



00277952

BEST IMAGE
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November 5, 1967

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COLO. OIL & GAS CONS. COMM.

Mr. George Peays, District Manager
J. M. Huber Corporation
615 Bankers Union Life Building
2401 E. 2nd Avenue
Denver, Colorado

Dear Sir:

Attached herewith are sample descriptions, drill-stem-test data and bit records from Huber's No. 21-1 Federal-Chamberlin, south Powder Wash field test. The formations penetrated and other data are:

J. M. HUBER CORP., No. 21-1 FEDERAL-CHAMBERLIN
NE SE Sec. 21, T. 11 N., R. 97 W.
Moffat County, Colorado

Elev: 7229' grd; 7240' K.B.
Comm: Oct. 17, 1967; U.S. Oct. 18, 1967.
Comp: D&A @ 7650' drill measure, Nov. 3, 1967.
Csg: 8 5/8" @ 448' w 310 sx & 2% CaCl₂.
Contr: Stuarco Oil Co., Rig #5.

Top Tipton	2240'	Schlumb. measure
" Hiawatha	2505'	" "
Base Big Sand-Top Ft. Union	5768'	" "
Top Huber's "A" zone	7022'	" "
" " "B" "	7250'	" "
T.D., D&A in Ft. Union	7650'	Driller's measure

Driller's depths must be corrected down-hole 3 or 4' to correlate with log measures to 6456'. At 6456' pipe was strapped and a 7' down-hole correction applied. From this point to T.D., a 6 to 8' up-hole measurement correction must be applied to driller's depths to correlate with E log measures.

Impervious siltstone at the top of the "B" zone between 7256 & 7262' (Sonic measure) displayed dull, spotted fluorescence wet, and dark brown oil stain dry. Good bright fluorescence was observed in sandstone from the 7324 to 7336' (Son meas.) interval, but the drill-stem-test from 7317 to 7395' (Son meas.) yielded only 190' of slightly oil and gas cut mud in 2½ hours. Likewise, the low shut-in pressure also indicated the lack of permeability in this zone.

With no other shows of oil or gas in the column, the No. 21-1 Federal-Chamberlin was recommended for abandonment at 7650' T.D. (drill meas.), November 3, 1967.

Very truly yours

Karl M. Buehler
Karl M. Buehler, geologist

SAMPLE DESCRIPTIONS

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Samples examined starting @ 2350' by K. M. Buehler, geologist on location from 3280' to T.D. Samples taken as follows: 30' to 3460'; 20' to 4400'; 15' to 5500'; 10' & 5' to 7650' T.D. Each sample examined fresh & wet for fluorescence. Sample depths are by driller's (geolograph) measure and are not corrected for lag or to E log depths. As only small quantities of sand were recovered in samples above 4300', typed descriptions are started at this point.

- 4300 to 4415' Sh, mar, yel & pale gr. NB# 6, YT3J in @ 4420'.
- 75 Sh, mar, yel & pale gr.
 - 4505 Sh, aa; Ss, wh, f, sa, gran, sl s&p, clean, por & perm, 05%.
 - 65 Sh, mar, yel & pale gr.
 - 95 Sh, mar, red, yel & pale gr.
 - 4610 Sh, mar, yel & pale gr.
 - 40 Sh, aa; Sltst, wh, sl s&p, calc, 05%.
 - 55 Sh, aa; Ss, pk & wh, v f to m-f, vcl g, pt calc, 05%.
 - 4730 Sh, mar, yel & pale gr.
 - 45 Sh, aa; Sltst, lt gr, vcl g, calc, dns, 05%.
 - 75 Aa; ltl crs, free sd. NB #7, YT1A in @ 4761'.
 - 90 Sh, aa; Ss, gr-wh, m-f, sa, s&p w grn g com, calc, w no perm or fluor, 20%.
 - 4805 Aa; Ss, aa, only 10%; no perm or fluor.
 - 65 Sh, mar, yel & pale gr.
 - 80 Sh, aa; Ss, pk to wh, f, vcl g, calc, 10%; no perm or fluor.
 - 4925 Sh, mar, yel & pale gr.
 - 40 Sh, aa; Ss, wh, f, vcl g, calc, 05%; few crs, free sd grains.
 - 70 Sh, aa. NB #8, YT3 in @ 4961'.
 - 5120 Sh, mar, yel & pale gr.
 - 35 Sh, aa; Sltst, lt gr-wh, mica, calc, 05%.
 - 39 (before trip) Sh, aa; Ss, wh, v f, vcl g, calc, 02%. NB #9, YT3J in @ 5139'.
 - 65 Sh, mar, yel & pale gr.
 - 80 Sh, aa; Sltst, lt gr to wh, mica, vcl g, calc, 10%.
 - 95 Aa; Sltst, 05%.
 - 5210 Sh, aa; Ss, wh, f & m-f, s&p, calc, 15%; v v low or no perm.
 - 25 Aa; sh, 95%; Ss, 05%.
 - 40 Aa; few crs, free sd g; few coal frgs.
 - 55 Sh, aa; Ss, med, sa, sl s&p, clean, friable, w good perm, 05%.
 - 70 Sh, mar, yel & lt gr; Sltst & v f ss, aa, 10%.
 - 5300 Sh, aa; Sltst, lt gr to wh, vcl g, calc, 05%.
 - 30 Sh, mar, yel & lt gr.
 - 60 Sh, aa; Sd, wh, crs, sa, free, w few mica flakes, gr & blk chert g & few pk feldspars, 05%; ss probably perm.
 - 75 Sh, mar, yel & lt gr. NB # 10, YT3J in @ 5371'.
 - 90 Sh, aa; some sd, crs, sa-sr, free.
 - 5420 Sh, mar, yel & lt gr; trace gr sh w carb plant frgs; Ss, gr to wh, f, mica, 02%.
 - 35 Sh, aa; few crs, sa-sr sd g & blk chert g.
 - 95 Sh, mar, yel & lt gr; trace gr sh w carb plant frgs.
 - 5504 Sh, aa; Ss, wh, m-f, sa, kaol, sl mica, sl vcl g, prob perm, 03%.
 - 10 Sh, lt to med gr; Sd, crs, sa-sr, free, w few pk feldsp & gr & wh chert g, 05%.
 - 20 Sh, lt to med gr, w trace dk gr sh too.
 - 40 Sh, mar, yel & lt to med gr. NB #11, YT1A in @ 5532'.
 - 60 Sh, lt to m gr, w trace dk gr fiss sh.

Huber, #21-1 Fed Chamberlin, NE SE 21-11N-97W, Moffat Co., Colo.

- 5560 to 5570' Sh, lt to m gr; Sltst, gr to wh, mica, shy, 05%.
-80 Sh, mar, yel & lt gr.
-90 Sh, lt to m gr; Coal & blk, coaly sh, 10%
-5610 Sh, lt to m gr; Coal & coaly sh, aa, 05%.
-30 Sh, lt to m gr; Sltst, m gr, mica, carb speck, dol, 35%.
-40 Aa; Ss, gr-wh, m, a, kaol, trashy, w no perm, 05%.
-60 Sh, lt, m to dk gr; Sltst, m gr, mica, carb speck, dol, 30%.
-80 Sh, lt, m to dk gr; Sltst, aa, 20%.
-5700 Sh, mar, yel, lt to m gr; Sltst, m gr, mica, carb, dol, aa, 20%.

TOP BIG SAND 5671' drill meas; 5674' E log.

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- 20 Sh, lt, m to dk gr; Sltst, aa, 20%; Ss, wh, med, sa, sap, sl
kaol, friable, w m perm, 05%; few crs sd g & gr & blk chert g.
-80 Sd, crs, a-sa, free, w gr & blk chert g com, cgl; few pk
feldspars; few coal frs @ base; prob good perm; no fluor.

BASE BIG SAND-TOP FT. UNION 5764' drill meas; 5768' E log.

- 5810 Sh, mar, yel, lt & med gr.
-20 Sh, aa; Ss, wh, f, sl mica, kaol, sl calc, w no perm, 05%;
ltl m, sa, mica, kaol ss too. Ss 5798-5804' E log.
-40 Sh, mar, yel, lt to m gr.
-50 Sh, aa; Ss, med, sa, vcl g, sl kaol, friable, prob w med perm,
05%. Ss 5828-40' E log.
-60 Sh, mar, yel, lt to med gr.
-5900 Sh, aa; Sltst, lt grn-gr, dol, sl mica, 05 to 10%; tr grn sh too.
-20 Sd, crs, sa-sr, cgl, ark, free; pk feldspars com; prob good perm.
Ss 5891-5911' E log.
-30 Sh, grn & lt to m gr. NB #13, YTLA in @ 5930'.
-70 Sh, lt to m gr; Sltst, lt grn-gr, mica, dol, 05%.
-6000 Sh, lt to m gr, w ltl grn-gr sh too; tr dk gr sh w carb spots
& streaks.
-10 Sh, aa; Sltst & v v f ss, cr-bf to wh, dns, dol, sl sid?, 25%.
-20 Sh & v f ss, aa, 90/10; Sh, blk, carb, coaly, 05%; no perm.
-30 Sh, med gr; Sltst & f ss, lt gr, kaol, dol, 05%.
-40 Sh, aa; Sltst & v f ss, lt gr, sl mica, sl glauc, dns, dol, 20%.
-50 Aa; Ss, wh, m-f, sa, v kaol, trashy, 25%; Coal, 05%; no perm.
-60 Sh, m gr; Ss, aa, 15%; Coal, 05%.
-80 Sh, m gr; Ss, wh, m, sa, v kaol, w no perm, 10%.
-6110 Sh, grn-gr & lt to m gr; hole sloughing shale.
-30 Sh, aa; Sltst & v f ss, lt gr & wh, sl f glauc, sl mica, dol,
v kaol, w no perm, 15%. Hole sloughing.
-60 Sh, med grn-gr; Sltst, grn-gr, mica, dol, 10%. NB #14, YTLA @
6152'.
-80 Sh, med grn-gr; Sltst & f ss, lt grn-gr to wh, mica, v kaol
w no perm, 20%.
-90 Aa; Sltst & ss, 10%; Sh, dk gr-blk, carb, 05%.
-6200 Sh, grn-gr; Sltst & f ss, lt grn-gr, sl f glauc, kaol, w no perm,
20%.
-10 Aa; Sltst & f ss, aa, 10%.
-30 Sh, med grn-gr; ltl sltst & ss, aa; few blk carb sh frgs.
-40 Sh, grn & dk brn to blk, waxy, carb; Coal, 10%; ltl blk sat sh.
-50 Sh, grn & dk gr-blk, satiny, carb.
-60 Sh, blk, v carb; Coal, 30%; Ls, dk brn, v arg, 05%.
-70 Sh, dk brn & gr to blk, v carb; Coal, 10%; Ls, dk brn, v arg, 10%.
-80 Sh, grn & dk gr, satiny, firm.
-85 Sh, aa; Sltst, m gr, v f, dns, dol, 25%; tr ss, wh, v kaol, f.
NB #15, YTLA in @ 6285'.

- 6285 to 6310' Sh, grn, brn & dk gr; Sltst, lt grn-gr, dol, 10%.
- 40 Sh, grn & dk brn, waxy, pt carb; Ss, cr to wh, m-f, un-ev-sort, sl mica, v kaol, w no perm, 25%. Ss 6305-28' E log.
- 60 Ss, aa, gr, bf, cr to wh, m-f, un-ev-sort, mica, v kaol, w no perm, 40%; Sh, grn, dk gr to blk, v carb; Coal, 10%.
- 80 Sh, dk gr to blk, v carb; Coal, 30%.
- 6400 Sh, grn, brn & dk gr, pt carb; Sltst & ss, aa, brn to wh, dol & kaol, 10%; no perm.
- 20 Sh, grn & brn, waxy; Coal, 40%.
- 30 Sh, brn-gr, waxy; Coal, 15%.
- 40 Aa; Coal, 25%.
- 50 Sh, brn-gr, waxy; Ss, wh, m-f, gr spt'd, un-ev-sort, v kaol, sl f glauc, w no perm, 25%. Ss 6431-38' E log.
- 60 Sh, aa, grn & brn, waxy. NB #16, YTLA in @ 6456'. Strapped Pipe, 6456' equals 6463' corrected. Applied a 7' down-hole measurement correction here.
- 70 Aa; Sltst & ss, aa, 10%.
- 90 Sh, grn & brn-gr; Sltst, bf-brn, v f, arg, & ss, wh, m-f, v kaol, w no perm, 10%.
- 6500 Aa; Coal, 10%.
- 10 Sh, dk brn-gr, waxy, carb; Coal, 05%; Ss, aa, 05%.
- 30 Aa; Coal, 02%.
- 40 Sh, dk brn-gr, waxy; Coal, 05%; Sltst & f ss, lt gr to wh, kaol, sl glauc, 05%.
- 50 Sh, aa; Sltst & ss, aa, 05%; Sid, brn, 03%.
- 60 Sh, grn & brn-gr, waxy; Tr siderite.
- 70 Aa; Coal, 03%.
- 6600 Sh, grn & m brn-gr; ltl coal too.
- 44 Sh, grn & m brn-gr, waxy; few coal frgs too. NB #17, OSC1GJ in @ 6644'. Hole sloughing badly; 30' fillup after trip.
- 60 Sh, grn & brn-gr, waxy. Hole sloughing badly after trip.
- 70 Sh, brn-gr, waxy; Coal, 05%; Ls, cr, sl f slty, 05%.
- 80 Aa; Coal, 03%.
- 90 Sh, aa; Sltst & f ss, lt gr, cr to wh, kaol & dol, mica, w no perm, 10%.
- 6700 Sh, grn & m brn-gr, waxy, carb; Coal, 05%.
- 20 Aa; Coal, 03%.
- 30 Aa; Coal, 10%.
- 40 Sh, aa; Ss, lt gr-wh, f, mica, sl s&p, dol, dns, 10%; Coal, 05%.
- 50 Aa; Sltst & f ss, lt gr to wh, sl mica, dol, sl glauc, 10%.
- 60 Aa; Sltst & f ss, lt gr, cr to wh, sl mica, sl glauc, kaol & dol, 20%; no perm.
- 70 Ss, pale grn-wh to wh, f, sl mica, sl f glauc, kaol & dol, 40%; Coaly sh, aa, 60%; no perm.
- 80 Sltst or v v f ss, m gr, sl s&p, mica, dns, dol, 35%; Sh, aa.
- 6800 Sh, dk brn-gr, carb; Coal, 05%. NB #18, YTLA in @ 6802'.
- 30 Sh, m-dk brn-gr, waxy; some grn sh; ltl coal.
- 50 Aa; Coal, 05%.
- 70 Aa; ltl coal.
- 6900 Sh, pale grn & brn-gr, waxy; trace coal; Sltst, grn, arg & dol, 05%.
- 30 Sh, pale grn & brn-gr; Sltst, aa, 05%.
- 40 Sh, grn-gr & m brn-gr; Sltst & f ss, lt grn-gr to wh, mica, dol & limy, 10%.
- 50 Aa; Ss, lt grn-gr, f, mica, gray-wackish, trashy, kaol & arg, w few pk feldspars, 10%.
- 70 Sh, grn & dk brn-gr; Sltst & f ss, aa, 15%; ltl coal.
- 75 Aa; Sltst & f ss, lt grn-gr to wh, mica, sl f glauc, gray-wackish, trashy, 20%; ltl coal.

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- 7330 to 7340' Sltst or v v f ss, lt gr-wh, f, s&p, mica, sl f glauc, 20%;
Coal, 05%; Sh, aa; no perm or fluor.
- 47 Ss, wh, v f, s&p, kaol & sl calc, w no perm or fluor, 25%;
Sh, grn & dk brn-gr-blk; Coal, 05%.
- 50 Ss, aa, 20%; Coal, 10%; Sh, aa; no perm or fluor.
- * -55 Ss, gr-wh, f to med, sa, v s&p, kaol, loose tex, w v low or no
perm; all w good spt'd yel fluor, but no trace of oil film wet;
v lt stain dry. Ss w show 7332-44' drill meas; 7324-36' E log.
- * -60 Ss, aa, 20% (10 frgs w fluor aa); Coal, 20%; Sh, aa. Coaly
7344-55' drill meas; 7336-47' E log.
- 70 Ss, gr-wh, v f, s&p, kao, w no perm or show, 10%; Coal, 15%;
Sh, aa; only 3 ss frgs w fluor.
- 90 Sh, dk brn-gr; Coal, 10%; no fluor.
- 7400 Aa; Sltst, dk gr, dns, arg, dol, v f, 05%; Coal, 05%.
- 03 (circ 1 hr) Aa; Coal, 20%.
- 03 (circ 1 hr) Sh, dk brn, waxy; Coal, 10%; Sltst, wh, dns, kaol, 03%.
- 03 (circ 1 hr) Sh, aa; Ss, v f, gr-bf & cr, dns, s&p, limy & dol,
15%; no perm or fluor.

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DST No. 1, 7325-7403' drill meas; 7317-95' E log. Open 2½ hr;
very weak blow 1st ½ hr, then moderate blow (under 2 & 3" of
water) for 2 hrs. Rec 190' slightly oil & gas cut mud (about
1% oil as specks in mud). No gas detected in drill pipe.
FP 102-131#. FSIP 971# after 1½ hr. HP 3921-3907#.
Jarred tool 50 minutes to free it after test.

- 20 Sh, brn & dk gr-blk; Sltst, dk gr, f, dns, dol, 05%. NB #23,
YTLA in @ 7403'.
- 30 Sh, aa; Sltst, m-lt gr, sl f glauc, dol, dns, 25%.
- 40 Sh, aa; Ls, brn, arg, carb, 02%; Coal, 05%; ltl sltst aa.
- 50 Sh, dk gr & brn, waxy; tr ss, bf, f, s&p, dns, dol.
- 60 Sh, brn & dk gr; Coal, 03%; Sltst, aa, 05%.
- 70 Sh & Sltst, aa, 90/10.
- 80 Sh, dk gr to blk; Sltst & v f ss, gr to bf, s&p, dns, dol &
limy, 20%; no perm or fluor. Top ss # 20 @ 7452' E log.
- 90 Sh, aa; Sltst or v v f ss, gr, bf & brn, s&p, dns, dol & limy,
30%; no perm or fluor. NB #24, YLSJ in @ 7490'.
- 7510 Sh, aa; Sltst, aa, 10%; no perm or fluor.
- 14 Sh, dk gr & brn; Coal, 05%.
- 20 Sh, aa; Sltst, gr & bf, v f, dol, 05%.
- 24 Aa; Coal, 05 or 10%.
- 30 Ss, bf, cr-wh, m-f, sl s&p, dns, sl f glauc, dol & se-qtzic, w
no perm or fluor.
- 40 Sh, aa; Ss, aa, w no perm or fluor, 25%.
- 50 Sh, brn & gr, waxy; Coal, 10%.
- 60 Ss, bf to brn, f, mica, dol, sl s&p, v dns, w no perm or fluor,
40%; Sh, dk gr & brn, 60%.
- 70 Sh, aa; Coal, 20%.
- 80 Sh, dk gr & brn; Coal, 05%; Sltst, gr, v f, arg, dns, dol, 05%.
- 7610 Sh, m to dk gr & brn; Sltst, m gr, f, dns, dol, 05%.
- 20 Sltst & v v f ss, lt gr-wh, sl s&p, sl f glauc, v kaol & dol,
mica, w no perm or fluor.
- 40 Ss, lt gr to wh, f to med, v s&p, kaol, loose tex; v low perm;
no fluor. Top porous ss 7602' drill meas; 7595' E log.
- 50 Sh, grn, dk gr & brn. Shale 7629-36' drill meas; 7622-29' E log.
- 50 (circ 1 hr) Ss, wh, med, sa-a, v s&p, kaol, w low perm; no fluor;
sd cleaner than above; some crs loose, free sd grains.
- 50 (circ 1½ hr) Ss, aa; no fluor. 7650' T.D., 2:00 PM, Nov. 2, 1967.

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- 6975 to 7010' Sh, grn & dk brn-gr, waxy; Ss, grn to wh, f, mica, a, kaol, w few pk feldspars, 10%. NB #19 Yt1A in @ 6975'.
-20 Sh, aa; Ss, m-f, grn-wh, mica, kaol, trashy, w tr red mineralization, 20%; no perm
-30 Aa; Sltst, grn-gr, dol, dns, sl f glauc, 10%; Ss, aa, 10%.
-40 Sh, grn & brn, waxy; Ss, aa, 05%.

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TOP of HUBER'S "A" ZONE 7028' drill meas; 7022' E log.

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- 60 Sh, aa; Sltst & f ss, cr to wh, sl f glauc, sl mica, v limy, w no perm, 35%. No fluor.
-70 Sh, grn & m to dk brn-gr; few coal frgs.
-80 Sh, grn-gr; Sltst, v v f, m gr, dns, dol & limy, or slty dol & ls, 40%; no perm or fluor.
-90 Sltst, m gr, v v f, v limy, 60%; Sh, 40%; several coal frgs. No perm or fluor.
-7100 Sltst, aa, 35%; Ls, bf, lith, 05%; Sh, aa, 60%. No perm or fluor.
-20 Sltst, m gr, dns, arg & dol, v f, 30%; Ls, brn, lith, 05%; Sh, m grn-gr, 65%.
-30 Sh, grn & m to dk gr & brn; Coal, 05 to 10%.
-40 Sh, grn & m to dk gr; trace bf, lith ls.
-50 Sh, m to dk brn-gr, waxy, soft; Coal, 03%; Sltst, dk gr, f, dns, arg, dol, 10%.
-57 Sh, aa; Coal, 05%.
-57 (circ 1 hr) Sh, aa; Coal, 40%.
-57 (circ 1 hr) Aa; Coal, 20%. NB #20, YTL in @ 7157'.
-75 Sh, grn & m-dk brn-gr; Sltst, m-dk gr, v f, v dns, limy & dol, sl f glauc, 15%.
-80 Aa; Coal, 05%.
-90 Sh, grn & dk brn-gr; Sltst, lt grn-gr, mica, dns, dol, 10%.
-7200 Sh, grn & dk brn-gr, waxy; ltl sltst & coal, aa.
-08 Sh, aa; Sltst & f ss, dns, aa, 10%. NB #21, Yt1A in @ 7208'.
-13 Sh, aa; Ss, cr-wh, v f, dns, calc, w some siderite spots, 05%.
-20 Sh, aa; Ss, cr-wh, v f, dns, kaol & dol, sl mica, 10%; no fluor.
-30 Sh, grn & dk gr to blk; Sltst, gr & wh, sl mica, sl s&p, dns, dol, sl siderite spt'd, 15%; no perm or fluor.
-40 Sh, grn & m to dk gr & blk; Coal, 03%.
-50 Sh, dk gr to blk; Coal, 25%.
-60 Sh, dk brn & gr to blk; Coal, 05%.

TOP of HUBER'S "B" ZONE 7257' drill meas; 7250' E log.

- * -70 Sltst or v v f ss, m gr, dns, s&p & mica, dol; no perm; 15 or 20 sltst frgs w faint speck'd fluor wet & dk brn oil stain dry.
* -74 Sltst, m to dk gr, s&p, dns, dol, w no perm, 25%; Sh, 75%; only few sltst frgs w dull speck'd fluor wet.
-76 (circ 1 hr before trip) Sltst, aa, dns, dol, s&p, m to dk gr, 25%; no perm or fluor. NB #22, OSC1GJ in @ 7276'.
-90 Sh, aa; Ss, gr-wh, m-f or f, s&p, dns, kaol, w no perm or show, 20%.
-7300 Aa; Sltst & f ss, s&p, dns, dol, mica, 15%; few crs sd g & gr & blk chert frgs; no perm or fluor.
-10 Ss & sltst, gr to wh, sl f glauc, s&p, dns, dol & kaol, 10%; Sh, grn, dk gr to blk, 90%; no perm or fluor.
-15 Coal, 25%; Sh, grn & dk brn-gr, 70%; Ss, gr to wh, m to crs, s&p, kaol, 05%; ltl brn ls; no perm or fluor.
-20 Sh, grn & dk brn-gr; Sltst, m gr, dns, dol, 10%; no perm or fluor.
-30 Sh, aa; Sltst & ss, aa, 10%; Coal, 05 to 10%; no perm or fluor.