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BEFORE THE OIL CONSERVATION DIVISION EXAMINER HEARING JULY 26, 2018

Fascinator Federal Com #601H, #602H, #603H, 604H

Fascinator Federal Com #701H, #702H, #703H Fascinator Federal Com #704H, #705H, #706H

COG OPERATING LLC

Section 30 & 31 T24S-R35E

Lea County, New Mexico

Case No. 16219 & 16220



	COSTS	Drlg - Rig Release(D)	Completion(C)	Tank Btty	Pmpg Equipmont(PEQ)	τοται
LEGAL:	SEC 30-31 T24S-R35E	ý.	TVD:	12,649		-
FORMATION:	WOLFBONE POOL		DEPTH:	22,500		
BHL:	200 FSL & 450 FWL		OBJECTIVE:	DRILL AND COMPLET	E	
SHL:	210 FNL & 3600 FWL		STATE & COUNTY:	New Mexico, Lea		
WELL NAME:	FASCINATOR FED COM 604H		PROSPECT NAME:	BULLDOG 717008		

INTANGIBLE COSTS		Release(D)		Completion(C)		Constrctn(TB)		Equipment(PEQ)	TOTAL
Title/Curative/Permit	201	11,000							11,000
Insurance	202	4,000							4,000
Damages/Right of Way	203	5,000	303		351				5,000
Survey/Stake Location	204	6,000			352				6,000
Location/Pits/Road Expense	205	120,000	305	10,000	353	31,000	366		161,000
Drilling / Completion Overhead	206	11,100	306						11,100
Turnkey Contract	207	0	307	1,397,000					1,397,000
Footage Contract	208	0	308	781,000					781,000
Daywork Contract	209	820,000	309	1,177,000					1,997,000
Directional Drilling Services	210	398,000	310	150,000					548,000
Fuel & Power	211	211,000	<	5,000	354		367	· · · · · · · · · · · · · · · · · · ·	216,000
Water	212	60,000		855,000			368		915,000
Bits	213	133,200	313	4,500			369	· · · · · · · · · · · · · · · · · · ·	137,700
Mud & Chemicals	214	275,000		25,000			370		300,000
Drill Stem Test	215	0		23,000			570		
			315						0
Coring & Analysis	216	0							0
Cement Surface	217	28,000							28,000
Cement Intermediate	218	75,000				the second s			75,000
Cement 2nd Intermediate/Production	219	115,000	1						115,000
Cement Squeeze & Other (Kickoff Plug)	220	0	. 1				371		0
Float Equipment & Centralizers	221	45,000	. 1						45,000
Casing Crews & Equipment	222	60,000	i						60,000
Fishing Tools & Service	223	0	323				372		0
Geologic/Engineering	224	0	324		355		373	· · · · · · · · · · · · · · · · · · ·	0
Contract Labor	225	5,500		8,200	356		374	6,500	92,200
Company Supervision	225	66,600	326	15,000	357		375		81,600
Contract Supervision	220	124,000		204,000	358		375	5,000	333,000
Testing Casing/Tubing	228			· · · · · · · · · · · · · · · · · · ·	550		377		
		20,000		10,000			511		30,000
Mud Logging Unit	229	52,000	329						52,000
Logging	230	0					378		0
Perforating/Wireline Services	231	4,000		515,000			379		519,000
Stimulation/Treating			332	397,000			380		397,000
Completion Unit			333	138,000			381	10,000	148,000
Swabbing Unit			334				382		0
Rentals-Surface	235	190,000	335	310,000	359		383	7,000	507,000
Rentals-Subsurface	236	150,000	336	55,000		-	384		205,000
Trucking/Forklift/Rig Mobilization	237	120,000	337	20,000	360		385	3,000	143,000
Welding Services	238	4,000	338	5,000	361		386		9,000
Water Disposal	239	0		60,000	362	135,000	387		195,000
Plug to Abandon	240	0		00,000	001		001	-	
		0				· · · · · · · · · · · · · · · · · · ·			
Seismic Analysis	241						389		0
Miscellaneous	242	0		050.000		1			
Contingency	243	63,000		250,000	363		390		313,000
Closed Loop & Environmental	244	330,000		5,000	364		388		335,000
Coil Tubing			346	462,000		1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			462,000
Flowback Crews & Equip			347	325,000					325,000
Offset Directional/Frac	248	0	348	48,000					48,000
TOTAL INTANGIBLES		3,506,400		7,231,700		238,000		31,500	11,007,600
TANGIBLE COSTS	401	72.000							73,000
Surface Casing	401	73,000						· · · · · · · · · · · · · · · · · · ·	
Intermediate Casing	402	421,000						the second s	421,000
Production Casing/Liner	403	433,000							433,000
Tubing			504	47,300			530	10,000	57,300
Wellhead Equipment	405	75,000	505	22,000			531	3,000	100,000
Pumping Unit				0			506	98,000	98,000
Prime Mover			1	0			507		0
Rods			ť i	0			508	65,000	65,000
Pumps-Sub Surface (BH)			509		- -		532	5,500	5,500
Tanks			1		510	35,800			35,800
Flowlines			6 1		511				85,000
Heater Treater/Separator					512				159,465
			9 8		513		533	20,000	80,000
Electrical System		-			513				
Packers/Anchors/Hangers	414	0		66,000			534	2,000	68,000
Couplings/Fittings/Valves	415	0			515				76,000
Dehydration			S - 1	and a second	517				0
Injection Plant/CO2 Equipment					518				C
Pumps-Surface			<u>j</u> j		521				6,250
Instrumentation/SCADA/POC		10-12-1-	ų 9		522	2	529	7,000	7,000
Miscellaneous	419	0	519		523	3	535	3,000	3,000
Contingency	420	0	520		524	4 /	536		C
Meters/LACT					525	5 29,150			29,150
Flares/Combusters/Emission			1		526				15,000
Gas Lift/Compression			527	15,000			528		90,000

COG Operating LLC

Gas Lift/Compression

TOTAL TANGIBLES

TOTAL WELL COSTS

% of Total Well Cost

3/27/2018 for proposal Date Prepared:

1,002,000

4,508,400

35%

COG Operating LLC

By: PWS

We approve: ____% Working Interest

Company:

By: Printed Name: Title: Date:

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

15,000 516

150,300

57%

7,382,000

75,000 528

6%

541,665 779,665 90,000 1,907,465

12,915,065

213,500

245,000

2%

IL: 210 FNL & 3600 FWL IL: 200 FSL & 450 FWL RMATION: WOLFBONE POOL GAL: SEC 30-31 T24S-R35E TANGIBLE COSTS e/Curative/Permit urance mages/Right of Way vey/Stake Location values/Right of Way vey/Stake Location values/Road Expense ing / Completion Overhead inkey Contract overkead vork Contract overkead ectional Drilling Services el & Power ter s d & Chemicals s 1 Stem Test s ing & Analysis ment Intermediate/Production ment Intermediate ment 200 Intermediate/Production ment Squeeze & Other (Kickoff Plug) at Equipment & Centralizers sing Crews & Equipment hing Tools & Service ologic/Engineering intract Labor mapany Supervision marxet Supervision	201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 214 215 216 217 218 219 220 221 222	Drlg - Rig Release(D) 11,000 5,000 6,000 120,000 11,100 0 820,000 398,000 211,000 60,000 133,200 275,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	306 307 308 309 310 311 312 313	STATE & COUNTY: OBJECTIVE: DEPTH: TVD: Completion(C) 10,000 1,397,000 781,000 1,177,000 150,000 5,000	351 352 353	New Mexico, Lea DRILL AND COMPL 22,500 12,649 Tank Btty Constrctn(TB) 31,000	<u>ETE</u>	Pmpg Equipment(PEQ)	TOTAL 11,00/ 4,00/ 5,00/
GAL: SEC 30-31 T24S-R35E TANGIBLE COSTS //Curative/Permit //rance mages/Right of Way vey/Stake Location ration/Pits/Road Expense ling / Completion Overhead nkey Contract vatage Contract //work Contract //work Contract /// overhead // overhe	202 203 204 205 206 207 208 209 210 211 211 212 213 214 215 216 217 218 218 219 210 212 213 214 215 216 217 218 219 220 221 221	Release(D) 11,000 4,000 5,000 6,000 120,000 11,100 0 820,000 398,000 211,000 60,000 133,200 275,000 0 0	303 305 306 307 308 309 310 311 312 313	TVD: Completion(C) 10,000 1,397,000 781,000 1,177,000 150,000 5,000	352	12,649 Tank Btty Constrctn(TB)	366		11,00
e/Curative/Permit urance nages/Right of Way vey/Stake Location ation/Pits/Road Expense ling / Completion Overhead nkey Contract otage Contract work Contract cetional Drilling Services al & Power ter S d & Chemicals I Stem Test ing & Analysis ment Surface ment Intermediate/Production ment Squeeze & Other (Kickoff Plug) at Equipment & Centralizers sing Crews & Equipment hing Tools & Service ologic/Engineering ntract Labor mpany Supervision	202 203 204 205 206 207 208 209 210 211 211 212 213 214 215 216 217 218 218 219 210 212 213 214 215 216 217 218 219 220 221 221	Release(D) 11,000 4,000 5,000 6,000 120,000 11,100 0 820,000 398,000 211,000 60,000 133,200 275,000 0 0	303 305 306 307 308 309 310 311 312 313	Completion(C)	352	Tank Btty Constrctn(TB)	366		11,00
e/Curative/Permit urance nages/Right of Way vey/Stake Location ation/Pits/Road Expense ling / Completion Overhead nkey Contract otage Contract work Contract cetional Drilling Services al & Power ter S d & Chemicals I Stem Test ing & Analysis ment Surface ment Intermediate/Production ment Squeeze & Other (Kickoff Plug) at Equipment & Centralizers sing Crews & Equipment hing Tools & Service ologic/Engineering ntract Labor mpany Supervision	202 203 204 205 206 207 208 209 210 211 211 212 213 214 215 216 217 218 218 219 210 212 213 214 215 216 217 218 219 220 221 221	Release(D) 11,000 4,000 5,000 6,000 120,000 11,100 0 820,000 398,000 211,000 60,000 133,200 275,000 0 0	303 305 306 307 308 309 310 311 312 313	10,000 1,397,000 781,000 1,177,000 150,000 5,000	352	Constrctn(TB)	366		11,00
e/Curative/Permit urance nages/Right of Way vey/Stake Location ation/Pits/Road Expense ling / Completion Overhead nkey Contract otage Contract work Contract cetional Drilling Services al & Power ter S d & Chemicals I Stem Test ing & Analysis ment Surface ment Intermediate/Production ment Squeeze & Other (Kickoff Plug) at Equipment & Centralizers sing Crews & Equipment hing Tools & Service ologic/Engineering ntract Labor mpany Supervision	202 203 204 205 206 207 208 209 210 211 211 212 213 214 215 216 217 218 218 219 210 212 213 214 215 216 217 218 219 220 221 221	11,000 4,000 5,000 120,000 11,100 0 820,000 398,000 211,000 60,000 133,200 275,000 0 0	303 305 306 307 308 309 310 311 312 313	10,000 1,397,000 781,000 1,177,000 150,000 5,000	352		366		11,00
mages/Right of Way vey/Stake Location ation/Pits/Road Expense ling / Completion Overhead nkey Contract vtage Contract extinate Contract extinate Contract extinate Contract extinate Contract extinate Contract extinate Contract ing & Analysis ment Surface ment Intermediate/Production ment Squeeze & Other (Kickoff Plug) at Equipment & Centralizers sing Crews & Equipment hing Tools & Service ologic/Engineering htract Labor ment Supervision htract Supervision	203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221	5,000 6,000 120,000 11,100 0 820,000 398,000 211,000 60,000 133,200 275,000 0 0	303 305 306 307 308 309 310 311 312 313	1,397,000 781,000 1,177,000 150,000 5,000	352	31,000	366		
vey/Stake Location sation/Pits/Road Expense ling / Completion Overhead nkey Contract vtage Contract stage Contract ectional Drilling Services el & Power ter s d & Chemicals d & Chemicals I Stem Test ing & Analysis ment Surface ment Intermediate ment 2nd Intermediate/Production ment Squeeze & Other (Kickoff Plug) at Equipment & Centralizers sing Crews & Equipment hing Tools & Service ologic/Engineering htract Labor mpany Supervision htract Supervision	204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221	6,000 120,000 11,100 0 820,000 398,000 211,000 60,000 133,200 275,000 0 0	305 306 307 308 309 310 311 312 313	1,397,000 781,000 1,177,000 150,000 5,000	352	31,000	366		5,00
ling / Completion Overhead nkey Contract btage Contract work Contract ectional Drilling Services el & Power ter s d & Chemicals l Stem Test ing & Analysis ment Surface ment Intermediate ment 2nd Intermediate/Production ment Squeeze & Other (Kickoff Plug) at Equipment & Centralizers sing Crews & Equipment hing Tools & Service ologic/Engineering htract Labor mpany Supervision htract Supervision	206 - 207 - 208 - 209 - 210 - 211 - 212 - 213 - 214 - 215 - 216 - 217 - 218 - 219 - 220 - 220 - 220 - 221 -	11,100 0 820,000 398,000 211,000 60,000 133,200 275,000 0 0	306 307 308 309 310 311 312 313	1,397,000 781,000 1,177,000 150,000 5,000	353	31,000	366		6,00
nkey Contract btage Contract btage Contract work Contract ectional Drilling Services el & Power ter b d & Chemicals d & Chemicals d & Chemicals fing & Analysis ment Test fing & Analysis ment Surface ment Intermediate ment 2nd Intermediate/Production ment Squeeze & Other (Kickoff Plug) at Equipment & Centralizers fing Tools & Service ologic/Engineering htract Labor mpany Supervision htract Supervision	207 208 209 210 211 212 213 214 215 216 217 218 217 218 219 220 221	0 820,000 398,000 211,000 60,000 133,200 275,000 0 0	307 308 309 310 311 312 313	781,000 1,177,000 150,000 5,000					161,00
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ectional Drilling Services el & Power ter d & Chemicals d	210 211 212 213 214 215 216 217 218 219 220 221	398,000 211,000 60,000 133,200 275,000 0 0	310 311 312 313	150,000 5,000					781,00
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ter ter ter ter ter ter ter ter	212 213 214 215 216 217 218 219 220 221	60,000 133,200 275,000 0 0	312 313		354		367		548,00
d & Chemicals I Stem Test I Stem Test I g & Analysis ment Surface ment Intermediate ment 2nd Intermediate/Production ment Squeeze & Other (Kickoff Plug) at Equipment & Centralizers sing Crews & Equipment hing Tools & Service ologic/Engineering htract Labor mpany Supervision htract Supervision	214 215 216 217 218 219 220 221	275,000 0 0		855,000	004		368		915,00
I Stem Test ing & Analysis ment Surface ment Intermediate ment Znd Intermediate/Production ment Squeeze & Other (Kickoff Plug) at Equipment & Centralizers sing Crews & Equipment hing Tools & Service logic/Engineering htract Labor mpany Supervision htract Supervision	215 216 217 218 219 220 221	0		4,500			369		137,70
ing & Analysis ment Surface ment Intermediate ment 2nd Intermediate/Production ment Squeeze & Other (Kickoff Plug) at Equipment & Centralizers sing Crews & Equipment hing Tools & Service ologic/Engineering ntract Labor mpany Supervision ntract Supervision	216 217 218 219 220 221	0	314 315	25,000		the second second second	370		300,00
ment Intermediate ment 2nd Intermediate/Production ment Squeeze & Other (Kickoff Plug) at Equipment & Centralizers sing Crews & Equipment hing Tools & Service ologic/Engineering ntract Labor mpany Supervision ntract Supervision	218 219 220 221	28,000					3 2		-
ment 2nd Intermediate/Production ment Squeeze & Other (Kickoff Plug) at Equipment & Centralizers sing Crews & Equipment hing Tools & Service ologic/Engineering ntract Labor mpany Supervision ntract Supervision	219 220 221			_					28,00
ment Squeeze & Other (Kickoff Plug) at Equipment & Centralizers sing Crews & Equipment hing Tools & Service ologic/Engineering ntract Labor mpany Supervision ntract Supervision	220 221	75,000				* 6			75,00
sing Crews & Equipment hing Tools & Service ologic/Engineering htract Labor mpany Supervision htract Supervision	-	0				-	371		
hing Tools & Service ologic/Engineering ntract Labor mpany Supervision ntract Supervision	222	45,000							45,00
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mpany Supervision Itract Supervision	224	0	324		355		373		-
ntract Supervision	225	5,500	325	8,200	356 357	72,000	374 375	6,500	92,20
	226 227	66,600 124,000		204,000	357 358	······································	375 376	5,000	333,00
	228	20,000	328	10,000			377		30,00
d Logging Unit	229	52,000	329				378		52,00
gging forating/Wireline Services	230 231	4,000	331	515,000			378 379		519,00
nulation/Treating	, I		332	397,000			380		397,0
mpletion Unitabbing Unit	a -		333 334	138,000			381 382	10,000	148,00
ntals-Surface	235	190,000		310,000	359		383	7,000	507,00
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ntingency	242	63,000	•	250,000	363		390):	313,00
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TOTAL INTANGIBLES	8 8	3,506,400		7,231,700		238,000		31,500	11,007,60
ANGIBLE COSTS									
rface Casing	401	73,000							73,00
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bduction Casing/Linerbing	403	433,000	504	47,300			530	10,000	433,00
ellhead Equipment	405	75,000	505				531	3,000	100,00
mping Unit			-	0			506 507	98,000	98,00
me Moverds				0			507 508	65,000	65,0
mps-Sub Surface (BH)	<u> </u>		509				532	5,500	5,5
nks wilnes					510 511	35,800			35,8 85,0
ater Treater/Separator	8		Í.		512				159,4
ectrical System			Ļ		513	60,000	533	20,000	80,0
ckers/Anchors/Hangers	414 415	0		66,000	515	76,000	534	2,000	68,0 76,0
hydration	-13	0			517				
ection Plant/CO2 Equipment					518				
mps-Surface			1		521 522		529	7,000	<u> </u>
scellaneous	419	0	519		523		535	3,000	3,0
ntingency	420	0	520		524		536		20.4
eters/LACTares/Combusters/Emission				and the second	525 526				29,1 15,0
as Lift/Compression			527		516	75,000	528		90,0
TOTAL TANGIBLES		1,002,000		150,300		541,665		213,500	1,907,4
TOTAL WELL COSTS	- 0		63						
% of Total Well Cost	t	35%		57%		6%		2%	
DG Operating LLC									
	<u>a</u>	Date Prepared:	3/27	/2018 for proposal	2				
	11				-				
0.000701/6		COG Operating LLC							
e approve: % Working Interest		By: PWS						_	
								-7.4 -	
mpany: Marathon Oil Permian LLC	÷.								
mpany: Marathon Oil Permian LLC									
	-			By signing you agree to					

1L: 210 FNL & 3600 FWL 1L: 200 FSL & 450 FWL				STATE & COUNTY:		New Mexico, Lea			
HL: 200 FSL & 450 FWL ORMATION: WOLFBONE POOL			_	OBJECTIVE: DEPTH:		DRILL AND COMPL 22,500	ETE		
GAL: SEC 30-31 T24S-R35E				TVD:		12,649			
		Drlg - Rig				Topk Pthy		Dense	
TANGIBLE COSTS		Release(D)		Completion(C)		<u>Tank Btty</u> Constrctn(TB)		<u>Pmpg</u> Equipment(PEQ)	ΤΟΤΑΙ
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otage Contract	208	0	308	781,000					781
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el & Power	211 212	211,000 60,000	311 312	5,000	354		367		216
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nent Intermediate	218	75,000							75
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nent Squeeze & Other (Kickoff Plug)	220 -	0		the second second			371		
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ntract Labor	225	5,500	325	8,200	356	72,000	374	6,500	92
mpany Supervision	226	66,600	326	15,000	357		375		81
ntract Supervision	227 -	124,000		204,000	358		376	5,000	333
sting Casing/Tubing	228	20,000	328	10,000			377		30
Id Logging Unit	229 230	52,000	329	the second second			378		52
gging rforating/Wireline Services	230	4,000	331	515,000			379		519
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mpletion Unit	1		333	138,000			381	10,000	148
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ucking/Forklift/Rig Mobilization	237	120,000	337	20,000	360		385	3,000	143
elding Services	238	4,000	338	5,000	361 362	135,000	386 387		9
ater Disposal	239 240	0	339 340	60,000	362	135,000	301		190
ismic Analysis	241	0	341						-
scellaneous	242	0		*			389		
ntingency	243	63,000	343	250,000	363		390		313
osed Loop & Environmental	244	330,000	344	5,000	364		388		335
bil Tubing			346						462
owback Crews & Equip			347	325,000)	325
fset Directional/Frac	248 -	3,506,400	348	48,000		238,000		31,500	11,007
	-	0,000,100							-
ANGIBLE COSTS									
rface Casing	401	73,000		· · · · · · · · · · · · · · · · · · ·					73
ermediate Casing	402	421,000							421
oduction Casing/Liner	403	433,000					500	40.000	433
bing	405	75,000	504 505	47,300			530 531	10,000	57
ellhead Equipment	405	75,000	505				506	98,000	98
mping one	1			0			507		-
ds	1			0			508	65,000	65
imps-Sub Surface (BH)			509				532	5,500	5
nks	1				510	35,800			35
owlines		and the second			511	85,000		and the second second	- 85
ater Treater/Separator	-				512		500	20.000	159
ectrical System			544		513	60,000	533 534	20,000	
ckers/Anchors/Hangers	414 415	0		66,000	515	76.000	534	2,000	76
huplings/Fittings/Valves	410				517	10,000			
ection Plant/CO2 Equipment	1				518				-
mps-Surface	ĺ				521	6,250			·
trumentation/SCADA/POC	j,				522		529	7,000	
scellaneous	419	0			523	-	535		
ntingency	420	0	520		524		536		
eters/LACT	j,				525				2
ares/Combusters/Emission	03			45.000	526		8 500		
as Lift/Compression	9	4 000 000	527		516	75,000	528	213,500	1,90
TOTAL TANGIBLES	32	1,002,000	-	150,300 7,382,000		779,665		245,000	12,91
TOTAL WELL COSTS	15	4,508,400	53	1,302,000					
% of Total Well Cost		35%		57%		6%		2%	
DG Operating LLC									
			0.07	(2010 f					
		Date Prepared:	3/27	/2018 for proposal					
		COG Operating LLC							

Company:	Oxy US	A Inc.

Printed Name: Title: Date:

Company:	OXY USA Inc.
By:	

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

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VELL NAME: FASCINATOR FED COM 604H SHL: 210 FNL & 3600 FWL				PROSPECT NAME STATE & COUNTY		BULLDOG 717008 New Mexico, Lea			
HL: 200 FSL & 450 FWL				OBJECTIVE:	-	DRILL AND COMPL	FTF		_
ORMATION: WOLFBONE POOL				DEPTH:		22,500	the f he		
EGAL: SEC 30-31 T24S-R35E				TVD:		12,649			
					_				
TANGIBLE COSTS		<u>Drlg - Rig</u> Release(D)		Completion(C)		Tank Btty Constrctn(TB)		<u>Pmpg</u> Equipment(PEQ)	TOTA
tle/Curative/Permit	201	11,000		<u>completion(c)</u>		<u>construit (TD)</u>		Equipment(PEQ)	<u>TOTA</u> 11
surance	202		302						
amages/Right of Way	203	5,000	303		351				5
urvey/Stake Location	204	6,000			352				6
cation/Pits/Road Expense	205			10,000	353	31,000	366		161
illing / Completion Overhead	206		306						11,
imkey Contract	- 207 -	0	307	1,397,000					1,397
botage Contract	208 209	0 820,000	308 309	781,000					781
rectional Drilling Services	210 -	398,000	310	150,000					548
el & Power	211		÷ .	5,000	354		367		216
ater	212	60,000	312	855,000			368		915
ts	213		313	4,500			369		137
ud & Chemicals	214	275,000	314	25,000			370		300
ill Stern Test	215	0	315						
oring & Analysis	_ 216 -	0							
ernent Surface ernent Intermediate	217 	28,000	8						28
ement Intermediate/Production	- ²¹⁸ - 219 -	75,000		• • • • • • • • • • • • • • • • • • • •					75 115
ement Squeeze & Other (Kickoff Plug)	219	0					371		115
oat Equipment & Centralizers	221 -	45,000							45
asing Crews & Equipment	222	60,000	a 1						60
shing Tools & Service	223		323				372		
eologic/Engineering	224	0	324		355		373		
ontract Labor	225	5,500	325	8,200	356	72,000	374	6,500	92
ompany Supervision	226	66,600	326	15,000	357		375		81
ontract Supervision	_ 227 -		S	204,000	358		376	5,000	333
esting Casing/Tubing	228	20,000	328	10,000			377		30
ud Logging Unit	- ²²⁹ 230 -	52,000	329				378		52
erforating/Wireline Services	230 - 231 -	4,000	331	515,000			379		519
imulation/Treating		1,000	332	397,000			380	-	397
ompletion Unit			333	138,000			381	10,000	148
wabbing Unit			334				382		
entals-Surface	235	190,000	335	310,000	359		383	7,000	507
entals-Subsurface	236	150,000	336	55,000			384		205
rucking/Forklift/Rig Mobilization	237	120,000	337	20,000			385	3,000	143
/elding Services	_ 238 -	4,000		5,000			386		9
ater Disposal	_ 239 -	0		60,000	362	135,000	387		195
lug to Abandon	- 240 -	0						and the second second	
eismic Analysis	- ²⁴¹ 242	0		·			389		
ontingency	243	63,000		250,000	363		390		313
losed Loop & Environmental	244	330,000	344	5,000	364		388		335
oil Tubing			346	462,000					462
lowback Crews & Equip	E 1		347	325,000					325
ffset Directional/Frac	248	0	348	48,000					48
TOTAL INTANGIBLES		3,506,400		7,231,700		238,000		31,500	11,007
	401	73,000							73
urface Casing	401	421,000							421
roduction Casing/Liner	403	433,000							433
ubing			504	47,300			530	10,000	57
/ellhead Equipment	405	75,000	505	22,000			531	3,000	100
umping Unit	E 1			0			506	98,000	98
rime Mover	_ !			0			507		
ods				0			508	65,000	65
umps-Sub Surface (BH)	_		509				532	5,500	5
anks		1			510 511	35,800			35
lowlines	-				511 512	85,000		· · · · · · · · · · · · · · · · · · ·	85
eater Treater/Separator				·····	512		533	20,000	80
ackers/Anchors/Hangers	414	0	514	66,000			534	2,000	
ouplings/Fittings/Valves	415	0			515	76,000			76
ehydration	1				517			and seather to the seat	3
jection Plant/CO2 Equipment					518			and a second	c
umps-Surface	_ 1				521	6,250	200		
strumentation/SCADA/POC					522		529	7,000	7
liscellaneous	419	0	-		523		535	3,000	3
ontingency	420	0	520		524		536		29
leters/LACT lares/Combusters/Emission	-	- martine			525 526	-		6	
ares/Compusters/Emission Bas Lift/Compression			527	15,000			528		
TOTAL TANGIBLES	-	1,002,000		150,300	2.0	541,665		213,500	1,907
TOTAL WELL COSTS		4,508,400	-	7,382,000		779,665		245,000	12,91
	-				-				
% of Total Well Co	st	35%		57%		6%		2%	
OG Operating LLC									

By: PWS

COG Operating LLC

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

We approve: ____% Working Interest

Company:	Advance Energy Partners, LLC
By:	
Printed Name:	
Title:	

HL:	210 FNL & 3600 FWL 200 FSL & 450 FWL				STATE & COUNTY: OBJECTIVE:		New Mexico, Lea DRILL AND COMPL	ETC		
	WOLFBONE POOL				DEPTH:		22,500	EIE		
EGAL:	SEC 30-31 T24S-R35E				TVD:		12,649			
_			Drlg - Rig			_	Tank Btty	-	Pmpg	
ITANGIBLE C	OSTS		Release(D)		Completion(C)		Constrctn(TB)		Equipment(PEQ)	ΤΟΤΑΙ
le/Curative/Permi	it	201	11,000							11,
surance amages/Right of V	Nav	202 203	4,000	302 303		351				4,
rvey/Stake Locati		203 - 204 -	6,000	000		352				5
cation/Pits/Road E		205	120,000	305	10,000	353	31,000	366		161
lling / Completion	n Overhead	206	11,100	306						11,
rnkey Contract		207	0	307	1,397,000					1,397,
otage Contract		208 _	0	308	781,000					781,
ywork Contract ectional Drilling S	Services	209	820,000 398,000	309 310	1,177,000					1,997,
ectional Drining S el & Power	Ser VICES	210 -	211,000	311		354		367		<u>548,</u> 216,
lter		212			855,000		·	368		915,
\$		213	133,200	313	4,500			369		137,
d & Chemicals		214	275,000	314	25,000			370		300,
I Stem Test		215	0	315						
ing & Analysis nent Surface		216 - 217 -	28,000	8						28,
nent Intermediate	e	217 -	75,000				· · · · · · · · · · · · · · · · · · ·			
	ediate/Production	219	115,000	8						115,
ment Squeeze &	Other (Kickoff Plug)	220	0					371		
at Equipment & C		221	45,000							45,
ing Crews & Equ		222	60,000	000				075		60
ing Tools & Sen logic/Engineerin		223	0	323 324		355	-	372 373	·	
ntract Labor	19	224 -	5,500	324	8,200	355 356	72,000	373 374	6,500	92
mpany Supervisi	on	225	66,600	326	15,000	357	, 2,000	375		81,
ntract Supervisio		227	124,000	327		358		376	5,000	333
sting Casing/Tubi		228	20,000	328	10,000			377		30
d Logging Unit		229	52,000	329						52
nging	0	230	0	-				378		
rforating/Wireline mulation/Treating		231	4,000	331 332	515,000			379 380		519, 397,
mpletion Unit				333	138,000			381	10,000	148,
abbing Unit				334				382		
ntals-Surface		235	190,000	335	310,000	359		383	7,000	507,
ntals-Subsurface)	236	150,000	336	55,000			384		205
cking/Forklift/Rig	Mobilization	237	120,000	337	20,000	360		385	3,000	143
Iding Services		238	4,000	338 339	5,000	361 362	135,000	386 387		9
ter Disposal		239 - 240	0			302	135,000	307	· · · · · · · · · · · · · · · · · · ·	
ismic Analysis		241 -	0		*				And the second	
scellaneous		242	0	342				389		
ntingency		243	63,000	343	250,000	363		390		313
osed Loop & Envi	ironmental	244	330,000		5,000	364		388		335
il Tubing	Faulte	<u> </u>		346	462,000					462
wback Crews & fset Directional/Fi		248 -	0	347 348	325,000 48,000				· · · · · · · · · · · · · · · · · · ·	48
TOTAL INTANG			3,506,400	040	7.231,700		238,000		31,500	11,007
ANGIBLE CO	STS									
rface Casing		401 -	73,000				1-2-1		<u></u>	73 421
ermediate Casing oduction Casing/I		402 - 403 -	421,000							433
bing			400,000	504	47,300			530	10,000	57
ellhead Equipmer	nt	405	75,000		22,000			531	3,000	100
mping Unit			1-212-		0			506	98.000	98
me Mover					0			507		
ds			ويجر فر والحر	500	0			508	65,000	<u>65</u>
mps-Sub Surface nks	e (BH)			509	-	510	35,800	532	5,500	35
wlines						511	85,000			85
ater Treater/Sep	arator					512	-			159
ectrical System						513	60,000	533	20,000	80
ckers/Anchors/H	langers	414	0	-	66,000			534	2,000	68
uplings/Fittings/	Valves	415	0			515	76,000		and the second secon	76
hydration				-		517 518				
ection Plant/CO2 mps-Surface						521	6,250			e
trumentation/SC	ADA/POC					522		529	7,000	7
scellaneous		419	0	519		523		535	3,000	3
ntingency		420	0	520		524		536		
ters/LACT						525				29
res/Combusters				527	45.000	526 516		520		
s Lift/Compressi TOTAL TANGIE			1,002,000	527	15,000	516	541,665	528	213,500	1,907
	WELL COSTS		4,508,400	-	7,382,000		779,665		245,000	12,915
		tal Well Cost	35%		57%		6%		2%	
	C									
OG Operating LL			Data Proposadi	ידרוב	2018 for proposal					
G Operating LL			Date Prepared:	3/2//	2018 for proposal					
G Operating LL										
DG Operating LL			COG Operating LLC							
OG Operating LLI			COG Operating LLC							
	Interest		COG Operating LLC By: PWS						_	

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

Printed Name: Title: Date:

HL: 210 FNL & 3600 FWL				STATE & COUNTY:		New Mexico, Lea			
HL: 200 FSL & 450 FWL				OBJECTIVE:		DRILL AND COMPL	ETE		
ORMATION: WOLFBONE POOL				DEPTH:		22,500	EIE		
EGAL: SEC 30-31 T24S-R35E				TVD:		12,649	_		
			1.		_				
		Drlg - Rig				Tank Btty		Pmpg	
ITANGIBLE COSTS		Release(D)		Completion(C)		Constrctn(TB)		Equipment(PEQ)	TOTAL
de/Curative/Permit	201	11,000							11,
surance	- 202 -		302						4,
images/Right of Way	203		303		351	·			5,
rvey/Stake Location	204	6,000	17		352				6,
cation/Pits/Road Expense	205		305	10,000	353	31,000	366		161,
illing / Completion Overhead	206	11,100	306						11
Imkey Contract	207	0	307	1,397,000					1,397
potage Contract	208	0	308	781,000					781
aywork Contract	209	820,000	309	1,177,000		and the second			1,997
rectional Drilling Services	210	398,000	310	150,000					548
el & Power	211	211,000	311	5,000	354		367		216
ater	212	60,000	312	855,000			368	· · · · · · · · · · · · · · · · · · ·	915,
ts	213	133,200	313	4,500			369	-	137,
ud & Chemicals	214	275,000	314	25,000			370		300
rill Stem Test	214	0	315	23,000			5,0		
oring & Analysis	215	0	010			*			
ement Surface	216 - 217 -	28,000							
									28,
ement Intermediate	218	75,000						*	75
ement 2nd Intermediate/Production	219	115,000							115
ement Squeeze & Other (Kickoff Plug)	- 220 -	0					371		
oat Equipment & Centralizers	221	45,000							45
asing Crews & Equipment	- 222 -	60,000							60,
shing Tools & Service	223		323				372		
eologic/Engineering	224	0	324		355		373		
ontract Labor	225	5,500	325	8,200	356	72,000	374	6,500	92
ompany Supervision	226	66,600	326	15,000	357		375		81
ontract Supervision	227	124,000	327	204,000	358		376	5,000	333
esting Casing/Tubing	228	20,000	328	10,000			377		30.
ud Logging Unit	229	52,000	329						52
ogging	230	0					378		
erforating/Wireline Services	231	4,000	331	515,000			379		519,
timulation/Treating			332	397,000		Contraction of the second	380		397
ompletion Unit	- 1		333	138,000			381	10,000	148
wabbing Unit			334	100,000		the second	382	10,000	140
entals-Surface	235	190,000	335	310,000	359		383	7,000	507
	236	150,000	336	55,000	000		384	1,000	205
entals-Subsurface				20,000	200		385	3,000	
rucking/Forklift/Rig Mobilization	237	120,000	337		360			3,000	143
elding Services	_ 238 -	4,000	338	5,000	361		386		9
/ater Disposal	239	0	339	60,000	362	135,000	387		195
lug to Abandon	_ 240 -	0	340						
eismic Analysis	241	0	341						
iscellaneous	_ 242 -	0	342				389		
ontingency	243	63,000	343	250,000	363		390		313
losed Loop & Environmental	244	330,000	344	5,000	364		388		335
oil Tubing			346	462,000					462
lowback Crews & Equip			347	325,000					325
ffset Directional/Frac	248	0	348	48,000					48
TOTAL INTANGIBLES		3,506,400		7,231,700		238,000		31,500	11,007
ANGIBLE COSTS									
urface Casing	401	73,000				2			73
termediate Casing	402	421,000							421
roduction Casing/Liner	403	433,000							433
ubing			504	47,300			530	10,000	57
/ellhead Equipment	405	75,000	505	22,000			531	3,000	100
umping Unit				0			506	98.000	98
rime Mover				0			507		
ods	-			0			508	65,000	65
umps-Sub Surface (BH)	2) i		509				532	5,500	5
anks	- 1				510	35,800			35
lowlines	-				511	85,000			85
leater Treater/Separator	-				512				159
lectrical System	- 1	the second second			513		533	20,000	80
ackers/Anchors/Hangers	414	0	514	66,000	2.0	00,000	534	2,000	68
ouplings/Fittings/Valves	414	0	0.14	00,000	515	76,000		2,000	76
	- *13	U		the state of the state	515				
ehydration	-								
njection Plant/CO2 Equipment	-				518			the second s	
umps-Surface					521	6,250		7 000	
nstrumentation/SCADA/POC	-2 - 3				522		529	7,000	
liscellaneous	419	0			523		535	3,000	:
Contingency	420	0	520		524		536		
1eters/LACT	<u> </u>				525				29
lares/Combusters/Emission	1				526	15,000			1!
Gas Lift/Compression	1		527	15,000	516	75,000	528		90
TOTAL TANGIBLES	-	1,002,000		150,300		541,665		213,500	1,907
		4,508,400	1	7,382,000		779,665		245,000	12,91
TOTAL WELL COSTS		1,000,100	1		-				
TOTAL WELL COSTS	- 2 - 8								
TOTAL WELL COSTS % of Total Well Co	= v	35%		57%		6%		2%	

We approve: _____% Working Interest

Company:	_ Energen Resources Corporation
Ву:	
Printed Name:	
Title:	

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

COG Operating LLC

By: PWS

201	Drlg - Rig	Ŷ	OBJECTIVE: DEPTH: TVD:		DRILL AND COMPL 22,500 12,649	εTE		
		\$						
						_		
					Tank Btty		Pmpg	
	Release(D)		Completion(C)		Constrctn(TB)		Equipment(PEQ)	TOTA
202	4,000	302						11
202	5,000			351				
204	6,000			352				6
205	120,000	305	10,000	353	31,000	366		161
206	11,100	306						11
207	0	307	1,397,000					1,397
208	0	308	781,000					781
209	820,000	309	1,177,000					1,997
210	398,000	310	150,000					548
-				354		367		216
								915
-								137
			25,000			370		300
-		315			· · · · · · · · · · · · · · · · · · ·			-
								28
-								75
					······································		·	115
220	0			1		371		
221	45,000		n en en sen anne in					45
222	60,000							60
223	0	323				372		
224	0	324		355		373		
225	5,500		8,200	356	72,000	374	6,500	92
226	66,600		15,000	357		375		81
	124,000		204,000	358			5,000	333
-			10,000			377		30
								52
-				; ;				
231	4,000			- 1				519
				5 3			10.000	397
-			138,000				10,000	- 148
235	190.000		310 000	359			7.000	507
				000			1,000	205
				360			3.000	143
238	4,000		5,000	361		386		
239	0	339	60,000	362	135,000	387		195
240	0	340						
241	0	341						
242	0	342				389		
243	63,000			363				313
244	330,000			364		388		335
a				8 8				462
240	0			5 - 5				325
246					238 000		31 500	11,007
e -	0,000,400			8 8	200.000			
401	73,000							73
402	421,000	-						421
403	433,000							433
		504	47,300			530	10,000	57
405	75,000	505	22,000			531	3,000	100
			0				98,000	98
8 8								65
		509	÷	540		532	5,500	35
			the second s					
e 🤉			**************************************					159
						533	20.000	
414	0	514	66.000	010				68
415	0	-		515	76,000			76
1		į.		517				
			and the second second	518				
. i		Į.		521	6,250			
, I				522		529	7,000	
419		-		523		535	3,000	
420	0	520		524		536		
			the sector of	525				
e -		70 -	45.000	e		FOR		1
e d	1 000 000	_		516		528	242.500	9
e) (j		-						1,90
é 8	4,508,400		/,382,000		//9,665		245,000	12,91
	350/		57%		£º/.		2%	
	33%		5176		576		∠ /q	
	Date Prepared:	3/27/	2018 for proposal					
5 8								
	COG Operating LLC							
	208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 233 224 225 226 227 228 229 230 231 235 236 237 238 239 240 241 242 243 244 243 244 243 244 248 401 402 403 405 414 414 415 419 420	208 0 209 820,000 210 398,000 211 211,000 212 60,000 213 133,200 214 275,000 215 0 216 0 217 28,000 218 75,000 219 115,000 220 0 221 45,000 222 60,000 223 0 224 0 225 5,500 226 66,600 227 124,000 228 20,000 230 0 231 4,000 235 190,000 236 150,000 237 120,000 238 4,000 240 0 241 0 242 0 243 63,000 244 3,506,400 415	208 0 308 209 820,000 309 210 398,000 310 211 211,000 311 212 60,000 312 213 133,200 313 214 275,000 314 215 0 315 216 0 323 219 115,000 220 0 221 45,000 222 60,000 223 0 323 224 0 324 225 5,500 325 226 66,600 326 227 124,000 321 228 20,000 328 229 52,000 329 230 0 0 231 4,000 331 333 333 333 236 150,000 335 237 120,000 340 241 0 341 242 0 342 4	208 0 308 781,000 209 820,000 309 1,177,000 210 398,000 311 15,000 211 211,000 311 5,000 213 133,200 313 4,500 214 275,000 314 25,000 217 28,000 20 20 218 75,000 22 60,000 220 0 323 22 220 0 324 224 222 60,000 225 8,200 221 45,000 327 224,000 222 60,000 326 15,000 223 0 324 325 8,200 224 0 324 333 138,000 230 0 334 35 310,000 233 190,000 335 310,000 334 240 0 340 342 342 <t< td=""><td>208 0 308 781,000 209 820,000 309 1,177,000 210 398,000 311 5,000 211 211,000 311 5,000 213 133,200 313 4,500 214 275,000 314 25,000 216 0 315 </td><td>208 0 300 781,000 344 210 386,000 310 1150,000 354 211 211,000 311 5,000 354 212 66,000 313 4,500 354 214 227,000 315 357 357 217 28,000 323 357 357 222 60,000 323 357 357 223 0 324 355 377 224 0 324 357 37 228 52,000 329 377 37 229 32,000 329 37 37 223 190,000 337 20,000 360 231 4,000 334 310,000 369 233 190,000 336 55,000 361 234 4,000 336 55,000 364 236 190,000 337 20,000 364 <td>200 0 300 781,000 344 200 200,000 300 1,177,000 344 367 211 211,000 311 5,000 384 367 212 60,000 313 4,500 384 369 213 133,300 313 4,500 370 214 275,000 314 25,000 371 219 115,000 323 372 371 223 0 324 355 373 224 0 324 355 372 223 0.03 325 377 20,00 377 224 0 324 355 373 375 226 5.500 326 317 376 377 228 2.0000 328 317 376 383 229 5.2000 335 310,000 389 383 228 100,000 335 510</td><td>200 0 000 781.000 1077.000 1077.000 210 0.20.000 300 1150.000 344 567 211 0.20.000 312 555.000 344 567 211 0.20.00 312 555.000 344 567 212 0.000 315 250.00 370 1000 211 0.20.00 314 250.00 371 1000 211 75.000 34 250.00 371 1000 222 0.0 323 371 1000 373 1000 222 0.0 323 373 150.00 376 50.00 222 0.00 325 82.00 386 70.00 376 50.00 222 0.00 33 130.000 386 30.000 386 30.000 222 0.00 33 130.000 386 30.000 386 30.000 386 30.000</td></td></t<>	208 0 308 781,000 209 820,000 309 1,177,000 210 398,000 311 5,000 211 211,000 311 5,000 213 133,200 313 4,500 214 275,000 314 25,000 216 0 315	208 0 300 781,000 344 210 386,000 310 1150,000 354 211 211,000 311 5,000 354 212 66,000 313 4,500 354 214 227,000 315 357 357 217 28,000 323 357 357 222 60,000 323 357 357 223 0 324 355 377 224 0 324 357 37 228 52,000 329 377 37 229 32,000 329 37 37 223 190,000 337 20,000 360 231 4,000 334 310,000 369 233 190,000 336 55,000 361 234 4,000 336 55,000 364 236 190,000 337 20,000 364 <td>200 0 300 781,000 344 200 200,000 300 1,177,000 344 367 211 211,000 311 5,000 384 367 212 60,000 313 4,500 384 369 213 133,300 313 4,500 370 214 275,000 314 25,000 371 219 115,000 323 372 371 223 0 324 355 373 224 0 324 355 372 223 0.03 325 377 20,00 377 224 0 324 355 373 375 226 5.500 326 317 376 377 228 2.0000 328 317 376 383 229 5.2000 335 310,000 389 383 228 100,000 335 510</td> <td>200 0 000 781.000 1077.000 1077.000 210 0.20.000 300 1150.000 344 567 211 0.20.000 312 555.000 344 567 211 0.20.00 312 555.000 344 567 212 0.000 315 250.00 370 1000 211 0.20.00 314 250.00 371 1000 211 75.000 34 250.00 371 1000 222 0.0 323 371 1000 373 1000 222 0.0 323 373 150.00 376 50.00 222 0.00 325 82.00 386 70.00 376 50.00 222 0.00 33 130.000 386 30.000 386 30.000 222 0.00 33 130.000 386 30.000 386 30.000 386 30.000</td>	200 0 300 781,000 344 200 200,000 300 1,177,000 344 367 211 211,000 311 5,000 384 367 212 60,000 313 4,500 384 369 213 133,300 313 4,500 370 214 275,000 314 25,000 371 219 115,000 323 372 371 223 0 324 355 373 224 0 324 355 372 223 0.03 325 377 20,00 377 224 0 324 355 373 375 226 5.500 326 317 376 377 228 2.0000 328 317 376 383 229 5.2000 335 310,000 389 383 228 100,000 335 510	200 0 000 781.000 1077.000 1077.000 210 0.20.000 300 1150.000 344 567 211 0.20.000 312 555.000 344 567 211 0.20.00 312 555.000 344 567 212 0.000 315 250.00 370 1000 211 0.20.00 314 250.00 371 1000 211 75.000 34 250.00 371 1000 222 0.0 323 371 1000 373 1000 222 0.0 323 373 150.00 376 50.00 222 0.00 325 82.00 386 70.00 376 50.00 222 0.00 33 130.000 386 30.000 386 30.000 222 0.00 33 130.000 386 30.000 386 30.000 386 30.000

Company:	Energex, LLC
By:	

Printed Name: Title: Date:

3HL: 2	210 FNL & 3600 FWL		_		STATE & COUNTY:		New Mexico, Lea			
	200 FSL & 450 FWL				OBJECTIVE:		DRILL AND COMPL	ETE		
	WOLFBONE POOL				DEPTH:		22,500	_		
GAL: S	SEC 30-31 T24S-R35E			0.5	TVD:		12,649			
			Drlg - Rig				Tank Btty		Pmpg	
TANGIBLE CO			Release(D)		Completion(C)		Constrctn(TB)		Equipment(PEQ)	TOTAL
le/Curative/Permit		201	11,000							11,
surance		202		302						4,
mages/Right of Wa		203 -		303		351				5
rvey/Stake Location		204	6,000			352				6
cation/Pits/Road Ex		205	120,000	305	10,000	353	31,000	366		161
illing / Completion C	Overhead	206	11,100	306						11
rnkey Contract		207		307	1,397,000					1,397
otage Contract		208	0	308	781,000					781
aywork Contract		209	820,000	309	1,177,000					1,997
rectional Drilling Sei	ervices	210	398,000	310	150,000					548
el & Power		211	211,000	311	5,000	354		367		216
ater		212	60,000	312	855,000			368		915
s		213	133,200	313	4,500			369		137,
ud & Chemicals		214	275,000	314	25,000			370		300,
ill Stem Test		215	0	315						-
oring & Analysis		216	0		and the second					
ement Surface		217	28,000		e de la constante de					28,
ement Intermediate		218	75,000	1						75,
ment 2nd Intermed	diate/Production	219	115,000							115,
ement Squeeze & O		220	0					371		
pat Equipment & Ce		221	45,000	1						45,
sing Crews & Equi		222	60,000	8	and the second sec					60,
shing Tools & Servi		223		323				372		
eologic/Engineering		224		324		355		373		
ontract Labor	• · · · · · · · · · · · · · · · · · · ·	225		325	8,200	356	72,000	374	6,500	
ompany Supervision	9	226		326	15,000	357	72,000	375		81
ontract Supervision		220 -		327	204,000	358		376	5,000	333
esting Casing/Tubing		227		328	10.000	550	<pre></pre>	377	0,000	333
ud Logging Unit		220		329	10,000			511		52
		230	02,000	020				378		
erforating/Wireline S	Services	230		331	515,000			379		519
imulation/Treating	Services	231	4,000	332	397,000			380		313,
				333				381	10,000	148,
ompletion Unit				334 334	138,000				10,000	140,
wabbing Unit		005	100.000		240.000	250		382	7.000	
entals-Surface		235		335	310,000	359		383	7,000	507
entals-Subsurface		236		336		200		384	2.000	205
ucking/Forklift/Rig N	Modilization	237		337	20,000	360		385	3,000	143
elding Services		238		338	5,000	361		386	<u> </u>	9
ater Disposal		239		339	60,000	362	135,000	387	<u>.</u>	195
lug to Abandon		240		340						2
eismic Analysis		241		341						
iscellaneous		242		342				389		-
ontingency		243		343	250,000	363		390		313
losed Loop & Enviro	onmental	244	330,000	344	5,000	364		388		335
oil Tubing				346	462,000					462
lowback Crews & Ec	quip			347	325,000					325,
ffset Directional/Fra	ac	248	0	348	48,000					48,
TOTAL INTANGIE	BLES		3,506,400		7,231,700		238,000		31,500	11,007,
ANGIBLE COS	<u>515</u>	404	73,000							73
urface Casing		401							· · · · · · · · · · · · · · · · · · ·	421
termediate Casing		402	421,000				the second s		the second s	-
roduction Casing/Lir		403	433,000	FA · ·				500	40.000	433
ubing				504	47,300			530	10,000	57
ellhead Equipment		405	75,000	505	22,000			531	3,000	100
umping Unit			and the stand of the		0			506	98,000	98
rime Mover					0			507		
ods		8 - A		500	0			508	65,000	65
umps-Sub Surface ((BH)			509				532	5,500	
anks			20 - 2			510				35
owlines					the second	511	85,000			85
eater Treater/Separ	rator	a (and the second second	512		_		159
lectrical System						513	60,000	533	20,000	80
ackers/Anchors/Har	ingers	414	0	514	66,000			534	2,000	68
ouplings/Fittings/Va	alves	415	0			515	76,000		and the second	76
ehydration		i 1				517				
jection Plant/CO2 E	Equipment	Q 1				518				-
umps-Surface						521	6,250			6
strumentation/SCA	ADA/POC					522		529	7,000	7
liscellaneous		419	0	519		523		535	3,000	3
ontingency		420	0	520		524		536		_
eters/LACT						525	29,150			29
	Emission	5 i				526	15,000			15
ares/Combusters/E		1		527	15,000			528		90
			1,002,000		150,300		541,665		213,500	1,907
as Lift/Compression			4,508,400		7,382,000		779,665		245,000	12,915
ares/Combusters/E as Lift/Compression TOTAL TANGIBL TOTAL V		• 2								
as Lift/Compression TOTAL TANGIBL	WELL COSTS				57%		6%		2%	
as Lift/Compression TOTAL TANGIBL			35%							
as Lift/Compression TOTAL TANGIBL	WELL COSTS % of Total Well Cost		35%							
as Lift/Compression TOTAL TANGIBL TOTAL V	WELL COSTS % of Total Well Cost			0.00-	0040 (
as Lift/Compression TOTAL TANGIBL TOTAL V	WELL COSTS % of Total Well Cost			3/27/:	2018 for proposal					
as Lifl/Compression TOTAL TANGIBL TOTAL V	WELL COSTS % of Total Well Cost	i i	Date Prepared:	3/27/:	2018 for proposal					
as Lift/Compression TOTAL TANGIBL TOTAL V	WELL COSTS % of Total Well Cost	i i		3/27/:	2018 for proposal					

Company:	Cnevron U. S. A. Inc.
By:	
Printed Name:	
Title:	
Date:	

HL: 210 FNL & 3600 FWL				STATE & COUNTY:		New Mexico, Lea	_		
HL: 200 FSL & 450 FWL				OBJECTIVE:		DRILL AND COMPL	ETE		
DRMATION: WOLFBONE POOL EGAL: SEC 30-31 T24S-R35E	-			DEPTH:		22,500	_		
GAL. SEC 30-31 1245-R35E				TVD:		12,649	_		
		Drig - Rig				Tank Btty	_	Pmpg	
TANGIBLE COSTS		Release(D)		Completion(C)		Constrctn(TB)		Equipment(PEQ)	TOTA
le/Curative/Permit	201	11,000							11
surance	202	4,000	302						4
mages/Right of Way	203	5,000	303		351				
rvey/Stake Location	204	6,000			352				6
cation/Pits/Road Expense	205	120,000	305	10,000	353	31,000	366		16
Iling / Completion Overhead	206	11,100	306	4 207 000		the second second			1
otage Contract	207	0	307	1,397,000		the second s			1,39
work Contract	208	820.000	308 309	781,000					78
ectional Drilling Services	209	398,000	309						1,99
el & Power	210	211.000	311	150,000	354		267		54
ater	212	60.000	312	855,000	304		367 368		21 91
5	213	133,200	313	4,500			369		13
d & Chemicals	214	275,000	314	25,000			370		30
I Stern Test	215	0	315	20,000			570		
ring & Analysis	216	0	010						
ment Surface	217	28,000							2
ment Intermediate	218	75,000			- 1				7
ment 2nd Intermediate/Production	219	115,000							11
ment Squeeze & Other (Kickoff Plug)	220	0			1		371		
at Equipment & Centralizers	221	45,000							4
sing Crews & Equipment	222	60,000				1997 - China (M. 1997)			6
hing Tools & Service	223	0	323		1		372		
ologic/Engineering	224	0	324		355		373		
ntract Labor	225	5,500	325	8,200	356	72,000	374	6,500	
mpany Supervision	226	66,600	326	15,000	357		375		8
ntract Supervision	227	124,000	327	204,000	358		376	5,000	33
sting Casing/Tubing	228	20,000	328	10,000			377		3
ud Logging Unit	229	52,000	329						5.
gging	230	0					378		
rforating/Wireline Services	231	4,000	331	515,000			379		51
mulation/Treating			332	397,000			380		39
empletion Unit			333	138,000		0.000	381	10,000	14
vabbing Unit	Q 1		334				382		
entals-Surface	235	190,000	335	310,000	359		383	7,000	50
entals-Subsurface	236	150,000	336	55,000			384		20
ucking/Forklift/Rig Mobilization	237	120,000	337	20,000	360		385	3,000	14
elding Services	238	4,000	338	5,000	361		386		
ater Disposal	239	0	339	60,000	362	135,000	387		19
ug to Abandon	240	0	340						
ismic Analysis	- 241	0	341			and the second			
scellaneous	242	0	342				389		
ontingency	243	63,000	343	250,000	363	-	390	·v	31
osed Loop & Environmental	- 244	330,000	344	5,000	364		388		33
bil Tubing	-8 - 8		346 347	462,000	i a	· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·	46
owback Crews & Equip ffset Directional/Frac	248	0	348	48,000					32
TOTAL INTANGIBLES	- 240	3,506,400	040	7.231,700	3	238,000		31,500	11,00
		0,000,100			1				
ANGIBLE COSTS									
Inface Casing	401	73,000							7
ermediate Casing	402	421,000							42
oduction Casing/Liner	403	433,000							43
bing			504	47,300			530	10,000	5
ellhead Equipment	405	75,000	505	22,000			531	3,000	10
Imping Unit				0			506	98,000	9
ime Mover				0			507	· · · · · · · · · · · · · · · · · · ·	
ods	<u>)</u> 1			0			508	65,000	6
mps-Sub Surface (BH)			509	· · · · · · · · · · · · · · · · · · ·			532	5,500	
nks					510	35,800			3
owlines					511	85,000			
eater Treater/Separator	-				512	159,465			15
ectrical System					513	60,000	533	20,000	
ackers/Anchors/Hangers	414	0	514	66,000	_		534	2,000	
ouplings/Fittings/Valves	415	0			515	76,000			7
hydration	-	1			517			- 10 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
ection Plant/CO2 Equipment					518				
Imps-Surface		King and the		1	521	6,250			
strumentation/SCADA/POC					522		529	7,000	
scellaneous	419	0			523		535	3,000	
ntingency	- 420	0	520		524		536		
eters/LACT	-				525	29,150			2
ares/Combusters/Emission	-	Constraint and the	507	45.000	526 516	15,000	600	Q	1
as Lift/Compression	-	4 000 000	527	15,000	516	75,000	528	212 500	1,90
TOTAL TANGIBLES	-	1,002,000		150,300		541,665		213,500	-
	.	4,508,400	0	7,382,000		779,665		245,000	12,9
TOTAL WELL COSTS				E70/		C 0/		2%	
TOTAL WELL COSTS				57%		6%		2%	
TOTAL WELL COSTS % of Total Well Cos	t oc	35%							
TOTAL WELL COSTS	t cec	35%							
TOTAL WELL COSTS % of Total Well Cos	t oo		3/07/	2018 for proposal					
TOTAL WELL COSTS % of Total Well Cos	t oc	Date Prepared:	3/27/	2018 for proposal					
TOTAL WELL COSTS % of Total Well Cos	t (**)		3/27/	2018 for proposal					

Burlington Resources Oil and Gas Company, LP Company: By: Printed Name: Title: Date:

SHL: 210 FNL & 3600 FWL BHL: 200 FSL & 450 FWL			PROSPECT NAM STATE & COUNT OBJECTIVE:	Y:	New Mexico, Lea DRILL AND COMPL	C70	1	
ORMATION: WOLFBONE POOL			DEPTH:	_	DRILL AND COMPL 22,500	EIE		
EGAL: SEC 30-31 T24S-R35E			TVD:		12,649			
		Drlg - Rig		_	Tank Btty		Pmpg	
NTANGIBLE COSTS		Release(D)	Completion(C)		Constrctn(TB)		Equipment(PEQ)	TOTAL
tle/Curative/Permit	201	11,000		-				11,0
amages/Right of Way	202 203	4,000 30		351				4,0
urvey/Stake Location	204	6,000		352				6,0
ocation/Pits/Road Expense	205	120,000 30	10,000	-	and the second s	366		161,0
rilling / Completion Overhead	206	11,100 30		-				11,1
umkey Contract	207	0 30		_				1,397,0
aywork Contract	208 209	0 30		-				781,0
rectional Drilling Services	210	398,000 31						548,0
el & Power	211	211,000 31		-		367		216,0
ater	212	60,000 31		-		368		915,0
tsud & Chemicals	213 214	<u>133,200</u> 31 275,000 31		-		369		137,7
ill Stem Test	214	275,000 31		-	+	370		300,0
pring & Analysis	216	0		Ť.				
ement Surface	217	28,000						28,0
ment Intermediate	218	75,000						75,0
ement 2nd Intermediate/Production	219	115,000		-				115,0
ment Squeeze & Other (Kickoff Plug) pat Equipment & Centralizers	220 221	45,000		-		371		
ising Crews & Equipment	222	60,000		-			, 6, 6, 6, 6, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7,	45,0
shing Tools & Service	223	0 32	23	-:		372		
eologic/Engineering	224	0 32	24	355		373		
ontract Labor	225	5,500 32	-	-		374	6,500	92,2
ompany Supervision	226	66,600 32		-		375		81,6
ontract Supervision	227 228	124,000 32 20,000 32	Planning and a statement			376 377	5,000	333,0
ud Logging Unit	229	52,000 32		-		011		52,0
ngging	230	0				378		
erforating/Wireline Services	231	4,000 33	-	-		379		519,
imulation/Treating	(a		32 397,000	-		380		397,
wabbing Unit			33 <u>138,000</u> 34			381 382	10,000	148,0
entals-Surface	235	190.000 33		359		383	7,000	507,0
entals-Subsurface	236	150,000 33				384		205,0
ucking/Forklift/Rig Mobilization	237	120,000 33	-	-)	385	3,000	143,0
elding Services	238	4,000 33	-		405.000	386		9,0
/ater Disposal	239	0 33	-	362	135,000	387		195,0
eismic Analysis	241	0 34		-				
iscellaneous	242	0 34	42			389		
ontingency	243	63,000 34				390		313,
losed Loop & Environmental	244	330,000 34		-		388		335,
oil Tubing Iowback Crews & Equip		34	46 <u>462,000</u> 47 325,000					462, 325,
offset Directional/Frac	248	0 34			11			48,
TOTAL INTANGIBLES		3,506,400	7,231,70	2	238,000		31,500	11,007,
ANGIBLE COSTS urface Casing	401	73.000						73,0
Itermediate Casing	402	421,000						421,0
roduction Casing/Liner	403	433,000						433,
ubing			04 47,30			530	10,000	57,
/ellhead Equipment	405	75,000 50	0522,00		· · · · · · · · · · · · · · · · · · ·	531	3,000	100,
umping Unit	i 18		A second s	0		506 507	98,000	98,
ods	3			0		508	65,000	65,
umps-Sub Surface (BH)		50	09			532	5,500	5,
anks				_ 510				35,
lowlines			-	- 511 512	-			85, 159,
eater Treater/Separatorectrical System	-			512	-	533	20,000	80,
ackers/Anchors/Hangers	414	0 5'	14 66,00			534	2,000	68,
ouplings/Fittings/Valves	415	0		515	5 76,000			76,
ehydration				_ 517				
jection Plant/CO2 Equipment	5 1			_ 518				
umps-Surface			·	- 521 522		529	7,000	
liscellaneous	419	0 5	19	523		535	3,000	3
contingency	420		20	524		536		
leters/LACT				525				29
lares/Combusters/Emission	: 3		45.00	526		500		15
as Lift/Compression	6 2	1,002,000	27 15,00 150,30		6 <u>75,000</u> 541,665	528	213,500	90,
	8	4,508,400	7,382,00		779,665		245,000	12,915
TOTAL TANGIBLES			-	_	-		······································	
			579	6	6%		2%	
TOTAL TANGIBLES		35%						
TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost		35%						
TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost			27/2018 for proposal					
TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost	1 5		27/2018 for proposal					
TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost	a 13		27/2018 for proposal					
TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost COG Operating LLC	: 3	Date Prepared: 3/2 COG Operating LLC	27/2018 for proposal	-				
TOTAL TANGIBLES TOTAL WELL COSTS	: iş 10	Date Prepared: 3/2	27/2018 for proposal	-			-:	
TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost COG Operating LLC Ve approve: % Working Interest	1	Date Prepared: 3/2 COG Operating LLC	27/2018 for proposal				n .	
TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost OG Operating LLC //e approve:% Working Interest company: L. W. Kirby	2 (S	Date Prepared: 3/2 COG Operating LLC	27/2018 for proposal	_			=:	
TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost OG Operating LLC //e approve: % Working Interest	5 (S 5)	Date Prepared: 3/2 COG Operating LLC	27/2018 for proposal					
TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Cost DG Operating LLC % approve: % Working Interest mompany: L. W. Kirby	1 (J	Date Prepared: 3/2 COG Operating LLC		_			-	

			AUTHOR		OR EXPENDITURE					
WELL NAME:	FASCINATOR FED COM 604	н			PROSPECT NAME		BULLDOG 717008			
SHL:	210 FNL & 3600 FWL				STATE & COUNTY		New Mexico, Lea			
BHL:	200 FSL & 450 FWL				OBJECTIVE:		DRILL AND COMPI	ETE		
ORMATION:	WOLFBONE POOL			~	DEPTH:		22,500			
EGAL:	SEC 30-31 T24S-R35E				TVD:		12,649			
NTANGIBLE	COSTS		<u>Drlg - Rig</u> Release(D)		Completion(C)		Tank Btty Constrctn(TB)		<u>Pmpg</u> Equipment(PEQ)	TOTAL
Title/Curative/Pen	mit	201	11,000							11,000
nsurance		202	4,000			2				4,000
Damages/Right of		203	5,000	303		351				5,000
Survey/Stake Loc		204	6,000			352				6,000
ocation/Pits/Roa		205	120,000		10,000	353	31,000	366		161,00
rilling / Completi		206	11,100	306		8				11,10
umkey Contract		207	0	307	1,397,000	2				1,397,00
ootage Contract aywork Contract		208	820,000	308 309	781,000	9 9				781,00
irectional Drilling		209 - 210	398,000	310	150,000	0				1,997,00
uel & Power	g Gervicea	210 - 211 -	211,000		5.000	354		367		216,00
/ater		212	60,000	312	855,000	004		368		915,00
its		212 -	133,200	313	4,500	3		369		137,70
lud & Chemicals	5	214	275,000	314	25,000	1	Contraction of the	370		300,00
rill Stern Test		215	0	315	10,000	3 :) 	
oring & Analysis	5	216	0	1						-
ement Surface		217	28,000			i i				28,00
Cernent Intermedi	liate	218	75,000	1						75,00
Cement 2nd Inter	mediate/Production	219	115,000							115,00
ement Squeeze	& Other (Kickoff Plug)	220	0					371		-
loat Equipment &	& Centralizers	221	45,000							45,00
asing Crews & E	Equipment	222	60,000							60,00
ishing Tools & S	Service	223	0	323				372		
eologic/Enginee	ering	224	0	324		355		373		
contract Labor		225	5,500	325	8,200	356	72,000	374	6,500	92,20
company Supervi	vision	226	66,600	326	15,000	357		375		81,60
Contract Supervis	sion	227	124,000		204,000	358		376	5,000	333,00
esting Casing/Tu		228	20,000	328	10,000			377		30,00
/lud Logging Unit	t	229	52,000	329						52,00
ogging		230	0					378		
Perforating/Wireling		231	4,000		515,000			379		519,00
Stimulation/Treati	ing	<u> </u>		332	397,000			380 381	10,000	397,00
Completion Unit				333 334	138,000		terra a travera	382	10,000	140,00
Swabbing Unit Rentals-Surface			190.000	335	310,000	359		383	7,000	507,00
Rentals-Subsurfa	200	236	150,000		55,000	000		384		205,00
Frucking/Forklift/F		237	120,000		20,000	360		385	3,000	143,00
Velding Services		238	4,000	τ ,	5,000			386		9,0
Vater Disposal		239	0		60,000		135,000	387		195,0
Plug to Abandon		240	0							
Seismic Analysis		241	0	341						
liscellaneous		242	0	342				389		
Contingency		243	63,000	343	250,000	363		390		313,0
Closed Loop & Er	nvironmental	244	330,000	344	5,000	364		388	0	335,0
Coil Tubing				346	462,000					462,0
-lowback Crews	& Equip			347	325,000					325,0
Offset Directional		248	0	348	48,000					48,0
TOTAL INTAN	NGIBLES		3,506,400		7,231,700		238,000		31,500	11,007,6
TANGIBLE C	OSTS									
Surface Casing		401	73,000							73,0
ntermediate Cas		402	421,000							421,0
Production Casin	ng/Liner	403	433,000						10.000	433,0
Tubing		—		504	47,300			530		57,3
Wellhead Equipm	nent	405	75,000	505	22,000			531	3,000	100,0
Pumping Unit		-	all in the second second		0			506 507		98,0
Prime Mover					0			507		65,0
Rods	Table (DLI)			500		-		532		5,5
Pumps-Sub Surfa	ace (BH)			509		510		032	5,000	35,8
Tanks				8	• • • • • • • • • • • • • • • • • • •		35,800		· · · · · · · · · · · · · · · · · · ·	
Flowlines	A			8 - 3		511	159,465			159,4
leater Treater/S				2		512 513	60,000	533	20,000	80,0
Electrical System		A14	0	514	66,000	•		534		68,0
Packers/Anchors		414 . 415	0			515	76,000		2,000	76,0
Couplings/Fitting	15/ V dIV 85	410		5		517				
Dehydration Injection Plant/C0	02 Equipment			-9		518		8		
Pumps-Surface				1		521	6,250			6,2
Instrumentation/S	SCADA/POC			2	· · · · · · · · · · · · · · ·	522		529	7,000	7,0
Miscellaneous	00.0/11/00		0	519		523		535		3,0

Company:	Barney	L.	Alsobrook
By:			

_% Working Interest

TOTAL WELL COSTS

Flares/Combusters/Emission

TOTAL TANGIBLES

Gas Lift/Compression

COG Operating LLC

We approve:

Printed Name:

Title: Date:

Miscellaneous

Contingency

Meters/LACT

By: PWS

419

420

% of Total Well Cost

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

3/27/2018 for proposal

0 519

0 520

527

1,002,000

4,508,400

Date Prepared:

COG Operating LLC

35%

523

524

525

526

15,000 516

150,300

57%

7,382,000

535

536

29,150

15,000

541,665

779,665

6%

75,000 528

3,000

213,500

245,000

2%

3,000

29,150

15,000

90,000

1,907,465

12,915,065

0

DRMATION WOLFBOKE DEFIL: 2 250 CRASSEL TOTAL	SHL: 210 FNL & 3600 FWL SHL: 200 FSL & 450 FWL				STATE & COUNTY: OBJECTIVE:		New Mexico, Lea DRILL AND COMPL	FTF		
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starg canadity label and a set of canadity label and a set	company Supervision	226	66,600	326	15,000	357		375		81,
ui Logenge Juli geographic Juli geogra	ontract Supervision	227	124,000	327	204,000	358		376	5,000	333,
Spans 200 0 </td <td>esting Casing/Tubing</td> <td>228</td> <td>20,000</td> <td>328</td> <td>10,000</td> <td></td> <td></td> <td>377</td> <td></td> <td>30,</td>	esting Casing/Tubing	228	20,000	328	10,000			377		30,
andrauling yearsets 211 4.00 31 515.00 379 379 595 andrade Vifening Services 225 100.00 33 130.00 309 309 700 557 andrade Vifening Services 225 110.000 33 100.00 330 100.00 330 100.00 336 200.00 346 200.00 346 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00 200.00	lud Logging Unit	229	52,000	329						52,
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% of Total Well Cost 35% 57% 6% 2% COG Operating LLC Date Prepared: 3/27/2018 for proposal COG Operating LLC	TOTAL TANGIBLES	- 29		• A = 1						-
COG Operating LLC Date Prepared: 3/27/2018 for proposal COG Operating LLC Ne approve:	TOTAL WELL COSTS	10	4,508,400	3	7,382,000		779,665		245,000	12,915
COG Operating LLC Date Prepared: 3/27/2018 for proposal COG Operating LLC Ne approve:										
Date Prepared: 3/27/2018 for proposal COG Operating LLC	% of Total Well Cost		35%		57%		6%		2%	
COG Operating LLC	COG Operating LLC									
COG Operating LLC										
COG Operating LLC			Date Prepared:	3/27/2	2018 for proposal					
Ne approve:										
Ne approve:										
			COG Operating LLC							
			COG Operating LLC							

Company: Flatland Mineral Fund, LP
By:
Printed Name:
Title:
Date:

Marathon Oil Permian LLC 5555 San Felipe St. Houston, Texas 77056

Re: <u>Well Proposal – Fascinator Federal Com 701H</u> Sec 30: E/2W/2 - T24S-R35E Sec 31: E/2W/2 - T24S-R35E SHL: 210' FNL/ 2160' FWL, or a legal location in Sec 30 (Unit C) BHL: 200' FSL/ 2310' FWL, or a legal location in Sec 31 (Unit N) Lea County, New Mexico

Dear Sir/Madam:

COG Operating LLC ("COG"), as Operator, hereby proposes to drill the Fascinator 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 12,761' and a MD of approximately 22,500' to test the Wolfbone Pool ("Operation"). The total cost of the Operation is estimated to be \$13,198,665, 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 covers Sec 30: E/2W/2 - T24S-R35E and Sec 31: E/2W/2 - T24S-R35E. 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 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 proposes to acquire your interest via term assignment. It has the following general provisions:

- 3 year primary term
- Delivering a 75% NRI, proportionately reduced
- \$2,000 per net acre bonus consideration

The Term Assignment offer expires 5 p.m., Central Time, June 13, 2018, and it is subject to the approval of COG's management and verification of title.

If an agreement cannot be reached within 30 days of the date of this letter, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a spacing unit for the proposed well if uncommitted at such time.

BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico Exhibit No. 17 Submitted by: COG OPERATING LLC Hearing Date: July 26, 2018 Case Nos. 16219 & 16220

Respectfully,

Megan L. Tipton

Megan Tipton Landman

 I/We hereby elect to participate in the Fascinator Federal Com 701H.
 I/We hereby elect <u>not</u> to participate in the Fascinator Federal Com 701H.

Company:	
By:	
Name:	
Title:	
Date:	

6 ⁶¹ 8

One Concho Center | 600 West Illinois Avenue | Midland, Texas 79701 | P 432 683 7443 | F 432 683 7441

US Certified Mail No. 91 7199 9991 7038 1571 5465

Chevron U. S. A. Inc. 1400 Smith Street Houston, TX 77002

Re: <u>Well Proposal – Fascinator Federal Com 701H</u> Sec 30: E/2W/2 - T24S-R35E Sec 31: E/2W/2 - T24S-R35E SHL: 210' FNL/ 2160' FWL, or a legal location in Sec 30 (Unit C) BHL: 200' FSL/ 2310' FWL, or a legal location in Sec 31 (Unit N) Lea County, New Mexico

Dear Sir/Madam:

COG Operating LLC ("COG"), as Operator, hereby proposes to drill the Fascinator 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 12,761' and a MD of approximately 22,500' to test the Wolfbone Pool ("Operation"). The total cost of the Operation is estimated to be \$13,198,665, and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE").

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

Please indicate your 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 lease your minerals under the following general terms:

- Bonus of \$2,000 /Net Mineral Acre
- 3 Year Primary Term
- 25% Royalty Interest

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

If an agreement cannot be reached within 30 days of the date of this letter, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a spacing unit for the proposed well if uncommitted at such time.

Respectfully,

Megan L. Tipton

Megan Tipton Landman

 I/We hereby elect to participate in the Fascinator Federal Com 701H.
 I/We hereby elect not to participate in the Fascinator Federal Com 701H.

Company:	
By:	
Name:	
Title:	
Date:	

HL: 200 FSL & 2310 FWL				OBJECTIVE:		DRILL AND COMPL	ETE		
DRMATION: WOLFBONE POOL EGAL: SEC 30-31 T24S-R35E				DEPTH: TVD:		22,500			
EGAL. SEC 30-31 1243-R35E						12,701			
TANGIBLE COSTS		<u>Drlg - Rig</u> Release(D)		Completion(C)		Tank Btty Constrctn(TB)		Pmpg Equipment(PEQ)	TOTAL
le/Curative/Permit	201	11,000		<u>completion(c)</u>		<u>Consticut(TB)</u>		Equipment(PEQ)	11,0
surance	202	4,000	302						4,0
mages/Right of Way	_ 203 _		303		351			• • • • • • • • • • • • • • • • • • •	5,0
rvey/Stake Location cation/Pits/Road Expense	204 205	6,000	305	10,000	352 353	31,000	366		6,0 161,0
Illing / Completion Overhead	205 -		306	10,000	000	31,000	300	i i i i i i i i i i i i i i i i i i i	13,1
mkey Contract	207		307	1,397,000					1,397,0
otage Contract	208	0	308	781,000					781,
ywork Contract	209		309	1,177,000					2,177,0
ectional Drilling Services	- 210 -		310	150,000	054		0.07		548,
el & Power	- ²¹¹ - 212		311 312	5,000	354		367 368		268, 915,
S	213		313	4,500		1	369		137,
ud & Chemicals	214	275,000	314	25,000			370		300,
li Stem Test	215		315						
ning & Analysis	216	0							
ment Surface ment Intermediate	217 218	28,000							28,
ment 2nd Intermediate/Production	218 -	75,000							115,
ment Squeeze & Other (Kickoff Plug)	220	0				**************************************	371	8	
at Equipment & Centralizers	221	45,000							45,
sing Crews & Equipment	222	60,000							60,
hing Tools & Service	223		323		0.5-		372		
eologic/Engineering Intract Labor	- 224 -		324 325	8,200	355 356	72,000	373 374	6,500	92,
ompany Supervision	- 225 -	82,800	325 326	15,000	356	/2,000	375	0,000	92,
ontract Supervision	227	151,000	327	204,000	358		376	5,000	360,
sting Casing/Tubing	228	20,000	328	10,000			377	-	30,
ud Logging Unit	229		329						52,
gging	230	0	204				378 379		E10
Inforating/Wireline Services	231	4,000	331 332	515,000			380		519, 397,
propletion Unit			333	138,000			381	10,000	148,
vabbing Unit		i - co i - co-	334				382		
entals-Surface	235	190,000	335	310,000	359		383	7,000	507,
entals-Subsurface	236	150,000	336	55,000			384		205,
ucking/Forklift/Rig Mobilization	237 238	120,000	337 338	20,000	360 361		385 386	3,000	143, 9,
elding Services	- 239 -	4,000	339	60,000	362	135,000	387		195,
ug to Abandon	240	0	340						
eismic Analysis	241	0	341	S					
iscellaneous	242	0	342				389		
ontingency	243	68,700	343	250,000	363		390 388	(318, 335,
osed Loop & Environmental	- 244 -	330,000	344 346	5,000	364		300		462,
owback Crews & Equip			347	325,000					325,
ffset Directional/Frac	248	0	348	48,000					48,
TOTAL INTANGIBLES	-	3,790,000		7,231,700		238,000		31,500	11,291,
ANGIBLE COSTS urface Casing	401	73,000							73,
termediate Casing	402	421,000							421
roduction Casing/Liner	403	433,000							433,
ubing			504	47,300	60 60		530		57,
ellhead Equipment	405	75,000	505	22,000	në i		531	3,000	
umping Unit				0		the second second	506 507	98,000	90
rime Mover				0	• . •		508	65,000	65
umps-Sub Surface (BH)	_ 1		509				532		5
anks	<u> </u>				510				35
owlines	_ !		1		511	85,000			85
eater Treater/Separator			8		512 513		533	20,000	159,
ectrical Systemackers/Anchors/Hangers	414	0	514	66,000	•	00,000	534		68
ouplings/Fittings/Valves	415	0	9 ⁻¹¹		515	76,000			76
ehydration				-	517				
jection Plant/CO2 Equipment					518				
umps-Surface	_		6		521		FAT		6
Instrumentation/SCADA/POC			E40	4	522 523	**	529 535		7
iscellaneous	419 420	0			523 524		535		3
eters/LACT		0	520		525		200		29
ares/Combusters/Emission					526	1			15
as Lift/Compression	_		527		•		528		90
TOTAL TANGIBLES	-	1,002,000	5	150,300		541,665	2	213,500	1,907 13,198
TOTAL WELL COSTS	_	4,792,000	5	7,382,000		779,665		245,000	13,198
% of Total Well Co	ost	36%		56%		6%		2%	
OG Operating LLC									
		Date Prepared:	3/27	2018 for proposal	-				
le approve.		COG Operating LLC							
Ve approve: % Working Interest		By: PWS						_	
ompany:									
ompañy: /:									
				By signing you agree to					

Marathon Oil Permian LLC 5555 San Felipe St. Houston, Texas 77056

Re: <u>Well Proposal – Fascinator Federal Com 702H</u> Sec 30: E/2W/2 - T24S-R35E Sec 31: E/2W/2 - T24S-R35E SHL: 210' FNL/ 2100' FWL, or a legal location in Sec 30 (Unit C) BHL: 200' FSL/ 1930' FWL, or a legal location in Sec 31 (Unit N) Lea County, New Mexico

Dear Sir/Madam:

COG Operating LLC ("COG"), as Operator, hereby proposes to drill the Fascinator 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 12,862' and a MD of approximately 22,600' to test the Wolfbone Pool ("Operation"). The total cost of the Operation is estimated to be \$13,198,665, 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 covers Sec 30: E/2W/2 - T24S-R35E and Sec 31: E/2W/2 - T24S-R35E. It has the following general provisions:

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

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- Delivering a 75% NRI, proportionately reduced
- \$2,000 per net acre bonus consideration

The Term Assignment offer expires 5 p.m., Central Time, June 13, 2018, and it is subject to the approval of COG's management and verification of title.

If an agreement cannot be reached within 30 days of the date of this letter, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a spacing unit for the proposed well if uncommitted at such time.

BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico Exhibit No. 18 Submitted by: COG OPERATING LLC Hearing Date: July 26, 2018 Case Nos. 16219 & 16220

Respectfully,

Megan L. Tipton

Megan Tipton Landman

	I/We hereby elect to participate in the Fascinator Federal Com 702H.
	/We hereby elect <u>not</u> to participate in the Fascinator Federal Com 702H.
Company:	

By:	
Name:	
Title:	
Date:	

One Concho Center | 600 West Illinois Avenue | Midland, Texas 79701 | P 432.683.7443 | F 432.683 7441

ş. .

Chevron U. S. A. Inc. 1400 Smith Street Houston, TX 77002

Re: <u>Well Proposal – Fascinator Federal Com 702H</u> Sec 30: E/2W/2 - T24S-R35E Sec 31: E/2W/2 - T24S-R35E SHL: 210' FNL/ 2100' FWL, or a legal location in Sec 30 (Unit C) BHL: 200' FSL/ 1930' FWL, or a legal location in Sec 31 (Unit N) Lea County, New Mexico

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

Please indicate your 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 lease your minerals under the following general terms:

- Bonus of \$2,000 /Net Mineral Acre
- 3 Year Primary Term
- 25% Royalty Interest

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

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If an agreement cannot be reached within 30 days of the date of this letter, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a spacing unit for the proposed well if uncommitted at such time.

Respectfully,

Megan L. Tipton

Megan Tipton Landman

Company:

 I/We hereby elect to participate in the Fascinator Federal Com 702H.
 I/We hereby elect <u>not</u> to participate in the Fascinator Federal Com 702H.

By:	
Name:	
Title:	
Date:	

100

WELL NAME:	FASCINATOR FED COM 702H	PROSPECT NAME:	BULLDOG 717008
SHL:	210 FNL & 2100 FWL	STATE & COUNTY:	New Mexico, Lea
BHL:	200 FSL & 1930 FWL	OBJECTIVE:	DRILL AND COMPLETE
FORMATION:	WOLFBONE POOL	DEPTH:	22,600
LEGAL:	SEC 30-31 T24S-R35E	TVD:	12,862

ITANGIBLE COSTS tle/Curative/Permit	201	<u>Drlg - Rig</u> <u>Release(D)</u> 11,000		Completion(C)		<u>Tank Btty</u> Constrctn(TB)		<u>Pmpg</u> Equipment(PEQ)	<u>TOTAI</u>
surance	202		302				à		4,
amages/Right of Way	203		303		351		1	a the second	
urvey/Stake Location	204	6,000			352		1		6,
cation/Pits/Road Expense	205		305	10,000	353	31,000 3	366		161,
illing / Completion Overhead	206		306				1		13,
Irnkey Contract	207		307	1,397,000		· · · · · · · · · · · · · · · · · · ·	3		1,397
botage Contract	208		308	781,000			9		781
aywork Contract	209		309	1 177 000			- 3		2,177,
	10						2		-
rectional Drilling Services	210		310	150,000			3		548,
iel & Power	211		311	5,000	354		367		268
ater	212		312	855,000			368		915,
is	213	133,200	313	4,500			369		137,
ud & Chemicals	214	275,000	314	25,000			370		300,
ill Stem Test	215	0	315						
pring & Analysis	216	0	1			2			
ement Surface	217	28,000	0				3		28
ement Intermediate	218	75,000	1				1		75
ement 2nd Intermediate/Production	219	115,000	: S			-	10		115
							371		
ement Squeeze & Other (Kickoff Plug)	220	0	1 (i			······	5/1		
pat Equipment & Centralizers	221	45,000							45.
asing Crews & Equipment	222	60,000							60
shing Tools & Service	223		323				372		
eologic/Engineering	224	0	324		355		373		
ontract Labor	225	5,500	325	8,200	356	72,000	374	6,500	92
ompany Supervision	226	82,800	326	15,000	357		375		97
ontract Supervision	227	151,000	327	204,000	358		376	5,000	360
esting Casing/Tubing	228	20,000	328	10,000			377		30
		52,000		10,000			1		52
ud Logging Unit	229		329				270		
ogging	230	0					378		
erforating/Wireline Services	231	4,000	331	515,000			379		519
timulation/Treating		and a second	332	397,000			380		397
ompletion Unit			333	138,000			381	10,000	148
wabbing Unit			334				382		
entals-Surface	235	190,000	335	310,000	359	· · · · · · · · · · · · · · · · · · ·	383	7.000	507
entals-Subsurface	236	150,000	336	55,000			384		205
rucking/Forklift/Rig Mobilization	237	120,000	337	20,000	360		385	3,000	143
	238	4,000	338	5,000	361		386		9
/elding Services									195
/ater Disposal	239	0	339	60,000	362	135,000	387		
lug to Abandon	240	0	340						
eismic Analysis	241	0	341						
liscellaneous	242	0	342				389		
Contingency	243	68,700	343	250,000	363		390		318
losed Loop & Environmental	244	330,000	344	5,000	364	S	388		335
coil Tubing			346	462,000					462
lowback Crews & Equip			347	325,000					325
	248	0		48,000					48
Offset Directional/Frac	240		340			238,000		31,500	11,291
TOTAL INTANGIBLES		3,790,000		7 231 700		230,000		31,300	11,231
ANGIBLE COSTS									
	401	73,000							73
urface Casing			11 - L					*****	
	402	421,000	а 						
ntermediate Casing									
ntermediate Casing Production Casing/Liner	402	421,000		47,300			530	10,000	421 433 57
ntermediate Casing roduction Casing/Liner ubing	402 403	421,000 433,000	504				530 531	10,000	433
ntermediate Casing roduction Casing/Liner ubing Velthead Equipment	402	421,000	504	22,000			531	3,000	433 57 100
ntermediate Casing roduction Casing/Liner ubing Velthead Equipment rumping Unit	402 403	421,000 433,000	504	22,000			531 506		433 57 100
ntermediate Casing Production Casing/Liner Subing Vellhead Equipment Pumping Unit Prime Mover	402 403	421,000 433,000	504	22,000 0 0			531 506 507	3,000	433 57 100 98
ntermediate Casing Production Casing/Liner Tubing Vellhead Equipment Pumping Unit Prime Mover Rods	402 403	421,000 433,000	504 505	22,000	5 0 17		531 506 507 508	3,000 98,000 65,000	433 57 100 98
ntermediate Casing Production Casing/Liner Subing Vellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH)	402 403	421,000 433,000	504	22,000 0 0	L 0 22		531 506 507	3,000	433 57 100 98 65
ntermediate Casing Production Casing/Liner Subing Vellhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH)	402 403	421,000 433,000	504 505	22,000 0 0	510	35,800	531 506 507 508	3,000 98,000 65,000	433 57 100 98 65 65
ntermediate Casing Production Casing/Liner Tubing Velthead Equipment Prumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Fanks	402 403	421,000 433,000	504 505	22,000 0 0	511	0 35,800 1 85,000	531 506 507 508	3,000 98,000 65,000	433 57 100 98 68 68 84 84
ntermediate Casing roduction Casing/Liner ubing Velthead Equipment rumping Unit rrime Mover Rods -umps-Sub Surface (BH) ranks rowlines	402 403	421,000 433,000	504 505	22,000 0 0	(1)	2 159,465	531 506 507 508	3,000 98,000 65,000 5,500	433 57 100 98 68 68 38 88 159
ntermediate Casing roduction Casing/Liner ubing VetIhead Equipment rumping Unit rrime Mover Rods vumps-Sub Surface (BH) fanks lowlines Heater Treater/Separator	402 403	421,000 433,000	504 505	22,000 0 0	511	2 159,465	531 506 507 508	3,000 98,000 65,000	433 57 100 98 68 68 38 88 159
ntermediate Casing roduction Casing/Liner ubing Vethead Equipment rumping Unit rrime Mover Rods Pumps-Sub Surface (BH) anks Towlines teater Treater/Separator Electrical System	402 403 405	421,000 433,000	504 505 509	22,000 0 0 0	511 512	2 159,465	531 506 507 508 532	3,000 98,000 65,000 5,500	433 57 100 98 68 68 68 68 68 68 68 68 68 68 68 68 68
ntermediate Casing roduction Casing/Liner ubing Velthead Equipment rumping Unit trime Mover Rods Pumps-Sub Surface (BH) anks lowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers	402 403 405	421,000 433,000 75,000	504 505 509 514	22,000 0 0 0	511 512	0 35,800 85,000 2 159,465 3 60,000	531 506 507 508 532	3,000 98,000 65,000 5,500 20,000	433 57 100 98 68 38 88 156 80 66
ntermediate Casing Production Casing/Liner Tubing Velthead Equipment Prime Mover Rods Pumps-Sub Surface (BH) Tanks Towlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves	402 403 405	421,000 433,000 75,000	504 505 509 514	22,000 0 0 0	511 512 513 515	2 35,800 1 85,000 2 159,455 3 60,000 5 76,000	531 506 507 508 532	3,000 98,000 65,000 5,500 20,000	433 57 100 98 68 38 88 156 80 66
ntermediate Casing Production Casing/Liner Tubing Velthead Equipment Pumping Unit Pumps-Sub Surface (BH) Tanks Pumps-Sub Surface (BH) Tanks Tanks Pumps-Sub Surface (BH) Tanks	402 403 405	421,000 433,000 75,000	504 505 509 514	22,000 0 0 0	511 512 513 515 515 517	2 35,800 85,000 2 159,465 3 60,000 5 7 7	531 506 507 508 532	3,000 98,000 65,000 5,500 20,000	433 55 100 98 68 68 68 88 88 155 88 66
ntermediate Casing Production Casing/Liner Ubing VetIhead Equipment Pumping Unit Prime Mover Rods Pumps-Sub Surface (BH) Fanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Douplings/Fittings/Valves Dehydration njection Plant/CO2 Equipment	402 403 405	421,000 433,000 75,000	504 505 509 514	22,000 0 0 0	511 512 513 515 515 517 518	2 35,800 1 85,000 2 159,465 3 60,000 5 76,000 7 8	531 506 507 508 532	3,000 98,000 65,000 5,500 20,000	43: 57 100 94 6: 33: 6: 155 8: 6: 7/
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termediate Casing roduction Casing/Liner ubing /ellhead Equipment umping Unit rime Mover cods umps-Sub Surface (BH) anks lowlines leater Treater/Separator leatrical System cackers/Anchors/Hangers couplings/Fittings/Valves lebydration njection Plant/CO2 Equipment pumps-Surface nstrumentation/SCADA/POC	402 403 405	421,000 433,000 75,000	504 505 509 514	22,000 0 0 0	511 512 513 515 517 518 521	2 35,800 85,000 2 159,465 3 60,000 5 76,000 7 3 6,250 2	531 506 507 508 532 533 534 529 535	3,000 98,000 5,500 20,000 2,000	43: 57 100 99 69 33 88 157 88 66 70
termediate Casing roduction Casing/Liner ubing /elthead Equipment umping Unit rime Mover ods umps-Sub Surface (BH) anks lowlines leater Treater/Separator leatrical System rackers/Anchors/Hangers couplings/Fittings/Valves rehydration njection Plant/CO2 Equipment umps-Surface nstrumentation/SCADA/POC	402 403 405 414 415	421,000 433,000 75,000 0 0 0	504 505 509 514		511 512 513 515 515 517 518 521 522	2 35,800 85,000 2 159,465 3 60,000 5 76,000 7 	531 506 507 508 532 533 534	3,000 98,000 65,000 5,500 20,000 2,000 2,000 7,000	43: 57 100 99 68 33 88 159 88 66 77
termediate Casing roduction Casing/Liner Jubing /elthead Equipment umping Unit rime Mover ods umps-Sub Surface (BH) anks lowlines eater Treater/Separator lectrical System ackers/Anchors/Hangers couplings/Fittings/Valves lehydration njection Plant/CO2 Equipment umps-Surface strumentation/SCADA/POC tiscellaneous contingency	402 403 405 414 415 419	<u>421,000</u> 433,000 75,000 0 0 0	504 505 509 514		511 512 513 515 517 518 521 522 523	2 35,800 85,000 2 159,465 3 60,000 5 76,000 7 3 6,250 2 3	531 506 507 508 532 533 534 529 535	3,000 98,000 65,000 5,500 20,000 2,000 2,000 7,000	433 55 100 99 60 33 88 155 88 66 77
termediate Casing roduction Casing/Liner Jubing /elthead Equipment umping Unit rime Mover ods umps-Sub Surface (BH) anks lowlines eater Treater/Separator lectrical System ackers/Anchors/Hangers ouplings/Fittings/Valves ehydration njection Plant/CO2 Equipment umps-Surface strumentation/SCADA/POC fiscellaneous contingency feters/LACT	402 403 405 414 415 419	<u>421,000</u> 433,000 75,000 0 0 0	504 505 509 514		511 512 513 515 517 518 521 522 523 524	2 35,800 85,000 2 159,455 3 60,000 5 76,000 7	531 506 507 508 532 533 534 529 535	3,000 98,000 65,000 5,500 20,000 2,000 2,000 7,000	433 55 100 99 66 33 88 155 88 66 77
termediate Casing roduction Casing/Liner ubing /elthead Equipment umping Unit rime Mover ods umps-Sub Surface (BH) anks lowlines leater Treater/Separator lectrical System rackers/Anchors/Hangers couplings/Fittings/Valves hehydration njection Plant/CO2 Equipment rumps-Surface nstrumentation/SCADA/POC fiscellaneous contingency feters/LACT	402 403 405 414 415 419	<u>421,000</u> 433,000 75,000 0 0 0	504 505 509 514 519 520		511 512 513 515 517 518 521 522 523 524 525 526	2 35,800 3 85,000 2 159,455 3 60,000 5 76,000 7	531 506 507 508 532 533 534 529 535 536	3,000 98,000 65,000 5,500 20,000 2,000 2,000 7,000	433 55 104 99 66 33 88 155 88 66 77 7
termediate Casing roduction Casing/Liner ubing /elihead Equipment umping Unit rime Mover oods umps-Sub Surface (BH) anks lowlines leater Treater/Separator lectrical System lectrical System lect	402 403 405 414 415 419	421,000 433,000 75,000 0 0 0 0 0 0	504 505 509 514 514 520 522	22,000 0 0 0 66,000	511 512 513 515 517 518 521 522 523 524 525 526	35,800 85,000 159,465 60,000 7 6,250 3 4 5 29,150 6 15,000	531 506 507 508 532 533 534 529 535	3,000 98,000 5,500 2,000 2,000 2,000 3,000	433 57 100 94 33 86 155 80 66 77 77 77 77 77 77 77 77 77 77 77 77
ttermediate Casing roduction Casing/Liner ubing Velthead Equipment umping Unit rime Mover cods tumps-Sub Surface (BH) anks lowlines leater Treater/Separator clectrical System Packers/Anchors/Hangers couplings/Fittings/Valves ouplings/Fittings/Valves couplings/Fittings/Valves couplings/Fittings/Valves couplings/Fittings/Valves couplings/Fittings/Valves couplings/Fittings/Valves couplings/Fittings/Valves couplings/Fittings/Valves couplings/Fittings/Valves couplings/Fittings/Valves couplingency Aleters/LACT lares/Combusters/Emission contingency Total TANGIBLES	402 403 405 414 415 419	421,000 433,000 75,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	504 505 509 514 514 520 522	22,000 0 0 0 66,000 66,000 150,000	511 512 513 515 517 518 521 522 523 524 525 526 516	35,800 1 85,000 2 159,465 3 60,000 5 76,000 7 3 6,250 3 4 5 29,150 6 75,000 541,665	531 506 507 508 532 533 534 529 535 536	3,000 98,000 65,000 5,500 20,000 2,000 2,000 3,000 3,000 213,500	433 57 100 94 64 333 85 155 8 66 67 70 70 70 70 9 9 9 9 1,90
termediate Casing roduction Casing/Liner Jbing leithead Equipment umping Unit rime Mover ods umps-Sub Surface (BH) anks lowlines eater Treater/Separator lectrical System ackers/Anchors/Hangers ouplings/Eitings/Valves ehydration liection Plant/CO2 Equipment umps-Surface ustrumentation/SCADA/POC liscellaneous ontingency leters/LACT lares/Combusters/Emission as Lift/Compression	402 403 405 414 415 419	421,000 433,000 75,000 0 0 0 0 0 0	504 505 509 514 514 520 522	22,000 0 0 0 66,000	511 512 513 515 517 518 521 522 523 524 525 526 516	35,800 85,000 159,465 60,000 7 6,250 3 4 5 29,150 6 15,000	531 506 507 508 532 533 534 529 535 536	3,000 98,000 5,500 2,000 2,000 2,000 3,000	433 57 100 94 64 333 85 155 8 66 67 70 70 70 70 9 9 9 9 1,90
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termediate Casing roduction Casing/Liner ubing /elihead Equipment umping Unit rime Mover ods umps-Sub Surface (BH) anks lowlines leater Treater/Separator lectrical System rackers/Anchors/Hangers couplings/Fittings/Valves hehydration rackers/Anchors/Hangers couplings/Fittings/Valves hehydration rackers/Anchors/Hangers couplings/Fittings/Valves hehydration rackers/Anchors/Hangers couplings/Fittings/Valves hehydration rackers/Anchors/Hangers couplings/Fittings/Valves hehydration rackers/Anchors/Hangers couplings/Fittings/Valves hehydration rackers/Anchors/Hangers couplings/Fittings/Valves hehydration rackers/LACT liares/Combusters/Emission contingency feters/LACT iares/Combusters/Emission contingency fortal Well Costs	402 403 405 414 415 419 420	421,000 433,000 75,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	504 505 509 514 519 520 527	22,000 0 0 0 66,000 66,000 15,000 150,300 7,382,000	511 512 513 515 517 518 521 522 523 524 525 526 516	2 35,800 35,800 2 159,465 3 60,000 5 76,000 5 76,000 7	531 506 507 508 532 533 534 529 535 536	3,000 98,000 5,500 20,000 2,000 2,000 3,000 3,000 213,500 245,000	433 57 100 98 64 53 88 155 88 66 66 66 70 70 70 70 70 70 70 70 70 70 70 70 70
ntermediate Casing Production Casing/Liner Tubing VetIhead Equipment Pumping Unit Prime Mover Cods Pumps-Sub Surface (BH) Tanks Towkines Teater/Separator Sectors/Anchors/Hangers Dehydration Nection Plant/CO2 Equipment Pumps-Surface Nstrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Telares/Combusters/Emission TOTAL TANGIBLES TOTAL WELL COSTS % of Total Well Costs	402 403 405 414 415 419 420	421,000 433,000 75,000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	504 505 509 514 519 520 527	22,000 0 0 0 66,000 66,000 15,000 150,300 7,382,000 56%	511 512 513 515 517 518 521 522 523 524 525 526 516	2 35,800 35,800 2 159,465 3 60,000 5 76,000 5 76,000 7	531 506 507 508 532 533 534 529 535 536	3,000 98,000 5,500 20,000 2,000 2,000 3,000 3,000 213,500 245,000	433 57 100 94 64 333 85 155 8 66 67 70 70 70 70 9 9 9 9 1,90
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This AFE is only an estimate.	By signing you agree to pay your share
of the actual costs incurred \gtrsim	

Printed Name: Title: Date:

Marathon Oil Permian LLC 5555 San Felipe St. Houston, Texas 77056

Re: <u>Well Proposal – Fascinator Federal Com 703H</u> Sec 30: E/2W/2 - T24S-R35E Sec 31: E/2W/2 - T24S-R35E SHL: 210' FNL/ 1510' FWL, or a legal location in Sec 30 (Unit C) BHL: 200' FSL/ 1510' FWL, or a legal location in Sec 31 (Unit N) Lea County, New Mexico

Dear Sir/Madam:

COG Operating LLC ("COG"), as Operator, hereby proposes to drill the Fascinator 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 12,764' and a MD of approximately 22,600' to test the Wolfbone Pool ("Operation"). The total cost of the Operation is estimated to be \$13,198,665, 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 covers Sec 30: E/2W/2 - T24S-R35E and Sec 31: E/2W/2 - T24S-R35E. 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 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 proposes to acquire your interest via term assignment. It has the following general provisions:

- 3 year primary term
- Delivering a 75% NRI, proportionately reduced
- \$2,000 per net acre bonus consideration

The Term Assignment offer expires 5 p.m., Central Time, June 13, 2018, and it is subject to the approval of COG's management and verification of title.

If an agreement cannot be reached within 30 days of the date of this letter, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a spacing unit for the proposed well if uncommitted at such time.

BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico Exhibit No. 19 Submitted by: COG OPERATING LLC Hearing Date: July 26, 2018 Case Nos. 16219 & 16220

Respectfully,

Megan L. Tipton

Megan Tipton Landman

 I/We hereby elect to participate in the Fascinator Federal Com 703H.

 I/We hereby elect <u>not</u> to participate in the Fascinator Federal Com 703H.

Company:	
By:	
Name:	
Title:	
Date:	

One Concho Center | 600 West Illinois Avenue | Midland, Texas 79701 | P 432.683.7443 | F 432.683.7441

Chevron U. S. A. Inc. 1400 Smith Street Houston, TX 77002

Re: <u>Well Proposal – Fascinator Federal Com 703H</u> Sec 30: E/2W/2 - T24S-R35E Sec 31: E/2W/2 - T24S-R35E SHL: 210' FNL/ 1510' FWL, or a legal location in Sec 30 (Unit C) BHL: 200' FSL/ 1510' FWL, or a legal location in Sec 31 (Unit N) Lea County, New Mexico

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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 covers Sec 30: E/2W/2 - T24S-R35E and Sec 31: E/2W/2 - T24S-R35E. 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 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 lease your minerals under the following general terms:

- Bonus of \$2,000 /Net Mineral Acre
- 3 Year Primary Term
- 25% Royalty Interest

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

If an agreement cannot be reached within 30 days of the date of this letter, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a spacing unit for the proposed well if uncommitted at such time.

Respectfully,

Megan L. Tipton

Megan Tipton Landman

Title:

Date:

	I/We hereby elect to participate in the Fascinator Federal Com 703H.
- 11	I/We hereby elect <u>not</u> to participate in the Fascinator Federal Com 703H.
Company:	
By: Name:	

WELL NAME:	FASCINATOR FED COM 703H	PROSPECT NAME:	BULLDOG 717008	
SHL:	210 FNL & 1510 FWL	STATE & COUNTY:	New Mexico, Lea	
BHL:	200 FSL & 1510 FWL	OBJECTIVE:	DRILL AND COMPLETE	
FORMATION:	WOLFBONE POOL	DEPTH:	22,600	
LEGAL:	SEC 30-31 T24S-R35E	TVD:	12,764	

INTANGIBLE COSTS		<u>Drlg - Rig</u> Release(D)		Completion(C)		<u>Tank Btty</u> Constrctn(TB)		<u>Pmpg</u> Equipment(PEQ)	TOTAL
Title/Curative/Permit	201	11.000		<u>completion(c)</u>		<u>oonsucui(TD)</u>		<u>Equipment(FEQ</u>)	11,000
Insurance	202	4,000	302						4,000
Damages/Right of Way	203	5,000	303		351			· · · · · · · · · · · · · · · · · · ·	5,000
Survey/Stake Location	204	6.000			352				6,000
Location/Pits/Road Expense	205	120,000	305	10,000	353	31,000	366	· · · · · · · · · · · · · · · · · · ·	161,000
Drilling / Completion Overhead	206	13,800	306			-		· · · · · · · · · · · · · · · · · · ·	13,800
Turnkey Contract	207	0	307	1,397,000					1,397,000
Footage Contract	208	0	308	781,000					781,000
Daywork Contract	209	1,000,000	309	1,177,000					2,177,000
Directional Drilling Services	210	398,000	310	150,000					548,000
Fuel & Power	211	263,000	311	5,000	354		367		268,000
Water	212	60,000	312	855,000			368		915,000
Bits	213	133,200	313	4,500			369		137,700
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							115,000
Cement Squeeze & Other (Kickoff Plug)	220	0					371		0
Float Equipment & Centralizers	221	45,000							45,000
Casing Crews & Equipment	222	60,000							60,000
Fishing Tools & Service	223	0	323				372		0
Geologic/Engineering	224	0	324		355		373		0
Contract Labor	225	5,500	325	8,200	356	72,000	374	6,500	92,200
Company Supervision	226	82,800	326	15,000	357		375		97,800
Contract Supervision	227	151,000	327	204,000	358		376	5,000	360,000
Testing Casing/Tubing	228	20,000	328	10,000			377		30,000
Mud Logging Unit	229	52,000	329						52,000
Logging	230	0					378		0
Perforating/Wireline Services	231	4,000	331	515,000			379		519,000
Stimulation/Treating			332	397,000			380		397,000
Completion Unit			333	138,000			381	10,000	148,000
Swabbing Unit			334				382		0
Rentals-Surface	235	190,000	335	310,000	359		383	7,000	507,000
Rentals-Subsurface	236	150,000	336	55,000			384		205,000
Trucking/Forklift/Rig Mobilization	237	120,000	337	20,000	360		385	3,000	143,000
Welding Services	238	4,000	338	5,000	361		386		9,000
Water Disposal	239	0	339	60,000	362	135,000	387		195,000
Plug to Abandon	240	0	340			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			0
Seismic Analysis	241	0	341						0
Miscellaneous	242	0	342				389		0
Contingency	243	68,700	343	250,000	363		390		318,700
Closed Loop & Environmental	244	330,000	344	5,000	364		388		335,000
Coil Tubing			346	462,000					462,000
Flowback Crews & Equip			347	325,000					325,000
Offset Directional/Frac	248	0	348	48,000		-			48,000
TOTAL INTANGIBLES		3,790,000		7,231,700		238,000		31,500	11,291,200
TANGIBLE COSTS									
Surface Casing	401	73,000						· · · · · · · · · · · · · · · · · · ·	73,000
Intermediate Casing	402	421,000							421,000
Production Casing/Liner	403	433,000	e						433,000
Tubing			504	47,300			530	10,000	57,300
Wellhead Equipment	405	75,000	505	22,000		<u></u>	531	3,000	100,000
Pumping Unit				0			506	98,000	98,000
Prime Mover				0			507		0
Rods			500	0		a distant of the second	508	65,000	65,000
Pumps-Sub Surface (BH)			509		EAC		532	5,500	5,500
Tanks					510			0 (35,800
Flowlines					511	85,000			85,000
Heater Treater/Separator					512		533	20,000	159,465
Electrical System	414	0	514	66,000	513	000.00	533 534	2,000	
Packers/Anchors/Hangers	414 415	0		00,000	515	76,000	JJ4	2,000	68,000
Couplings/Fittings/Valves Dehydration	410	0			515				0
					518			· · · · · · · · · · · · · · · · · · ·	0
Injection Plant/CO2 Equipment					521			· · · · · · · · · · · · · · · · · · ·	6,250
Pumps-Surface Instrumentation/SCADA/POC				Hard Charles and the Charles	521		529	7,000	7,000
Miscellaneous	419	0	519		523		535	3,000	3,000
Contingency	419	0			523		536		0
Meters/LACT	-120		520		525				29,150
Flares/Combusters/Emission					526				15,000
Gas Lift/Compression			527	15,000			528		90,000
TOTAL TANGIBLES		1.002.000	561	150,300	010	541.665		213,500	1,907,465
TOTAL WELL COSTS		4,792,000	5	7,382,000	5	779,665		245,000	13,198,665
					1				
% of Total Well Cost		36%		56%		6%		2%	
COG Operating LLC									
			o /= =	0010 (
		Date Prepared:	3/27/	2018 for proposal	3				
		COG Operating LLC							
We approve:		COG Operating LLC							
% Working Interest		By: PWS						_	
								5	
Company:									
By:									

By:

Printed Name: Title: Date:



US Certified Mail No. 91 7199 9991 7038 1571 5403

Energex, LLC 4425 98th St., Ste. 200 Lubbock, TX 79424

Re: <u>Well Proposal – Fascinator Federal Com 704H</u> Sec 30: Lots 1-4 - T24S-R35E Sec 31: Lots 1-4 - T24S-R35E SHL: 210' FNL/ 980' FWL, or a legal location in Sec 30 (Lot 1) BHL: 200' FSL/ 1130' FWL, or a legal location in Sec 31 (Lot 4) Lea County, New Mexico

Dear Sir/Madam:

COG Operating LLC ("COG"), as Operator, hereby proposes to drill the Fascinator 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 12,889' and a MD of approximately 22,700' to test the Wolfbone Pool ("Operation"). The total cost of the Operation is estimated to be \$13,198,665, 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 covers Sec 30: Lots 1-4 - T24S-R35E and Sec 31: Lots 1-4 - T24S-R35E. 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 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 proposes to acquire your interest via term assignment. It has the following general provisions:

- 3 year primary term
- Delivering a 75% NRI, proportionately reduced
- \$2,000 per net acre bonus consideration

The Term Assignment offer expires 5 p.m., Central Time, June 13, 2018, and it is subject to the approval of COG's management and verification of title.

If an agreement cannot be reached within 30 days of the date of this letter, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a spacing unit for the proposed well if uncommitted at such time.

Dhe Concho Center | 600 West Illinois Avenus | Moland, Toxas 79701 | P 439 683 7445 BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico Exhibit No. 20 Submitted by: COG OPERATING LLC Hearing Date: July 26, 2018 Case Nos. 16219 & 16220

Respectfully,

Megan L. Tipton

Company:

Megan Tipton Landman

 I/We hereby elect to participate in the Fascinator Federal Com 704H.
I/We hereby elect <u>not</u> to participate in the Fascinator Federal Com 704H.

By:	
Name:	
Title:	
Date:	

One Concho Center | 600 West Illinois Avenue | Midland, Texas 79701 | P 432.683.7443 | P 432 683 7441



US Certified Mail No. 91 7199 9991 7038 7698 1519

Burlington Resources Oil and Gas Company, LP REAL PROPERTY ADMINISTRATION PO BOX 7500 Bartlesville, OK 74005

Re: Well Proposal – Fascinator Federal Com 704H Sec 30: Lots 1-4 - T24S-R35E Sec 31: Lots 1-4 - T24S-R35E SHL: 210' FNL/ 980' FWL, or a legal location in Sec 30 (Lot 1) BHL: 200' FSL/ 1130' FWL, or a legal location in Sec 31 (Lot 4) Lea County, New Mexico

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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 covers Sec 30: Lots 1-4 - T24S-R35E and Sec 31: Lots 1-4 - T24S-R35E. 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 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 lease your minerals under the following general terms:

- Bonus of \$2,000 /Net Mineral Acre
- 3 Year Primary Term
- 25% Royalty Interest

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

If an agreement cannot be reached within 30 days of the date of this letter, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a spacing unit for the proposed well if uncommitted at such time.

One Concho Center | 680 West Illinois Avenue | Midland, Texas 79701 | P 432,683,7443 | F 432,683,7441

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Respectfully,

Megan L. Tipton

Megan Tipton Landman

 I/We hereby elect to participate in the Fascinator Federal Com 704H.
 I/We hereby elect <u>not</u> to participate in the Fascinator Federal Com 704H.

Company:	
By:	
Name:	5
Title:	
Date:	

<u>k</u>

WELL NAME:	FASCINATOR FED COM 704H	PROSPECT NAME:	BULLDOG 717008	
SHL:	210 FNL & 980 FWL	STATE & COUNTY:	New Mexico, Lea	
BHL:	200 FSL & 1130 FWL	OBJECTIVE:	DRILL AND COMPLETE	
FORMATION:	WOLFBONE POOL	DEPTH:	22,700	
LEGAL:	SEC 30-31 T24S-R35E	TVD:	12,889	

ITANGIBLE COSTS	201	Drlg - Rig Release(D) 11,000		Completion(C)		Tank Btty Constrctn(TB)		Pmpg Equipment(PEQ)	<u>TOTA</u>
surance	201	4,000	302			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			4,
amages/Right of Way	202 -	5,000	303		351				
Invey/Stake Location	203 -	6,000	505		352				5
cation/Pits/Road Expense	204 -	120,000	205	10,000			200		6,
	_		305	10,000	353	31,000	366		161,
illing / Completion Overhead	206 _	13,800	306					the second second	13
imkey Contract	207 _	0	307	1,397,000					1,397,
otage Contract	208 _	0	308	781,000		and the second			781
work Contract	209	1,000,000	309	1,177,000					2,177
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ater	212	60,000	312	855,000			368		915
S	213	133,200	313	4,500			369		137
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ment Intermediate	218	75,000	1						75
ment 2nd Intermediate/Production	219	115,000				the second second second			115
ment Squeeze & Other (Kickoff Plug)	220	0					374		s <u> </u>
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sting Casing/Tubing	228	20,000	328	10,000			377		30
Id Logging Unit	229	52,000	329	10,000					52
gging	230	0					378		JZ
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rforating/Wireline Services	231 _	4,000	331				379		519
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Impletion Unit	_		333	138,000			381	10,000	148
vabbing Unit	_		334				382		
ntals-Surface	235	190,000	335	310,000	359		383	7,000	507
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elding Services	238	4,000	338	5,000	361		386		9
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eismic Analysis	241	0	341			Contract Contract		the second second second	
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osed Loop & Environmental	244 -	330,000	344	5,000	364		388	•	335
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owback Crews & Equip	_		347	325,000				-	325
ffset Directional/Frac	248	0	348	48,000					48
TOTAL INTANGIBLES		3,790,000		7,231,700		238,000		31,500	11,291
ANGIBLE COSTS									
Inface Casing	401	73,000							73
ermediate Casing	402	421,000	° 1						421
oduction Casing/Liner	403	433,000	0 8						433
bing	400 -	400,000	504	47,300			530	10,000	57
	405	75.000							-
ellhead Equipment	405 -	75,000	505	22,000			531	3,000	
Imping Unit	5		8 9	0		1	506	98,000	98
ime Mover		a lot a series	, .	0			507		
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umps-Sub Surface (BH)	0		509				532	5,500	
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owlines			(1 i		511	85,000			85
eater Treater/Separator			1		512	159,465			159
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scellaneous	419	0	519		523		535	3,000	
ntingency	420	0	• · · · ·		524		536		
eters/LACT			1		525	29,150	_		
ires/Combusters/Emission	-		1		526			· · · · · · · · · · · · · · · · · · ·	
			527	15,000			528		
s Lift/Compression	-	4 000 000			510		520		
TOTAL TANGIBLES		1,002,000		150,300		541,665		213,500	1,90
TOTAL WELL COSTS	-	4,792,000	8	7,382,000		779,665		245,000	13,19
% of Total Well Cost		36%		56%		6%		2%	
νο ορωαιτη LLο	Г	Date Prepared:	3/27/2	2018 for proposal					
	(COG Operating LLC							

Printed Name: Title: Date:

		D-I Di-		
LEGAL:	SEC 30-31 T24S-R35E		TVD:	12,889
FORMATION:	WOLFBONE POOL		DEPTH:	22,700
BHL:	200 FSL & 1130 FWL		OBJECTIVE:	DRILL AND COMPLETE
SHL:	210 FNL & 980 FWL		STATE & COUNTY:	New Mexico, Lea
WELL NAME:			PROSPECT NAME:	BULLDOG 717008

5,000 6,000 120,000 13,800 0 1,000,000 398,000 263,000 60,000 133,200 275,000 0 0 0 28,000 75,000 115,000 0 115,000 0 0 45,000 0 0	302 - 303 - 306 - 307 - 308 - 309 - 311 - 313 - 314 - 313 - 314 - 315 - - - </th <th>10,000 1,397,000 781,000 1,177,000 150,000 855,000 25,000 25,000 315,000 204,000 10,000 515,000 397,000 397,000 310,000 55,000 20,000 5,000 60,000</th> <th>351 352 353 354 355 356 357 358 358 359 360 361 362</th> <th>31,000 </th> <th>366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384</th> <th>6,500 5,000 10,000 7,000</th> <th>1 16 16 13 1,39 78 2,17 54 266 911 13 300 21 77 54 266 911 13 300 20 91 13 300 91 14 15 14 15 14 15 15 15 15 15 15 15 15 15 15</th>	10,000 1,397,000 781,000 1,177,000 150,000 855,000 25,000 25,000 315,000 204,000 10,000 515,000 397,000 397,000 310,000 55,000 20,000 5,000 60,000	351 352 353 354 355 356 357 358 358 359 360 361 362	31,000 	366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384	6,500 5,000 10,000 7,000	1 16 16 13 1,39 78 2,17 54 266 911 13 300 21 77 54 266 911 13 300 20 91 13 300 91 14 15 14 15 14 15 15 15 15 15 15 15 15 15 15
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Marathon Oil Permian LLC

WELL NAME:	FASCINATOR FED COM 704H				PROSPECT NAME	:	BULLDOG 717008			
SHL:	210 FNL & 980 FWL				STATE & COUNTY	1 1	New Mexico, Lea			
BHL:	200 FSL & 1130 FWL				OBJECTIVE:		DRILL AND COMPI	LETE		
FORMATION:	WOLFBONE POOL				DEPTH:		22,700			
LEGAL:	SEC 30-31 T24S-R35E				TVD:		12,889			
			Drlg - Rig				Tank Btty		Pmpg	
NTANGIBLE COSTS			Release(D)		Completion(C)		Constrctn(TB)		Equipment(PEQ)	TOTAL
Title/Curative/Perm	nit	201	11,000							11,000
Insurance		202	4,000	302						4,000
Damages/Right of	Way	203	5,000	303		351				5,000
Survey/Stake Loca	tion	204	6,000			352				6,000
Location/Pits/Road	Expense	205	120,000	305	10,000	353	31,000	366		161,000
Drilling / Completio	n Overhead	206	13,800	306						13,800
Turnkey Contract		207	0	307	1,397,000		and the second			1,397,000
Footage Contract		208	0	308	781,000	1				781,000
Daywork Contract		209	1,000,000	309	1,177,000					2,177,000
Directional Drilling	Services	210	398,000	310	150,000					548,000
Fuel & Power		211	263,000	311	5,000	354		367		268,000

Directional Drilling Services	210								
	210	398,000	310	150,000					548,000
Fuel & Power	211	263,000	311	5,000	354		367		268,000
Water	212	60,000	312	855,000	1		368		915,000
Bits	213	133,200	313	4,500			369		137,700
Mud & Chemicals	214	275,000	314	25,000	1		370		300,000
Drill Stem Test	215	0	315						0
Coring & Analysis	216	0			1		1		0
Cement Surface	217	28,000			1				28,000
Cement Intermediate	218	75,000							75,000
Cement 2nd Intermediate/Production	219	115,000			1		3		115,000
Cernent Squeeze & Other (Kickoff Plug)	220	0					371		0
Float Equipment & Centralizers	221	45,000			Ĵ.				45,000
Casing Crews & Equipment	222	60,000			1				60,000
Fishing Tools & Service	223	0	323				372		0
Geologic/Engineering	224	0	324		355		373	· · · · · · · · · · · · · · · · · · ·	0
Contract Labor	225	5,500	325	8,200	356	72,000	374	6,500	92,200
Company Supervision	226	82,800	326	15,000	357		375		97,800
Contract Supervision	227	151,000	327	204,000	358		376	5,000	360,000
Testing Casing/Tubing	228	20,000	328	10,000	1		377		30,000
Mud Logging Unit	229	52,000	329						52,000
Logging	230	0		S	1		378		0
Perforating/Wireline Services	231	4,000	331	515,000	1		379		519,000
Stimulation/Treating			332	397,000	1		380		397,000
Completion Unit			333	138,000	1		381	10,000	148,000
Swabbing Unit			334		1		382		0
Rentals-Surface	235	190,000	335	310,000	359		383	7,000	507,000
Rentals-Subsurface	236	150,000	336	55,000			384		205,000
Trucking/Forklift/Rig Mobilization	237	120,000	337	20,000	360		385	3,000	143,000
Welding Services	238	4,000	338	5,000	361		386		9,000
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		1				0
Miscellaneous	242	0	342		1		389		0
Contingency	243	68,700	343	250,000	363		390		318,700
Closed Loop & Environmental	244	330,000	344	5,000	364		388		335,000
Coil Tubing			346	462,000					462,000
Flowback Crews & Equip			347	325,000	ĺ.				325,000
Offset Directional/Frac	248	0	348	48,000					48,000
TOTAL INTANGIBLES		3,790,000		7,231,700		238,000		31,500	11,291,200

Surface Casing	401	73,000							73,000
Intermediate Casing	402	421,000						- C - 1	421,000
Production Casing/Liner	403	433,000							433,000
Tubing			504	47,300			530	10,000	57,300
Wellhead Equipment	405	75,000	505	22,000			531	3,000	100,000
Pumping Unit				0			506	98,000	98,000
Prime Mover				0			507		0
Rods				0			508	65,000	65,000
Pumps-Sub Surface (BH)			509		27	1.5	532	5,500	5,500
Tanks					510	35,800			35,800
Flowlines					511	85,000			85,000
Heater Treater/Separator					512	159,465			159,465
Electrical System					513	60,000	533	20,000	80,000
Packers/Anchors/Hangers	414	0	514	66,000			534	2,000	68,000
Couplings/Fittings/Valves	415	0			515	76,000			76,000
Dehydration					517				0
Injection Plant/CO2 Equipment					518				0
Pumps-Surface					521	6,250			6,250
Instrumentation/SCADA/POC			-		522		529	7,000	7,000
Miscellaneous	419	0	519		523		535	3,000	3,000
Contingency	420	0	520		524		536		0
Meters/LACT					525	29,150			29,150
Flares/Combusters/Emission					526	15,000			15,000
Gas Lift/Compression			527	15,000	516	75,000	528		90,000
TOTAL TANGIBLES		1,002,000		150,300		541,665		213,500	1,907,465
TOTAL WELL COSTS		4,792,000	4	7,382,000	-	779,665		245,000	13,198,665
% of Total Well Cost		36%		56%		6%		2%	

Date Prepared: 3/27/2018 for proposal

COG Operating LLC

By: PWS

Company:	Oxy USA Inc.
By:	

We approve: ____% Working Interest

Printed Name: Title:

Date:

Insurance		202	4.000	302			4 000
Title/Curative/Perm	nit	201	11,000				11,000
INTANGIBLE (COSTS		Release(D)	Completion(C)	Constrctn(TB)	Equipment(PEQ)	TOTAL
			Drlg - Rig		Tank Btty	Pmpg_	
_					12,000		
LEGAL:	SEC 30-31 T24S-R35E	-		TVD:	12,889		
FORMATION:	WOLFBONE POOL			DEPTH:	22,700		
BHL:	200 FSL & 1130 FWL			OBJECTIVE:	DRILL AND COMPLET	E	
SHL:	210 FNL & 980 FWL			STATE & COUNTY:	New Mexico, Lea		
WELL NAME:	FASCINATOR FED COM 704H			PROSPECT NAME:	BULLDOG 717008		

Title/Curative/Permit	201	11,000				<u>construit rer</u>		Equipment(TEQ)	11,000
Insurance	202	4,000	302						4,000
Damages/Right of Way	203	5,000	303		351				5,000
Survey/Stake Location	204	6,000			352				
Location/Pits/Road Expense		120,000	205	10.000			200		6,000
	205		305	10,000	353	31,000	366		161,000
Drilling / Completion Overhead	206	13,800	306						13,800
Turnkey Contract	207	0	307	1,397,000					1,397,000
Footage Contract	208	0	308	781,000					781,000
Daywork Contract	209	1,000,000	309	1,177,000					2,177,000
Directional Drilling Services	210	398,000	310	150,000					548,000
Fuel & Power	211	263,000	311		354	-	367		268,000
Water	212	60,000	312	855,000	001		368		915,000
Bits			-			and the second			
	- 213 -	133,200	313	4,500			369		137,700
Mud & Chemicals	214	275,000	314	25,000			370		300,000
Drill Stem Test	215	0	315			Sector and sector			0
Coring & Analysis	216	0	1						0
Cement Surface	217	28,000	- 1						28,000
Cement Intermediate	218	75,000	1						75,000
Cement 2nd Intermediate/Production	219	115,000	1			· · · · · · · · · · · · · · · · · · ·)	115,000
Cement Squeeze & Other (Kickoff Plug)	220	0	1				274		
							371		0
Float Equipment & Centralizers	221	45,000		and the second s					45,000
Casing Crews & Equipment	222	60,000							60,000
Fishing Tools & Service	223	0	323				372		0
Geologic/Engineering	224	0	324		355		373	1	0
Contract Labor	225	5,500	325	8,200	356	72,000	374	6,500	92,200
Company Supervision	226	82.800	326	15,000	357	12,000	375	0,000	97,800
	-								
Contract Supervision	- 227 -	151,000	327	204,000	358		376	5,000	360,000
Testing Casing/Tubing	- 228 -	20,000	328	10,000			377		30,000
Mud Logging Unit	229	52,000	329						52,000
Logging	230	0					378		0
Perforating/Wireline Services	231	4,000	331	515,000			379		519,000
Stimulation/Treating	-		332	397,000			380		397,000
Completion Unit			333	138,000			381	10,000	
				130,000				10,000	148,000
Swabbing Unit			334				382		0
Rentals-Surface	235	190,000	335		359		383	7,000	507,000
Rentals-Subsurface	236	150,000	336	55,000			384		205,000
Trucking/Forklift/Rig Mobilization	237	120,000	337	20,000	360		385	3,000	143,000
Welding Services	238	4,000	338	5,000	361		386		9,000
Water Disposal	239	0	339	60,000	362	135,000	387		195,000
Plug to Abandon	240	0	340	00,000					0
Seismic Analysis	241	0	341						0
Miscellaneous	_ 242 _	0	342				389		0
Contingency	243	68,700	343	250,000	363		390		318,700
Closed Loop & Environmental	244	330,000	344	5,000	364	2-2 P	388		335,000
Coil Tubing	2 i		346	462,000					462,000
Flowback Crews & Equip	-) (1		347	325,000					325,000
Offset Directional/Frac	248	0	348	48,000		-			48,000
TOTAL INTANGIBLES	- 240 (*	3,790,000	040	7,231,700		238,000		31,500	
TOTAL INTANGIBLES		3,790,000	5	7,231,700		236,000		31,300	11,291,200
TANGIBLE COSTS									
Surface Casing	401	73,000						and the second	73,000
Intermediate Casing	402	421,000				1			421,000
Production Casing/Liner	403	433,000	i i						433,000
Tubing	e 11 i	1001000	504	47,300			530	10,000	57,300
	-	75.000							
Wellhead Equipment	405	75,000	505	22,000			531	3,000	100,000
Pumping Unit				0			506	98,000	98,000
Prime Mover	_	a the state was in the	ļ	0			507	·	0
Rods	_ 1			0			508	65,000	65,000
Pumps-Sub Surface (BH)	1		509				532	5,500	5,500
Tanks	. 1		1		510	35.800		1	35,800
Flowlines	- 3				511	85,000			85,000
			 4 			-			
	-	and the second second	N 8		512		-		159,465
Heater Treater/Separator					513	60,000	533	20,000	80,000
Heater Treater/Separator Electrical System		0	61 - G	66,000			534	2,000	68,000
Heater Treater/Separator	414	•			515	76,000			76,000
Heater Treater/Separator Electrical System	414	0			E 4 7	ST			0
Heater Treater/Separator Electrical System Packers/Anchors/Hangers			8 - S		517				· · · · · ·
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration									0
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment					518				0
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface					518 521	6,250	600	7.000	0 6,250
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC	415 	0			518 521 522	6,250	529	7.000	0 6,250 7,000
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface	415 415 415 419	0	519		518 521 522 523	6,250	535	7.000	0 6,250 7,000 3,000
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC	415 	0			518 521 522	6,250			0 6,250 7,000 3,000 0
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Pumps-Surface Instrumentation/SCADA/POC Miscellaneous	415 415 415 419	0	519		518 521 522 523	6,250	535		0 6,250 7,000 3,000
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	415 415 415 419	0	519		518 521 522 523 524	6,250	535		0 6,250 7,000 3,000 0
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/Combusters/Emission	415 415 415 419	0	519 520	15.000	518 521 522 523 524 525 526		535 536		0 6,250 7,000 3,000 0 29,150 15,000
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/Combusters/Emission Gas Lift/Compression	415 415 415 419	0	519	15,000	518 521 522 523 524 525 526		535 536	3,000	0 6,250 7,000 3,000 0 29,150 15,000 90,000
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Purps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combusters/Emission Gas Lift/Compression TOTAL TANGIBLES	415 415 415 419	000000000000000000000000000000000000000	519 520 527	150,300	518 521 522 523 524 525 526		535 536	3,000 	0 6,250 7,000 3,000 0 29,150 15,000 90,000 1,907,465
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/Combusters/Emission Gas Lift/Compression	415 415 415 419	0	519 520 527		518 521 522 523 524 525 526		535 536	3,000	0 6,250 7,000 3,000 0 29,150 15,000 90,000
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Purps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combusters/Emission Gas Lift/Compression TOTAL TANGIBLES	415 415 415 419	000000000000000000000000000000000000000	519 520 527	150,300 7,382,000	518 521 522 523 524 525 526	6,250 29,150 15,000 75,000 541,665 779,665	535 536	213,500 245,000	0 6,250 7,000 3,000 0 29,150 15,000 90,000 1,907,465
Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Dehydration Injection Plant/CO2 Equipment Purps-Surface Instrumentation/SCADA/POC Miscellaneous Contingency Meters/LACT Flares/Combusters/Emission Gas Lift/Compression TOTAL TANGIBLES	415	000000000000000000000000000000000000000	519 520 527	150,300	518 521 522 523 524 525 526		535 536	3,000 	0 6,250 7,000 3,000 0 29,150 15,000 90,000 1,907,465

Date Prepared: 3/27/2018 for proposal

COG Operating LLC

By: PWS

Company:	Advance Energy Partners, LLC
By:	
Printed Name:	

We approve: _____% Working Interest

Title: Date:

ELL NAME: FASCINATOR FED COM 704	H		_	PROSPECT NAME		BULLDOG 717008			
HL: 210 FNL & 980 FWL HL: 200 FSL & 1130 FWL				STATE & COUNTY	:	New Mexico, Lea	CTC.		_
DRMATION: WOLFBONE POOL				OBJECTIVE: DEPTH:	_	DRILL AND COMPL 22,700	EIE		
EGAL: SEC 30-31 T24S-R35E				TVD:		12,889			
362				C					
	204	Drlg - Rig Release(D)		Completion(C)		Tank Btty Constrctn(TB)		Pmpg Equipment(PEQ)	TOTA
le/Curative/Permit	201	4,000	302						11
mages/Right of Way	202 - 203	5,000			351				
Irvey/Stake Location	204	6,000	000		352	·			6
cation/Pits/Road Expense	205	120,000	305	10,000	353	31,000	366		161
illing / Completion Overhead	206	13,800	306						13
mkey Contract	207	0	307	1,397,000					1,397
otage Contract	208	0	308	781,000					781
ywork Contract	209	1,000,000	309	1,177,000					2,177
ectional Drilling Services	210	398,000	310	150,000					548
el & Power	211	263,000	311	5,000	354		367		268
ater	212	60,000	÷	855,000			368		915
S	213	133,200		4,500		the second second	369		137
ud & Chemicals	214	275,000	314	25,000			370		
ill Stem Test	215	0	315						
ring & Analysis	216	0							
ment Surface	217	28,000						· · · · · · · · · · · · · · · · · · ·	28
ement Intermediate ement 2nd Intermediate/Production	218 219	75,000							75
ement 2nd Intermediate/Production ement Squeeze & Other (Kickoff Plug)	219 -	115,000					371		115
pat Equipment & Centralizers	220	45,000				tractor diversity	511		45
asing Crews & Equipment	221 _	60,000							45
shing Tools & Service	<u>222</u> -		323				372		0
eologic/Engineering	223 -	0	ε :		355	÷	373		(
Infract Labor	225	5,500	325	8,200	356	72,000	374	6,500	
ompany Supervision	226	82,800		15,000	357		375		97
ontract Supervision	227	151,000		204,000	358		376	5,000	360
sting Casing/Tubing	228	20,000		10,000			377		30
ud Logging Unit	229	52,000							52
gging	230	0					378		-
erforating/Wireline Services	231	4,000	331	515,000			379		519
mulation/Treating			332	397,000			380		397
ompletion Unit			333	138,000			381	10,000	148
vabbing Unit			334				382		20
entals-Surface	235	190,000	335	310,000	359		383	7,000	507
entals-Subsurface	236	150,000	336	55,000			384		205
ucking/Forklift/Rig Mobilization	237	120,000	337	20,000	360		385	3,000	143
elding Services	238	4,000	338	5,000	361		386		9
ater Disposal	239	0		60,000	362	135,000	387		195
ug to Abandon	240	0							-
eismic Analysis	241	0							-
scellaneous	242	0					389		
ontingency	243	68,700	343	250,000	363		390		318
osed Loop & Environmental	244	330,000	344 346	462,000	364		388		335
oil Tubing owback Crews & Equip	<u> </u>		347	325,000					325
fset Directional/Frac	248	0		48,000					48
TOTAL INTANGIBLES		3,790,000	0.0	7.231.700		238,000		31,500	11,291
10									
ANGIBLE COSTS									
Inface Casing	401	73,000							73
termediate Casing	402	421,000							421
oduction Casing/Liner	403	433,000							433
ibing			504	47,300			530	10,000	57
ellhead Equipment	405	75,000	505	22,000			531	3,000	100
amping Unit				0			506	98,000	98
ime Mover				0			507		
ods		- to - Alexander		0			508	65,000	6
Imps-Sub Surface (BH)			509				532	5,500	
inks		and the proof		in the second second	510	35,800		the second second second	3
owlines					511 512	85,000			15
eater Treater/Separator					512	60,000	533	20,000	8
ectrical System ackers/Anchors/Hangers	414	0	514	66,000	513	00,000	534	2,000	6
ackers/Anchors/Hangers ouplings/Fittings/Valves	414 -	0	-	00,000	515	76,000	504	2,000	- 7
ehydration		0			515			· · · · ·	
ection Plant/CO2 Equipment					518				30
Imps-Surface	-	1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.1.	÷ .		521	6,250			
strumentation/SCADA/POC			2		522		529	7,000	
iscellaneous	419	0	519		523		535	3,000	-
ontingency	410	0	-		524		536		
eters/LACT			520		525	29,150		a the same of the same	2
ares/Combusters/Emission			Ľ.		526	15,000			1
as Lift/Compression			527	15,000		75,000	528		9
TOTAL TANGIBLES		1,002,000		150,300		541,665		213,500	1,90
TOTAL WELL COSTS		4,792,000	-	7,382,000		779,665		245,000	13,19

Date Prepared: 3/27/2018 for proposal

COG Operating LLC

By: PWS

Company: Scratch Properties, LLC
By:

We approve: _____% Working Interest

Printed Name: Title:

Date:

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

YELL NAME: FASCINATOR FED COM 704H HL: 210 FNL & 980 FWL				PROSPECT NAME STATE & COUNTY		New Mexico, Lea			
HL: 200 FSL & 1130 FWL ORMATION: WOLFBONE POOL	_			OBJECTIVE: DEPTH:		DRILL AND COMPL 22,700	ETE		
GAL: SEC 30-31 T24S-R35E	Q1			TVD:		12,889			
		Drlg - Rig			_	Tank Btty		Pmpg	
TANGIBLE COSTS e/Curative/Permit	201	Release(D) 11,000		Completion(C)		Constrctn(TB)		Equipment(PEQ)	TOTA
urance	202		302				1		
mages/Right of Way	203	5,000	303		351				
vey/Stake Location	204	6,000			352		1		6
cation/Pits/Road Expense	205	120,000	305	10,000	353	31,000	366		161
Iling / Completion Overhead	206	13,800	306				1		13
rnkey Contract	207	0	307	1,397,000			- 1		1,397
otage Contract	208	0	308	781,000					781
ywork Contract	209	1,000,000	309	1,177,000			1	and the second second	2,177
rectional Drilling Services	210	398,000	310	150,000			- 0		548
el & Power	211		311	5,000	354		367		268
ater	212 _	60,000	312	855,000			368		915
s	213	133,200	313	4,500		and the second	369		137
ud & Chemicals	214 -	275,000	314	25,000			370		300
ill Stem Test	215	0	315	·			3		-
ring & Analysis	216	0					3		-
ment Surface	217	28,000					- 3		28
ment Intermediate ment 2nd Intermediate/Production	218 -	75.000		the state and the s			3		75
ement Squeeze & Other (Kickoff Plug)	219 220	115,000		** ***			374		115
pat Equipment & Centralizers	220 -	45,000					371		
asing Crews & Equipment	221 -	60,000							45
shing Tools & Service	222	0,000	323				372		60
eologic/Engineering	223	0	323		355	· · · · · · · · · · · · · · · · · · ·	373		-
ontract Labor	224	5,500	325	8,200	356	72,000	374	6,500	
ompany Supervision	225	82,800	326	15,000	357	12,000	375	0,000	92
ontract Supervision	220 -	151,000	327	204,000	358		376	5,000	360
esting Casing/Tubing	228	20,000	328	10,000	200		377	0,000	300
ud Logging Unit	229	52,000	329				1		52
gging	230	0	OLO				378		
erforating/Wireline Services	231	4,000	331	515,000		*** *** ******************************	379		519
imulation/Treating			332	397,000			380		397
ompletion Unit	. 1		333	138,000			381	10,000	148
vabbing Unit			334				382		-
entals-Surface	235	190,000	335	310,000	359		383	7,000	507
entals-Subsurface	236	150,000	336	55,000			384		205
ucking/Forklift/Rig Mobilization	237	120,000	337	20,000	360		385	3,000	143
elding Services	238	4,000	338	5,000	361		386		9
ater Disposal	239	0	339	60,000	362	135,000	387		195
ug to Abandon	240	0	340				- 0		· · · · · · · · · · · · · · · · · · ·
eismic Analysis	241	0	341						
scellaneous	242	0	342	· · · · · · · · · · · · · · · · · · ·			389		
ontingency	243	68,700	343	250,000	363		390		318
osed Loop & Environmental	244 _	330,000	344	5,000	364		388		335
pil Tubing	8 5	and the second se	346	462,000			3		462
owback Crews & Equip	-		347	325,000			-		325
fset Directional/Frac	248 -	0	348	48,000			- 24		48
TOTAL INTANGIBLES	: :	3,790,000		7,231,700		238,000	72	31,500	11,291
ANGIBLE COSTS	404	70.000							
Inface Casing	401	73,000					30	the second s	73
termediate Casing	402	421,000		**************************************		the second second	13		421
oduction Casing/Liner	403 _	433,000	504	47.300			530	10.000	433
ibing ellhead Equipment	405	75,000	504 505	22,000			530 531	3,000	100
Imping Unit	+00	13,000	505	0			506	98,000	98
ime Mover	< 18			0		••••••••••••••••	500	20,000	- 30
bds	•2 ==						508	65,000	- 65
Imps-Sub Surface (BH)	· ·		509				532	5,500	t
intps-sub surface (BH)			200	1200-026.8-0	510	35,800		5,000	35
owlines	-				511	85,000			
eater Treater/Separator	AL AS	the second of the			512	159,465			159
ectrical System	: i				513	60,000	533	20,000	80
ackers/Anchors/Hangers	414	0	514	66,000			534	2,000	68
puplings/Fittings/Valves	415	0			515	76,000			70
ehydration					517				-
ection Plant/CO2 Equipment					518				S
Imps-Surface					521	6,250		1. Sec	
strumentation/SCADA/POC					522		529	7,000	
scellaneous	419	0	519		523		535	3,000	
ontingency	420	0	520		524		536		
eters/LACT	Q - Q				525	29,150			2
ares/Combusters/Emission					526	15,000			1
as Lift/Compression	1 1		527	15,000	516		528		9
TOTAL TANGIBLES		1,002,000		150,300		541,665		213,500	1,90
TOTAL WELL COSTS		4,792,000		7,382,000	-	779,665		245,000	13,19
% of Total Well Cos	:	36%		56%		6%		2%	
OG Operating LLC									

We approve:

____% Working Interest

Company:	Energen Resources Corporation
By:	
Printed Name:	
Printed Name: Title:	

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

By: PWS

			ITY F	ERATING LLC OR EXPENDITURE RILLING					
WELL NAME: FASCINATOR FED COM 704H				PROSPECT NAME		BULLDOG 717008			
SHL: 210 FNL & 980 FWL				STATE & COUNTY		New Mexico, Lea	_		
BHL: 200 FSL & 1130 FWL				OBJECTIVE:		DRILL AND COMP	ETE		
FORMATION: WOLFBONE POOL				DEPTH:	_	22,700		•	
LEGAL: SEC 30-31 T24S-R35E	e .			TVD:		12,889			
				110.	-	12,000			
INTANGIBLE COSTS		<u>Drlg - Rig</u> Release(D)		Completion(C)		Tank Btty Constrctn(TB)		Pmpg Equipment(PEQ)	TOTAL
Title/Curative/Permit	201	11,000							11,000
Insurance	202	4,000	302						4,000
Damages/Right of Way	203	5,000	303		351				5,000
Survey/Stake Location	204	6,000			352				6,000
Location/Pits/Road Expense	205	120,000	305	10,000	353	31,000	366		161,000
Drilling / Completion Overhead	206	13,800							13,800
Turnkey Contract	207	0		1,397,000					1,397,000
Footage Contract	208	0		781,000					781,000
Daywork Contract	209	1,000,000	309	1,177,000					2,177,000
Directional Drilling Services	210	398,000	310	150,000					548,000
Fuel & Power	211	263,000	311	5,000	354		367		268,000
Water	212	60,000	312	855,000			368		915,000
Bits	213	133,200	313	4,500			369		137,700
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
Cernent 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	45,000							45,000
Casing Crews & Equipment	222	60,000							60,000
Fishing Tools & Service	223	0					372		0
Geologic/Engineering	224	0	324		355		373		0
Contract Labor	225	5,500		8,200	356	72,000	374	6,500	92,200
Company Supervision	226	82,800	326	15,000	357		375		97,800
Contract Supervision	227	151,000		204,000	358		376	5,000	360,000
Testing Casing/Tubing	228	20,000		10,000			377		30,000
Mud Logging Unit	229	52,000	329						52,000
Logging	230	0					378		0
Perforating/Wireline Services	231	4,000		515,000			379		519,000
Stimulation/Treating			332	397,000			380		397,000
Completion Unit	e 4		333	138,000			381	10,000	148,000
Swabbing Unit			334				382		0
Rentals-Surface	235	190,000		310,000	359		383	7,000	507,000
Rentals-Subsurface	236	150,000		55,000			384		205,000
Trucking/Forklift/Rig Mobilization	237	120,000		20,000	360		385	3,000	143,000
Welding Services	238	4,000		5.000	361		386		9,000
Water Disposal	239	0	t 3	60,000	362	135,000	387		195,000
Plug to Abandon	240	0							0
Seismic Analysis	241	0							0
Miscellaneous	242	0					389	· · · · · · · · · · · · · · · · · · ·	0
Contingency	243	68,700		250,000	363		390		318,700
Closed Loop & Environmental	244	330,000		5,000	364		388		335,000
Coil Tubing	. 1	State of the second	346	462,000		the second s			462,000
Flowback Crews & Equip	1		347	325,000					325,000
Offset Directional/Frac	248	0	348	48,000					48,000
TOTAL INTANGIBLES		3,790,000		7,231,700		238,000		31,500	11,291,200

TANGIBLE COSTS
Surface Casing

Surface Casing	401	73,000							73,000
Intermediate Casing	402	421,000							421,000
Production Casing/Liner	403	433,000							433,000
Tubing			504	47,300			530	10,000	57,300
Wellhead Equipment	405	75,000	505	22,000			531	3,000	100,000
Pumping Unit				0			506	98,000	98,000
Prime Mover				0			507		0
Rods				0			508	65,000	65,000
Pumps-Sub Surface (BH)			509				532	5,500	5,500
Tanks					510	35,800			35,800
Flowlines			100		511	85,000			85,000
Heater Treater/Separator					512	159,465			159,465
Electrical System					513	60,000	533	20,000	80,000
Packers/Anchors/Hangers	414	0	514	66,000			534	2,000	68,000
Couplings/Fittings/Valves	415	0			515	76,000			76,000
Dehydration					517				0
Injection Plant/CO2 Equipment					518				0
Pumps-Surface			1.1		521	6,250			6,250
Instrumentation/SCADA/POC					522		529	7,000	7,000
Miscellaneous	419	0	519		523		535	3,000	3,000
Contingency	420	0	520		524		536		0
Meters/LACT					525	29,150			29,150
Flares/Combusters/Emission					526	15,000			15,000
Gas Lift/Compression			527	15,000	516	75,000	528		90,000
TOTAL TANGIBLES		1,002,000		150,300		541,665		213,500	1,907,465
TOTAL WELL COSTS		4,792,000	-	7,382,000		779,665	-	245,000	13,198,665
% of Total Well Cost		36%		56%		6%		2%	

Date Prepared: 3/27/2018 for proposal

COG Operating LLC

By: PWS

Company: By:	Energex, LLC
By:	

We approve: _____% Working Interest

Printed Name:

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

WELL NAME: FASCINATOR FED COM 704H SHL: 210 FNL & 980 FWL				PROSPECT NAME		BULLDOG 717008			
BHL: 200 FSL & 1130 FWL			_	STATE & COUNTY OBJECTIVE:	:	New Mexico, Lea DRILL AND COMPI	ETE		
FORMATION: WOLFBONE POOL				DEPTH:		22,700			
LEGAL: SEC 30-31 T24S-R35E				TVD:		12,889			
·		Drlg - Rig				Tank Btty		Depart	
INTANGIBLE COSTS		Release(D)		Completion(C)		Constrctn(TB)		<u>Pmpg</u> Equipment(PEQ)	TOTAL
Title/Curative/Permit	201	11,000							11,000
	202	4,000			8 8				4,000
Damages/Right of Way Survey/Stake Location	203	5,000	303	(AT 2)	351				5,000
Location/Pits/Road Expense	204 205	6,000	305	10,000	352 353		366	-	6,000
Drilling / Completion Overhead	205	13,800	306	10,000	303		300		161,000
Turnkey Contract	207	0	307	1,397,000	-				1,397,000
Footage Contract	208	0	308	781,000	-				781,000
Daywork Contract	209	1,000,000	309	1,177,000	3				2,177,000
Directional Drilling Services	210	398,000	310	150,000					548,000
Fuel & Power Water	211 212	263,000	311 312	5,000	354		367 368	-	268,000
Bits	212	133,200	313	4,500	e -		369		915,000
Mud & Chemicals	214	275,000	314	25,000	5		370		300,000
Drill Stem Test	215	0	315						0
Coring & Analysis	216	0			li E				0
Cement Surface	217	28,000			1				28,000
Cement Intermediate Cement 2nd Intermediate/Production	218	75,000						-	75,000
Cement 2nd Intermediate/Production Cement Squeeze & Other (Kickoff Plug)	219 220	115,000					371		115,000
Float Equipment & Centralizers	220	45,000				1	571		45,000
Casing Crews & Equipment	222	60,000			i -				60,000
Fishing Tools & Service	223	0					372		0
Geologic/Engineering	224	0	324		355		373		0
Contract Labor	225	5.500	325	8,200	356	72,000	374	6,500	92,200
Company Supervision Contract Supervision	226 227	82,800	326 327	15,000 204,000	357 358	·	375 376	E 000	97,800
Testing Casing/Tubing	227	20,000	327 328	10,000	000	1	376	5,000	360,000
Mud Logging Unit	229	52,000	329		2				52,000
Logging	230	0			Į –		378		0
Perforating/Wireline Services	231	4.000	331	515,000	2 8		379		519,000
Stimulation/Treating		and the second second	332	397,000			380		397,000
Completion Unit			333	138,000	6		381	10,000	148,000
Swabbing Unit Rentals-Surface	235	190,000	334 335	310,000	359		382 383	7,000	0 507,000
Rentals-Subsurface	236	150.000	336	55,000	000		384		205,000
Trucking/Forklift/Rig Mobilization	237	120,000	337	20,000	360		385	3,000	143,000
Welding Services	238	4,000	338	5,000	361		386		9,000
Water Disposal	239	0		60,000	362	135,000	387		195,000
Plug to Abandon Seismic Analysis	240 241	0	340 341		6				0
Miscellaneous	241	0	342				389		0
Contingency	243	68,700		250,000	363	-	390		318,700
Closed Loop & Environmental	244	330,000	344	5,000	364		388		335,000
Coil Tubing			346	462,000	4			and the second	462,000
Flowback Crews & Equip			347	325,000	2				325,000
Offset Directional/Frac TOTAL INTANGIBLES	248	3,790,000	348	48,000 7,231,700	1	238,000		31,500	48,000
	8 8	0,190,000		7,231,100		230,000		51,500	11,231,200
TANGIBLE COSTS									
Surface Casing	401	73,000				and the second second			73,000
Intermediate Casing	402	421,000		• · · · · · · · · · · · · · · · · · · ·					421,000
Production Casing/Liner	403	433,000	504	47.000			500	40.000	433,000
Tubing Wellhead Equipment	405	75,000	504 505	47,300		1 2 2 2 4 4	530 531	10,000	57,300
Pumping Unit	100	10,000	000	0	i.		506	98,000	98,000
Prime Mover				0			507		0
Rods				0	ļ.		508	65,000	65,000
Pumps-Sub Surface (BH)		and the second second	509				532	5,500	5,500
Tanks					510	-			35,800
Flowlines Heater Treater/Separator				•	511 512	-			85,000
Electrical System					513		533	20,000	80,000
Packers/Anchors/Hangers	414	0	514	66,000			534	2.000	68,000
Couplings/Fittings/Valves	415	0			515				76,000
Dehydration					517				0
Injection Plant/CO2 Equipment					518 521				6 250
Pumps-Surface Instrumentation/SCADA/POC				the Constitution of the	521 522		529	7.000	6,250
Miscellaneous	419	0	519		523		535	3.000	3,000
Contingency	420	0			524	-	536		0
Meters/LACT		a and a second of			525				29,150
Flares/Combusters/Emission			507		526		500		15,000
Gas Lift/Compression TOTAL TANGIBLES		1.002.000	527	15,000	-	541,665	528	213,500	90,000
TOTAL WELL COSTS		4,792,000		7,382,000		779,665		245,000	13,198,665
% of Total Well Cost		36%		56%		6%		2%	
COG Operating LLC		3.2							
		Date Prepared:	3/27/	2018 for proposal					
		Date i Tepaleu.	JIZII	2010 IOI PIOPOSAL	2				
		COG Operating LLC							
We approve:									
% Working Interest		By: PWS						-0	
Company: Chevron U. S. A. Inc. By:									
Printed Name:									
Title:		This AFE is only an esti	mate.	By signing you agree to	pay y	our share			

Title: Date:

HL: 210 FNL & 980 FWL			_	PROSPECT NAME STATE & COUNTY	_	BULLDOG 717008 New Mexico, Lea			
HL: 200 FSL & 1130 FWL				OBJECTIVE:		DRILL AND COMPL	ETE		_
ORMATION: WOLFBONE POOL			_	DEPTH:		22,700			
GAL: SEC 30-31 T24S-R35E	-0			TVD:	_	12.889	_		_
				TVD.		12,009			
		Drig - Rig				Tank Btty		Pmpg	
TANGIBLE COSTS		Release(D)		Completion(C)		Constrctn(TB)		Equipment(PEQ)	TOTA
e/Curative/Permit	201	11,000						adaibinouti adi	1
urance	202	4,000	302						
mages/Right of Way	203	5,000			351				
vey/Stake Location	204	6,000			352				
cation/Pits/Road Expense	205	120,000	305	10,000	353	31,000	366		
lling / Completion Overhead	- 205 -		£	10,000	353	31,000	300		16
	-	13,800	-						1
nkey Contract	_ 207 _	0	6	1,397,000					1,39
tage Contract	208	0	308	781,000					
work Contract	209	1,000,000	309	1,177,000					2,17
ectional Drilling Services	210	398,000	310	150,000					54
el & Power	211	263,000	311	5,000	354		367		26
ter	212	60,000	312	855,000			368		91
3	213	133,200		4,500			369		13
d & Chemicals	214	275,000							
				25,000		· · · · · · · · · · · · · · · · · · ·	370		30
I Stem Test	215 -	0	315						
ing & Analysis	216	0							
nent Surface	217	28,000							2
nent Intermediate	218	75,000							7
nent 2nd Intermediate/Production	219	115,000							11
nent Squeeze & Other (Kickoff Plug)	220	0					371		<u> </u>
at Equipment & Centralizers	221	45,000	5			· · · · · · · · · · · · · · · · · · ·	511)
	-								4
sing Crews & Equipment	- 222 -	60,000							e6
hing Tools & Service	223	0					372		-
ologic/Engineering	_ 224 _	0	324		355		373		
ntract Labor	225	5,500	325	8,200	356	72,000	374	6,500	g
mpany Supervision	226	82,800	326	15.000	357		375	· · · · · · · · · · · · · · · · · · ·	9
ntract Supervision	227	151,000	327	204,000	358		376	5,000	36
sting Casing/Tubing	228	20,000	328	10,000			377		3
Id Logging Unit	229		F .	10,000			511		-
	-	52,000	329				8		5
gging	230	0	2				378	· · · · · · · · · · · · · · · · · · ·	-
rforating/Wireline Services	231	4,000	331	515,000			379	v	51
mulation/Treating			332	397,000			380		39
Impletion Unit			333	138,000			381	10,000	14
vabbing Unit			334				382		-
entals-Surface	235	190.000	335	310,000	359		383	7,000	50
entals-Subsurface	236	150,000	÷	55,000			384		20
	- 230 -		e		200				
ucking/Forklift/Rig Mobilization		120,000	337	20,000	360		385	3,000	14
elding Services	238	4,000		5,000	361		386		
ater Disposal	239	0	339	60,000	362	135,000	387		19
ug to Abandon	240	0	340						
ismic Analysis	241	0	341						
scellaneous	242	0	342				389		
ntingency	243	68,700	343	250,000	363	-	390		31
osed Loop & Environmental	244	330,000		5,000	364		388		33
		000,000	346		504		300		-
il Tubing			•	462,000					46
owback Crews & Equip			347	325,000					32
fset Directional/Frac	248	0	348	48,000					4
TOTAL INTANGIBLES		3,790,000		7,231,700		238,000		31,500	11,29
ANGIBLE COSTS									
Inface Casing	401	73,000							7
ermediate Casing	402	421,000	1	·		· · · · · · · · · · · · · · · · · · ·			42
oduction Casing/Liner	- 403 -	433,000							43
bing			504	47,300			530	10,000	5
ellhead Equipment	405	75,000	505	22,000			531	3.000	10
Imping Unit				0			506	98,000	9
me Mover				0			507		-
ods	- 1			0			508	65,000	6
mps-Sub Surface (BH)		S 10 5 1 1 1	509				532	5,500	-
nks	-				510	35,800		0,000	
				· · · · · · · · · · · · · · · · · · ·					
wlines					511	85,000			
ater Treater/Separator					512	159,465			15
ectrical System					513	60,000	533	20,000	
ckers/Anchors/Hangers	414	0	514	66,000			534	2,000	
uplings/Fittings/Valves	415	0			515	76,000			· · · ·
hydration					517	e			
ection Plant/CO2 Equipment					518				
	÷ ÷	1		the second second					-
mps-Surface					521	6,250	P • -		
trumentation/SCADA/POC	2 i 2				522		529	7,000	š
scellaneous	419	0	519		523		535	3,000	
ntingency	420	0	520		524	· · · · · · · · · · · · · · · · · · ·	536	· · · · · · · · · · · · · · · · · · ·	
ters/LACT					525	29,150			
res/Combusters/Emission	- 1			Training the second	526	15,000		1 1/1 1/1 1/1 1/1 1/1 1/2	Se
	-		527	15,000	516	75,000	528		
as Lift/Compression	-	1,002,000			210		J20	040 500	_
as Lift/Compression				150,300		541,665		213,500	1,90
TOTAL TANGIBLES	-		-						
		4,792,000	-	7,382,000		779,665		245,000	13,19

Date Prepared: 3/27/2018 for proposal

COG Operating LLC

By: PWS

We approve: ____% Working Interest

Burlington Resources Oil and Gas Company, LP

Company: By: Printed Name:

Title:	
Date:	

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

HL: 210 FNL & 980 FWL HL: 200 FSL & 1130 FWL				PROSPECT NAME: STATE & COUNTY: OBJECTIVE:		New Mexico, Lea DRILL AND COMPL	ETE	5	
DRMATION: WOLFBONE POOL				DEPTH:		22,700	_ ()		
GAL: SEC 30-31 T24S-R35E				TVD:		12,889			
		Drlg - Rig			_	Tank Btty	_	Pmpg	_
TANGIBLE COSTS		Release(D)		Completion(C)		Constrctn(TB)		Equipment(PEQ)	TOTAL
e/Curative/Permit urance	201	11,000	202						11,
mages/Right of Way	202 203		302 303		351				4,
rvey/Stake Location	204	6,000			352				6,
cation/Pits/Road Expense	205	120,000	305	10,000	353	31,000	366		161,
lling / Completion Overhead	206	13,800	306						13,
mkey Contract	207	0	307	1,397,000		and the second			1,397,
otage Contract	208 209	1,000,000	308 309	781,000					781,
ectional Drilling Services	210	398,000	310	150,000		11			<u>2,177,</u> 548,
el & Power	211		311	5,000	354		367		268,
iter	212	60,000	312	855,000			368		915,
	213		313	4,500			369		137,
d & Chemicals	214		314 315	25,000			370		
ring & Analysis	215 216	0	315			********			
nent Surface	217	28,000							28,
nent Intermediate	218	75,000							75,
nent 2nd Intermediate/Production	219	115,000							115,
nent Squeeze & Other (Kickoff Plug)	220	0					371		
at Equipment & Centralizers	221	45,000							45,
ing Crews & Equipment	222 223	60,000	323				372		60,
logic/Engineering	223	0	323 324		355	•	372		<u></u>
tract Labor	225	5,500	325	8,200	356	72,000	374	6,500	92
npany Supervision	226	82,800	326	15,000	357	-	375		97,
tract Supervision	227	151,000	327	204,000	358		376	5,000	360
ting Casing/Tubing	228		328	10,000		· · · · · · · · · · · · · · · · · · ·	377		30
d Logging Unit	229	52,000	329				270		52,
ging forating/Wireline Services	230 231	4.000	331	515,000			378 379		519,
nulation/Treating	201	4,000	332	397,000			380		397,
npletion Unit			333	138,000			381	10.000	148
abbing Unit			334				382		
tals-Surface	235	190,000	335	310,000	359		383	7,000	507,
tals-Subsurface	236	150,000	336	55,000			384		205
cking/Forklift/Rig Mobilization	237 238	120,000	337 338	20,000	360 361		385 386	3,000	
lding Services ter Disposal	230	4,000	339	60,000	362	135,000	387	ni internet interne	195
g to Abandon	240		340		001	100,000	007		
smic Analysis	241	0	341						
cellaneous	242	0	342				389		
ntingency	243	68,700	343	250,000	363		390		318
sed Loop & Environmental	244	330,000	344 346	462,000	364		388	·	335
I Tubing wback Crews & Equip			340 347	325,000		and the second second			325
set Directional/Frac	248	0		48,000					48
TOTAL INTANGIBLES		3,790,000		7,231,700		238,000		31,500	11,291
NGIBLE COSTS									70
face Casing	401 402	73,000							421
ermediate Casing. duction Casing/Liner	402	433,000						10 - 10 - 10 - 10 - 10 - 10 - 10 - 10 -	433
Ding			504	47,300			530	10,000	57
Ilhead Equipment	405	75,000	505	22,000			531	3,000	100
nping Unit				0			506	98,000	98
ne Mover				0			507		
ds	e a	and a second	500	0			508	65,000	65
nps-Sub Surface (BH)	ы р		509		510	35,800	532	5,500	5
wlines					510	85,000			85
ater Treater/Separator	1				512				159
ctrical System	į (513	60,000	533	20,000	80
ckers/Anchors/Hangers	414	0	514	66,000			534	2,000	68
uplings/Fittings/Valves	415	0	2		515 517				76
hydration ection Plant/CO2 Equipment			9. j		517 518			÷	
mps-Surface	-				521	6,250			6
rumentation/SCADA/POC	i i		2		522		529	7,000	7
cellaneous	419	0			523		535	3,000	3
ntingency	420	0	520		524		536		
ers/LACT	5: h		8 8		525 526				
es/Combusters/Emission	e 2		527	15,000			528		90
	- 2	1,002,000	~~!	150,300	2.0	541,665		213,500	1,907
TOTAL WELL COSTS	- 7	4,792,000	8	7,382,000		779,665		245,000	13,198
% of Total Well Cos	t	36%		56%		6%		2%	
		D.I. D	3/27/	2018 for proposal					
			JILII	La ra la propusal					
	2	Date Prepared:							
	-	COG Operating LLC							
G Operating LLC									
G Operating LLC	-							₹.	

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

_

Printed Name: Title: Date:

WELL NAME:	FASCINATOR FED COM 704H	PROSPECT NAME:	BULLDOG 717008	
SHL:	210 FNL & 980 FWL	STATE & COUNTY:	New Mexico, Lea	
BHL:	200 FSL & 1130 FWL	OBJECTIVE:	DRILL AND COMPLETE	
FORMATION:	WOLFBONE POOL	DEPTH:	22,700	
LEGAL:	SEC 30-31 T24S-R35E	TVD:	12,889	

le/Curative/Permit surance amages/Right of Way urvey/Stake Location cation/Pits/Road Expense	201 202 203	11,000 4,000 5,000	302 303						<u>11,0</u> 4,0
amages/Right of Way Irvey/Stake Location	203			·					4.0
rvey/Stake Location		5.000	202						
			303		351				5,0
cation/Pits/Road Expense	204	6.000			352				6,0
	205	120,000	305	10,000	353	31,000	366		161,0
illing / Completion Overhead	206	13,800	306						13,8
Inkey Contract	207	0	307	1,397,000					1,397,0
otage Contract	208	0	308	781,000				and the second se	781,0
aywork Contract	209	1,000,000	309	1,177,000					2,177,0
rectional Drilling Services	210	398,000	310	150,000					548,
el & Power	211	263.000	311	5,000	354		367		268,
ater	212				004	The second se			
			312	855,000			368		915,
s	213	133,200	313	4,500			369		137,
ud & Chemicals	214	275,000	314	25,000		a transferrar and the stand	370		300,
ill Stem Test	215	0	315						
pring & Analysis	216	0	010					-	
ement Surface	217	28,000							28,
ment Intermediate	218	75,000				and the second se			75,
ment 2nd Intermediate/Production	219	115,000		1		1		-	115,
ement Squeeze & Other (Kickoff Plug)	220	0					374		
						and the second second	371		
pat Equipment & Centralizers	221	45,000							45,
asing Crews & Equipment	222	60,000							60,
shing Tools & Service	223	0	323				372		
					255			-	
eologic/Engineering	224	0	324		355		373		
ntract Labor	225	5,500	325	8,200	356	72,000	374	6,500	92,
ompany Supervision	226	82,800	326	15,000	357		375		97,
ontract Supervision	227	151,000	327	204,000	358		376	5,000	360
		-						5,000	-
esting Casing/Tubing	228	20,000	328	10,000			377		
ud Logging Unit	229	52,000	329					Concern State	52
gging	230	0					378		
erforating/Wireline Services	231	4,000	331	515.000			379		519
*	201	4,000				÷			
mulation/Treating			332	397,000			380		397
ompletion Unit		1000 - 100 -	333	138,000			381	10,000	148
vabbing Unit			334			1	382		
entals-Surface	235	190,000	335	310,000	359		383	7,000	507,
					000				-
entals-Subsurface	236	150,000	336	55,000			384		205,
ucking/Forklift/Rig Mobilization	237	120,000	337	20,000	360		385	3,000	143,
elding Services	238	4,000	338	5,000	361		386		9,
ater Disposal	239	0	339	60,000	362	135,000	387	8	195,
					002	100,000	007		
ug to Abandon	240	0	340					and the second second	
eismic Analysis	241	0	341						
scellaneous	242	0	342				389		
ontingency	243	68,700	343	250,000	363		390		318
osed Loop & Environmental	244	330,000	344	5,000	364		388		335
pil Tubing			346	462,000		and the second		and the second sec	462
owback Crews & Equip			347	325,000					325
fset Directional/Frac	248	0	348	48,000					48
TOTAL INTANGIBLES		3,790,000		7,231,700		238,000		31,500	11,291,
		0.100,000						01,000	
								×	
ANGIBLE COSTS									
urface Casing	401	73,000		and the second se					73,
ermediate Casing	402	421,000							421
oduction Casing/Liner	403	433,000							433,
	-103	400,000					E.0.0	40.000	
ibing			504	47,300			530	10,000	57,
ellhead Equipment	405	75,000	505	22,000			531	3,000	100
umping Unit				0			506	98,000	98
ime Mover		the second second		0		1	507		
	e -			the second se				0E 000	
ods	i i	242-215-24 A		0			508	65,000	65
umps-Sub Surface (BH)			509				532	5,500	5
anks					510	35,800			35
owlines					511				85
								11	159
eater Treater/Separator		and the second second			512				
ectrical System	-:			the second s	513	60,000	533	20,000	80
ackers/Anchors/Hangers	414	0	514	66,000			534	2,000	68
ouplings/Fittings/Valves	415	0			515	76,000			76
				**************************************	517				
ehydration			0					**************************************	
ection Plant/CO2 Equipment		and the second second second			518			the second s	
Imps-Surface	× 1				521	6,250			6
strumentation/SCADA/POC			2		522		529	7,000	7
				-					
iscellaneous	419	0	•		523		535	3,000	3
ontingency	420	0	520		524		536		
eters/LACT				the second s	525	29,150			29
			2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	526				
ares/Combusters/Emission	•						500		
as Lift/Compression			527	15.000	516		528		90
TOTAL TANGIBLES	-	1,002,000		150,300		541,665		213,500	1,907
TOTAL WELL COSTS	•	4,792,000		7,382,000		779,665		245,000	13,198
IUTAL WELL CUSTS		4,/92,000		1,302,000		119,005		243,000	10,100
% of Total Well Cost		36%		56%		6%		2%	
DG Operating LLC									
		Date Prepared:	3/27/	2018 for proposal					
		COG Operating LLC							
e approve:		COG Operating LLC							

Сотрапу:	Barney L. Alsobrook
Ву:	
Printed Name:	
Printed Name: Title:	

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

VELL NAME:	FASCINATOR FED COM 704H 210 FNL & 980 FWL	1			PROSPECT NAME	_	BULLDOG 717008			
HL:	200 FSL & 1130 FWL				STATE & COUNTY		New Mexico, Lea	ETE		
ORMATION:	WOLFBONE POOL	_			OBJECTIVE: DEPTH:		DRILL AND COMPL 22,700	EIE		
EGAL:	SEC 30-31 T24S-R35E				TVD:		12,889	-		
							12,000	-		
			Drlg - Rig				Tank Btty		Pmpg	
TANGIBLE C			<u>Release(D)</u>		Completion(C)		Constrctn(TB)		Equipment(PEQ)	<u>TOTAI</u>
tle/Curative/Permi	t	201	11,000						and the second second	11,
surance	A/	202	4,000							4
amages/Right of V Irvey/Stake Locati			5,000	303		351 352				5
cation/Pits/Road I		204 -	120,000	305	10,000	352	31,000	266		6
rilling / Completion		205 -	13,800	306	10,000	303	31,000	366		
rnkey Contract		207	0		1,397,000					1,397,
otage Contract		208	0		781,000					781
aywork Contract		209	1,000,000	309	1,177,000					2,177
rectional Drilling S	Services	210	398,000	310	150,000					548
el & Power		211	263,000	311	5,000	354		367		268
ater		212	60,000		855,000			368		915
ts		213	133,200		4,500			369		137
ud & Chemicals		214	275,000		25,000			370		300
ill Stern Test		215	0	315						
oring & Analysis		216	0							
ement Surface	2	217	28,000	e -					-	28
ment Intermediat		218 -	75,000		States of the second					
	Other (Kickoff Plug)	219 -	115,000	-				371		115
at Equipment & C		220 -	45,000	1				5/1		45
asing Crews & Equ		222	60,000							<u>45</u> 60
shing Tools & Ser		223	0	323				372	-	0
eologic/Engineerin		224	0			355		373		
ontract Labor		225	5,500		8,200	356	72,000	374	6,500	92
ompany Supervisi	on	226	82,800		15,000	357		375		97
ontract Supervisio	n	227	151,000	327	204,000	358		376	5,000	360
esting Casing/Tubi	ing	228	20,000	328	10,000			377		30
ud Logging Unit		229	52,000	329						52
gging		230	0					378		
erforating/Wireline		231	4,000	331	515,000			379		519
imulation/Treating				332	397,000			380		397
ompletion Unit				333	138,000			381	10,000	148
wabbing Unit		-	1	334				382		
entals-Surface		235	190,000	335	310,000	359		383	7,000	507
entals-Subsurface		236	150,000		55.000	200		384		205
ucking/Forklift/Rig	Modilization	237	120,000		20,000			385	3,000	143
/elding Services /ater Disposal		238	4,000		5,000	361	425.000	386		9
lug to Abandon		239 240	0		60,000	362	135,000	387		195
eismic Analysis		240 -	0							
liscellaneous		242	0					389		
ontingency		243	68,700		250,000	363		390	()	318,
osed Loop & Envi	ronmental	244	330,000		5,000	364	7 *	388		335
oil Tubing				346	462,000					462
owback Crews & I	Equip			347	325,000					325
ffset Directional/Fr	rac	248	0	348	48,000					48
TOTAL INTANG	IBLES		3,790,000		7,231,700		238,000		31,500	11,291
ANGIBLE CO	<u>STS</u>									
urface Casing		401	73,000						······································	73
termediate Casing		402 -	421,000		and provide the second				the spectrum set	421
roduction Casing/L	liner	403 -	433,000							433
ubing Kollhood Equipmor		- 405 -	75.000	504 505	47.300			530	10,000	57
/ellhead Equipmer	n	405 -	75,000	505	22,000			531 506	3,000	100
umping Unit rime Mover			10.00	1	0			506 507	98,000	98
ods					0	1		507 508	65,000	65
umps-Sub Surface	e (BH)			509	0	8		532	5,500	5
anks		-				510	35,800	552	0,000	35
owlines		- 1		1		511	85,000			
eater Treater/Sepa	arator			[]		512	159,465			159
ectrical System				[]		513	60,000	533	20,000	80
ackers/Anchors/Ha	angers	414	0	514	66,000			534	2,000	68
ouplings/Fittings/V	/alves	415	0			515	76,000			76
ehydration						517				
jection Plant/CO2	Equipment		and a second second	1		518				
Imps-Surface						521	6,250			6
strumentation/SC/	ADA/POC					522		529	7,000	7
iscellaneous		419	0			523		535	3,000	3
ontingency		420	0	520		524		536		
eters/LACT		-	and the second second			525	29,150		Sector Sector	29
ares/Combusters/						526	15,000			15
as Lift/Compressi				527	15,000	516	75.000	528		90
TOTAL TANGIE		-	1,002,000		150,300		541.665		213,500	1,907
TOTAL	WELL COSTS		4,792,000		7,382,000		779,665		245,000	13,198
	07 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 - 5 -	`t	0001		2001				50/	
	% of Total Well C	.0SL	36%		56%		6%		2%	
OG Operating LLC	^									

COG Operating LLC

By: PWS

This AFE is only an estimate. By signing you agree to pay your share

We approve:

Printed Name: Title:

By:

Date:

____% Working Interest

Company: Flatland Mineral Fund, LP

of the actual costs incurred.

April 13, 2018

Marathon Oil Permian LLC 5555 San Felipe St. Houston, Texas 77056

Re: <u>Well Proposal – Fascinator Federal Com 705H</u> Sec 30: Lots 1-4 – T24S-R35E Sec 31: Lots 1-4 – T24S-R35E SHL: 210' FNL/ 920' FWL, or a legal location in Sec 30 (Lot 1) BHL: 200' FSL/ 710' FWL, or a legal location in Sec 31 (Lot 4) Lea County, New Mexico

Dear Sir/Madam:

COG Operating LLC ("COG"), as Operator, hereby proposes to drill the Fascinator 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 12,790' and a MD of approximately 22,600' to test the Wolfbone Pool ("Operation"). The total cost of the Operation is estimated to be \$13,198,665, 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 covers Sec 30: Lots 1-4 - T24S-R35E and Sec 31: Lots 1-4 - T24S-R35E. 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 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 proposes to acquire your interest via term assignment. It has the following general provisions:

- 3 year primary term
- Delivering a 75% NRI, proportionately reduced
- \$2,000 per net acre bonus consideration

The Term Assignment offer expires 5 p.m., Central Time, June 13, 2018, and it is subject to the approval of COG's management and verification of title.

If an agreement cannot be reached within 30 days of the date of this letter, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a spacing unit for the proposed well if uncommitted at such time.

BEFORE THE OIL CONSERVATION DIVISION Santa Fe, New Mexico Exhibit No. 21 Submitted by: COG OPERATING LLC Hearing Date: July 26, 2018 Case Nos. 16219 & 16220 If you have any questions, please contact the undersigned at (432) 685-2588 Mflanagan@concho.com.

Respectfully,

Megan L. Tipton

Date: _____

٠

Megan Tipton Landman

 I/We hereby elect to participate in the Fascinator Federal Com 705H.

 I/We hereby elect <u>not</u> to participate in the Fascinator Federal Com 705H.

Company:	
By:	
Dy.	
Name:	
Title:	

One Concho Center | 600 West Illinois Avenue | Midland, Texas 79701 | P 432.663 7443 | F 432.683 7441



April 13, 2018

US Certified Mail No. 91 7199 9991 7038 1571 5052

The Estate of Barney L. Alsobrook, deceased 1405 E 17th Odessa, TX 79761

Re: <u>Well Proposal – Fascinator Federal Com 705H</u> Sec 30: Lots 1-4 - T24S-R35E Sec 31: Lots 1-4 - T24S-R35E SHL: 210' FNL/ 920' FWL, or a legal location in Sec 30 (Lot 1) BHL: 200' FSL/ 710' FWL, or a legal location in Sec 31 (Lot 4) Lea County, New Mexico

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

Please indicate your 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 lease your minerals under the following general terms:

- Bonus of \$2,000 /Net Mineral Acre
- 3 Year Primary Term
- 25% Royalty Interest

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

If an agreement cannot be reached within 30 days of the date of this letter, COG will apply to the New Mexico Oil Conservation Division for compulsory pooling of your interest into a spacing unit for the proposed well if uncommitted at such time.

One Conche Canter | 600 West Illinois Avenue | Midland, Texas 79701 | P 432 663 7443 | F 432 663 7441

If you have any questions, please contact the undersigned at (432) 685-2588 Mflanagan@concho.com.

Respectfully,

Megan L. Tipton

Megan Tipton Landman

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 I/We hereby elect to participate in the Fascinator Federal Com 705H.

 I/We hereby elect <u>not</u> to participate in the Fascinator Federal Com 705H.