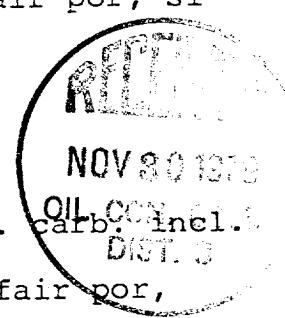


~~energy survey~~
GC4-PC #283

B-29-29N-12W

SAMPLE DESCRIPTION

- 210' - 50 10% Ss: wht, vfn-m-g, sbrnd, clay fld, tite
90% Sh: gry, firm, silty, w/occ. carb. incl.
- 50' - 80 100% Sh: AA
- 80' - 300 10% Ss: wht, fn-g, sbrnd, clay fld (swelling), tite
90% Sh: AA
- 300' - 20 10% Ss: wht, fn-g, sbang, mod clay fld, fair porosity, w/
occ. carb. incl.
90% Sh: AA
- 20' - 50 20% Ss: AA
80% Sh: AA
- 50' - 70 40% Ss: wht, fn-g, sbrnd, clay fld (swelling), tite
60% Sh: AA, gry-brn, sl lignitic
- 70' - 80 60% Ss: AA
40% Sh: gry-brn, firm, fri, silty-sl clayey, w/occ. carb. incl.
- 80' - 410 40% Ss: wht, fn-m-g, sbang, mod clay fld, fair porosity
60% Sh: gry, firm, fri, silty, w/occ. carb. incl.
- 410' - 20 40% Ss: AA, hvy clay fill (swelling), tite
60% Sh: AA
- 20' - 40 60% Ss: AA
40% Sh: AA
- 40' - 50 70% Ss: clr wht, fn-m-g, sbang, sl clay fld, good por,
sl arkosic, w/occ. carb. incl.
30% Sh: AA, some drk gry and carb.
- 50' - 70 50% Ss: wht, fn-g, sbrnd, clay fld (swelling), tite
50% Sh: AA, silty-sl clayey
- 70' - 80 No Sample
- 80' - 500 70% Ss: wht, fn-g, sbang, sl-mod clay fld, fair por, sl
arkosic, w/occ. carb. incl.
30% Sh: AA
- 500' - 50 70% Ss: AA, clay fld (swelling), tite
30% Sh: AA, clayey-silty
- 50' - 60 100% Sh: gry, firm, fri, silty-clayey, w/occ. carb. incl.
- 60' - 70 20% Ss: wht, vfn-fn-g, sbang, mod clay fld, fair por,
w/occ. carb. incl.
80% Sh: AA



570 - 80 40% Ss: AA
 60% Sh: AA

80 - 90 10% Ss: AA
 90% Sh: AA

90 - 600 40% Ss: AA
 60% Sh: AA

600 - 10 30% Ss: wht, fn-m-g, sbang, mod clay fld, fair-good por,
 sl arkosic, w/occ. carb. incl.
 70% Sh: AA, silty

10 - 20 50% Ss: AA
 50% Sh: AA

20 - 30 10% Ss: AA
 90% Sh: lt gry-gry, firm, fri, silty, w/occ. carb. incl.

30 - 60 10% Ss: AA
 90% Sh: gry, soft, fri, clayey-sl silty, w/occ. carb. incl.

60 - 70 10% Ss: AA
 90% Sh: AA, sl clayey-silty

70 - 90 30% Ss: wht, m-g, sbrnd, sl clay fld, good por, w/occ.
 carb. incl.
 70% Sh: AA

90 - 700 40% Ss: AA
 60% Sh: AA

700 - 10 20% Ss: AA
 80% Sh: AA

10 - 20 10% Ss: AA
 90% Sh: AA

20 - 30 10% Ss: wht, fn-g, sbang, mod clay fld, fair por.
 90% Sh: AA

30 - 50 10% Ss: clr wht, m-g, sbang, mod clay fld, fair por, sl arkosic
 90% Sh: AA, clayey-silty

50 - 60 30% Ss: wht, fn-g, sbrnd, clay fld, tite, w/occ. carb. incl.
 70% Sh: gry, soft, fri, clayey

60 - 80 10% Ss: AA
 90% Sh: AA

80 - 90 30% Ss:wht, fn-g, sbrnd, mod-sl clay fld, fair-good por.
 70% Sh: AA

790 - 800 10% Ss: AA
90% Sh: AA

800 - 10 30% Ss: wht, m-g, sbrnd, clay fld, tite
70% Sh: AA, sl micromicaceous

10 - 20 10% Ss: clr wht, fn-g, sbang, sl clay fld, good por,
sl arkosic
90% Sh: AA

20 - 30 30% Ss: AA, fn-m-g
70% Sh: AA

30 - 40 10% Ss: AA
90% Sh: AA, soft-firm, clayey-silty

40 - 50 30% Ss: AA
70% Sh: AA

50 - 80 100% Sh: AA, clayey

80 - 900 50% Ss: wht, fn-m-g, sbrnd, sl-mod clay fld, fair por,
w/occ. carb. incl.
50% Sh: gry-brn, soft, fri, clayey-silty, w/occ. carb. incl.

900 - 20 30% Ss: wht, fn-m-g, sbang, sl clay fld, fair por, w/occ.
carb. incl., sl arkosic, calc.
70% Sh: gry, soft, clayey

20 - 50 10% Ss: AA, fn-g
90% Sh: AA

50 - 60 20% Ss: AA
80% Sh: AA

60 - 70 40% Ss: gry, fn-g, sbang, mod clay fld, fair por, sl shaly,
w/occ. carb. incl.
60% Sh: AA, sl micromicaceous

70 - 90 40% Ss: clr wht, fn-m-g, sl clay fld, good por, sl coaly
60% Sh: AA

90 - 1000 20% Ss: AA
80% Sh: AA
Tr. Chert: clr, crs-g, sbrnd

1000 - 30 N.S.

30 - 40 10% Ss: wht, fn-g, sbrnd, clay fld, fair por-tite, w/occ.
carb. incl.
90% Sh: gry, soft, fri, sl silty, w/occ. carb. incl.

40 - 60 10% Ss: wht, m-g, sbang, mod clay fld, fair-good por, sl
arkosic
90% Sh: AA

1060 - 70 10% Ss: AA, no feldspar grains, clay fld, tite-fair por.
90% Sh: AA, some dark gray and coaly

70 - 80 10% Ss: AA, fn-g
90% Sh: gry-drk gry, soft-firm, fri, clayey-sl silty, some carb.

80 - 90 10% Ss: AA, m-g, clay fld, tite-fair por.
90% Sh: AA

90 - 1100 10% Ss: AA
90% Sh: AA

1100 - 10 20% Ss: wht, m-g, sbang, clay matrix, tite-fair por.
80% Sh: AA, some w/carb. incl.

10 - 20 40% Ss: wht-clr, m-g, sbang-sbrnd, sl clayey, good por,
w/carb. incl., sl feldspathic
60% Sh: AA

20 - 30 20% Ss: AA
80% Sh: AA

30 - 40 40% Ss: mostly clr, fn-m-g, sbrnd-rnnd, clay matrix, fair-
poor por, w/occ. carb. incl.
60% Sh: AA

40 - 50 30% Clystn: gry, soft, swelling
60% Sh: gry, soft, clayey, sl micromicaceous
10% Coal: blk, vit, clayey

50 - 70 50% Clystn: AA
50% Sh: gry-drk gry, firm, fri, sl silty, some carb.

70 - 80 30% Ss: wht, fn-g, sbrnd, sl clay fld, calc, fair por-tite,
sl feldspathic
70% Sh: AA

80 - 90 20% Ss: AA
80% Sh: AA

90 - 1200 10% Ss: AA
80% Sh: gry, soft, fri, clayey-silty, w/occ. carb. incl.
10% Coal: blk, vit.

1200 - 10 100% Coal: AA

10 - 20 30% Ss: wht, fn-m-g, sbrnd, sl-mod clay fld, fair por,
calc, sl arkosic
20% Sh: gry-brn, soft-firm, fri, clayey-silty, some lignitic
50% Coal: AA

20 - 30 40% Ss: AA, gry-wht
40% Sh: AA
20% Coal: AA

1230 - 40 N.S.

40 - 60 30% Ss: wht, m-g, sbang, sl clay fld, good por, sl feldspathic
50% Sh: AA
20% Coal: AA

60 - 70 20% Ss: AA, gry-wht, fn-m-g
60% Sh: gry, soft, fri, clayey-silty
20% Coal: blk, vit.

70 - 80 30% Ss: AA
60% Sh: AA
10% Coal: AA

80 - 90 20% Ss: wht, m-g, sbang, sl clay fld, calc, sl feldspathic,
good por, w/occ. carb. incl., sl glauc.
40% Sh: gry, soft, fri, clayey
40% Coal: AA

90 - 1320 40% Ss: clr wht, m-g, sbang, mod clay fld, fair-good por, calc,
sl feldspathic, w/occ. carb. incl., sl glauc.
30% Sh: AA
30% Coal: blk, vit.

20 - 30 50% Ss: AA
30% Sh: AA
20% Coal: blk, vit.

30 - 50 30% Ss: wht, fn-g, sbang, mod clay fld, fair por, calc,
w/occ. carb. incl.
40% Sh: AA
30% Coal: AA

50 - 60 N.S.

60 - 80 30% Ss: AA, sl shaly, fair-poor por.
60% Sh: gry-lt gry, soft, fri, sl silty-clayey
10% Coal: AA

80 - 90 40% Ss: wht, fn-g, sbang, mod clay fld, fair por,
sl feldspathic, calc, w/occ. carb. incl.
30% Sh: lt gry, soft, fri, silty, w/carb. incl.
30% Coal: AA

90 - 1400 10% Ss: AA
80% Sh: AA
10% Coal: AA

1400 - 10 20% Ss: AA, shaly, tite
80% Sh: AA, vy silty
Tr. Coal: AA

10 - 20 10% Ss: AA
80% Sh: AA
10% Coal: AA

1420 - 30 100% Sh: AA, vy silty-sl sandy
Tr. Coal: AA

30 - 50 20% Ss: wht, fn-g, sbang, clay fld, tite
80% Sh: AA, no sand
Tr. Coal: AA

50 - 80 80% Sh: lt gry, soft, fri, silty, w/carb. incl.
20% Coal: blk, vit.

80 - 90 10% Ss: wht, fn-g, sbang, sl clay fld, good por., sl glauc.
80% Sh: gry, soft, fri, silty, w/occ. carb. incl.
10% Coal: blk, vit.

90 - 1500 AA

1500 - 10 90% Sh: AA
10% Coal: AA

10 - 18 N.S.

TD 1518'