

**COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
DRILLING**

WELL NAME: Patton 5 Fee #8H	PROSPECT NAME: Lakewood
Surf. 380' FSL, 330' FWL, Section 5	COUNTY & STATE: Eddy Co. NM
BHL. 380' FSL, 330' FEL, Section 5	OBJECTIVE: 7,300' MD, (2750' TVD) Paddock Test
T19S, R26E (Pilot Hole TD 4500')	

<b>INTANGIBLE COSTS</b>	<b>BCP</b>	<b>ACP</b>	<b>TOTAL</b>
Title/Curative/Permit	201 10,000		10,000
Insurance	202 22,000	302	22,000
Damages/Right of Way	203 15,000	303	15,000
Survey/Stake Location	204 3,000	304	3,000
Location/Pits/Road Expense	205 40,000	305 15,000	55,000
Drilling / Completion Overhead	206 5,000	306 1,000	6,000
Turnkey Contract	207	307	0
Footage Contract	208	308	0
Daywork Contract 17:1 @ \$13500/day	209 229,500	309 13,500	243,000
Directional Drilling Services	210 300,000	310	300,000
Fuel & Power	211 65,000	311 23,000	88,000
Water	212 20,000	312 60,000	80,000
Bits	213 35,000	313 1,000	36,000
Mud & Chemicals	214 30,000	314	30,000
Drill Stem Test	215	315	0
Coring & Analysis	216		0
Cement Surface	217 25,000		25,000
Cement Intermediate	218		0
Cement Production 5-1/2"	218	319 65,000	65,000
Cement Squeeze & Other (Kickoff Plug)	220 80,000	320	80,000
Float Equipment & Centralizers	221 7,000	321 18,000	25,000
Casing Crews & Equipment	222 5,000	322 12,000	17,000
Fishing Tools & Service	223	323	0
Geologic/Engineering	224 10,000	324 1,000	11,000
Contract Labor	225 10,000	325 21,000	31,000
Company Supervision	226 2,000	326 2,000	4,000
Contract Supervision	227 25,000	327 2,000	27,000
Testing Casing/Tubing	228 4,000	328 12,000	16,000
Mud Logging Unit	229 15,000	329	15,000
Logging	230 45,000	330	45,000
Perforating/Wireline Services	231 3,500	331 40,000	43,500
Stimulation/Treating		332 900,000	900,000
Completion Unit		333 24,000	24,000
Swabbing Unit		334	0
Rentals-Surface	235 30,000	335 75,000	105,000
Rentals-Subsurface	236 50,000	336 10,000	60,000
Trucking/Forklift/Rig Mobilization	237 45,000	337 20,000	65,000
Welding Services	238 5,000	338 2,500	7,500
Water Disposal	239	339 15,000	15,000
Plug to Abandon	240	340	0
Seismic Analysis	241	341	0
Closed Loop & Environmental	244 75,000	344	75,000
Miscellaneous	242 5,000	342 1,000	6,000
Contingency	243 122,000	343 134,000	256,000
<b>TOTAL INTANGIBLES</b>	<b>1,338,000</b>	<b>1,468,000</b>	<b>2,806,000</b>
<b>TANGIBLE COSTS</b>			
Surface Casing 1000' 8 5/8" 32#	401 26,500		26,500
Intermediate Casing	402	503	0
Production Casing/Liner 4900'-5 1/2" & 2400' 7"		503 150,500	150,500
Tubing 2600' 2 7/8"		504 19,000	19,000
Wellhead Equipment	405 8,000	505 12,000	20,000
Pumping Unit		506 40,000	40,000
Prime Mover		507 20,000	20,000
Rods		508	0
Pumps		509 10,000	10,000
Tanks		510 27,825	27,825
Flowlines		511 5,000	5,000
Heater Treater/Separator		512 48,500	48,500
Electrical System		513 2,500	2,500
Packers/Anchors/Hangers	414	514	0
Couplings/Fittings/Valves	415 2,500	515 45,250	47,750
Gas Compressors/Meters		516 4,000	4,000
Dehydrator		517	0
Injection Plant/CO2 Equipment		518	0
Miscellaneous	419 1,000	519 21,000	22,000
Contingency	420 4,000	520 41,425	45,425
<b>TOTAL TANGIBLES</b>	<b>42,000</b>	<b>447,000</b>	<b>489,000</b>
<b>TOTAL WELL COSTS</b>	<b>1,380,000</b>	<b>1,915,000</b>	<b>3,295,000</b>

COG Operating LLC

By: J. Coffman / C. Bird / C. Elliott

Date Prepared: 10/18/2011

We approve:  
\_\_\_\_\_% Working Interest

Company:

By:

Printed Name:

Title:

Date:

BEFORE THE OIL CONSERVATION DIVISION  
Santa Fe, New Mexico  
**Exhibit No. 4**  
Submitted by:  
**COG OPERATING, LLC**  
Hearing Date: **January 5, 2012**

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