

**COG OPERATING LLC
AUTHORITY FOR EXPENDITURE
DRILLING**

Cost Estimate

WELL NAME: Resolver Federal Com #2H	PROSPECT NAME: Bulldog 2332 (717122)
SHL: 190' FNL & 2260' FWL (Unit C)	STATE & COUNTY: New Mexico, Lea
BHL: 330' FSL & 2260' FWL (Unit N)	OBJECTIVE: Drill & Complete
FORMATION: Bone Spring	DEPTH: 14,400
LEGAL: E/2W/2 Sec. 12, T23S-R32E	TVD: 9,826 (12,500 PH)

INTANGIBLE COSTS		BCP	ACP	TOTAL
Title/Curative/Permit	201	11,000		11,000
Insurance	202	4,000	302	4,000
Damages/Right of Way	203	5,000	303	5,000
Survey/Stake Location	204	7,000	304	7,000
Location/Pits/Road Expense	205	80,000	305 20,000	100,000
Drilling / Completion Overhead	206	8,000	306	8,000
Turnkey Contract	207	0	307	0
Footage Contract	208	0	308	0
Daywork Contract	209	377,000	309	377,000
Directional Drilling Services	210	129,000	310	129,000
Fuel & Power	211	58,000	311 8,500	66,500
Water	212	49,000	312 396,000	445,000
Bits	213	64,000	313 3,000	67,000
Mud & Chemicals	214	52,000	314 8,500	60,500
Drill Stem Test	215	0	315	0
Coring & Analysis	216	30,000		30,000
Cement Surface	217	28,000		28,000
Cement Intermediate	218	38,000		38,000
Cement 2nd Intermediate/Production	218	0	319 100,000	100,000
Cement Squeeze & Other (Kickoff Plug)	220	45,000	320 0	45,000
Float Equipment & Centralizers	221	5,000	321 9,000	14,000
Casing Crews & Equipment	222	15,000	322 15,000	30,000
Fishing Tools & Service	223	0	323	0
Geologic/Engineering	224	0	324	0
Contract Labor	225	8,000	325 176,500	184,500
Company Supervision	226	0	326	0
Contract Supervision	227	39,000	327 70,000	109,000
Testing Casing/Tubing	228	10,000	328 10,000	20,000
Mud Logging Unit	229	24,000	329	24,000
Logging	230	250,000	330	250,000
Perforating/Wireline Services	231	8,000	331 200,800	208,800
Stimulation/Treating		0	332 1,600,000	1,600,000
Completion Unit		0	333 42,500	42,500
Swabbing Unit		0	334	0
Rentals-Surface	235	91,000	335 175,000	266,000
Rentals-Subsurface	236	105,000	336 22,500	127,500
Trucking/Forklift/Rig Mobilization	237	115,000	337 45,000	160,000
Welding Services	238	4,000	338 5,000	9,000
Water Disposal	239	0	339 360,000	360,000
Plug to Abandon	240	0	340	0
Seismic Analysis	241	0	341	0
Closed Loop & Environmental	244	128,000	344 5,000	133,000
Miscellaneous	242	0	342	0
Contingency	243	36,000	343 50,000	86,000
TOTAL INTANGIBLES		1,821,000	3,322,300	5,143,300
TANGIBLE COSTS				
Surface Casing	401	36,000	0	36,000
Intermediate Casing	402	148,000	503 0	148,000
Production Casing		0	503 212,000	212,000
Tubing		0	504 80,000	80,000
Wellhead Equipment	405	30,000	505 15,000	45,000
Pumping Unit		0	506 103,500	103,500
Prime Mover		0	507	0
Rods		0	508 50,000	50,000
Pumps		0	509 31,500	31,500
Tanks		0	510 90,000	90,000
Flowlines		0	511 45,000	45,000
Heater Treater/Separator		0	512 58,500	58,500
Electrical System		0	513	0
Packers/Anchors/Hangers	414	0	514 9,000	9,000
Couplings/Fittings/Valves	415	0	515 202,500	202,500
Gas Compressors/Meters		0	516 7,290	7,290
Dehydrator		0	517	0
Injection Plant/CO2 Equipment		0	518	0
Miscellaneous	419	0	519	0
Contingency	420	0	520 50,000	50,000
TOTAL TANGIBLES		214,000	934,290	1,148,290
TOTAL WELL COSTS		2,035,000	4,256,590	6,291,590

COG Operating LLC

We approve:
_____% Working Interest

Company: ConocoPhillips Company
By: _____

Printed Name:
Title:
Date:

Date Prepared: 7/30/15

COG Operating LLC

By: Travis Newman (Drilling)

OCD Case No. 15381

**COG OPERATING
Exhibit #5**

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