

**COG OPERATING LLC
AUTHORITY FOR EXPENDITURE
DRILLING**

WELL NAME: Halberd 27 State Com 1H	PROSPECT NAME: Spruce	SWF
SHL: 1003' FSL & 65' FWL,UL:M (Sec 26)	STATE & COUNTY: New Mexico, Eddy	
BHL: 978' FSL & 330' FWL,UL:M (Sec 27)	OBJECTIVE: Yeso Horizontal	
FORMATION: Yeso	DEPTH: 8,935	
LEGAL: SW/4SW/4 Sec 26, T17S-R28E	TVD: 3,925	

INTANGIBLE COSTS		BCP	ACP	TOTAL
Title/Curative/Permit	201	11,000		11,000
Insurance	202	4,000	0	4,000
Damages/Right of Way	203	12,000	0	12,000
Survey/State Location	204	3,000	0	3,000
Location/Pits/Road Expense	205	80,000	9,000	89,000
Drilling / Completion Overhead	206	4,000	7,000	11,000
Turnkey Contract	207			0
Footage Contract	208			0
Daywork Contract (0 days /spud-rts @ \$0)	209	144,000	0	144,000
Directional Drilling Services (0 dir days @ \$0)	210	78,000		78,000
Fuel & Power	211	15,000	1,000	16,000
Water	212	30,000	127,000	157,000
Bits	213	41,856	5,000	46,856
Mud & Chemicals	214	31,000	0	31,000
Drill Stem Test	215		0	0
Coring & Analysis	216			0
Cement Surface	217	12,000		12,000
Cement Intermediate	218	10,000		10,000
Cement 2nd Intermediate/Production	218	0	45,000	45,000
Cement Squeeze & Other (Kickoff Plug)	220		0	0
Float Equipment & Centralizers	221	2,700	7,000	9,700
Casing Crews & Equipment	222	6,480	9,000	15,480
Fishing Tools & Service	223			0
Geologic/Engineering	224			0
Contract Labor	225	4,250	18,000	22,250
Company Supervision	226		7,000	7,000
Contract Supervision	227	19,000	56,000	75,000
Testing Casing/Tubing	228	2,480	4,000	6,480
Mud Logging Unit	229	18,000		18,000
Logging	230	16,560		16,560
Perforating/Wireline Services	231	1,500	115,000	116,500
Stimulation/Treating			777,000	777,000
Completion Unit			41,000	41,000
Swabbing Unit				0
Rentals-Surface	235	38,000	170,000	208,000
Rentals-Subsurface	236	43,000	16,000	59,000
Trucking/Forklift/Rig Mobilization	237	40,000	57,000	97,000
Welding Services	238	4,750	1,000	5,750
Water Disposal	239	0	8,000	8,000
Plug to Abandon	240	0	0	0
Seismic Analysis	241	0	0	0
Closed Loop & Environmental	244	55,000	0	55,000
Miscellaneous	242	0	0	0
Contingency 2%	243	15,414	46,000	61,414
TOTAL INTANGIBLES		721,000	1,528,000	2,247,000
TANGIBLE COSTS				
Surface Casing (13 3/8" 54.5# J55 STC)	401	10,000		10,000
Intermediate Casing (9 5/8" 40# J55 LTC)	402	18,000	0	18,000
Production Casing (7" 29# & 5 1/2" 17# L80)			131,000	131,000
Tubing			18,000	18,000
Wellhead Equipment	405	8,900	22,000	30,900
Pumping Unit			64,000	64,000
Prime Mover			0	0
Rods			15,000	15,000
Pumps			50,000	50,000
Tanks			15,000	15,000
Flowlines			20,000	20,000
Heater Treater/Separator			51,000	51,000
Electrical System			28,000	28,000
Packers/Anchors/Hangers	414	0	2,000	2,000
Couplings/Fittings/Valves	415	500	18,000	18,500
Gas Compressors/Meters			3,000	3,000
Dehydrator				0
Injection Plant/CO2 Equipment				0
Miscellaneous	419	500	10,000	10,500
Contingency	420	100	0	100
TOTAL TANGIBLES		38,000	445,000	483,000
TOTAL WELL COSTS		759,000	1,971,000	2,730,000

COG Operating LLC

By: Carl Bird/Paul Figei

We approve:
_____% Working Interest

Company:

By:

Printed Name:

Title:

Date:

Date Prepared: 2-25-18 BJM 2/28/18

COG Operating LLC

By:

**BEFORE THE OIL CONVERSION
DIVISION**

Santa Fe, New Mexico

Exhibit No. 6

Submitted by: COG OPERATING LLC

Hearing Date: August 4, 2016

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

**COG OPERATING LLC
AUTHORITY FOR EXPENDITURE
DRILLING**

WELL NAME: Halberd 27 State Com 21H	PROSPECT NAME: Spruce
SHL: 1150' FSL & 65' FWL, UL.M (Sec 26)	STATE & COUNTY: New Mexico, Eddy
BHL: 872' FSL & 330' FWL, UL.M (Sec 27)	OBJECTIVE: Yaso Horizontal
FORMATION: Yaso	DEPTH: 9,460
LEGAL: SW/4SW/4 Sec 26, T17S-R28E	TVD: 4,450

INTANGIBLE COSTS		BCP	ACP	TOTAL
Title/Curative/Permit	201	11,000		11,000
Insurance	202	4,000	0	4,000
Damages/Right of Way	203	12,000	0	12,000
Survey/State Location	204	3,000	0	3,000
Location/Pits/Road Expense	205	60,000	9,000	69,000
Drilling / Completion Overhead	206	4,000	7,000	11,000
Turnkey Contract	207			0
Footage Contract	208			0
Daywork Contract (0 days /spud-rite @ \$0)	209	144,000	0	144,000
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Fuel & Power	211	15,000	1,000	16,000
Water	212	30,000	127,000	157,000
Bits	213	41,858	5,000	46,858
Mud & Chemicals	214	31,000	0	31,000
Drill Stem Test	215		0	0
Coring & Analysis	216			0
Cement Surface	217	12,000		12,000
Cement Intermediate	218	10,000		10,000
Cement 2nd Intermediate/Production	219	0	45,000	45,000
Cement Squeeze & Other (Kickoff Plug)	220		0	0
Float Equipment & Centralizers	221	2,700	7,000	9,700
Casing Crawls & Equipment	222	6,480	9,000	15,480
Fishing Tools & Service	223			0
Geologic/Engineering	224			0
Contract Labor	225	4,250	18,000	22,250
Company Supervision	226		7,000	7,000
Contract Supervision	227	16,000	58,000	74,000
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Seismic Analysis	241	0	0	0
Closed Loop & Environmental	244	55,000	0	55,000
Miscellaneous	242	0	0	0
Contingency 3%	243	15,414	48,000	63,414
TOTAL INTANGIBLES		721,000	1,526,000	2,247,000

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Rods			15,000	15,000
Pumps			60,000	60,000
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Dehydrator			0	0
Injection Pumps/CO2 Equipment			0	0
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