

AUTHORITY FOR EXPENDITURE

AFE No. _____ Lease Name Federal A Well No. 1E
 Description 1190' FNL & 1190' FWL of Sec 32, T28N, R10W County San Juan
 State New Mexico Area Farmington Operator CTOC
 Project Drill & Complete Dakota Gas Well Prepared by MAG/BLS *TRM* *R. Smith*
 Exploration Development X Recompletion T.D. 6,700 Date 12/9/98

24x_xx INTANGIBLE TANGIBLE TOTAL

8-01	CONDUCTOR HOLE / RATHOLE			\$0
8-01	DAYWORK DRILLING \$6000/day x 10 days	\$60,000		\$60,000
8-01	FOOTAGE DRILLING			\$0
8-01	MOVING RIG	\$12,000		\$12,000
8-01	TURNKEY DRILLING			\$0
8-03	CONTRACT LABOR	\$4,000		\$4,000
8-04	TRUCKING	\$5,000		\$5,000
8-05	LOCATION / ROADS / PITS	\$14,000		\$14,000
8-06	MUD / CHEMICALS	\$12,000		\$12,000
8-06	WATER & WATERLINES	\$9,000		\$9,000
8-07	DST / WL FORMATION TESTING			\$0
8-08	OPEN HOLE LOGS	\$11,000		\$11,000
8-09	CEMENT & CEMENTING SERVICES	\$3,500		\$3,500
8-10	DRILL BITS one - 12 1/4", three - 7-7/8"	\$20,000		\$20,000
8-10	POWER & FUEL	\$2,000		\$2,000
8-11	CASING CREWS, TOOLS & TONGS			\$0
8-12	RENTAL TOOLS & EQUIPMENT	\$4,000		\$4,000
8-15	CORING & CORE ANALYSIS			\$0
8-16	PUMP TRUCKS & SERVICES			\$0
8-17	GEOLOGY / ENGINEERING / SUPERVISION 10 days @ \$500/day	\$5,000		\$5,000
8-18	MUD LOGGING UNIT	\$5,000		\$5,000
8-18	DIRECTIONAL TOOLS & SERVICE			\$0
8-18	FISHING TOOLS & SERVICE			\$0
8-21	LAND DAMAGES / LEGAL WORK	\$10,000		\$10,000
9-01	OVERHEAD 10 days @ \$250/day	\$2,500		\$2,500
9-01	CONDUCTOR PIPE			\$0
9-01	INTERMEDIATE CASING			\$0
9-01	SURFACE CASING 8 5/8" @ 350'		\$2,500	\$2,500
9-03	BRADENHEAD		\$600	\$600
9-10	NON-CONT. TANG. EQUIP. DRLG.			\$0
CONTINGENCIES 5% of INTANGIBLE / TANGIBLE COSTS		\$9,000		\$9,000
TOTAL COST TO CASING POINT		\$188,000	\$3,100	\$191,100
PLUG & ABANDONMENT		\$5,000		\$5,000
TOTAL COST IF DRY HOLE		\$193,000	\$3,100	\$196,100
8-02	COMPLETION UNIT 5 days @ \$2100/day	\$10,500		\$10,500
8-03	CONTRACT LABOR	\$5,000		\$5,000
8-03	INSTALLATION OF SERVICE EQUIPMENT			\$0
8-04	TRUCKING	\$4,000		\$4,000
8-05	FILL PITS & DRESS LOCATION	\$2,500		\$2,500
8-06	CHEMICAL PRODUCTS			\$0
8-06	WATER TRANSPORTS	\$5,000		\$5,000
8-07	CASED HOLE WIRELINE SERVICES	\$3,000		\$3,000
8-09	CEMENT & CEMENTING SERVICES	\$22,500		\$22,500
8-11	CASING CREWS, TOOLS & TONGS	\$2,800		\$2,800
8-11	RENTAL TOOLS & EQUIPMENT			\$0
8-15	FRAC PIT / LINER			\$0
8-15	FRAC TANK RENTALS	\$3,000		\$3,000
8-15	PUMP TRUCKS & SERVICES			\$0
8-15	STIMULATION SERVICES 1 Acid BD, 1 Sand Frac	\$40,000		\$40,000
8-16	ENGINEERING / SUPERVISION 5 days @ \$500/day	\$2,500		\$2,500
8-18	FISHING TOOLS & SERVICES			\$0
8-18	LEGAL WORK			\$0
8-18	PLUG & ABANDONMENT			\$0
8-21	OVERHEAD 5 days @ \$250/day	\$1,300		\$1,300
9-01	PRODUCTION CASING / LINER 4 1/2" @ 6700'		\$27,600	\$27,600
9-02	TUBING 2 3/8" @ 6600'		\$14,600	\$14,600
9-03	TUBINGHEAD / X-MAS TREE		\$8,000	\$8,000
9-04	ARTIFICIAL LIFT EQUIPMENT			\$0
9-04	SUBSURFACE EQUIPMENT / SALVABLE			\$0
9-05	SEPARATION EQUIPMENT / GAUGES		\$10,000	\$10,000
9-05	TANKS / WALKS / STAIRWAYS 1 each 20, 100, 300 Bbl		\$3,000	\$3,000
9-09	FLOWLINES & FITTINGS		\$2,000	\$2,000
9-10	NON-CONT. TANG. EQUIP. COMPL.			\$0
CONTINGENCIES 5% of INTANGIBLE / TANGIBLE COSTS		\$5,100		\$5,100
TOTAL COST TO COMPLETE & EQUIP		\$107,200	\$65,200	\$172,400
TOTAL WELL COST		\$295,200	\$68,300	\$363,500

Form 12/9/98

OPERATOR	BY <i>S. Walker</i>	WI %	DATE 11/29/98
COMPANY	BY	WI %	DATE
COMPANY	BY	WI %	DATE
COMPANY	BY	WI %	DATE
COMPANY	BY	WI %	DATE
COMPANY	BY	WI %	DATE