

ROCKY MOUNTAIN GEO-ENGINEERING CO.

WELL SITE GEOLOGY -- MUD LOGGING

2450 INDUSTRIAL BLVD

PHONE (503) 243-3044

GRAND JUNCTION, CO 81505

COMPANY PHILLIPS PETROLEUM CO		LOCATION 2336' PNL & 862' FEL SEC 31 T29N R6W	FROM 3148'	TO 3289'
WELL SAN JUAN 29-G #243		COUNTY RIO ARriba	DEPTH LOGGED 1/3/92	DATE LOGGED 1/3/92
FIELD BASIN FRONTIARD		STATE NEW MEXICO	ENGINEERS JACK PALUGA	
ELEVATION GR 6453' DE 6464'		DRILLING FLUID PRODUCED WATER		

	SHALE		DOLOMITE		COAL		DTG - DOWN TIME GAS	TG - TRIP GAS
	SANDSTONE		CHERT		ANHY-GYP		DST - DRILL STEM TEST	CG - CONNECTION GAS
	LIMESTONE		SALT		SILTSTONE		SLM - STEEL STEM MEAS	NB - NEW BIT
							LAT - LOGGED AFTER TRIP	NR - NO RETURNS
							WOB - WEIGHT ON BIT	CO - CIRCULATE OUT
							RPM - REVOLUTIONS/MIN	NS - NO SAMPLE
							SPM - STROKES/MIN	RR - RERUN
							PP - PUMP PRESSURE	CB - CORE BIT
							DEVIATION	○ - SHOW REPORT

DRILLING RATE IN MIN PER 2'		LITHOLOGY		CHROMATOGRAPH HYDROCARBONS IN PPM				M - 1000 PPM		REMARKS				
5	10	15	20	DEPTH	PERCENT AUC	TOTAL GAS	METHANE	ETHANE PROPANE	BUTANE PENTANE	WT	VIS	WL	CKE	PH
RISC FIELD UNIT #12 ON LOCATION 1/3/92 @ 0330														
7" CASING SET @ 3148'														
										COAL BEDS		NET COAL		
3152-54														
3208-10														
3212-14														
3216-18														
3224-26														
3228-30														
3232-36														
3246-48														
3252-54														
3256-58														
3276-78														
3282-84														
COAL blk-dkgy dul rthy-arg sft-frm no vis bldg no vis clt mod ash cont SH m-dkgy slty sl carb hd plty grdg to sltst sdy sl carb ip														
SH m-ltgy slty m hd plty grdg to sltst sdy m hd plty														
SLTST m-dkgy sdy sl carb m hd plty grdg to ss ip m-ltgy slty mtx ip f- vf grn p srted ip m cmt														
SH m-dkgy slty carb m hd plty grdg to sltst ip SLTST m-dkbrn sdy carb ip m hd plty grdg to ss														
COAL blk-dkgy bri-dul bnd ip sl rthy-arg m hd sbbky-plty m ash cont no vis bldg no vis clt interbd with ss dkbrn dus slty-carb mtx f-vf grn grdg to sltst sdy carb														
COAL blk-dkgy dul-occ bri bnd frm-a hd sbbky ip m-high ash cont tr bldg no vis clt interbd with sh dkgy-blk-dkbrn slty carb m hd sbbky														
COAL blk-dkgy dul rthy-arg frm-m hd sbbky-plty mod ash cont tr bldg no vis clt interbd with sh dkgy-blk carb slty														
SLTST dkgy-dkbrn sdy carb m hd plty ip grdg to ss ip dus slty-sl carb mtx f-vf grn p srted ip														
COAL blk-dkgy dul-occ bri bnd m hd ip rthy-arg no vis bldg no vis clt interbd with sltst sdy carb m hd														
UNIT RELEASED 1/4/92 @ 1100														