COG OPERATING LLC
AUTHORITY FOR EXPENDITURE
DRILLING

WELL NAME:	Pilum 15 Fee 2H	PROSPECT NAME: LAKEWOOD/CEMETARY	
SHL:	701' FEL & 450' FSL; SEC16-18S-26E	STATE & COUNTY: New Mexico, Eddy	
BHL:	330' FSL & 1648' FEL; SEC15-18S-26E	OBJECTIVE:	SH9 Yeso Horizontal
FORMATION:	YESO	DEPTH:	7,615
LEGAL:	SEC 15 TWP 18S RGE 26E	TVD:	2,685

INTANGIBLE COSTS		**BCP**		**ACP**	**TOTAL**
Title/Curative/Permit	201	11,000			11,000
Insurance	202	22,000	302	0	22,000
Damages/Right of Way	203	50,000	303	0	50,000
Survey/Stake Location	204	7,000	304	0	7,000
Location/Pits/Road Expense	205	85,000	305	25,000	110,000
Drilling / Completion Overhead	206	6,000	306	2,000	8,000
Turnkey Contract	207		307		0
Footage Contract	208		308		0
Daywork Contract (0 days f/spud-rls @ $0)	209	145,000	309	29,000	174,000
Directional Drilling Services (0 dir days @ $0)	210	125,000	310		125,000
Fuel & Power	211	30,000	311	6,000	36,000
Water	212	24,000	312	120,000	144,000
Bits	213	25,000	313	5,000	30,000
Mud & Chemicals	214	19,000	314	0	19,000
Drill Stem Test	215		315	0	0
Coring & Analysis	216				0
Cement Surface	217	54,000			54,000
Cement Intermediate	218	0			0
Cement 2nd Intermediate/Production	218	0	319	55,000	55,000
Cement Squeeze & Other (Kickoff Plug)	220		320	0	0
Float Equipment & Centralizers	221	2,000	321	20,000	22,000
Casing Crews & Equipment	222	5,000	322	12,000	17,000
Fishing Tools & Service	223		323		0
Geologic/Engineering	224	2,000	324		2,000
Contract Labor	225	35,000	325	21,000	56,000
Company Supervision	226	2,000	326	2,000	4,000
Contract Supervision	227	17,000	327	40,000	57,000
Testing Casing/Tubing	228	3,000	328	5,000	8,000
Mud Logging Unit (logging f/24 days)	229	17,000	329		17,000
Logging	230	20,000	330		20,000
Perforating/Wireline Services	231	1,500	331	95,000	96,500
Stimulation/Treating			332	925,000	925,000
Completion Unit			333	30,000	30,000
Swabbing Unit			334		0
Rentals-Surface	235	14,000	335	200,000	214,000
Rentals-Subsurface	236	23,000	336	15,000	38,000
Trucking/Forklift/Rig Mobilization	237	42,000	337	30,000	72,000
Welding Services	238	5,000	338	2,500	7,500
Water Disposal	239	0	339	30,000	30,000
Plug to Abandon	240	0	340	0	0
Seismic Analysis	241	0	341	0	0
Closed Loop & Environmental	244	50,000	344	0	50,000
Miscellaneous	242	0	342	0	0
Contingency 10%	243	85,500	343	167,500	253,000
TOTAL INTANGIBLES		927,000		1,837,000	2,764,000

TANGIBLE COSTS					
Surface Casing (8 5/8" 32# J55 LTC)	401	26,000			26,000
Intermediate Casing(2150' 8 5/8" 32# J55 LTC)	402	0	503	0	0
Production Casing (5 1/2" 17# L80)			503	109,000	109,000
Tubing			504	16,000	16,000
Wellhead Equipment	405	6,000	505	20,000	26,000
Pumping Unit			506	60,000	60,000
Prime Mover			507	20,000	20,000
Rods			508	12,000	12,000
Pumps			509	70,000	70,000
Tanks			510	21,000	21,000
Flowlines			511	12,000	12,000
Heater Treater/Separator			512	33,000	33,000
Electrical System			513	20,000	20,000
Packers/Anchors/Hangers	414	0	514	2,500	2,500
Couplings/Fittings/Valves	415	500	515	40,000	40,500
Gas Compressors/Meters			516	5,000	5,000
Dehydrator			517		0
Injection Plant/CO2 Equipment			518		0
Miscellaneous	419	500	519	4,000	4,500
Contingency	420	2,000	520	23,500	25,500
TOTAL TANGIBLES		35,000		468,000	503,000
TOTAL WELL COSTS		962,000		2,305,000	3,267,000

COG Operating LLC

By: Carl Bird

Date Prepared: 3/18/14 TC

COG Operating LLC

By: __________

We approve:
_____% Working Interest

Company: __________
By: __________

Printed Name: __________
Title: __________
Date: __________

This AFE is only an estimate. By signing you agr
of the actual costs incurred.

BEFORE THE OIL CONVERSATION DIVISION
Santa Fe, New Mexico
Exhibit No. 4
Submitted by: **COG OPERATING LLC**
Hearing Date: November 19, 2014