United Fuel Gas #1-9509T Fee
Wayne 1549
Wayne County, West Virginia

UNITED FUEL GAS #1 FEE 9509-T
WAYNE COUNTY, WEST VIRGINIA
WAYNE 1549
CORE DESCRIPTION

3344-3349 - Black, dark gray, brownish gray thin-bedded, laminated dolomicrite. Two thin (1" each) interbeds of blue-gray and brownish very fine granular anhydrite. Trace small vertical open fractures. Some pinch and swell structures. Possible scour and fill.

3349 - One inch bed of blue-gray and brown anhydrite as above. Three inches brown dolomicrite with very high concentration of anhydrite blebs. Six inches of thinly laminated dark brownish gray and light brownish gray dolomite. Some interlaminae of dark brownish gray dolomite. Upper 1/2" of lower 6" very anhydritic.

3350-3352 - Light reddish brown, light gray, gray, dark gray thin bedded to thinly laminated, mottled, wavy laminated dolomicrite. Scattered interbeds and interlaminae of dolosiltite. Dessication cracks, pinch and swell, scour and fill, solution mottling, vertical burrows, convolute bedding present. Possible low angle cross beds in one thin dolosiltite bed. Dolosiltite more common near base of interval.

3353-3354 - Light brown to dark grayish brown interbedded dolarenite (dolosiltite?) and dolomicrite. Thin dolomicrite beds are mud cracked and scoured on upper surfaces. Traces of pinch and swell. Thicker dolomicrite beds are solution mottled. Dolarenite beds, locally, show low angle cross beds. Some dolarenite horizons contain dolomicrite clasts. One large vertical burrow in this interval. Trace fractures.

3355 - Dark gray, greenish gray thin-bedded, laminated mottled dolomicrite. Trace thin dolosiltite interlaminae. Traces of scour and fill, dolomicrite clasts, pinch and swell, possible burrows.

3356-3359 - Predominantly tan, brown, gray-brown distorted, crenkly, very thinly laminated stromatolitic dolomicrite. Some interbeds and interlaminae of mottled unbedded dolomicrite. Scattered traces of blue-gray translucent anhydrite (one large anhydrite nodule, remainder occurs as small blebs and fracture fill). Some brecciation. Brecciation and distorted laminae possibly evidence of solution collapse. Dolarenite and dolosiltite occur as filling in possible solution channels and around collapse breccia. Fractures.

3360-3364 - Interbedded and interlaminated gray to dark gray dolomicrite and brown to brownish gray dolarenite. Lower 1/2 of 3360 full of small, disseminated anhydrite crystals. Also has large mass of anhydrite fracture fill. Dolarenite contains many small, sand size dolomicrite clasts. Dolomicrite is very mottled to unmottled. Locally, rock is very brecciated and laminae are very broken and contorted; possibly due to solution collapse. Anhydrite fracture fill occurs locally. In these areas distortion may be due to growth of crystallization. Beds at 3362 slightly offset by small normal fault. Dolomicrite beds and laminae show dessication features, pinch and swell, scour and fill, etc. Trace fractures.

3365 - Upper 2" interbedded mud cracked dolomicrite and dolarenite containing dolomicrite clasts. Lower 8" is wavy, thinly laminated brownish gray and brown dolomicrite.

3366-3369 - Dark grayish brown, brown, gray interbedded laminated dolomicrite and dolarenite. Anhydrite fills vugs and fractures. Dolomicrite beds largely broken and contorted. Many large dolomicrite fragments in dolarenite. Numerous dessication and soft sediment deformation features as previously described. Trace of bright green clay or finely dessiminated glauconite. Trace pyrite. Fractures.

3370-3375 - Gray, greenish gray, light brown, becoming chocolate-brown locally mottled to laminated dolomicrite. In part wavy bedded, locally mud cracked and brecciated. Trace of pinch and swell. One thin bed of dolosiltite with underlying dolomicrite scoured.

3376-3377 - Missing

3378-3379 - Dark brown laminated, mottled dolomicrite. Possible vertical burrows.

3380-3389 - Missing

3390-3391.5 - Greenish gray, gray, green, brown very mottled dolomicrite.

3391.5-3392.5 - Brown, dark grayish brown, gray, greenish gray brecciated dolomicrite and dolarenite. Anhydrite. Fractured.

3392.5-3394 - Missing

3395-3395.5 - Dark brown wavy laminated dolomicrite.

3395.5-3396 - Missing

3397-3398.5 - Tan, dark browish gray finely laminated stromatolitic dolomicrite. Steeply dipping, broken, brecciated, contorted laminae possibly due to solution collapse. Traces of anhydrite. Possible green shale or finely dessiminated glauconite.

3398.5 - Tan to brownish gray laminated, very contorted dolomicrite.

3399-3400 - Tan, gray, greenish gray very mottled dolomicrite.

3401-3409.5 - Brown, dark brown, gray brown laminated wavy bedded dolomicrite. Locally very anhydritic and with scattered anhydrite nodules. Locally mottled, locally brecciated. Locally shows pinch and swell and dessication features. Traces of fractures. 3403 has thin (1") layer of dolomitic, grain supported calcarenite (very sparry).

3409.5-3410.5 - Dark brownish gray dolomitic crinoidal (?) Calcsiltite.

3410.5 - Gray, gray-brown wavy laminated stromatolitic calcsiltite to micrite. Fractured. Trace of anhydrite.

3411-3412 - Dark gray, brownish gray laminated to wavy laminated, mottled, brecciated micrite. Trace of anhydrite nodules. Possible dessication features. Becomes dolomitic toward base of interval.

3413-3413.5 - Dark gray to brownish gray laminated mottled calcareous dolomicrite.

3413.5 - Light brownish gray to dark brownish gray fossiliferous calcareous oodolosparite.

3414 - Brown fine to medium-grained calcareous dolarenite.

3414.5-3424 - Dark gray to dark brownish gray mottled to unmottled dolomitic thin-bedded very fine-grained, grain supported, fossiliferous calcarenite. Locally, has micrite interbeds. In part micritic, in part sparry. Locally, cross-laminated. Many of the grains are coated grains (oolites?) and in places the coated grains are elongate parallel to bedding, as if they had been squashed. Locally pyritic. Some shale partings. Stylolites. Trace fractures. Locally very dolomitic.

3425-3429 - Mottled brown and gray very fine to medium crystalline recrystallized (?) dolomite. Possible traces of ghost grains (fossil fragments, ooids, pellets). Trace dark gray very fine crystalline elongate clasts. Filled fractures.

3430-3435 - Brown to dark gray badly recrystallized very fine crystalline pelletal (?) dolomite and medium to fine-grained oodolosparite. Locally cross-laminated. Upper foot broken up and with many large clasts of oodolosparite. Becomes sandy toward base of interval. Possibly trace oomoldic porosity.

3436-3437.5 - Fine to medium-grained angular to subangular, fair sorted, dolomitic (Calcareous?) quartz sandstone. Horizontal and cross-laminations. Trace clay clasts.

3437.5 - Light greenish gray, mottled, sandy dolomicrite.

3438-3446 - Light brownish to dark brownish gray mottled very find crystalline dolomicrite with clasts and ghosts of clasts or grains locally. One or two widely scattered blue-gray anhydrite nodules.

3447-3467 - Light brown, brown, dark brownish gray, fine to medium crystalline mottled to laminated dolomite. Locally contains scattered fine to medium-grained, angular to subangular quartz grains. Interbeds of very sandy fine to medium crystalline dolomite. Interbeds of very fine to fine-grained, angular to subangular dolomitic, quartz sandstone. Fractures. Possibly some intercrystalline porosity in dolomite. Scattered anhydrite nodules.

3468-3471 - Predominantly gray to light brownish gray microcrystalline dolomite to slightly sandy dolomite. Locally burrow mottled. Burrows predominantly horizontal but some are vertical. Three or four, widely separated, very thin interbeds of siliceous, calcareous very fine-grained sandstone to coarse siltstone. Burrows largely filled with sand size quartz and calcite. One or two, very thin, widely separated horizons, quite calcareous. One dolomite horizon contains calcareous remnants of fossil bivalves. Scattered traces of pyrite. Slightly stylolitic.

3472-3493 - Brown, grayish brown, gray stromatoporoid, bryozoan, coral dolomitic to partially dolomitic limestone (micrite) (wachestone to packstone). Percent dolomite increases toward base of interval becoming calcareous to very slightly calcareous dolomite. Dolomitization appears to be selective, affecting only the matrix. There is little to no dolomitization of faunal elements. At base of interval matrix is essentially a gray fine crystalline dolomite with brown to tan calcite fossils. Laminar stromatoporoids very abundant in upper 5 feet of interval then again (largely fragmental) from 3484-85. Stromatoporoids are disoriented and give the impression of solution collapse. Remainder of fauna composed predominantly of bryozoa with some coral and remnants of bivalves. Bryozoans both branching and encrusting. Trace of dolomite stromatactis structure. Some fractures but ~~both~~ most are well healed. Stylolites.

3494-3495 - Gray and brown dolomicrite with thin interbeds of dolarenite (or may be sandy dolomite). Becoming thinly wispy bedded toward base of interval. Some fractures, mostly healed. Trace micro-offset along some fractures.

3496-3497.5 - As at 3472-93.

3497.5-3498 - Missing

3499-3505 - Mottled dark gray and brown fine crystalline dolomite and sandy dolomite to dolomitic very fine-grained sandstone. Appears to have some intercrystalline and some vuggy porosity. Healed to partially healed fractures. Trace dolomite stromatactis structure.

3506-3534.5 - Thin-bedded light tan fine to very fine-grained angular to subangular well sorted slightly dolomitic orthoquartzite. Thin gray shale laminae and wispy shale laminae common. Local cross-bedding. Shale clasts common in local horizons. Grain size decrease in lower part of interval and shaliness increases. Lower part of interval is siltstone.

3534.5-3541 - Greenish gray slightly calcareous silty shale. Traces of possible burrowing. Some thin interbeds of clean siltstone. Trace maroon silty shale interbeds.

Bottom of Core

Holly Grissom

HG/cjb
4/231

3349 laminated dolomite (cryptalgalaminite)
wavy, discontinuous lamination
anhydrite nodule at top shows enterolithic
structure which is characteristic
of tidal-flat anhydrite
two intraclasts near bottom
in-situ brecciation (mud crack?) at base

3352 laminated dolomite
mud crack at top
chemical mottling

~3356 laminated dolostone disrupted by burrows
pellet-supported intraclasts within burrows

3359 stromatolitic dolostone
several stromatolite columns growing up
from base and near top
(LLH-CS type)
anhydrite nodules surrounded by
stylolites indicate that they
grew, in part, by dissolution


3349
3349


3352
3352


3356


3359

3364 numerous intraclasts, some edgewise possibly draped over small stromatolite in lower left, recrystallized

anhydrite has filled voids

clay seam at base

3370.5 thickly laminated dolomite

burrowed mottled

"lumpy" bedding - isolated clumps produced by combination of desiccation and burrowing

stromatolite in lower left

vertical burrows in middle

black burrow fillings ???

3391 laminated dolomite

chemical mottling - mottling is associated with fractures, due to action of ground water

3397 portion of algal-stromatolite head

slump structure (enterolithic folding, brecciation) on steep side

lamination like this, against gravity, is usually taken as positive evidence of stromatolitic growth


3364


3370.5


3391
3391


3397

3407 laminated dolomite
discontinuous, crenulated lamination
may be of algal origin

3410 ostracod ~~dolomite~~ biosparite
thinly bedded

3415 burrow-mottled dolomite
large algal stromatolite, clast or in situ?
irregular patches of secondary anhydrite

3421 thinly bedded oosparite limestone
few horizontal burrows, circular in cross section, at top
ripple marks


3407


3410


3415


3421
3421

3425 bioturbated oolitic wackestone-mudstone
stylolites at top
irregular patches of recrystallized calcite
near bottom

3430 oolitic grainstone
large vertical and horizontal burrows
filled with calcarenite
large intraclasts of different lithology
to top
ripple marks in oolite

3437 quartz-sandy dolomite / dolomitic sandstone
high-angle accretion cross bedding in middle
trough cross bedding at base

3441 thoroughly burrowed dolomite
clays concentrated into irregular,
discontinuous seams by biogenic
reworking


3425
3425


3430


3437


3441
3441

3447 sandy dolomite
laminated
some horizontal burrows to top

3459 thoroughly burrowed dolomite

3468 thinly bedded dolomite

3473 stromatoporoid limestone
vaguely laminated, spherical stromatoporoids
at top, one large head in
middle
inter-head micrite is burrowed
one large vug is partly filled with
calcite spar, center open;
vug probably formed as
dissolved stromatoporoid


3447


3459
3459


3468


3473

3479.5 boundstone
vaguely laminated spherical stromatoporoids
large Favosites coral, left center
Cladopora finger coral at bottom
stylolites

3480 bafflestone
stick coral Cladopora densely packed at top,
scattered in mud below
corals not in growth position, merely toppled
over upon death
stylolites

3484 bafflestone - boundstone
abundant Cladopora
large stromatoporoid head at base
dark fine-grained dolomite matrix

3488 bafflestone
Cladopora, large Favosites, tabular
stromatoporoids
dark fine-grained dolomite matrix


3479.5


3480


3484.5


3488

3490 pelletal dolomite
some mud-supported fossils: Cladopora,
tabular stromatoporoids
somewhat bioturbated

3493 few fossil-calcarenite beds in
horizontally-burrowed fine-grained
dolomite

3499 horizontal pellet-filled burrows
in fine-grained dolomite
brachiopod filled with dolomite spar

3509 burrowed fine-grained sandstone
with few clay partings


3490


3493


3499


3509

3511.5 fine-grained sandstone
planar, low-angle cross bedding
one bed burrowed

3514.5 bioturbated fine-grained sandstone

3518 well laminated fine-grained sandstone

3522.5 thoroughly bioturbated
very-fine-grained sandstone


3511.5


3514.5


3518


3522.5

3523 very-fine-grained sandstone
original laminae mostly destroyed
by borrowing
large vug mostly filled with dolomite spar

3528 well laminated very-fine-grained sandstone
one bed bioturbated

3533 very-fine-grained sandstone
with intraformational pebbles of
laminated shale

3539 bioturbated shale


3527


3528


3533


3539

CORE REPORT

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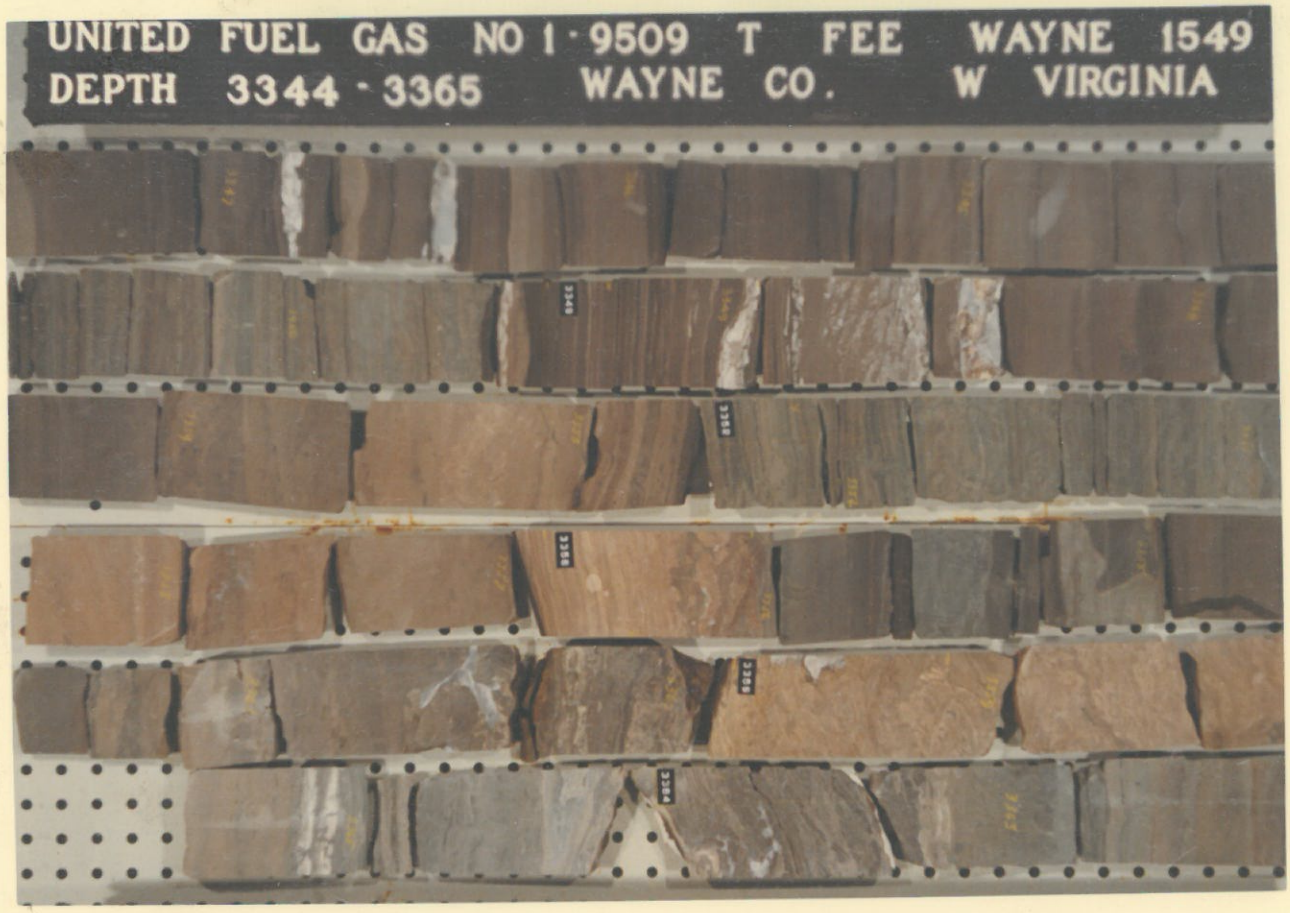
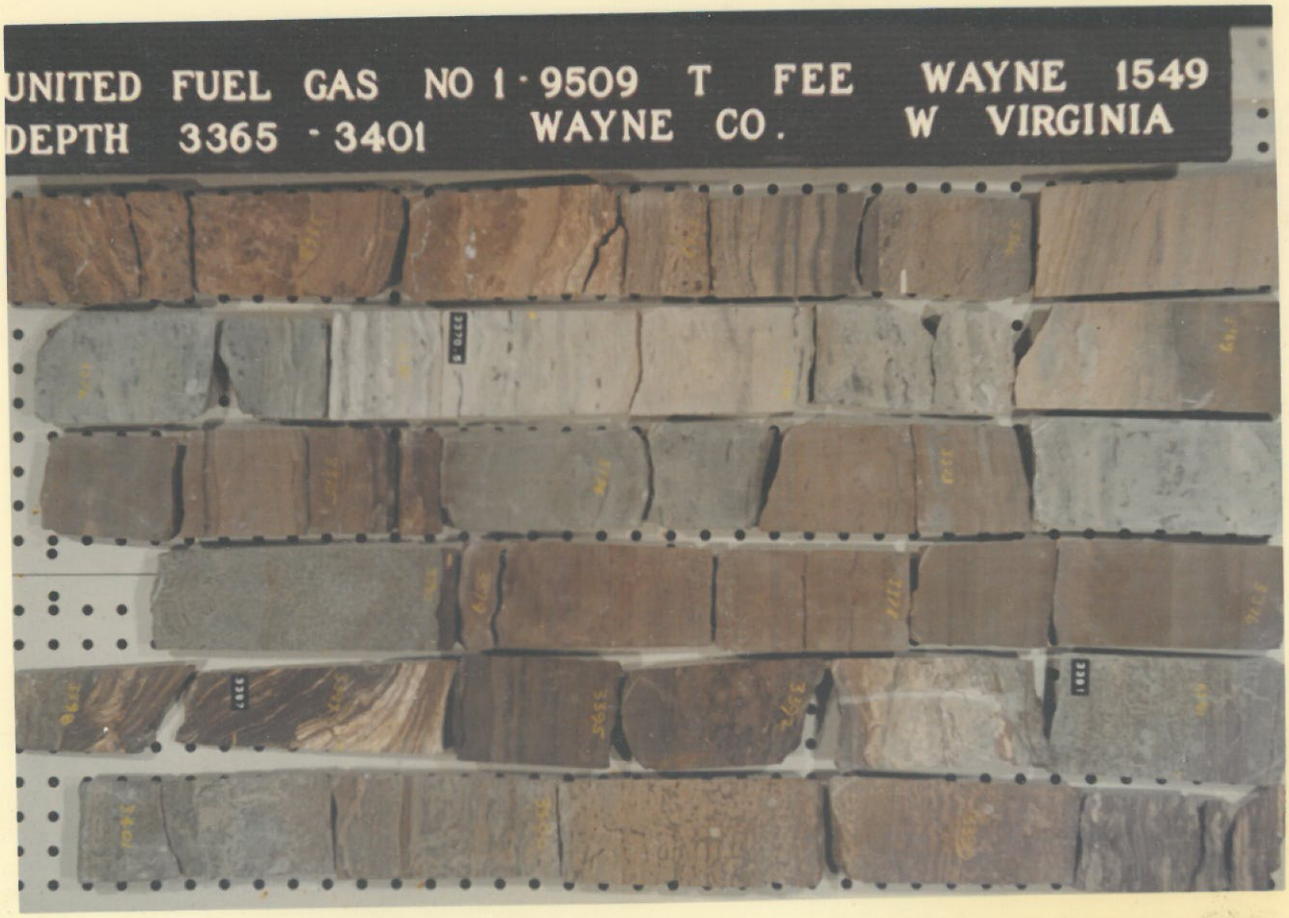
August 1973

Prepared By

Holly D. Grissom


UNITED FUEL GAS NO 1 · 9509 T FEE WAYNE 1549
DEPTH 3344 - 3365 WAYNE CO. W VIRGINIA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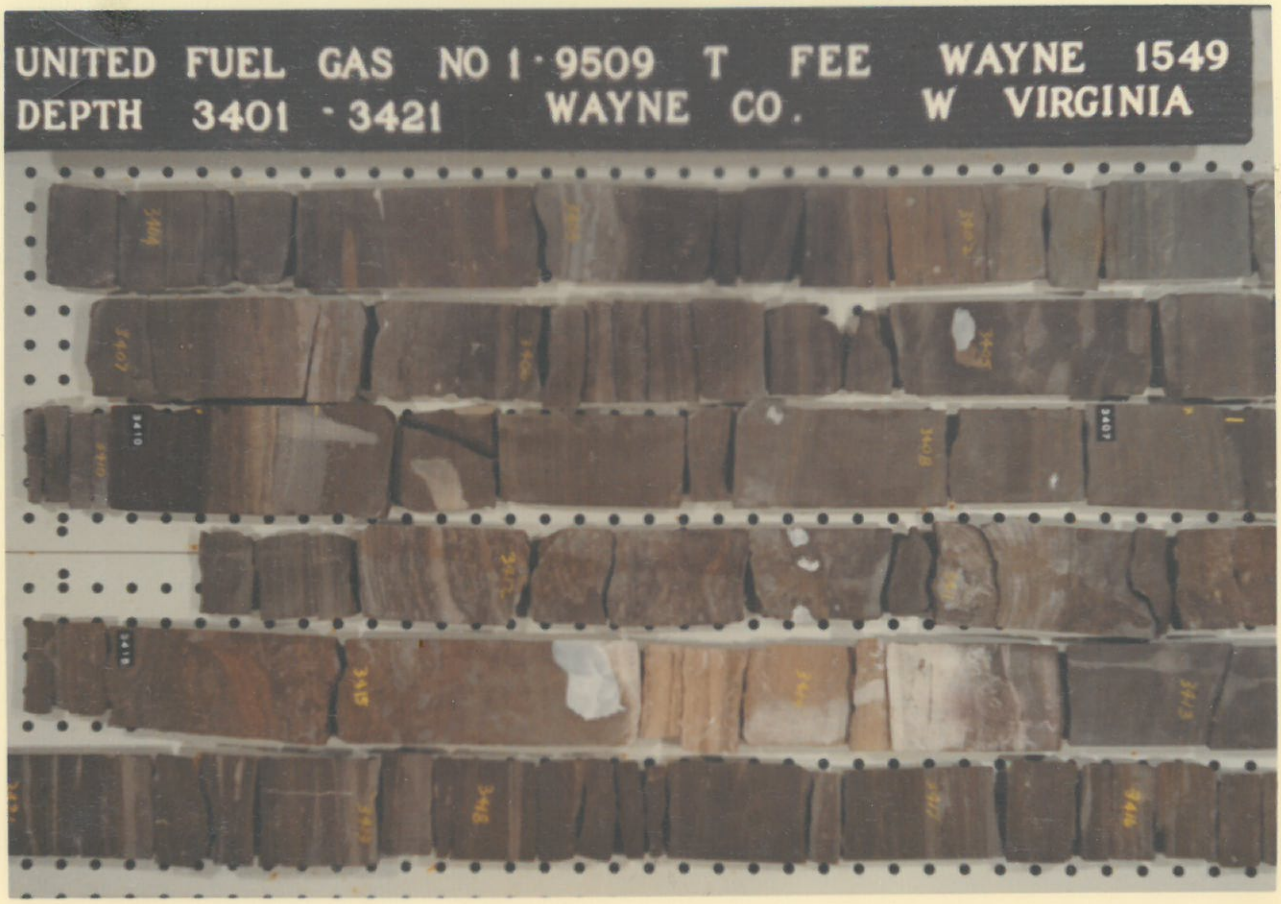
DEPTH 3365 - 3401 WAYNE CO. W VIRGINIA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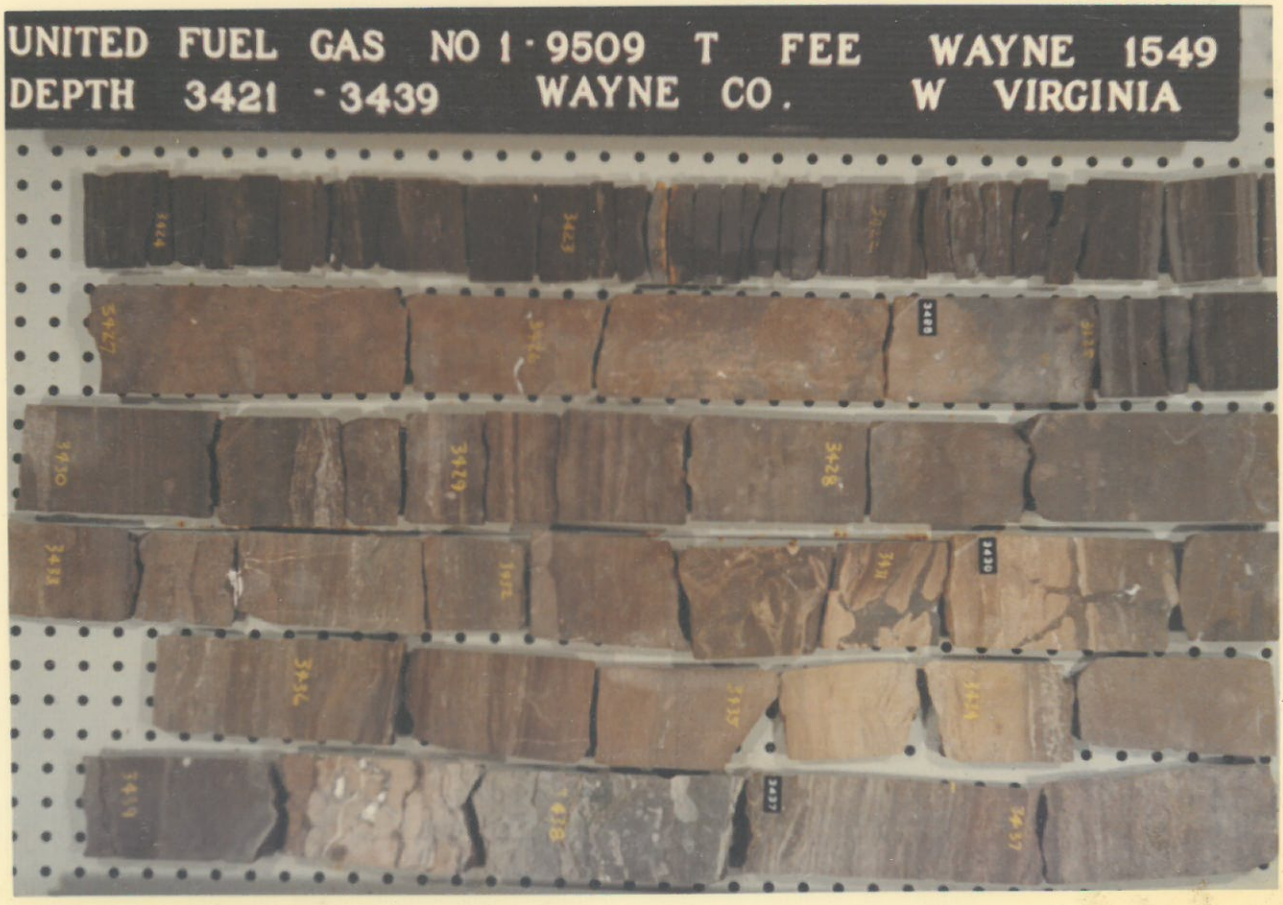
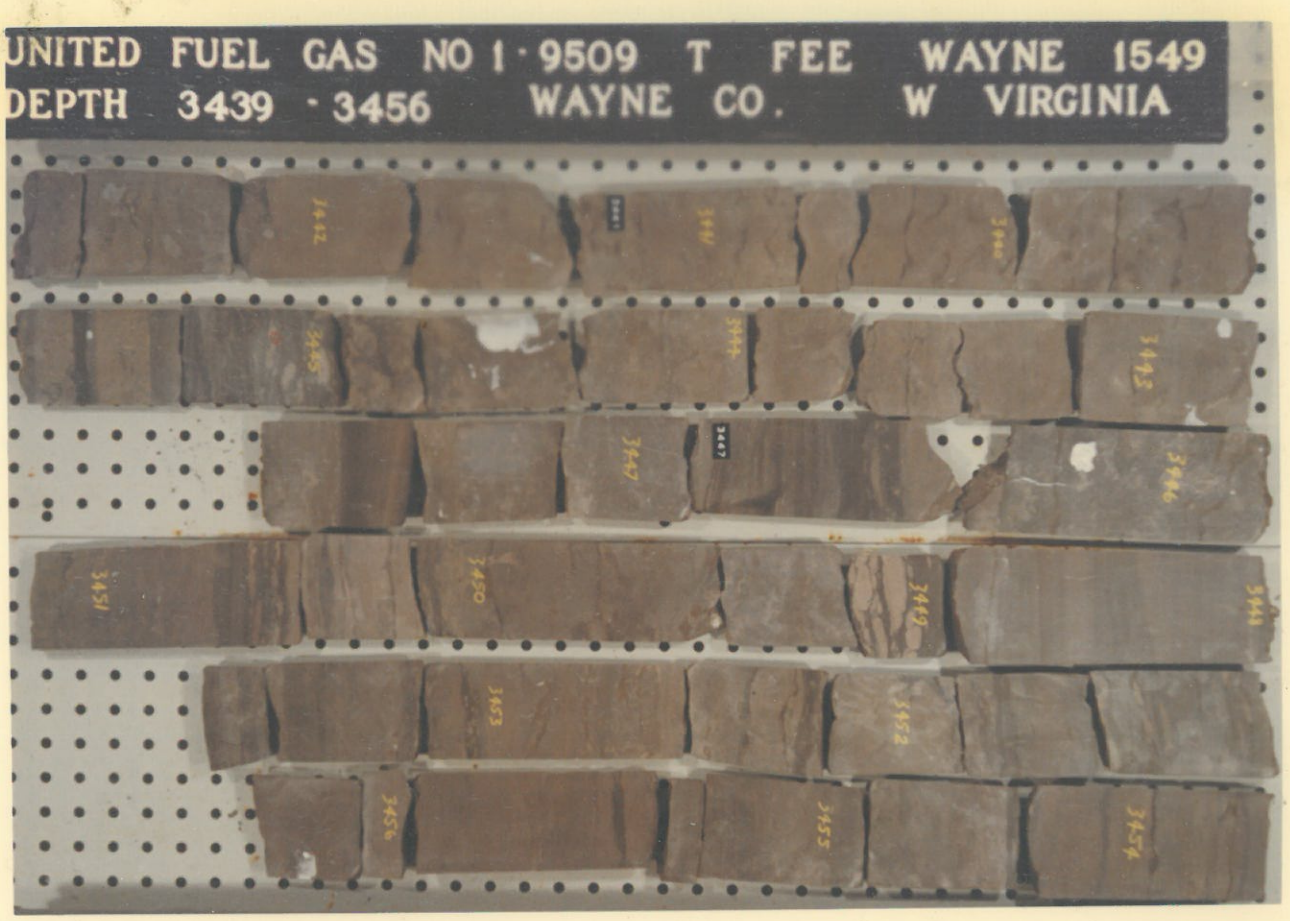
DEPTH 3401 · 3421 WAYNE CO. W VIRGINIA


UNITED FUEL GAS NO 1 · 9509 T FEE WAYNE 1549
DEPTH 3421 · 3439 WAYNE CO. W VIRGINIA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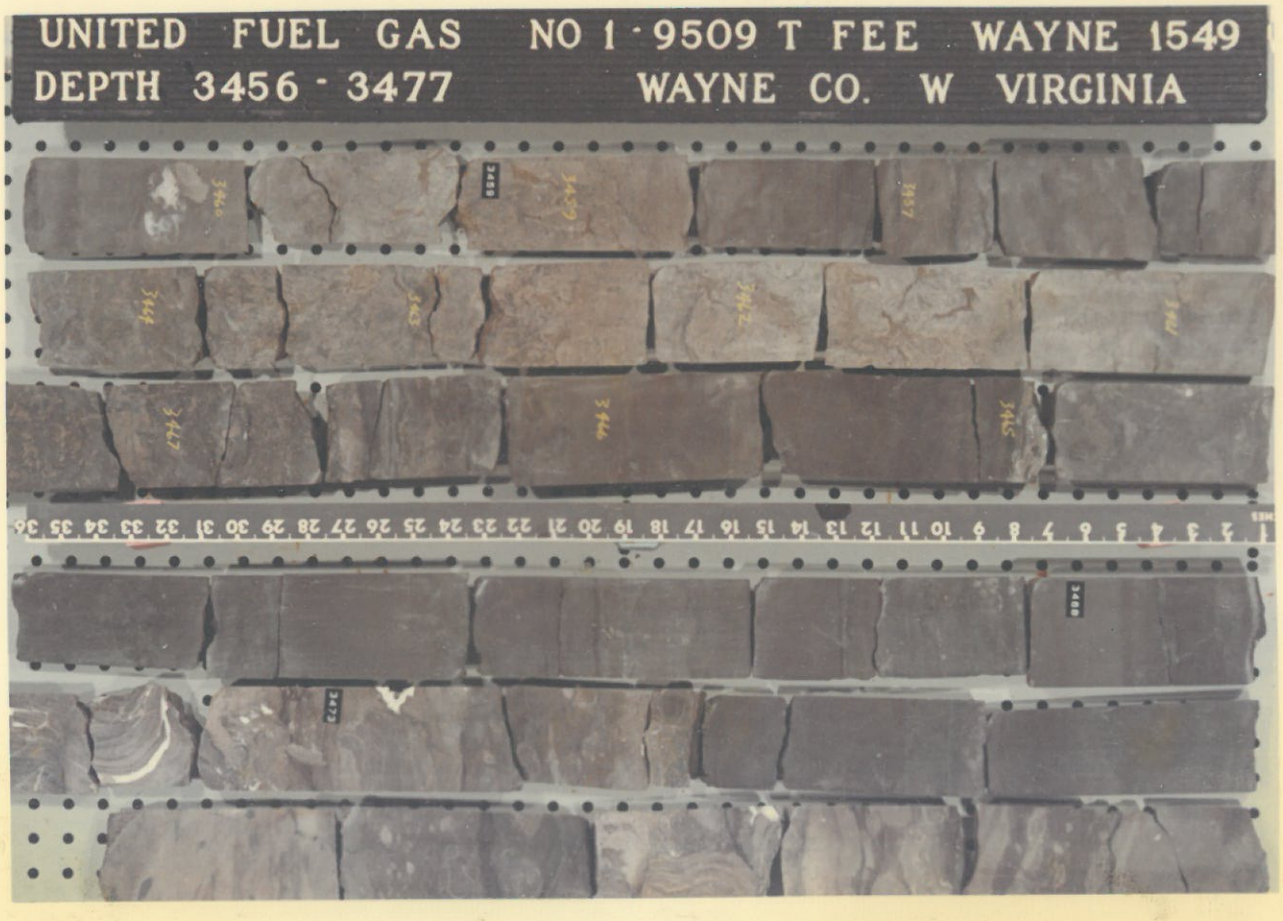
DEPTH 3439 · 3456 WAYNE CO. W VIRGINIA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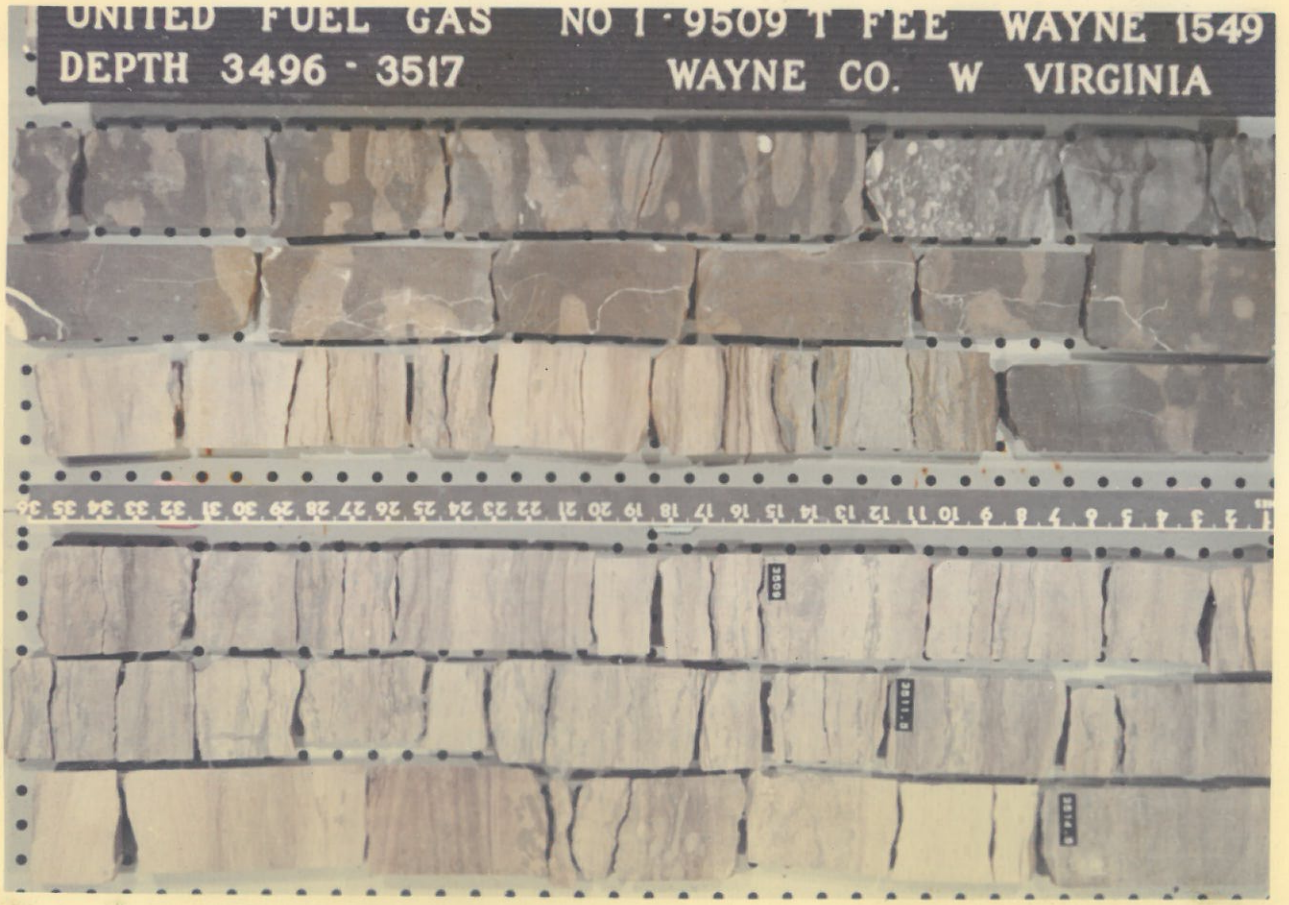
DEPTH 3477 - 3496 WAYNE CO. W VIRGINIA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DEPTH 3496 - 3517 WAYNE CO. W VIRGINIA


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DEPTH 3517 - 3541 WAYNE CO. W VIRGINIA