

SPOT LOG

DRILL HOLE: Sartin #5
PROP. OWNER: F. Sartin
DRILL CONTRACTOR: J-J Drilling Contractors
DRILL OPERATOR: Jim Jackson
DATE STARTED: 6/29/79
CASING LEFT IN HOLE: 25' of 7" surface casing, cemented in; 302.55' of 4" production casing

LOG: 495' FWL, 825' FSL,
Sec. 26, T30S, R21E
330' W. of Sartin #1, Crawford, Co.
LOGGED BY: DRK
ELEV: 845' surveyed
DATE COMPLETED: 6/30/79
TOTAL DEPTH: 307'

10:45 a.m.

- 25 - 28 - Limestone, gray to light gray
28 - 31 - Shale, black; underclay, gray
31 - 45 - Limestone, light gray to light tan, angular fragments; darker gray near base
45 - 50 - Shale, black; trace coal
50 - 51 - Underclay, gray
51 - 62 - Shale, gray; very clayey near top; slightly silty
62 - 63 - Limestone, brown
63 - 75 - Shale, gray, silty, micaceous, carbonaceous laminae; limey in spots
75 - 77 - Limestone, medium brown to light gray
77 - 105 - Shale, gray to dark gray; scattered silty sections; trace limestone, brown
105 - 110 - Shale, gray; minor calcareous sections
110 - 132 - Shale, gray to dark gray 95%; shale, brown 5%; chatter at 128'
132 - 135 - Shale, gray to very dark gray; very dark gray shale is calcareous; chatter at 135'
135 - 138 - Shale, gray to very dark gray
138 - 139 - Coal
139 - 142 - Shale, gray to black; minor shell fossils in brown limestone at approximately 140"; frequent drill chatter below 142.
BASE OF VERDIGRIS 142 - 151 - Limestone, light gray to light brown 50%; shale, gray to dark gray 50%
151 - 157 - Shale, dark gray to black
157 - 158 - Coal
158 - 159 - Underclay, gray
159 - 174.5 - Siltstone, fine grained to medium grained, light gray; CFS @ 173'; CFS @ 174.5'; trace sandstone, brown at 174.5'

Core #1 - 174.5 - 194

Note: Crude on pit during coring appears to be "light"

174.5 - 194 - Sandstone, medium grained, nearly all brown sugar color

Oozing oil at:

- 174.6 - 174.8
176.9 - 178
182.3 - 182.7
185.15
185.4
185.6 - 185.7
190.7 - 190.8

Shale Pebbles at:
174.5 - 174.6 (2" diameter)
174.9 (1/4" diameter)
188.55 (1/4" diameter)
188.75 (1/4" diameter)
190.5 (1/4" diameter)

Carbonaceous Laminae at:
174.7 - 174.8
177.7
184.7 - 184.9
185.5
186.7
187.5
190.5

Core #2 - 194 - 214

Note: one foot core loss

194 - 203.5 - Sandstone, medium grained, brown to gray brown

Oozing oil at:
201.1 - 201.6

Shale Break at:
197.2 - 197.3

Shale Pebbles at:
200.7 (1/8" diameter up to 1" x 1/2")

203.5 - 210.2 - Sandstone, medium grained, gray brown; appears to be water saturated;
carbonaceous laminae at 204.5 and at 209 - 209.5

210.2 - 210.4 - Shale, black, carbonaceous

210.4 - 211.2 - Coal, vitreous

211.2 - 214 - Clay, gray, underclay

Note: one foot core loss is probably in this section.

214 - 223 - Shale, light gray, clayey; minor sandstone and black shale from reaming
operation

223 - 224 - Coal

224 - 227 - Shale, light gray to medium gray 80%; clay, gray 10%; shale, black 10%

227 - 235 - Siltstone, medium grained to coarse grained, gray to dark gray and brown,
slight oily odor, micaceous 70%; shale, gray to dark gray 30%

235 - 258 - Shale, light gray to dark gray, silty near top; somewhat micaceous;
occasional rainbow, no odor

TEBO COAL 258 - 262 - Shale, dark gray to black; coal at 260'

262 - 270 - Shale, light gray 80%; clay, gray, underclay 20%; minor shale, black

270 - 275 - Shale, gray to light gray; minor clay, gray

WEIR - PITTSBURGH 275 - 280 - Shale, gray 60%; shale, black 40%; trace coal

280 - 285 - Siltstone, fine grained, gray to light gray 80%; shaley; clay, gray,
underclay, 15%; shale, black 5%

IRLESVILLE
SANDSTONE

- 285 - 292 - Siltstone, fine grained, gray, shaley near bottom
- 292 - 297 - Shale, light gray 30%; shale, dark gray to gray 70%; slightly silty
- 297 - 307 - Shale, dark gray to gray, slightly silty; minor shale, light gray

T.D. @ 307' - 6/29/79 - 10:00 p.m.