

COG OPERATING LLC  
AUTHORITY FOR EXPENDITURE  
DRILLING

WELL NAME: Blackhawk "11" Fed Com #2	PROSPECT NAME: Crow Flats
Surf. Loc: 1590' FSL & 1800' FWL, Sec 11	COUNTY & STATE: Eddy, NM
B.H. Loc: 1650' FSL & 330' FEL, Sec 11	OBJECTIVE: 9,591' MD (6620' TVD) Lower Abo Test
T16S - R28E; w/pilot, wo/LWD	

INTANGIBLE COSTS

		BCP	ACP	TOTAL
Title/Curative/Permit	201	5,500		5,500
Insurance	202	22,000		22,000
Damages/Right of Way	203	15,000		15,000
Survey/Stake Location	204	3,000		3,000
Location/Pits/Road Expense	205	45,000	5,000	50,000
Drilling / Completion Overhead	206	5,000	1,000	6,000
Turnkey Contract	207			0
Footage Contract	208			0
Daywork Contract 29:4 @ \$10,000/day	209	290,000	40,000	330,000
Directional Drilling Services, With out LWD	210	160,000		160,000
Fuel & Power	211	48,000	6,000	54,000
Water	212	30,000	50,000	80,000
Bits	213	50,000	1,000	51,000
Mud & Chemicals	214	60,000		60,000
Drill Stem Test	215			0
Coring & Analysis	216			0
Cement Surface	217	12,200		12,200
Cement Intermediate	218	15,000		15,000
Cement 2nd Intermediate 7"	218		23,400	23,400
Cement Squeeze & Other (Kickoff Plug)	220	18,700		18,700
Float Equipment & Centralizers	221	5,000	2,000	7,000
Casing Crews & Equipment	222	15,000	10,000	25,000
Fishing Tools & Service	223			0
Geologic/Engineering	224	10,000	1,000	11,000
Contract Labor	225	10,000	30,000	40,000
Company Supervision	226	2,000	2,000	4,000
Contract Supervision	227	36,000	4,000	40,000
Testing Casing/Tubing	228	4,000	1,500	5,500
Mud Logging Unit	229	19,500		19,500
Logging	230	60,000		60,000
Perforating/Wireline Services	231	1,500	12,500	14,000
Stimulation/Treating			750,000	750,000
Completion Unit			18,000	18,000
Swabbing Unit				0
Rentals-Surface	235	90,000	45,000	135,000
Rentals-Subsurface	236	40,000	10,000	50,000
Trucking/Forklift/Rig Mobilization	237	80,000	15,000	95,000
Welding Services	238	3,000	1,500	4,500
Water Disposal	239		15,000	15,000
Plug to Abandon	240			0
Seismic Analysis	241			0
Closed Loop & Environmental	244	210,000		210,000
Miscellaneous	242	5,000	1,000	6,000
Contingency	243	138,600	105,100	243,700
TOTAL INTANGIBLES		1,509,000	1,150,000	2,659,000

TANGIBLE COSTS

Surface Casing 500' 13 3/8"	401	18,000		18,000
Intermediate Casing 2300' 9 5/8", 6300' - 7"	402	59,000	145,000	204,000
Production Casing/Liner 4900' - 4.5"			59,000	59,000
Tubing 6000' 2 7/8"			34,000	34,000
Wellhead Equipment	405	10,000	8,000	18,000
Pumping Unit				0
Prime Mover				0
Rods				0
Pumps				0
Tanks			60,000	60,000
Flowlines			15,000	15,000
Heater Treater/Separator			25,000	25,000
Electrical System				0
Packers/Anchors/Hangers	414		200,000	200,000
Couplings/Fittings/Valves	415	2,000	50,000	52,000
Gas Compressors/Meters			4,000	4,000
Dehydrator				0
Injection Plant/CO2 Equipment				0
Miscellaneous	419	1,000	1,000	2,000
Contingency	420	9,000	61,000	70,000
TOTAL TANGIBLES		99,000	662,000	761,000
TOTAL WELL COSTS		1,608,000	1,812,000	3,420,000

COG Operating LLC

By: J. Coffman / C. Bird

Date Prepared: 6/15/09

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

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.