E TROLEUM OPERATING COMPAN'. 10-1301 TKAVIS STREET, SUITE 2000, HOUSTON, TX, 77002 Tol: (713) 654-8960, Fax: (713) 654-7722

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AUTHORIZATION - FOR - EXPENDITURE

Lease/Well: Kemnitz "28" State #1	400 0245			OF L'ALL AND	Date: 11/20/2003
Location: 1980' FNL 660' FEL Section 28 T Lea County, NM	105 K34E	Objective: <u>/</u> Proposed TD:	Atoka, Morrow 13.400'	<u></u>	
X=Y=			2402009		
		Dr		WO EVERNOE	
Project Type: DRILLING-EXPL (Circle one)	DRILLING-DEV	R	ECOMPLETION	WO-EXPENSE	OTHER INVEST
	drill and complete a 13,4	OO! Atoka Morrow M	Voll		
		UU AIUKA, MUITUW V	<u>ven.</u>		
INTANGIBLE COSTS			DRILLING	COMPLETION	TOTAL
Permit/Survey/Damages			14,000	COMPLETION	14,000
Location & Road: Bldg./Restor			25,000	3,000	28,000
Con. DrillDaywork	48days @ \$	8,200	393,600	24,600	418,200
Con. DrillTurnkey, Footage, Other	to 12 days @ \$	2.500		30,000	
Completion Rig: MI/RU/RD	12days @ \$	2,500	60,000	30,000	<u>30,000</u> 60,000
Mud & Chemical			45,000		45,000
Fuel, Power, and Water			60,000	3,500	63,500
Bits			65,000	1,600	66,600
Cement & Cement Services			33,000	30,000	63,000
Casing Crew, Tongs & Tools Mud Logging/MWD	38 days @ \$	750	6,300 28,500	5,400	<u>11,700</u> 28,500
Electric Logging/Perforating/Wireline	<u> </u>	////	25,000	18,000	43,000
Swab/Coiled Tubing Units	days @ \$			-	·····
Fracture/ Acid Stimulation				100,000	100,000
Fishing Services		· · · · · · · · · · · · · · · · · · ·			
Rental Tools & Equipment Contract Supervision	56 days @ \$	750	48,000	12,000 14,000	60,000 56,000
Co. Labor (Time, Exp. & Benefits)	<u> </u>	750	42,000	14,000	50,000
Welding, Trucking, Contract Labor		· · · · · · · · · · · · · · · · · · ·	12,500	17,500	30,000
DST & FT/Coring & Analysis			6,500		6,500
Consulting Services	- <u></u>				
			14,000	7,000	21,000
Transportation Tubing inspection and testing			6,000 3,500	3,500 2,000	9,500 5,500
Other			5,000	5,000	10,000
,	Subtotal Intangible		892,900	277,100	1,170,000
Contingencies	5 '	%	44,645	13,855	
	ANGIBLE COSTS		937,545	290,955	1,228,500
TANGIBLE COSTS			DRILLING	COMPLETION	TOTAL
Conductor Pipe	Size Footage	\$/foot	7,000		7,000
Surf. Casing	13 3/8" 450	18.00	8,100		8,100
Intermediate Csg Intermediate Csg	9 5/8" 4800	12.50	60,000		60,000
Internediate Csg					
Production	5 1/2" 13400	7.00		02.800	
Production	<u>5 1/2" 13400</u> 2 7/8" 13100	7.00		93,800	
Production Tubing Float Equip. & Liner Hanger	2 7/8" 13100	3.50	4,200	93,800 45,850 3,000	45,850
Tubing Float Equip. & Liner Hanger Valves & Fittings	2 7/8" 13100	3.50	4,200	45,850	45,850 7,200
Tubing Float Equip. & Liner Hanger Valves & Fittings Wellhead Equipment	2 7/8" 13100	3.50	4,200	45,850 3,000	45,850 7,200 5,000
Tubing Float Equip. & Liner Hanger Valves & Fittings Wellhead Equipment Misc. Equipment	2 7/8" 13100	3.50		45,850 3,000 5,000 16,000	45,850 7,200 5,000 34,000
Tubing Float Equip. & Liner Hanger Valves & Fittings Wellhead Equipment Misc. Equipment Packer & Downhole Equipment	2 7/8" 13100	3.50	18,000	45,850 3,000 5,000	45,850 7,200 5,000 34,000 - 8,000
Tubing Float Equip. & Liner Hanger Valves & Fittings Wellhead Equipment Misc. Equipment Packer & Downhole Equipment Rods & Pump	2 7/8" 13100	3.50	18,000	45,850 3,000 5,000 16,000	45,850 7,200 5,000 34,000
Tubing Float Equip. & Liner Hanger Valves & Fittings Wellhead Equipment Misc. Equipment Packer & Downhole Equipment Rods & Pump Pumping Unit & Prime Mover	27/8" 13100	3.50	18,000	45,850 3,000 5,000 16,000	45,850 7,200 5,000 34,000
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Tubing Float Equip. & Liner Hanger Valves & Fittings Wellhead Equipment Misc. Equipment Packer & Downhole Equipment Rods & Pump Pumping Unit & Prime Mover Meter & Meter Run Flowlines & Connections Tanks Heater & Dehyd./Compressor Separator/Heater-Treater Installation Costs Pipeline/ROW & Sales Connection Other <u>TOTAL TANGIBLE & INTA</u> <u>TOTAL TANGIBLE & INTA</u> EDGE APPROVAL: Prepared by: Jim Keiging Date: <u>11/20/2003</u>	2 7/8" 13100 2 7/8" 13100 EEFORE EAAM EEFORE EAAM OIL CONSERVATIN OIL CONSERVATIN OIL CONSERVATIN Subtotal Tangible 5 NGIBLE COSTS NGIBLE COST 6) 25.00	3.50	18,000 18,000 97,300 4,865 102,165 1,039,710	45,850 3,000 5,000 16,000 8,000 25,000 15,000 10,000 15,000 245,150 12,258 257,408	45,850 7,200 5,000 34,000 - - - - - - - - - - - - - - - - - -
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STRAIGHT	E-LOGS NONE			BHL Y Y EPTH 40' 450' 450' 2000' 2891' 4581'	SECTION : STRAIGHT	34E	HOLE SIZE PRESET 17-1/2" 12 1/4"	ENGR: RIG: ELEV. KB: CASING DETAILS 20" Conductor 13-3/8", 48 ppf H-40, STC	JIM KEISLING 4097' MUD WT. & TYPE SPUD MUD 8.8 PPG 8.4-10.3 ppg native mud 400'-3000'	MAXIMU DOGLE SEVERI 2 ⁰ /100
STRAIGHT	PEN HOLE LOGGING	Yates	TVD 40' 450' 2000' 2891' 4581'	EPTH MD 40' 450' 2000' 2891' 4581'			SIZE PRESET 17-1/2"	CASING DETAILS 20" Conductor 13-3/8", 48 ppf H-40, STC	& TYPE SPUD MUD 8.8 PPG 8.4-10.3 ppg native mud	DOGLE
STRAIGHT E	<u>LOGGING</u>	Yates	TVD 40' 450' 2000' 2891' 4581'	MD 40' 450' 2000' 2891' 4581'			SIZE PRESET 17-1/2"	DETAILS 20" Conductor 13-3/8", 48 ppf H-40, STC	& TYPE SPUD MUD 8.8 PPG 8.4-10.3 ppg native mud	SEVERI
			450' 2000' 2891' 4581'	450' 2000' 2891' 4581'			17-1/2"	13-3/8", 48 ppf H-40, STC	MUD 8.8 PPG 8.4-10.3 ppg native mud	2 ⁰ /100
			2000' 2891' 4581'	2000' 2891' 4581'			12 1/4"		8.4-10.3 ppg native mud	
			2891' 4581'	2891' 4581'			12 1/4"	тос		
			2891' 4581'	2891' 4581'			12 1/4"	тос		
			4581'	4581'						
		San Andres							{ [
HOLE	NONE		4800'	1000				9 5/8", 36 ppf K-55, STC	8.4-10.3 ppg native mud	
		· ·	1	4800'				0'-4800'	400'-4800'	2 ⁰ /100'
		Abo	8106'	8106'					8.4-8.9 ppg fresh gel 4800'-8500' Cl - 1-8000	
		Wolfcamp	9946'	9946'				TOC @ 9500'		
		Townsend Lime	10751'	10751'						
		Kemnitz Lime Strawn Lime	10881' 11961'	10881' 11961'			8-1/2"		8.4-8.9 ppg fresh gel 8500'-10200' Cl - 130-145K	
		Atoka	12256'	12256						
		Upper Morrow	12746'	12746'						
		Middle Morrow	13036'	13036"						
		Lower Morrow Chester	13096' 13106'	13096' 13106'						
E-L TRAIGHT Triple HOLE 4800't	1		13400'	13400'				5 1/2", 17#, N-80, LTC	9.5-9.9 ppg brine, XCD starch	2 ⁰ /100'