

# ROCKY MOUNTAIN GEO-ENGINEERING CO.

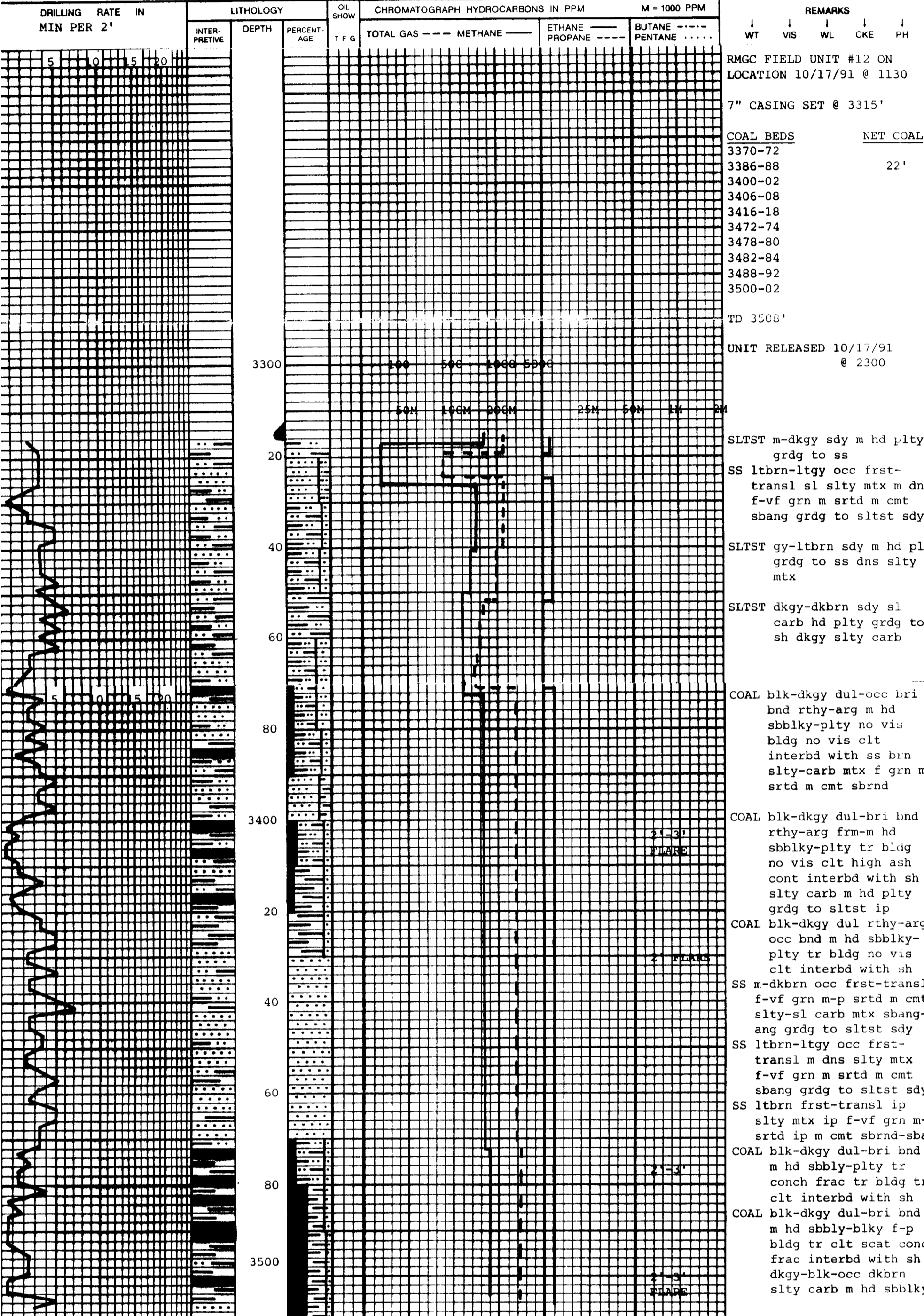
WELL SITE GEOLOGY — MUD LOGGING  
 2450 INDUSTRIAL BLVD. PHONE (303) 243-3044 GRAND JUNCTION, CO 81505

COMPANY PHILLIPS PETROLEUM CO	LOCATION 983' FSL & 1145' FWL SEC 11 T31N R8W	DEPTH LOGGED FROM 3315' TO 3508'
WELL SAN JUAN 32-8 #243	COUNTY SAN JUAN	DATE LOGGED 10/17/91 10/17/91
FIELD BASIN FRUITLAND	STATE NEW MEXICO	ENGINEERS JACK PALUGA
ELEVATION GR 6618' DF 6629'	DRILLING FLUID PRODUCED WATER	

SHALE	DOLOMITE	COAL	
SANDSTONE	CHERT	ANHY-GYP	
LIMESTONE	SALT	SILTSTONE	

D TG - DOWN TIME GAS  
 DST - DRILL STEM TEST  
 SLM - STEEL LINE MEAS.  
 LAT - LOGGED AFTER TRIP  
 WOB - WEIGHT ON BIT  
 RPM - REVOLUTIONS/MIN.  
 SPM - STROKES/MIN.  
 PP - PUMP PRESSURE  
 O - DEVIATION

TG - TRIP GAS  
 CG - CONNECTION GAS  
 NB - NEW BIT  
 NR - NO RETURNS  
 CO - CIRCULATE OUT  
 NS - NO SAMPLE  
 RR - RERUN  
 CB - CORE BIT  
 O - SHOW REPORT



RMGC FIELD UNIT #12 ON  
 LOCATION 10/17/91 @ 1130

7" CASING SET @ 3315'

COAL BEDS NET COAL  
 3370-72  
 3386-88 22'  
 3400-02  
 3406-08  
 3416-18  
 3472-74  
 3478-80  
 3482-84  
 3488-92  
 3500-02

TD 3508'

UNIT RELEASED 10/17/91 @ 2300

3300 100 500 1000 5000

50M 100M 200M 25M 50M 1M 2M

20 SLTST m-dkgy sdy m hd pty grdg to ss  
 SS ltbrn-ltgy occ frst-transl sl slty mtx m dns f-vf grn m srted m cmt sbang grdg to sltst sdy

40 SLTST gy-ltbrn sdy m hd pty grdg to ss dns slty mtx

60 SLTST dkgy-dkbrn sdy sl carb hd pty grdg to sh dkgy slty carb

80 COAL blk-dkgy dul-occ bri bnd rthy-arg m hd sbbkly-pty no vis bldg no vis clt interbd with ss brn slty-carb mtx f grn m srted m cmt sbrnd

3400 COAL blk-dkgy dul-bri bnd rthy-arg frm-m hd sbbkly-pty tr bldg no vis clt high ash cont interbd with sh slty carb m hd pty grdg to sltst ip

20 COAL blk-dkgy dul rthy-arg occ bnd m hd sbbkly-pty tr bldg no vis clt interbd with sh

40 SS m-dkbrn occ frst-transl f-vf grn m-p srted m cmt slty-sl carb mtx sbang-ang grdg to sltst sdy

60 SS ltbrn-ltgy occ frst-transl m dns slty mtx f-vf grn m srted m cmt sbang grdg to sltst sdy

80 SS ltbrn frst-transl ip slty mtx ip f-vf grn m-w srted ip m cmt sbrnd-sbang

COAL blk-dkgy dul-bri bnd m hd sbbly-pty tr conch frac tr bldg tr clt interbd with sh

COAL blk-dkgy dul-bri bnd ip m hd sbbly-blky f-p bldg tr clt scat conch frac interbd with sh dkgy-blk-occ dkbrn slty carb m hd sbbkly

2'-3' FLARE  
 2'-3' FLARE  
 2'-3' FLARE