

## REFERENCES

- Abdullah, A., Akhir, J.M., & Abdullah, I. (2010). The Extraction of Lineaments Using Slope Image Derived from Digital Elevation Model: Case Study of Sungai Lembing-Maran area, Malaysia. *Journal of Applied Sciences Research*, 6 (11). pp 1745-1751.
- Abdullah, A. (2013). Landsat ETM-7 for Lineament Mapping using Automatic Extraction Technique in the SW part of Taiz area, Yemen. *Global Journal of Human Social Science Geography, Geo-sciences, Environmental and Disaster Management*. Volume 13. Pp35-39.
- Aboyeji, O.S., Mogaji, K.A., & Oyinloye, R. O. (2012). Structural Interpretation of Remotely Sensed Data Sets, Its Hydrogeological Implications over Ole-Ife and Environs. *Ozean Journal of Applied Sciences* 5 (1).
- Aher, S.P., Shinde, S.D., Jarag, A.P., Babu, M., & Gawali.P.B. (2014). Identification of Lineaments in the Pravara Basin from ASTER-DEM Data and Satellite Images for their Geotectonic Implication. *International Research Journal of Earth Sciences*. Vol. 2(7). pp 2321-2527.
- Amier, R. I. (1991). Coal, Source Rocks and Hydrocarbons in the South Palembang sub-basin, South Sumatra, Indonesia. University of Wollongong Thesis.
- Amijaya, H. (2005). The Microfacies of Lower Suban Coal Seam in South Sumatra basin, Indonesia: Implication of Paleomire Dynamics. *Proceedings of Joint Conference & Exhibition HAGI-IAGI-PERHAPI*, Surabaya.
- Argakoesoemah, R.M.I., Raharja, M., Winardhi, S., Tarigan, R., Maksum, T. F. & Aimar, A. (2005). Telisa Shallow Marine Sandstone as an Emerging Exploration Target in Palembang High, South Sumatra Basin. *Proceedings, Indonesian Petroleum Association. The 30<sup>th</sup> Annual Convention and Exhibition*.



- Argialas D., Mavrantza, O., & Stefouli, M. (2003). Automatic Mapping of Tectonic Lineaments (Faults) using methods and techniques of Photointerpretation/Digital Remote Sensing and Expert Systems, THALES Project No. 1174.
- Argialis, D.P., & Mavrantza, O.D. (2004). Comparison of Edge Detection and Hough Transform Techniques for the Extraction of Geologic Features. The International Archives of the Photogrammetry, Remote Sensing and Spatial information Sciences, Vol. 34, Part XXX, pp790-795.
- Ariani, S., Sihombing, A.Y., Gunawan, I.M., Setiawan, A., Adam., P. & Tarmusi. (2010). Facies and Sandstone Distribution Pattern of "X" Sandstone Reservoir in Air Benakat Formation, Sungai Gelam Field, Jambi Subbasin. Proceedings, Indonesian Petroleum Association. The 34<sup>th</sup> Annual Convention & Exhibition.
- Arunachalam, M. (2014). Hydrothermal Mineral Alteration Mapping in parts of Northwestern Tamil Nadu, India- using Geospatial Technology. ISPRS TC VIII International Symposium on "Operational Remote Sensing Applications: Opportunities, Progress and Challenges", Hyderabad, India, December 9-12.
- Asra. D.S & Fiter. J. (2005). Correlation between geological properties and production rate at Telisa sandstone in Kaji Field. Proceedings Joint Convention Surabaya. The 30<sup>th</sup> HAGI, The 34<sup>th</sup> IAGI and the 14<sup>th</sup> Perhapi Annual Conference Exhibition.
- Badiman. A., Poyomono. A., Sumodra. A., Mu'in. F., and Lutucosina. M. Fracture related fault analysis for Basement Reservoir identification in Pangea Block, South Sumatra. Proceedings JCM Makassar. The 36<sup>th</sup> HAGI and 40<sup>th</sup> IAGI Annual Convention and Exhibition.
- Barber, A.J., Crow, M.J., & Milsom, J.S. (2005). Sumatra: Geology, Resources and Tectonic Evolution. Geological Society Memoirs No. 31.
- Baquero, M., Montes, C., & Boyona, G. (2014). Lineament Analysis in Northern Columbia, South America. The 5th EARSel Workshop on Remote Sensing and Geology. Poland.

- Bin, L., & Yaganeh, M.S. (2012). Comparison for Image Edge Detection Algorithms. IOSR Journal of Computer Engineering (IOSRJCE). Vol 2, Issue 6.
- Bishop, M.G. (2001). South Sumatra Basin Province, Indonesia: The Lahat/talang Akar-Cenozoic Total Petroleum System. Open-File Report 99-50-S. USGS.
- Cambell, J.B., & Wynne, R.H. (2011). Introduction to Remote Sensing. 5<sup>th</sup> Edition. The Guilford Press. New York.
- Cameron. N. R., Ghazal. S.A., & Thompson .S.J. (1982). Geologic Map of the Siakniindrapura & TG Pnang Quadrangle.
- Clure, J., & Fiptiani, N. (2002). Hydrocarbon Exploration in the Merang Triangle, South Sumatra. Proceedings, Indonesian Petroleum Association. Twenty-Eight Annual Convention & Exhibition.
- Corral, I., Gonzalez, F., Grier, A., Corbella, M., Gomez-Grass, D., & Cardellach, E. (2011). Landsat RTM+ Imaging for the Exploration of Epithermal Deposits in the Azuero Peninsula (Panama). Revista de la sociedad espanola de mineralogic.
- DIVA-GIS. (2015). Administrative Boundaries of Indonesia. Retrieved on 06 September 2015 from <http://www.diva-gis.org/gdata>
- Ege, I. (2011). Determination of Fault Morphology of Antakya-Kahramanmaras Depression Area by using methods of Remote Sensing (RS) and Geographical Information Systems (GIS). The 2nd International Geography Symposium. pp 702-708.
- Ekaninggarani. E., & Apricanto. K. (2011). Define a clastic stratigraphic play on 2D dataset with field analogy and geological concepy. Proceedings of the 36<sup>th</sup> HAGI and 40<sup>th</sup> IAGI Annual Convention and Exhibition. Makassar.
- Fedyanto, G., & Sunardi, E. I. (2003). Analysis of Sequence Stratigraphy, Lemat Formation to Gumai Formation, GN Field, South Sumatra Basin. The 29th Annual Convention. Jarkata.



- Gafoer. S., Burhan., G. & Purnomo, J. (1995). Geologic Map of the Palembang Quadrangle, South Sumatra.
- Gafoer. S., Cobrie. T., & Purnomo. J. (1986). Geological Map of the Lahat Quadrangle, South Sumatra.
- Ginger, D., & Fielding, K. (2005). The Petroleum Systems and Future Potential of the South Sumatra Basin. Proceedings IPA. The 30th Annual Convention and Exhibition. Jarkata.
- Gomarasca, M.A. (2009). Basics of Geomatics. Springer Science and Business Media. New York.
- Habibnia, B., Taheri, R., Moradkhani, M., & Sefat, M.H. (2010). Application of Remote Sensing in Two Southern Iranian Oil Field. The 1<sup>st</sup> International Applied Geological Congress, Department of Geology, Islamic Azad University, Iran, 26-28 March 2010.
- Hamilton. W. (1979) Tectonics of the Indonesian region. Geological Professional Paper 1078. United States Government Printing Office. Washington
- Holis, Z., & Sappie, B. (2012). Fractured Basement Reservoirs Characterization in Central Sumatra Basin, Kotopanjang Area, Riau, Western Indonesia: An Outcrop Analogue Study. American Association of Petroleum Geologists. International Conference and Exhibition, Singapore, September 2012.
- Hung, L.Q., Batelaan, O., & Smedt, F. (2005). Lineament Extraction and Analysis, comparison of LANDSAT ETM and ASTER imagery. Case study: Suimuoi tropical karst catchment, Vietnam. Proceedings of SPIE. Vol 5983.
- Ibrahim, U., & Mutua, F. (2014). Lineament Extraction using Landsat 8 OLI in Gedo, Somalia. International Journal of Science and Research (IJSR). Volume 3 Issue 9, pp 291-297.
- Kamel, S.R., Almasian, M., Pourkermani, M. & Dana, S. (2015). Structural and Fault Analysis of Haji Abad with Interpretation of Landsat 8 Satellite Images. Open Journal of Geology. vol 5. pp 470-488.



- Kassou, A., Essahlaoui. A. & Aissa, M. (2012). Extraction of Structural Lineaments from Satellite Images Landsat 7 ETM + of Tighza Mining District (Central Morocco). *Research Journal of Earth Sciences* 4 (2). pp 44-48.
- Kavak, K.S., & Cetin, H. (2007). A Detailed Geologic Lineament Analysis Using Landsat TM Data of Golmarmara/Manisa Region, Turkey. *Online Journal of Earth Sciences* 1 (3) pp 145-153.
- Kesumajana.A.H.P., Noerad, D., Sapiie. B., & Priono. A. (2010). The Role of Hydrocarbon Maturation Modelling, A Case Study: South Sumatra Basin. Proceedings, Indonesian Petroleum Association. The 34<sup>th</sup> Annual Convention & Exhibition.
- Khan. D. S., & Jacobson. S. (2008). Remote sensing and geochemistry for detecting hydrocarbon micro seepages. *GSA Bulletin*. V. 120 pp 96-105.
- Khidir, S.O., & Babkir, I.A.A. (2013). Digital Image Processing and Geospatial Analysis of Landsat 7 ETM + for mineral exploration, Abidiya area, North Sudan. *International Journal of Geomatics and Geosciences*. pp 645-659.
- Khorram, S., Koch. F.H., van der Wiele, C.F., Nelson. A, C. (2012). *Remote Sensing*. Springer. London.
- Kocal, A., Duzgun, H.S., and Karpuz, C. (2006) Discontinuity Mapping with Automatic Lineament Extraction from High Resolution Satellite Imagery. 15th International Symposium on Mine Planning and Equipment Selection 20-22 Sept., Torino, pp 1411-1416.
- Konecny, G. (2003). *Geoinformation- Remote Sensing, Photogrammetry and Geographic Information Systems*. Taylor & Francis. London.
- Latef, M. Z. B. A., & Kahar, R. (2008). Oil and Gas Exploration in Ethiopia using GIS. *Map Asia* 2008.
- Levin, N. (1999). *Fundamentals of Remote Sensing*. (ebook). Available at <http://www.atar.msc.huji.ac.il/~geo/personal/Noam%20Levin/1999-fundamentals-of-remote-sensing.pdf> Retrieved August 15 2015.



UNIVERSITAS  
GADJAH MADA

**Characterization of Lineaments and Evaluating their Implications on Petroleum Resources: South Sumatra Basin, Indonesia**

NGOROYEMOTO, TAPIWA FRANK KWACHARA, Dr. Ir. Jarot Setyowiyoto, M.Sc., Dr. Didit Hadi Barianto, S.T, M.Si  
Universitas Gadjah Mada, 2016 | Diunduh dari <http://etd.repository.ugm.ac.id/>

- Madani, A.A. (2001). Selection of the Optimum Landsat Thematic Mapper Bands for Automatic Lineaments Extraction, Wadi Natasha Area, South Eastern Desert, Egypt. The 22nd Asian Conference on Remote Sensing, 5-9 September 2001.
- McCaffrey, R. (2009). The Tectonic Framework of the Sumatra Subduction Zone. Annual Review of Earth and Planetary Sciences. pp 345-370.
- McCandless, S.W., & Jackson, C.R. (2004). Principles of Synthetic Aperture Radar. US. Dept of Commerce NOAA/NESDIS Publication, US Govt. Print Office, Washington DC. pp 464-487.
- Miall, A.D. (1990). Principles of Sedimentary Basin Analysis. 2nd Edition. New York.
- Mohammed, A., Palanivel, K., & Kumanan, C. J. (2010). Significance of Surface Lineaments for Gas and Oil Exploration in Part of Sabatayn Basin- Yemen. Journal of Geography and Geology. Vol 2, No 1. Pp 119-129.
- Moreira, A. (2013). Synthetic Aperture Radar (SAR): Principles and Applications. The 4th Advanced Course in Land Remote Sensing. Horokopeo University. Lecture Notes. Greece.
- Mogaji, K.A., Aboyeji, O.S., & Omosuyi, G.O. (2006). Mapping of Lineaments for Groundwater Targeting in Basement Complex Area of Ondo State using Remote Sensing.
- Mshiu, E.E. (2011). Landsat Remote Sensing Data as an Alternative Approach for Geological Mapping in Tanzania: A Case Study in the Rungwe Volcanic Province, South-Western Tanzania. Tanzania Journal of Sciences. Vol 37. pp 26-36.
- Murali, N., Ramakrishna, K., Saha, U.K., & Saervesam, G. (2010). Application of Remote Sensing and GIS in Seismic Surveys in KG Basin. The 8<sup>th</sup> Biennial International Conference & Exposition on Petroleum Geophysics.
- Mwaniki, M.W., Moeller, M.S., & Schellmann, G. (2015). A comparison of Landsat 8 (OLI) and Landsat 7 (ETM+) in mapping geology and visualizing lineaments: A case study of Central Kenya. The International Archives of the Photogrammetric, Remote Sensing and Spatial Information Sciences, Volume XL-7. Germany. pp 897-906.



- Nagal, S. (2014). Mapping of Lineaments in Adwa River Basin Using Remote Sensing and GIS Techniques. *European Academic Research*. Vol 2 9646-9658
- Njoku, E.G. (2014). *Encyclopedia of Remote Sensing: Encyclopedia of Earth Sciences Series*. Springer, New York.
- Obaydi, H, K., & Sorbi, A. (2015). Investigation and Structural Analysis of Dezful Shear Zone using Remote Sensing. *Research Journal of Fisheries and Hydrobiology*. Pp 11-16
- Olgen, M.K. (2004). Determining Lineaments and Geomorphic features using Landsat 5-TM Data on the Lower Bakircay Plain, Western Turkey. *Aegean Geographical Journal*, 13. pp 47-57.
- OPEC. (2016). OPEC Basket price. [http://www.opec.org/opec\\_web/en/data\\_graph/40.htm](http://www.opec.org/opec_web/en/data_graph/40.htm).
- Papadaki, E.S., Mertikas, S.P., & Sarris, A. (2011). Identification of Lineaments with Possible Structural Origin using Aster images and DEM Derived Products in Western Crete, Greece. *EARSel eProceedings* 10, 1/2011.
- Patra, D.H., Noeradi, D., & Subroto, E. (2012). Tectonic Evolution at Musi High and Its Influence to Gumai Formation as an Active Source Rock at Sopa Field, South Sumatra Basin. *Search and Discovery Article*.
- Pethe, S. (2013). *Subsurface Analysis of Sundaland Basins: Source Rocks, Structural Trends and the Distribution of Oil Fields*. Thesis. Ball State University, Indiana.
- Petrovic, A., Khan, S.D., & Chafetz, H.S. (2008). Remote Detection and Geochemical Studies for finding Hydrocarbon-Induced alterations in Lisbon Valley, Utah. *Marine and Petroleum Geology*. pp 696-705.
- Prabu, P., & Rajagopalan. B. (2013). *Groundwater Targeting and Sustainable Water Resource Management in Hard Rock Hydrogeological Environment Using RS-GIS*. INTECH.

- Premonowati (2011). Outcrops Conservation of Tanjung Baru or Lower TalangAkar Formation, Baturaja City of Palembang Area-South Sumatra Basin: How important? Sedimentologi Newsletter Number 20 1/2011. Indonesian Sedimentologists Forum.
- Pulunggono, A., Haryo, A.S., & Kosuma, C.G. (1992). Pre-Tertiary and Tertiary Fault Systems as a Framework of the Sumatra Basin; A Study of SAR-Maps. Proceedings Indonesian Petroleum Association. 21<sup>st</sup> Annual Convention.
- Reddy, A. M. (2008). Remote Sensing and Geographic Information Systems. 3<sup>rd</sup> Edition. BS Publications, Hyperabad.
- Rodriguez, E., Morris, S.C., Belz, E., Chapin, E.C., Martin. J.M., Daffer, W & Hensley, S. (2005). An Assessment of SRTM Topographic Products. California.
- Rodriguez, E. (2005). Shutter Radar Topography Mission: Data Validation and Applications. Virginia.
- Sadarwo A.W., Luthfi. N. (2005). Miocene carbonate as the hydrocarbon reservoir in Jambi area. Proceedings Joint Convention Surabaya HAGI-IAGI-PERHAPI. He 34<sup>th</sup> IAGI and the 14<sup>th</sup> PERHAPI Annual Conference and Exhibition.
- Sarp, G., & Toprak, V. (2007). Spatial Analysis of Lineaments, North West of Ankara. The 28th Asian Conference on Remote sensing.
- Selati, S., van Ruitenbeek, F., van der Meer, F., & Naimi, B. (2014). Detection of Alteration Induced by Onshore Gas Seeps from Aster and WorldView-2 Data. Remote Sensing Journal, Volume 6.
- Selati, S., van Ruitenbeek, F.J.A., & van der Meer, F.D. (2014) Remote Sensing of Hydrocarbon Seep-induced Alteration in Onshore Basins: A Review.
- Septriandi & Sujarmaitanto. (2010). A study of Tectonic and Structural settings in coal basins Indonesia to understand coalification process and implication to coal bed methane (CBM) system. Case study: South Sumatra Basin. Proceedings PIT IAGI Lambok. The 34<sup>th</sup> IAGI Annual Convention and Exhibition.



- Shankar, B., & Osinski, G.R. (2015) Revisiting the Lineament Study of the Sudbury Impact Structure using Recent Remote Sensing Imagery. The 46th Lunar and Planetary Science Conference. pp 3004-2005.
- Siahaan, D., Tulot, S., & Rudd, R. (2015). Rejuvenating play-based exploration in South Sumatra Basin. Accessed from <https://www.ihs.com/newsletter/source-newsletter/international/apr-2014/south.html>.
- Sirisokha, S. (2015). Mineral potential Mapping using Geographic Information System (GIS) for Gold Mineralization in West Java, Indonesia. UGM Thesis.
- Surwarna. S.N., Gafoer. S., Amin. T. C., Kasnama., & Hermanto. B. (1992). Geologic Map of Sarolangum Quadrangle, Sumatra.
- Teguh.F. & Agus. H.P. (2011). Jabung block basement- Their characteristics and their economic potential. Proceedings JCM Makassar: The 36<sup>th</sup> HAGI.
- Thannoun. G.R. (2013). Automatic Extraction and Geospatial Analysis of Lineaments and their Tectonic Significance in some areas of Northern Iraq using Remote Sensing Techniques change pictures and GIS. International Journal of Enhanced Research in Science Technology and Engineering. Vol 2, Issue 2 pp 1-11.
- US Army Corps of Engineers. (2003). Engineering and Design: Remote Sensing. Engineers Manual. Washington DC.
- USGS (2015). Landsat Surface Reflectance High Level Data Products. [http://landsat.usgs.gov/CDR\\_LSR.php](http://landsat.usgs.gov/CDR_LSR.php). Retrieved 13 January 2016.
- USGS (2004). Shuttle Radar Topography Mission, 1 Arc Second scene SRTM\_u03\_n008e004, Unfilled Unfinished 2.0, Global Land Cover Facility, University of Maryland, College Park, Maryland, February 2000.
- Valencia, M.J. (1981). The South China Sea: Hydrocarbon Potential and Possibilities of Joint Development. Pergamon Press, UK.



- Vitorello, R.A.I. (1996). Mapping of Hydrothermally Altered Areas in Vegetated Terrain, using Multisource Data Integration and Segmentation Techniques. International Archives of Photogrammetry and Remote Sensing. Vol. XXXI, Part B7. Vienna.
- Weerasekera, W. L., Mayadunna, B.B., Senanayake, I.P., Dissanayake., & D.M.D.O.K. (2014). Integrated Remote Sensing and GIS in Lineament Mapping for Groundwater Exploration- A case study in Ambalantota, Sri Lanka. SAITM Research Symposium on Engineering Advancements pp 62-65.
- Wibowo. S. (2010). Petrophysical Rock Typing of Muddy Carbonate Reservoirs. An Example from Early Miocene Baturaja Formation, Sunda Basin. Proceedings, Indonesian Petroleum Association. The 34<sup>th</sup> Annual Convention & Exhibition.
- Wuyi, Y., Xiaoping, Q., & Liqun, Z. (2001). Evaluation of Multi-Sensor Remote Sensing Data Applied Oil and gas Exploration in the Loess Highlands, Ordos Plateau, China. Conference Proceedings: 22<sup>nd</sup> Asian Conference on Remote Sensing and Processing (CRISP), 5-9 November 2001, Singapore.
- Weng, Q. (2010). Remote Sensing and GIS Integration: Theories, Methods and Applications. McGraw-Hill. USA
- Wessling, R. B. (1999). The SRTM Mission: A World-Wide 30 m Resolution DEM from SAR Interferometry. Photogrammetric Week. pp 145-155.
- Westerveld, J. (1941). Geology- Three geological sections across South Sumatra.
- Zhang, G., Shen, X., Zou, L., & Shanglong, L.U. (2008). Identifying Hydrocarbon Leakage induced anomalies using Landsat-7/ETM+ data processing techniques in the west slope of Songliao Basin, China.