

DAFTAR PUSTAKA

- Akbari, D., dan Sutrisno. (2014). *Interpretasi Data Geophysical Well Logging dan Analisis Hubungan Density Log dengan Kualitas Batubara*. Fisika UIN Jakarta. Jakarta.
- Alpern B, dan Sousa, ML. (2002). ‘Documented international enquiry on solid sedimentary fossil fuels; coal: definitions, classifications, reserves-resources, and energy potential’. *International Journal of Coal Geology*, Vol. 50 (1), hal: 3–41.
- Anggayana, K. (2002). *Genesa Batubara*. Departemen Teknik Pertambangan. FITKM. Institut Teknologi Bandung. Bandung.
- Ardhiyatsari, D.F. (2017) *Analisa Data Proksimat dan Perhitungan Volume Batubara Berdasarkan Data Log Densitas dan Gamma Ray dari Lapangan “TG” PT Sucofindo (Persero), Tbk*. Disertasi. Institut Teknologi Sepuluh Nopember. Surabaya.
- Asquith, G. dan Gibson C. (1982). *Basic Well Log Analysis for Geologist*. The American Association of Petroleum Geologist. Tusla, Oklahoma, USA.
- Brilianto, A. (2010). *Geologi dan Identifikasi Seam Batubara Berdasarkan Data E-Log dan Sifat Fisik di Permukaan Blok Kelai PT. Berau Coal Kecamatan Sambaliung Kabupaten Berau*. UPN Veteran Yogyakarta. Yogyakarta.
- BPB Manual. (1981). *British Petroleum Book*. British Company. United Kingdom.
- Burkhalter, R.M. (1995). ‘Ooidal ironstones and ferruginous microbialites: Origin and relation to sequence stratigraphy (Aalenian and Bajocian, Swiss Jura mountains)’. *Sedimentology*, Vol.42, hal: 57–74.
- Cant, D. (1992). ‘Subsurface facies analusis. Dalam R. G. Walker (Ed.), *Facies Models, Response to Sea Level Changes*. St. John’s: Geological Association of Canada.
- Chen, Z.; Yu, J.; Hou, K. Genesis of siderite in Xuanlong area in northwest Hebei province. *Chin. J. Geol.* 1982, 17, 395–402.
- Chopra, P., E., Papp. dan Gibson, D. (2000). *Geophysical Well Logging*. Department of Geology, Australian National.
- Diessel, C.F.K. (1992). *Coal-Bearing Depositional Systems*. Springer-Verlag. Berlin Heidelberg Germany.
- i. (2010). ‘The “chessboard” classification scheme of mineral deposits: analogy and geology from aluminum to zirconium’. *Earth-Sci. Rev.*, Vol. 91, hal: 1–420.



- D.R. Reeves. (1996). *Coal Interpretation Manual*. BPB Instruments Ltd. England.
- Faudzan, A., Suryani, S., dan Budiawati, T. (2015). ‘Perbandingan Metode Inverse Distance Weighted (IDW) dengan Metode Ordinary Kriging untuk Estimasi Sebaran Polusi Udara di Bandung’. *E-procedding of Engineering*, (2), 6726.
- Frederichs, A.T.; Dobeneck, T.V.; Bleil, U.; Dekkers, M.J. (2003). ‘Towards the identification of siderite, rhodochrosite, and vivianite in sediments by their low-temperature magnetic properties’. *Phys. Chem. Earth Parts A/B/C*, Vol. 28, hal: 669–679.
- Hałas, S.; Chlebowski, R. (2004). ‘Unique siderite occurrence in Baltic Sea: A clue to siderite-water oxygen isotope fractionation at low temperatures. *Geol. Q.* Vol. 48, hal: 317–322.
- Hamilton, W. (1979). *Tectonic of Indonesian Region*. Geological Survey, Professional Paper 1078. United States of America.
- Harono. (1993). *Pengantar Evaluasi Log*. Schlumberger Data Services. Jakarta.
- Hasan, H (2008), ‘Penggunaan Ripper dalam Membantu Excavator pada Pengupaan Overburden Tanpa Peledakan (Blasting) pada Tambang Batubara Skala Kecil’. *Jurnal Aplika*. Vol.8(1), hal: 29 -33.
- Horne, J.C., Ferm, J.C., Caruccio, F.T., dan Baganz, B.P. (1978). ‘Depositional Models in Coal Exploration and Mine Planning In Appalachian Region”, *The American Association of Petroleum Geologist Bulletin*, Vol. 62 (12), hal: 2379-2411.
- Hower, J.C. (2002). ‘Coal Geology’. *International Journal of Coal Geology*, Vol. 53
- Ibrahim Dahlan. (2005). *Prospek Sumber Daya Batubara Di Kabupaten Kutai Timur, Kalimantan Timur*.
- In Papp, É. (Editor). (2002). ‘Geophysical and Remote Sensing Methods for Regolith Exploration’. *CRCLEME Open File Report* Vol. 144, hal: 105-115.
- Islah dan Fujiono. (2004). *Evaluasi Konservasi Sumberdaya Batubara Di Sekitar Tanjung Redeb Kabupaten Berau Kalimantan Timur*. Kolokium Hasil Lapangan.
- Iswati, Y. (2012). *Analisis Core dan Defleksi Log untuk Mengetahui Lingkungan Pengendapan dan Menentukan Cadangan Batubara di Banko Barat Pit 1 utara Selatan*. (Skripsi Sarjana pada Fakultas Teknik Universitas Sung). Tidak Diterbitkan.
- S. and H. Basarir (2015). *Excavability assessment of surface coal mine. Production and Processing Technology*. CRC press. London.



- Kesumawati F., Nurhakim, Adip, M., dan Misdianto. (2011). ‘Studi Target Pembongkaran Overburden Berdasarkan Kajian Pemboran Untuk Lubang Ledak PT. Bukit Makmur Mandiri Utama Jobsite Adaro Kabupaten Tabalong Provinsi Kalimantan Selatan’. *Jurnal Fisika FLUX*, Vol 11 (1), hal: 32-39.
- Koesoemadinata. (1977). *Geologi Minyak dan Gas Bumi*. Institut Teknologi Bandung. Bandung.
- MacCALLUM, R. (1992). ‘Geophysical Logs and the Search for Opencast Coal Reserves’. *British Coal Opencast, Heol ty Aberaman, Geological Society, London*, Vol. 63, hal: 77-93.
- Maryanto, S. (2011). ‘Stratigrafi dan Keterdapatannya Batubara Formasi Lati di Daerah Berau, Kalimantan Timur’. *Buletin Sumber Daya Geologi*, Vol. 6 (2), hal: 97-110)
- Mottana, A., Crespi R, dan Liborio, G. (1999). *Guide to Rocks and Minerals*. Fireside Simon & Schuster’s. New York.
- Nabar, D. (1999). *Ekonomi Teknik*. Penerbit Universitas Sriwijaya. Palembang.
- Nichols, G. (2009). *Sedimentology and Stratigraphy*. Department of Geology, Royal Holloway, University of London.
- Prahmono, G.H. (2018). ‘Akurasi Metode IDW dan Kriging Untuk Interpolasi Sebaran Sedimen Tersuspensi di Maros Sulawesi Selatan’, *Forum Geografi*, Vol. 22 (1), hal.145-158.
- Prodjosumarto, P. (1996). *Pemindahan Tanah Mekanis*. Institut Teknologi Bandung. Bandung.
- Puspita, M., Rahman, A., & HAK, A. (2015). ‘Kajian Teknis dan Ekonomis Pemberian Interburden B2C Secara Ripping pada Tambang Banko Barat Pit-1 Timur, PT Bukit Asam (Persero), Tbk. UPTE, Sumatera Selatan’. *Jurnal Ilmu Teknik*. Vol 2(3).
- Putro, S.D., Santoso, A., dan Hidayat W. (2014). ‘Analisis Log Densitas dan Volume Shale terhadap Kalor, Ash Content, dan Total Moisture Pada Lapisan Batubara Berdasarkan Data Well Logging Daerah Banko Pit 1 Barat, Kecamatan Lawing Kidul, Kabupaten Muara Enim, Provinsi Sumatera Selatan’, *Paper UPN “Veteran” Yogyakarta*.
- Rahmad, B., Raharjo, S., Pramudiohadi E.W., dan Ediyanto. (2017). *Pengantar Eksplorasi Geologi Batubara dan Kualitas Batubara*. LPPM dan UPNVY.



A.E. (2021). ‘Modeling the Depositional Environment of the Sandstone Voir in the Middle Miocene Sidri Member, Badri Field, Gulf of Suez , Egypt: Integration of Gamma-Ray Log Patterns and Petrographic

- Characteristics of Lithology'. *Nat Resour Res* 30, 431–449, doi: <https://doi.org/10.1007/s11053-020-09757-6>.
- Rider, M. (1996). *The Geological Interpretation of Well Logs Second Edition*. Interprint Ltd. Malta.
- Santelli, C.M., Welch, S.A., Westrich, H.R., Banfield, J.F. (2001). 'The effect of Fe-oxidizing bacteria on Fe-silicate mineral dissolution'. *Chem. Geol.* Vol.180, hal: 99–115.
- Sari, N.L. (2009). 'Potensi Batubara Indonesia'. *Jurnal Lingkungan*.
- Schlatter's L.E. (1976). 'Coal Exploration and Mining Manual'. *Shell Internationale Petroleum Maatchappij B.V., The Hague*.
- Schlumberger. (1997). *Log Interpretation: 4th Edition*. Texas: Schlumberger Well Service Inc.
- Selley, R.C. (1986). *Ancient Sedimentary Environment and Their Subsurface Diagnosis 3rd Editioon*. Cornell University Press. New York.
- Serra, Oberto. (1988). *Fundamentals of Well logging Interpretation*. Edisi ke-3. New York: Elsevier Science Publishing Company Inc.
- Shen, Y., Qin, Y., Li, Z., Jin, J., Wei, Z.H., Zheng, J., Zhang, T., Zong, Y., Wang, X. (2017). 'The sedimentary origin and geological significance of siderite in the Longtan Formation of western Guizhou Province'. *Earth Sci. Front.* Vol. 24, hal: 152–161.
- Siehl, A., Thein, I. (1989). 'Minette-type ironstones', *Br. Geol. Soc. Spec. Publ.* Vol. 46, hal: 175–193.
- Situmorang, R. L., dan Burhan, G., (1995). 'Peta Geologi Lembar Tanjung Redeb, Kalimantan Timur'. *Geological Research and Development Centre*, Bandung.
- Skousen, J., Ziemkiewicz, P., dan Yang, J. (2012). 'Use of Coal Combustion By-Products in Mine Reclamation: Review of Case Studies in the USA'. *Geosystem Eng*, Vol. 15, hal: 71-83. doi:10/1080/12269328.2012.676258.
- Stefanko, R., (1983). 'Coal Mining Technology, Theory and Practice'. *Society Of Mining Engineering Of The American Institute Of Mining, Metallurgical, And Petroleum Engineers, Inc., New York*.
- Sugiyono. (2013). *Metodologi Penelitian Kuantitatif, Kualitatif, dan R&D*. ALFABETA. Bandung.
- rumidi. (1995). *Batubara dan Gambut*. Gajamada University Press. akarta.



- Sukandarrumidi. (1996). *Batubara dan Pemanfaatanya*. Gajamada University Press. Yogyakarta.
- Suwarna, N. dan Hermanto, B. (2007) ‘Berau Coal in East Kalimantan: Its Petrographics Characteristics and Depositional Environment’. *Indonesian Journal of Geology*, Vol.2(4), hal: 191-206.
- Tenriajeng, A. dan Tenrisukki. (2003). *Pemindahan Tanah Mekanik (Alat-Alat Berat)*. Penerbit Guna Darma. Jakarta.
- Tossin, S dan Kadir, R. (1996). ‘Tipe Reservoir Sedimen Miosen Tengah di Sub-Cekungan Tarakan, Cekungan Tarakan, Kalimantan Timur’. *Proceeding of the 25th Annual Convention of The Indonesian Association of Geologist*, hal: 495-512.
- Treiman, A.H., dan Romanek, C.S. (1998). ‘Bulk and stable isotopic compositions of carbonate minerals in Martian meteorite Allan Hills 84001: No proof of high formation temperature’. *Meteorit. Planet. Sci.* Vol. 33, hal :737–742.
- Voltz, M., dan Webster, R. (1990). ‘A Comparison of Kriging, Cubic Splines and Classification for Predicting Soil Properties from Sample Information’. *J. Soil Sci.* Vol. 41, hal: 473-490.
- Vyshar, O., Stolboushkin, A., Rakhimova, G., Stanevich, V., dan Rakhimov, M. (2023). ‘Study of the Properties of Overburdened Rocks From Coal Mining: Overburden – As Raw Material in the Production of Ceramic Bricks’. *International Journal of GEOMATE*, Vol. 25 Issue 107, hal: 86-94.
- Wibowo, R.C., Yandi, V.N., Dewanto, O., dan Rasimeng S. (2023). ‘Identifikasi Lingkungan Pengendapan Batuan Karbonat Cekungan Jawa Timur Utara Menggunakan Analisis Elektrofasis Data Log Gamma Ray’. *Jurnal Geosaintek*, Vol. 9 (1), hal: 1-7. p-ISSN: 2460-9072, e-ISSN: 2502-3659.
- Xie, B.Z., Sun, L.F., Fang, H., Shi, X.Y., Tang, D.J. (2021). ‘*Siderite* in banded iron formation of the Neoarchean Baizhiyan Formation, Shanxi Province: Genesis and palaeoenvironmental Implications’, *J. Palaeogeogr.* Vol. 23, hal: 175–190.
- Xie, M., Ma, F., Chen, G., Zheng, X., Xiao, R., Zhang, C. (2023), ‘Genesis and Geological Significance of *Siderite* in the First Member of the Nantun Formation of Dongming Sag, Hailar Basin’. *Mineral*, Vol. 13, doi: <https://doi.org/10.3390/min13060804>.
- Yang, X., Zhang, X. (2021). ‘The genesis of Ediacaran *siderite*-rich iron formations in North Qilian, and its constraints on ancient oceanic conditions’. *Chin. Sci. Vol.* 66, hal: 3032–3044.
- J., Saffari, M., Fathi, H., Karimian, N., Moazallahi, M. dan Gazni, R. J.). ‘Evaluation and Comparison of Ordinary Kriging and Inverse Distance



Weighting Method for Prediction of Spatial Variability of Some Soil Chemical Parameters'. *Research Journal of Biological Science*, Vol. 4 (1), hal: 93-102.

Zhang, Y.J., Shen, Y.L., Yang, T.Y., Zhao, Y., Tong, G.C. (2020). 'Development characteristics of siderite in the constraint of sequence frame: A case study of Late Permian coal measures in Panguan area'. *J. China Coal Soc.* Vol. 45, hal: 976–985.



L

A

M

P

I

R

A

N



Optimized using
trial version
www.balesio.com

Lampiran 1 Daftar titik sumur daerah penelitian

N O	HOLEID	EASTI NG	NORTHI NG	ELEVA SI	N O	HOLEID	EASTI NG	NORTHI NG	ELEVA SI
1	DDGT-P-08-05	550258.7	235814.2	40.02	36	P-07-049	551696.5	236558.4	30.4
2	DDGT-P-08-07	551576.1	235532.8	4.72	37	P-07-050	551902	236478.9	45.49
3	DDGT-P-08-08	552599.3	235778.6	29.61	38	P-07-052	552285.2	235879	11.44
4	DDGT-P-19-02	550771.7	235920.2	20.701	39	P-07-053	552464.1	235626.6	28.56
5	P-07-001	551519.1	237041.4	25.71	40	P-07-055	551782.3	235352.4	38.13
6	P-07-002	551431.7	236738.9	45.83	41	P-07-058	551704.5	236378.2	47.94
7	P-07-003	551367	236251.3	49.43	42	P-07-060	550962.3	234964.5	14.53
8	P-07-004	551393.5	235984	13.97	43	P-07-061	551158	236104.9	43.23
9	P-07-005	551383.9	235812.9	18.39	44	P-07-062	550996.6	235969.6	40.05
10	P-07-006	551284.9	235354.7	14.81	45	P-07-063	550586.6	235525.2	19.07
11	P-07-008	550311.1	235304.6	24.36	46	P-07-064	550828.3	235728	20.07
12	P-07-009	551241.8	236535.4	33.51	47	P-07-065	551644.6	235530.2	5.78
13	P-07-010	551342.1	235656.7	5.7	48	P-07-066	552169	235550.3	14.62
14	P-07-011	550251.6	235276.7	8.33	49	P-07-067	552734.1	235827	19.85
15	P-07-012	550955.6	236341.5	45.51	50	P-07-068	552489.2	236021.3	25.25
16	P-07-014	550799	236173.6	42.56	51	P-07-070	552864.6	236377.4	27.41
17	P-07-014A	550799	236173.6	42.56	52	P-07-072	552225.3	236867.6	21.49
18	P-07-016	550612.3	236023.1	31.1	53	P-07-075	551540	236183.6	42.46
19	P-07-020	550383.1	235759.7	27.7	54	P-07-076	551236.7	236024.6	35.69
20	P-07-022	551337.8	235005	36.31	55	P-07-077	550975.1	236080.2	52.97
21	P-07-024	551935.2	236709	31.03	56	P-07-078	551509.5	236505.8	40.65
22	P-07-026	550145.6	235848	33.72	57	P-07-081	551060	236604.4	42.03
23	P-07-030	552475.6	236285.2	15.4	58	P-07-082	550666.4	236344	41
24	P-07-033	552701	236078.6	22.95	59	P-07-083	550134.3	236178	27.5
25	P-07-036	553000.7	235847.4	33.81	60	P-07-088	550462	234935	6.43
26	P-07-039	550931.7	235634.3	7.89	61	P-07-089	550389.7	235126.6	7.704
27	P-07-040	550557.2	234839.5	12.89	62	P-07-091	550756.6	235420.9	5
28	P-07-041	550800.7	235292.8	22.61	63	P-07-092	551072.6	235337.2	4.18
29	P-07-042	550716.2	235128	7.48	64	P-07-092R	551074.6	235335.1	4.18
30	P-07-042R	550716.3	235126.9	7.52	65	P-07-093	551204.5	235599	21.22
31	P-07-043	550891.9	235456.6	4.87	66	P-12-002W	551582.4	236630	36.49
32	P-07-045	551028.3	236827.8	45.08	67	P-12-003W	551524.1	236636	53.62
	'-046	550744.4	236635.5	60.52	68	P-12-004W	551425.7	236658.8	45.05
	'-047	550622.8	236516.9	30.93	69	P-12-005	551554.6	236710.4	47.85
	'-048	550365.5	236304.2	21.47	70	P-12-007	551714.9	236679.1	35.9
					71	P-12-008	551850.8	236825	27.29



NO	HOLEID	EASTING	NORTHING	ELEVATION
72	P-12-009	551901.2	236705.1	29.45
73	P-12-010	551991.1	236748.1	31.02
74	P-12-011	552110.1	236755.2	34.07
75	P-19-001	551337.8	235005	2.97
76	P-19-002W	550855.4	235081.8	4.543
77	P-19-003W	550560.5	235123	10.938
78	P-19-004W	550656.7	234735.5	34.064
79	P-19-005W	550432	235273.8	45.748
80	P-19-006W	550650.7	234932.9	19.011
81	P-19-008W	550650.8	235305.8	35.198
82	P-19-009	550781.4	234883.4	12.43
83	P-19-010W	550593.3	235411.6	16.05
84	P-19-011	550416.7	235428.6	40.07
85	P-19-012W	551078.5	234729.3	19.53
86	P-19-013	551132.8	235121.8	5.18
87	P-19-014W	551023.7	235487.6	7.79
88	P-19-015	551160.6	234891.8	9.48
89	P-19-016	550930.4	234753.6	17.31
90	P-19-017	550526	235662.6	12.1
91	P-19-018W	550831.8	235802.6	20.824
92	P-19-019W	550515.6	236204.4	43.347
93	P-19-020	550734.8	235960.1	20.75
94	P-19-021	550415	236043	9.94
95	P-19-022W	550352.9	236129.5	18.649
96	P-19-023	550537.8	236306.8	61.86
97	P-19-024	550872.9	235625.8	7.41
98	P-19-025	550973.3	236096.3	48.85
99	P-19-026	550268.5	235966.8	18.94
100	P-19-027	550261.5	236227	25.01
101	P-19-028	550680	236123.1	39.23
102	P-19-030	550658.7	236252.6	31.62
103	P-19-031W	551448.3	236125.7	37.447
	033W	550316.4	235693	28.189
	1-034	551302.2	234922.2	6.61
	1-036	550985.9	235793.5	21.83

NO	HOLEID	EASTING	NORTHING	ELEVATION
107	P-21-001	550991.6	234615.3	31.64
108	P-22-001	552601.9	236802	6.59
109	P-23-033W	549278.5	233561.1	49.23
110	P-23-036W	550681.4	236686.7	40.504
111	P-23-038W	550733.2	236550.1	41.273
112	P-23-041W	550916.2	236918.1	21.508
113	P-23-042W	550950.5	236953.2	12.294
114	P-23-043W	551503.2	236776.7	34.689
115	P-23-044W	551600.3	236783.8	37.255
116	P-23-046W	551759.8	236883	26.563
117	P-23-047	551751.5	236943	15.9
118	P-23-049	551864.2	237002	10.708
119	P-23-050W	551909.4	237057.1	8.162
120	P-23-051	551805.9	237074.7	5.824
121	P-23-052W	551774.4	237030.2	7.297
122	P-23-053	551691.3	237084.9	12.298
123	P-23-054W	551578.9	236991.8	31.262
124	P-23-055W	551851.9	236902.4	12.15
125	P-23-057	551770.9	236775.9	24.087
126	P-23-058W	551967.2	236891.3	31.478
127	P-23-059	551965.5	236939.5	27.812
128	P-23-060	551956.7	236968.5	24.497
129	P-23-062	551974.1	236837.1	30.223
130	P-23-064	552020.1	236958	32.284
131	P-23-065	552091.6	236933.2	36.58
132	P-23-067	552062	236976.4	26.614
133	P-23-068	552155.5	237031.1	32.524
134	P-23-069	551852.7	236956	11.759
135	P-23-070	552140.9	236914.9	39.125
136	P-23-071	552114.1	236799.6	36.113
137	P-23-072	552185.7	236880.2	17.629
138	P-23-073	552111	236862.3	42.466
139	P-23-074	552206.7	236792.5	35.867
140	P-23-075	552291.1	236651.7	43.476



NO	HOLEID	EASTING	NORTHING	ELEVATION
14 1	P-23-076	552369. 7	236720.5	16.51
14 2	P-23-077	552424. 3	236627.1	24.201
14 3	P-23-078	552403. 1	236842.2	14.719
14 4	P-23-079	552320. 3	236944.8	27.378
14 5	P-23-080	552380. 9	236903.8	25.74
14 6	P-23-081	552597. 4	236539.9	13.18
14 7	P-23-082	552497. 2	236541.8	26.559
14 8	P-23-083	552414	235718.2	19.839
14 9	P-23-084	552293. 7	235674.7	10.165
15 0	PD-11-002	550749. 7	235258.6	27.43
15 1	PD-11-003	550842. 2	234875	25.75
15 2	PD-11-004	550790. 3	234935.7	9.35
15 3	PD-11-005	550825. 7	235480.7	4.88
15 4	PD-11-006	550796	234856	30
15 5	PD-11-007	550931. 1	235202.4	15.61
15 6	PD-11-009	550788. 7	235577.6	6.88
15 7	PD-11-012	550666. 1	235333.4	25.54
15 8	PD-11-013	550891. 1	235285.3	17.64
15 9	PD-11-014	550849. 6	235384.5	12.54
16 0	PD-11-015	550544. 2	235287.3	30.45
16 1	PD-11-018	550486. 3	235497.7	27.33
16 2	PD-11-019	551061. 8	235222.1	3.01
16 3	PD-11-020	550478	235221.7	34.41
16 4	PD-11-022	550550. 1	235164.5	33.16
16 5	PD-11-025	550357. 7	235573	40.8
16 6	PD-11-026	550856. 7	235103.1	4.71
16 7	PD-11-027	551163. 9	235227.9	3.3
16 8	PD-11-028	550569. 3	235712.4	24.26
16 9	PD-11-029	551186. 9	235291.5	4.16
17 0	PD-11-030	550783. 8	235061.7	4.94
17 1	PD-11-031	551249. 6	235171.2	3.56
	1-032	550394. 9	235629.9	32.98
	1-034	550654. 9	235118.7	20.24
	1-035	551339. 9	235147.1	3.27
17 5	PD-11-036	550433. 2	235575.5	31.91
17 6	PD-11-037	550413. 3	235432.4	41.38
17 7	PD-11-038	550623. 7	235187.3	15.45
17 8	PD-11-041	553078. 7	235796.7	11.01
17 9	PD-11-044	550394. 7	235273.1	44.13
18 0	PD-11-045	550472. 6	235339.8	36.81
18 1	PD-11-052	551280	235261.5	7.67
18 2	PD-11-053	551374. 5	235245.7	3.9
18 3	PD-11-078	551703. 3	235240.3	20
18 4	PD-12-010	550487. 6	235857.6	8.97
18 5	PD-12-010W	550487. 6	235857.6	8.97
18 6	PD-12-012	550475	235935.6	16.52
18 7	PD-12-012W	550475	235935.6	16.52
18 8	PD-12-022	550734. 9	235553.1	8.6
18 9	PD-12-022W	550734. 9	235553.1	8.6
19 0	PD-12-025	550677. 9	235662.5	8.12
19 1	PD-12-025W	550677. 9	235662.5	8.12
19 2	PD-12-026	550629. 6	235607.6	10.88
19 3	PD-12-026W	550629. 6	235607.6	10.88
19 4	PD-12-028	550697. 2	235709.2	7.41
19 5	PD-12-028W	550697. 2	235709.2	7.41
19 6	PD-12-032	550627. 8	235781.6	13.44
19 7	PD-12-032W	550627. 8	235781.6	13.44
19 8	PD-12-035	550530. 9	235990.2	13.08
19 9	PD-12-035W	550530. 9	235990.2	13.08
20 0	PD-12-058	551346. 1	236629.1	36.867
20 1	PD-12-059	551349	236554.5	36.499
20 2	PD-12-060	551392. 9	236516.1	40.983
20 3	PD-12-061	551302. 8	236457.6	29.191
20 4	PD-12-062	551452. 2	236509.9	26.469
20 5	PD-12-063	551246. 4	236447	33.731
20 6	PD-12-064	551364. 1	236458.2	24.296
20 7	PD-12-065	551195. 3	236332.5	36.514
20 8	PD-12-066	551145. 8	236300.9	34.233



NO	HOLEID	EASTING	NORTHING	ELEVATION
209	PD-12-067	551407.9	236399.8	31.263
210	PD-12-068	551075.4	236269.6	44.968
211	PD-12-069	551338.1	236395.1	32.51
212	PD-12-070	551212.3	236149.6	38.449
213	PD-12-071	551332.4	236332.9	40.687
214	PD-12-072	551401.4	236347.4	38.321
215	PD-12-073	551455	236370.4	30.951
216	PD-12-074	551271.3	236224	42.65
217	PD-12-075	551504.7	236405.5	23.527
218	PD-12-076	551532.4	236365.5	31.237
219	PD-12-077	551451.8	236298.3	39.695
220	PD-12-078	551452	236445.1	27.39
221	PD-12-079	551481.1	236330	36.171
222	PD-12-080	551414.8	236177.2	33.904
223	PD-12-081	551638.3	236484.9	23.979
224	PD-12-082	551331.5	236128.8	48.378
225	PD-12-083	551476	236114.1	36.518
226	PD-12-084	551581.5	236515.7	32.198
227	PD-12-085	551585.6	236232.6	40.31
228	PD-12-086W	551624.4	236561.9	31.12
229	PD-12-087	550908.7	234872.8	15.47
230	PD-12-087W	550908.7	234872.8	15.47
231	PD-12-088W	550737.5	234815.8	29.4
232	PD-12-089	550829.8	234811.3	12.54
233	PD-12-089W	550829.8	234811.3	12.54
234	PD-12-090W	550797.3	234888.2	12.51
235	PD-12-091	552203.2	236539	26.12
236	PD-12-092	550719.3	234895.5	25
237	PD-12-092W	550719.3	234895.5	25
238	PD-12-093	550704.7	234990.5	5.36
239	PD-12-093W	550704.7	234990.5	5.36
	2-094	552188.6	236588.8	25.48
	2-095	550623.5	234932.3	19.03
	-12-5W	550623.5	234932.3	19.03



NO	HOLEID	EASTING	NORTHING	ELEVATION
27	PD-12-125W	551928.5	236539.9	30.76
27	PD-12-126W	551820.4	236477.5	26.43
27	PD-12-127W	551724.1	236444	37.82
28	PD-12-128	551823.4	236394.3	37.23
28	PD-12-129W	551813.9	236318.8	27.53
28	PD-12-130W	551701.2	236326.4	39.33
28	PD-12-131W	551576.9	236354.6	32.94
28	PD-12-132W	551590.8	236305.5	41.35
28	PD-12-133	551628.7	236247.3	30.68
28	PD-12-134	551503.2	236176.1	40.01
28	PD-12-135	551127.3	236210.6	55.37
28	PD-12-136W	552120.3	236701.6	21.85
28	PD-12-137W	552169.5	236668.7	25.83
29	PD-19-001W	550303.2	235203.8	7.352
29	PD-19-003W	550832.7	234588.5	28.959
29	PD-19-004W	550307.3	235434.6	16.421
29	PD-19-006W	550271.2	235677.2	23.824
29	PD-19-010W	549812.5	235675	14.488
29	PD-19-012	549792.1	235778.8	29.84
29	PD-19-017W	551110.3	235687.9	24.129
29	PD-19-022	551046.6	235831.7	24.559
29	PD-19-023W	550012.2	236005.6	37.61
29	PD-19-024	549960.5	236093.7	29.715
30	PD-19-025	551040.3	236329.6	36.831
30	PD-19-026	551280.1	235789.3	11.092
30	PD-19-027	551467.8	235847.3	34.941
30	PD-19-028	551464.6	235679.2	33.313
30	PD-19-029W	550114.2	236031.9	23.544
30	PD-19-030	551562.8	235788	7.639
30	PD-19-039	551863.6	235772.4	20.086
30	PD-19-043	550199.8	235751.3	26.039
	9-045	550066.7	235909.6	16.533
	9-048	550895.2	236484.5	51.843
	9-049	550702.6	234834.1	35.234

NO	HOLEID	EASTING	NORTHING	ELEVATION
31	PD-19-050W	550852.2	236556.3	43.464
31	PD-19-052	551048.7	236496.2	46.528
31	PD-19-054W	550323.1	235527.3	22.037
31	PD-19-055W	550225.1	235608.2	35.971
31	PD-19-059W	550535.3	235043.6	5.89
31	PD-19-072W	550274.2	235396.8	12.445
31	PD-19-079W	551775.5	235460.5	24.435
31	PD-19-085W	551854.1	235502.1	22.083
31	PD-19-099	550722.6	234668.4	8.77
32	PD-19-099W	550722.6	234668.4	8.77
32	PD-19-102W	551795.9	235959.4	8.426
32	PD-21-001	551420	235377.5	3.94
32	PD-21-002	551463.2	235514.8	4.825
32	PD-21-003	551617.5	235440	17.265
32	PD-21-004	551678.1	235305	30.851
32	PD-21-005	551952	235346.6	40.461
32	PD-21-006	551821.9	235483.7	23.143
32	PD-21-007	551955.1	236185.2	9.475
32	PD-21-008	551638.5	235612.9	5.442
33	PD-21-009	551923.1	236087.9	8.564
33	PD-21-010	551828.6	235628.3	6.165
33	PD-21-011	551959	235603.4	6.418
33	PD-21-012	552113.6	236020.9	26.931
33	PD-21-013	552031.4	235471.1	32.254
33	PD-21-014	552158.6	235870.7	32.754
33	PD-21-016	552140.4	235684.3	26.75
33	PD-21-020	551999.8	235788.2	7.58
33	PD-21-023	551844.8	235752.2	22.75
33	PD-21-025	551813.1	235864.4	21.65
34	PD-21-026	550082.6	235785.6	36.29
34	PD-21-027	550188.8	235533.6	24.51
34	PD-21-028	551826.7	235949.5	10.04
34	PD-21-029W	550714.6	234589.5	16.834
34	PD-21-032	550549.2	234688	34.05



N O	HOLEID	EASTI NG	NORTHI NG	ELEVA SI
34 5	PD-22-005	549978	236194.6	36.667
34 6	PD-22-007	550878. 2	237047.8	9.07
34 7	PD-22-008	550913. 5	237049.7	8.89
34 8	PD-22-009	550939. 8	237079.8	8.54
34 9	PD-22-010	550875. 9	237129.7	6.99
35 0	PD-22-012	552420. 8	236698.1	10.42
35 1	PD-22-013	552508. 6	236769.2	9.53
35 2	PD-22-014	552604. 8	236915.7	7.76
35 3	PD-23- 045W	550601. 2	236803	19.125
35 4	PD-23- 046W	550525. 9	236809.5	25.218
35 5	PD-23- 048W	550545. 7	236855.2	20.484
35 6	PD-23- 052W	550543. 9	236669.4	19.611

N O	HOLEID	EASTI NG	NORTHI NG	ELEVA SI
35 7	PD-23- 053W	550751. 5	236922.2	20.72
35 8	PD-23-054	550853. 9	236905.3	22.828
35 9	PD-23-076	552243. 5	236759.7	32.063
36 0	PD-23-077	552300. 3	236698.8	36.111
36 1	PD-23-078	552421. 5	236886.2	27.667
36 2	PD-23-079	552486. 9	236645	23.836
36 3	PD-23-080	552535. 2	236591.3	11.35
36 4	PD-23-081	552624. 5	236574.3	11.781
36 5	PD-23-082	552676. 4	236525.9	24.077
36 6	PD-23-083	552513. 2	236419.2	35.829
36 7	PD-23-086	552646. 2	236257.8	38.122



Optimized using
trial version
www.balesio.com

Lampiran 2 Daftar titik sumur yang terdapat *ironstone siderite*

N O	HOLEID	EASTI NG	NORTHI NG	ELEV ASI
1	DDGT-P-08-05	550258.66	235814.18	40.02
2	DDGT-P-08-07	551576.13	235532.78	4.72
3	DDGT-P-08-08	552599.28	235778.6	29.61
4	DDGT-P-19-02	550771.741	235920.15	20.701
5	P-07-001	551519.12	237041.36	25.71
6	P-07-002	551431.65	236738.9	45.83
7	P-07-003	551367	236251.26	49.43
8	P-07-008	550311.126	235304.615	24.36
9	P-07-009	551241.8	236535.35	33.51
10	P-07-011	550251.575	235276.745	8.33
11	P-07-012	550955.601	236341.53	45.51
12	P-07-022	551337.79	235005	36.31
13	P-07-024	551935.19	236709.044	31.03
14	P-07-026	550145.56	235848.03	33.72
15	P-07-030	552475.58	236285.24	15.4
16	P-07-033	552700.96	236078.61	22.95
17	P-07-036	553000.74	235847.35	33.81
18	P-07-039	550931.74	235634.33	7.89
19	P-07-040	550557.189	234839.52	12.89
20	P-07-041	550800.73	235292.84	22.61
21	P-07-042	550716.2	235128.03	7.48
22	P-07-042R	550716.27	235126.89	7.52
23	P-07-043	550891.85	235456.57	4.87
24	P-07-045	551028.3	236827.787	45.08
25	P-07-046	550744.364	236635.527	60.52
26	P-07-048	550365.511	236304.241	21.47
27	P-07-049	551696.53	236558.39	30.4
28	P-07-050	551902.04	236478.9	45.49
29	P-07-052	552285.22	235879.01	11.44
30	P-07-053	552464.131	235626.59	28.56
31	-055	551782.31	235352.44	38.13
32	-058	551704.5	236378.21	47.94
33	-060	550962.27	234964.53	14.53
34	-063	550586.63	235525.19	19.07
35	P-07-065	551644.64	235530.2	5.78
36	P-07-066	552168.964	235550.307	14.62
37	P-07-067	552734.05	235826.96	19.85
38	P-07-068	552489.24	236021.34	25.25
39	P-07-070	552864.59	236377.39	27.41
40	P-07-072	552225.29	236867.59	21.49
41	P-07-075	551539.98	236183.64	42.46
42	P-07-077	550975.08	236080.23	52.97
43	P-07-078	551509.495	236505.815	40.65
44	P-07-081	551060.036	236604.43	42.03
45	P-07-083	550134.287	236177.995	27.5
46	P-07-088	550461.95	234934.99	6.43
47	P-07-089	550389.68	235126.57	7.704
48	P-07-091	550756.6	235420.87	5
49	P-07-092	551072.581	235337.187	4.18
50	P-07-092R	551074.596	235335.063	4.18
51	P-12-002W	551582.37	236630.01	36.49
52	P-12-003W	551524.08	236636.04	53.62
53	P-12-004W	551425.68	236658.8	45.05
54	P-12-005	551554.6	236710.35	47.85
55	P-12-007	551714.89	236679.11	35.9
56	P-12-008	551850.8	236824.96	27.29
57	P-12-009	551901.18	236705.09	29.45
58	P-12-010	551991.06	236748.07	31.02
59	P-12-011	552110.08	236755.21	34.07
60	P-19-001	551337.79	235005	2.97
61	P-19-002W	550855.373	235081.82	4.543
62	P-19-003W	550560.452	235123.043	10.938
63	P-19-004W	550656.748	234735.541	34.064
64	P-19-005W	550431.968	235273.79	45.748
65	P-19-006W	550650.706	234932.914	19.011
66	P-19-008W	550650.773	235305.757	35.198
67	P-19-009	550781.35	234883.44	12.43



NO	HOLEID	EASTING	NORTHING	ELEV ASI
68	P-19-010W	550593.327	235411.559	16.05
69	P-19-011	550416.71	235428.64	40.07
70	P-19-012W	551078.53	234729.25	19.53
71	P-19-013	551132.78	235121.75	5.18
72	P-19-014W	551023.679	235487.642	7.79
73	P-19-015	551160.55	234891.82	9.48
74	P-19-016	550930.42	234753.59	17.31
75	P-19-018W	550831.824	235802.619	20.824
76	P-19-019W	550515.63	236204.358	43.347
77	P-19-020	550734.82	235960.13	20.75
78	P-19-021	550415.01	236042.96	9.94
79	P-19-022W	550352.882	236129.527	18.649
80	P-19-023	550537.83	236306.79	61.86
81	P-19-024	550872.91	235625.82	7.41
82	P-19-025	550973.31	236096.32	48.85
83	P-19-026	550268.52	235966.82	18.94
84	P-19-027	550261.52	236226.97	25.01
85	P-19-028	550680.03	236123.07	39.23
86	P-19-031W	551448.334	236125.737	37.447
87	P-19-033W	550316.412	235692.983	28.189
88	P-19-034	551302.2	234922.21	6.61
89	P-19-036	550985.93	235793.46	21.83
90	P-21-001	550991.55	234615.33	31.64
91	P-22-001	552601.939	236801.959	6.59
92	P-23-036W	550681.395	236686.727	40.504
93	P-23-038W	550733.229	236550.073	41.273
94	P-23-041W	550916.18	236918.089	21.508
95	P-23-042W	550950.541	236953.241	12.294
96	P-23-043W	551503.197	236776.703	34.689
97	P-23-044W	551600.346	236783.828	37.255
98	P-23-046W	551759.82	236883.036	26.563
	-047	551751.458	236942.98	15.9
	-049	551864.194	237002.004	10.708
	050W	551909.407	237057.088	8.162

N O	HOLEID	EASTI NG	NORTHI NG	ELEV ASI
10 2	P-23-051	551805. 864	237074.72 1	5.824
10 3	P-23-052W	551774. 382	237030.20 5	7.297
10 4	P-23-053	551691. 286	237084.89 4	12.298
10 5	P-23-054W	551578. 861	236991.76 1	31.262
10 6	P-23-055W	551851. 894	236902.39 1	12.15
10 7	P-23-057	551770. 865	236775.89 8	24.087
10 8	P-23-058W	551967. 227	236891.34 4	31.478
10 9	P-23-059	551965. 466	236939.48 8	27.812
11 0	P-23-060	551956. 671	236968.51 3	24.497
11 1	P-23-062	551974. 071	236837.06 1	30.223
11 2	P-23-064	552020. 057	236957.96 9	32.284
11 3	P-23-065	552091. 623	236933.22 8	36.58
11 4	P-23-067	552062. 042	236976.40 3	26.614
11 5	P-23-068	552155. 523	237031.05 4	32.524
11 6	P-23-069	551852. 697	236956.03 5	11.759
11 7	P-23-070	552140. 914	236914.94 3	39.125
11 8	P-23-071	552114. 059	236799.60 2	36.113
11 9	P-23-072	552185. 691	236880.17 1	17.629
12 0	P-23-073	552111. 006	236862.27 9	42.466
12 1	P-23-074	552206. 731	236792.54	35.867
12 2	P-23-075	552291. 052	236651.67 9	43.476
12 3	P-23-076	552369. 721	236720.51 9	16.51
12 4	P-23-077	552424. 287	236627.09 7	24.201
12 5	P-23-078	552403. 057	236842.23	14.719
12 6	P-23-079	552320. 31	236944.80 3	27.378
12 7	P-23-080	552380. 909	236903.83 7	25.74
12 8	P-23-081	552597. 446	236539.91	13.18
12 9	P-23-082	552497. 235	236541.82	26.559
13 0	P-23-083	552413. 977	235718.20 3	19.839
13 1	P-23-084	552293. 699	235674.72 3	10.165
13 2	PD-11-003	550842. 15	234874.98	25.75
13 3	PD-11-004	550790. 32	234935.68	9.35
13 4	PD-11-006	550796	234856	30
13 5	PD-11-012	550666. 14	235333.4	25.54



NO	HOLEID	EASTING	NORTHING	ELEV ASI
13 6	PD-11-015	550544. 24	235287.3	30.45
13 7	PD-11-018	550486. 31	235497.71	27.33
13 8	PD-11-019	551061. 77	235222.1	3.01
13 9	PD-11-020	550478. 01	235221.65	34.41
14 0	PD-11-022	550550. 06	235164.45	33.16
14 1	PD-11-030	550783. 81	235061.72	4.94
14 2	PD-11-034	550654. 85	235118.68	20.24
14 3	PD-11-037	550413. 3	235432.36	41.38
14 4	PD-11-038	550623. 74	235187.3	15.45
14 5	PD-11-041	553078. 65	235796.71	11.01
14 6	PD-11-044	550394. 69	235273.14	44.13
14 7	PD-11-045	550472. 59	235339.82	36.81
14 8	PD-11-078	551703. 32	235240.31	20
14 9	PD-12-058	551346. 074	236629.09	36.867
15 0	PD-12-059	551348. 984	236554.47 1	36.499
15 1	PD-12-060	551392. 93	236516.09	40.983
15 2	PD-12-061	551302. 765	236457.62 6	29.191
15 3	PD-12-062	551452. 192	236509.87 7	26.469
15 4	PD-12-063	551246. 368	236447.03 5	33.731
15 5	PD-12-064	551364. 06	236458.22 4	24.296
15 6	PD-12-065	551195. 256	236332.49	36.514
15 7	PD-12-066	551145. 826	236300.85 8	34.233
15 8	PD-12-067	551407. 915	236399.84 3	31.263
15 9	PD-12-068	551075. 429	236269.57 7	44.968
16 0	PD-12-069	551338. 119	236395.14 8	32.51
16 1	PD-12-070	551212. 264	236149.58 1	38.449
16 2	PD-12-071	551332. 359	236332.87 4	40.687
16 3	PD-12-072	551401. 443	236347.40 1	38.321
16 4	PD-12-073	551455. 038	236370.37 5	30.951
16 5	PD-12-074	551271. 342	236224.04 6	42.65
16 6	PD-12-075	551504. 721	236405.49 5	23.527
	2-076	551532. 431	236365.53 2	31.237
	2-077	551451. 837	236298.34 5	39.695
	2-078	551451. 972	236445.14 2	27.39
17 0	PD-12-079	551481. 081	236330.03 6	36.171
17 1	PD-12-080	551414. 776	236177.16 7	33.904
17 2	PD-12-081	551638. 253	236484.92 2	23.979
17 3	PD-12-082	551331. 491	236128.79 6	48.378
17 4	PD-12-083	551476. 012	236114.08	36.518
17 5	PD-12-084	551581. 454	236515.69 4	32.198
17 6	PD-12-085	551585. 644	236232.60 7	40.31
17 7	PD-12-086W	551624. 43	236561.85	31.12
17 8	PD-12-087W	550908. 67	234872.82	15.47
17 9	PD-12-088W	550737. 48	234815.83	29.4
18 0	PD-12-089W	550829. 79	234811.31	12.54
18 1	PD-12-090W	550797. 25	234888.24	12.51
18 2	PD-12-091	552203. 15	236539.03	26.12
18 3	PD-12-092W	550719. 32	234895.54	25
18 4	PD-12-094	552188. 64	236588.83	25.48
18 5	PD-12-095W	550623. 51	234932.27	19.03
18 6	PD-12-096	552161. 4	236623.17	31.9
18 7	PD-12-097W	551105. 33	234856.68	4.74
18 8	PD-12-098	552112. 86	236632.98	16.84
18 9	PD-12-099	552054. 77	236632.13	13.35
19 0	PD-12-100	552056. 5	236585.17	19.37
19 1	PD-12-102	552066. 67	236534.76	22.9
19 2	PD-12-103W	550986. 51	234818.86	7.89
19 3	PD-12-104W	551010. 86	234813.82	6.76
19 4	PD-12-105	552060. 07	236699.12	25.05
19 5	PD-12-107	551987. 82	236680.76	31.16
19 6	PD-12-108	551946. 77	236660.73	29.06
19 7	PD-12-109W	550935. 79	234744	26.62
19 8	PD-12-110	551899. 99	236672.91	17.84
19 9	PD-12-111W	550902. 37	234756.58	23.46
20 0	PD-12-112W	550860. 16	234682.89	33.26
20 1	PD-12-113W	550988. 43	234749.98	19.42
20 2	PD-12-114	551818. 33	236658.75	26.72
20 3	PD-12-115	551754. 97	236620.27	29.66



NO	HOLEID	EASTING	NORTHING	ELEV ASI
204	PD-12-116	551695.02	236588.95	30.43
205	PD-12-117	552235.39	236593.28	33.88
206	PD-12-118W	552282.4	236588.67	34.72
207	PD-12-119W	552163.93	236522.78	14.84
208	PD-12-120W	551650.64	236613.06	24.44
209	PD-12-121W	552071.24	236462.99	28.73
210	PD-12-122	552027.8	236424.66	39.1
211	PD-12-123W	551970.48	236398.31	22.16
212	PD-12-124W	551300.85	236568.75	32.3
213	PD-12-125W	551928.54	236539.86	30.76
214	PD-12-126W	551820.35	236477.45	26.43
215	PD-12-127W	551724.07	236443.98	37.82
216	PD-12-128	551823.38	236394.29	37.23
217	PD-12-129W	551813.89	236318.81	27.53
218	PD-12-130W	551701.19	236326.4	39.33
219	PD-12-131W	551576.87	236354.58	32.94
220	PD-12-132W	551590.8	236305.53	41.35
221	PD-12-133	551628.7	236247.33	30.68
222	PD-12-134	551503.21	236176.08	40.01
223	PD-12-135	551127.29	236210.64	55.37
224	PD-12-136W	552120.33	236701.62	21.85
225	PD-12-137W	552169.49	236668.74	25.83
226	PD-19-001W	550303.198	235203.83	7.352
227	PD-19-003W	550832.741	234588.50	28.959
228	PD-19-006W	550271.157	235677.16	23.824
229	PD-19-010W	549812.473	235675.04	14.488
230	PD-19-012	549792.09	235778.84	29.84
231	PD-19-017W	551110.271	235687.91	24.129
232	PD-19-022	551046.566	235831.67	24.559
233	PD-19-023W	550012.179	236005.64	37.61
234	PD-19-025	551040.293	236329.57	36.831
	9-026	551280.068	235789.34	11.092
	9-027	551467.781	235847.28	34.941
	9-028	551464.576	235679.15	33.313

NO	HOLEID	EASTING	NORTHING	ELEV ASI
238	PD-19-029W	550114.212	236031.88	23.544
239	PD-19-030	551562.803	235788.01	7.639
240	PD-19-039	551863.584	235772.36	20.086
241	PD-19-043	550199.763	235751.30	26.039
242	PD-19-048	550895.193	236484.48	51.843
243	PD-19-050W	550852.247	236556.33	43.464
244	PD-19-052	551048.682	236496.22	46.528
245	PD-19-054W	550323.074	235527.31	22.037
246	PD-19-059W	550535.294	235043.56	5.89
247	PD-19-079W	551775.466	235460.46	24.435
248	PD-19-085W	551854.087	235502.07	22.083
249	PD-19-099W	550722.592	234668.43	8.77
250	PD-19-102W	551795.92	235959.38	8.426
251	PD-21-001	551420.009	235377.51	3.94
252	PD-21-002	551463.23	235514.79	4.825
253	PD-21-003	551617.454	235440.01	17.265
254	PD-21-004	551678.076	235305.01	30.851
255	PD-21-005	551951.986	235346.58	40.461
256	PD-21-006	551821.931	235483.66	23.143
257	PD-21-007	551955.109	236185.24	9.475
258	PD-21-008	551638.494	235612.90	5.442
259	PD-21-009	551923.093	236087.93	8.564
260	PD-21-010	551828.558	235628.26	6.165
261	PD-21-011	551958.997	235603.40	6.418
262	PD-21-012	552113.621	236020.86	26.931
263	PD-21-013	552031.417	235471.13	32.254
264	PD-21-014	552158.567	235870.70	32.754
265	PD-21-016	552140.44	235684.25	26.75
266	PD-21-020	551999.78	235788.2	7.58
267	PD-21-023	551844.81	235752.15	22.75
268	PD-21-025	551813.09	235864.4	21.65
269	PD-21-028	551826.73	235949.54	10.04
270	PD-21-029W	550714.589	234589.47	16.834
271	PD-21-032	550549.2	234687.98	34.05



N O	HOLEID	EASTI NG	NORTHI NG	ELEV ASI
27 2	PD-22-007	550878. 183	237047.82 9	9.07
27 3	PD-22-008	550913. 547	237049.66 7	8.89
27 4	PD-22-009	550939. 808	237079.84 8	8.54
27 5	PD-22-010	550875. 901	237129.67	6.99
27 6	PD-22-012	552420. 77	236698.08 5	10.42
27 7	PD-22-013	552508. 563	236769.15 2	9.53
27 8	PD-22-014	552604. 758	236915.72	7.76
27 9	PD-23- 045W	550601. 239	236803.03 8	19.125
28 0	PD-23- 046W	550525. 932	236809.48 9	25.218
28 1	PD-23- 048W	550545. 665	236855.23 8	20.484
28 2	PD-23- 052W	550543. 877	236669.39 8	19.611
N O	HOLEID	EASTI NG	NORTHI NG	ELEV ASI
28 3	PD-23- 053W	550751. 535	236922.23 1	20.72
28 4	PD-23-054	550853. 902	236905.26 4	22.828
28 5	PD-23-076	552243. 54	236759.73 8	32.063
28 6	PD-23-077	552300. 26	236698.82 2	36.111
28 7	PD-23-078	552421. 466	236886.24 3	27.667
28 8	PD-23-079	552486. 85	236644.95 8	23.836
28 9	PD-23-080	552535. 239	236591.33 6	11.35
29 0	PD-23-081	552624. 541	236574.34	11.781
29 1	PD-23-082	552676. 394	236525.87 4	24.077
29 2	PD-23-083	552513. 218	236419.23 5	35.829
29 3	PD-23-086	552646. 165	236257.75 2	38.122



Optimized using
trial version
www.balesio.com

Lampiran 3 Tabel log *Gamma Ray, Long Density, dan Short Density*

HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM	HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM
P-07-008	21	21748	1692		P-07-036	31	21496	1689	
P-07-008	30	20442	2011		P-07-067	21	20436	1712	
P-07-008	36	21244	2077		P-07-036	29	21191	1881	
P-07-008	35	20751	1789		P-07-036	21	20157	1704	
P-07-008	28	20554	1649		P-07-067	22	20371	2070	
P-07-011	36	20686	1719		P-07-067	23	20011	1764	
P-07-011	25	19786	1641		P-07-067	21	21302	2084	
P-07-011	25	21823	1872		P-07-067	30	20534	1929	
P-07-011	27	21067	1823		P-07-067	33	19582	1748	
P-07-011	22	20411	1612		P-07-067	24	21436	1970	
P-07-011	33	20654	1747		P-07-008	32	20088	2057	
P-07-011	22	20199	2034		P-07-033	34	20019	1952	
P-07-011	34	20101	2045		P-07-033	35	19210	2038	
P-07-011	27	20675	1866		P-07-040	23	19649	1847	
P-07-011	32	20395	1859		P-07-041	27	20389	1702	
P-07-011	34	19743	1758		P-07-041	31	20633	2025	
P-07-026	30	19733	1853		P-07-042	32	21399	1865	
P-07-026	27	21543	1981		P-07-042	21	19873	1919	
P-07-040	23	20588	1698		P-07-042	27	19559	1773	
P-07-040	27	21640	1778		P-07-042	34	19560	1983	
P-07-042	24	21942	2044		P-07-042	28	19641	1879	
P-07-042	30	19891	1948		P-07-042R	23	21063	1701	
P-07-042	34	21839	1951		P-07-043	23	20828	1642	
P-07-042	24	21773	1875		P-07-048	23	20770	1955	
P-07-042R	25	19581	1685	K-L	P-07-048	31	20250	1874	
P-07-042R	35	20190	1949		P-07-053	28	20229	2005	
P-07-042R	32	21708	1791		P-07-053	31	20755	1870	
P-07-042R	28	20481	1729		P-07-060	32	19618	1757	
P-07-042R	21	19810	1740		P-07-063	25	20628	2051	
P-07-042R	32	21711	1897		P-07-066	32	19401	1738	
P-07-083	26	21515	1829		P-07-070	21	19218	1827	
P-07-083	29	21153	1872		P-07-070	34	19958	1801	
P-07-083	26	20883	1999		P-07-083	34	19814	1726	
P-07-088	35	19699	1942		P-07-083	26	19345	1791	
P-07-088	31	21813	1654		P-07-083	33	21427	2057	
P-07-088	22	20636	1920		P-07-083	29	19263	1944	
P-07-088	36	19932	2047		P-07-083	28	20738	1828	
P-07-088	25	19860	1871		P-07-088	30	20123	1924	
P-07-088	21	20148	1747		P-07-089	35	21439	1898	
P-07-089	24	19915	1613		P-07-089	23	20258	1704	
P-07-089	33	20064	1795		P-07-091	25	19615	1816	
P-07-089	27	20607	1824		P-07-091	36	20692	1934	
P-07-089	22	20551	1861		P-07-091	34	20494	2095	
P-07-089	34	19916	1767		P-07-091	32	19315	2001	
P-07-089	27	21610	1859		P-07-092	32	21037	1885	
P-07-089	33	20733	1945		DDGT-P-08-08	35	19206	1689	
P-07-089	23	20023	1696		DDGT-P-08-08	35	19582	1838	
P-19-003W	24	21531	2037		DDGT-P-08-08	26	21143	1816	
P-19-003W	27	19665	1825		DDGT-P-08-08	33	20366	1624	
P-19-009	21	20304	1697		PD-11-004	21	20700	1697	
P-19-016	24	21060	1793		PD-11-004	23	20659	2042	
P-19-021	22	21044	2024		P-19-001	36	20262	1999	
P-19-027	26	21815	1618		P-19-002W	26	19833	2095	
P-19-027	28	20579	2062		P-19-002W	24	21483	1796	
PD-19-001W	33	21205	1855		P-19-002W	34	19765	1756	
PD-19-010W	35	20673	1855		P-19-003W	32	20979	1647	
PD-19-010W	32	21138	1922		P-19-003W	33	20164	1948	
	27	19813	1665		P-19-003W	31	20474	1887	
	28	21573	2056		P-19-003W	31	21276	1801	
	29	20450	1893		P-19-004W	31	20365	2066	
	21	19602	1816		P-19-004W	32	19150	1746	
	27	20733	1809		P-19-005W	30	19132	1949	



HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM	HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM
P-19-005W	35	19143	1844		PD-11-037	21	20157	2148	
P-19-006W	24	20189	1917		PD-11-038	32	20991	1799	
P-19-006W	24	20649	2039		PD-11-044	25	19179	1836	
P-19-006W	22	20642	1630		PD-12-088W	33	21456	2136	
P-19-008W	34	20011	1830		PD-12-089W	36	20980	1818	
P-19-008W	24	19447	2001		PD-12-090W	36	19293	2074	
P-19-008W	23	20598	1749		PD-12-092W	28	19508	1657	
P-19-009	31	19414	1771		PD-12-095W	27	21274	1691	
P-19-009	36	20496	1728		PD-12-097W	23	20520	1867	
P-19-010W	24	19750	1900		PD-12-104W	28	19729	1834	
P-19-010W	21	20573	1907		PD-12-104W	32	21458	1780	
P-19-010W	29	19168	1751		PD-12-104W	29	20837	2193	
P-19-010W	33	19132	2030		PD-12-109W	35	19751	1616	
P-19-011	25	19824	2073		PD-12-111W	27	21747	1863	
P-19-011	29	20871	1884		PD-12-112W	22	20649	1631	
P-19-011	32	20719	1876		PD-12-113W	25	20920	1777	
P-19-011	29	20179	2083		PD-12-113W	29	21124	1601	
P-19-012W	23	20735	1908		P-19-001	22	20714	1887	
P-19-013	25	21411	2014		P-19-003W	31	19500	1721	
P-19-013	32	19231	1673		P-19-005W	30	19628	2110	
P-19-013	21	20406	1725		P-19-008W	35	20618	1954	
P-19-013	35	20857	1629		P-19-009	33	21343	1919	
P-19-016	31	20491	1628		P-19-011	31	19375	1819	
P-19-020	22	20185	2072		P-19-013	22	20462	1816	
P-19-021	36	19917	1714		P-19-013	36	20788	1861	
P-19-021	22	20128	1880		P-19-014W	32	19222	1634	
P-19-021	30	21504	1911		P-19-015	34	20705	1915	
P-19-024	23	19355	1658		P-19-016	22	20016	1744	
P-19-024	31	19219	1965		P-19-018W	30	20814	2149	
P-19-026	22	20837	1868		P-19-019W	36	20983	2175	
P-19-027	30	19505	1674		P-19-021	27	19070	1841	
P-19-027	21	21103	1852		P-19-021	29	19072	1890	
P-19-028	22	20551	2019		P-19-022W	25	19178	1753	
P-19-028	32	20954	1785		P-19-023	35	19584	1971	
P-19-028	32	19332	1675		P-19-023	24	20284	1864	
P-19-028	28	21002	1745		P-19-024	28	21802	1915	
P-19-033W	30	20100	2040		P-19-024	31	21475	2017	
P-19-033W	30	19890	2077		P-19-026	27	19558	1885	
P-19-034	24	20926	1798		P-19-026	23	19967	2177	
PD-19-003W	36	19590	1909		P-19-028	24	20983	1719	
PD-19-054W	29	21020	1678		P-19-028	31	20477	2136	
PD-19-054W	23	20956	1753		P-19-028	36	21086	1647	
PD-19-054W	27	19536	1838		P-19-034	25	19486	1998	
PD-19-099W	30	20781	1884		PD-19-006W	36	20894	1977	
PD-21-029W	23	20078	1936		PD-19-029W	28	21822	1731	
PD-21-032	28	20279	2071		PD-19-029W	27	19909	1864	
P-07-033	24	19785	2022		PD-19-029W	33	20753	2039	
P-07-042	23	21825	1882		PD-19-043	30	20222	1846	
P-07-042	29	19076	1882						
P-07-042	30	19387	1923						
P-07-042R	23	19170	1892						
P-07-053	27	20006	1745						
P-07-065	33	19372	1952						
P-07-066	22	21516	2161						
	26	19813	1869						
	24	19162	1799						
	33	20631	1957						
	32	19838	2010						
	36	20414	1648						
	28	19209	1877						
	22	19065	2151						

M-N



HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM
PD-19-059W	34	19986	1958	
PD-21-029W	32	19517	1961	
P-07-067	35	19260	1942	
P-07-067	32	21218	1803	
P-07-067	35	20726	2116	
P-07-067	31	20957	2026	
P-07-067	24	19403	1622	
P-07-067	36	19770	1765	
P-07-067	29	20800	2104	
P-07-067	26	19778	1818	
P-07-030	26	20965	1664	
P-07-033	36	19809	1744	
P-07-033	36	21898	1608	
P-07-033	25	21848	2009	
P-07-039	24	21715	1809	
P-07-041	27	20394	1982	
P-07-042R	21	19682	1967	
P-07-043	24	20478	1992	
P-07-048	33	20158	1632	
P-07-052	36	19373	1626	
P-07-053	30	21662	1886	
P-07-055	21	20942	1672	
P-07-060	35	21387	1817	
P-07-060	21	20498	1639	
P-07-065	21	20253	1811	
P-07-065	22	20484	1982	
P-07-066	29	20385	1894	
P-07-066	24	21451	1914	
P-07-068	21	21153	1706	
P-07-068	28	21459	2025	
P-07-070	21	19872	1668	
P-07-070	23	21647	1642	
P-07-091	34	21068	1618	
P-07-091	26	21779	1789	
P-07-091	25	19709	1726	
P-07-092	28	20830	1614	
P-07-092	24	20880	1979	
P-07-092	31	20403	1941	
P-07-092R	32	19624	1846	
P-07-092R	31	21591	2041	
P-07-092R	26	20775	1884	
DDGT-P-08-07	21	21756	1984	
PD-11-003	25	21407	1775	
PD-11-004	25	21089	1734	
PD-11-012	28	21125	1830	
PD-11-015	31	20570	1860	
PD-11-018	33	21088	1720	
PD-11-019	27	20808	1650	
PD-11-019	25	20282	1955	
PD-11-020	23	21372	1938	
PD-11-022	32	21467	1869	
PD-11-030	23	20801	1820	
PD-11-030	35	21242	1987	
PD-11-034	25	19294	1620	
PD-11-045	26	21203	1922	
PD-12-087W	25	19679	2110	
	22	21109	1686	
	22	21783	1674	
	28	20608	1634	

N-O

HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM
PD-12-103W	33	21732	1772	
PD-12-109W	21	21135	1933	
PD-12-111W	23	20513	2015	
PD-12-112W	32	20823	1768	
PD-12-113W	35	21374	1712	
PD-12-113W	26	20938	1988	
P-19-001	36	19316	2088	
P-19-001	29	20964	1884	
P-19-001	27	19562	1928	
P-19-002W	31	19798	1866	
P-19-004W	22	19546	1845	
P-19-005W	30	20587	1811	
P-19-009	28	21532	1817	
P-19-010W	27	19936	2100	
P-19-010W	31	20866	1793	
P-19-010W	35	21574	1889	
P-19-011	24	20592	1809	
P-19-011	36	21216	1967	
P-19-013	28	19619	2020	
P-19-013	22	20531	1661	
P-19-013	29	19750	1693	
P-19-015	23	20293	1700	
P-19-015	28	19358	1672	
P-19-016	27	22007	1883	
P-19-016	21	20522	1955	
P-19-016	27	21439	1645	
P-19-018W	28	19801	1689	
P-19-019W	28	20797	1653	
P-19-020	27	21505	1706	
P-19-022W	27	21299	1819	
P-19-022W	28	19539	1835	
P-19-023	22	21991	2049	
P-19-023	21	21581	1866	
P-19-024	25	19645	2038	
P-19-027	24	21061	1681	
P-19-027	27	21992	2039	
P-19-027	29	21074	1718	
P-19-027	21	21791	1701	
P-19-027	25	21994	1918	
P-19-033W	28	20722	1731	
P-19-033W	26	21444	1698	
P-19-034	36	21897	1969	
DDGT-P-19-02	29	20924	2076	
P-21-001	32	21657	2111	
P-21-001	27	21524	1734	
P-07-012	26	19562	1711	
P-07-012	29	20060	1940	
P-07-012	34	20191	1946	
P-07-012	34	19243	1785	
P-07-012	27	20571	2088	
P-07-012	29	19310	2067	
P-07-024	33	19350	1728	
P-07-024	25	20359	1981	
P-07-024	26	20900	1902	
P-07-024	33	20977	1669	
P-07-049	30	20447	1710	
P-07-049	26	20372	1870	
P-07-050	31	19448	1826	
P-07-050	25	20520	2064	
P-07-050	31	19349	1630	

O-P



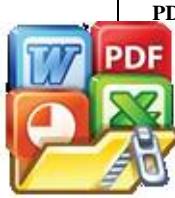
HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM	HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM
P-07-050	25	19643	2005		PD-12-127W	21	20859	1825	
P-07-050	35	19644	1776		PD-19-102W	28	20311	1941	
P-07-058	35	19382	1687		PD-19-102W	29	19914	1923	
P-07-058	26	19955	1685		PD-21-008	33	20355	2033	
P-07-058	31	20864	1916		PD-21-013	36	19308	1927	
P-07-058	28	20961	1687		PD-21-020	32	20082	1785	
P-07-072	29	20983	1632		PD-21-020	27	19997	1723	
P-07-072	22	20300	2006		PD-21-020	31	19348	2048	
P-07-072	36	19318	1745		PD-21-020	32	19740	1911	
P-07-072	29	20274	2030		PD-23-045W	27	19687	1909	
P-07-072	28	20979	1620		PD-23-045W	22	20974	1987	
P-07-072	31	20373	1815		PD-23-045W	25	20078	1618	
P-07-072	36	20381	2058		PD-23-045W	34	20017	1710	
P-07-072	30	20030	1898		P-07-009	22	19626	2063	
P-07-072	34	19225	1896		P-07-009	28	19237	1995	
P-07-072	29	19561	1944		P-07-012	32	19391	1815	
P-07-072	35	20787	1966		P-07-009	32	19843	1912	
P-07-075	32	19301	1840		P-07-024	29	20118	2008	
P-07-075	24	19357	1976		P-07-045	23	19057	1956	
P-07-075	31	19398	1963		P-07-072	30	20588	1924	
P-07-075	30	20950	1776		P-07-049	25	19232	1679	
P-07-075	24	20838	1764		P-07-049	29	20161	2074	
P-07-075	22	20571	1907		P-07-050	26	20447	1608	
P-07-075	29	20429	1775		P-07-009	29	19648	1850	
P-07-075	23	19491	1834		P-07-022	31	19466	1665	
P-07-075	26	19919	1768		P-07-045	33	20178	1797	
P-07-075	33	19262	2000		P-07-049	21	20821	2057	
P-07-075	31	19597	2024		P-07-012	27	19406	1964	
P-07-075	34	20222	1907		P-07-046	32	20509	1677	
P-07-075	29	20256	1885		P-07-046	27	19562	1612	
P-07-075	33	19294	1911		P-07-058	36	19088	2087	
P-07-075	31	20691	1695		P-07-072	23	20058	1607	
P-07-075	27	19489	1643		PD-12-066	30	19402	1657	
P-07-075	29	19628	2082		P-07-024	24	19843	1858	
P-07-075	29	19973	2048		P-07-049	25	20575	1702	
P-07-075	22	20776	1727		P-07-049	33	19735	1905	
P-07-075	36	20629	1681		P-07-046	24	19693	1606	
P-07-075	24	20562	1875		P-07-012	24	20754	1716	
P-07-077	23	20090	2014		P-07-012	32	20662	1726	
P-07-077	33	20798	2055		P-07-058	26	19125	1699	
P-07-077	33	20237	1760		P-23-041W	35	20569	2070	
P-07-077	25	19850	1919		P-07-045	25	20351	2031	
P-07-077	25	19536	1968		P-07-022	31	20802	1706	
P-07-077	25	19605	1701		P-07-045	36	19754	1758	
P-19-025	32	19711	1870		P-07-058	26	20435	2036	
P-19-025	34	20716	1616		PD-12-066	31	19209	1722	
P-19-025	32	20251	1690		P-07-024	25	19134	1817	
P-19-031W	36	19585	2015		P-23-036W	31	19606	1814	
P-19-031W	34	19713	1663		PD-12-063	24	20098	2082	
P-19-031W	33	19442	1924		PD-12-068	32	19413	1969	
P-23-038	30	20161	2044		P-07-024	26	20734	1981	
P-23-038	28	20955	1869		P-07-045	24	19166	1833	
P-23-042W	29	19363	2019		P-07-046	31	20572	2034	
P-23-042W	33	19452	2072		P-07-050	26	20799	1737	
P-23-042W	30	19694	2040		P-07-058	21	19519	1992	
P-23-042W	23	20586	1834		P-07-012	25	20639	2009	
P-23-042W	29	20885	1704		P-07-024	33	20866	1603	
PD-12-127W	27	19573	2004		P-07-050	24	19883	1917	
PD-12-	32	19504	1807		P-07-049	23	20764	1936	
	26	20033	1629		P-19-031W	26	19575	1958	
	32	19768	1881						P-Q
	36	19499	1907						



HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM
PD-12-066	30	20427	1667	
P-07-009	35	19689	1621	
P-07-024	36	19662	1774	
P-07-022	26	19953	1618	
P-07-072	28	20041	2071	
PD-12-065	21	19782	1837	
P-19-031W	27	19488	1995	
P-19-025	33	19736	1671	
P-07-046	33	20815	2085	
P-07-049	35	19822	1696	
PD-12-073	22	19705	1800	
P-07-081	24	19507	2070	
PD-12-063	27	20787	1646	
PD-23-045W	22	20007	2078	
P-07-024	36	19569	1980	
P-07-072	25	19670	1807	
P-23-041W	23	20271	1855	
PD-12-066	34	20039	1971	
P-19-025	34	19882	2061	
P-07-003	24	19658	1732	
P-07-009	28	20206	1784	
P-07-046	27	20598	1953	
PD-12-066	33	20589	1996	
P-07-045	31	20523	1892	
P-07-049	29	20511	1816	
P-07-081	23	19806	1698	
P-07-049	24	19496	1716	
PD-12-063	23	20133	1799	
P-07-081	30	19835	2006	
P-12-007	30	19362	1818	
PD-12-114	31	19474	1799	
P-19-025	22	19772	2037	
P-07-058	33	20215	1816	
DDGT-P-08-05	32	19475	1754	
P-07-077	25	20230	1953	
P-07-045	34	20116	1919	
P-07-049	21	19322	1923	
PD-12-068	31	19759	1853	
P-07-081	29	19551	2086	
P-07-050	23	20736	2008	
P-07-081	34	20146	2098	
P-19-031W	24	19416	1732	
P-07-072	36	19470	1673	
P-07-058	34	19010	1963	
P-07-081	32	19812	1915	
P-19-031W	22	20438	1709	
PD-12-114	33	19275	1688	
P-19-031W	35	20120	1751	
P-07-072	34	20457	1851	
P-07-072	29	20258	2007	
P-07-072	28	19633	1678	
P-12-007	28	19856	1656	
P-23-042W	36	19388	1800	
PD-12-058	24	19243	1834	
PD-12-061	36	19324	1887	
PD-12-061	22	19661	1957	
P-07-081	35	19080	1691	
PD-19-	28	20512	1801	
	22	19473	1657	
	28	20097	1992	
	35	19130	1740	
	24	20274	1853	
	36	20108	1707	

HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM
PD-12-063	35	20173	1997	
P-07-072	27	19869	1764	
PD-12-073	29	20206	1797	
P-12-011	21	19980	1648	
P-19-025	33	19118	1753	
P-07-050	34	19310	1733	
PD-12-064	35	19690	1792	
PD-12-067	30	20561	1611	
P-07-072	25	19851	1824	
PD-12-061	26	19416	1997	
P-23-042W	29	19615	1944	
P-19-025	29	20462	1801	
P-19-031W	27	19480	1768	
P-23-042W	31	20747	1909	
PD-12-064	28	19860	1752	
PD-12-065	34	20617	1802	
PD-12-068	31	20789	2016	
PD-12-064	25	19391	1632	
P-23-041W	27	19490	2006	
P-07-072	36	20267	1890	
DDGT-P-08-05	23	20280	1946	
P-07-003	21	19898	1601	
P-07-050	22	20043	1887	
P-23-041W	21	20229	1737	
P-23-042W	22	19454	1602	
PD-12-064	34	20370	2016	
P-23-042W	24	19585	2036	
P-23-042W	36	19018	1963	
P-07-024	28	19120	1786	
P-07-077	31	19018	1813	
PD-12-068	30	20544	1845	
PD-12-063	27	20723	1924	
PD-12-065	34	19912	1783	
P-23-038	30	20427	1770	
P-23-038	34	20166	1647	
P-23-036W	23	20873	2029	
P-07-009	24	19760	2029	
P-07-045	33	20468	1731	
P-07-009	21	20740	1958	
P-07-001	21	20190	2058	
P-07-001	36	20189	2064	
P-07-075	31	19626	1998	
PD-12-086W	36	20433	2058	
PD-12-086W	23	20121	1809	
P-12-009	28	20100	1976	
PD-12-073	25	20573	2058	
P-07-001	24	19139	1793	
P-23-051	33	20433	1807	
P-07-024	25	20659	1625	
PD-12-073	24	19876	1642	
P-12-002W	34	19151	1925	
P-07-075	32	20748	1911	
PD-12-086W	30	19614	1904	
P-07-049	28	20751	1804	
PD-12-072	23	20125	1977	
PD-12-098	36	20691	2047	
PD-12-100	24	20341	1993	
P-07-009	32	20174	1901	
P-07-024	27	20863	1936	
P-12-008	25	20150	2053	
P-07-024	32	19628	1784	
P-07-045	27	19379	2020	
P-07-049	34	20348	2050	

Q-R



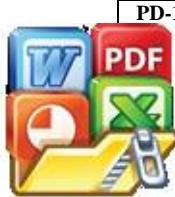
HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM
P-12-009	22	20071	2056	
PD-12-064	33	20603	1706	
PD-12-067	22	19100	1711	
PD-12-067	36	19543	1788	
PD-12-071	26	20170	1650	
PD-12-071	26	19245	1933	
PD-12-086W	32	20130	1897	
PD-12-072	30	19534	1734	
P-07-050	23	20788	1942	
P-07-072	24	20364	2084	
P-12-009	30	19437	1734	
PD-12-063	34	20180	2026	
PD-12-064	32	20394	1894	
PD-12-071	28	19506	1699	
PD-12-098	29	19844	1959	
PD-12-059	30	20628	1657	
PD-12-064	31	20650	1763	
P-07-009	21	20167	1952	
P-23-044W	33	19460	1668	
P-23-051	29	19660	1976	
P-07-050	30	19810	1695	
P-12-009	33	19322	1973	
PD-12-058	27	19709	1984	
PD-12-098	31	20444	1976	
PD-12-098	31	19580	1872	
P-07-050	33	20841	1949	
P-07-081	35	20438	1974	
P-12-011	33	20795	1719	
PD-12-086W	30	20137	1865	
PD-12-069	23	20842	1638	
PD-12-067	36	20818	1668	
P-07-045	23	19638	2034	
P-12-011	36	20168	1859	
PD-12-059	24	20037	1642	
PD-12-067	32	20554	1873	
PD-12-072	31	19629	1692	
PD-12-086W	28	20226	1960	
P-12-010	31	20370	2043	
P-12-010	21	19574	1962	
P-12-010	28	20290	1809	
P-07-009	31	19591	1778	
P-07-049	31	19958	1697	
P-12-008	29	20446	1621	
PD-12-058	32	19449	2070	
PD-12-086W	33	20313	1618	
PD-12-098	32	20231	2062	
PD-12-098	33	20776	1707	
P-07-024	21	20422	1935	
P-12-009	27	19281	1664	
P-12-011	33	19754	1949	
P-07-081	32	20005	1685	
PD-12-063	24	20550	1652	
PD-12-069	33	20343	1618	
PD-12-071	31	19336	1793	
P-07-009	35	20363	1873	
PD-12-059	32	19651	1990	
	21	20681	1989	
	22	19461	1662	
	26	19506	1705	
	32	19172	1901	
	27	20506	2054	
	35	19423	1646	



Optimized using
trial version
www.balesio.com

HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM
PD-12-059	30	20434	1956	
PD-12-071	28	19887	1797	
P-07-081	29	19412	2062	
PD-12-067	26	20496	1648	
P-23-050W	23	20797	1926	
PD-12-086W	24	20037	2052	
PD-12-100	26	19764	1734	
P-12-002W	21	19423	1737	
P-07-078	33	19294	1871	
PD-12-067	27	19474	1754	
PD-12-069	33	20096	1882	
P-07-002	27	20051	1719	
PD-12-086W	29	19911	1900	
PD-12-058	36	19883	1971	
PD-12-058	23	19138	1962	
PD-12-061	26	20235	1840	
PD-12-062	29	19940	1842	
PD-12-098	24	20719	1934	
PD-12-098	25	20021	1674	
PD-12-086W	26	20792	1984	
PD-12-063	32	19713	1958	
PD-12-065	36	20039	1956	
P-23-046W	27	19142	1690	
P-12-010	25	20395	1986	
P-23-046W	22	19539	1660	
PD-12-059	26	19566	2049	
P-23-041W	29	20745	1830	
PD-12-061	34	19614	1836	
PD-12-063	29	20670	1741	
P-12-004W	24	20532	1810	
PD-12-058	22	20182	1934	
PD-12-060	22	20242	1706	
P-12-003W	33	20828	1943	
P-12-009	36	19209	1801	
PD-12-114	26	19509	1797	
PD-19-050W	30	19200	1874	
PD-12-069	30	19113	1648	
PD-19-050W	33	20509	2074	
P-07-072	27	20108	1780	
P-23-041W	34	19784	1738	
PD-12-098	29	20400	1820	
P-07-081	22	20806	1969	
P-23-042W	36	19494	2061	
P-12-004W	32	20430	1708	
PD-12-063	31	20439	1964	
P-07-072	21	20453	1649	
P-23-043W	32	20860	1894	
P-23-044W	29	20422	2073	
PD-12-086W	33	19155	1622	
PD-19-050W	33	19703	1856	
PD-19-050W	22	19947	2069	
PD-12-060	29	19347	1961	
PD-12-065	22	19347	1755	
P-23-050W	33	20592	1892	
P-12-011	25	20713	1898	
PD-12-071	28	19358	2029	
P-12-002W	27	20163	1637	
P-07-045	26	20499	2011	
P-07-075	28	19674	1761	

HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM		HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM	
P-23-041W	30	20035	1800			P-07-002	23	20066	1945		
P-07-022	28	20850	2002			P-07-078	25	20040	1644		
PD-12-073	25	19350	1781			P-12-003W	26	20619	1911		
P-07-009	35	20151	1679			P-07-078	24	19683	1882		
P-12-003W	21	19879	2021			P-12-011	21	20933	2088		
P-23-041W	26	19417	2043			P-07-024	29	20436	1866		
P-23-049	22	19751	1707			P-12-003W	30	20797	1663		
PD-12-086W	23	20335	1961			P-12-005	30	19238	2025		
P-23-053	34	20652	1709			P-12-003W	21	19936	1697		
P-12-011	28	19752	2042			P-12-004W	29	20081	1765		
P-23-049	31	20607	1631			P-07-078	31	20359	1905		
P-07-081	36	20731	1839			P-07-050	31	19651	1746		
PD-12-065	29	20636	1974			PD-22-010	27	19184	1929		
P-23-050W	24	20225	1847			P-07-024	35	20798	1787		
PD-12-072	25	20602	1869			P-23-053	30	20601	1625		
DDGT-P-08-05	25	20459	2068			PD-12-073	32	20358	1808		
P-12-011	29	19580	1689			P-07-078	34	19814	1866		
P-23-042W	29	19131	1792			P-12-009	34	20253	2068		
PD-12-086W	32	20269	1719			P-12-011	23	19901	1820		
P-12-011	32	19324	2015			P-12-003W	21	20549	1729		
P-07-022	30	20075	1975			P-23-046W	32	20587	1679		
P-07-078	35	19635	1924			DDGT-P-08-05	24	20873	1734		
P-12-004W	33	19283	2092			P-07-078	28	20504	1641		
P-07-003	30	20163	1928			P-07-078	21	19068	1874		
P-07-022	25	20992	1856			PD-22-008	31	20832	2042		
P-07-072	25	20588	1839			PD-22-010	34	19550	1662		
P-07-072	30	19587	1969			P-07-078	35	20264	1613		
P-12-007	26	19837	1810			P-12-009	23	19158	1955		
P-12-003W	26	19118	1831			P-23-043W	25	19269	2043		
P-07-022	31	20193	1732			P-12-009	32	19953	1784		
P-12-003W	35	19949	1764			P-23-044W	29	19583	1661		
P-12-011	25	19870	1785			P-07-001	30	20368	2077		
P-07-078	22	20519	1943			P-07-001	35	19669	1605		
P-07-024	22	20689	1797			P-23-050W	26	19431	1698		
P-12-003W	24	20245	1979			P-23-050W	26	19467	1621		
PD-12-060	32	20751	1607			P-07-078	28	20565	1808		
P-07-075	28	20045	1752			PD-12-114	22	20971	1853		
P-07-072	36	20101	1990			P-23-051	34	20016	1812		
P-07-058	23	19922	1989			P-07-001	31	20808	2074		
P-07-078	29	19376	1801			P-12-005	21	19157	2076		
P-12-003W	33	19520	1712			P-07-078	36	20023	2019		
P-07-078	36	19184	1910			P-07-078	27	19321	1792		
P-12-005	26	19527	1884			P-07-077	33	19279	1968		
P-12-007	25	19709	1956			P-12-008	33	19246	1880		
P-12-008	27	20918	2083			PD-12-059	21	20330	1796		
PD-12-062	31	19774	1604			P-12-007	33	19245	1822		
P-12-005	33	19587	1718			PD-12-059	31	19658	1659		
P-07-045	28	19202	1996			P-12-003W	34	19990	1852		
P-12-005	34	20163	1976			PD-12-058	23	19830	1821		
PD-12-060	29	19295	1792			P-12-008	33	20270	2048		
P-12-010	36	20732	1711			P-12-005	33	20251	1775		
P-07-078	23	20290	2032			P-12-005	28	19210	1836		
P-07-002	32	19654	1711			P-12-005	21	19895	1724		
PD-12-062	35	20179	2051			P-07-078	28	19586	1901		
PD-12-072	29	20608	1890			P-12-007	24	19620	1771		
P-07-003	30	19821	1737			PD-12-058	25	19678	1696		
PD-12-062	34	20503	1688			P-12-009	28	20069	1918		
	34	20041	1769								
	26	19222	1996			PD-12-086W	35	20526	1762		
	23	20858	1928			PD-12-058	34	19664	2086		
	22	19651	1749			P-07-024	32	19266	1728		
	22	20585	1780			PD-12-058	23	19526	2024		
	33	20683	1679			PD-12-058	34	20537	1943		
	27	19775	1982			PD-12-059	29	19343	1913		
						PD-12-059	32	19381	1680		
						P-23-046W	24	19817	1928		



HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM	HOLEID	GR (CPS)	SD (CPS)	LD (CPS)	IB SEAM
P-07-045	35	20231	1687		P-12-005	36	19287	2009	
P-07-078	36	19838	2048		P-23-043W	32	19194	1850	
P-12-004W	32	19781	1976		P-07-045	34	19758	1774	
P-12-009	24	19596	1940		P-07-078	26	19671	1839	
P-12-005	30	20508	2080		P-12-011	30	19794	1819	
P-07-078	36	19389	1679		P-12-011	35	19849	1889	
P-12-007	24	19230	1963		P-23-046W	21	20189	1670	
P-12-008	31	20166	1996		P-12-009	28	19884	1984	
P-07-072	22	19691	1902		P-23-051	27	19259	2046	
P-12-009	27	19254	1788		P-12-003W	27	19217	1765	
P-07-078	35	19841	1968		P-12-007	25	20536	2041	
P-07-078	36	19243	2067		P-23-046W	34	20089	1902	
P-12-007	35	19527	2069		P-12-009	31	19534	1944	
P-12-008	30	20489	1757		P-23-043W	25	20466	1692	
P-12-003W	30	19460	1970		P-23-053	22	19489	2030	
P-07-072	21	20134	1801		P-23-051	31	19961	1671	
P-07-072	28	20004	1734		P-12-011	21	20275	1900	
P-12-008	22	20322	1904		P-07-072	25	19810	1862	
P-23-049	28	19545	2058		DDGT-P-08-05	24	19871	2069	
P-07-078	33	20349	1686		P-12-009	28	19870	1927	
P-12-005	30	19789	1654		P-23-049	32	20533	1763	
P-12-007	25	20216	2076		P-23-046W	33	20224	1723	
P-12-008	25	19780	1711		P-23-049	25	19664	1746	
P-07-072	21	20184	1681		P-12-008	28	19905	1786	
P-07-072	32	19244	1675						



Optimized using
trial version
www.balesio.com

Lampiran 4 Ukuran *ironstone siderite* pada interburden antara seam K-L

HOLEID	KETEBALAN	HOLEID	KETEBALAN
P-07-008	0.60	P-07-088	0.30
P-07-008	0.20	P-07-088	0.20
P-07-008	0.40	P-07-089	0.20
P-07-008	0.60	P-07-089	0.20
P-07-008	0.30	P-07-089	0.20
P-07-011	0.30	P-07-089	0.20
P-07-011	0.20	P-07-089	0.20
P-07-011	0.30	P-07-089	0.20
P-07-011	0.20	P-07-089	0.20
P-07-011	0.32	P-07-089	0.20
P-07-011	0.20	P-07-089	0.20
P-07-011	0.20	P-07-089	0.20
P-07-011	0.16	P-07-089	0.40
P-07-011	0.16	P-19-003W	0.54
P-07-011	0.18	P-19-003W	0.21
P-07-011	0.50	P-19-009	0.50
P-07-026	0.20	P-19-016	0.20
P-07-026	0.60	P-19-021	0.40
P-07-040	0.20	P-19-027	0.40
P-07-040	0.20	P-19-027	0.30
P-07-042	0.32	PD-19-001W	0.28
P-07-042	0.30	PD-19-010W	0.10
P-07-042	0.40	PD-19-012	0.20
P-07-042	0.22	PD-19-023W	0.20
P-07-042R	0.40	PD-19-029W	0.30
P-07-042R	0.30	PD-11-041	0.54
P-07-042R	0.22	P-07-067	0.52
P-07-042R	0.16	PD-11-041	0.36
P-07-042R	0.24	P-07-036	0.30
P-07-042R	0.85	P-07-067	0.28
P-07-083	0.20	P-07-036	0.24
P-07-083	0.20	P-07-067	0.20
P-07-083	0.10	P-07-067	0.19
P-07-088	0.20	P-07-067	0.19
P-07-088	0.26	P-07-067	0.17
P-07-088	0.20	P-07-067	0.15
P-07-088	0.20	P-07-067	0.14
P-07-088	0.20	P-07-067	0.12



Lampiran 5 Ukuran *ironstone siderite* pada interburden antara seam L-M

HOLEID	KETEBALAN	HOLEID	KETEBALAN
P-07-008	0.24	P-19-004W	0.30
P-07-033	0.12	P-19-004W	0.20
P-07-033	0.04	P-19-005W	0.84
P-07-040	0.30	P-19-005W	0.78
P-07-041	0.30	P-19-006W	0.22
P-07-041	0.40	P-19-006W	0.16
P-07-042	0.20	P-19-006W	0.42
P-07-042	0.16	P-19-008W	0.40
P-07-042	0.14	P-19-008W	0.40
P-07-042	0.14	P-19-008W	0.26
P-07-042	0.44	P-19-009	0.20
P-07-042R	0.52	P-19-009	0.40
P-07-043	0.30	P-19-010W	0.62
P-07-048	0.40	P-19-010W	0.46
P-07-048	0.20	P-19-010W	0.80
P-07-053	0.30	P-19-010W	0.28
P-07-053	0.06	P-19-011	0.04
P-07-060	0.20	P-19-011	0.80
P-07-063	0.50	P-19-011	0.34
P-07-066	0.40	P-19-011	0.64
P-07-070	0.14	P-19-012W	0.30
P-07-070	0.30	P-19-013	0.52
P-07-083	0.40	P-19-013	0.20
P-07-083	0.20	P-19-013	0.30
P-07-083	0.20	P-19-013	0.36
P-07-083	0.20	P-19-016	0.40
P-07-088	0.40	P-19-020	0.40
P-07-089	0.20	P-19-021	0.30
P-07-089	0.20	P-19-021	0.60
P-07-091	0.20	P-19-024	0.30
P-07-091	0.20	P-19-024	0.38
P-07-091	0.20	P-19-026	0.60
P-07-092	0.20	P-19-027	0.30
DDGT-P-08-08	0.18	P-19-027	0.40
DDGT-P-08-08	0.20	P-19-028	0.20
DDGT-P-08-08	0.22	P-19-028	0.20
DDGT-P-08-08	0.34	P-19-028	0.20
PD-11-004	0.28	P-19-033W	0.30
PD-11-004	0.20	P-19-033W	0.30
P-19-001	0.64	P-19-034	0.30
P-19-002W	0.14	PD-19-003W	0.36
P-19-002W	0.22	PD-19-054W	0.22
P-19-002W	0.18	PD-19-054W	0.16
P-19-003W	0.50	PD-19-054W	0.62
P-19-003W	0.41	PD-19-054W	0.12
P-19-003W	0.18	PD-19-099W	0.40
P-19-003W	0.22	PD-21-029W	0.31



Lampiran 6 Ukuran *ironstone siderite* pada interburden antara seam M-N

HOLEID	KETEBALAN	HOLEID	KETEBALAN
P-07-033	0.32	P-19-009	0.42
P-07-042	0.12	P-19-011	0.18
P-07-042	0.26	P-19-013	0.5
P-07-042	0.16	P-19-013	0.16
P-07-042R	0.12	P-19-014W	0.38
P-07-053	0.3	P-19-015	0.22
P-07-065	0.42	P-19-016	0.4
P-07-066	0.24	P-19-018W	0.3
P-07-066	0.24	P-19-019W	0.6
P-07-091	0.4	P-19-021	0.5
PD-11-006	0.35	P-19-021	0.2
PD-11-012	0.4	P-19-022W	0.4
PD-11-020	0.84	P-19-023	0.4
PD-11-030	0.44	P-19-023	0.3
PD-11-034	0.2	P-19-024	0.4
PD-11-037	0.34	P-19-024	0.24
PD-11-038	0.34	P-19-026	0.4
PD-11-044	0.88	P-19-026	0.4
PD-12-088W	0.08	P-19-028	0.6
PD-12-089W	0.26	P-19-028	0.2
PD-12-090W	0.46	P-19-034	0.46
PD-12-092W	0.16	PD-19-006W	0.2
PD-12-095W	0.88	PD-19-029W	0.2
PD-12-097W	0.18	PD-19-029W	0.2
PD-12-104W	0.38	PD-19-029W	0.3
PD-12-104W	0.28	PD-19-043	0.14
PD-12-104W	0.3	PD-19-059W	0.34
PD-12-109W	0.48	PD-21-029W	0.44
PD-12-111W	0.17	P-07-067	0.3
PD-12-112W	0.22	P-07-067	0.25
PD-12-113W	0.24	P-07-067	0.21
PD-12-113W	0.26	P-07-067	0.2
PD-12-113W	0.22	P-07-067	0.2
P-19-001	0.22	P-07-067	0.18
P-19-003W	0.2	P-07-067	0.11
P-19-005W	0.2	P-07-067	0.08
P-19-008W	0.2		



Lampiran 7 Ukuran *ironstone siderite* pada interburden antara seam N-O

HOLEID	KETEBALAN	HOLEID	KETEBALAN
P-07-030	0.18	PD-12-089W	0.10
P-07-033	0.50	PD-12-092W	0.50
P-07-033	0.78	PD-12-103W	0.60
P-07-033	0.28	PD-12-109W	0.74
P-07-039	0.70	PD-12-111W	0.40
P-07-041	0.50	PD-12-112W	0.30
P-07-042R	0.30	PD-12-113W	0.74
P-07-043	0.30	PD-12-113W	0.64
P-07-048	0.40	P-19-001	0.28
P-07-052	0.32	P-19-001	0.48
P-07-053	0.40	P-19-001	0.20
P-07-055	0.66	P-19-002W	0.12
P-07-060	0.30	P-19-004W	0.42
P-07-060	0.20	P-19-005W	0.38
P-07-065	0.60	P-19-009	0.40
P-07-065	0.36	P-19-010W	0.42
P-07-066	0.28	P-19-010W	0.30
P-07-066	0.60	P-19-010W	0.62
P-07-068	0.20	P-19-011	0.38
P-07-068	0.22	P-19-011	0.28
P-07-070	0.10	P-19-013	0.32
P-07-070	0.12	P-19-013	0.28
P-07-091	0.40	P-19-013	0.30
P-07-091	0.20	P-19-015	0.20
P-07-091	0.20	P-19-015	0.18
P-07-092	0.20	P-19-016	0.72
P-07-092	0.50	P-19-016	0.50
P-07-092	0.20	P-19-016	0.36
P-07-092R	0.30	P-19-018W	0.40
P-07-092R	0.70	P-19-019W	0.20
P-07-092R	0.20	P-19-020	0.30
DDGT-P-08-07	0.58	P-19-022W	0.40
PD-11-003	0.26	P-19-022W	0.30
PD-11-004	0.10	P-19-023	0.30
PD-11-012	0.50	P-19-023	0.20
PD-11-015	0.30	P-19-024	0.24
PD-11-018	0.26	P-19-027	0.40
PD-11-019	0.26	P-19-027	0.30
PD-11-019	0.42	P-19-027	0.40
PD-11-020	0.24	P-19-027	0.20
PD-11-022	0.54	P-19-027	0.20
PD-11-030	0.40	P-19-033W	0.20
PD-11-030	0.70	P-19-033W	0.36
PD-11-034	0.20	P-19-034	0.20
PD-11-045	0.59	DDGT-P-19-02	0.34
PD-12-087W	0.12	P-21-001	0.34
PD-12-088W	0.36	P-21-001	0.52



Lampiran 8 Ukuran *ironstone siderite* pada interburden antara seam O-P

HOLEID	KETEBALAN	HOLEID	KETEBALAN
P-07-012	0.12	P-07-075	0.3
P-07-012	0.12	P-07-075	0.33
P-07-012	0.14	P-07-075	0.35
P-07-012	0.2	P-07-075	0.37
P-07-012	0.22	P-07-075	0.38
P-07-012	0.44	P-07-075	0.4
P-07-024	0.13	P-07-075	0.6
P-07-024	0.14	P-07-077	0.12
P-07-024	0.21	P-07-077	0.18
P-07-024	0.35	P-07-077	0.26
P-07-049	0.08	P-07-077	0.28
P-07-049	0.29	P-07-077	0.35
P-07-050	0.22	P-07-077	0.4
P-07-050	0.25	P-19-025	0.28
P-07-050	0.33	P-19-025	0.39
P-07-050	0.38	P-19-025	0.59
P-07-050	0.65	P-19-031W	0.31
P-07-058	0.08	P-19-031W	0.34
P-07-058	0.09	P-19-031W	0.5
P-07-058	0.2	P-23-038	0.32
P-07-058	0.23	P-23-038	0.47
P-07-072	0.1	P-23-042W	0.18
P-07-072	0.15	P-23-042W	0.2
P-07-072	0.18	P-23-042W	0.35
P-07-072	0.2	P-23-042W	0.41
P-07-072	0.2	P-23-042W	0.42
P-07-072	0.24	PD-12-127W	0.2
P-07-072	0.3	PD-12-127W	0.2
P-07-072	0.32	PD-12-127W	0.28
P-07-072	0.38	PD-12-127W	0.29
P-07-072	0.5	PD-12-127W	0.43
P-07-072	0.72	PD-12-127W	0.52
P-07-075	0.15	PD-19-102W	0.35
P-07-075	0.19	PD-19-102W	0.38
P-07-075	0.2	PD-21-008	0.42
P-07-075	0.2	PD-21-013	0.67
P-07-075	0.21	PD-21-020	0.15
P-07-075	0.22	PD-21-020	0.2
P-07-075	0.23	PD-21-020	0.26
P-07-075	0.24	PD-21-020	0.32
P-07-075	0.26	PD-23-045W	0.17
P-07-075	0.27	PD-23-045W	0.32
P-07-075	0.28	PD-23-045W	0.47
P-07-075	0.29	PD-23-045W	0.6
P-07-075	0.3		



Lampiran 9 Ukuran *ironstone siderite* pada interburden antara seam P-Q

HOLEID	KETEBALAN	HOLEID	KETEBALAN
P-07-009	0.05	P-07-003	0.26
P-07-009	0.06	P-07-009	0.27
P-07-012	0.07	P-07-046	0.27
P-07-009	0.08	PD-12-066	0.27
P-07-024	0.09	P-07-045	0.27
P-07-045	0.1	P-07-049	0.27
P-07-072	0.1	P-07-081	0.28
P-07-049	0.1	P-07-049	0.28
P-07-049	0.11	PD-12-063	0.28
P-07-050	0.11	P-07-081	0.3
P-07-009	0.12	P-12-007	0.3
P-07-022	0.12	PD-12-114	0.3
P-07-045	0.13	P-19-025	0.3
P-07-049	0.13	P-07-058	0.3
P-07-012	0.13	DDGT-P-08-05	0.3
P-07-046	0.13	P-07-077	0.31
P-07-046	0.13	P-07-045	0.31
P-07-058	0.13	P-07-049	0.31
P-07-072	0.13	PD-12-068	0.32
PD-12-066	0.14	P-07-081	0.32
P-07-024	0.15	P-07-050	0.33
P-07-049	0.16	P-07-081	0.33
P-07-049	0.16	P-19-031W	0.33
P-07-046	0.17	P-07-072	0.35
P-07-012	0.18	P-07-058	0.35
P-07-012	0.18	P-07-081	0.35
P-07-058	0.18	P-19-031W	0.35
P-23-041W	0.18	PD-12-114	0.35
P-07-045	0.18	P-19-031W	0.36
P-07-022	0.19	P-07-072	0.37
P-07-045	0.19	P-07-072	0.37
P-07-058	0.19	P-12-007	0.37
PD-12-066	0.2	P-23-042W	0.37
P-07-024	0.2	PD-12-058	0.37
P-23-036W	0.2	PD-12-061	0.38
PD-12-063	0.2	PD-12-061	0.38
PD-12-068	0.2	P-07-081	0.39
P-07-024	0.21	PD-19-050W	0.39
P-07-045	0.21	PD-23-045W	0.39
P-07-046	0.21	P-07-003	0.4
P-07-050	0.21	P-07-009	0.4
P-07-058	0.21	P-07-072	0.4
P-07-012	0.21	P-07-072	0.4
P-07-024	0.22	PD-12-063	0.4
P-07-050	0.22	P-07-072	0.41
P-07-049	0.23	PD-12-073	0.41
P-19-031W	0.23	P-12-011	0.42
PD-12-066	0.23	P-19-025	0.42
P-07-009	0.23	P-07-050	0.43
P-07-024	0.23	PD-12-064	0.43
P-07-022	0.24	PD-12-067	0.43
P-07-072	0.24	P-07-072	0.43
PD-12-065	0.24	PD-12-061	0.44
P-19-031W	0.24	P-23-042W	0.44
P-19-025	0.24	P-19-025	0.45
P-07-046	0.24	P-19-031W	0.45
P-07-049	0.24	P-23-042W	0.45
PD-12-073	0.24	PD-12-064	0.45
P-07-081	0.25	PD-12-065	0.45
2-063	0.25	PD-12-068	0.45
1-045W	0.25	PD-12-064	0.45
7-024	0.26	P-23-041W	0.48
7-072	0.26	P-07-072	0.48
041W	0.26	DDGT-P-08-05	0.5
2-066	0.26	P-07-003	0.52
3-025	0.26		



HOLEID	KETEBALAN
P-07-050	0.55
P-23-041W	0.55
P-23-042W	0.55
PD-12-064	0.55
P-23-042W	0.57
P-23-042W	0.6
P-07-024	0.6
P-07-077	0.61

HOLEID	KETEBALAN
PD-12-068	0.62
PD-12-063	0.62
PD-12-065	0.66
P-23-038	0.68
P-23-038	0.73
P-23-036W	0.75
P-07-009	0.77



Optimized using
trial version
www.balesio.com

Lampiran 10 Ukuran *ironstone siderite* pada interburden antara seam Q-R

HOLEID	KETEBALAN	HOLEID	KETEBALAN
P-07-045	0.06	P-12-008	0.25
P-07-009	0.09	PD-12-058	0.25
P-07-001	0.1	PD-12-086W	0.25
P-07-075	0.11	PD-12-098	0.25
PD-12-086W	0.12	PD-12-098	0.25
PD-12-086W	0.12	P-07-024	0.26
P-12-009	0.13	P-12-009	0.26
PD-12-073	0.13	P-12-011	0.26
P-07-001	0.13	P-07-081	0.26
P-23-051	0.13	PD-12-063	0.26
P-07-024	0.14	PD-12-069	0.26
PD-12-073	0.14	PD-12-071	0.26
P-12-002W	0.15	P-07-009	0.27
P-07-075	0.15	PD-12-059	0.27
PD-12-086W	0.15	PD-12-086W	0.27
P-07-049	0.16	P-12-011	0.27
PD-12-072	0.16	PD-12-062	0.28
PD-12-098	0.16	PD-12-064	0.28
PD-12-100	0.16	P-07-050	0.28
P-07-009	0.17	P-07-058	0.28
P-07-024	0.17	PD-12-059	0.28
P-12-008	0.17	PD-12-071	0.28
P-07-024	0.18	P-07-081	0.29
P-07-045	0.18	PD-12-067	0.29
P-07-049	0.18	P-23-050W	0.3
P-12-009	0.18	PD-12-086W	0.3
PD-12-064	0.18	PD-12-100	0.3
PD-12-067	0.18	P-12-002W	0.31
PD-12-067	0.18	PD-12-067	0.31
PD-12-071	0.18	PD-12-069	0.31
PD-12-071	0.18	P-07-002	0.31
PD-12-086W	0.18	PD-12-086W	0.31
PD-12-072	0.19	PD-12-058	0.32
P-07-050	0.19	PD-12-058	0.32
P-07-072	0.2	PD-12-061	0.32
P-12-009	0.2	PD-12-062	0.32
PD-12-063	0.2	PD-12-098	0.32
PD-12-064	0.2	PD-12-098	0.32
PD-12-071	0.2	PD-12-086W	0.33
PD-12-098	0.2	PD-12-063	0.33
PD-12-064	0.2	PD-12-065	0.33
P-07-009	0.2	P-23-046W	0.34
P-23-044W	0.2	P-12-010	0.34
P-23-051	0.2	P-23-046W	0.34
P-07-050	0.21	PD-12-059	0.35
P-12-009	0.21	P-23-041W	0.35
PD-12-058	0.21	PD-12-061	0.35
PD-12-098	0.21	PD-12-063	0.35
PD-12-098	0.21	P-12-004W	0.35
P-07-050	0.22	PD-12-058	0.35
P-07-081	0.22	PD-12-060	0.35
P-12-011	0.22	P-12-003W	0.35
PD-12-086W	0.22	P-12-009	0.36
PD-12-069	0.22	PD-12-114	0.36
PD-12-067	0.22	PD-19-050W	0.37
P-07-045	0.23	PD-12-069	0.38
P-12-011	0.23	PD-19-050W	0.38
PD-12-059	0.23	P-07-072	0.39
PD-12-067	0.23	P-23-041W	0.39
2-072	0.23	PD-12-098	0.4
1-086W	0.23	P-07-081	0.4
2-010	0.24	P-23-042W	0.4
2-010	0.24	P-12-004W	0.41
2-010	0.24	PD-12-063	0.41
7-009	0.25	P-07-072	0.43
7-049	0.25	P-23-043W	0.43



HOLEID	KETEBALAN
P-23-044W	0.43
PD-12-086W	0.43
PD-19-050W	0.43
PD-19-050W	0.44
PD-12-060	0.45
PD-12-065	0.46
P-23-050W	0.47
P-12-011	0.48
PD-12-071	0.48
P-12-002W	0.48
P-07-045	0.49
P-07-075	0.51
P-23-041W	0.52
P-07-022	0.52
PD-12-073	0.53
P-07-009	0.54
P-12-003W	0.54

HOLEID	KETEBALAN
P-23-041W	0.56
P-23-049	0.57
PD-12-086W	0.58
P-23-053	0.6
P-12-011	0.6
P-23-049	0.6
P-07-081	0.61
PD-12-065	0.62
P-23-050W	0.64
PD-12-072	0.64
DDGT-P-08-05	0.7
P-12-011	0.73
P-23-042W	0.8
P-07-001	0.44
P-07-078	0.43
PD-12-059	0.38
PD-12-086W	0.37



Optimized using
trial version
www.balesio.com

Lampiran 11 Ukuran *ironstone siderite* pada interburden antara seam R-S

HOLEID	KETEBALAN	HOLEID	KETEBALAN
P-12-011	0.07	P-23-038	0.27
P-07-022	0.09	PD-12-062	0.27
P-07-078	0.12	P-07-002	0.29
P-12-004W	0.12	P-12-003W	0.29
P-07-003	0.12	P-07-078	0.3
P-07-022	0.13	P-12-011	0.3
P-07-072	0.13	P-07-024	0.31
P-07-072	0.14	P-12-003W	0.31
P-12-007	0.15	P-12-005	0.31
P-12-003W	0.16	P-12-003W	0.32
P-07-022	0.16	P-12-004W	0.32
P-12-003W	0.16	P-07-078	0.33
P-12-011	0.17	P-07-050	0.33
P-07-078	0.17	PD-22-010	0.35
P-07-024	0.18	P-07-024	0.36
P-12-003W	0.18	P-23-053	0.36
PD-12-060	0.18	PD-12-073	0.36
P-07-075	0.18	P-07-078	0.37
P-07-072	0.18	P-12-009	0.37
P-07-058	0.19	P-12-011	0.37
P-07-078	0.19	P-12-003W	0.39
P-12-003W	0.19	P-23-046W	0.4
P-07-078	0.19	DDGT-P-08-05	0.4
P-12-005	0.2	P-07-078	0.4
P-12-007	0.2	P-07-078	0.41
P-12-008	0.2	PD-22-008	0.42
PD-12-062	0.2	PD-22-010	0.42
P-12-005	0.2	P-07-078	0.45
P-07-045	0.21	P-12-009	0.45
P-12-005	0.22	P-23-043W	0.45
PD-12-060	0.22	P-12-009	0.48
P-12-010	0.22	P-23-044W	0.49
P-07-078	0.23	P-07-001	0.5
P-07-002	0.23	P-07-001	0.58
PD-12-062	0.23	P-23-050W	0.59
PD-12-072	0.23	P-23-050W	0.63
P-07-003	0.24	P-07-078	0.65
PD-12-062	0.24	PD-12-114	0.66
PD-12-067	0.24	P-23-051	0.66
PD-12-072	0.24	P-07-001	0.7
P-12-007	0.24	P-12-005	0.73
P-12-007	0.26	P-07-078	0.88
P-12-011	0.26		



Lampiran 12 Ukuran *ironstone siderite* pada interburden antara seam S-T

HOLEID	KETEBALAN
P-07-078	0.04
P-07-077	0.08
P-12-008	0.08
PD-12-059	0.12
P-12-007	0.14
PD-12-059	0.14
P-12-003W	0.15
PD-12-058	0.16
P-12-008	0.17
P-12-005	0.18
P-12-005	0.18
P-12-005	0.19
P-07-078	0.2
P-12-007	0.2
PD-12-058	0.21
P-12-009	0.22
PD-12-086W	0.22
PD-12-058	0.23
P-07-024	0.23
PD-12-058	0.23
PD-12-058	0.24
PD-12-059	0.24
PD-12-059	0.24
P-23-046W	0.24
P-07-045	0.25
P-07-078	0.25
P-12-004W	0.25
P-12-009	0.25
P-12-005	0.26
P-07-078	0.27
P-12-007	0.27
P-12-008	0.27
P-07-072	0.27
P-12-009	0.28
P-07-078	0.31
P-07-078	0.32
P-12-007	0.32
P-12-008	0.32
P-12-003W	0.33
P-07-072	0.33
P-07-072	0.33
P-12-008	0.33
P-23-049	0.33
P-07-078	0.34
P-12-005	0.34
P-12-007	0.35
P-12-008	0.37
P-07-072	0.37
P-07-072	0.4
P-12-005	0.4
P-23-043W	0.4
P-07-045	0.4
P-07-078	0.4
P-12-011	0.41
P-12-011	0.41
P-23-046W	0.41
P-12-009	0.44
P-23-051	0.45
P-12-003W	0.46
2-007	0.46
046W	0.46
2-009	0.48
043W	0.52
3-053	0.52
3-051	0.53
2-011	0.57

HOLEID	KETEBALAN
P-07-072	0.58
DDGT-P-08-05	0.6
P-12-009	0.62
P-23-049	0.64
P-23-046W	0.65
P-23-049	0.66
P-12-008	0.67



Lampiran 13 Peta Stasiun Pengamatan

Optimized using
trial version
www.balesio.com

Lampiran 14 Peta Titik Sumur

Optimized using
trial version
www.balesio.com

Lampiran 15 Penampang Stratigrafi

Optimized using
trial version
www.balesio.com



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET, DAN TEKNOLOGI
UNIVERSITAS HASANUDDIN
FAKULTAS TEKNIK
DEPARTEMEN TEKNIK GEOLOGI
PROGRAM STUDI TEKNIK GEOLOGI

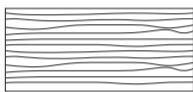
PENAMPANG STRATIGRAFI

OLEH:
REDONDO
D061201012

LOKASI : TELUK BAYUR, KABUPATEN BERAU, PROVINSI KALIMANTAN TIMUR
DAERAH : RINGROAD PARAPATAN
SKALA : TIDAK SEBENARNYA

KETERANGAN:

STRUKTUR SEDIMEN



: LAMINASI

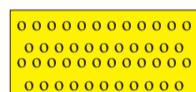


: CROSS BEDDING



: LOAD STRUCTURE

SIMPOL LITOLOGI



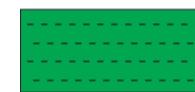
: BATUPASIR SEDANG



: BATUBARA



: BATUPASIR HALUS



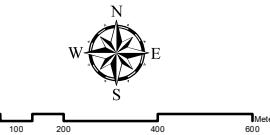
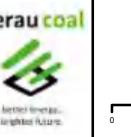
: BATULEMPUNG



: BATUPASIR SANGAT HALUS

MASA	UMUR		FORMASI	SATUAN	TEBAL (m)	LITOLOGI DAN UKURAN BUTIR	P E M E R I A N										LINGKUNGAN PENGENDAPAN				
	ZAMAN	KALA					L	L	P	P	P	P	S	K	K	R	R				
K E N O Z O I K U M	MIOSSEN	SEN AWAL-MIOSEN TENGAH	L A T I	BATUPASIR	6,84		Dijumpai batuan sedimen dalam keadaan lapuk berwarna kuning kehitaman dan segar berwarna abu-abu. Batuan ini memiliki ukuran butir pasir sedang (1/4-1/2 mm). Batuan ini bernama <u>Batupasir sedang</u> (Wentworth, 1922).		Dijumpai batuan sedimen dalam keadaan lapuk berwarna kuning kecokelatan dan segar berwarna abu-abu. Batuan ini memiliki ukuran butir pasir halus (1/8-1/4 mm). Batuan ini bernama <u>Batupasir halus</u> (Wentworth, 1922).		Dijumpai batuan sedimen dalam keadaan lapuk berwarna abu-abu kecokelatan dan segar berwarna abu-abu. Batuan ini memiliki ukuran butir pasir sangat halus (1/16-1/8 mm). Nama batuan ini adalah <u>Batupasir sangat halus</u> (Wentworth, 1922).	Terdapat sisipan <u>batulempung</u> dengan lapuk berwarna merah kecokelatan dan segar berwarna abu-abu gelap. Nama batuan ini adalah <u>Batulempung</u> (Wentworth, 1922)	Dijumpai Siderite dengan ukuran bervariasi mulai dari 3-15 cm	struktur sedimen berupa <i>load structure</i> , <i>bedding</i> , dan <i>through lamination</i> .		<i>CREVASSÉ SPLAY INTERDISTRIBUTORY BAY</i>	<i>LEVEE CHANNEL</i>	<i>CREVASSÉ SPLAY INTERDISTRIBUTORY BAY</i>	<i>CREVASSÉ SPLAY INTERDISTRIBUTORY BAY</i>	<i>LEVEE CHANNEL</i>	<i>Transitional Lower Delta Plain</i>
				BATUBARA	0,58		Dijumpai batuan sedimen dalam keadaan lapuk berwarna kuning keemasan dan segar berwarna hitam. Batuan ini memiliki pecahan konkoidal sampai sub-konkoidal. Memiliki kilap kaca dan mudah hancur. Nama batuan ini adalah <u>Batubara</u> .														
				ATU- LEMPUNG	2,58		Dijumpai batuan sedimen dalam keadaan segar berwarna abu kehitaman dan lapuk berwarna abu kekuningan. Batuan ini memiliki ukuran butir lempung (<1/256 mm). Nama batuan ini adalah <u>Batulempung</u> (Wentworth, 1922).														

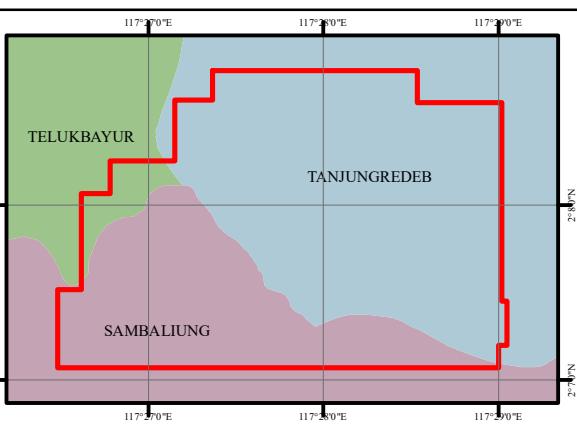
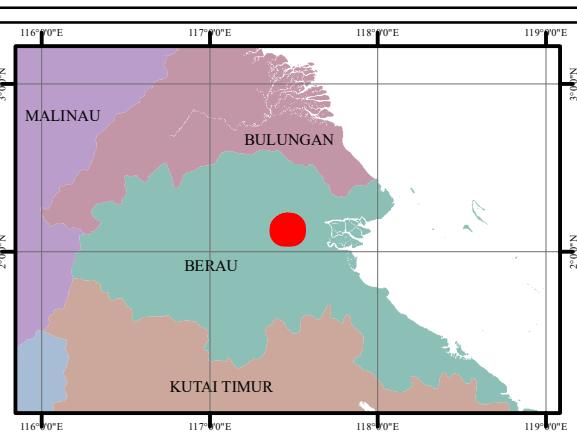
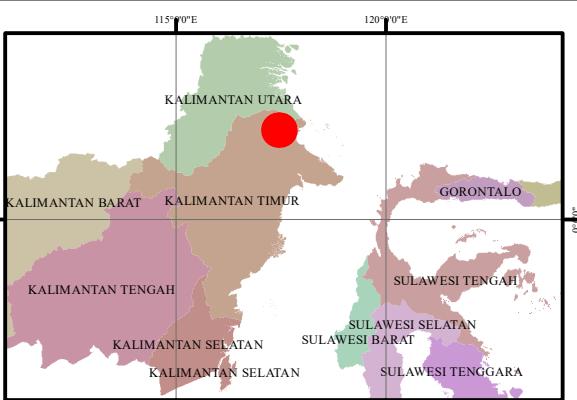
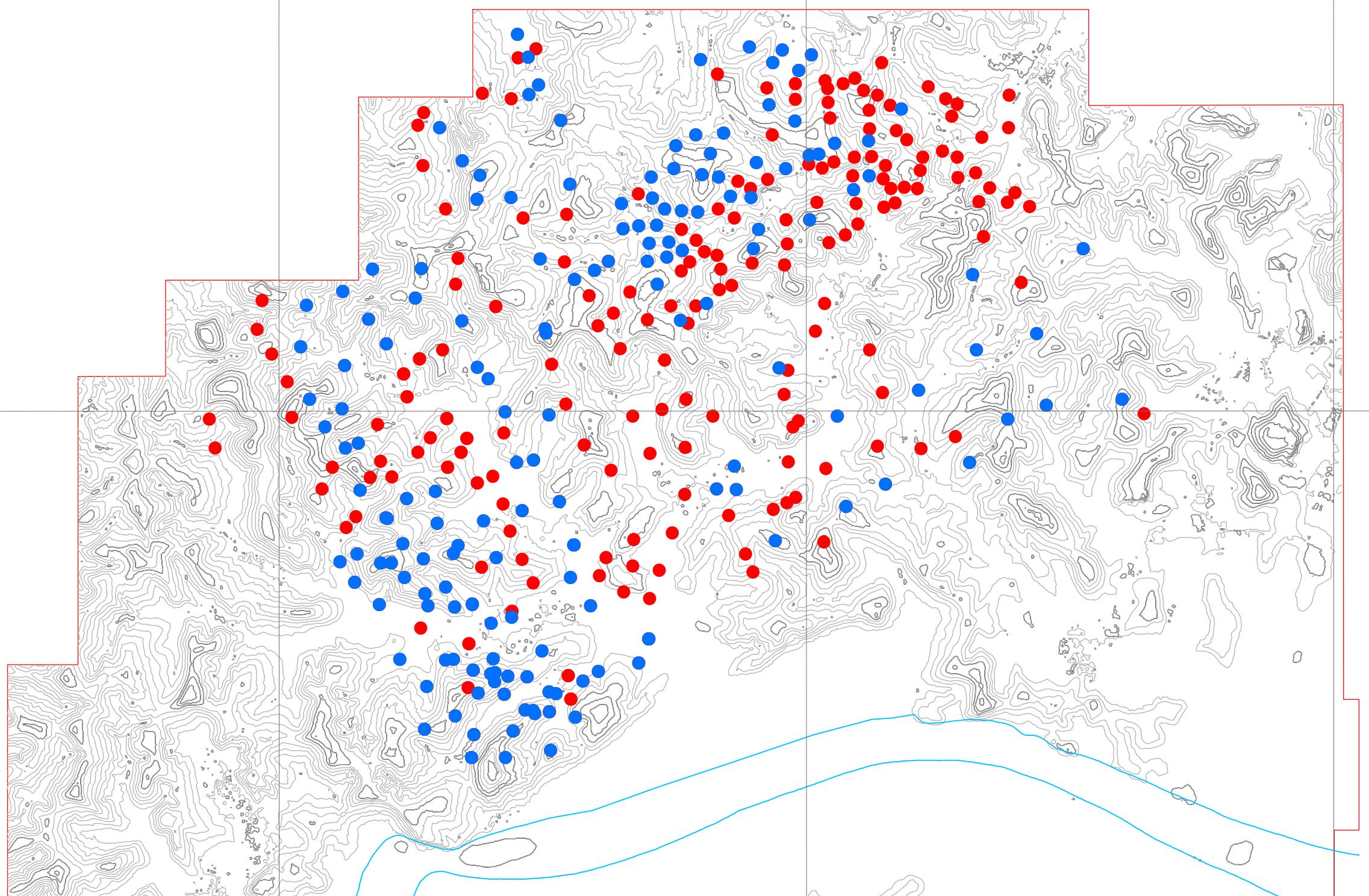




**PETA TITIK SUMUR
SITE PARAPATAN MINING OPERATION
PT. BERAU COAL**

KETERANGAN

- SUMUR DIJUMPPI SIDERITE
- SUMUR TANPA SIDERITE
- KONTUR
- SUNGAI
- KONSESI



Optimized using
trial version
www.balesio.com

117°27'0"E

117°28'0"E

117°29'0"E

2°9'0"N

2°9'0"N

2°8'0"N

2°8'0"N

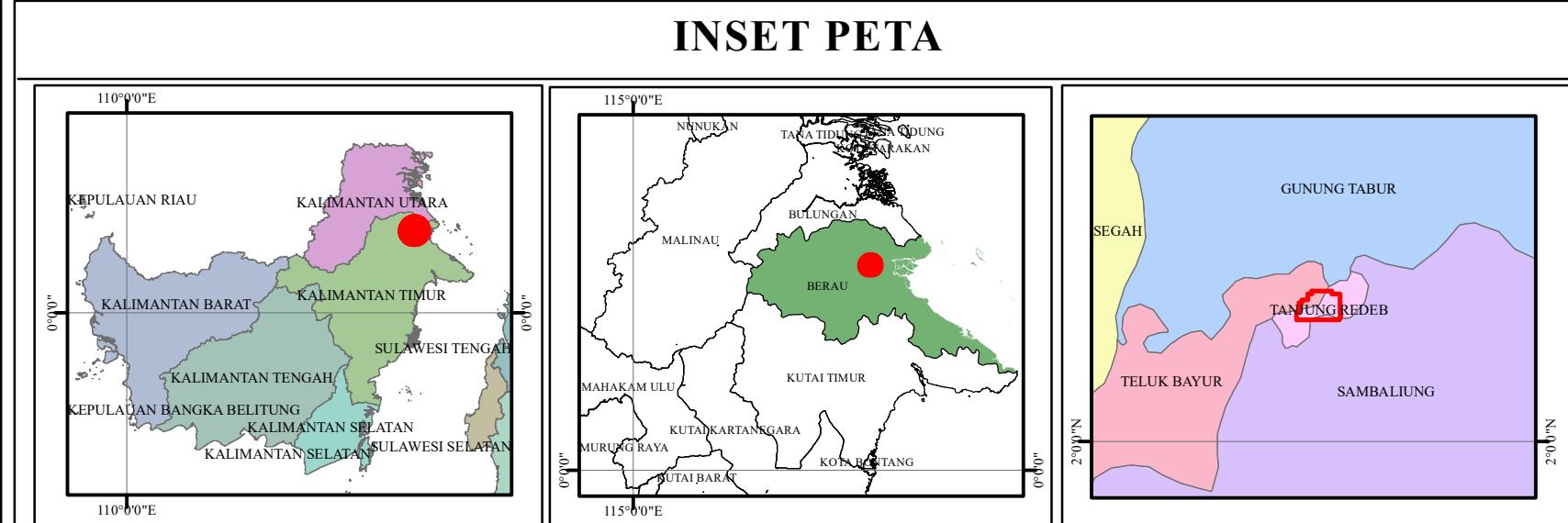
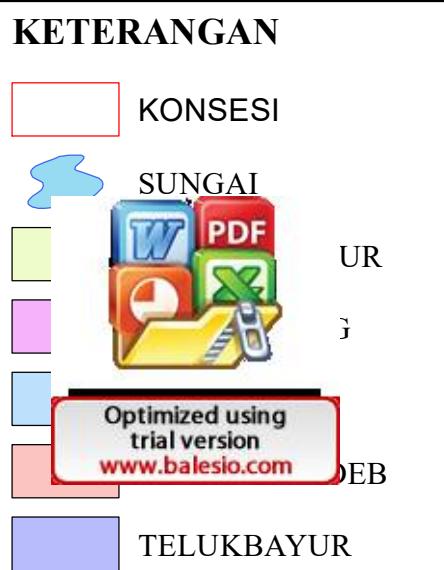
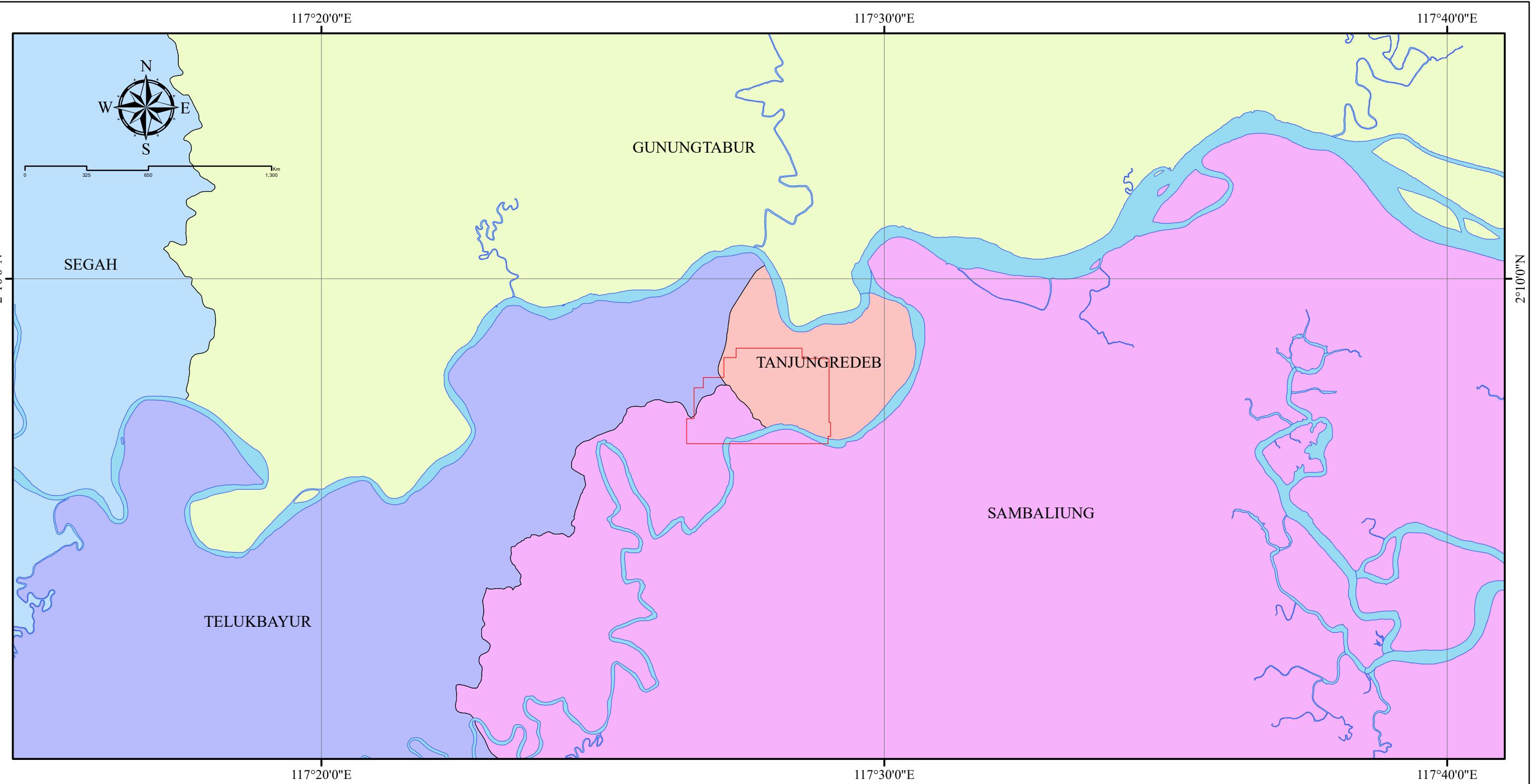
2°7'0"N

2°7'0"N

117°27'0"E

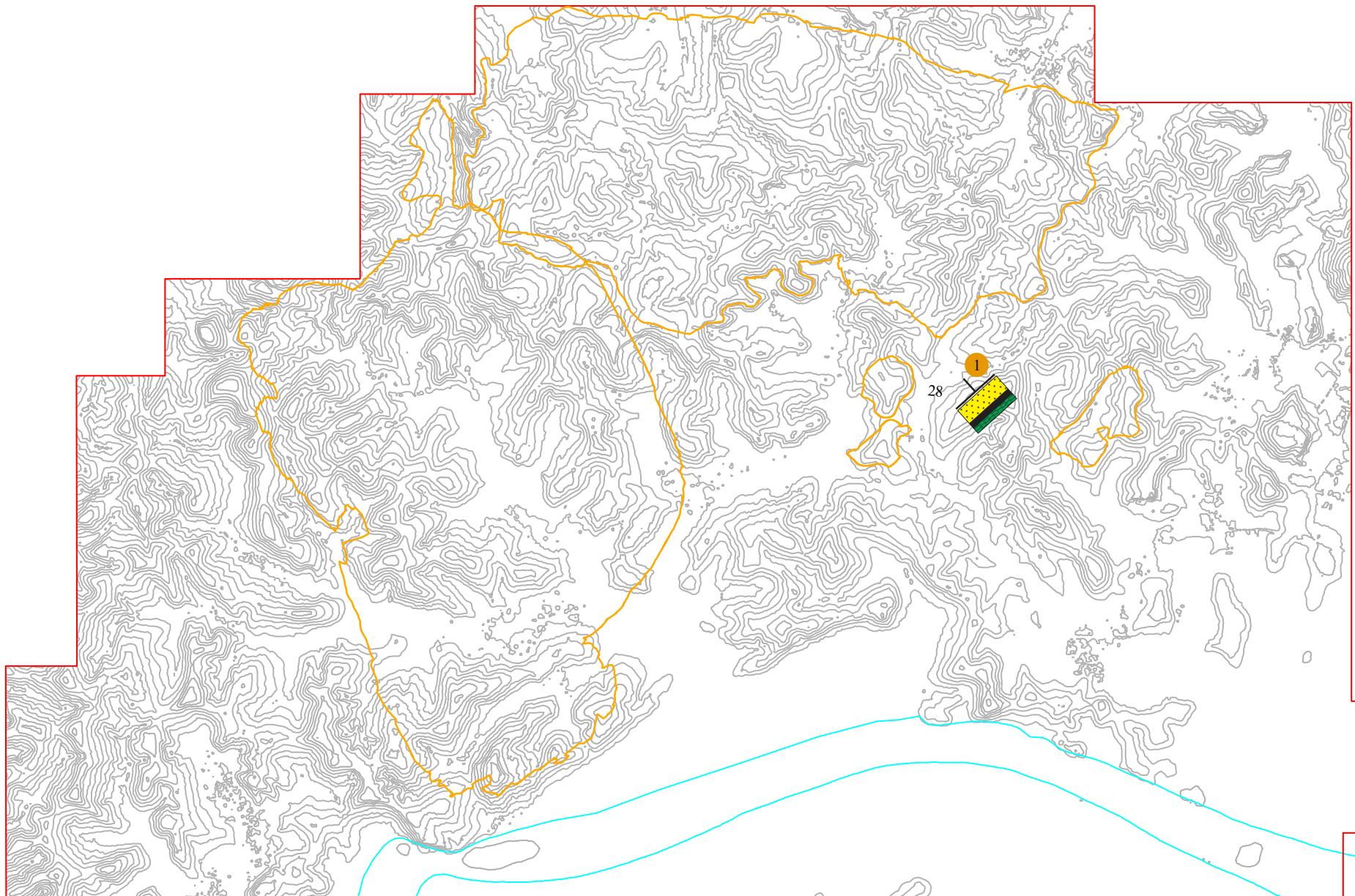
117°28'0"E

117°29'0"E

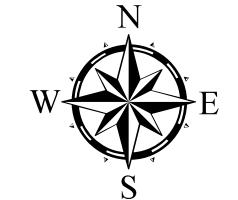


PETA STASIUN PENGAMATAN

Area Parapatan, Kecamatan Teluk Bayur, Kabupaten Berau
Provinsi Kalimantan Timur



Optimized using
trial version
www.balesio.com



0 245 490 980 1,470 1,960 Meter

INTERVAL KONTUR 5 METER

OLEH:
REDONDO
D061201012

BERAU
2023

KETERANGAN:

- | | |
|----------------------|------------|
| : NOMOR STASIUN | : KONTUR |
| : KEDUDUKAN BATUAN | : BODY PIT |
| : SATUAN BATUPASIR | : KONSESI |
| : SATUAN BATUBARA | : SUNGAI |
| : SATUAN BATULEMPUNG | |

