at the above-captioned location, or at a legal location as approved by the governing regulatory agency, to a TVD of approximately 12,400' and a MD of approximately 22,960' to test the Wolfcamp Formation ("Operation"). Surface Hole Location and Bottom Hole Location to be determined in accordance with COG's operating plans and surface restrictions on the property. The total cost of the Operation is estimated to be \$13,904,855.00, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

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Title:



5509 Champions Drive Midland, TX 79706

Attention: Land Department

Re: Well Proposal - Mastiff Federal Com #709H

Sec 4: Lot 4, SW/4NW/4, and W/2SW/4 - T24S-R32E

Sec 33: W/2 W/2 - T23S-R32E

Approximate First Take Point: 100' FSL / 846' FWL, Sec.4-T24S-R32E Approximate Last Take Point: 100' FSL / 846' FWL, Sec.33-T23S-R32E

Lea County, New Mexico

Dear Sir/Madam:

COG Operating LLC (COG), as Operator, hereby proposes the drilling and completion of the Mastiff Federal Com #709H well as a horizontal well at the above-captioned location, or at a legal location as approved by the governing regulatory agency, to a TVD of approximately 12,300' and a MD of approximately 22,860' to test the Wolfcamp Formation ("Operation"). Surface Hole Location and Bottom Hole Location to be determined in accordance with COG's operating plans and surface restrictions on the property. The total cost of the Operation is estimated to be \$13,904,855.00, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

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Respectfully,

Adam C. Reker

Landman

I/We hereby elect to participate in the Mastiff Federal Com #709H.

I/We hereby elect not to participate in the Mastiff Federal Com #709H.

Company: EOG Resources Inc.

By:

Title: _____



5509 Champions Drive Midland, TX 79706

Attention: Land Department

Re: Well Proposal - Mastiff Federal Com #710H

Sec 4: Lot 4, SW/4NW/4, and W/2SW/4 - T24S-R32E

Sec 33: W/2 W/2 - T23S-R32E

Approximate First Take Point: 100' FSL / 330' FWL, Sec.4-T24S-R32E Approximate Last Take Point: 100' FSL / 330' FWL, Sec.33-T23S-R32E

Lea County, New Mexico

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Landman

I/We hereby elect to participate in the Mastiff Federal Com #710H.

I/We hereby elect not to participate in the Mastiff Federal Com #710H.

Company: EOG Resources Inc.

By:

Title: _____

WELL NAME:	MASTIFF FED COM #701H	PROSPECT NAME:	Bulldog 2432 (717113)	
FTP:	Sec 4: 100 FNL & 330 FEL	STATE & COUNTY:	New Mexico, Lea	
LTP:	Sec 9: 100 FSL & 330 FEL	OBJECTIVE:	Drill and Complete	
FORMATION:	Wolfcamp	DEPTH:	22,860	
LEGAL:	Sec 4-24S-32E	TVD:	12,300	

NTANGIBLE COSTS tte/Curative/Permit	201	Drlg - Rig Release(D) 20,000		Completion(C)		Tank Btty Constrctn(TB)		Pmpq Equipment(PEQ)	TOTAL 20,
surance	202		302						2,
mages/Right of Way	203	20,000 3	303		351				20,
rvey/Stake Location	204	7,000			352			MAIN CERES	7,
cation/Pits/Road Expense	205		305.	10,000	353	45,000	366		190
illing / Completion Overhead	206		306	15,000					26
irnkey Contract	207	0	- 1						
ootage Contract	208	923,000							923
aywork Contract	210	442,000	7			A N		Maria Cara San B	442
rectional Drilling Services	210		307	1,418,000				Awar and the same	1,418
ac Equipment			308	473,000					473
ac Chemicals			309	814,000				MANUFACTION.	814
ac Proppant ac Proppant Transportation			310	399,000					399
nel & Power	211		311	68,000	354		367		279
ater	212		312	966,000			368		1,026
is s	213		313	4,500			369		115
ud & Chemicals	214		314	25,000			370		300
ill Stem Test	215		315					SEALS - ZAYAHASI	
ring & Analysis	216	0						W THE RESIDENCE OF THE PARTY OF	
ment Surface	217	28,000	Į.	A VOIG YELL,					28
ement Intermediate	218	75,000		Salar March					75
ement 2nd Intermediate/Production	219	115,000							115
ement Squeeze & Other (Kickoff Plug)	220	0					371		
pat Equipment & Centralizers	221	65,000	1						65
asing Crews & Equipment	222	70,000	į						70
shing Tools & Service	223	0 3	323				372		
ologic/Engineering	224	11,400 3	324		355		373		11
ontract Labor	225	6,500	325	20,000	356	122,935	374	6,500	155
empany Supervision	226	66,600	326	15,000	357		375		81
ontract Supervision	227	157,000	327	255,000	358		376	5,000	417
esting Casing/Tubing	228	30,000	328	5,000			377		35
ud Logging Unit	229	52,000	329						52
ogging	230	0					378		
erforating/Wireline Services	231		331	538,000			379		542
imulation/Treating			332	397,000			380		397
ompletion Unit			333	138,000		Was Indian	381	8,800	146
wabbing Unit			334				382	·	
entals-Surface	235	190,000	335	403,000	359		383	7,000	600
entals-Subsurface	236	150,000	336	30,000			384		180
rucking/Forklift/Rig Mobilization	237		337	20,000	360		385	3,000	223
elding Services	238	3,000	338	5,000	361		386		8
ater Disposal	239	0 :	339	60,000	362	135,000	387		195
lug to Abandon	240		340						
eismic Analysis	241		341				200		
iscellaneous	242	1011 00 0000	342				389		
ontingency	243		343	250,000	363		390		319
losed Loop & Environmental	244		344	5,000	364		388		335
yed Diesel	245		345	484,000					750
oil Tubing			346	750,000					48
lowback Crews & Equip	040		347	48,000			391		
Offset Directional/Frac	248	3,840,100	348	7,615,500		302,935	391	30,300	11,788
TOTAL INTANGIBLES		3,040,100		7,010,000		- 000,000			
ANGIBLE COSTS									
urface Casing	401	52,000							52
ntermediate Casing	402	555,000		The State of the S					555
roduction Casing/Liner	403	516,000							516
ubing	200	- CONTRACTOR OF THE PERSON OF	504	52,030			530	5,000	57
Vellhead Equipment	405		505	22,000		The second second	531		100
umping Unit				0			506		96
rime Mover				0			507		
ods				0			508	-	35
umps-Sub Surface (BH)			509				532		
anks		TWEST OF THE			510	63,645.00			60
lowlines					511			THE THE SECTION	26
eater Treater/Separator					512				140
lectrical System				THE REAL PROPERTY.	513		533	15,000	145
ackers/Anchors/Hangers	414		514	66,000			534	2,000	68
ouplings/Fittings/Valves	415			ANALS: ELEVA	515	102,282			102
- Company - Comp	100.00				517				
enydration					518				
				CONTRACTOR STATE	521	5,000			
vehydration njection Plant/CO2 Equipment fumps-Surface					522		529	7,000	17
jection Plant/CO2 Equipment umps-Surface			519		523	5,241	535	3,000	3
jection PlanVCO2 Equipment umps-Surface istrumentation/SCADA/POC	419	·	520		524		536		
ejection Plant/CO2 Equipment	419 420				525	25,156	3	THE WAY THE	2
jection Plant/CO2 Equipment umps-Surface istrumentation/SCADA/POC liscellaneous								The second secon	2
jection Plant/CO2 Equipment umps-Surface estrumentation/SCADA/POC liscellaneous ontingency leters/LACT				7 2 2 2 2 10	526				
jection Plant/CO2 Equipment umps-Surface strumentation/SCADA/POC iscellaneous ontingency eters/LACT ares/Combustors/Emission			527	15,000	516	60,000	528		_
jection Plant/CO2 Equipment umps-Surface strumentation/SCADA/POC liscellaneous ontingency leters/LACT lares/Combustors/Emission				15,000 155,030	516	60,000 591,990	528	171,000	2,11
jection Plant/CO2 Equipment umps-Surface strumentation/SCADA/POC liscellaneous ontingency leters/LACT lares/Combustors/Emission as Lift/Compression					516	60,000	528		2,11
jection Plant/CO2 Equipment umps-Surface strumentation/SCADA/POC iscellaneous ontingency eters/LACT ares/Combustors/Emission as Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS		1,198,000 5,038,100		155,030 7,771,000	516	5 60,000 591,990 894,925	528	171,000 201,300	2,11
jection Plant/CO2 Equipment umps-Surface strumentation/SCADA/POC iscellaneous ontingency eters/LACT iares/Combustors/Emission as Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		1,198,000		155,030	516	60,000 591,990	528	171,000	2,11
jection Plant/CO2 Equipment umps-Surface strumentation/SCADA/POC liscellaneous ontingency leters/LACT lares/Combustors/Emission as Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		1,198,000 5,038,100		155,030 7,771,000	516	5 60,000 591,990 894,925	528	171,000 201,300	2,11
jection Plant/CO2 Equipment umps-Surface strumentation/SCADA/POC iscellaneous ontingency eters/LACT iares/Combustors/Emission as Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		1,198,000 5,038,100 36%		155,030 7,771,000 56%	516	5 60,000 591,990 894,925	528	171,000 201,300	2,11
jection Plant/CO2 Equipment umps-Surface strumentation/SCADA/POC liscellaneous ontingency leters/LACT lares/Combustors/Emission as Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		1,198,000 5,038,100		155,030 7,771,000	516	5 60,000 591,990 894,925	528	171,000 201,300	2,11
jection Plant/CO2 Equipment umps-Surface strumentation/SCADA/POC liscellaneous ontingency leters/LACT lares/Combustors/Emission as Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		1,198,000 5,038,100 36% Date Prepared:	527	155,030 7,771,000 56%	516	5 60,000 591,990 894,925	528	171,000 201,300	2,11
jection Plant/CO2 Equipment umps-Surface istrumentation/SCADA/POC liscellaneous ontingency leters/LACT lares/Combustors/Emission ias Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		1,198,000 5,038,100 36%	527	155,030 7,771,000 56% 10/18/18	516	5 60,000 591,990 894,925	528	171,000 201,300	2,11
jection Plant/CO2 Equipment umps-Surface istrumentation/SCADA/POC liscellaneous ontingency leters/LACT lares/Combustors/Emission ias Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		1,198,000 5,038,100 36% Date Prepared:	527	155,030 7,771,000 56%	516	5 60,000 591,990 894,925	528	171,000 201,300	2,11
jection Plant/CO2 Equipment umps-Surface istrumentation/SCADA/POC liscellaneous ontingency leters/LACT lares/Combustors/Emission ias Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost iOG Operating LLC		1,198,000 5,038,100 36% Date Prepared: COG Operating LLC	527	155,030 7,771,000 56% 10/18/18	516	5 60,000 591,990 894,925	528	171,000 201,300	2,11
jection Plant/CO2 Equipment umps-Surface strumentation/SCADA/POC iscellaneous ontingency eters/LACT ares/Combustors/Emission as Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost OG Operating LLC /e approve:% Working Interest ompany:		1,198,000 5,038,100 36% Date Prepared: COG Operating LLC	527	155,030 7,771,000 56% 10/18/18	516	5 60,000 591,990 894,925	528	171,000 201,300	2,11
jection Plant/CO2 Equipment umps-Surface strumentation/SCADA/POC iscellaneous ontingency eters/LACT ares/Combustors/Emission as Litt/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost OG Operating LLC		1,198,000 5,038,100 36% Date Prepared: COG Operating LLC	527	155,030 7,771,000 56% 10/18/18	516	5 60,000 591,990 894,925	528	171,000 201,300	7. 2,11 13,90
ection Plant/CO2 Equipment imps-Surface strumentation/SCADA/POC scellaneous ontingency oters/LACT ares/Combustors/Emission as Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost OG Operating LLC e approve:% Working Interest company:		1,198,000 5,038,100 36% Date Prepared: COG Operating LLC	527	155,030 7,771,000 56% 10/18/18	516	5 60,000 591,990 894,925	528	171,000 201,300	2,11

WELL NAME:	MASTIFF FED COM #702H	PROSPECT NAME:	Bulldog 2432 (717113)	
FTP:	Sec 4: 100 FNL & 843 FEL	STATE & COUNTY:	New Mexico, Lea	
LTP:	Sec 9: 100 FSL & 843 FEL	OBJECTIVE:	Drill and Complete	
FORMATION:	Wolfcamp	DEPTH:	22,960	
LEGAL:	Sec 4-24S-32E	TVD:	12,400	

INTANGIBLE COSTS Title/Curative/Permit	201	Drlg - Rig Release(D)		Completion(C)		Tank Btty Constrctn(TB)		Pmpq Equipment(PEQ)	TOTAL 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	3707 is		352				7,000
Location/Pits/Road Expense	205	135,000	305	10,000	353	45,000	366		190,000
Drilling / Completion Overhead	206	11,100	306	15,000					26,100
Turnkey Contract	207	0		TOUR PARTY OF THE					0
Footage Contract	208	0							0
Daywork Contract	209	923,000							923,000
Directional Drilling Services	210	442,000							442,000
Frac Equipment			307	1,418,000					1,418,000
Frac Chemicals			308	473,000					473,000
Frac Proppant		William III	309	814,000		ALL SERVICE			814,000
Frac Proppant Transportation			310	399,000					399,000
Fuel & Power	211	211,000	311	68,000	354		367		279,000
Water	212	60,000	312	966,000			368		1,026,000
Bits	213	111,000	313	4,500			369		115,500
Mud & Chemicals	214	275,000	314	25,000			370	-	300,000
Drill Stem Test	215	0	315						0
Coring & Analysis	216	0				The second secon			0
Cement Surface	217	28,000							28,000
Cement Intermediate	218	75,000							75,000
Cement 2nd Intermediate/Production	219	115,000						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	115,000
Cement Squeeze & Other (Kickoff Plug)	220	0					371		0
Float Equipment & Centralizers	221	65,000							65,000
Casing Crews & Equipment	222	70,000	000				070		70,000
Fishing Tools & Service	223	11 400	323		ne-		372		11.400
Geologic/Engineering Contract Labor	224	11,400	324	00.000	355	100.005	373	0.000	11,400
Company Supervision	225	6,500	325	20,000	356	122,935	374	6,500	155,935
Contract Supervision	226	66,600	326	15,000 255,000	357 358		375 376	£ 000	81,600
Contract Supervision Testing Casing/Tubing	228	157,000 30,000	327	5,000	338		376	5,000	417,000
	229	52,000	329	5,000			311	STATE OF THE STATE OF	35,000 52,000
Mud Logging Unit Logging	230	52,000	029				378		52,000
Perforating/Wireline Services	231	4,000	331	538,000			379		542,000
Stimulation/Treating	LUI	4,000	332	397,000			380		397,000
Completion Unit		CONTRACTOR OF THE PARTY OF THE	333	138,000			381	8,800	146,800
Swabbing Unit			334	100,000			382	0,000	0
Rentals-Surface	235	190,000	335	403,000	359		383	7,000	600,000
Rentals-Subsurface	236	150,000	336	30,000	-		384	7,000	180,000
Trucking/Forklift/Rig Mobilization	237	200,000	337	20,000	360		385	3,000	223,000
Welding Services	238	3,000	338	5,000	361		386	-	8,000
Water Disposal	239	0	339	60,000	362	135,000	387	yı — — — — — — — — — — — — — — — — — — —	195,000
Plug to Abandon	240	0	340						0
Seismic Analysis	241	0	341						0
Miscellaneous	242	0	342				389		0
Contingency	243	69,000	343	250,000	363		390		319,000
Closed Loop & Environmental	244	330,000	344	5,000	364		388		335,000
Dyed Diesel	245		345	484,000					
Coil Tubing			346	750,000					750,000
Flowback Crews & Equip			347	48,000		O.A.		Taring Institute V	48,000
Offset Directional/Frac	248		348				391		0
TOTAL INTANGIBLES		3,840,100		7,615,500		302,935		30,300	11,788,835
T.1110101 F 000T0									
TANGIBLE COSTS	200	(2007)							
Surface Casing	401	52,000		SWELL BUILD					52,000
Intermediate Casing	402	555,000				and the same of the same of			555,000
Production Casing/Liner	403	516,000	1221				1223		516,000
Tubing	405	75.000	504	52,030			530	5,000	57,030
Wellhead Equipment	405	75,000	505	22,000			531	3,000	100,000
Pumping Unit				0			506	96,000	96,000
Prime Mover Rods				0			507	25.000	25,000
Pumps-Sub Surface (BH)			509	0			508	35,000	35,000
Tanks		In the second	509		510	63,645.00	532	5,000	5,000
the state of the s					511				63,645 26,593
Flowlines						NE MARKET			140,007
Flowlines Heater Treater/Separator						26,593.00 140.007.00			
Heater Treater/Separator					512	140,007.00	533	15.000	
	414		514	66,000		140,007.00	533 534	15,000	145,000
Heater Treater/Separator Electrical System	414 415		514	66,000	512	140,007.00	533 534	15,000 2,000	
Heater Treater/Separator Electrical System Packers/Anchors/Hangers			514	66,000	512 513	140,007.00 130,000.00			145,000 68,000
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves			514	66,000	512 513 515	140,007.00 130,000.00			145,000 68,000 102,282
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration			514	66,000	512 513 515 517	140,007.00 130,000.00			145,000 68,000 102,282 0
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment			514	66,000	512 513 515 517 518	140,007.00 130,000.00 102,282			145,000 68,000 102,282 0
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface			514	66,000	512 513 515 517 518 521	140,007.00 130,000.00 102,282	534	2,000	145,000 68,000 102,282 0 0 5,000
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC	415			66,000	512 513 515 517 518 521 522	140,007.00 130,000.00 102,282 5,000 10,482	534	7,000	145,000 68,000 102,282 0 0 5,000
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous	415		519	66,000	512 513 515 517 518 521 522 523	140,007.00 130,000.00 102,282 5,000 10,482	534 529 535	7,000	145,000 68,000 102,282 0 0 5,000 17,482 8,241
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency	415		519	66,000	512 513 515 517 518 521 522 523 524	140,007.00 130,000.00 102,282 5,000 10,482 5,241	534 529 535	7,000	145,000 68,000 102,282 0 0 5,000 17,482 8,241
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Filtings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression	415		519	15,000	512 513 515 517 518 521 522 523 524 525	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156	534 529 535	7,000	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES	415	1,198,000	519 520	15,000 155,030	512 513 515 517 518 521 522 523 524 525 526	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990	529 535 536	7,000 3,000 171,000	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression	415	1,198,000 5,038,100	519 520	15,000	512 513 515 517 518 521 522 523 524 525 526	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000	529 535 536	7,000 3,000	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	415	5,038,100	519 520	15,000 155,030 7,771,000	512 513 515 517 518 521 522 523 524 525 526	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	529 535 536	7,000 3,000 171,000 201,300	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost	415		519 520	15,000 155,030	512 513 515 517 518 521 522 523 524 525 526	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990	529 535 536	7,000 3,000 171,000	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	415	5,038,100	519 520	15,000 155,030 7,771,000	512 513 515 517 518 521 522 523 524 525 526	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	529 535 536	7,000 3,000 171,000 201,300	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost	419 420	5,038,100 36%	519 520	15,000 155,030 7,771,000 56%	512 513 515 517 518 521 522 523 524 525 526	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	529 535 536	7,000 3,000 171,000 201,300	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost	419 420	5,038,100 36% Date Prepared:	519 520 527	15,000 155,030 7,771,000 56%	512 513 515 517 518 521 522 523 524 525 526	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	529 535 536	7,000 3,000 171,000 201,300	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost	419 420	5,038,100 36% Date Prepared:	519 520	15,000 155,030 7,771,000 56%	512 513 515 517 518 521 522 523 524 525 526	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	529 535 536	7,000 3,000 171,000 201,300	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost COG Operating LLC We approve:	419 420	5,038,100 36% Date Prepared:	519 520 527	15,000 155,030 7,771,000 56%	512 513 515 517 518 521 522 523 524 525 526	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	529 535 536	7,000 3,000 171,000 201,300	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost COG Operating LLC	419 420	5,038,100 36% Date Prepared:	519 520 527	15,000 155,030 7,771,000 56%	512 513 515 517 518 521 522 523 524 525 526	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	529 535 536	7,000 3,000 171,000 201,300	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Filtings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS ### of Total Well Cost COG Operating LLC We approve:	419 420	5,038,100 36% Date Prepared:	519 520 527	15,000 155,030 7,771,000 56%	512 513 515 517 518 521 522 523 524 525 526	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	529 535 536	7,000 3,000 171,000 201,300	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS We approve: % Working Interest Company:	419 420	5,038,100 36% Date Prepared:	519 520 527	15,000 155,030 7,771,000 56%	512 513 515 517 518 521 522 523 524 525 526	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	529 535 536	7,000 3,000 171,000 201,300	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Filtings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS ### of Total Well Cost COG Operating LLC We approve:	419 420	5,038,100 36% Date Prepared:	519 520 527	15,000 155,030 7,771,000 56%	512 513 515 517 518 521 522 523 524 525 526	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	529 535 536	7,000 3,000 171,000 201,300	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS We approve:% Working Interest Company: By: Printed Name:	419 420	5,038,100 36% Date Prepared: COG Operating LLC By:	519 520 527	15,000 155,030 7,771,000 56% 10/18/18	512 513 515 517 518 521 522 523 524 525 526 516	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	529 535 536	7,000 3,000 171,000 201,300	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS We approve:	419 420	5,038,100 36% Date Prepared: COG Operating LLC By:	519 520 527	15,000 155,030 7,771,000 56%	512 513 515 517 518 521 522 523 524 525 526 516	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	529 535 536	7,000 3,000 171,000 201,300	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS We approve:	419 420	5,038,100 36% Date Prepared: COG Operating LLC By:	519 520 527	15,000 155,030 7,771,000 56% 10/18/18	512 513 515 517 518 521 522 523 524 525 526 516	140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	529 535 536	7,000 3,000 171,000 201,300	145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020

WELL NAME:	MASTIFF FED COM #703H	PROSPECT NAME:	Bulldog 2432 (717113)	
FTP:	Sec 4: 100 FNL & 1356 FEL	STATE & COUNTY:	New Mexico, Lea	
LTP:	Sec 9: 100 FSL & 1356 FEL	OBJECTIVE:	Drill and Complete	
FORMATION:	Wolfcamp	DEPTH:	22,860	
LEGAL:	Sec 4-24S-32E	TVD:	12,300	

INTANGIBLE COSTS		Drlg - Rig Release(D)		Completion(C)		Tank Btty Constrctn(TB)		Pmpq Equipment(PEQ)	TOTAL
Title/Curative/Permit	201	20,000							20,000
Insurance	202	2,500	302						2,500
Darnages/Right of Way	203	20,000	303		351			CHARLES IN TAXABLE	20,000
Survey/Stake Location	204	7,000			352				7,000
Location/Pits/Road Expense	205	135,000	305	10,000	353	45,000	366		190,000
Drilling / Completion Overhead	206	11,100	306	15,000					26,100
Turnkey Contract	207	0		ACCUPATION OF					0
Footage Contract	208	0							0
Daywork Contract Directional Drilling Services	209	923,000							923,000
Frac Equipment	210	442,000	307	1,418,000					442,000
Frac Chemicals			308	473,000					1,418,000 473,000
Frac Proppant			309	814,000					814,000
Frac Proppant Transportation		THE REAL PROPERTY.	310	399,000					399,000
Fuel & Power	211	211,000	311	68,000	354		367		279,000
Water	212	60,000	312	966,000			368		1,026,000
Bits	213	111,000	313	4,500			369		115,500
Mud & Chemicals	214	275,000	314	25,000		STATE OF THE STATE OF	370		300,000
Drill Stem Test	215	0	315						0
Coring & Analysis	216	0							0
Cement Surface	217	28,000							28,000
Cement Intermediate	218	75,000							75,000
Cement 2nd Intermediate/Production	219	115,000						HERO STREET	115,000
Cement Squeeze & Other (Kickoff Plug)	220	0					371		0
Float Equipment & Centralizers	221	65,000						A HOLL	65,000
Casing Crews & Equipment	222	70,000	2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					70,000
Fishing Tools & Service	223	0					372		0
Geologic/Engineering	224	11,400	324	00.000	355	****	373	0.500	11,400
Contract Labor Company Supervision	225	6,500 66,600	325	20,000	356	122,935	374	6,500	155,935
Company Supervision Contract Supervision	226 227	157,000	326 327	15,000 255,000	357 358		375 376	5,000	81,600 417,000
Testing Casing/Tubing	228	30,000	328	5,000	338	To the Control	376	5,000	35,000
Mud Logging Unit	229	52,000	329	5,000			with.	Marie Control	52,000
Logging	230	0				THE RESERVE	378	()	0
Perforating/Wireline Services	231	4,000	331	538,000			379		542,000
Stimulation/Treating			332	397,000			380		397,000
Completion Unit			333	138,000			381	8,800	146,800
Swabbing Unit		TENT OF BUILD	334				382		0
Rentals-Surface	235	190,000	335	403,000	359		383	7,000	600,000
Rentals-Subsurface	236	150,000	336	30,000			384		180,000
Trucking/Forklift/Rig Mobilization	237	200,000	337	20,000	360		385	3,000	223,000
Welding Services Water Disposal	238	3,000	338	5,000	361	135,000	386		195,000
Plug to Abandon	240	0	340	60,000	302	135,000	307		195,000
Seismic Analysis	241	0	341					-	0
Miscellaneous	242	0	342				389		0
Contingency	243	69,000	343	250,000	363		390		319,000
Closed Loop & Environmental	244	330,000	344	5,000	364		388	(335,000
Dyed Diesel	245		345	484,000		CONTRACTOR OF THE			
Coil Tubing			346	750,000				ALC: THE PARTY	750,000
Flowback Crews & Equip			347	48,000					48,000
Offset Directional/Frac	248	2010100	348	7.015.500			391		0
TOTAL INTANGIBLES		3,840,100		7,615,500		302,935		30,300	11,788,835
TANGIBLE COSTS									
TANGIBLE COSTS Surface Casing	401	52,000							52,000
A CONTRACTOR OF THE PARTY OF TH	401 402	52,000 555,000							52,000 555,000
Surface Casing									
Surface Casing Intermediate Casing Production Casing/Liner Tubing	402	555,000	504	52,030			530	5,000	555,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment	402	555,000	504 505	22,000			531	3,000	555,000 516,000 57,030 100,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit	402 403	555,000 516,000		22,000 0			531 506	- Indiana	555,000 516,000 57,030 100,000 96,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover	402 403	555,000 516,000		22,000 0 0			531 506 507	3,000 96,000	555,000 516,000 57,030 100,000 96,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods	402 403	555,000 516,000	505	22,000 0			531 506 507 508	3,000 96,000 35,000	555,000 516,000 57,030 100,000 96,000 0 35,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH)	402 403	555,000 516,000		22,000 0 0	Fac		531 506 507	3,000 96,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks	402 403	555,000 516,000	505	22,000 0 0	510	63,645.00	531 506 507 508	3,000 96,000 35,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines	402 403	555,000 516,000	505	22,000 0 0	511	26,593.00	531 506 507 508	3,000 96,000 35,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator	402 403	555,000 516,000	505	22,000 0 0	511 512	26,593.00 140,007.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines	402 403	555,000 516,000	505	22,000 0 0	511	26,593.00	531 506 507 508	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System	402 403 405	555,000 516,000	505	22,000 0 0 0	511 512	26,593.00 140,007.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers	402 403 405	555,000 516,000	505	22,000 0 0 0	511 512 513	26,593.00 140,007.00 130,000.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves	402 403 405	555,000 516,000	505	22,000 0 0 0	511 512 513 515	26,593.00 140,007.00 130,000.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface	402 403 405	555,000 516,000	505	22,000 0 0 0	511 512 513 515 517	26,593.00 140,007.00 130,000.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC	402 403 405 414 415	555,000 516,000	505	22,000 0 0 0	511 512 513 515 517 518	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482	531 506 507 508 532	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous	402 403 405 414 415	555,000 516,000	505 509 514	22,000 0 0 0	511 512 513 515 517 518 521 522 523	26,593.00 140,007.00 130,000.00 102,282	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Detydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency	402 403 405 414 415	555,000 516,000	505	22,000 0 0 0	511 512 513 515 517 518 521 522 523 524	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT	402 403 405 414 415	555,000 516,000	505 509 514	22,000 0 0 0	511 512 513 515 517 518 521 522 523 524 525	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission	402 403 405 414 415	555,000 516,000	505 509 514 519 520	22,000 0 0 0 0	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydrator Dehydrator Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression	402 403 405 414 415	555,000 516,000 75,000	505 509 514	22,000 0 0 0 0	511 512 513 515 517 518 521 522 523 524 525	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES	402 403 405 414 415	555,000 516,000 75,000	505 509 514 519 520	22,000 0 0 0 0 66,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydrator Dehydrator Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression	402 403 405 414 415	555,000 516,000 75,000	505 509 514 519 520	22,000 0 0 0 0	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000	505 509 514 519 520	22,000 0 0 0 0 66,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dethydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36%	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Detrydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36%	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS * of Total Well Cost COG Operating LLC We approve:% Working Interest	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36% Date Prepared:	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Detrydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS We approve:% Working Interest Company:	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36% Date Prepared:	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost COG Operating LLC We approve:% Working Interest	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36% Date Prepared:	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS We approve:% Working Interest Company: By: Printed Name:	402 403 405 414 415	555,000 516,000 75,000 75,000 1,198,000 5,038,100 36% Date Prepared: COG Operating LLC N	505 509 514 519 520 527	22,000 0 0 0 0 66,000 155,030 7,771,000 56% 10/18/18	511 512 513 515 517 518 521 522 523 524 526 516	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS We approve:% Working Interest Company: By: Printed Name: Title:	402 403 405 414 415	555,000 516,000 75,000 75,000 1,198,000 5,038,100 36% Date Prepared: COG Operating LLC By:	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 526 516	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumpis-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS We approve:% Working Interest Company: By: Printed Name:	402 403 405 414 415	555,000 516,000 75,000 75,000 1,198,000 5,038,100 36% Date Prepared: COG Operating LLC N	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000 56% 10/18/18	511 512 513 515 517 518 521 522 523 524 526 516	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020

WELL NAME:	MASTIFF FED COM #704H	PROSPECT NAME:	Bulldog 2432 (717113)	
FTP:	Sec 4: 100 FNL & 1869 FEL	STATE & COUNTY:	New Mexico, Lea	
LTP:	Sec 9: 100 FSL & 1869 FEL	OBJECTIVE:	Drill and Complete	
FORMATION:	Wolfcamp	DEPTH:	22,960	
LEGAL:	Sec 4-24S-32E	TVD:	12,400	

ITANGIBLE COSTS tte/Curative/Permit	201	Drlq - Riq Release(D)		Completion(C)		Tank Btty Constrctn(TB)		Pmpq Equipment(PEQ)	TOTAL 20,0
surance	202	2,500	302						20,0
amages/Right of Way	203	20,000	303		351				20,0
urvey/Stake Location	204	7,000		A STATE OF THE STA	352				7,0
ocation/Pits/Road Expense	205	135,000	305	10,000	353	45,000	366		190,0
illing / Completion Overhead	206	11,100	306	15,000					26,1
urnkey Contract potage Contract	207	0							-
aywork Contract	209	923,000	8 9					•	923,0
rectional Drilling Services	210	442,000							442,0
ac Equipment			307	1,418,000					1,418,0
ac Chemicals			308	473,000		TOTAL STATE OF THE			473,0
ac Proppant			309	814,000		TEN ENGLS			814,0
ac Proppant Transportation			310	399,000		Name of Street			399,0
el & Power	211	211,000	311	68,000	354		367		279,0
ater	212	60,000	312	966,000			368		1,026,0
S	213	111,000	313	4,500			369		115,5
ud & Chemicals	214	275,000	314	25,000			370		300,0
ill Stern Test	215	0	315						
ring & Analysis	216	0							
ment Surface	217	28,000							28,0
ment Intermediate	218	75,000	4						75,0
ement 2nd Intermediate/Production	219	115,000					giv.		115,0
ement Squeeze & Other (Kickoff Plug)	220	0				THE PROPERTY OF	371		
pat Equipment & Centralizers	221	65,000							65,0
asing Crews & Equipment shing Tools & Service	222	70,000	200				970		70,0
	223	11,400	323		355		372		- 42
eologic/Engineering entract Labor	224	6,500	324	20,000	355	122,935	373	0.500	11,4
ompany Supervision	225	66,600	325	15,000	356	122,935	374 375	6,500	155,9
ontract Supervision	226	157,000	326	255,000	357		376	E 000	-
esting Casing/Tubing	228	30,000	328	5,000	338		376	5,000	417,
ud Logging Unit	229	52,000	329	5,000			SIT		52,
gging Onit	230	52,000	028	1000			378		52,
erforating/Wireline Services	231	4,000	331	538,000			379		542,
imulation/Treating		S =	332	397,000			380		397,
ompletion Unit			333	138,000		Colored Control of the	381	8,800	146,8
vabbing Unit			334	100,000			382	- 0,000	140,0
entals-Surface	235	190,000	335	403,000	359		383	7,000	600,0
entals-Subsurface	236	150,000	336	30,000			384	- 11000	180,0
ucking/Forklift/Rig Mobilization	237	200,000	337	20,000	360		385	3,000	223,0
elding Services	238	3,000	338	5,000	361		386		8,6
ater Disposal	239	0	339	60,000	362	135,000	387		195,0
ug to Abandon	240	0	340					THE PARTY OF THE	
eismic Analysis	241	0	341						
scellaneous	242	0	342				389		
ontingency	243	69,000	343	250,000	363		390		319,
osed Loop & Environmental	244	330,000	344	5,000	364		388		335,
yed Diesel	245		345	484,000					
oil Tubing			346	750,000		entarpations.			750,
owback Crews & Equip			347	48,000					48,
fset Directional/Frac	248		348				391		
TOTAL INTANGIBLES		3,840,100	9	7,615,500		302,935		30,300	11,788,
ANCIRI E COSTS									
ANGIBLE COSTS		70 000							1/22/23
urface Casing	401	52,000							52,
termediate Casing oduction Casing/Liner	403	555,000 516,000	5 8						555,
bing	403	510,000	504	52,030			Eau	E 000	516,
ellhead Equipment	405	75,000	505	22,000			530 531	3,000	100,
umping Unit	405	75,000	303	0			506	96,000	96,0
ime Mover			5 8	0			507	90,000	30,
ods				0			508	35,000	35,
imps-Sub Surface (BH)			509	0			532	5,000	-
inks			500	the party and	510	63,645.00	302	5,000	5,
owlines				The same of the same of	511	26,593.00		1	26,
eater Treater/Separator					512				140,
ectrical System					513		533	15,000	145,
ickers/Anchors/Hangers	414		514	66,000			534	2,000	68,
ouplings/Fittings/Valves	415				515	102,282		NEU PRINCIPAL	102,
hydration					517				
ection Plant/CO2 Equipment					518				
imps-Surface					521	5,000		The second second	5,
strumentation/SCADA/POC					522	10,482	529	7,000	17,
scellaneous	419		519		523	5,241	535	3,000	8,
entingency	420		520		524		536		
eters/LACT				Land a series of the	525	25,156		AND DESCRIPTION OF THE PERSON	25,
itels/LAC1		THE RESERVE OF		Section 1	526	23,584		THE RESERVE OF THE PARTY OF THE	23,
		X TOWN	527	15,000	516	60,000	528		75,
res/Combustors/Emission		4 700 000	· ·	155,030		591,990		171,000	2,116,
res/Combustors/Emission s Lift/Compression		1,198,000		7,771,000		894,925		201,300	13,904,
res/Combustors/Emission s Lift/Compression		5,038,100						(1)	
res/Combustors/Emission s Litt/Compression TOTAL TANGIBLES TOTAL WELL COSTS		5,038,100	3						
res/Combustors/Emission s Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost			1	56%		6%		1%	
res/Combustors/Emission s Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		5,038,100	9	56%		6%		1%	
res/Combustors/Emission s Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		5,038,100				6%		1%	
res/Combustors/Emission s Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		5,038,100 36% Date Prepared:		10/18/18		6%		1%	
res/Combustors/Emission s Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		5,038,100 36% Date Prepared:	KR			6%		1%	
res/Combustors/Emission IS Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost OG Operating LLC		5,038,100 36% Date Prepared:	KR			6%		1%	
ares/Combustors/Emission as Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS		5,038,100 36% Date Prepared:	ICR			6%		1%	
res/Combustors/Emission IS Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost OG Operating LLC e approve:% Working Interest		5,038,100 36% Date Prepared: COG Operating LLC	KR	10/18/18		6%		-	
res/Combustors/Emission IS Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost DG Operating LLC a approve:% Working Interest Impany:		5,038,100 36% Date Prepared: COG Operating LLC	KR	10/18/18		6%		1%	
res/Combustors/Emission s Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost OG Operating LLC s approve:% Working Interest		5,038,100 36% Date Prepared: COG Operating LLC	ic R	10/18/18		6%		-	
res/Combustors/Emission s Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost G Operating LLC approve:% Working Interest mpany:		5,038,100 36% Date Prepared: COG Operating LLC	KR	10/18/18		6%		-	
res/Combustors/Emission s Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost G Operating LLC approve:% Working Interest mpany:		5,038,100 36% Date Prepared: COG Operating LLC By:		10/18/18	N Was			1%	

WELL NAME:	MASTIFF FED COM #705H	PROSPECT NAME:	Bulldog 2432 (717113)	
FTP:	Sec 4: 100 FNL & 2382 FEL	STATE & COUNTY:	New Mexico, Lea	
LTP:	Sec 9: 100 FSL & 2382 FEL	OBJECTIVE:	Drill and Complete	
FORMATION:	Wolfcamp	DEPTH:	22,860	
LEGAL:	Sec 4-24S-32E	TVD;	12,300	

INTANGIBLE COSTS Title/Curative/Permit	201	Drlg - Rig Release(D) 20,000		Completion(C)		Tank Btty Constrctn(TB)		Pmpq Equipment(PEQ)	TOTAL 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			352				7,000
Location/Pits/Road Expense	205		305	10,000	353	45,000	366		190,000
Drilling / Completion Overhead	206		306	15,000					26,100
Turnkey Contract Footage Contract	207	0							0
Daywork Contract	209	923,000							923,000
Directional Drilling Services	210	442,000	1			2 7 TOTAL CO.			442,000
Frac Equipment	1		307	1,418,000					1,418,000
Frac Chemicals	j		308	473,000					473,000
Frac Proppant	į		309	814,000					814,000
Frac Proppant Transportation			310	399,000					399,000
Fuel & Power	211	211,000	311	68,000	354		367		279,000
Water	212	60,000	312	966,000			368		1,026,000
Bits	213		313	4,500			369		115,500
Mud & Chemicals	214		314	25,000			370		300,000
Drill Stem Test	215		315						0
Coring & Analysis	216	0				- VAN-		No. of the last of	0
Cement Surface	217	28,000							28,000
Cement Intermediate Cement 2nd Intermediate/Production	218	75,000 115,000							75,000
Cement Squeeze & Other (Kickoff Plug)	220	0					371		115,000
Float Equipment & Centralizers	221	65,000		9-10/1 Table 20/1			37.1		65,000
Casing Crews & Equipment	222	70,000				PARALLINEE.		S-0-8-0-10-	70,000
Fishing Tools & Service	223		323				372		- 70,000
Geologic/Engineering	224		324		355		373		11,400
Contract Labor	225		325	20,000	356	122,935	374	6,500	155,935
Company Supervision	226	11274702007	326	15,000	357		375		81,600
Contract Supervision	227		327	255,000	358		376	5,000	417,000
Testing Casing/Tubing	228		328	5,000			377		35,000
Mud Logging Unit	229		329					LINE AND ADDRESS.	52,000
Logging	230	0				ALIENA ALIENA	378		0
Perforating/Wireline Services	231		331	538,000			379		542,000
Stimulation/Treating	-		332	397,000			380		397,000
Completion Unit			333	138,000			381	8,800	146,800
Swabbing Unit Rentals-Surface	235	Contract Contract	334	403,000	359		382	7,000	0
Rentals-Subsurface	236		336	30,000	359		384	7,000	180,000
Trucking/Forklift/Rig Mobilization	237		337	20,000	360		385	3,000	223,000
Welding Services	238		338	5,000	361		386	5,000	8,000
Water Disposal	239		339	60,000	362	135,000	387		195,000
Plug to Abandon	240	0	340					III A COLUMN TO A STATE OF THE PARTY OF THE	0
Seismic Analysis	241	0	341					REAL PROPERTY.	0
Miscellaneous	242	0	342				389		0
Contingency	243	69,000	343	250,000	363		390		319,000
Closed Loop & Environmental	244	330,000	344	5,000	364		388		335,000
Dyed Diesel	245		345	484,000		PARTITION OF THE PARTY.			
Coil Tubing	-		346	750,000					750,000
Flowback Crews & Equip			347	48,000			5.60		48,000
Offset Directional/Frac	248		348	7.045.500		200 005	391	20.000	0
TOTAL INTANGIBLES		3,840,100		7,615,500		302,935		30,300	11,788,835
TANGIBLE COSTS									
Surface Casing	401	52,000							52,000
Intermediate Casing	402	555,000							555,000
Production Casing/Liner	403	516,000	i						516,000
Tubing			504	52,030			530	5,000	57,030
Wellhead Equipment	405	75,000	505	22,000			531	3,000	100,000
Pumping Unit	1		j	0			506	96,000	96,000
Prime Mover		TENTE DE LES		0			507		0
Rods	- 1			0		The second second	508	35,000	35,000
Pumps-Sub Surface (BH)			509				532	5,000	5,000
Tanks	1				510	63,645.00		VI STATE OF THE ST	63,645
Flowlines		FOR MUETE			511	26,593.00			26,593
Heater Treater/Separator			7.		512	140,007.00	1200		140,007
Electrical System Packers/Anchors/Hanners	414		E14	00.000	513	130,000.00	533	15,000	145,000
Packers/Anchors/Hangers Couplings/Fittings/Valves	414		514	66,000	515	100.000	534	2,000	68,000
Dehydration	415	7.50				102,282			102,282
Injection Plant/CO2 Equipment					517 518				0
	- 1				521	5,000			5,000
		The state of the s			522	10,482	529	7,000	17,482
Pumps-Surface	1		-		523	5,241	535	3,000	8,241
Pumps-Surface Instrumentation/SCADA/POC	419		519				-	3,000	0
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous	419		519 520				536		V
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency					524		536		25 156
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT						25,156 23,584	536		25,156 23,584
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission				15,000	524 525	25,156	536 528		
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission			520	15,000 155,030	524 525 526	25,156 23,584		171,000	23,584
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression			520		524 525 526	25,156 23,584 60,000		171,000 201,300	23,584 75,000
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		1,198,000	520	155,030	524 525 526	25,156 23,584 60,000 591,990			23,584 75,000 2,116,020
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost	420	1,198,000 5,038,100 36%	520	155,030 7,771,000 56%	524 525 526	25,156 23,584 60,000 591,990 894,925		201,300	23,584 75,000 2,116,020
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost	420	1,198,000 5,038,100 36% Date Prepared:	520	155,030 7,771,000	524 525 526	25,156 23,584 60,000 591,990 894,925		201,300	23,584 75,000 2,116,020
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost	420	1,198,000 5,038,100 36% Date Prepared:	520	155,030 7,771,000 56%	524 525 526	25,156 23,584 60,000 591,990 894,925		201,300	23,584 75,000 2,116,020
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	420	1,198,000 5,038,100 36%	520	155,030 7,771,000 56%	524 525 526	25,156 23,584 60,000 591,990 894,925		201,300	23,584 75,000 2,116,020
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost COG Operating LLC We approve:% Working Interest	420	1,198,000 5,038,100 36% Date Prepared:	520	155,030 7,771,000 56% 10/18/18	524 525 526	25,156 23,584 60,000 591,990 894,925		201,300	23,584 75,000 2,116,020
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Litt/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost COG Operating LLC We approve:% Working Interest Company:	420	1,198,000 5,038,100 36% Date Prepared:	520	155,030 7,771,000 56% 10/18/18	524 525 526	25,156 23,584 60,000 591,990 894,925		201,300	23,584 75,000 2,116,020
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS **of Total Well Cost COG Operating LLC We approve:% Working Interest Company: By:	420	1,198,000 5,038,100 36% Date Prepared:	520	155,030 7,771,000 56% 10/18/18	524 525 526	25,156 23,584 60,000 591,990 894,925		201,300	23,584 75,000 2,116,020
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost COG Operating LLC We approve:% Working Interest Company: By: Printed Name:	420	1,198,000 5,038,100 36% Date Prepared: COG Operating LLC	520	155,030 7,771,000 56% 10/18/18	524 525 526 516	25,156 23,584 60,000 591,990 894,925 6%		201,300	23,584 75,000 2,116,020
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Litt/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost COG Operating LLC We approve:% Working Interest Company: By: Printed Name: Title:	420	1,198,000 5,038,100 36% Date Prepared: COG Operating LLC AG By:	520 527	155,030 7,771,000 56% 10/18/18	524 525 526 516	25,156 23,584 60,000 591,990 894,925 6%		201,300	23,584 75,000 2,116,020
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost COG Operating LLC We approve:% Working Interest Company: By: Printed Name:	420	1,198,000 5,038,100 36% Date Prepared: COG Operating LLC	520 527	155,030 7,771,000 56% 10/18/18	524 525 526 516	25,156 23,584 60,000 591,990 894,925 6%		201,300	23,584 75,000 2,116,020

WELL NAME:	MASTIFF FED COM #706H	PROSPECT NAME:	Bulldog 2432 (717113)	
FTP:	Sec 4: 100 FSL & 2385 FWL	STATE & COUNTY:	New Mexico, Lea	
LTP:	Sec 33: 100 FNL & 2385 FWL	OBJECTIVE:	Drill and Complete	
FORMATION:	Wolfcamp	DEPTH:	22,960	
LEGAL:	Sec 4-24S-32E	TVD;	12,400	

INTANGIBLE COSTS		Drlq - Rig Release(D)		Completion(C)		Tank Btty Constrctn(TB)		Pmpq Equipment(PEQ)	TOTAL
Title/Curative/Permit	201	20,000							20,000
Insurance	202	2,500	12000						2,500
Damages/Right of Way	203	20,000			351				20,000
Survey/Stake Location	204	7,000	S .		352				7,000
Location/Pits/Road Expense	205	135,000	305	10,000	353	45,000	366		190,000
Drilling / Completion Overhead	206	11,100	306	15,000					26,100
Turnkey Contract	207	0							0
Footage Contract	208	0							0
Daywork Contract	209	923,000				A STATE OF THE PARTY OF THE PAR			923,000
Directional Drilling Services	210	442,000		Service Services					442,000
Frac Equipment			307	1,418,000					1,418,000
Frac Chemicals			308	473,000					473,000
Frac Proppant			309	814,000					814,000
Frac Proppant Transportation			310	399,000		A AND DESCRIPTION OF THE PERSON OF THE PERSO			399,000
Fuel & Power	211	211,000	PSS(1,529)	68,000	354		207		THE RESERVE AND ADDRESS OF THE PERSON NAMED IN
- Control of the Cont					334		367		279,000
Water	212	60,000		966,000			368		1,026,000
Bits	213	111,000		4,500			369		115,500
Mud & Chemicals	214	275,000		25,000			370		300,000
Drill Stern Test	215	0							0
Coring & Analysis	216	0	j i			THE RESERVE OF			.0
Cement Surface	217	28,000							28,000
Cement Intermediate	218	75,000							75,000
Cement 2nd Intermediate/Production	219	115,000							115,000
Cement Squeeze & Other (Kickoff Plug)	220	0				Parl Contract Contract	371		0
Float Equipment & Centralizers	221	65,000							65,000
Casing Crews & Equipment	222	70,000							70,000
Fishing Tools & Service	223	0	323				372		0
Geologic/Engineering	224	11,400			355		373		11,400
Contract Labor	225	6,500		20,000	356	122,935	374	6,500	155,935
Company Supervision	226	66,600		15,000	357	122,935	375	6,500	-
								7.000	81,600
Contract Supervision	227	157,000		255,000	358		376	5,000	417,000
Testing Casing/Tubing	228	30,000		5,000			377		35,000
Mud Logging Unit	229	52,000							52,000
Logging	230	0	·	A STATE OF THE STA			378		0
Perforating/Wireline Services	231	4,000	331	538,000			379		542,000
Stimulation/Treating			332	397,000			380		397,000
Completion Unit			333	138,000			381	8,800	146,800
Swabbing Unit			334				382		0
Rentals-Surface	235	190,000	335	403,000	359		383	7,000	600,000
Rentals-Subsurface	236	150,000		30,000		The second second second	384		180,000
Trucking/Forklift/Rig Mobilization	237	200,000		20,000	360		385	3,000	223,000
Welding Services	238	3,000		5,000	361		386	3,000	8,000
Water Disposal	239	0			362	105.000			-
The state of the s				60,000	362	135,000	387		195,000
Plug to Abandon	240	0							0
Seismic Analysis	241	0				Control of the			0
Miscellaneous	242	0					389		0
Contingency	243	69,000		250,000	363		390		319,000
Closed Loop & Environmental	244	330,000	344	5,000	364		388		335,000
Dyed Diesel	245		345	484,000					
Coil Tubing		Market Cla	346	750,000					750,000
Flowback Crews & Equip			347	48,000					48,000
Offset Directional/Frac	248		348				391		0
TOTAL INTANGIBLES		3,840,100		7,615,500		302,935		30,300	11,788,835
<u></u>									
TANGIBLE COSTS									
									52,000
	401	52,000							
Surface Casing	401	52,000							
Surface Casing Intermediate Casing	402	555,000						STURBLOW	555,000
Surface Casing Intermediate Casing Production Casing/Liner				E2 020			F20	5.000	555,000 516,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing	402 403	555,000 516,000	504	52,030			530	5,000	555,000 516,000 57,030
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment	402	555,000	504	22,000			531	3,000	555,000 516,000 57,030 100,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit	402 403	555,000 516,000	504	22,000 0			531 506		555,000 516,000 57,030 100,000 96,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover	402 403	555,000 516,000	504	22,000 0 0			531 506 507	3,000 96,000	555,000 516,000 57,030 100,000 96,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods	402 403	555,000 516,000	504 505	22,000 0			531 506	3,000	555,000 516,000 57,030 100,000 96,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover	402 403	555,000 516,000	504	22,000 0 0			531 506 507	3,000 96,000	555,000 516,000 57,030 100,000 96,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods	402 403	555,000 516,000	504 505	22,000 0 0	510	63,645.00	531 506 507 508	3,000 96,000 35,000	555,000 516,000 57,030 100,000 96,000 0 35,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH)	402 403	555,000 516,000	504 505	22,000 0 0	510 511	63,645.00 26,593.00	531 506 507 508	3,000 96,000 35,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks	402 403	555,000 516,000	504 505	22,000 0 0			531 506 507 508	3,000 96,000 35,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines	402 403	555,000 516,000	504 505	22,000 0 0	511	26,593.00	531 506 507 508	3,000 96,000 35,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator	402 403	555,000 516,000	504 505	22,000 0 0	511 512	26,593.00 140,007.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System	402 403 405	555,000 516,000	504 505 509	22,000 0 0 0	511 512	26,593.00 140,007.00 130,000.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers	402 403 405	555,000 516,000	504 505 509	22,000 0 0 0	511 512 513	26,593.00 140,007.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration	402 403 405	555,000 516,000	504 505 509	22,000 0 0 0	511 512 513 515 517	26,593.00 140,007.00 130,000.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment	402 403 405	555,000 516,000	504 505 509	22,000 0 0 0	511 512 513 515 517 518	26,593.00 140,007.00 130,000.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface	402 403 405	555,000 516,000	504 505 509	22,000 0 0 0	511 512 513 515 517 518 521	26,593.00 140,007.00 130,000.00 102,282	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC	402 403 405 414 415	555,000 516,000	504 505 509	22,000 0 0 0	511 512 513 515 517 518 521 522	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentatior/SCADA/POC Miscellaneous	402 403 405 414 415	555,000 516,000	504 505 509 514	22,000 0 0 0	511 512 513 515 517 518 521 522 523	26,593.00 140,007.00 130,000.00 102,282	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Detydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency	402 403 405 414 415	555,000 516,000	504 505 509	22,000 0 0 0	511 512 513 515 517 518 521 522 523 524	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT	402 403 405 414 415	555,000 516,000	504 505 509 514	22,000 0 0 0	511 512 513 515 517 518 521 522 523 524 525	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission	402 403 405 414 415	555,000 516,000	504 505 509 514 519 520	22,000 0 0 0 0	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Compussion	402 403 405 414 415	555,000 516,000 75,000	504 505 509 514	22,000 0 0 0 0	511 512 513 515 517 518 521 522 523 524 525	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES	402 403 405 414 415	555,000 516,000 75,000	504 505 509 514 519 520	22,000 0 0 0 0 66,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression	402 403 405 414 415	555,000 516,000 75,000	504 505 509 514 519 520	22,000 0 0 0 0	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100	504 505 509 514 519 520	22,000 0 0 0 0 0 155,000 155,030 7,771,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000	504 505 509 514 519 520	22,000 0 0 0 0 66,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100	504 505 509 514 519 520	22,000 0 0 0 0 0 155,000 155,030 7,771,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100	504 505 509 514 519 520	22,000 0 0 0 0 0 15,000 155,030 7,771,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36% Date Prepared:	504 505 509 514 519 520	22,000 0 0 0 0 0 155,000 155,030 7,771,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Detydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36% Date Prepared:	504 505 509 514 519 520	22,000 0 0 0 0 0 15,000 155,030 7,771,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Detydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100	504 505 509 514 519 520	22,000 0 0 0 0 0 15,000 155,030 7,771,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36% Date Prepared:	504 505 509 514 519 520	22,000 0 0 0 0 0 15,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Detrydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost COG Operating LLC	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36% Date Prepared:	504 505 509 514 519 520	22,000 0 0 0 0 0 15,000 155,030 7,771,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost COG Operating LLC	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36% Date Prepared:	504 505 509 514 519 520	22,000 0 0 0 0 0 15,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost COG Operating LLC We approve:% Working Interest	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36% Date Prepared:	504 505 509 514 519 520	22,000 0 0 0 0 0 15,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost Company:% Working Interest Company: By:	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36% Date Prepared:	504 505 509 514 519 520	22,000 0 0 0 0 0 15,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS We approve:% Working Interest Company: By: Printed Name:	402 403 405 414 415	555,000 516,000 75,000 75,000 1,198,000 5,038,100 36% Date Prepared: COG Operating LLC By:	504 505 509 514 519 520	22,000 0 0 0 0 15,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526 516	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925 6%	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Detydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS "% of Total Well Cost COG Operating LLC We approve:% Working Interest Company: By: Printed Name: Title:	402 403 405 414 415	555,000 516,000 75,000 75,000 1,198,000 5,038,100 36% Date Prepared: COG Operating LLC By:	504 505 509 514 519 520	22,000 0 0 0 0 0 15,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526 516	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925 6%	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumpis-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS "% of Total Well Cost Company: By: Printed Name:	402 403 405 414 415	555,000 516,000 75,000 75,000 1,198,000 5,038,100 36% Date Prepared: COG Operating LLC By:	504 505 509 514 519 520	22,000 0 0 0 0 15,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526 516	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925 6%	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020

WELL NAME:	MASTIFF FED COM #707H	PROSPECT NAME:	Bulldog 2432 (717113)	
FTP:	Sec 4: 100 FSL & 1872 FWL	STATE & COUNTY:	New Mexico, Lea	
LTP:	Sec 33: 100 FNL & 1872 FWL	OBJECTIVE:	Drill and Complete	
FORMATION:	Wolfcamp	DEPTH:	22,860	
LEGAL:	Sec 4-24S-32E	TVD:	12,300	

NTANGIBLE COSTS Title/Curative/Permit	201	Drlg - Riq Release(D) 20,000		Completion(C)		Tank Btty Constrctn(TB)		Pmpq Equipment(PEQ)	<u>TOTA</u>
nsurance	202	2,500	302						2
Pamages/Right of Way	203	20,000	303		351				20
Survey/Stake Location	204	7,000		THE RESERVE OF THE PERSON NAMED IN	352				
			205	40.000		40.000	200		100
ocation/Pits/Road Expense	205	135,000	305	10,000	353	45,000	366		190
Orilling / Completion Overhead	206	11,100	306	15,000				THE RESERVE	26
urnkey Contract	207	0							
ootage Contract	208	0							
Daywork Contract	209	923,000		THE PERSON NAMED IN					923
Directional Drilling Services	210	442,000							-
	210	442,000							442
rac Equipment			307	1,418,000					1,418
rac Chemicals			308	473,000					473
rac Proppant			309	814,000		The United House			814
rac Proppant Transportation			310	399,000		THE RESIDENCE			399
	011	211 000					007		
uel & Power	211	211,000	311	68,000	354		367		279
Vater	212	60,000	312	966,000		Salar	368		1,026
its	213	111,000	313	4,500			369		115
fud & Chemicals	214	275,000	314	25,000			370		300
rill Stem Test	215	0	315						
			010						
oring & Analysis	216	0							-
Cement Surface	217	28,000							28
Cement Intermediate	218	75,000							75
Cement 2nd Intermediate/Production	219	115,000							115
							074		110
Cement Squeeze & Other (Kickoff Plug)	220	0					371		
loat Equipment & Centralizers	221	65,000				Carles All		والمسالية	65
asing Crews & Equipment	222	70,000							70
ishing Tools & Service	223	0	323			THE PERSON NAMED IN COLUMN	372		
eologic/Engineering	224	11,400	324		355		373		11
						4****		9.444	
Contract Labor	225	6,500	325	20,000	356	122,935	374	6,500	155
company Supervision	226	66,600	326	15,000	357		375		81
Contract Supervision	227	157,000	327	255,000	358		376	5,000	417
esting Casing/Tubing	228	30,000	328	5,000			377		35
Mud Logging Unit	229	52,000	329	2,000					
			929				-		52
ogging	230	0		The state of the s			378		
erforating/Wireline Services	231	4,000	331	538,000			379		542
Stimulation/Treating			332	397,000			380		397
Completion Unit			333	138,000			381	8,800	146
				100,000				0,000	140
Swabbing Unit			334				382		
Rentals-Surface	235	190,000	335	403,000	359		383	7,000	600
Rentals-Subsurface	236	150,000	336	30,000			384		180
rucking/Forklift/Rig Mobilization	237	200,000	337	20,000	360		385	3,000	223
						· 		5,000	
/elding Services	238	3,000	338	5,000	361		386		8
Vater Disposal	239	0	339	60,000	362	135,000	387		195
lug to Abandon	240	. 0	340						
Seismic Analysis	241	0	341						
Miscellaneous	242	0	342			Name of the Owner, when the Owner, when the	389		
		69,000		250,000	202				210
Contingency	243		343	250,000	363		390		319
Closed Loop & Environmental	244	330,000	344	5,000	364		388		335
Dyed Diesel	245		345	484,000					
Coil Tubing			346	750,000					750
Flowback Crews & Equip			347	48,000					48
NAME OF THE PROPERTY OF THE PR				-40,000			223		- 40
Offset Directional/Frac	248		348				391		-
TOTAL INTANGIBLES		3,840,100		7,615,500		302,935		30,300	11,788
TANGIBLE COSTS									
Surface Casing	401	52,000							52
						2			_
ntermediate Casing	402	555,000							555
Production Casing/Liner	403	516,000							516
ubing			504	52,030			530	5,000	57
Vellhead Equipment	405	75,000	505	22,000		THE RESIDENCE	531	3,000	100
		75,000	-	0					-
Pumping Unit							506	96,000	96
Prime Mover				0		Control of the last	507		
Rods				0			508	35,000	35
Pumps-Sub Surface (BH)			509				532	5,000	5
anks					510	63,645.00			63
Towlines					511	26,593.00			_
								The second secon	26
Heater Treater/Separator					512				140
lectrical System					513	130,000.00	533	15,000	145
ackers/Anchors/Hangers	414		514	66,000			534	2,000	68
ouplings/Fittings/Valves	415				515	102,282			102
Pehydration	1000	Inches and the second		EAST VIOLEN		100,000			102
runymmu/UII					517				_
Vication DisableOn F		Description of the last			518				
					521	5,000			5
		EXECUTE DE LA COMP		The second second	522	10,482	529	7,000	17
rumps-Surface			519		523	5,241	535	3,000	
rumps-Surface nstrumentation/SCADA/POC	410		212			5,241		3,000	8
umps-Surface istrumentation/SCADA/POC liscellaneous	419		FRE		524		536		
umps-Surface istrumentation/SCADA/POC liscellaneous ontingency	419 420		520		-		000		
umps-Surface istrumentation/SCADA/POC iscellaneous ontingency			520		525	25,156	500		25
umps-Surface strumentation/SCADA/POC iscellaneous ontingency eters/LACT			520		525 526		500		-
umps-Surface estrumentation/SCADA/POC liscellaneous ontingency leters/LACT lares/Combustors/Emission				ar no	526	23,584			23
umps-Surface strumentation/SCADA/POC iscellaneous ontingency leters/LACT lares/Combustors/Emission as Lit//Compression			520 527	15,000		23,584 60,000	528		23 75
umps-Surface strumentation/SCADA/POC siscellaneous onningency eters/LACT ares/Combustors/Emission as Litt/Compression TOTAL TANGIBLES		1,198,000		155,030	526	23,584 60,000 591,990		171,000	23 75
umps-Surface strumentation/SCADA/POC iscellaneous pontingency eters/LACT ares/Combustors/Emission as Lift/Compression		1,198,000 5,038,100			526	23,584 60,000		171,000 201,300	23 75 2,116
rumps-Surface strumentation/SCADA/POC discellaneous contingency deters/LACT lares/Combustors/Emission disc Lift/Compression TOTAL TANGIBLES				155,030	526	23,584 60,000 591,990		201,300	23 75 2,116
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Mares/Combustors/Emission Mas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		5,038,100		155,030 7,771,000	526	23,584 60,000 591,990 894,925			23 75 2,116
TOTAL WELL COSTS		5,038,100		155,030 7,771,000	526	23,584 60,000 591,990 894,925		201,300	23 75 2,116
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Mares/Combustors/Emission Mas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		5,038,100 36% Date Prepared:	527	155,030 7,771,000 56%	526	23,584 60,000 591,990 894,925		201,300	25 23 75 2,116 13,904
rumps-Surface nstrumentation/SCADA/POC discellaneous contingency deters/LACT lares/Combustors/Emission das Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		5,038,100 36%	527	155,030 7,771,000 56%	526	23,584 60,000 591,990 894,925		201,300	23 75 2,116
Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Hares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost COG Operating LLC		5,038,100 36% Date Prepared: COG Operating LLC	527	155,030 7,771,000 56% 10/18/18	526	23,584 60,000 591,990 894,925		201,300	23 75 2,116
rumps-Surface strumentation/SCADA/POC discellaneous contingency deters/LACT lares/Combustors/Emission das Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		5,038,100 36% Date Prepared:	527	155,030 7,771,000 56%	526	23,584 60,000 591,990 894,925		201,300	23 75 2,116
umps-Surface ustrumentation/SCADA/POC liscellaneous ontingency leters/LACT lares/Combustors/Emission ias Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost OG Operating LLC //e approve:% Working Interest		5,038,100 36% Date Prepared: COG Operating LLC	527	155,030 7,771,000 56% 10/18/18	526	23,584 60,000 591,990 894,925		201,300	23 75 2,116
umps-Surface strumentation/SCADA/POC iscellaneous ontingency eters/LACT ares/Combustors/Emission as Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost OG Operating LLC //e approve:% Working Interest ompany:		5,038,100 36% Date Prepared: COG Operating LLC	527	155,030 7,771,000 56% 10/18/18	526	23,584 60,000 591,990 894,925		201,300	23 75 2,116
umps-Surface strumentation/SCADA/POC iscellaneous ontingency eters/LACT ares/Combustors/Emission as Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost OG Operating LLC //e approve:% Working Interest ompany:		5,038,100 36% Date Prepared: COG Operating LLC	527	155,030 7,771,000 56% 10/18/18	526	23,584 60,000 591,990 894,925		201,300	23 75 2,116
imps-Surface strumentation/SCADA/POC scellaneous ontingency eters/LACT ares/Combustors/Emission as Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost DG Operating LLC e approve:% Working Interest ompany:		5,038,100 36% Date Prepared: COG Operating LLC By:	527	155,030 7,771,000 56% 10/18/18	526 516	23,584 60,000 591,990 894,925 6%		201,300	23 75 2,116

WELL NAME:	MASTIFF FED COM #708H	PROSPECT NAME:	Bulldog 2432 (717113)	
FTP:	Sec 4: 100 FSL & 1359 FWL	STATE & COUNTY:	New Mexico, Lea	
LTP:	Sec 33: 100 FNL & 1359 FWL	OBJECTIVE:	Drill and Complete	
FORMATION:	Wolfcamp	DEPTH:	22,960	
LEGAL:	Sec 4-24S-32E	TVD:	12,400	

INTANGIBLE COSTS Title (Curative (Pormit	00*	Drlg - Rig Release(D)		Completion(C)		Tank Btty Constrctn(TB)		Pmpq Equipment(PEQ)	TOTAL
Title/Curative/Permit Insurance	201	20,000	102						20,000
No. of the second secon					254				2,500
Damages/Right of Way	203		103		351				20,000
Survey/Stake Location	204	7,000			352				7,000
Location/Pits/Road Expense	205		105	10,000	353	45,000	366		190,000
Drilling / Completion Overhead	206		106	15,000					26,100
Turnkey Contract	207	0						19 3 10 10	0
Footage Contract	208	0							0
Daywork Contract	209	923,000							923,000
Directional Drilling Services	210	442,000							442,000
Frac Equipment		30	107	1,418,000					1,418,000
Frac Chemicals		30	808	473,000					473,000
Frac Proppant		30	809	814,000		7.00		RADINESSESSESSESSESSESSESSESSESSESSESSESSESS	814,000
Frac Proppant Transportation		3	10	399,000					399,000
Fuel & Power	211	211,000 3	111	68,000	354		367		279,000
Water	212		112	966,000		The color of the color	368		1,026,000
Bits	213		113	4,500			369		115,500
Mud & Chemicals	214		114	25,000			370		300,000
Drill Stem Test	215	0 3	4	23,000			370		
			110						0
Coring & Analysis	216	0							0
Cement Surface	217	28,000	9						28,000
Cement Intermediate	218	75,000							75,000
Cement 2nd Intermediate/Production	219	115,000							115,000
Cement Squeeze & Other (Kickoff Plug)	220	0					371		0
Float Equipment & Centralizers	221	65,000							65,000
Casing Crews & Equipment	222	70,000	i	THE NAME OF				E I DATE TO THE	70,000
Fishing Tools & Service	223	- Company	323			V-1000 -000	372		0
Geologic/Engineering	224		124		355		373		11,400
Contract Labor	225		325	20,000	356	122,935	374	6,500	155,935
Company Supervision	226		126	15,000	357	122,000	375	0,000	81,600
Contract Supervision	227	Land Control of the C	327	255,000	358			5,000	
			100		338		376	5,000	417,000
Testing Casing/Tubing	228	-	328	5,000			377	0	35,000
Mud Logging Unit	229		129						52,000
Logging	230	0					378		0
Perforating/Wireline Services	231		331	538,000			379		542,000
Stimulation/Treating		33	332	397,000			380		397,000
Completion Unit		33	333	138,000			381	8,800	146,800
Swabbing Unit		3	34				382		0
Rentals-Surface	235	190,000 33	335	403,000	359		383	7,000	600,000
Rentals-Subsurface	236		36	30,000			384		180,000
Trucking/Forklift/Rig Mobilization	237		337	20,000	360		385	3,000	223,000
Welding Services	238		338	5,000	361		386	- 0,000	8,000
Water Disposal	239		339	60,000	362	135,000	387		195,000
			100	00,000	302	135,000	307		
Plug to Abandon	240		340						0
Seismic Analysis	241	0 34							0
Miscellaneous	242		342			CARALLY I	389		0
Contingency	243		343	250,000	363		390		319,000
Closed Loop & Environmental	244	330,000 34	344	5,000	364		388		335,000
Dyed Diesel	245	34	345	484,000					
Coil Tubing		34	346	750,000					750,000
Flowback Crews & Equip		34	347	48,000				Charles and the same of the sa	48,000
Offset Directional/Frac	248	34	348				391		0
TOTAL INTANGIBLES		3,840,100		7,615,500		302,935		30,300	11,788,835
TANGIBLE COSTS									
Surface Casing	401	52,000							52,000
Intermediate Casing	402	555,000							
									555,000
Production Casing/Liner	403	516,000		50.000					516,000
Tubing	175925		04	52,030			530	5,000	57,030
Wellhead Equipment	405	75,000 50	05	22,000			531	3,000	100,000
Pumping Unit		7 (4.15)		0			506	96,000	96,000
Prime Mover				0			507		0
Rods				0			508	35,000	35,000
Pumps-Sub Surface (BH)		50	09				532	5,000	5,000
Tanks					510	63,645.00			63,645
Flowlines			1	S DISTRICT OF STREET	511	26,593.00			26,593
Heater Treater/Separator			1		512	140,007.00		STATE OF THE STATE OF	140,007
Electrical System				COLUMN TO SERVICE STATE OF THE PERSON SERVICE STATE OF THE	513	130,000.00	533	15,000	145,000
Packers/Anchors/Hangers	414	5	14	66,000			534	2,000	68,000
Couplings/Fittings/Valves	415				515	102,282		2,000	102,282
Dehydration					517	102,202			0
Injection Plant/CO2 Equipment				SEAT MARKET	518			Total Control of the	0
Pumps-Surface						F 000			-
			,		521	5,000	ene		5,000
Instrumentation/SCADA/POC					522	10,482	529	7,000	17,482
Miscellaneous	419		19		523	5,241	535	3,000	8,241
Contingency	420	52	20		524		536		0
Meters/LACT					525	25,156		Established to the	25,156
Flares/Combustors/Emission		HER BEING BERN			526	23,584			23,584
Gas Lift/Compression		52	27	15,000	516	60,000	528		75,000
TOTAL TANGIBLES		1,198,000	-	155,030		591,990		171,000	2,116,020
TOTAL WELL COSTS		5,038,100	- 3	7,771,000		894,925		201,300	13,904,855
% of Total Well Cost		36%		56%		6%		1%	
COG Operating LLC									
		Total resources of the Section 2015							
		Date Prepared:		10/18/18					
		A+0							
We recover		COG Operating LLC ALL							
We approve:				التصمران ال					
% Working Interest		By:		MB				28	
Company									
Company:									
By:									
Printed Name:									
Printed Name:		This AFE is only an estimate	te. F	By signing you agree to no	ay you	r share			
		This AFE is only an estimate of the actual costs incurred.		By signing you agree to pa	ay you	r share			

WELL NAME:	MASTIFF FED COM #709H	PROSPECT NAME:	Bulldog 2432 (717113)	
FTP:	Sec 4: 100 FSL & 846 FWL	STATE & COUNTY:	New Mexico, Lea	
LTP:	Sec 33: 100 FNL & 846 FWL	OBJECTIVE:	Drill and Complete	
FORMATION:	Wolfcamp	DEPTH:	22,860	
LEGAL:	Sec 4-24S-32E	TVD:	12,300	

INTANGIBLE COSTS		Drlg - Rig Release(D)		Completion(C)		Tank Btty Constrctn(TB)		Pmpq Equipment(PEQ)	TOTAL
Title/Curative/Permit	201	20,000	200	197				*	20,000
Insurance	202		302		e Value				2,500
Damages/Right of Way	203		303		351				20,000
Survey/Stake Location	204	7,000			352				7,000
Location/Pits/Road Expense	205	135,000 3	305	10,000	353	45,000	366		190,000
Drilling / Completion Overhead	206		306	15,000		THE RESIDENCE			26,100
Turnkey Contract	207	0							0
Footage Contract	208	0							0
Daywork Contract	209	923,000							923,000
Directional Drilling Services	210	442,000							442,000
Frac Equipment			307	1,418,000					1,418,000
Frac Chemicals		3	308	473,000					473,000
Frac Proppant		3	309	814,000					814,000
Frac Proppant Transportation			310	399,000					399,000
Fuel & Power	211	211,000 3	311	68,000	354		367		279,000
Water	212	60,000 3	312	966,000			368		1,026,000
Bits	213	111,000 3	313	4,500			369		115,500
Mud & Chemicals	214	275,000 3	314	25,000			370		300,000
Drill Stem Test	215	0 3	315						0
Coring & Analysis	216	0							0
Cement Surface	217	28,000		TANKS OF EACH		TOTAL TALE TO			28,000
Cement Intermediate	218	75,000				Control of the Control			75,000
Cement 2nd Intermediate/Production	219	115,000							115,000
Cement Squeeze & Other (Kickoff Plug)	220	0					371		0
Float Equipment & Centralizers	221	65,000				Total Control Date			65,000
Casing Crews & Equipment	222	70,000							70,000
Fishing Tools & Service	223	0 3	323				372		0
Geologic/Engineering	224	11,400 3	324		355		373		11,400
Contract Labor	225		325	20,000	356	122,935	374	6,500	155,935
Company Supervision	226		326	15,000	357		375		81,600
Contract Supervision	227		327	255,000	358		376	5,000	417,000
Testing Casing/Tubing	228	-	328	5,000	- veresticht		377	A STATE OF THE STA	35,000
Mud Logging Unit	229		329			120			52,000
Logging	230	0		ASSESSMENT OF THE PARTY OF THE			378		0
Perforating/Wireline Services	231		331	538,000			379		542,000
Stimulation/Treating	:550		332	397,000		CONTRACTOR OF THE PARTY OF THE	380		397,000
Completion Unit			333	138,000			381	8,800	146,800
Swabbing Unit			334	100,000			382	0,000	000,000
Rentals-Surface	235		335	403,000	359		383	7,000	600,000
Rentals-Subsurface	236		336	30,000	333		384	7,000	180,000
Trucking/Forklitt/Rig Mobilization	237	-	337	20,000	360		385	3,000	
								3,000	223,000
Welding Services	238		338	5,000	361	405.000	386		8,000
Water Disposal	239		339	60,000	362	135,000	387		195,000
Plug to Abandon	240		340						0
Seismic Analysis	241		341				200		0
Miscellaneous	242		342				389		0
Contingency	243		343	250,000	363		390		319,000
Closed Loop & Environmental	244		344	5,000	364		388		335,000
Dyed Diesel	245		345	484,000				A STATE OF	
Coil Tubing			346	750,000					750,000
Flowback Crews & Equip			347	48,000		Extension in D			48,000
Offset Directional/Frac	248		348				391		0
TOTAL INTANGIBLES		3,840,100		7,615,500		302,935		30,300	11,788,835
TANOIDI 5 00070									
TANGIBLE COSTS	1000000	The ST WARFE							
Surface Casing	401	52,000							52,000
Intermediate Casing	402	555,000							555,000
Production Casing/Liner	403	516,000				B 12 1 2 1 3			516,000
Tubing			504	52,030		A Second Lines	530	5,000	57,030
Wellhead Equipment	405	75,000 5	505	22,000			531	3,000	100,000
Pumping Unit				0			506	96,000	96,000
Prime Mover				0		200	507	-	0
Rods				0			508	35,000	35,000
Pumps-Sub Surface (BH)		5	509				532	5,000	5,000
Tanks				NEXT LIBERT	510	63,645.00			63,645
Flowlines				1320-LUCIELE	511	26,593.00		INIS CULTURE !	26,593
Heater Treater/Separator					512	140,007.00		LEDG VEDLEVI	140,007
Electrical System					513	130,000.00	533	15,000	145,000
Packers/Anchors/Hangers	414	5	514	66,000			534	2,000	68,000
Couplings/Fittings/Valves	415			THE POWER WITH	515	102,282			102,282
Dehydration					517				0
Injection Plant/CO2 Equipment					518				0
Pumps-Surface					521	5,000			5,000
Instrumentation/SCADA/POC		THE STATE OF THE S			522	10,482	529	7,000	17,482
Miscellaneous	419		519		523	5,241	535	3,000	8,241
Contingency	420		520		524		536		0
Meters/LACT	2.0000		27 546		525	25,156	SCHOOL SERVICE	No. of the same	25,156
Flares/Combustors/Emission					526	23,584			23,584
Gas Lift/Compression		5	527	15,000	516		528		75,000
TOTAL TANGIBLES		1,198,000		155,030		591,990	-	171,000	2,116,020
TOTAL WELL COSTS		5,038,100		7,771,000		894,925		201,300	13,904,855
		0,000,100		7,771,000		034,323		201,000	10,004,000
% of Total Well Cost		36%		56%		6%		1%	
COG Operating LLC									
and the second s									
		Date Prepared:		10/18/18					
		916	4						
		COG Operating LLC AU	10						
We approve		TO SECURITY OF THE PROPERTY OF							
We approve: % Working interest									
We approve:% Working interest		Ву:		MB					
				MB				2	
% Working Interest				МВ					
% Working Interest Company:				MB					
% Working Interest Company: By: Printed Name:		By:							
		By: This AFE is only an estimat			ıy you	r share			
% Working Interest Company: By: Printed Name:		By:			ıy you	r share			

WELL NAME:	MASTIFF FED COM #710H	PROSPECT NAME:	Bulldog 2432 (717113)	
FTP:	Sec 4: 100 FSL & 330 FWL	STATE & COUNTY:	New Mexico, Lea	
LTP:	Sec 33: 100 FNL & 330 FWL	OBJECTIVE:	Drill and Complete	
FORMATION:	Wolfcamp	DEPTH:	22,960	
LEGAL:	Sec 4-24S-32E	TVD:	12,400	

INTANGIBLE COSTS		Drlg - Rig Release(D)		Completion(C)		Tank Btty Constrctn(TB)		Pmpg Equipment(PEQ)	TOTAL
Title/Curative/Permit	201	20,000	000						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	005	10.000	352	45.000	000		7,000
Location/Pits/Road Expense	205	135,000	305	10,000	353	45,000	366		190,000
Drilling / Completion Overhead	206	11,100	306	15,000					26,100
Turnkey Contract	207	0							0
Footage Contract	208	0				COLUMN TO THE REAL PROPERTY OF THE PERTY OF		-	0
Daywork Contract Dispersional Politics Seedings	209	923,000							923,000
Directional Drilling Services	210	442,000	307	1,418,000					442,000
Frac Equipment Frac Chemicals			308	473,000					1,418,000 473,000
Frac Proppant			309	814,000					814,000
Frac Proppant Transportation			310	399,000					399,000
Fuel & Power	211	211,000	311	68,000	354		367		279,000
Water	212	60,000	312	966,000			368	-	1,026,000
Bits	213	111,000	313	4,500			369		115,500
Mud & Chemicals	214	275,000	314	25,000			370		300,000
Drill Stem Test	215	0	315						0
Coring & Analysis	216	0							0
Cement Surface	217	28,000							28,000
Cement Intermediate	218	75,000							75,000
Cement 2nd Intermediate/Production	219	115,000		The Control					115,000
Cement Squeeze & Other (Kickoff Plug)	220	0		IN SULL OF SULLINE			371		0
Float Equipment & Centralizers	221	65,000				MATERIA DI			65,000
Casing Crews & Equipment	222	70,000				No. of the last of			70,000
Fishing Tools & Service	223	0	323				372		0
Geologic/Engineering	224	11,400	324		355		373		11,400
Contract Labor	225	6,500	325	20,000	356	122,935	374	6,500	155,935
Company Supervision	226	66,600	326	15,000	357		375		81,600
Contract Supervision	227	157,000	327	255,000	358		376	5,000	417,000
Testing Casing/Tubing	228	30,000	328	5,000			377		35,000
Mud Logging Unit	229	52,000	329						52,000
Logging	230	0					378		0
Perforating/Wireline Services	231	4,000	331	538,000			379		542,000
Stimulation/Treating			332	397,000			380		397,000
Completion Unit			333	138,000			381	8,800	146,800
Swabbing Unit			334				382		0
Rentals-Surface	235	190,000	335	403,000	359		383	7,000	600,000
Rentals-Subsurface	236	150,000	336	30,000		CONTRACTOR STREET	384		180,000
Trucking/Forklift/Rig Mobilization	237	200,000	337	20,000	360		385	3,000	223,000
Welding Services	238	3,000	338	5,000	361		386		8,000
Water Disposal	239	0	339	60,000	362	135,000	387		195,000
Plug to Abandon	240	0	340						0
Seismic Analysis	241	0	341				200		- 0
Miscellaneous Contingency	242	69,000	342	250,000	363		389 390		319,000
Closed Loop & Environmental	244	330,000	344	5,000	364		388		335,000
Dyed Diesel	245	300,000	345	484,000	504		300		333,000
Coil Tubing	2.10		346	750,000					750,000
Flowback Crews & Equip			347	48,000				La constante de la constante d	48,000
Offset Directional/Frac	248		348	7			391		0
TOTAL INTANGIBLES		3,840,100		7,615,500		302,935		30,300	11,788,835
TANGIBLE COSTS									
TANGIBLE COSTS Surface Casing	401	52,000							52,000
	401 402	52,000 555,000							52,000 555,000
Surface Casing									
Surface Casing Intermediate Casing	402	555,000	504	52,030			530	5,000	555,000
Surface Casing Intermediate Casing Production Casing/Liner	402	555,000	504 505	52,030 22,000			530 531	5,000 3,000	555,000 516,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit	402 403	555,000 516,000		22,000 0			531 506		555,000 516,000 57,030
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover	402 403	555,000 516,000		22,000 0 0			531 506 507	3,000 96,000	555,000 516,000 57,030 100,000 96,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods	402 403	555,000 516,000	505	22,000 0			531 506 507 508	3,000	555,000 516,000 57,030 100,000 96,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH)	402 403	555,000 516,000		22,000 0 0			531 506 507	3,000 96,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks	402 403	555,000 516,000	505	22,000 0 0	510	63,645.00	531 506 507 508	3,000 96,000 35,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines	402 403	555,000 516,000	505	22,000 0 0	511	26,593.00	531 506 507 508	3,000 96,000 35,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator	402 403	555,000 516,000	505	22,000 0 0	511 512	26,593.00 140,007.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System	402 403 405	555,000 516,000	505	22,000 0 0 0	511	26,593.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers	402 403 405	555,000 516,000	505	22,000 0 0	511 512 513	26,593.00 140,007.00 130,000.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves	402 403 405	555,000 516,000	505	22,000 0 0 0	511 512 513 515	26,593.00 140,007.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration	402 403 405	555,000 516,000	505	22,000 0 0 0	511 512 513 515 517	26,593.00 140,007.00 130,000.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment	402 403 405	555,000 516,000	505	22,000 0 0 0	511 512 513 515 517 518	26,593.00 140,007.00 130,000.00	531 506 507 508 532	3,000 96,000 35,000 5,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface	402 403 405	555,000 516,000	505	22,000 0 0 0	511 512 513 515 517 518 521	26,593.00 140,007.00 130,000.00 102,282	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC	402 403 405 414 415	555,000 516,000	505 509 514	22,000 0 0 0	511 512 513 515 517 518 521 522	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 0 35,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous	402 403 405 414 415	555,000 516,000	505 509 514	22,000 0 0 0	511 512 513 515 517 518 521 522 523	26,593.00 140,007.00 130,000.00 102,282	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency	402 403 405 414 415	555,000 516,000	505 509 514	22,000 0 0 0	511 512 513 515 517 518 521 522 523 524	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT	402 403 405 414 415	555,000 516,000	505 509 514	22,000 0 0 0	511 512 513 515 517 518 521 522 523 524 525	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission	402 403 405 414 415	555,000 516,000	505 509 514 519 520	22,000 0 0 0 0	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT	402 403 405 414 415	555,000 516,000 75,000	505 509 514	22,000 0 0 0 0	511 512 513 515 517 518 521 522 523 524 525	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000	531 506 507 508 532 533 534	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES	402 403 405 414 415	555,000 516,000 75,000	505 509 514 519 520	22,000 0 0 0 0 66,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression	402 403 405 414 415	555,000 516,000 75,000	505 509 514 519 520	22,000 0 0 0 0	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000	505 509 514 519 520	22,000 0 0 0 0 66,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36%	505 509 514 519 520	22,000 0 0 0 0 66,000 15,000 155,030 7,771,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36% Date Prepared:	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36% Date Prepared:	505 509 514 519 520	22,000 0 0 0 0 66,000 15,000 155,030 7,771,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36%	505 509 514 519 520	22,000 0 0 0 0 66,000 15,000 155,030 7,771,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost	402 403 405 414 415	555,000 516,000 75,000 1,198,000 5,038,100 36% Date Prepared:	505 509 514 519 520	22,000 0 0 0 0 66,000 15,000 155,030 7,771,000	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS We approve:% Working Interest	402 403 405 414 415	555,000 516,000 75,000 75,000 1,198,000 5,038,100 36% Date Prepared:	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 68,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS We approve:% Working Interest Company:	402 403 405 414 415	555,000 516,000 75,000 75,000 1,198,000 5,038,100 36% Date Prepared:	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS ** of Total Well Cost COG Operating LLC We approve:* Working Interest	402 403 405 414 415	555,000 516,000 75,000 75,000 1,198,000 5,038,100 36% Date Prepared:	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS We approve:% Working Interest Company:	402 403 405 414 415	555,000 516,000 75,000 75,000 1,198,000 5,038,100 36% Date Prepared:	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000 56%	511 512 513 515 517 518 521 522 523 524 525 526	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS We approve:% Working Interest Company: By:	402 403 405 414 415	555,000 516,000 75,000 75,000 1,198,000 5,038,100 36% Date Prepared: COG Operating LLC AC	505 509 514 519 520	22,000 0 0 0 0 66,000 155,030 7,771,000 56%	511 512 513 515 517 522 523 524 525 526 516	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020
Surface Casing Intermediate Casing Production Casing/Liner Tubing Weilhead Equipment Pumping Unit Prime Mover Rods Pumpis-Sub Surface (BH) Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combustors/Emission Gas Lift/Compression TOTAL TANGIBLES TOTAL WELL COSTS We approve:% Working Interest Company: By: Printed Name:	402 403 405 414 415	555,000 516,000 75,000 75,000 1,198,000 5,038,100 36% Date Prepared: COG Operating LLC AC	505 509 514 519 520 527	22,000 0 0 0 0 15,000 155,030 7,771,000 56%	511 512 513 515 517 522 523 524 525 526 516	26,593.00 140,007.00 130,000.00 102,282 5,000 10,482 5,241 25,156 23,584 60,000 591,990 894,925	531 506 507 508 532 533 534 529 535 536	3,000 96,000 35,000 5,000 15,000 2,000 7,000 3,000	555,000 516,000 57,030 100,000 96,000 0 35,000 5,000 63,645 26,593 140,007 145,000 102,282 0 0 5,000 17,482 8,241 0 25,156 23,584 75,000 2,116,020