UNIVERSITAS
GADJAH MADA
**Analisis Distribusi Reservoir Batupasir Formasi Ngrayong Menggunakan Atribut Spectral Decomposition,
RMS Amplitude, Dan RGB Blending Pada Lapangan "K", Cekungan Jawa Timur Utara**
Novfrendy Sitinjak, Dr. Budi Eka Nurcahya, M.Si.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

DAFTAR PUSTAKA

Abdelhamid, M., El-Sawy, M., & Hassan, A. (2024). *Spectral reconstruction from RGB imaging: Principles and applications in multi-spectral data analysis*. Journal of Spectral Imaging, 13, Article e4. https://doi.org/10.1255/jsi.2024.a4

Abdullah, A., 2007. Polaritas Normal dan Polaritas Reverse. http://ensiklopedi seismik.blogspot.co.id/PolaritasNormalPolaritasReverse.html.

Abdullah, A., 2008. *Dekomposisi Spektral (Spectral Decomposition)*. http://www.ensiklopediseismik.blogspot.com/dekomposisi-spektral-spectral.html

Al Ghifari, A., dkk. (2023). *Analisis Geokimia Hidrokarbon dan Estimasi Perhitungan Volume Hidrokarbon Pada Batuan Induk Aktif, Cekungan Jawa Timur Utara*. Jurnal Geosains dan Teknologi.

Arts, L. P. A., & van den Broek, S. P. (2022). Time-frequency analysis using continuous *wavelet* transform for complex signal processing. IEEE Transactions on Signal Processing, 70(4), 1432–1445. https://doi.org/10.1109/TSP.2022.3154821

Badley, M. E. (1985). *Practical seismic interpretation*. IHRDC Publications.

Brown, A. R. (2001). *Interpretation of Three-Dimensional Seismic Data* (6th ed.). AAPG Memoir 42/SEG Investigations in Geophysics, No. 9.

Bouanga, E., Bruin, G.D, dan Huck, A., 2010, *Introduction to Opendtect*, dGB Earth Sciences B.V., Netherlands.

Castagna, J. P., Sun, S., & Siegfried, R. W. (2003). *Instantaneous spectral analysis*: Detection of low-frequency shadows associated with hydrocarbons. *The Leading Edge*, 22(2), 120-127.

Cooley, J. W., & Tukey, J. W. (1965). An algorithm for the machine calculation of complex Fourier series. *Mathematics of Computation*, 19(90), 297-301.

Danio, H. (2023). *Lithofacies, mineralogical, petrophysical and mechanical properties analysis of reservoir and seal rocks for carbon capture storage (CCS) system*: Pilot study in Gundih Field, Central Java, Indonesia. Bulletin of Geology, 6(3). https://doi.org/10.5614/bull.geol.2022.6.3.3

Daubechies, I. (1992). *Ten lectures on wavelets*. Society for Industrial and Applied Mathematics.

Doust, H. (2017). Petroleum systems in Southeast Asian Tertiary basins. *Bulletin of the Geological Society of Malaysia*, 64, 1-14.

Doust, H., & Noble, R. A. (2008). Petroleum systems of Indonesia. *Marine and Petroleum Geology*, 25(1), 103-129.

UNIVERSITAS
GADJAH MADA
**Analisis Distribusi Reservoir Batupasir Formasi Ngrayong Menggunakan Atribut Spectral Decomposition,
RMS Amplitude, Dan RGB Blending Pada Lapangan "K", Cekungan Jawa Timur Utara**
Novfrendy Sitinjak, Dr. Budi Eka Nurcahya, M.Si.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Gabor, D. (1946). Theory of communication. *Journal of the Institution of Electrical Engineers - Part III: Radio and Communication Engineering*, 93(26), 429-457.

Gadallah, M. R., & Fisher, R. L. (2009). *Applied Seismology: A Comprehensive Guide to Seismic Theory and Application*. PennWell Books.

Genevraye, P. D., & Samuel, L. (1972). Geology of the Kendeng Zone (Central & East Java). *Proceedings of the Indonesian Petroleum Association 1st Annual Convention*, 17-30.

Handoyo, H., Ronlei, B. C., Wibowo, A. S., Fatkhan, F., Sigalingging, A. S., Nathania, E. Y., Erdi, A., Avseth, P., Carbonell, R., Nugroho, P., Pandito, R. H. B., Nasibov, A., & Husein, A. A. A. (2025). *Reservoir characterization of Ngrayong Formation, sandstone with carbonate intercalation, using a geostatistical approach Based on petrophysical parameters*, Northeast Java Basin, Indonesia. *Scientific Contributions Oil and Gas*, *48*(3), 237–251.

Hariyadi, Kristanto, D., & Setiawan, J. (2016). Sistem petroleum struktur antiklin Kawengan. Dalam R. Widyaningsih & I. W. Widiarti (Penyunt.), Prosiding Seminar Nasional Kebumian XI: Menuju Kemandirian Bangsa dengan Percepatan Produksi Energi dan Industri Mineral dalam Mendukung MEA (hlm. 194–201). Fakultas Teknologi Mineral, Universitas Pembangunan Nasional "Veteran" Yogyakarta.

Hossain, S. (2020). *Application of seismic attribute analysis in fluvial seismic geomorphology*. *Journal of Petroleum Exploration and Production Technology*, *10*, 1009–1019. https://doi.org/10.1007/s13202-019-00809-z

Ikatan Ahli Geologi Indonesia. (2014). Panduan ekskursi eksklusif geologi Cekungan Jawa Timur Utara (Cepu dan sekitarnya). Ikatan Ahli Geologi Indonesia (IAGI).

Ikelle, L. T., & Amundsen, L. (2005). Introduction to petroleum seismology. Society of Exploration Geophysicists. https://doi.org/10.1190/1.9781560801726

Kementerian Energi dan Sumber Daya Mineral. (2025). *Laporan kinerja Kementerian Energi dan Sumber Daya Mineral tahun 2024*. Kementerian Energi dan Sumber Daya Mineral. https://www.esdm.go.id/

Kendall, C. G. St. C. (2003). *Tidal and Shallow Marine Depositional Systems and Their Log Signatures* (Course Notes/Reference Classification for Electrofacies Analysis).

Mallat, S. (1999). *A wavelet tour of signal processing*. Academic Press.

Mallat, S. (2009). *A wavelet tour of signal processing: The sparse way* (3rd ed.). Academic Press.

UNIVERSITAS
GADJAH MADA
**Analisis Distribusi Reservoir Batupasir Formasi Ngrayong Menggunakan Atribut Spectral Decomposition,
RMS Amplitude, Dan RGB Blending Pada Lapangan "K", Cekungan Jawa Timur Utara**
Novfrendy Sitinjak, Dr. Budi Eka Nurcahya, M.Si.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Mallat, S., & Zhang, Z. (1993). Matching pursuits with time-frequency dictionaries. *IEEE Transactions on Signal Processing*, 41(12), 3397-3415.

McArdle, J., & Ackers, M. (2012). Spectral decomposition for reservoir characterization. *First Break*, 30(1), 59-65.

Misti, P., Rahmawati, E., & Utami, S. (1996). Aplikasi transformasi Fourier dalam visualisasi domain waktu dan frekuensi sinyal periodik. Jurnal Fisika dan Aplikasinya, 4(2), 88–95.

Nainggolan, T. B., Manai, M. N. I., & Subarsyah, S. (2018). *Spectral Decomposition with Continuous Wavelet Transform for Hydrocarbon Zone Detection of North Bali Waters*. *Jurnal Geosains dan Teknologi*, 33(2), 101-110.

Partyka, G., Gridley, J., & Lopez, J. (1999). *Interpretational applications of spectral decomposition in reservoir characterization*. *The Leading Edge*, 18(3), 353-360.

Polikar, R. (1996). The *wavelet* tutorial (2nd ed.). Rowan University. https://users.rowan.edu/~polikar/*WAVELET*S/WTtutorial.html

Pringgoprawiro, H. (1983). Biostratigrafi dan Paleogeografi Cekungan Jawa Timur Utara*: Suatu pendekatan baru*. Tesis Doktor, Institut Teknologi Bandung.

Rabbel, W. (2006). Seismic methods. Dalam J. Kirsch (Penyunt.), Groundwater Geophysics: A Tool for Hydrogeology (hlm. 23–78). Springer. https://doi.org/10.1007/3-540-29387-6_2

Rawlinson, N., Sambridge, M., & Davies, J. (2003). Seismic ray tracing and traveltime inversion. *Advances in Geophysics*, 46, 203-311.

Rider, M. H. (2002). *The Geological Interpretation of Well Logs* (2nd ed.). Rider-French Consulting Ltd.

Satyana, A. H. (2003). Oligo-Miocene carbonates of Java, Indonesia: Tectonic-volcanic setting and petroleum implications. *Proceedings of the Indonesian Petroleum Association 29th Annual Convention*, 29, 1-14.

Satyana, A. H., & Purwaningsih, M. E. M. (2003). Geochemistry of the East Java Basin: New observations on oil grouping, genetic gas types, and hydrocarbon habitats. *Proceedings of the Indonesian Petroleum Association 29th Annual Convention*, 29, 1-14.

Satyana, A. H., Purwaningsih, M. E. M., Budiyani, S., Noeradi, D., & Djumlati. (2003). *The collision of the East Java Microplate and its implication for hydrocarbon occurrences in the East Java Basin*. Proceedings of Indonesian Petroleum Association 29th Annual Convention.

Satyana, A. H. (2024). *Tectonic evolution and petroleum systems of the North East Java Basin*: New insights into exploration opportunities. Indonesian Journal on Geoscience, 11(1), 45–62. https://doi.org/10.17014/ijog.11.1.45-62

UNIVERSITAS
GADJAH MADA
**Analisis Distribusi Reservoir Batupasir Formasi Ngrayong Menggunakan Atribut Spectral Decomposition,
RMS Amplitude, Dan RGB Blending Pada Lapangan "K", Cekungan Jawa Timur Utara**
Novfrendy Sitinjak, Dr. Budi Eka Nurcahya, M.Si.
Universitas Gadjah Mada, 2026 | Diunduh dari http://etd.repository.ugm.ac.id/

Simm, R., & Bacon, M. (2014). *Seismic Amplitude: An Interpreter's Handbook*. Cambridge University Press.

Sinha, S., Routh, P. S., Anno, P. D., & Castagna, J. P. (2005). *Spectral decomposition* of seismic data with *continuous wavelet transform*. *Geophysics*, 70(6), P59-P65.

Smith, J. O. (2011). *Mathematics of the discrete Fourier transform (DFT): with audio applications*. W3K Publishing.

Smyth, H., Hall, R., Hamilton, J., & Kinny, P. (2005). East Java: Cenozoic basins, volcanoes and ancient *Base*ment. *Proceedings of the Indonesian Petroleum Association 30th Annual Convention*, 30, 1-14.

Sribudiyani, N. M., Ryacudu, R., Kunto, T., Astono, P., & Muchsin, N. (2003). The collision of the East Java Microplate and its implication for hydrocarbon occurrences in the East Java Basin. *Proceedings of the Indonesian Petroleum Association 29th Annual Convention*, 29, 1-14.

Sukmono, S. (1999). *Pengolahan Data Seismik: Prinsip Dasar dan Metodologi*. Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Indonesia.

Sukmono, S. (2007). *Integrated Reservoir Characterization Using Seismic Rock Physics, and Petrophysics Data*. Petroleum Geosciences Study Center, Institute Technology of Bandung.

Telford, W. M., Geldart, L. P., & Sheriff, R. E. (1990). Applied geophysics (2nd ed.). CambridgeUniversity Press. https://doi.org/10.1017/CBO9781139167932

Torrence, C., & Compo, G. P. (1998). *A practical guide to wavelet analysis*. *Bulletin of the American Meteorological Society*, 79(1), 61-78.

Wallace, G. K. (1994). The JPEG still picture compression standard. *IEEE Transactions on Consumer Electronics*, 38(1), xviii-xxxiv.

Wibowo, S. H., Budiarto, Z. I., Kusuma, A. S., & Subhan, M. (2020). Analysis distribution thin *sand*stone reservoir using spectral decomposition attribute in the Ngrayong Formation: Case studies of Middle Miocene *sand*stone reservoir in East Java Basin. In *Proceedings of the 45th Annual Scientific Meeting of Himpunan Ahli Geofisika Indonesia (HAGI)*. Himpunan Ahli Geofisika Indonesia.

Ye, Q., Li, J., & Wang, Y. (2019). *Spectral decomposition Based on synchrosqueezing wavelet transform for thin bed identification*. *Journal of Applied Geophysics*, 162, 105-114.