

REFERENCES

- Arribas, A. Jr. (1995) Characteristics of high-sulfidation epithermal deposits, and their relation to magmatic fluid. In Thompson, J.F.H., ed., *Magmas, fluids, and ore deposits*, Mineralogical Association of Canada Short Course 23, 419-454.
- Barton, P. B., and Toulmin, P. (1964) The electromotive method for the determination of the fugacity of sulfur in laboratory sulfide systems. *Geochimica et Cosmochimica Acta*, 28(5), 619-640. Barton, P. B., and Toulmin, P. (1966). Phase relations involving sphalerite in the Fe-Zn-S system. *Economic Geology*, 61(5), 815-849.
- Basuki, A., Aditya Sumanagara. D., and Sinamebela, D. (1994) The Gunung Pongkor gold-silver deposit, West Java, Indonesia. *Journal of Geochemical Exploration*, 50.371-391.
- Basuki, A., Suparka, E., and Sunarya, Y. (1999) Gold deposit in the Cikidang area, West Java, Indonesia. *GEOSEA '98 Proceedings Geol. Soc. Malaysia Bull.* 45, December 1999 pp. 251-259 Ninth Regional Congress on Geology, Mineral and Energy Resources of Southeast Asia GEOSEA '98 17 -19 August 1998. Shangri-La Hotel, Kuala Lumpur, Malaysia
- Bayliss, P., Berry L.G., Mrose, M.E., dan Smith, D.K. (1980) *Mineral Powder Diffraction File Data Book, Book 1*, JCPDS, Pennsylvania: International Centre for Diffraction Data.

- Bayliss, P., Berry L.G., Mrose, M.E., dan Smith, D.K. (1980) Mineral Powder Diffraction File Data Book, Book 2, JCPDS, Pennsylvania: International Centre for Diffraction Data.
- Bogie, I., and MacKenzie, K., M., (1998) The application of a volcanic facies model to an andesitic stratovolcano hosted geothermal system at Wayang Windu, Java, Indonesia: In *Proceedings 20th of the New Zealand Geothermal Workshop, Auckland*, 265–270, 1998
- Bogie, I., Lawless, J. V., Rychagov, S., and Belousov, V. (2005) Magmatic related hydrothermal systems: classification of the types of geothermal systems and their ore mineralization. In *Proceedings of the International Kuril-Kamchatka field workshop-16 luglio-6 agosto (23)*.
- Boudagher-Fadel, M.K., (2008) Evolution and Geological Significance of Larger Benthic Foraminifera. First edition 2008, Elsevier B.V. pg. 390-397
- Carlile, J. C. and Mitchell, A.H.G. (1993) Magmatic arcs and associated gold and copper mineralization in Indonesia. *Journal of Geochemical Exploration*, 50, pp. 91-142
- Cas, R., A., F., dan Wright, J., V., (1988) *Volcanic Successions – Modern and Ancient*: London, Academic Division of Unwin Hyman Ltd.
- Chen, P. Y., (1977) *Table of Key lines in X-Ray Powder Diffraction Patterns of Mineral in Clays and Associated Rocks*. Indiana: Department of Natural Resources Geological Survey Occasional Paper 21, Authority of the State of Indiana, Bloomington, Indiana.

- Corbett, G.J. (2002) Epithermal Gold for Explorationists. AIG Journal – *Applied geoscientific practice and research in Australia*: Paper 2002-01, February 2002
- Cooke, D.R. and Simmons, S.F. (2000) Characteristic and Genesis of epithermal gold deposit. *Reviews in Economic Geology*, v.13, pp. 221-244
- Einaudi, M. T., Hedenquist, J. W., and Inan, E. E. (2003) Sulfidation state of fluids in active and extinct hydrothermal systems: transitions from porphyry to epithermal environments. *Special Publication-Society of Economic Geologists*, 10, 285-314
- Finch, C. J. (1998) Inductively Coupled Plasma-Emission Spectrometry (ICP-ES) at the Geochemical Laboratory. *Current Research (1998) Newfoundland Department of Mine and Energy: Geological Survey, Report 98-1*, pp. 179-193
- Garwin, S., Hall, R., and Watanabe, K. (2005) Tectonic Setting, Geology, and Gold and Copper Mineralization in Cenozoic Magmatic Arcs of Southeast Asia and the West Pacific. *Society of Economic Geologists, Economic Geology 100th Anniversary Volume*, pp. 891–930
- Gurusinga, M. A. (2018) *Fasies Gunung Api Pada Daerah Buluroto-Sentul Kabupaten Trenggalek, Jawa Timur* Bachelor's degree thesis, Departemen Teknik Geologi. Fakultas Teknik, Universitas Gadjah Mada, Kementerian Riset, Teknologi, Dan Pendidikan Tinggi (Unpublished)

- Hall, R. (2002) Cenozoic geological and plate tectonic evolution of SE Asia and the SW Pacific: computer-based reconstructions. Model and animations: *Journal of Asian Earth Sciences*, 20, pp.353–431
- Hall, R. Clements, B., Smyth, H. R., and Cottam M. A., (2007) A New Interpretation of Java's Structure. In *Proceedings Indonesian Petroleum Association 31st Annual Convention and Exhibition*, pp. 63-85 (May-2007)
- Hall, R. and Smyth, H. R. (2008) Cenozoic arc processes in Indonesia: Identification of the key influences on the stratigraphic record in active volcanic arcs. *The Geological Society of America, Special Paper 436*, 2008, pp.27-54
- Hall, R., (2009) Indonesia Geology. *Encyclopedia of Islands*. Gillespie, R. and Clague, D. (eds.). Berkeley, California: University of California Press, p. 454-460
- Hall, R. (2014) The Origin of Sundaland. *Proceedings of Sunderland Resources 2014 MGEI Annual Convection*, 17th - 18th November, Palembang, South Sumatra, Indonesia, pp 1-25
- Hamilton, W. B. (1979) Tectonics of the Indonesian Region. *Professional Paper* 1078, U.S. Geol. Surv., Washington, DC, 345p
- Hamilton, W. B. (1981) Plate Motions in Eastern Indonesian and Surrounding Regions. *Professional Paper* 1078, U.S. Geol. Surv., Washington, DC, 345p
- Hamilton, W. B. (1988) Plate Tectonics and Island Arcs: *Geological Society of America Bulletin*, Vol 100, pp: 1103-1527

- Harijoko, A., Sanemastu, K., Duncan, R. A., Prihatmoko, S., and Watanabe, K.,
(2004) Timing of the mineralization and volcanism at the Cibaliung gold
deposit, Western Java, Indonesia. *Resource Geology*, 54, 187-195
- Hartono, H., Baharuddin and Barta, K. (1992) *Geological Map of the Madiun
Quadrangle, Jawa*. Geological Research and Development Center,
Bandung, Indonesia.
- Hedenquist, J. W., Reyes, A. G., Simmons, S. F., and Taguchi, S. (1992) The
thermal and geochemical structure of geothermal and epithermal systems:
A framework for interpreting fluid inclusion data. *Eur. J. Mineral.* 4, pp.
989–1015.
- Hedenquist, J. W. and Lowenstern, J. B. (1994) The Role of Magmas in the
Formation of Hydrothermal Ore Deposits. *Nature* Vol 370, 1994, pp. 519-
527
- Hedenquist, J.W., Arribas A.R., and Gonzalez-Urien G. (2000) Exploration for
epithermal gold deposits. In *SEG Reviews in Economic Geology*: 13, 245-
277
- Hutchison, C. S. (1981) Review of the Indonesian Volcanic Arc. In Barber, A.J. and
Wirjosujono, S. (Eds), 1979, *The Geology and Tectonics of Eastern
Indonesia: Proceedings of the CCOP-IOC SEATAR Working Group
Meeting, Bandung, Indonesia*, The Geological Research and Development
Center, Special Publication No.2, pp. 65-80
- Hutchison, C. S. (1989) *Geological Evolution of South-East Asia*: Oxford
Monographs on Geology and Geophysics, Oxford, UK: Clarendon Press.

- Idrus, A., and Handayani, E., (2017) Geology and Characteristics of Low sulphidation Epithermal Vein in Senepo Area, East Java. Indonesian Mining Journal Vol. 20, No. 2, October 2017: 93 - 103
- JICA-JOGMEC (2004) Report on the Mineral Exploration in the East Java Area, the Republic of Indonesia-Consolidated Report, Japan International Cooperation Agency and the Japan Oil, Gas and Metals National Corporation Report, Tokyo
- Katili, J. A. (1975) Volcanism and Plate Tectonics in the Indonesian Island Arcs. Tectonophysics 26, pp.165–188.
- Kretz, R, (1983) Symbols for rock forming minerals, American Mineralogist, Volume 68, pages 277-279, 1983.
- Lindgren, W. (1933) Mineral deposits. (4th ed.) New York, Mc Grew-Hill, p. 930
- Lodding, W., and Rhett, D. W., (1973) Sample Preparation of X-Ray Fluorescence Analysis: Li-borate Glass Disks: American Mineralogist. Vol 57, pp 281-283 (1972)
- Mahesh Kumar, G. Neelam, I. Ajitha, A. and Uma MaheshwaraRao, V. (1986) Inductively Coupled Plasma Atomic Emission Spectroscopy: An Overview. International Journal of Pharmaceutical Research and Analysis, Vol 4 / Issue 8 / 2014 / 470-477
- Marcoux, E., and Milesi, J.P. (1994) Epithermal gold deposits in West Java, Indonesia: geology, age and crustal source. Journal of Geochemical Exploration, 50.393-408

- Marcperson, C. G. and Hall, R. (1999) Tectonic controls of Geochemical Evolution in Arc Magmatism of SE Asia: Proceedings 4th PACRIM Congress, 1999, Australian Institute of Mining and Metallurgy, 359-368
- Maryono, A., Setijadji, L.D., Arif, J., Harrison, R., and Soeriaatmadja, E. (2012) Gold, Silver and Copper Metallogeny of the Eastern Sunda Magmatic Arc Indonesia: Proceedings of Banda and Eastern Sunda Arcs. 2012 Mgei Annual Convention, November 2012, Malang East Java, Indonesia, pp. 23-38
- McPhie, J., Doyle, and M., Allen, R., (1993) Volcanic Textures: Tasmania, Center of Ore Deposit and Exploration Studies Tasmania.
- Meyer, C. and Hemley, J. J. (1967) Wallrock alteration. In Barnes, H.L., ed., Geochemistry of Hydrothermal Ore Deposits: New York, Holt, Reinhart and Winston, p. 166-235.
- Milesi, J. P, Marcoux, E., Sitorous, T., Simandjuntak. M., Leroy, J. and Bailly, L., (1999) Pongor West Java, Indonesia: a Pliocene supergene-enriched epithermal Au-Ag-(Mn) deposit. Mineralium Deposita. 34.131-149
- Moncada D, Mutchler S, Nieto A, Reynolds TJ, Rimstidt JD and Bodnar RJ (2012) Mineral textures and fluid inclusion petrography of the epithermal Ag-Au deposits at Guanajuato, Mexico: Application to exploration. Journal of Geochemical Exploration (114) 20–35
- Morrison G. W., Rose W. J., and Jaireth S., (1991) Geological and geochemical controls on the silver content (fineness) of gold in gold-silver deposits. Ore Geology Reviews, 6 (1991) 333-364

- Muthi, A., Basten, G., Suasta, G. D., and Litaay N. E. W. (2013) Characteristics of Alteration and Mineralization at Randu Kuning - Wonogiri Project. *Majalah Geologi Indonesia*, Vol. 28 No. 1 April 2013: 15-28
- Noel C. White and Jeffrey W. Hedenquist (1990) Epithermal environments and style of mineralization: Variations and their causes, and guidelines for exploration. *Journal of Geochemical Exploration*, 36 (1990) 445-474 445 Elsevier Science Publishers B.V., Amsterdam -- Printed in The Netherlands)
- Noel C. White and Jeffrey W. Hedenquist (1995) Epithermal gold deposits: Styles, characteristics, and exploration. Published in SEG Newsletter, 1995, No. 23, pp. 1, 913
- Pearce, J. A. (1996) A user's guide to basalt discrimination diagrams. In: Wyman, D. A. (ed.) *Trace Element Geochemistry of Volcanic Rocks: Applications for Massive Sulphide Exploration*. Geological Association of Canada, Short Course Notes 12, 79–113.
- Permana, M. R. (2018) *Prospek Sentul Dan Buluroto, Kabupaten Trenggalek, Provinsi Jawa Timur*. Bachelor's degree thesis, Departemen Teknik Geologi. Fakultas Teknik, Universitas Gadjah Mada, Kementerian Riset, Teknologi, Dan Pendidikan Tinggi (Unpublished)
- Pirajno, F. (2010) *Hydrothermal Processes and Mineral Systems*: Springer Science and Business Media B.V. 2009, 2010
- Phoumephone, P., Harijoko, A., Warmada, I.W., Imai, A., Takahashi, R., and Shingo Y. (2009) Hydrothermal alteration of Epithermal Gold Deposit at

Dalangturu and Suruh areas, Trenggalek Regency, East Java, Indonesia.

International Conference Earth Science and Technology: pp.169-177

PT Sumber Mineral Nusantara (2010) The Results of Scouts Diamond Drilling, Trenggalek Area. Report for Trenggalek Project (From Jan 2010 to Aug 2010)

Reed, M. H. (1982) Calculation of multicomponent chemical equilibria and reaction processes in systems involving minerals, gases and an aqueous phase: *Geochimica et cosmochimica Acta*, v. 46, p. 513-528.

Reed, M. H., and Spycher, N. F. (1985) Boiling, cooling and oxidation in epithermal systems. A numerical approach, *Reviews in Economic Geology*, v.2, p. 249-272.

Robert, F., Brommecker, R., Bourne, B. T., Dobak, P. J., McEwan, C. J., Rowe, R. R., Zhou, X. (2007) Models and Exploration Methods for Major Gold Deposit Types. *Ore Deposits and Exploration Technology*, Paper 48

Rollinson, H. R. (1993) *Using Geochemical Data: Evaluation, Presentation, Interpretation*. Pearson Education Limited, Edinburgh Gate, Longman Group UK Limited 1993

Rosana, M. F. and Matsueda, H. (2002) Cikidang hydrothermal gold deposits in western Java, Indonesia. *Resource Geology*, 52,341-352

Saefudin, I. (1994) Pentarikhan jejak belah terhadap batuan terobosan dait dan andesit daerah Pacitan, Jawa Timur. *Jurnal Geologi dan Sumber-saya Mineral*, 4.18-36 (in Indonesian)

- Samodra, H., Gafoer, S., and Tjokrosapoetro, S. (1992a) *Geological Map of the Pacitan Quadrangle, Jawa. Geological Research and Development Center, Bandung, Indonesia.*
- Samodra, H., Suharsono, Gafoer, S., and Suwarti, T. (1992b) *Geological Map of the Tulungagung Quadrangle, Jawa. Geological Research and Development Center, Bandung, Indonesia.*
- Sampurno and Samodra, H. (1997) *Geological Map of the Ponorogo Quadrangle, Jawa. Geological Research and Development Center, Bandung, Indonesia.*
- Setijadji, L.D., Kajino, S., Imai, A. and Watanabe, K. (2006) Cenozoic Island Arc Magmatism in Java Island (Sunda Arc, Indonesia); Clues on Relationships between Geodynamics of Volcanic Centers and Ore Mineralization. *Resource Geology*, Vol.56, No.3, pp, 267-292
- Setijadji, L.D., (2010) Segmented Volcanic Arc and its Association with Geothermal Fields in Java Island, Indonesia: *Proceedings World Geothermal Congress 2010, Bali, Indonesia, 25-29 April 2010*, pp. 1-12
- Setijadji, L.D. and Maryono, (2012) Geology and Arc Magmatism of the Eastern Sunda Arc, Indonesia: *Proceedings of Banda and Eastern Sunda Arcs 2012 Mgei Annual Convention*, November 2012, Malang East Java, Indonesia, pp. 1-22
- Shingo, Y. (2009) Nature of Epithermal Gold Mineralization and Related Igneous Activity in Prospects around Trenggalek, East Java, Indonesia. Master Thesis, Economic Geology Laboratory, Department of Earth Resources Engineering, Faculty of Engineering, Kyushu University (Unpublished)

- Shingo, Y., Imai, A., Takahashi, R., Watanabe, K., Harijoko, A., Warmada, I. W., Idrus, A., and Phoumephone, P. (2009) Outline of epithermal gold mineralization at Trenggalek prospects, East Java, Indonesia. In Proceedings of International Symposium on Earth Science and Technology 2009, 279-283
- Shingo, Y., Imai, A., Takahashi, R., Watanabe, K., Harijoko, A., Warmada, I. W., Idrus, A., Phoumephone, P., and Schersten, A. (2010) Conditions of gold ore formation at Trenggalek prospects, East Java, Indonesia. In Proceedings of International Symposium on Earth Science and Technology 2010, 411-414
- Sillitoe, R. H. (1993b) Epithermal models: genetic types, geometrical controls and shallow features. In Kirkham, R.V., Sinclair, W.D., Thorpe, R.I., and Duke, J.M., eds., Mineral Deposit Modeling: Geological Association of Canada, Special paper 40, p.99- 166.
- Sillitoe, R. H. (1993) Indonesian mineral deposits-introductory comments, comparison and speculations. Journal of Geochemical Exploration 50 (1994) 1-11
- Sillitoe, R.H., and Hedenquist, J.W. (2003) Linkages between volcano tectonic settings, ore-fluid compositions, and epithermal precious metal deposits. Society of Economic Geologists Special Publication 10, 315-343.
- Smyth, H. (2005) Eocene to Miocene Basin History and Volcanic Activity in East Java, Indonesia. PhD Dissertation, Department of Geology, Royal Holloway, University of London (Unpublished)

- Smyth, H., Hall, R., Hamilton, J. P., and Kinny, P. (2005) East Java: Cenozoic Basins, Volcanoes and Ancient Basement. Jakarta, Proceedings, Indonesian Petroleum Association, Thirtieth Annual Convention and Exhibition, pp. 251-266
- Smyth, H., Hall, R., and Nicols, G. J. (2008) Cenozoic volcanic arc history of East Java, Indonesia: The stratigraphic record of eruptions on an active continental margin. The Geological Society of America, Special Paper 436, pp: 199-222
- Soeharto, R. S. and Hilman, P. M. (1997) Laporan eksplorasi mineral logam mulia dan logam dasar di daerah Jember, Jawa Timur. Directorate of Mineral Resources, 16p. (In Indonesia)
- Soeria-Atmadja, R., Maury, R.C., Bellon, H., Pringgoprawiro, H., Polve, M., Priadi, B. (1991) The Tertiary Magmatic Belts in Java: Proceedings of the Silver Jubilee, Symposium on the Dynamic of Subduction and its Products. Indonesian Institute of Sciences (LIPI), pp: 98-121
- Soeria-Atmadja, R., Maury, R.C., Bellon, H., Pringgoprawiro, H., and Polve, M. (1994) Tertiary Magmatic Belts in Java: Journal of Southeast Asian Earth Sciences, Vol. 9, No. 1/2, pp: 13-27, 1994
- Soeria-Atmadja, R., Sunarya, Y., Sutanto and Hendaryono, (1998) Epithermal Gold-Copper Mineralization Association with Late Neogene-magmatism and crustal extension in the Sunda-Banda Arc: Geological Society, Bulletin 42 (1998), pp: 257-268

- Subandrio, A.S. and Basuki N.I. (2010) Alteration and Vein Textures Associated with Gold Mineralization at the Bunikasih Area, Pangalengan, West Java. *Jurnal Geologi Indonesia*, Vol. 5 No. 4 Desember 2010: 247-261
- Syafrizal, Imai, A., Lehmann, B., and Watanabe, K. (2005) Characteristics of gold mineralization at the Ciurung vein, Pongkor gold-silver deposit, awest Java, Indonesia. *Resource Geology*, 55, 225-238
- Syafrizal, Rivai, T. A., Yonezu, K., Kusumanto, D., Watanabe, K. and Hede A. N.H., (2017) Characteristics of a Low-Sulfidation Epithermal Deposit in the River Reef Zone and the Watuputih Hill, the Poboya Gold Prospect, Central Sulawesi, Indonesia: Host Rocks and Hydrothermal Alteration. *Minerals* 2017, 7, 124; doi:10.3390/min7070124
- Takahashi, R., Shingo, Y., Imai, A., Watanabe, K., Harijoko, A., Warmada, I. W., and Idrus, A. (2011) Mineralogical description and ore-forming condition at the Trenggalek gold prospect, East Java, Indonesia. *Proceedings of the 1st Asia Africa Mineral Resources Conference 2011*, Fukuoka, pp. 121-125
- Takahashi, R., Shingo Y., Imai, A., Watanabe, K., Harijoko, A., Warmada, I.W., Idrus, A., Setijadji, L.D., Phoumephone, P., Schersten, A. and Page, L., (2014) Epithermal Gold Mineralization in the Trenggalek District, East Java, Indonesia. *The Society of Resource Geology*, Vol.64. No.2: pp.149-166
- Tun, M. M. (2015) *Geology, Mineralogy, Geochemistry and Origin of Cijulang High-sulphidation Epithermal Gold Prospect, West Java, Indonesia*. PhD

Dissertation, Department of Geology, Faculty of Engineering, Universitas
Gadjah Mada (Unpublished)

van Bemmelen, R. W., (1949) The Geology of Indonesia, Vol. IA, Gov. Print.
Office, The Hague Martinus Nijhoff

Warmada, I. W., Lehmann, B. and Simandjuntak, M., (2003) Polymetallic sulfides
and sulfosalts of the Pongor epithermal gold-silver deposit, West Java,
Indonesia. Canadian Mineralogist, 41, 185-200

White, N. C., Leake, M.J. McCaughey, S.N., and Parris, B.W., (1995) Epithermal
Gold Deposits of Southwest Pacific. Journal of Geochemical Exploration 54
(1995) 87-136

White, N. C. and Hedenquist, J. W. (1995) Epithermal gold deposits: Styles,
characteristics and exploration. Society of Economic Geologists Newsletter,
23: 1-13.

Whitney, D.L., and Evans, B.W., (2010) Abbreviations for names of rock-forming
minerals, American Mineralogist, Volume 95, pages 185–187.

Wilkinson, J. J., (2001) Fluid inclusions in hydrothermal ore deposits. Elsevier
Science, Lithos, Vol. 55, 2001, pp. 229–272

Yuningsih, E. T., Matsueda, H., and Rosana M. F. (2014) Epithermal Gold-Silver
Deposits in Western Java, Indonesia: Gold-Silver Selenide-Telluride
Mineralization Indonesian Journal on Geoscience Vol. 1 No. 2 August 2014:
71-81