

COG OPERATING LLC
AUTHORITY FOR EXPENDITURE
DRILLING

WELL NAME: Blackhawk "11" Fed Com #1	PROSPECT NAME: Crow Flats
Surf. Loc: 430' FS&WL, Sec 11	COUNTY & STATE: Eddy,NM
B.H. Loc: 330' FS&EL, Sec 11	OBJECTIVE: 10,856' MD (6610' 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	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	45,000	305	5,000		50,000
Drilling / Completion Overhead	206	5,000	306	1,000		6,000
Turnkey Contract	207		307			0
Footage Contract	208		308			0
Daywork Contract 32.4 @ \$10,000/day	209	320,000	309	40,000		360,000
Directional Drilling Services, With out LWD	210	180,000	310			180,000
Fuel & Power	211	54,000	311	6,000		60,000
Water	212	30,000	312	50,000		80,000
Bits	213	50,000	313	1,000		51,000
Mud & Chemicals	214	60,000	314			60,000
Drill Stem Test	215		315			0
Coring & Analysis	216					0
Cement Surface	217	12,200				12,200
Cement Intermediate	218	15,000				15,000
Cement 2nd Intermediate 7"	218		319	23,400		23,400
Cement Squeeze & Other (Kickoff Plug)	220	18,700	320			18,700
Float Equipment & Centralizers	221	5,000	321	2,000		7,000
Casing Crews & Equipment	222	15,000	322	10,000		25,000
Fishing Tools & Service	223		323			0
Geologic/Engineering	224	10,000	324	1,000		11,000
Contract Labor	225	10,000	325	30,000		40,000
Company Supervision	226	2,000	326	2,000		4,000
Contract Supervision	227	36,000	327	4,000		40,000
Testing Casing/Tubing	228	4,000	328	1,500		5,500
Mud Logging Unit	229	22,500	329			22,500
Logging	230	60,000	330			60,000
Perforating/Wireline Services	231	1,500	331	12,500		14,000
Stimulation/Treating			332	750,000		750,000
Completion Unit			333	18,000		18,000
Swabbing Unit			334			0
Rentals-Surface	235	100,000	335	45,000		145,000
Rentals-Subsurface	236	45,000	336	10,000		55,000
Trucking/Forklift/Rig Mobilization	237	80,000	337	15,000		95,000
Welding Services	238	3,000	338	1,500		4,500
Water Disposal	239		339	15,000		15,000
Plug to Abandon	240		340			0
Seismic Analysis	241		341			0
Closed Loop & Environmental	244	225,000	344			225,000
Miscellaneous	242	5,000	342	1,000		6,000
Contingency	243	146,600	343	105,100		251,700
TOTAL INTANGIBLES		1,606,000		1,150,000		2,756,000

TANGIBLE COSTS		BCP		ACP		TOTAL
Surface Casing 500' 13 3/8"	401	18,000				18,000
Intermediate Casing 2300' 9 5/8", 6000' - 7"	402	59,000	503	145,000		204,000
Production Casing/Liner 4900' - 4.5"			503	59,000		59,000
Tubing 6000' 2 7/8"			504	34,000		34,000
Wellhead Equipment	405	10,000	505	8,000		18,000
Pumping Unit			506			0
Prime Mover			507			0
Rods			508			0
Pumps			509			0
Tanks			510	60,000		60,000
Flowlines			511	15,000		15,000
Heater Treater/Separator			512	25,000		25,000
Electrical System			513			0
Packers/Anchors/Hangers	414		514	200,000		200,000
Couplings/Fittings/Valves	415	2,000	515	50,000		52,000
Gas Compressors/Meters			516	4,000		4,000
Dehydrator			517			0
Injection Plant/CO2 Equipment			518			0
Miscellaneous	419	1,000	519	1,000		2,000
Contingency	420	9,000	520	61,000		70,000
TOTAL TANGIBLES		99,000		662,000		761,000
TOTAL WELL COSTS		1,705,000		1,812,000		3,517,000

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.