

LITHOLOGIC DESCRIPTION OF ROCK SPRINGS WELL NO. 4-2  
 SESENW SEC 15 T18N R106W SWEETWATER COUNTY, WYOMING

February 16, 1966

By

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Footage	Description	Remarks
30.0-31.1	Shale, light gray, interbedded with tan, shale with semi-lithographic texture, calcareous, mineralization of the iron sulphide type occur both in bands and scattered crystals, varves and laminations apparent.	dry
31.1-32.5	Shale, same as above, slightly darker, varves contorted in upper part of zone.	
32.5-33.8	Siltstone, light to dark gray, granular with minor fractures and shale partings, becoming olive drab near base, some sandstone grains in matrix, banded in part.	contains free water
33.8-34.5	Shale, oil, interbedded olive drab and dark brown mineralization crystals throughout matrix.	dry
34.5-35.7	Shale, oil, light to medium greenish-gray, lean.	
35.7-38.6	Shale, oil, medium brown to dark gray-brown and black, few crystals, medium yield to good yield, basal .2 inch is richest section.	
38.6-40.3	Shale, oil, chocolate brown and light brown, laminated and/or interbedded, bands and veins of mineralization, other crystals as groups and individuals, some saturated with oil, probable good oil section.	
40.3-41.6	Shale, oil, medium gray, some laminations.	
41.6-44.2	Shale, oil, as above but lighter gray.	
44.2-44.9	Shale, oil, gray with inclusions of dark tan to purple limestone, dense.	
44.9-45.4	Shale, oil, medium to dark gray, iron sulphides mineral crystals from 45.2-45.4.	
45.4-46.5	Shale, oil, medium to light gray, olive drab in parts, trace scattered crystals as above.	
46.5-47.2	Shale, oil, medium gray, laminated with thin beds and larger inclusions of tan to brown limestone.	
47.2-47.3	Sandstone, brownish-gray, porous, loosely cemented with disseminated shale particles, pyritic.	

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47.3-48.6	Shale, oil, medium to dark gray with occasional light gray laminations, good section.	
48.6-48.8	Sandstone, gray to gray-brown, very fine to fine-grained, tight, shale particles in matrix, oil stained.	
48.8-49.9	Shale, oil, same as 47.3-48.6.	
49.9-50.2	Ash, clay and sandstone, white to yellowish-tan, very fine grained, tight, numerous fractures which are filled with gray sandstone and shale particles.	Good marker bed
50.2-50.6	Shale, oil, dark gray.	
50.6-51.2	Shale, gray to olive drab, iron sulphides as scattered mineralization in matrix.	
51.2-51.8	Shale as above with laminations and inclusions of tan to light brown to lavender limestone, dense.	
51.8-52.8	Shale, oil, medium gray with occasional streaks of dark gray.	
52.8-53.4	Shale, oil, as above with large inclusions of sandstone, gray to brown, very fine to fine-grained, saturated with oil, probably the result of fracturing and/or channel filling.	
53.4-57.7	Shale, medium to predominately dark gray to sooty black, occasional light gray varves.	
57.7-57.8	Ash, clay and sandstone, white to yellow, tan and light gray, very fine grained, porous fractures filled with gray sandstone and shale particles.	
57.8-58.5	Shale, oil, brown to medium gray with thin sandstone layer at 58.4, light gray, dark shale partings, pyritic, occasional iron sulphide crystals.	
58.5-61.0	Shale, oil, tan, medium brown to light and dark gray, abundant mineralization as above, several tan to lavender limestone zones, especially 58.7-58.9, 59.5-59.7, and 60.6-61.0.	
61.0-62.4	Shale, oil, medium to dark gray, with varve contortions 61.7-61.9.	
62.4-62.6	Dolomite, dark lavender to brownish-purple, dense, finely crystalline, contorted.	

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62.6-63.1	Shale, oil, tan, limey varves thinly interbedded with medium gray to black shale.	
63.1-63.5	Shale, oil, dark gray to sooty black.	
63.5-64.6	Shale, oil, dark gray with thin zones of limestone, medium brown, dense.	
64.6-64.7	Limestone, (Dolomitic?), purple to pink, dense with considerable fracturing and sandstone, brown, tightly cemented, fine grained, oil stained, shale in partings.	
64.7-65.9	Shale, oil, medium gray, banded and varved with brown and tan, dense, shaley limestone.	
65.9-67.1	Shale, oil, dark gray to sooty black.	
67.1-67.4	Sandstone, reddish brown, very fine grained tight, calcareous (tuffaceous?), banded with black shale near bottom of section. M-BED	
67.4-67.9	Shale, dark gray to sooty black, banded with thin tan limestone zones.	
67.9-68.0	Limestone, light brown, finely crystalline, dense slightly contorted.	
68.0-69.3	Shale, medium brown, interbedded with lighter brown, slightly calcareous shale and dark gray shale from 69.1-69.3.	
69.3-69.6	Limestone, tan to light brown, dense, semi-lithographic.	
69.6-69.8	Shale, gray to brownish gray, calcareous..	
69.8-69.9	Limestone, brown to brownish-purple, dense slightly fractured, sucrosic in part.	
69.9-70.4	Shale, oil, light to medium brown, zones of olive drab, conchoidal fracturing.	
70.4-71.2	Shale, oil, greenish-brown to medium brown with streaks and inclusions of light to dark brown limestone, scattered iron sulphide crystals.	
71.2-71.7	Shale, oil, dark gray to black, interbedded with tan to medium brown limestone streaks contorted.	
71.7-71.9	Shale as above with prominent limestone inclusions, gray-brown to purple, dense but fractured, fractures contain resinous oil residue.	
71.9-72.8	Shale, oil, dark gray to dark brown, limey streaks.	
72.8-73.1	Shale, oil, light gray to medium gray-green clayey, conchoidal fracturing.	

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73.1-73.5	Shale, oil, medium gray to gray-green.	
73.5-73.6	Ash and clay with very fine-grained white to gray sandstone, contorted and fractured, pyritic, with fractures filled with dark shale particles, pink dolomitic and limey inclusions.	Good marker bed.
73.6-76.8	Shale, oil, light gray, olive drab, medium brown calcareous, interbedded with tan to brown limestone zones, dense.	
76.8-78.5	Shale, oil, light gray, grading downward to greenish-gray limestone streak at 78.0.	
78.5-80.4	Shale, oil, dark gray to black, thinly laminated with limestone tan and brown to purple and shale, gray-green and brown.	
80.4-80.6	Shale, oil, medium to dark gray, tan limestone inclusions, dense.	