

## SFT 2023 – TERTIARY-AGE VOLCANIC-HOSTED EPITHERMAL PRECIOUS METAL DEPOSITS OF THE WALKER LANE, SW NEVADA

### Selected References

#### OVERVIEW PAPERS

- Arribas, A., 2020, Characteristics of high-sulfidation (or Au-Ag-Cu-As) epithermal deposits: a 2020 perspective (abs), *in* Koutz, F.R., and Pennell, W.M., Vision for Discovery: Geology and Ore Deposits of the Basin and Range: Geological Society of Nevada Symposium 2020 Proceedings, Reno-Sparks, Nevada, p. A-87.
- Berger, B.R. and R.W. Henley, 1989, Advances in Understanding of Epithermal Gold-silver Deposits, with Special Reference to the Western United States: *Econ. Geol. Mon.* 6, 405-423.
- Carraher, R.A., and Barr, M., 2015, Epithermal deposits of central Nevada: Geological Society of Nevada 2015 Symposium, Field trip guidebook 4, 127 p.
- Heald, P., Foley, N.K. and D.O. Hayba, 1987, Comparative Anatomy of Volcanic-hosted Epithermal Deposits: Acid-sulfate and Adularia-sericite Types: *Economic Geology*, 82, 1-26.
- Hedenquist, J.W., Arribas R., A. and E. Gonzales-Urien, 2000, Exploration for Epithermal Gold Deposits. *Society of Economic Geologists Reviews* v. 13, 245-277.
- Henley, R.W., 1985, The Geothermal Framework of Epithermal Deposits. *Society of Economic Geologists Reviews* v. 2, 1-24.
- John, D.A., du Bray, E.A., Henry, C.D., and Vikre, P.G., 2015, Cenozoic magmatism and epithermal gold-silver deposits of the southern ancestral Cascade Arc, western Nevada and eastern California, *in* Pennell, W.M., and Garside, L.J., New concepts and discoveries: Geological Society of Nevada Symposium 2015 Proceedings, Reno-Sparks, Nevada, p. 611-645.
- John, D.A., and Henry, C.D., 2022, Magmatic-tectonic settings of Cenozoic epithermal gold-silver deposits of the Great Basin, western United States, *in* Koutz, F.R, ed., Vision for Discovery: Geology and Ore Deposits of the Great Basin: Geological Society of Nevada 2022 Symposium Proceedings, Reno-Sparks, Nevada, p. 765-796, electronic copy.
- Lange, J.R. and Eastoe, C.J., 1988, Relationships between a Porphyry Cu-Mo Deposit, Base and Precious Metal Veins, and Laramide Intrusions, Mineral Park, Arizona. *Econ. Geol.*, v. 83, 551-567.
- Seedorf, E., 1991, Magmatism, Extension, and Ore Deposits of Eocene to Holocene Age in the Great Basin – Mutual Effects and Preliminary Proposed Genetic Relationships, *in* Raines, G.L. Lisle, R.E., Schafer, R.W., and Wilkinson, W.H., eds, *Geology and Ore Deposits of the Great Basin*, Geological Society of Nevada Symposium Proceedings, Reno, April 1990, p. 133-178.
- Simmons, S.F., White, N.C., and John, D.A., 2005, Geological characteristics of epithermal precious and base metal deposits: *Society of Economic Geologists 100th Anniversary Volume*, p. 485-522.

## AURORA AND BOREALIS

Borealis Mining Company, LLC, 2022, Borealis mine project fact sheet:

<https://ndep.nv.gov/uploads/documents/NEV2005101fsFY22.pdf> 16 p.

Eng, T., 1991, Geology and mineralization of the Freedom Flats gold deposit, Borealis mine, Mineral county, Nevada, in Raines, G.L., Lisle, R.L., Schafer, R.W., and Wilkinson, W.H., eds., Geology and Ore Deposits of the Great Basin: Geological Society of Nevada 1990 Symposium Proceedings, Reno-Sparks, Nevada, p. 995-1019.

Gryphon, 2008, Technical Report on the Mineral Resources of the Borealis Gold Project Located in Mineral County, Nevada, USA: report prepared for Gryphon Gold Corporation and Borealis Mining Company, April 28, 2008, 164 p.

Knight Piésold, 2006, Technical Report on the Mineral Reserves and Development of the Borealis Gold Project Located in Mineral County, Nevada, USA: report prepared for Gryphon Gold Corporation, August 15, 2006, 230 p.

Noble, A, 2005, Technical Report on the Mineral Resources of the Borealis Gold Project located in Mineral County, Nevada, USA: report prepared for Gryphon Gold Corp., May 25, 2005, 225 p.

Osborne, M.A., 1991, Epithermal mineralization at Aurora, Nevada, in Raines, G.L., Lisle, R.L., Schafer, R.W., and Wilkinson, W.H., eds., Geology and Ore Deposits of the Great Basin: Geological Society of Nevada 1990 Symposium Proceedings, Reno-Sparks, Nevada, p. 1097-1110.

Telesto, 2008, Preliminary (Economic) Assessment of the Mineral Resources of the Borealis Gold Project Located in Mineral County, Nevada, USA: report prepared for Gryphon Gold Corporation and Borealis Mining Company, September 2, 2008, 260 p.

Telesto, 2009, Pre-Feasibility Study of the Mineral Resources of the Borealis Gold Project Located in Mineral County, Nevada, USA Revised and Rested (sic): report prepared for Gryphon Gold Corporation, September 17, 2009, 263 p.

Telesto, 2011, Pre-Feasibility Study Update of the Mineral Resources of the Borealis Gold Project Located in Mineral County, Nevada, USA as at April 25, 2011: report prepared for Gryphon Gold Corporation, April 25, 2011, 262 p.

Vikre, P.G., John, D.A., du Bray, E.A., and Fleck, R.J., 2015, Gold-silver mining districts, alteration zones, and paleolandforms in the Miocene Bodie Hills volcanic field, California and Nevada: U.S. Geological Survey, Scientific Investigations Report 2015–5012, 160 p. [Includes a section on Aurora]

## BEATTY

Bartos, P., Doyle, M., Nicholson, D., and Thompson, T., 2022, Exploration, geology, alteration, and mineralization of the Silicon gold prospect, greater Bullfrog Hills – Bare Mountain district, Nye county, Nevada, in Koutz, F.R., ed., Vision for Discovery: Geology and Ore Deposits of the Great Basin: Geological Society of Nevada 2022 Symposium Proceedings, Reno-Sparks, Nevada, p. 442-466, electronic copy.

- Connors, K.A., Weiss, S.I., and Noble, D.C., 1998, Geologic Map of the Northeastern Bullfrog Hills and Vicinity, Southern Nye County, Nevada, Nevada Bureau of Mines and Geology, Map 112, scale 1:24,000.
- Coolbaugh, M.F., Pace, D., Craig, L.D., Bedell, R.L., and Miller, M.S., 2020, The Silicon gold project, Nye County, Nevada: Prospect generation methods leading to initial recognition, acquisition, and characterization, *in* Koutz, F.R., and Pennell, W.M., Vision for Discovery: Geology and Ore Deposits of the Basin and Range: Geological Society of Nevada Symposium 2020 Proceedings, Reno-Sparks, Nevada, p. 1027- 1041.
- Cornwall, H.R. and Kleinhampl, F.J., 1961, Geologic Map of the Bare Mountain Quadrangle, Nevada: U.S. Geological Survey, GQ-157, scale 1:62,500.
- Cornwall, H.R., and Kleinhampl, F.J., 1964, Geology of the Bullfrog quadrangle and ore deposits related to the Bullfrog Hills caldera, Nye County, Nevada, and Inyo County, California: U.S. Geological Survey Professional Paper 454-J, 25 p.
- Fischer, B.T., and Cline, J.S., 2020, Ore classification of pseudobreccia ore in the 144 zone gold deposit: A chemical replacement model, Bare Mountain Range, Nevada: Economic Geology, v. 115, p. 1137-1150.
- Eng, T., Boden, D.R., Reischman, M.R., and Biggs, J.O., 1995, Geology and Mineralization of the Bullfrog Mine and vicinity, Nye County, Nevada, in Coyner, A.R. and Fahey, P.L., eds., Geology and Ore Deposits of the American Cordillera, Symposium proceedings, Reno, Geological Society of Nevada, Vol. 1, pp. 353-399.
- Johnson, K.L., 2021, NI 43-101 Technical Report Mineral Resource Estimate, Bullfrog Gold Project – Nye County, Nevada: Tetra Tech for Augusta Gold Corp., 106 p.
- Maldonado, F., and Hausback, B.P., 1990, Geologic map of the northeast quarter of the Bullfrog 15-minute quadrangle, Nye County, Nevada: U.S. Geological Survey Miscellaneous Investigations Map I-2049, scale 1:24,000.
- Ransome, F.L., Emmons, W.H., and Garrey, G.H., 1910, Geology and Ore Deposits of the Bullfrog District, Nevada: U.S. Geological Survey Bulletin 407, 130 p.
- Rasmussen, H., Pedraza, J., and Schaff, 2020, Sterling/Crown gold deposits of the Bare Mountains, southern Nevada (abstract), *n* Koutz, F.R., and Pennell, W.M., Vision for Discovery: Geology and Ore Deposits of the Basin and Range: Geological Society of Nevada Symposium 2020 Proceedings, Reno-Sparks, Nevada, p. A-83.

## GOLDFIELD

- Ashley, R.P., 1974, Goldfield Mining District. Nevada Bureau of Mines and Geology, Report 19, 49-66.
- Ashley, R.P., 1990, The Goldfield gold district, Esmeralda and Nye Counties, Nevada, in Epithermal Gold Deposits--Part 1: U.S. Geological Survey Bulletin 1857-H, p. H1-H7.
- Centerra, 2022, Deliver on Results: Investor Presentation, February 8, 2022, Centerra Gold website, 32p.
- Centerra, 2022, Centerra Gold Completes Acquisition of the Goldfield District Development Project: Press Release, February 28, 2022, Centerra Gold website, 1 p.

- Centerra, 2022, 2022 Annual Information Form, March 30, 2023: see Sedar: <https://www.sedar.com/DisplayProfile.do?lang=EN&issuerType=03&issuerNo=00020738> by date of riling, 95p..
- Centerra, 2023, Building a strong, stable platform: Investor Presentation, February 2023: Centerra Gold website, March 3, 2023, 31 p.
- May, B., 2020, Updates to the high-sulfidation Goldfield district, Esmeralda County, Nevada (abs) *in* Koutz, F.R., and Pennell, W.M., Vision for Discovery: Geology and Ore Deposits of the Basin and Range: Geological Society of Nevada Symposium 2020 Proceedings, Reno-Sparks, Nevada, p. A-153.
- Micon, 2013, Update to the feasibility study on the Goldfield property, Nevada, USA: report prepared by Micon International Ltd., for International Minerals Corporation (see Sedar: <https://www.sedar.com/DisplayCompanyDocuments.do?lang=EN&issuerNo=00003532> by date of filing, 177 p.
- Ransome, F.L., 1909, The geology and ore deposits of Goldfield, Nevada: U.S. Geological Survey Professional Paper 66, 258 p.
- Rockwell, B.W., 2000, The Goldfield Mining District, Nevada: An Acid-Sulfate Bonanza Gold Deposit: in Guidebook for Field Trip to the Basin and Range, Floyd F. Sabins, ed., Fourteenth International Conference for Applied Geologic Remote Sensing, Las Vegas, Nevada, USA, November 6-8, 2000, 23p.
- Rockwell, B.W., 2013, Automated Mapping of Mineral Groups and Green Vegetation from Landsat Thematic Mapper Imagery with an Example from the San Juan Mountains, Colorado: US Dept of Interior and USGS, Scientific Investigations Map 3232, 31 p.
- Sung, J.-Y., Petersen, E.U., and Bennett, R.E., Jr., Mineralogy and Geochemistry of High-grade Gold Ores, Goldfield, NV. 2005, (abs. poster) Geol. Soc. America Annual Meeting, Salt Lake City, October 2005.
- Vikre, P. G., 1989, Ledge Formation at the Sandstorm and Kendall Gold Mines, Goldfield, Nevada: *Economic Geology*, v. 84, 1989, pp. 2115-2138.
- Vickre, P.G., Fleck, R. and Rye, R.O., 2005, Ages and geochemistry of magmatic hydrothermal alunites in the Goldfield district, Esmeralda County, Nevada: US Geol. Survey Open File Report 2005-1258, Poster.
- Vikre, P.G., Premo, W., Pribil, M., and Poulson, S., 2020, Relationships of magmatic evolution, sulfide saturation, and devolatilization to mineralogy and Ag/Au of diverse Ag-Au(-Cu) deposits in the Tonopah and Goldfield districts, Nevada (abstract), *in* Koutz, F.R., and Pennell, W.M., Vision for Discovery: Geology and Ore Deposits of the Basin and Range: Geological Society of Nevada Symposium 2020 Proceedings, Reno-Sparks, Nevada, p. A-155-A-156.
- Wallace, A.B., 1978, Possible signatures of buried porphyry-copper deposits in middle to late Tertiary volcanic rocks of western Nevada: Fifth IAGOD Quadrennial Symposium, p. 69-77.

## ROUND MOUNTAIN

- Boden, D.R., 1986, Eruptive history and structural development of the Toquima caldera complex, central Nevada: Geological Society of America Bulletin, v. 97, p. 61-74.
- Boden, D.R., 1992, Geologic map of the Toquima caldera complex, central Nevada: Nevada Bureau of Mines and Geology Map 98, scale 1:48,000.
- Ferguson, H.G., 1921, The Round Mountain District, Nevada: USGS Bull. 721-I, pp 383-406.
- Griffiths, R., Prestia, A., Howell, S.T., Brough, C., Donkervoort, L., and Dixon, J., 2023, Environmental geochemistry of the Round Mountain Mine, Nevada, and Mineralogical Controls on Acid Generation: in Econ. Geol. v.118, pp549-570.
- Henry, C.D., Elson, H.B., McIntosh, W.C., Heizler, M.T., and Castor, S.B., 1997, Brief duration of hydrothermal activity at Round Mountain, Nevada, determined from  $^{40}\text{Ar}/^{39}\text{Ar}$  geochronology: Economic Geology, v. 92, p. 807-826.
- Howell, S.T. and Muntean, J.L., 2015, Spatial and Temporal Evolution of Hydrothermal Fluids of the Round Mountain Gold Deposit, Nevada (abstract): in Pennell, W.M., and Garside, L.J., New concepts and discoveries: Geological Society of Nevada Symposium 2015 Proceedings, Reno-Sparks, Nevada.
- Jennings, T.L., 2015, Geology of the Round Mountain and Gold Hill Deposits, Round Mountain Gold Corporation Nye County Nevada: in Geological Society of Nevada, Symposium 2015, Epithermal Deposits of Central Nevada, Field Trip Guidebook 4, p. 103–116.
- Kinross, 2006, Round Mountain Technical Report, Nye County USA: prepared by Hanson, W. of Kinross Gold Corp., March 30, 2006, 85 pp.
- Kinross, 2021, Annual Report (public filing).
- Kinross, 2021, Annual Information Form for the year ended December 31, 2021 (public filing)
- Kinross, 2022, Management's Discussion and Analysis (MDA) for the year ended December 31, 2022 (public filing)
- Mills, B.A, 1984, Geology of the Round Mountain gold deposit, Nye County, Nevada, in Wilkins, J. ed., Gold and Silver Deposits of the Basin and Range Province, Western USA: Arizona Geological Society, Digest, vol. XV, p 89-99
- Ransome, F. L. (1909) Round Mountain, Nevada: U.S. Geological Survey Bulletin 380, p. 44-47.
- Rhys, D., Lagos, R., Schroer, G., St. Jean, N., and Munson, C., 2020, Structural evolution and ore controls in a caldera setting at the Round Mountain epithermal deposit (abstract), in Koutz, F.R., and Pennell, W.M., Vision for Discovery: Geology and Ore Deposits of the Basin and Range: Geological Society of Nevada Symposium 2020 Proceedings, Reno-Sparks, Nevada, p. A-37-A-38.
- Sander, M.V., 1988., Geologic setting and the relation of epithermal gold-silver mineralization to wall-rock alteration at the Round Mountain mine, Nye County, Nevada: in Schafer, R.W., Cooper, J.J., Vikre P.G., eds, Geol. Society of Nevada 1987 Symposium, Bulk Mineable Precious Metal Deposits of the Western United States, p. 375-416.
- Sander M.V., and Einaudi M.T., 1987, The Round Mountain gold-silver mine, Nye County, Nevada: in Johnson J.L., ed., Geol. Society of Nevada 1987 Symposium, Bulk Mineable Precious Metal Deposits of the Western United States, Guidebook for Field Trips, p. 130-135.

- Sander, M.V., and Einaudi, M.T., 1990, Epithermal deposition of Gold during transition from propylitic to potassic alteration at Round Mountain, Nevada: *Economic Geology*, v. 85, p. 285-311.
- Seedorf, Eric, 1991, Magmatism, Extension, and Ore Deposits of Eocene to Holocene Age in the Great Basin – Mutual Effects and Preliminary Proposed Genetic Relationships, in Raines, G.L. Lisle, R.E., Schafer, R.W., Wilkinson, W.H., eds, *Geology and Ore Deposits of the Great Basin*, Geological Society of Nevada Symposium Proceedings, Reno, April 1990, p. 133-178.
- Shawe, D.R., Foord, E.E. and Conklin, N.M., 1984, Huebnerite veins near Round Mountain, Nye County, Nevada: US Geol. Survey Prof. Paper 1287, 52pp.
- Shawe, D.R., Marvin, R.F., Andriessen, P.A.M., Mehnert, H.H., and Merritt, V.M., 1986, Ages of igneous and hydrothermal events in the Round Mountain and Manhattan Gold districts, Nye County, Nevada: *Economic Geology*, v.81, p. 388-407.
- Stewart, J. H., Moore, W. J., and Zietz, I., 1977, East-West Patterns of Cenozoic Igneous Rocks, Aeromagnetic Anomalies, and Mineral Deposits, Nevada and Utah, *GSA Bull.* V 88, p 67-77.
- Tingley, J. V. and Berger, B. R., 1985, Lode Gold Deposits of Round Mountain, Nevada, Nevada Bureau of Mines and Geology Bulletin 100, 62 p.

#### TONOPAH

- Ashley, R.P., 1990, The Tonopah Precious-metal District, Esmeralda and Nye Counties, Nevada: in Shawe, D.R., Ashley and Carter, L.M.H. eds., *Epithermal Gold Deposits—Part I*, U.S. Geol. Survey Bulletin, 1857-H, p. H8-H13.
- John, D.A. and Henry, C.D., 2022, Magmatic-tectonic Settings of Cenozoic Epithermal Gold-Silver Deposits of the Great Basin, Western United States, *Geol. Society of Nevada Symposium proceedings 2022*, p. 765-796.
- John, D.A., Nash, J.T., Plouff, D., and Whitebread, D.H., 1991, The conterminous United States Mineral Appraisal Program: background information to accompany folio of geologic, geochemical, geophysical, and mineral resources maps of the Tonopah 1° by 2° quadrangle, Nevada, U.S.G.S. Circular, 1070, 23 p.
- John, D.A., du Bray, E.A., Henry, C.D., and Vikre, P.G., 2015, Cenozoic Magmatism and Epithermal Gold-Silver Deposits of the Southern Ancestral Cascade Arc, Western Nevada and Eastern California, *Geological Society of Nevada Symposium: New Concepts and Discoveries*, p.611-645.
- John, D.A., Colgan, J. P., Vikre, P. G., Cosca, M.A., Morgan, L.E., and du Bray, E.A., 2020, Ancestral Cascade Arc magmatism, extensional tectonics, and Miocene epithermal silver-gold deposits near Tonopah, Nevada: New ideas About old districts (abstract), *in* Koutz, F.R., and Pennell, W.M., *Vision for Discovery: Geology and Ore Deposits of the Basin and Range: Geol. Society of Nevada Symposium 2020 Proceedings*, Reno-Sparks, Nevada, p. A-151.
- John, D.A., Colgan, J.P., Vikre, P.G., Cosca, M.A., Morgan, L.E., and du Bray, E.A., 2022a, Ancestral Cascade Arc Magmatism, Extensional Tectonics, and Miocene Epithermal Silver-Gold Deposits near Tonopah, Nevada: New Ideas About Old Districts: *Geol. Society of Nevada Symposium Program with Abstracts*, p. 88.

- John, D.A., Colgan, J.P., Vikre, P.G., Cosca, M.A., Morgan, L.E., and du Bray, E.A., 2022b, Ancestral Cascade Arc Magmatism, Extensional Tectonics, and Miocene Epithermal Silver-Gold Deposits near Tonopah, Nevada: New Ideas About Old Districts: presentation to the Geol. Society of Nevada Symposium, Reno, Nevada.
- Turner, W.A., 2020, Bandit property: Under explored epithermal mineralization in the Tonopah quadrangle, Walker Lane, Nevada (abstract), *in* Koutz, F.R., and Pennell, W.M., Vision for Discovery: Geology and Ore Deposits of the Basin and Range: Geological Society of Nevada Symposium 2020 Proceedings, Reno-Sparks, Nevada, p. P-55-P56.
- Vikre, P.G., Premo, W., Pribil, M., and Poulson, S., 2020, Relationships of magmatic evolution, sulfide saturation, and devolatilization to mineralogy and Ag/Au of diverse Ag-Au(-Cu) deposits in the Tonopah and Goldfield districts, Nevada (abstract), *in* Koutz, F.R., and Pennell, W.M., Vision for Discovery: Geology and Ore Deposits of the Basin and Range: Geological Society of Nevada Symposium 2020 Proceedings, Reno-Sparks, Nevada, p. A-155-A-156.
- Mining History Association, 2000, The Mining History of Tonopah and Goldfield, NV: The 11th Annual Conference of the Mining History Association, Tonopah, Nevada, June 1-4, 2000; <https://www.mininghistoryassociation.org/Tonopah.htm>