

0030 0006
NBMG OFR 83-11
See also 83-12 for
geochemical results.

Clark Co. - general
Item 17

NON METALLIC DISTRICTS - CLARK COUNTY

The non-metallic districts in Clark County include the Arden, Sloan, Moapa, Jean, and Muddy Mountain districts, and the Overton and Dry Lake Areas. All of the districts are accessible along well used, paved and dirt roads.

The literature available concerning the geology, history, and deposits of the areas is extensive, and will not be reviewed in this report.

Production of non-metallic commodities in Clark County, has generally far exceeded metallic commodities since the turn of the century where most of the discoveries were made after the early exploration for metallics. According to Papke (oral communication, 1983) the following three areas are the only currently producing properties in the county:

Gypsum is produced at the Apex operation of Pacific Coast Building Products, Inc., 25 airline miles northeast of Las Vegas. Mining is done from a high-grade near surface gypsum deposit that has very large reserves. The open pit and plant are in S7 and 10, T20S, R64E. The nearly flat lying deposit apparently occurs in the Muddy Creek Farmation of Pleiocene(?) age. The gypsum is processed, calcined and used in the manufacture of sheetrock and other products at the adjacent plant.

Limestone and lime are produced at Apex, about 20 miles northeast; the operation is owned by Genstar Cement and Lime Co., who purchased it in 1982 from Flintkote Lime Co. The high-purity calcium limestone is produced by open pit mining from the Crystal Pass Limestone member of the Devonian Sultan Limestone. Some of the material is crushed, sized, and sold for use in sugar refining and other useages. The rest is calcined and sold as lime, mostly for the construction industry.

Silica sand is producted several miles south of overton, Clark County, by Simplot Silica Products, Inc. The material comes from the Cretaceous Baseline

Sandstone, a second generation material formed by reworking of the iron-rich Aztec Sandstone. The Baseline Sandstone crops out in a northwestward-trending belt about 5 miles long, the formation has a thickness of about 500 feet and dips about 30°NE. Portions of the formation, especially the lower and upper parts, contain excessive amounts of iron oxides and are not useable. The better material is light colored, friable, and has well-rounded grains. The material has been mined in a number of open pits, but current mining is from the large Florence pit in the northern part of S11, T17S, R67E. The sandstone is slurried, pumped 4 miles, and washed to produce a product used mostly in manufacture of glass. Typically the product contains 99.4% SiO₂, 0.45% Fe₂O₃ and .555% combined Al₂O₃ and TiO₂. Reserves are large.

Selected References:

- Anderson, R. E. (1974) Large-magnitude Late Tertiary strike-slip faulting north of Lake Mead, Nevada: USGS Professional Paper 794.
- Anonymous (1921) Promising colemanite deposit found in Nevada: EMJ, v. 111, p.600.
- Anonymous (1982) La Madre Mountains/Pine Creek G-E-M Resources Area: Great Basin GEM Joint Venture Technical Report GRA No. NV-32.
- Arnold H. B. (1977) Geology of part of the Muddy Mountains, Clark County, Nevada: EWSC M. S. Thesis.
- Anonymous (1982) Muddy Mountains G-E-M Resources Area: Great Basin GEM Joint Venture Technical Report GRA No. NV-34.
- Axen, G. J. (1980) Geology of the LaMadre Mountain Area, Spring Mountains, southern Nevada: M. S. Thesis, Massachusetts Institute of Technology.
- Bohannon, R. G. (1982) Geologic map of the Muddy Mountains Wilderness Study Area, Clark County, Nevada: USGS map MF-1458-A.
- Bohannon, R. G., and Vine, J. D. (1982) Geochemical map of the Muddy Mountains Wilderness Study Area, Clark County, Nevada: USGS Map-1458-B.
- Bohannon, R. G. (1982) Geologic map, tectonic map, and structure sections of the

- Muddy and northern Black Mountains, Clark County, Nevada: USGS Map MI-1406
- Bohannon, R. G., et al (1982) Mineral resource potential map of the Muddy Mountains Wilderness Study Area, Clark County, Nevada: USGS Map MF-1458-C.
- Brock, W. G., and Engelder, T. (1977) Deformation associated with the movement of the Muddy Mountain overthrust in the Buffington window, southeastern Nevada: GSA Bulletin, v. 88, p. 1167-1677.
- Burchfiel, B.C., et al (1974) Geology of the Spring Mountains, Nevada: GSA Bulletin v. 85, p. 1013.
- Carpenter, J.A. (1929) Mineral resources of southern Nevada: NBMG Bulletin 2.
- Fulton, J.A., and Smith, A. M. (1932) Nonmetallic minerals in Nevada: NBMG Bulletin 17.
- Gale, H.S. (1921) The Callville Wash colemanite deposit: EMJ, v. 112, no. 14, p.524.
- Garside, L.J. (1973) Radioactive mineral occurrences in Nevada: NBMG Bulletin 81.
- Hewett, D.F. (1923) Carnotite in southern Nevada: EMJ, v. 115, p. 232-235.
- Hewett, D. F., et al (1936) Mineral resources of the region around Boulder Dam: USGS Bulletin 871.
- Hewett, D. F. (1956) Geology and mineral resources of the Ivanpah quadrangle, California and Nevada: USGS Professional Paper 275.
- Leszykowski, A.M., et al (1982) Mineral investigation of the Muddy Mountains Wilderness Study Area (BLM), Clark County, Nevada: USBM Summary Report MLA 112-82.
- Lincoln, F. C. (1923) Mining districts and mineral resources of Nevada: Nevada Publications Co., Reno.
- Longwell, C. R. (1928) Geology of the Muddy Mountains, Nevada: USGS Bulletin 798.
- Longwell, C.R., et al (1965) Geology and mineral deposits of Clark County, NBMG Bulletin 62.
- Longwell C.R. (1920) Geology of the Muddy Mountains, Nevada: Yale Univ. PhD thesis.

- Longwell C.R. (1921) Geology of the Muddy Mountains, Nevada: Am Jour. Sci, v 201
p 39.
- Longwell C.R. (1922) The Muddy Mountain overthrust in southeastern Nevada: Jour
Geol, v 30, p 63.
- Longwell C.R. (1924) Thrust-faults and faults in southern Nevada (abs): GSA Bull,
v 35, p 64.
- Longwell C.R. (1926) Structural studies in southern Nevada and western Arizona:
GSA Bull, v 37, p 551.
- Longwell C.R. (1932) Muddy Mountain thrust in fact and fiction: Sc, v 76, p 99.
- Longwell C.R. (1939) Thrust faults of southern Nevada photographed in color (abs):
GSA Bull, v 50, p 1919.
- Longwell C.R. (1945) Low-angle normal faults in the Basin and Range Province:
AGU Trans, v 26, p 107.
- Longwell C.R. (1949) Structure of the northern Muddy Mountain area, Nevada: GSA
Bull, v 60, p 923.
- Longwell C.R. (1952) Basin and Range geology west of St. George Basin, Utah: Utah
Geol Soc. Gdbk Geol Utah Cedar City to Las Vegas, n 7, p 109.
- Longwell C.R. (1962) Restudy of the Arrowhead fault, Muddy Mountains, Nevada:
USGS PP 450D, p 82.
- Longwell C.R. (1963) Reconnaissance geology between Lake Mead and Davis Dam,
Arizona, Nevada: USGS PP 374E.
- Longwell C.R. (1973) Structural studies in southern Nevada and western Arizona-
a correction: GSA Bull, v 84, p 3717.
- Longwell C.R., and Pampeyan, E.H., Bowyer, B., Roberts, R.J. (1965) Geology and
mineral deposits of Clark County, Nevada: NBMG Bull 62.

Non-Metallic districts-5.

- Murphy, T. D. (1954) Silica resources of Clark County, Nevada: NBMG Bulletin 55.
- NBMG (1964) Mineral and Water resources of Nevada: NBMG Bulletin 65.
- Noble, L.F. (1923) Colemanite in Clark County, Nevada: USGS Bulletin 735-B.
- Papke, K. G. (1970) Montmorillonite, bentonite, and fuller's earth deposits in Nevada: NBMG Bulletin 76.
- Papke, K. G. (1973) Industrial mineral deposits of Nevada: NBMG Map 46.
- Papke, K. G. (1976) Evaporites and brines in Nevada playas: NBMG Bulletin 87.
- Spurr, J.E. (1903) Descriptive geology of Nevada south of the fortieth parallel and adjacent portions of California: USGS Bulletin 208.
- Stewart, J. H., and Carlson, J.E. (1976) Cenozoic rocks of Nevada: NBMG Map 52.
- Stoddard, C. (1932) Catalogue of mining district, in Metal and nonmetal occurrences in Nevada: NBMG Bulletin 16.
- Vanderburg, W. O. (1936) Placer mining in Nevada: NBMG Bulletin 27.