



US Certified Mail - 01 7199 9991 7036 0804 9098

February 24 2017

Nadel and Gussman Delaware LLC
15 E 5th St
Tulsa OK 74103
Attn: Land Department

Re Well Proposal - Stove Pipe Federal Com #21H
Sec 6 E/2 E/2 T25S R35E
Sec 7 E/E E/2 T25S-R35E
SHL 409 FNL/ 476 FEL, or a legal location in Sec 6 (Unit A)
BHL 200 FSL/ 330 FEL or a legal location in Sec 7 (Unit P)
Lea County New Mexico

Dear Sir/Madam

COG Operating LLC (COG) as Operator proposes to drill the Stove Pipe Federal Com #21H well as a horizontal well at the above-captioned location to a TVD of approximately 12 729' and a MD of 22 500' to test the Wolfbone Pool (Operation). The total cost of the Operation is estimated to be \$11 160 667.00 and a detailed description of the cost is set out in the enclosed Authority for Expenditure (AFE).

COG is proposing to drill this well under the terms of the AAPL Form 610- 1989 Operating Agreement. The Operating Agreement covers Sec 6 E/2 E/2 and Sec 7 E/2 E/2 T25S R35E Lea County NM. A fully executable copy will be sent for your execution if you shall choose to participate with the following general provisions:

- 100/300 Non-consenting penalty
- \$7 000/\$700 Drilling and Producing rate
- COG Operating LLC named as Operator

If you do not wish to participate in the Operation, COG proposes to acquire your interest via farmout. The Farmout 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.

If you have any questions, please do not hesitate to contact the undersigned at 432 685 2588.

Respectfully

Megan Flanagan

Landman

O e Co ch Centre | 600 West Illinois Ave | Tulsa, OK 74101 | P 432 683 7443 | F 432 683 7441

BEFORE THE OIL CONSERVATION DIVISION
Santa Fe, New Mexico
Exhibit No. 5
Submitted by
COG OPERATING LLC
Hearing Date April 27, 2017

_____ I/We hereby elect to participate in the Stove Pipe Federal Com #21H

_____ I/We hereby elect not to participate in the Stove Pipe Federal Com #21H

Company _____

By _____

Name _____

Title _____

Date _____

**COG OPERATING LLC
AUTHORITY FOR EXPENDITURE
DRILLING**

WELL NAME	STOVE PIPE FEDERAL COM #21H	PROSPECT NAME	BULLDOG 2535 (717109)	S Lea Co UWC no PH 2M
SHL	SEC 8 409 FNL & 476 FEL	STATE & COUNTY	New Mexico, Lea	
BHL	SEC 7 200 FSL & 330 FEL	OBJECTIVE	DRILL & COMPLETE	
FORMATION	WOLFBONE	DEPTH	22,500	
LEGAL	6-25S-35E	TVD	12,729	

		Orig. Rig Release(D)	Completion(C)	Tank Bty Constrn(TB)	Pmpg Equipment(PEQ)	TOTAL
INTANGIBLE COSTS						
Total/Constrn/Permit	201	11,000				11,000
Insurance	202	0				0
Damages/Right of Way	203	5,000				5,000
Survey/Stake Location	204	8,000				8,000
Location/Plat/Road Expense	205	130,000	53,648	217,352	368	401,000
Drilling / Completion Overhead	208	10,500				10,500
Turnkey Contract	207	0	307			0
Footage Contract	208	0	308			0
Daywork Contract	209	595,000	309			595,000
Directional Drilling Services	210	245,000	310			245,000
Fuel & Power	211	81,000	311	5,000	354	86,000
Water	212	86,833	312	1,100,000	368	1,186,833
Bbs	213	114,000	313	4,500	369	118,500
Mud & Chemicals	214	140,000	314	25,000	370	165,000
Drill Stem Test	215	0	315			0
Coring & Analysis	216	0				0
Cement Surface	217	28,000				28,000
Cement Intermediate	218	40,000				40,000
Cement 2nd Intermediate/Production	219	80,000				80,000
Cement Squeeze & Other (Kickoff Plug)	220	55,000			371	55,000
Float Equipment & Centralizers	221	17,800				17,800
Casing Crows & Equipment	222	50,000				50,000
Fishing Tools & Service	223	0	323		372	0
Geologic/Engineering	224	0	324	356	373	0
Contract Labor	225	5,500	325	8,200	374	13,700
Company Supervision	226	83,000	326	30,000	375	113,000
Contract Supervision	227	103,000	327	85,000	376	188,000
Testing Casing/Tubing	228	20,000	328	10,000	377	30,000
Mud Logging Unit	229	39,000	329		378	39,000
Logging	230	25,000			379	25,000
Perforating/Wireline Services	231	4,000	331	404,000	380	408,000
Stimulation/Treating			332	3,200,000	381	3,200,000
Completion Unit			333	138,000	382	1,500
Swabbing Unit			334		383	0
Rentals-Surface	235	190,000	335	315,000	384	5,100
Rentals-Subsurface	236	140,000	336	75,000	385	215,000
Trucking/Field/Rig Mobilization	237	140,000	337	20,000	386	160,000
Welding Services	238	4,000	338	5,000	387	9,000
Water Disposal	239	0	339	80,000	388	150,000
Plug to Abandon	240	0	340		389	0
Selismic Analysis	241	0	341		390	0
Miscellaneous	242	0	342		391	0
Contingency	243	48,000	343	125,000	392	173,000
Closed Loop & Environmental	244	198,000	344	5,000	393	203,000
Coil Tubing			345	500,000	394	500,000
Flowback Crows & Equip			346	98,000		98,000
Offset Directional/Frac	245	0	348			0
TOTAL INTANGIBLES		2,668,833	6,266,348	488,152	23,000	9,436,133

TANGIBLE COSTS						
Surface Casing	401	113,200				113,200
Intermediate Casing	402	528,000				528,000
Production Casing/Liner	403	380,000				380,000
Tubing			43,000		630	43,000
Wellhead Equipment	405	65,000	505	20,000	531	85,000
Pumping Unit					532	100,470
Prime Mover					533	0
Rods					534	45,000
Purges-Sub Surface (BH)			509		535	0
Tools				37,500	536	37,500
Flowlines				50,000	537	50,000
Master Treater/Separator				47,500	538	47,500
Electrical System				32,500	539	32,500
Packers/Anchors/Hangers	414	0	514	8,000	540	8,000
Couplings/Fittings/Valves	415	0		115,000	541	115,000
Dehydration					542	0
Injection Plant/CO2 Equipment					543	0
Pumps-Surface					544	0
Instrumentation/SCADA/PLC					545	4,000
Miscellaneous	419	0	519	40,000	546	40,000
Contingency	20	0	520		547	0
Materials/LACT				35,000	548	35,000
Flares/Combustors/Emission				25,000	549	25,000
Gas Lift/Compression			15,000	1,364	550	16,364
TOTAL TANGIBLES		1,098,200	84,000	363,864	180,470	1,724,534
TOTAL WELL COSTS		3,767,033	6,350,348	852,016	183,470	11,180,867

COG Operating LLC

% of Total Well Cost

34%

67%

8%

2%

Date Prepared 1/23/2017

COG Operating LLC

By: RSLKEN LAFORTUNE

We approve

% Working Interest

Company

By

Printed Name

Title

Date

