

BENCH MARK GEOLOGICAL SERVICES

HYDROCARBON WELL LOG

MAY 4 1991
OIL CON. DIV.
DIST. 3

OPERATOR BLACKWOOD AND NICHOLS
WELL NE Blanco Unit 444 FIELD Basin Fruitland Coal
LOCATION sec 23 T31N R7W CO./STATE San Juan Co., New Mexico
ELEVATION KB 6593 ft. GL 6579' (ungrd) SPUD DATE _____
INTERVAL LOGGED 3150 - 3524 ft. DATE LOGGED 10/29 thru 10/30/90
LOGGING GEOLOGISTS Randy Laney, Mike Mixer
INSTRUMENTATION FID Chromatograph and Total Gas Detector, Infrared CO₂ Detector
WELL LOCATION

NEBU 434

NEBU 71
NEBU 444

LEGEND—GAS CURVES
TOTAL GAS T
METHANE 1
ETHANE 2
PROPANE 3
ISO & N-BUTANE 4
OIL INDICATOR $\frac{C_2 + C_3}{C_1}$ 0

HYDROCARBON ANALYSIS

TOTAL GAS			Reported in Units	
10	100	1000	10	100
GAS CHROMATOGRAPHY			Reported in PPM	
100	1000	10000	100	1000
OIL INDICATOR			Dimension Less	
0.01	0.1	1.0	0.01	0.1

7" casing set at 3150 ft.

5 ft. sample interval
Drilling with water

Depth of Coal Intervals
[# of canistered samples]

100 units Total Gas = 13 methane
10 100 1000 units
100 1000 10,000 ppm

heavies 100 1000 ppm
CO₂ 1000 10,000 ppm

RATE OF PENETRATION

Min./Ft.
STC FDTL 6 1/4"
2-22's, 1-20

2.5 5 7.5 10

WOB 10
RPM 75
PP 400

TD 3524 ft.

DEPTH
LITHOLOGY
OBSERVED
%

60

80

3200

20

40

60

80

3300

20

40

60

80

3400

20

40

60

80

3500

20

total

C₁

CG

total

100 u.

C₁ 3,420 ppm

C₂ 700 ppm

C₃ 410 ppm

total

100 units

C₁ 6,675 ppm

CG

total

125 units

C₁ 9,910 ppm

CG

total

78 units

C₁ 5,785 ppm

CG

total

90 units

C₁ 6,885 ppm

C₂

C₂

CG

C₃

1-C₂

Visual
Share
G F P T

Lithology
Interp

Lithology
Descriptions
and Remarks

Sh med-dk brn, very platy-sub fis, sub res-res, firm, non-v sli calc, mod-very carb w/ paper thin coaly lam

Ss med-dk gy, brn gy, pred vf gr, sub ang, poor srt, fros, disagg, mod calc, mod-very silty, NS

Sh med-dk gy, med brn, platy-sub platy, firm, earthy-sub res, non calc, mod carb, intbd w/ sub vit, platy blk coal

Siltst med-dk brn, sub blk, firm, earthy, sli-mod carb, non calc, intbd w/ brn gy, vf gr, sub ang Ss

Coal black & some brn blk, platy-sub platy, v little vit-pred sub vit to resinous, very carb, intbd w/ blk brn, sub platy, v carb Sh

Coal black, pred platy-syb blocky & some blk w/ only rare conch frac, sub vit w/ 10-20% mod coarse vit, gen very carb, no resin, no calc, poor-fair quality

Ss lt brn gy, sub ang-ang, mod w srt, gen fros disagg, vf dissem carb grs, mod-very calc cat w/ some wh calc clyst, NS

Ss med gy wh, gen as above, f-some vf gr, sub ang, mod calc cat, NS

Coal black to brn blk platy-some sub blocky at top becoming pred sub blocky to base w/ rare conch frac, drilled up vf gr, 10-15% vit at top; 20-30% v finely banded vit at base, gen very carb, little calc, no resin, overall poor-fair quality coal, best of well

Coal black, platy-sub blocky-occ blk, pred sub vit w/ 15-20% vit as fine bands, mod-very carb, some f gr resin fair-poor quality

T/ P.C. Tongue 3391'
Ss med gy wh S&P, f gr sub ang to some ang clear-fros qtz grs, sli cat, glauc & carb grs, some brn dd spotty intgran residue, faint yel flr, lt yel residual ring cur, sli tr condensate odor

Ss lt gy wh S&P, f-vf gr, sub ang, more fros than above, v well srt sli & sli calc cat, faint yel flr, v sli odor, NC

Siltst med brn, mottled gy brn, sub blk, firm, sli-mod carb, mod carb, intbd w/ Ss as above

Sh med-dk brn, sub platy-sub blocky, firm, non calc, mod-very carb gen very silty, grdg to carb Siltst

Siltst med-dk brn, sub blocky, firm, non calc, very carb w/ some dissem coaly grs

Sh dk brn, sub blocky-sub platy, sub res-occ sub vit luster, non calc, mod-very carb w/ fine coaly material

T/ Main P.C. 3520'
TD sample- Ss med gy wh S&P, f gr, sub rd-sub ang, fros-some clr, mod w srt, disagg, glauc & carb grs, pale-med gn yel flr, mod yel ring cut, fair condensate odor