

August 13, 2015

Janet M. Hanley
5422 Beaver Lodge Drive
Kingwood, TX 77345

RE: Well Proposal - Bone Yard 11 Fee #11H
SL: 10' FSL & 130' FWL (Unit M)
BHL: 330' FNL & 330' FWL (Unit D)
Section 11, T20S, R25E, Eddy County, New Mexico

Dear Ms. Hanley:

COG Operating LLC ("COG"), as Operator, proposes to drill the Bone Yard 11 Fee #11H as a horizontal well at the above-captioned location or at an approved surface location within location unit letter M, to a depth of approximately 2880' TVD, 7825' MD to test the Yezo Formation ("Operation"). The total cost of the Operation is estimated to be \$2,786,000 and a detailed description of the cost is set out in the enclosed Authority for Expenditure ("AFE"). COG anticipates that it will spud the well in the second quarter of 2016.

COG is proposing to drill this well under the terms of a modified 1989 AAPL Model Form Operating Agreement ("OA") covering the W 1/4 of the W 1/4 of Section 11, T-20-S, R-25-E, with the following general provisions:

- 100/300 Non-consenting penalty
- \$6000 per month drilling rate - \$600 per month producing rate
- COG named as Operator
(a draft of our proposed OA is enclosed)

If you wish to participate in the Operation, please sign and return the AFE. If you desire to receive well information regarding the subject operations, please include a Well Information Requirements list with the AFE. Upon receipt of your signed AFE, we will send an executable copy of the OA.

If you do not wish to participate in the Operation, COG would like to acquire a Lease of your interest for the following general terms:


- Three year primary term
- 3/16 Royalty Interest, proportionately reduced
- \$150 per net acre bonus consideration

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

Please direct any technical questions to Carl Bird at 432-686-3057 and land questions to the undersigned at 432-685-4354.

Yours Truly,

COG Operating LLC



Stuart A. Dirks, CPL
Senior Landman

CORPORATE ADDRESS: One Concho Center 600 W Illinois Avenue Midland, Texas 79701 Phone 432.683.7443 Fax 432.683.7441

**COG OPERATING LLC
AUTHORITY FOR EXPENDITURE
DRILLING**

WELL NAME: BONE YARD 11 FEE #11H	PROSPECT NAME: LAKEWOOD/CEMETARY
SHL: 10' FSL 130' FWL (UL - M)	STATE & COUNTY: New Mexico, Eddy
BHL: 330' FNL 330' FWL (UL - D)	OBJECTIVE: Yeso Horizontal
FORMATION: Yeso	DEPTH: 7,825
LEGAL: T20S-R25E, SEC. 11	TVD: 2,880

INTANGIBLE COSTS		BCP	ACP	TOTAL
Title/Curative/Permit	201	11,000		11,000
Insurance	202	4,000	0	4,000
Damages/Right of Way	203	40,000	0	40,000
Survey/Stake Location	204	7,000	0	7,000
Location/Pits/Road Expense	205	85,000	25,000	110,000
Drilling / Completion Overhead	206	3,000	2,000	5,000
Turnkey Contract	207			0
Footage Contract	208			0
Daywork Contract (0 days /spud-rts @ \$0)	209	156,000	0	156,000
Directional Drilling Services (0 dir days @ \$0)	210	99,000		99,000
Fuel & Power	211	24,000	5,000	29,000
Water	212	29,000	85,000	114,000
Bits	213	20,000	5,000	25,000
Mud & Chemicals	214	34,000	0	34,000
Drill Stem Test	215		0	0
Coring & Analysis	216			0
Cement Surface	217	32,000		32,000
Cement Intermediate	218	0		0
Cement 2nd Intermediate/Production	218	0	38,000	38,000
Cement Squeeze & Other (Kickoff Plug)	220		0	0
Float Equipment & Centralizers	221	1,100	7,000	8,100
Casing Crews & Equipment	222	3,800	9,000	12,800
Fishing Tools & Service	223			0
Geologic/Engineering	224			0
Contract Labor	225	5,000	42,000	47,000
Company Supervision	226	2,000	2,000	4,000
Contract Supervision	227	18,000	46,000	64,000
Testing Casing/Tubing	228	2,400	4,500	6,900
Mud Logging Unit	229	18,000		18,000
Logging	230	18,000		18,000
Perforating/Wireline Services	231	1,500	118,000	119,500
Stimulation/Treating			824,000	824,000
Completion Unit			35,000	35,000
Swabbing Unit				0
Rentals-Surface	235	15,000	220,000	235,000
Rentals-Subsurface	236	26,000	15,000	43,000
Trucking/Forklift/Rig Mobilization	237	44,000	60,000	104,000
Welding Services	238	5,000	3,000	8,000
Water Disposal	239	0	20,000	20,000
Plug to Abandon	240	0	0	0
Seismic Analysis	241	0	0	0
Closed Loop & Environmental	244	42,000	0	42,000
Miscellaneous	242	0	0	0
Contingency 2%	243	15,110	32,500	47,610
TOTAL INTANGIBLES		763,000	1,598,000	2,361,000

TANGIBLE COSTS				
Surface Casing (8 5/8" 32# J55 LTC)	401	25,000		25,000
Intermediate Casing (8 5/8" 32# J55 LTC)	402	0	0	0
Production Casing (5 1/2" 17# L80)			109,000	109,000
Tubing			15,000	15,000
Wellhead Equipment	405	5,790	18,000	23,790
Pumping Unit			54,000	54,000
Prime Mover			0	0
Rods			11,000	11,000
Pumps			63,000	63,000
Tanks			19,000	19,000
Flowlines			11,000	11,000
Heater Treater/Separator			29,000	29,000
Electrical System			18,000	18,000
Packers/Anchors/Hangers	414	0	2,000	2,000
Couplings/Fittings/Valves	415	500	36,000	36,500
Gas Compressors/Meters			4,000	4,000
Dehydrator				0
Injection Plant/CO2 Equipment				0
Miscellaneous	419	500	4,000	4,500
Contingency	420	210	0	210
TOTAL TANGIBLES		32,000	393,000	425,000
TOTAL WELL COSTS		795,000	1,991,000	2,786,000

COG Operating LLC

By: Carl Bird

Date Prepared: 8/10/2015

We approve:

% Working Interest

COG Operating LLC

By:

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.