

LITHOLOGIC DESCRIPTION OF USBM ROCK SPRINGS SITE 4 WELL PBC-18
SWSWNE SEC 15 T 18 N R 106 W SWEETWATER COUNTY, WYOMING

by
George F. (Pete) Dana

Footage	Description
60.0-61.2	Oil shale, dark gray, black, soft and crumbly in upper 0.5', rare pods and veinlets of gray microcrystalline dolomite, some pyrite.
61.2-61.4	Ash, tuff, sandstone, buff, tan, yellow, very fine-grained with thin interbeds of dark shale, some lighter gray.
61.4-63.1	Oil shale, gray to dark gray, some greenish-gray, firm, abundant scattered minute crystals, inclusion of light gray, microcrystalline dolomite at 62.1'.
63.1-64.6	Oil shale, dark gray to black, blocky fracturing, rare crystals as above.
64.6-67.5	Oil shale as above, badly broken, soft when wet, crumbly in part.
67.5-69.6	Oil shale, dark gray to black, firm, block fracturing, natural vertical fracture 68.6-69.0', tan dolomitic algal zone at 69.2-69.3', hard, slight vuggy porosity.
69.6-70.0	Missing.
70.0-72.7	Oil shale, brown to dark brown, gray to dark gray, brownish-gray, some greenish-gray, rare to abundant crystals, numerous diagonal natural fractures, algal zone (?), dolomitized, tan to brown, some purplish-brown, hard at 71.1'.
72.9-73.2	Oil shale as above, with two major zones or inclusions of brown to purple dolomite with some light brown, very hard, occasional fracture.
73.2-74.8	Oil shale, dark gray to black, some dark brownish-gray, gray band dolomite 73.8'.
74.8-75.5	Missing.
75.5-76.2	Oil shale, black, some dark gray, very faintly laminated, diagonal natural fracture 75.5-75.7', breaks into discs easily.
76.2-76.6	Oil shale as above, badly broken, very soft, burned.
76.6-77.3	Missing, assumed burned.
77.3-77.8	Oil shale as in 76.2-76.6'.
77.8-79.4	Oil shale, dark gray, black, some brown thin zone of crystals at 78.5', breaks easily horizontally.
79.4-79.8	Tuff or sandstone, purple, tan, brown, reddish-brown, maroon, very fine to fine-grained, natural fracture containing oil stain. <u>M-bed</u> .
79.8-80.5	Oil shale, dark gray, black, some dark brown natural vertical fractures 80.2-80.5'.
80.5-80.9	Missing.
80.9-82.1	Oil shale, brown to dark brown, grayish-brown, badly broken.
82.1-82.6	Dolomite, tan, light brown to brown, silty, very hard, semi-lithographic.
82.6-83.9	Oil shale, greenish-brown, brown, gray, veinlets and scattered individual crystals.
83.9-84.4	Oil shale, black, brownish-gray, brown laminated and banded, inclusion of earthy tan dolomite at 84.3'.

FootageDescription

- 84.4-84.5 Tuff or ash, brownish to reddish-gray, very fine-grained, irregular top and bottom, rare pods tan dolomite, just above this bed is inclusion of siltstone or dolomite, light gray, permeable, fractures with brown shale filling.
- 84.5-84.6 Dolomite, purplish-brown, microcrystalline, very hard and dense.
- 84.6-85.5 Oil shale, dark brownish-gray, dark brown, rare bits carbonaceous material or fossilized fish scale, varved, breaks into discs easily.