COG OPERATING LLC AUTHORITY FOR EXPENDITURE DRILLING

WELL NAME: Taylor D #2
LOCATION: Section 9-T17S-R32E, NMPM
FOOTAGE: 1650' FSL & 1650' FEL PROSPECT NAME: Maljamar (Lowe) Prospect COUNTY & STATE: Lea County, NM OBJECTIVE: Yeso test (4 Fracs) 7000'

We approve:	<u>BCP</u>		ACP	<u>TOTAL</u>
Damages/Right of Way 203	4,000			4,000
Survey/Stake Location	3,800	302		3,800
Cocation/Pits/Road Expense 205		303		0
Drilling / Completion Overhead 206	2,500	304		2,500
Turnkey Contract	30,000	305	5,000	35,000
Cootage Contract	2,500	306	2,000	4,500
Daywork Contract 208		307		0
Directional Drilling Services	175.000	308		175,000
Table Power 211 Nater 212 213 213 214 214 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215 215	175,000		,	1/5,000
Water 212 3its 213 Wild & Chemicals 214 Drill Stem Test 215 Coring & Analysis 216 Cement Surface 217 Cement Intermediate #1 218 Cement Intermediate #2 220 Cement Intermediate #2 220 Cement Squeeze 220 Float Equipment & Centralizers 221 Dasing Crews & Equipment 222 Eishing Tools & Service 223 Seologic/Engineering 224 Cortract Labor 225 Company Supervision 226 Company Supervision 227 Centract Supervision 227 Cesting Casing/Tubing 228 Mud Logging Unit 229 Cogging 230 Perforating/Wireline Services 231 Stimulation/Treating (4 fracs) 231 Completion Unit 235 Weathing Unit 237 Rentals-Subsurface 236 Rentals-Subsurface 236	28,800	310 311	1,000	29,800
Sits 213	14,000	312	32,000	46,000
Mud & Chemicals		313	500	24,500
Drill Stem Test	7,000	314	300	7,000
Coring & Analysis	7,000	315		- 7,000
Cement Surface		0,0		
Cement Intermediate #1 Cement Intermediate #2 Cement Production Cement Squeeze 220 Cement Squeeze 221 Casing Crews & Equipment 222 Casing Crews & Equipment 222 Casing Crews & Equipment 224 Contract Labor 225 Company Supervision 226 Company Supervision 227 Cesting Casing/Tubing 228 Contract Supervision 227 Cesting Casing/Tubing 228 Cesting Casing/Tubing 229 Cesting Casing/Tubing 230 Cesting Casing/Tubing 231 Cesting Casing/Tubing 232 Cesting Casing/Tubing 233 Cesting Casing/Version 234 Cesting Casing/Version 235 Cesting Casing/Version 236 Cesting Casing/Version 237 Cesting Casing/Version 237 Cesting Casing/Forkilft/Rig Mobilization 237 Cesting Casing/Forkilft/Rig Mobilization 238 Cesting Casing/Forkilft/Rig Mobilization 240 Cesting Casing/Casing Casing C	15,500	1	· · · · · · · · · · · · · · · · · · ·	15,500
Cement Production	16,400			16,400
Cement Squeeze 220				0
Float Equipment & Centralizers 221 Casing Crews & Equipment 222 Fishing Tools & Service 223 Centract Labor 225 Company Supervision 226 Contract Supervision 227 Cesting Casing/Tubing 228 Mud Logging Unit 229 Logging 230 Centract Supervision 227 Cesting Casing/Tubing 228 Mud Logging Unit 229 Logging 230 Centrating/Wireline Services 231 Stimulation/Treating (4 fracs) Completion Unit 237 Semalals-Surface 236 Trucking/Forklift/Rig Mobilization 237 Welding Services 238 Water Disposal 239 Plug to Abandon 240 Seismic Analysis 241 Closed Loop & Environmental 244 Miscellaneous 242 Contingency 5% 243 TOTAL INTANGIBLES TOTAL INTANGIBLES Total Equipment 405 Pumping Unit Prime Mover 405 Pumping Unit Prime Mover 415 Casing Filtings/Valves 415 Gas Compressors/Meters 240 Dehydrator Injection Plant/CO2 Equipment Miscellaneous 419 Contingency 5% 420 TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:		319	30,000	30,000
Casing Crews & Equipment 222 223 224 224 225 225 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 226 2		320		0
Secologic/Engineering	2,500	321	2,000	4,500
Secologic/Engineering 224	4,000	322	5,500	9,500
Contract Labor		323		0
Company Supervision 226		324		0
Contract Supervision	3,000	325	10,000	13,000
Festing Casing/Tubing 228 Mud Logging Unit 229 Logging 230 Peerforating/Wireline Services 231 Sitimulation/Treating (4 fracs) 235 Completion Unit 235 Sentals-Subsurface 236 Rentals-Subsurface 236 Rentals-Subsurface 238 Welding Services 238 Water Disposal 239 Plug to Abandon 240 Seismic Analysis 241 Closed Loop & Environmental 244 Miscellaneous 242 Contingency 5% 243 TOTAL INTANGIBLES 243 TANGIBLE COSTS 244 Surface Casing 401 ntermediate Casing #1 402 ntermediate Casing #2 402 Production Casing/Liner 405 Pumps Flanks Flowlines 405 Heater Treater/Separator 216-216-216-216-216-216-216-216-216-216-		326		0
Mud Logging Unit	12,000	327	5,000	17,000
230 Perforating/Wireline Services 231	1,800	328	2,200	4,000
Perforating/Wireline Services Etimulation/Treating (4 fracs) Completion Unit Swabbing Unit Rentals-Surface Rentals-Surface Rentals-Subsurface Prucking/Forklift/Rig Mobilization Welding Services Water Disposal Plug to Abandon Plug to Aband	6,000	329		6,000
Stimulation/Treating (4 fracs) Completion Unit Swabbing Unit Rentals-Surface 235 Rentals-Subsurface 236 Rentals-Subsurface 237 Welding Services 238 Water Disposal 239 Plug to Abandon 240 Seismic Analysis 241 Closed Loop & Environmental 244 Miscellaneous 242 Contingency 5% 243 TOTAL INTANGIBLES TANGIBLE COSTS Surface Casing 401 Intermediate Casing #1 402 Intermediate Casing #2 Production Casing/Liner Tubing Wellhead Equipment 405 Pumping Unit Prime Mover Rods Pumps Flanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers 414 Couplings/Fittings/Valves 36as Compressors/Meters Dehydrator Injection Plant/CO2 Equipment Miscellaneous 419 Contingency 5% 420 TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:	15,000	330		15,000
Completion Unit Swabbing Unit Rentals-Surface 235 Rentals-Surface 236 Rentals-Subsurface 237 Welding Services 238 Water Disposal 239 Plug to Abandon 240 Seismic Analysis 241 Closed Loop & Environmental 244 Miscellaneous 242 Contingency 5% 243 TOTAL INTANGIBLES 241 TOTAL INTANGIBLES 242 TOTAL INTANGIBLES 243 TOTAL INTANGIBLES 244 245 245 245 246 246 246 246 246 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247 247		331	24,000	24,000
Swabbing Unit 235 Rentals-Surface 236 Trucking/Forklift/Rig Mobilization 237 Welding Services 238 Water Disposal 239 Plug to Abandon 240 Seismic Analysis 241 Closed Loop & Environmental 244 Miscellaneous 242 Contingency 5% 243 TOTAL INTANGIBLES 401 Intermediate Casing #1 402 Intermediate Casing #2 402 Production Casing/Liner 405 Tubing 405 Wellhead Equipment 405 Pumping Unit 405 Prime Mover 804 Rods 8 Pumps 1 Tanks Flowlines Heater Treater/Separator 414 Electrical System 414 Packers/Anchors/Hangers 414 Couplings/Fittings/Valves 415 Gas Compressors/Meters 419 Dehydrator Injection Plant/CO2 Equipment <tr< td=""><td></td><td>332 333</td><td>369,000</td><td><u>369,000</u> 20,000</td></tr<>		332 333	369,000	<u>369,000</u> 20,000
Rentals-Surface		334	20,000	20,000
Rentals-Subsurface	5,000	335	36,000	41,000
Trucking/Forklift/Rig Mobilization 237 Melding Services 238 Mater Disposal 239 Plug to Abandon 240 Seismic Analysis 241 Closed Loop & Environmental 244 Miscellaneous 242 Contingency 5% 243 TOTAL INTANGIBLES TANGIBLE COSTS Surface Casing 401 Intermediate Casing #1 402 Intermediate Casing #2 Production Casing/Liner Tubing Wellhead Equipment 405 Pumping Unit Prime Mover Rods Pumps Tanks Flowlines 414 Couplings/Fittings/Valves 415 Gas Compressors/Meters Dehydrator Injection Plant/CO2 Equipment Miscellaneous 419 Cod Operating LLC By: Erick W. Nelson We approve:	26,000	336	10,000	36,000
Welding Services 238 Water Disposal 239 Plug to Abandon 240 Seismic Analysis 241 Closed Loop & Environmental 244 Miscellaneous 242 Contingency 5% 243 TOTAL INTANGIBLES 343 TANGIBLE COSTS Surface Casing 401 Intermediate Casing #1 402 Intermediate Casing #2 402 Production Casing/Liner 405 Tubing Wellhead Equipment Pumping Unit 405 Prime Mover 405 Rods 409 Pumps Tanks 405 Flowlines 405 Heater Treater/Separator 414 Electrical System 414 Packers/Anchors/Hangers 414 Couplings/Fittings/Valves 415 Gas Compressors/Meters 419 Dehydrator 419 Injection Plant/CO2 Equipment 420 Miscellaneous 420 TOTAL TA	40,000	337	8,000	48,000
Water Disposal 239 Plug to Abandon 240 Seismic Analysis 241 Closed Loop & Environmental 244 Miscellaneous 242 Contingency 5% 243 TOTAL INTANGIBLES 401 TANGIBLE COSTS Surface Casing 401 ntermediate Casing #1 402 ntermediate Casing #1 402 ntermediate Casing #2 401 Production Casing/Liner 405 Tubing Wellhead Equipment Wellhead Equipment 405 Pumping Unit 405 Pumps Fanks Flowlines 405 Heater Treater/Separator Electrical System Packers/Anchors/Hangers 414 Couplings/Fittings/Valves 415 Gas Compressors/Meters Dehydrator Injection Plant/CO2 Equipment 419 Miscellaneous 420 TOTAL WELL COSTS 420 TOTAL TANGIBLES TOTAL TANGIBLES TOTAL WELL COSTS	2,000	338	1,000	3,000
Plug to Abandon	500	339	3,000	3,500
Seismic Analysis		340		0
244		341		0
Contingency 5% TOTAL INTANGIBLES TANGIBLE COSTS Surface Casing 401 Intermediate Casing #1 402 Intermediate Casing #2 Production Casing/Liner Tubing Wellhead Equipment 405 Pumping Unit Prime Mover Rods Pumps Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers 414 Couplings/Fittings/Valves Gas Compressors/Meters Dehydrator Injection Plant/CO2 Equipment Miscellaneous 419 Contingency 5% 420 TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:	100,000	344		100,000
TOTAL INTANGIBLES TANGIBLE COSTS Surface Casing		342		0
TANGIBLE COSTS Surface Casing	27,065	343	28,310	55,375
Surface Casing	569,000		595,000	1,163,000
Surface Casing				
Intermediate Casing #1	31,200		•	31,200
Intermediate Casing #2	75,300		,	75,300
Tubing Wellhead Equipment Pumping Unit Prime Mover Rods Pumps Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Gas Compressors/Meters Dehydrator Injection Plant/CO2 Equipment Miscellaneous Contingency 5% TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson 405 405 405 405 416 420 420 420 420 420 420 420 42				0
Weilhead Equipment Pumping Unit Prime Mover Rods Pumps Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Gas Compressors/Meters Dehydrator Injection Plant/CO2 Equipment Miscellaneous Contingency 5% TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson 405 405 405 416 420 420 420 420 420 420 420 42		503	154,000	154,000
Pumping Unit Prime Mover Rods Pumps Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Gas Compressors/Meters Dehydrator Injection Plant/CO2 Equipment Miscellaneous Contingency 5% TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:		504	49,000	49,000
Prime Mover Rods Pumps Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Gas Compressors/Meters Dehydrator Injection Plant/CO2 Equipment Miscellaneous Contingency 5% TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:	6,000	505	3,000	9,000
Rods Pumps Fanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers 414 Couplings/Fittings/Valves 415 Gas Compressors/Meters Dehydrator Injection Plant/CO2 Equipment Miscellaneous 419 Contingency 5% 420 TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:		506	87,500	87,500
Pumps Fanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers Couplings/Fittings/Valves Gas Compressors/Meters Dehydrator Injection Plant/CO2 Equipment Miscellaneous Contingency 5% TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:		507		0
Tanks Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers 414 Couplings/Fittings/Valves 415 Gas Compressors/Meters Dehydrator Injection Plant/CO2 Equipment Miscellaneous 419 Contingency 5% 420 TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:		508	21,376	21,376
Flowlines Heater Treater/Separator Electrical System Packers/Anchors/Hangers 414 Couplings/Fittings/Valves 415 Gas Compressors/Meters Dehydrator njection Plant/CO2 Equipment Miscellaneous 419 Contingency 5% 420 TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:	·	509	4,500	4,500
Heater Treater/Separator Electrical System Packers/Anchors/Hangers 414 Couplings/Fittings/Valves 415 Gas Compressors/Meters Dehydrator njection Plant/CO2 Equipment Miscellaneous 419 Contingency 5% 420 TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:	····	510	3,000	3,000
Electrical System Packers/Anchors/Hangers 414 Couplings/Fittings/Valves 415 Gas Compressors/Meters Dehydrator njection Plant/CO2 Equipment Miscellaneous 419 Contingency 5% 420 TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:		511	5,000	5,000
Packers/Anchors/Hangers 414 Couplings/Fittings/Valves 415 Gas Compressors/Meters Dehydrator Injection Plant/CO2 Equipment Miscellaneous 419 Contingency 5% 420 TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:		512	3,000	3,000
Couplings/Fittings/Valves Gas Compressors/Meters Dehydrator njection Plant/CO2 Equipment Miscellaneous Contingency 5% TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:		513	10,000	10,000
Gas Compressors/Meters Dehydrator njection Plant/CO2 Equipment Miscellaneous 419 Contingency 5% 420 TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:		514 515	900	7,000
Dehydrator njection Plant/CO2 Equipment Miscellaneous 419 Contingency 5% 420 TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:		515 516	7,000	7,000
Injection Plant/CO2 Equipment Miscellaneous Contingency 5% TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:		517		0
Miscellaneous 419 Contingency 5% 420 TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:		518		
Contingency 5% TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:	500	519	500	1,000
TOTAL TANGIBLES TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:	5,700	520	18,600	24,300
TOTAL WELL COSTS COG Operating LLC By: Erick W. Nelson We approve:	118,700	-	367,376	486,076
By: Erick W. Nelson We approve:	688,000		963,000	1,650,000
By: Erick W. Nelson We approve:				
• •	Date Prepared:		5/7/10	
			ate. By signing you agree	to pay your share
Company:	of the actual costs in	currec	d.	
By: Printed Name:			202 -	.
Title:				perating LLC
Date:				14491, 14492 and 4493

Ex. _____9

COG OPERATING LLC AUTHORITY FOR EXPENDITURE DRILLING

WELL NAME: Taylor D #3

PROSPECT NAME: Maljamar (Lowe) Prospect

LOCATION: Section 9-T17S-R32E, NMPM

COUNTY & STATE: Lea County, NM

FOOTAGE: 2210' FNL & 1650' FEL

OBJECTIVE: Yeso test (4 Fracs) 7000'

INTANGIBLE COSTS	60.	BCP		ACP	TOTAL
Title/Curative/Permit	201 202	4,000	202		4,000 3,800
Insurance		3,800	302		
Damages/Right of Way	203		303		0
Survey/Stake Location	204	2,500	304		2,500
Location/Pits/Road Expense	205	30,000	305	5,000	35,000
Drilling / Completion Overhead	206	2,500	306	2,000	4,500
Turnkey Contract Footage Contract	207		307 308		0
Daywork Contract	208	175,000	308		175,000
	209	175,000	310		175,000
Directional Drilling Services Fuel & Power	210 211	28,800	311	1,000	29,800
Water	212	14,000	312	32,000	46,000
Bits	212	24,000	313	500	24,500
Mud & Chemicals					
Drill Stem Test	214	7,000	314 315		7,000
	215		315		0
Coring & Analysis	216	45.500			15 500
Cement Surface	217	15,500			15,500
Cement Intermediate #1	218	16,400			16,400
Cement Intermediate #2			040	20.000	0 00 000
Cement Production			319	30,000	30,000
Cement Squeeze	220		320		0
Float Equipment & Centralizers	221	2,500	321	2,000	4,500
Casing Crews & Equipment	222	4,000	322	5,500	9,500
Fishing Tools & Service	223		323		0
Geologic/Engineering	224		324	40.555	0
Contract Labor	225	3,000	325	10,000	13,000
Company Supervision	226		326		0
Contract Supervision	227	12,000	327	5,000	17,000
Testing Casing/Tubing	228	1,800	328	2,200	4,000
Mud Logging Unit	229	6,000	329		6,000
Logging	230	15,000	330		15,000
Perforating/Wireline Services	231		331	24,000	24,000
Stimulation/Treating (4 fracs)			332	369,000	369,000
Completion Unit			333	20,000	20,000
Swabbing Unit			334		0
Rentals-Surface	235	5,000	335	36,000	41,000
Rentals-Subsurface	236	26,000	336	10,000	36,000
Trucking/Forklift/Rig Mobilization	237	40,000	337	8,000	48,000
Welding Services	238	2,000	338	1,000	3,000
Water Disposal	239	500	339	3,000	3,500
Plug to Abandon	240		340		0
Seismic Analysis	241		341		0
Closed Loop & Environmental	244	100,000	344		100,000
Miscellaneous	242		342		55.075
Contingency 5%	243	27,065	343	28,310	55,375
TOTAL INTANGIBLES		569,000		595,000	1,163,000
TANOID: - 00070					
TANGIBLE COSTS					04.000
Surface Casing	401	31,200			31,200
Intermediate Casing #1	402	75,300			75,300
Intermediate Casing #2					0
Production Casing/Liner			503	154,000	154,000
Tubing			504	49,000	49,000
Wellhead Equipment	405	6,000	505	3,000	9,000
Pumping Unit			506	87,500	87,500
Prime Mover			507	01.000	0 01 070
Rods			508	21,376	21,376
Pumps			509	4,500	4,500
Tanks			510	3,000	3,000
Flowlines			511	5,000	5,000
Heater Treater/Separator			512	3,000	3,000
Electrical System Packers / Apphors / Hangers	44.4		513	10,000	10,000
Packers/Anchors/Hangers	414		514		7,000
Couplings/Fittings/Valves	415		515 516	7,000	7,000
Gas Compressors/Meters					0
Dehydrator			517 518		0
Injection Plant/CO2 Equipment Miscellaneous	440	500	519	500	1,000
	419 420	5,700	520	18,600	24,300
Contingency 5% TOTAL TANGIBLES	420	118,700	UZU	367,376	486,076
TOTAL VELL COSTS		688,000		963,000	1,650,000
TOTAL WELL COSTS				300,000	1,000,000
COG Operating LLC					
By: Erick W. Nelson		Date Prepared:		5/7/10	
27. 2. c. 77. 110.00.1		_ =		5,,,10	
We approve:		This AFE is only an of the actual costs in		ate. By signing you agree to	pay your share
Company:		-	.54116		
Ву:					
Printed Name:		_			
Title:		-			
Date:		-			
		_			

COG OPERATING LLC AUTHORITY FOR EXPENDITURE DRILLING

PROSPECT NAME: Maljamar (Lowe) Prospect COUNTY & STATE: Lea County, NM WELL NAME: Taylor D #4 LOCATION: Section 9-T17S-R32E, NMPM FOOTAGE: 2120' FNL & 475' FEL OBJECTIVE: Yeso test (4 Fracs) 7000 **INTANGIBLE COSTS** ACP TOTAL **BCP** Title/Curative/Permit 201 4.000 4.000 Insurance 202 3,800 302 3.800 Damages/Right of Way 203 303 0 Survey/Stake Location 204 2,500 304 2,500 Location/Pits/Road Expense 205 30,000 305 5,000 35,000 Drilling / Completion Overhead 206 306 2,000 4,500 2,500 Turnkey Contract 207 307 Footage Contract 208 308 0 Daywork Contract 175,000 309 175,000 209 Directional Drilling Services 210 310 0 Fuel & Power 211 311 1,000 29,800 28,800 Water 212 14,000 312 32,000 46,000 24,000 Bits 213 313 500 24,500 Mud & Chemicals 214 7,000 314 7,000 Drill Stem Test 215 315 0 Coring & Analysis 216 n 15.500 Cement Surface 217 15,500 Cement Intermediate #1 218 16,400 16,400 Cement Intermediate #2 n Cement Production 319 30.000 30.000 Cement Squeeze 220 320 0 Float Equipment & Centralizers 2,500 2.000 4.500 221 321 4,000 Casing Crews & Equipment 5,500 222 322 9,500 223 323 Fishing Tools & Service Geologic/Engineering 224 324 0 Contract Labor 225 3,000 325 10,000 13,000 Company Supervision 226 326 0 227 12,000 327 5,000 17,000 Contract Supervision Testing Casing/Tubing 228 1,800 328 4,000 2,200 Mud Logging Unit 229 6,000 329 6,000 230 15,000 330 15,000 Logging Perforating/Wireline Services 231 331 24,000 24,000 Stimulation/Treating (4 fracs) 332 369,000 369,000 Completion Unit 333 20,000 20,000 Swabbing Unit 334 0 41,000 5.000 36.000 Rentals-Surface 335 235 336 10.000 36,000 Rentals-Subsurface 236 26,000 Trucking/Forklift/Rig Mobilization 237 40,000 337 8,000 48,000 338 Welding Services 3,000 238 2,000 1,000 Water Disposal 239 500 339 3,000 3,500 Plug to Abandon 240 340 0 Seismic Analysis 241 341 0 100,000 344 100,000 Closed Loop & Environmental 244 242 342 Miscellaneous 243 27,065 343 28,310 55,375 Contingency 5% TOTAL INTANGIBLES 569,000 595,000 1,163,000 **TANGIBLE COSTS** 401 31,200 31,200 Surface Casing Intermediate Casing #1 402 75,300 75,300 Intermediate Casing #2 0 154,000 Production Casing/Liner 503 154,000 49,000 504 49,000 Tubing Wellhead Equipment 9,000 6.000 505 3.000 405 Pumping Unit 87,500 87,500 506 Prime Mover 507 0 Rods 21,376 21,376 508 Pumps 509 4,500 4,500 510 3,000 3,000 Tanks Flowlines 511 5,000 5.000 Heater Treater/Separator 512 3.000 3.000 10.000 Electrical System 513 10.000 514 900 900 Packers/Anchors/Hangers 414 Couplings/Fittings/Valves 515 7,000 7,000 415 516 Gas Compressors/Meters Dehydrator 517 0 Injection Plant/CO2 Equipment 518 $\overline{ }$ 419 500 519 500 1,000 Miscellaneous Contingency 5% 420 5,700 520 18 600 24,300 TOTAL TANGIBLES 118,700 367,376 486,076 **TOTAL WELL COSTS** 688,000 963,000 1.650.000 COG Operating LLC By: Erick W. Nelson 5/7/10 Date Prepared: This AFE is only an estimate. By signing you agree to pay your share We approve: of the actual costs incurred. Company: Printed Name Title:

Date:

COG OPERATING LLC AUTHORITY FOR EXPENDITURE DRILLING

WELL NAME: Taylor D #5
LOCATION: Section 9-T17S-R32E, NMPM
FOOTAGE: 1650' FSL & 330' FEL PROSPECT NAME: Maljamar (Lowe) Prospect COUNTY & STATE: Lea County, NM OBJECTIVE: Yeso test (4 Fracs) 7100'

1001AGE. 1030 FSL & 330 FEL		OBJECTIV	<u> </u>	reso test (4 Fracs) / it	
INTANGIBLE COSTS		<u>BCP</u>		<u>ACP</u>	TOTAL
Title/Curative/Permit	201	4,000		_ 	4,000
Insurance	202	3,800	302		3,800
Damages/Right of Way	203		303	<u> </u>	0
Survey/Stake Location	204	2,500	304		2,500
Location/Pits/Road Expense	205	30,000	305	5,000	35,000
Drilling / Completion Overhead	206 -	2,500	306	2,000	4,500
Turnkey Contract			307		0
Footage Contract	208		308	•	
Daywork Contract	209	175,000	309		175,000
Directional Drilling Services	210	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	310		0
Fuel & Power		28,800	311	1,000	29,800
Water	212	14,000	312	32,000	46,000
Bits	213	24,000	313	500	24,500
Mud & Chemicals	214	7,000	314		7,000
Drill Stem Test	215	.,000	315		0
Coring & Analysis	216	·	•	No. 200	0
Cement Surface	217	15,500		*	15,500
Cement Intermediate #1	218	16,400			16,400
Cement Intermediate #2		10,100			0
Cement Production			319	30,000	30,000
Cement Squeeze	220		320	00,000	0
Float Equipment & Centralizers	221 -	2,500	321	2,000	4,500
Casing Crews & Equipment	221 -	4,000	322	5,500	9,500
Fishing Tools & Service	222 -	4,000	323	0,000	9,300
Geologic/Engineering	224		324		
Contract Labor	225	3,000	325	10,000	13,000
Company Supervision	226 -	0,000	326	10,000	0
Contract Supervision	227 -	12,000	327	5,000	17,000
Testing Casing/Tubing	228 -	1,800	328	2,200	4,000
Mud Logging Unit	229	6,000	329		6,000
Logging	230	15,000	330		15,000
Perforating/Wireline Services	231	10,000	331	24,000	24,000
Stimulation/Treating (4 fracs)			332	369,000	369,000
Completion Unit	-		333	20,000	20,000
Swabbing Unit	 · -		334	20,000	20,000
Rentals-Surface	235	5,000	335	36,000	41,000
Rentals-Subsurface	235 - 236 -	26,000	336	10,000	36,000
Trucking/Forklift/Rig Mobilization	²³⁰ -	40,000	337	8,000	48,000
Welding Services	—— 237 238	2,000	338	1,000	3,000
Water Disposal		500	339		3,500
	239	300	340	3,000	3,500
Plug to Abandon Seismic Analysis	240 -		341		0
	241 -	100.000			100,000
Closed Loop & Environmental Miscellaneous	244 -	100,000	344		
	242 -	27.005	342	20.240	<u> </u>
Contingency 5%	243 .	27,065	343	28,310	55,375
TOTAL INTANGIBLES	-	569,000		595,000	1,163,000
TANCIPI E COCTO					
TANGIBLE COSTS					
Surface Casing	401	31,200			31,200
Intermediate Casing #1	402	75,300			75,300
Intermediate Casing #2					0
Production Casing/Liner			503	154,000	154,000
Tubing			504	49,000	49,000
Wellhead Equipment	405	6,000	505	3,000	9,000
Pumping Unit			506	87,500	87,500
Prime Mover		· · · · · · · · · · · · · · · · · · ·	507	2.0	0
Rods			508	21,376	21,376
Pumps			509	4,500	4,500
Tanks			510	3,000	3,000
Flowlines			511	5,000	5,000
Heater Treater/Separator			512	3,000	3,000
Electrical System			513	10,000	10,000
Packers/Anchors/Hangers	414		514	900	900
Couplings/Fittings/Valves	415		515	7,000	7,000
Gas Compressors/Meters			516		0
Dehydrator			517	****	0
Injection Plant/CO2 Equipment			518		0
Miscellaneous	419	500	519	500	1,000
Contingency 5%	420	5,700	520	18,600	24,300
TOTAL TANGIBLES		118,700		367,376	486,076
TOTAL WELL COSTS		688,000		963,000	1,650,000
COG Operating LLC					
By: Erick W. Nelson		Date Prepared:		5/7/10	
We approve:		This AFE is only an	estima	ite. By signing you agree to p	ay your share
		of the actual costs in	currec	1 .	
Company:					
		•			•
•					

By:
Printed Name:
Title:

Date: