

**COG OPERATING LLC
AUTHORITY FOR EXPENDITURE
DRILLING**

WELL NAME: STONEWALL 9 FEE #1H	PROSPECT NAME: LAKEWOOD/CEMETARY
SHL: 300' FSL & 330' FWL UL-M	STATE & COUNTY: New Mexico, Eddy
BHL: 330' FNL & 330' FWL UL-D	OBJECTIVE: SH12 Yeso Horizontal
FORMATION: Glorieta Yeso	DEPTH: 7,415
LEGAL: SEC9 T19S-R26E	TVD: 3,100

INTANGIBLE COSTS	BCP	ACP	TOTAL
Title/Curative/Permit	201	10,000	10,000
Insurance	202	22,000	22,000
Damages/Right of Way	203	50,000	50,000
Survey/Stake Location	204	3,000	3,000
Location/Pits/Road Expense	205	60,000	85,000
Drilling / Completion Overhead	206	2,500	4,500
Turnkey Contract	207		0
Footage Contract	208		0
Daywork Contract (0 days f/spud-ris @ \$0)	209	225,000	270,000
Directional Drilling Services (0 dir days @ \$0)	210	190,000	190,000
Fuel & Power	211	57,000	69,000
Water	212	39,000	139,000
Bits	213	27,000	32,000
Mud & Chemicals	214	32,000	32,000
Drill Stem Test	215		0
Coring & Analysis	216		0
Cement Surface	217	48,000	48,000
Cement Intermediate	218	0	0
Cement 2nd Intermediate/Production	218	0	65,000
Cement Squeeze & Other (Kickoff Plug)	220	40,000	40,000
Float Equipment & Centralizers	221	2,000	32,000
Casing Crews & Equipment	222	5,000	17,000
Fishing Tools & Service	223		0
Geologic/Engineering	224	10,000	10,000
Contract Labor	225	20,000	41,000
Company Supervision	226	2,000	4,000
Contract Supervision	227	26,000	46,000
Testing Casing/Tubing	228	3,000	15,000
Mud Logging Unit (logging f/24 days)	229	14,000	14,000
Logging	230	25,000	25,000
Perforating/Wireline Services	231	3,500	53,500
Stimulation/Treating			750,000
Completion Unit			30,000
Swabbing Unit			0
Rentals-Surface	235	24,000	274,000
Rentals-Subsurface	236	44,000	119,000
Trucking/Forklift/Rig Mobilization	237	47,000	67,000
Welding Services	238	5,000	7,500
Water Disposal	239	0	40,000
Plug to Abandon	240	0	0
Seismic Analysis	241	0	0
Closed Loop & Environmental	244	113,000	113,000
Miscellaneous	242	0	0
Contingency 10%	243	115,000	272,500
TOTAL INTANGIBLES		1,264,000	2,990,000
TANGIBLE COSTS			
Surface Casing (8 5/8" 32# J55 LTC)	401	28,000	28,000
Intermediate Casing(2150' 8 5/8" 32# J55 LTC)	402	0	0
Production Casing (5 1/2" 17# L80)			122,000
Tubing			22,000
Wellhead Equipment	405	6,000	26,000
Pumping Unit			60,000
Prime Mover			20,000
Rods			12,000
Pumps			70,000
Tanks			21,000
Flowlines			8,000
Heater Treater/Separator			30,000
Electrical System			20,000
Packers/Anchors/Hangers	414	0	2,500
Couplings/Fittings/Valves	415	500	60,000
Gas Compressors/Meters			5,000
Dehydrator			0
Injection Plant/CO2 Equipment			0
Miscellaneous	419	500	1,000
Contingency	420	2,000	26,000
TOTAL TANGIBLES		37,000	534,000
TOTAL WELL COSTS		1,301,000	3,524,000

COG Operating LLC

By: Carl Bird

Date Prepared: 12/10/12

JJ

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 of the actual costs incurred.

EXHIBIT 4