

HYDROCARBON
WELL LOG RECEIVED

MAR 14 1991

OIL CON. DIV
DIST. 3

WELL NE Blanco Unit 490

FIELD Basin Fruitland Coal DI
CO/STATE San Juan Co., New Mexico

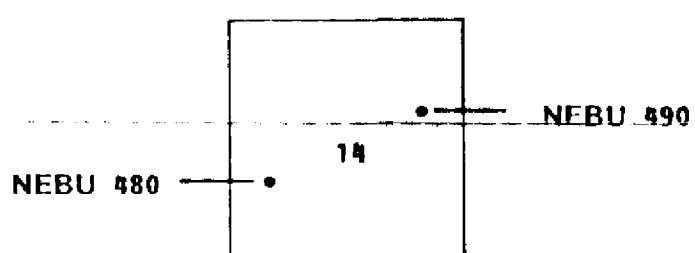
LOCATION sec 14 T31N R7W

CO/STATE San Juan Co., New Mexico
SPUD DATE _____
DATE LOGGED 10/14 thru 10/15/00

LOGGING GEOLOGISTS **Randy Laney, Mike Mixter**

INSTRUMENTATION FID Chromatograph and Total Gas Detector, Infrared CO₂ Detector

WELL LOCATION



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

LEGEND—GAS CURVES	
TOTAL GAS	T
METHANE	1
ETHANE	2
PROPANE	3
ISO & N-BUTANE	4
OIL INDICATOR	$\frac{C_3 + C_4}{C_1}$ 0

ABBREVIATIONS

CO	— Circulate Out
CG	— Connection Gas
CB	— Core Bit
DC	— Depth Correction
DS	— Directional Survey
DST	— Drill Stem Test
DTG	— Down Time Gas
FC	— Filter Cake
LAT	— Logged After Trip
NB	— New Bit
NDR	— No Data Recorded
NR	— No Returns
PP	— Pump Pressure
RPM	— Rotary Speed
SPM	— Pump Strokes
TG	— Trip Gas
TGR	— Trip Gas Recycle
Vis	— Viscosity
Wl	— Water Loss
WOB	— Weight on Bit
WI	— Density Of Drift Fluid

LITHOLOGY MODIFIERS

//	Anhydritic
B	Bentonitic
C	Calcareous
■	Carbonaceous, Coaly
L	Dolomitic
F	Fossiliferous
G	Glaucconitic
O	Oolitic
P	Pyritic
A	Siliceous

RATE OF PENETRATION

Min. Ft.

STC FDTL 5 1/4"
2-20's, 1-24

2.5 5 7.5 10

WOB 8-10
RPM 90
PP 800

circ. out

C.D.

TD 3413 ft.

DEPTH

3000
20
40
60
80
3100
20
40
60
80
3200
20
40
60
80
3300
20
40
60
80
3400
20

LITHOLOGY OBSERVED

%

GAS CHROMATOGRAPHY			Reported in PPM		Visual Show	Lithology Interp.	Lithology Descriptions and Remarks
100	1000	10000	100	1000			
OIL INDICATOR			Dimension Less				
0.01	0.1	1.0	0.01	0.1			
7" casing set at 3001 ft.			5 ft. sample interval Drilling with water				
100 units Total Gas = 1% methane 10 100 1000 units 100 1000 10,000 ppm			Depth of Coal Intervals (# of canistered samples)				
			heavies 100 1000 ppm CO ₂ 1000 10,000 ppm				
total 83 units C ₁ 6,350 ppm C ₂ 30 ppm			3033-34 3095-96 3106-07 3112-14 3128-31 ONSET OF -FLARED GAS- 3137-48 (1 can)				Sh v lt gy, lt brn g sub platy, mod firm, earthy to sli sub wa non-sli calc, non carb Sltst med-dk gy, sub platy, firm, earthy, sli calc, non carb Sh med-dk gy, med-dk brn, sub platy, earthy sli res, dk brn par v carb w/ some coaly laminae, intbd w/ blk vit Coal Ss med gy, gen vf gr sub ang, fair sorting fros qtz grs, disagg. mod calc cement w/ some wh calc clyst, mod silty, NS Sh med brn, gy brn, s platy-occ sub blocky earthy, sub res, sli- mod carb, non calc, in bd w/ Ss as above Sltst med-dk brn-gy brn, sub platy-sub blk firm, mod carb, sli c intbd w/ blk, gen vit Coal Sh & Coal Sh is med gy-gy blk & v dk brn platy-sub blk, earth res, v carb, intbd w/ blk, gen vit Coal, som w/ conch frac Coal black, sub bloc to some blk w/ occ conch frac, pred sub vit w/ 25% vit as di persed to fine band some carb, tr calc, t resin, rare pyr, fair quality coal Ss lt-med gy-cream pred vf gr, sub ang- rd, fair srt, fros, dis agg, sli-mod calc cem ent, some carb grs, N
total 45 units C ₁ 3,615 ppm total 78 units C ₁ 5,850 ppm			CG DTG carbon dioxide				Ss lt brn gy sli S very dissimilar to above Ss, gen f gr, s rd, pred clear qtz g sil cement, scattered very pale gn glauc, abnt spotty brn dd -gran residue, NF, NC represents interval reworked P.C. Ss Coal black, sub bloc to some blk w/ some conch frac, 20-30% v at top becoming 40- coarse to massive v at base, mod carb at top, drilled up vf gr rare resin, tr calc, fair to good quality coal-better at base org-brn clyst intbd
total 67 units C ₁ 5,235 ppm			CG carbon dioxide				Ss med brn gy, vf t some f gr, sub rd-sub ang, fros, disagg, fai srt, mod calc cmt, no glauc, NF, NC Coal black, blocky sub blk w/ fair to good conch frac and cleat development, 5- 70% massive vit, ver little carb, drilled up f gr, no calc, no resin, very good qua lity-best of well T/ P.C. Tongue 33 Ss v lt gy wh S&P, gr, sub rd, very well srt, fros & clr qtz glauc & carb grs, no intgran residue, sli condensate odor, pal gn yel flor, residua yel ring cut Ss v lt gy S&P, gen as above, f gr, v wel srt, sli more fros, s more calc, glauc & c grs, some org chf, t pale yel flor, sli o no cut Sh very dk brn-blk brn, sub platy-sub b mod sft, sub res w/ grainy text, very ca w/ abnt coaly paper thin laminae, mod st
total 58 units C ₁ 4,211			CG carbon dioxide				Coal sub blk-blk fair conch frac, 40- fine banded to coar vit, some carb, some gr resin, no calc, g quality coal T/ Main P.C. 341 TD sample- Ss med wh S&P, f gr, sub rd, srt, gen fros, sli c glauc & carb-coaly v sli yel flor, tr y ring cut, sli odor