

**COG OPERATING LLC
AUTHORITY FOR EXPENDITURE
DRILLING**

WELL NAME: GUNNER 5 FEE COM #1H	PROSPECT NAME: BULLDOG 717038
SHL: 660 FNL & 190 FEL	STATE & COUNTY: New Mexico, Lea
BHL: 660 FNL & 330 FWL	OBJECTIVE: DRILL & COMPLETE
FORMATION: AVALON SHALE	DEPTH: 14,300'
LEGAL: 5-26S-34E	TVD: 9,900'

INTANGIBLE COSTS		BCP	ACP	TOTAL
Title/Curative/Permit	201	11,000		11,000
Insurance	202	5,000	302	5,000
Damages/Right of Way	203	15,000	303	15,000
Survey/Stake Location	204	7,000	304	7,000
Location/Pits/Road Expense	205	100,000	305 25,000	125,000
Drilling / Completion Overhead	206	6,000	306	6,000
Turnkey Contract	207	0	307	0
Footage Contract	208	0	308	0
Daywork Contract	209	458,000	309	458,000
Directional Drilling Services	210	170,000	310	170,000
Fuel & Power	211	158,000	311 10,000	168,000
Water	212	75,000	312 250,000	325,000
Bits	213	78,000	313 4,500	82,500
Mud & Chemicals	214	70,000	314	70,000
Drill Stem Test	215	0	315	0
Coring & Analysis	216	0		0
Cement Surface	217	40,000		40,000
Cement Intermediate	218	60,000		60,000
Cement 2nd Intermediate/Production	218	0	319 125,000	125,000
Cement Squeeze & Other (Kickoff Plug)	220	40,000	320	40,000
Float Equipment & Centralizers	221	15,000	321 20,000	35,000
Casing Crews & Equipment	222	20,000	322 20,000	40,000
Fishing Tools & Service	223	0	323	0
Geologic/Engineering	224	0	324	0
Contract Labor	225	10,000	325 160,000	170,000
Company Supervision	226	0	326	0
Contract Supervision	227	42,000	327 50,000	92,000
Testing Casing/Tubing	228	7,000	328	7,000
Mud Logging Unit	229	32,000	329	32,000
Logging	230	100,000	330 10,000	110,000
Perforating/Wireline Services	231	15,000	331 125,000	140,000
Stimulation/Treating		0	332 1,500,000	1,500,000
Completion Unit		0	333 50,000	50,000
Swabbing Unit		0	334	0
Rentals-Surface	235	125,000	335 250,000	375,000
Rentals-Subsurface	236	110,000	336 25,000	135,000
Trucking/Forklift/Rig Mobilization	237	140,000	337 25,000	165,000
Welding Services	238	5,000	338 7,500	12,500
Water Disposal	239	0	339 280,000	280,000
Plug to Abandon	240	0	340	0
Seismic Analysis	241	0	341	0
Closed Loop & Environmental	244	150,000	344 10,000	160,000
Miscellaneous	242	0	342	0
Contingency	243	104,000	343 150,000	254,000
TOTAL INTANGIBLES		2,168,000	3,097,000	5,265,000
TANGIBLE COSTS				
Surface Casing	401	39,000		39,000
Intermediate Casing	402	124,000	503	124,000
Production Casing		0	503 218,000	218,000
Tubing		0	504 60,000	60,000
Wellhead Equipment	405	20,000	505 35,000	55,000
Pumping Unit		0	506 115,000	115,000
Prime Mover		0	507 20,000	20,000
Rods		0	508 50,000	50,000
Pumps		0	509 22,000	22,000
Tanks		0	510 75,000	75,000
Flowlines		0	511 50,000	50,000
Heater Treater/Separator		0	512 50,000	50,000
Electrical System		0	513	0
Packers/Anchors/Hangers	414	0	514 10,000	10,000
Couplings/Fittings/Valves	415	0	515 160,000	160,000
Gas Compressors/Meters		0	516 8,100	8,100
Dehydrator		0	517	0
Injection Plant/CO2 Equipment		0	518	0
Miscellaneous	418	0	519	0
Contingency	420	10,000	520 44,900	54,900
TOTAL TANGIBLES		193,000	918,000	1,111,000
TOTAL WELL COSTS		2,361,000	4,015,000	6,376,000

COG Operating LLC

Date Prepared: 7/15/2013

COG Operating LLC

By: SETH WILD SH

We approve:
0.391 % Working Interest

Company: CHEVRON U.S.A. INC.
By: *[Signature]*

Printed Name: VINCE LEMIEUX
Title: ASSET MANAGER
Date: 08/14/2013

This AFE is only an estimate
of the actual costs incurred

BEFORE THE OIL CONVERSION
COMMISSION
Santa Fe, New Mexico
Exhibit No. 8
Submitted by: COG OPERATING LLC
Hearing Date: June 19, 2014