

Certificate No. ....  
March 2, 2021

Banjarmasin  
Jl. Jend. A. Yani Km 7,8 No 21A Banjarmasin70654, Indonesia  
Phone/Facs: +62 511 3271080/3258111  
Email: min.bjm@sucofindo.co.id

## REPORT OF ANALYSIS

PRINCIPAL : **PT. SUMBER SURYADAYA PRIMA**  
ADDRESS : KOMP. PERINTIS, JL. BAYANGKARA, NO. 38, SUNGAI ULIN, BANJARBARU  
UTARA, BANJARBARU, KALIMANTAN SELATAN  
SUBJECT : **COAL**  
DESCRIPTION OF SAMPLE : THE SAMPLE FOR THE ANALYSIS WAS SUBMITTED BY THE PRINCIPAL  
DATED ON FEBRUARY 23, 2021  
PACKING : UNSEALED POLYPROPYLENE BAG  
NUMBER OF SAMPLE : 1 (ONE) BAG  
SAMPLE WEIGHT : 8.93 Kgs  
TOP SIZE : + 75 MM  
DATE OF ANALYSIS : FEBRUARY 23 – 26, 2021  
SAMPLE MARK : **PT – SM – OC / 02**

### ANALYSIS RESULTS :

PARAMETER TEST	RESULT				STANDARD METHODS
	AR	ADB	DB	DAFB	
TOTAL MOISTURE, %	34.40	-	-	-	ASTM D3302/D3302M-19
MOISTURE, %	-	20.43	-	-	ASTM D3173/D3137M-17a
ASH CONTENT, %	2.44	2.96	3.72	-	ASTM D3174-12 (2018)
VOLATILE MATTER, %	30.21	36.64	46.05	47.83	ASTM D3175-20
FIXED CARBON, %	32.95	39.97	50.23	52.17	ASTM D3172-13
TOTAL SULPHUR, %	0.27	0.33	0.41	0.43	ASTM D4239-18e1
GROSS CALORIFIC VALUE, Kcal/kg	4262	5170	6497	6748	ASTM D5865-19
HARDGROVE GRINDABILITY INDEX	36				ASTM D409/D409M-16

Note : Calculating by different basis refer to ASTM D3180-15

The attachment available an integral part of this report.

This test result (s) related to the sample (s) submitted only and the report / certificate cannot be reproduced in any way, except in full context and with the prior approval in writing from Sucofindo Laboratory.

This Certificate/report is issued under our General Terms and Conditions, copy of which is available upon request or may be accessed at [www.sucofindo.co.id](http://www.sucofindo.co.id)

**Dept. Of Commercial 3 Mineral & Coal Testing**

57010421000153

**Karmaili**

BJM201200001956

Certificate No. ....  
 March 2, 2021

Banjarmasin  
 Jl. Jend. A. Yani Km 7,8 No 21A Banjarmasin70654, Indonesia  
 Phone/Facs: +62 511 3271080/3258111  
 Email: min.bjm@sucofindo.co.id

### ATTACHMENT TO REPORT OF ANALYSIS

PARAMETER TEST	RESULTS			STANDARD METHODS
	ARB	ADB	DB	
<b>ULTIMATE ANALYSIS :</b>				
- CARBON %	<b>45.3</b>	<b>54.9</b>	<b>69.0</b>	ASTM D5373-16
- HYDROGEN *) %	<b>2.91</b>	<b>3.53</b>	<b>4.44</b>	ASTM D5373-16
- NITROGEN %	<b>0.82</b>	<b>1.00</b>	<b>1.26</b>	ASTM D5373-16
- OXYGEN *) %	<b>13.86</b>	<b>16.85</b>	<b>21.17</b>	ASTM D3176-15
<b>ASH ANALYSIS (dry coal ash) :</b>				
- SiO <sub>2</sub> %	-	-	<b>5.63</b>	ASTM D3682-2013
- Al <sub>2</sub> O <sub>3</sub> %	-	-	<b>7.50</b>	ASTM D3682-2013
- Fe <sub>2</sub> O <sub>3</sub> %	-	-	<b>14.33</b>	ASTM D3682-2013
- CaO %	-	-	<b>30.47</b>	ASTM D3682-2013
- MgO %	-	-	<b>13.39</b>	ASTM D3682-2013
- Na <sub>2</sub> O %	-	-	<b>0.16</b>	ASTM D3682-2013
- K <sub>2</sub> O %	-	-	<b>0.19</b>	ASTM D3682-2013
- MnO <sub>2</sub> %	-	-	<b>0.31</b>	IK/BJM-A/004
- TiO <sub>2</sub> %	-	-	<b>0.28</b>	ASTM D3682-2013
- P <sub>2</sub> O <sub>5</sub> %	-	-	<b>0.21</b>	ISO 622:2016
- SO <sub>3</sub> %	-	-	<b>27.38</b>	ASTM D5016-16
<b>ASH FUSION TEMPERATURE:</b>				
	<b>REDUCING ATMOSPHERE</b>	<b>OXIDIZING ATMOSPHERE</b>		
- INITIAL DEFORMATION °C	<b>1340</b>	<b>1360</b>		ASTM D1857/D1857M-18
- SPHERICAL °C	<b>1360</b>	<b>1390</b>		ASTM D1857/D1857M-18
- HEMISPHERE °C	<b>1380</b>	<b>1420</b>		ASTM D1857/D1857M-18
- FLOW °C	<b>1420</b>	<b>1500</b>		ASTM D1857/D1857M-18

\*) Excluding Water Constituent in Coal Samples