UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
MINISTRIES OF INDUSTRY AND NATIONAL ECONOMY OF THE GOVERNMENT OF LIBYA
UNDER THE AUSPICES OF THE
AGENCY FOR INTERNATIONAL DEVELOPMENT, U.S. DEPARTMENT OF STATE

PROFESSIONAL PAPER 660
PLATE 10

Thickness (meters)	Silicates	CaO	MgO	Al_2O_3	Fe_2O_3	Moisture	Loss on ignition	Lithologic description
4.9	13.49	46.76	Tr.	0.74	0.88	0.05	37.35	Caliche-type alluvium
1.8	36.59	33.04	1.70	1.22	1.24	0.14	26.85	Limestone, marly, yellowish-brown.
3.1	6.60	50.15	1.44	Tr.	0.60	0.05	40.39	Limestone, compact, light-gray to dark-gray.
4.9	2.88	47.05	Tr.	6.41	2.00	0.42	40.74	Limestone, light-gray, with thin shale partings.
3.7	6.03	32.80	5.21	9.48	2.40	0.24	43.60	Limestone, light-gray to dark-gray, hard, massive.
0.9	17.51	41.96	2.53	1.09	1.19	0.40	34.16	Marl, yellow, greenish-gray.

(Continued at top)

(Continued from below)

Thickness (meters)	Silicates	CaO	MgO	Al_2O_3	Fe_2O_3	Moisture	Loss on ignition	Lithologic description
3.1	3.65	52.28	1.62	0.21	1.04	0.06	41.10	Limestone, light-gray, massive, some parts purple.
3.7	2.30	42.01	Tr.	11.16	2.40	0.17	42.30	Limestone, light-gray to dark-gray, compact, siliceous.
1.2	49.44	16.85	2.56	8.66	4.09	1.50	16.14	Shale, marly, yellow, calcareous.
3.1	8.76	41.82	7.33	1.34	1.36	0.42	39.62	Limestone, light-gray, massive, compact.
1.5	24.50	20.10	4.52	6.75	4.86	0.46	39.00	Limestone, yellowish-green, marly and shaly.
1.8	34.65	19.15	4.55	10.67	7.03	2.63	19.77	Limestone, yellow, light-gray.
1.5	5.34	23.55	3.73	24.60	4.21	0.71	38.95	Limestone, light-gray, yellowish-brown; marl partings as much as 10 cm thick.
1.5	34.31	17.02	7.02	12.33	3.04	1.43	25.00	Marl and limestone, yellowish-brown; some thin shale partings as much as 10 cm thick.
3.1	3.55	48.36	3.71	1.30	0.72	0.14	41.47	Limestone, light-gray, siliceous

A. ROCKS FOR CEMENT MATERIAL AT KILOMETER 54

Thickness (meters)	Silicates	CaO	MgO	Al_2O_3	Fe_2O_3	Moisture	Loss on ignition	Lithologic description
1.5	–	–	–	–	–	–	–	Surficial cover, caliche-type; alluvium.
1.2	15.69	42.27	Tr.	4.82	1.96	0.54	33.48	Caliche-type calcareous material.
1.5	8.90	41.75	1.38	7.24	1.91	0.31	38.59	Limestone, thin-bedded, gray, yellow.
0.5	4.64	47.15	Tr.	5.89	2.74	0.20	38.86	Limestone, light-gray to dark-gray, compact, massive, siliceous.
0.3	3.54	51.56	1.77	1.22	0.52	0.18	41.25	Limestone, marly, shale, thin-bedded yellow.
1.1	1.47	55.30	Tr.	Tr.	0.56	–	43.29	Limestone, light-gray to dark-gray, massive, compact, siliceous.
1.2	15.84	42.32	1.35	2.25	1.19	0.53	35.98	Limestone and marl, yellow, gray, thin-bedded.
2.3	3.65	34.01	16.01	1.56	1.28	0.19	43.11	Limestone, light-gray to dark-gray, massive.
1.2	30.22	23.96	1.11	10.73	2.63	0.97	29.36	Limestone, marl, and shale, yellow, gray, thin-bedded.
0.9	3.24	49.96	3.46	0.53	0.59	0.05	43.05	Limestone, massive, gray.
0.5	58.47	9.35	Tr.	12.30	4.47	2.87	15.63	Marl, limestone, and shale, yellow.
1.5	1.22	54.60	0.83	0.29	0.41	0.05	43.40	Limestone, massive, gray.

Analyses made at the Libyan-American Joint Services Chemical Laboratory, Tripoli, under the supervision of Pierro Grossi and Atom Pietri

B. ROCKS FOR CEMENT MATERIAL AT KILOMETER 59

STRATIGRAPHIC SECTIONS SHOWING LITHOLOGY AND CHEMICAL ANALYSES OF ROCKS FOR CEMENT MATERIAL AT KILOMETERS 54 AND 59, AZIZIA, LIBYA