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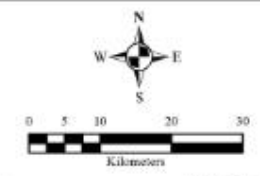


APPENDICES



APPENDIX 1

THE MAP OF RESEARCH LOCATION



Datum : World Geodetic System 1984
 System Grid : Grid Geographic - Interval 10 Minutes
 Projection : WGS 1984 UTM Zone 51S

- LEGEND**
- Transportation
 - Sea Route
 - Land Route
 - IUP Boundary
 - North Block Plan
 - South Block Plan

SITUATION MAP

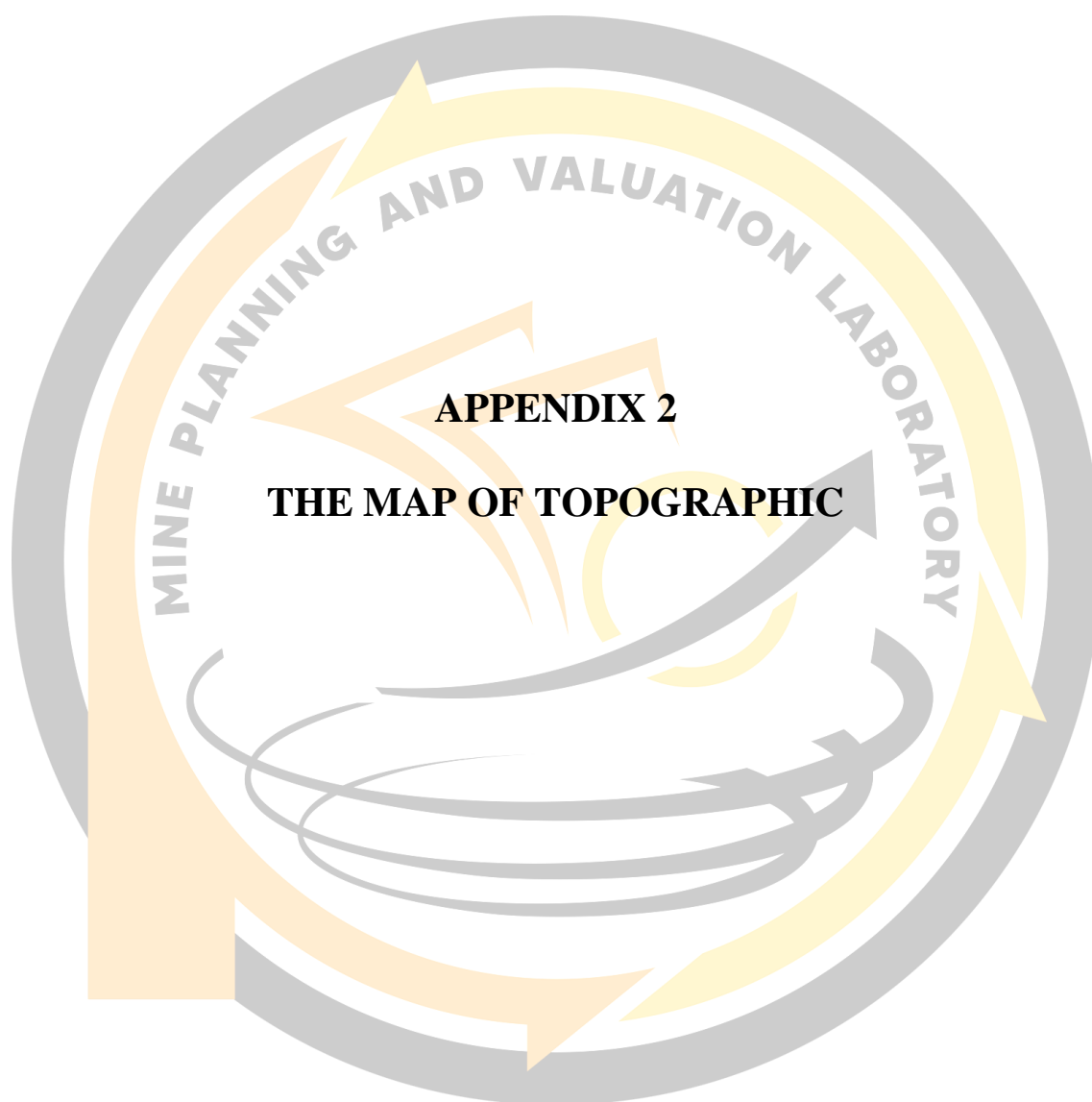


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 PT PACIFIC ORE RESOURCES, BOMBANA REGENCY,
 SOUTHEAST SULAWESI PROVINCE

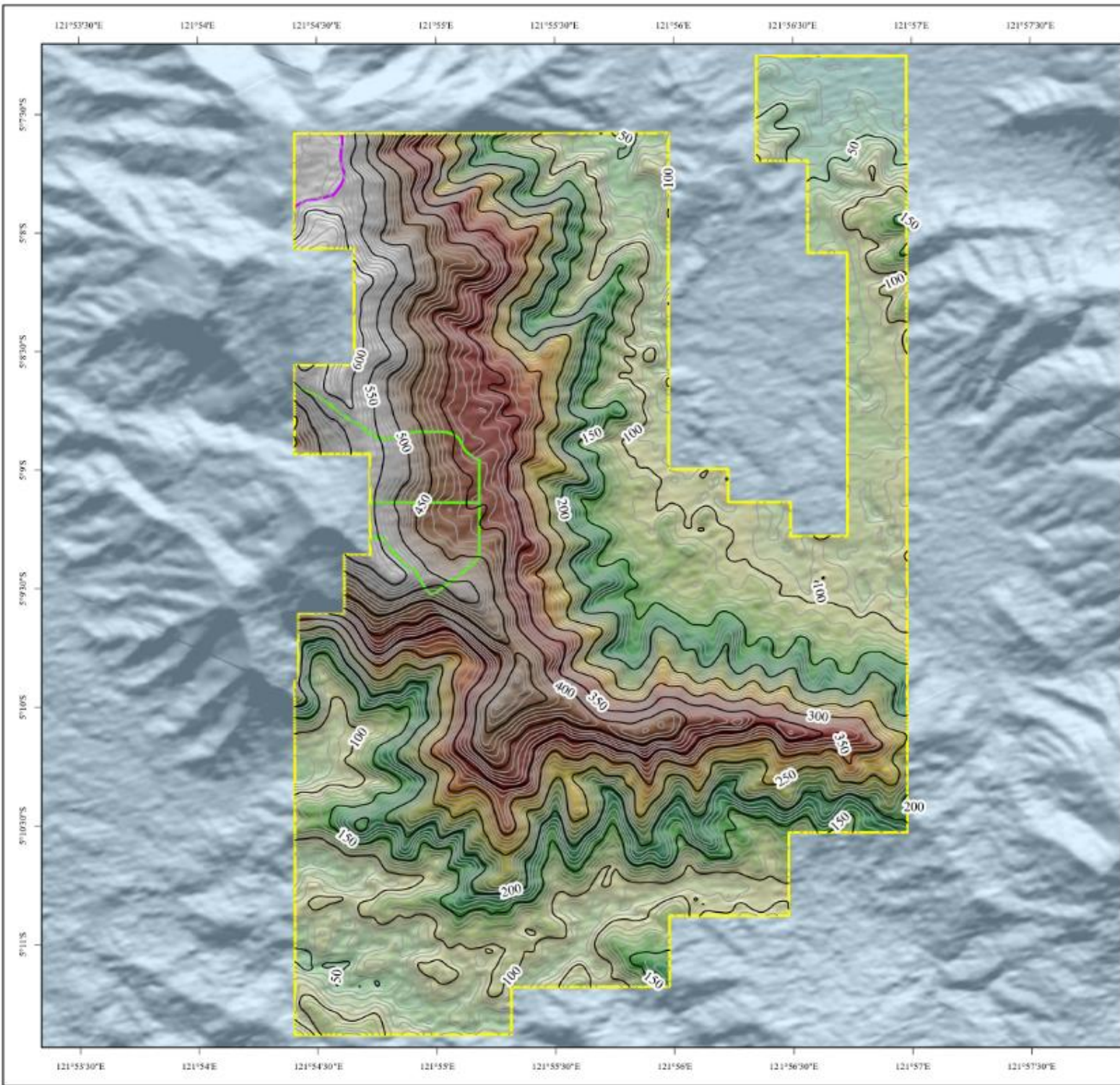
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**THE MAP OF RESEARCH LOCATION
 PT PACIFIC ORE RESOURCES**



APPENDIX 2

THE MAP OF TOPOGRAPHIC



Datum : World Geodetic System 1984
 System Grid : Grid Geographic - Interval 30 Second
 Projection : WGS 1984 UTM Zone 51S

- LEGEND**
- Contour
 - Contour Index
 - 646.416
 - 8.34279
 - IUP Boundary
 - North Block Plan
 - South Block Plan

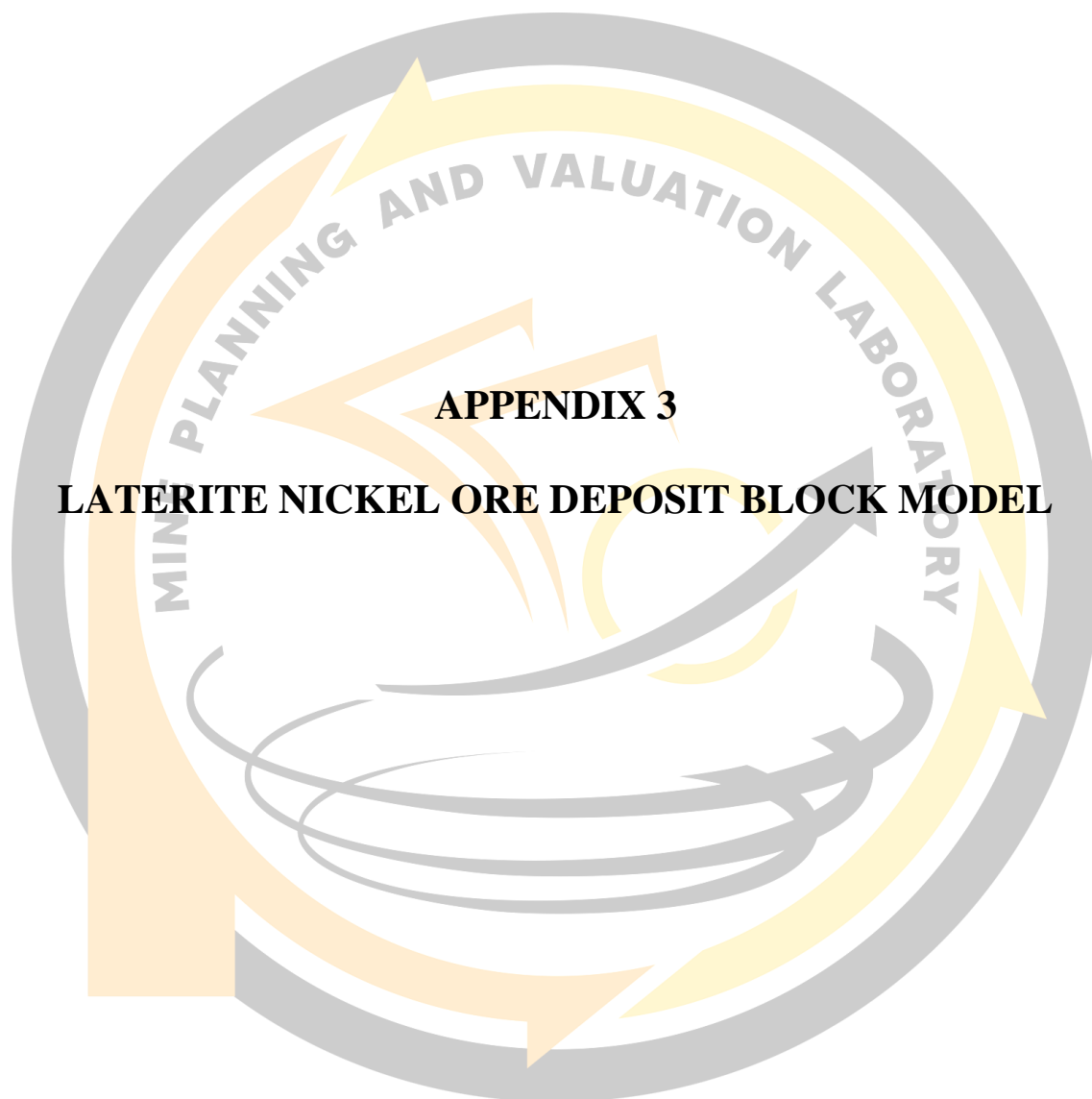


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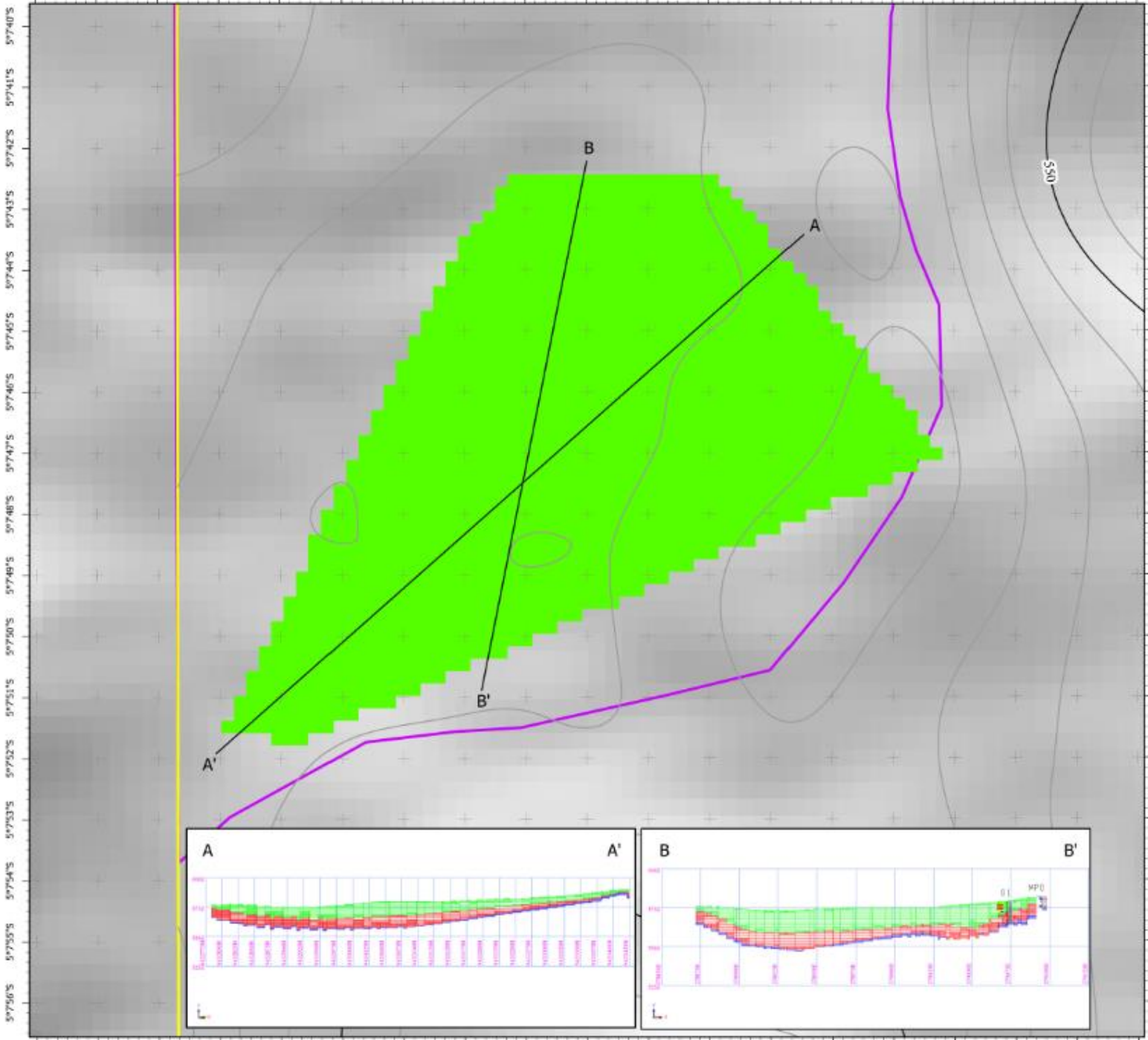
**THE MAP OF TOPOGRAPHIC
 PT PACIFIC ORE RESOURCES**



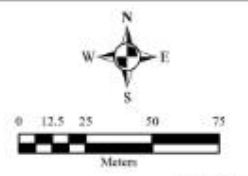
APPENDIX 3

LATERITE NICKEL ORE DEPOSIT BLOCK MODEL

121°54'22"E 121°54'23"E 121°54'24"E 121°54'25"E 121°54'26"E 121°54'27"E 121°54'28"E 121°54'29"E 121°54'30"E 121°54'31"E 121°54'32"E 121°54'33"E 121°54'34"E 121°54'35"E 121°54'36"E 121°54'37"E 121°54'38"E 121°54'39"E 121°54'40"E

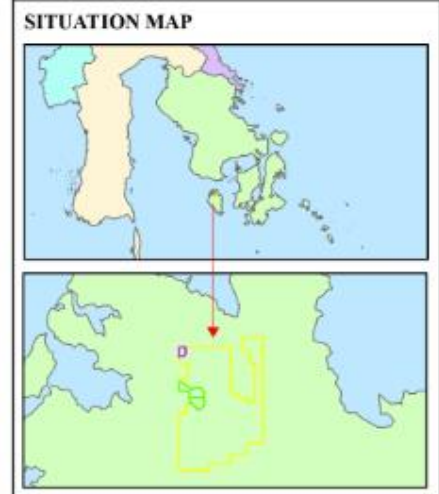


121°54'22"E 121°54'23"E 121°54'24"E 121°54'25"E 121°54'26"E 121°54'27"E 121°54'28"E 121°54'29"E 121°54'30"E 121°54'31"E 121°54'32"E 121°54'33"E 121°54'34"E 121°54'35"E 121°54'36"E 121°54'37"E 121°54'38"E 121°54'39"E 121°54'40"E



Datum : World Geodetic System 1984
 System Grid : Grid Geographic - Interval 1 Second
 Projection : WGS 1984 UTM Zone 51S

- LEGEND**
- Contour
 - Contour Index
 - Limonite Zone
 - Saprolite Zone
 - Bedrock Zone
 - IUP Boundary
 - North Block Plan
 - South Block Plan

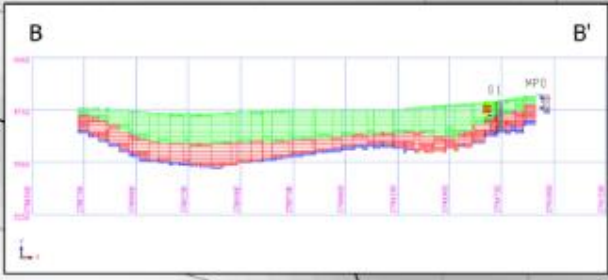
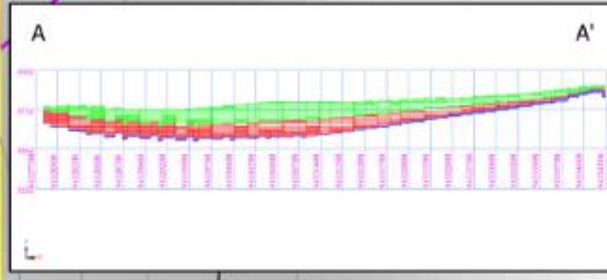


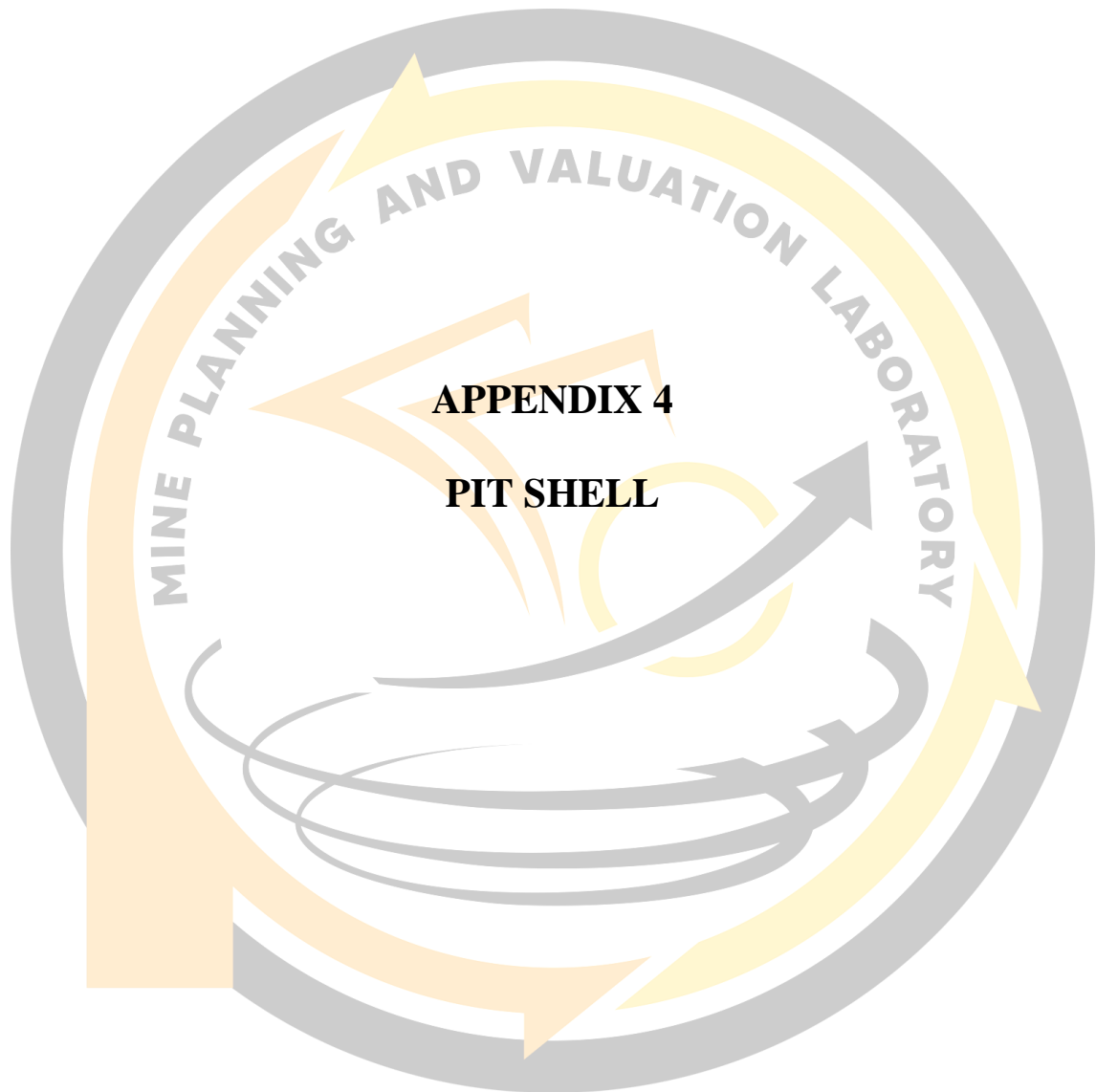
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**THE MAP OF NORTH BLOCK MODEL
 PT PACIFIC ORE RESOURCES**





APPENDIX 4

PIT SHELL

3°24'10"E 3°24'11"E 3°24'12"E 3°24'13"E 3°24'14"E 3°24'15"E 3°24'16"E 3°24'17"E 3°24'18"E 3°24'19"E 3°24'20"E 3°24'21"E 3°24'22"E 3°24'23"E

64°19'34"N

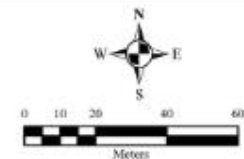
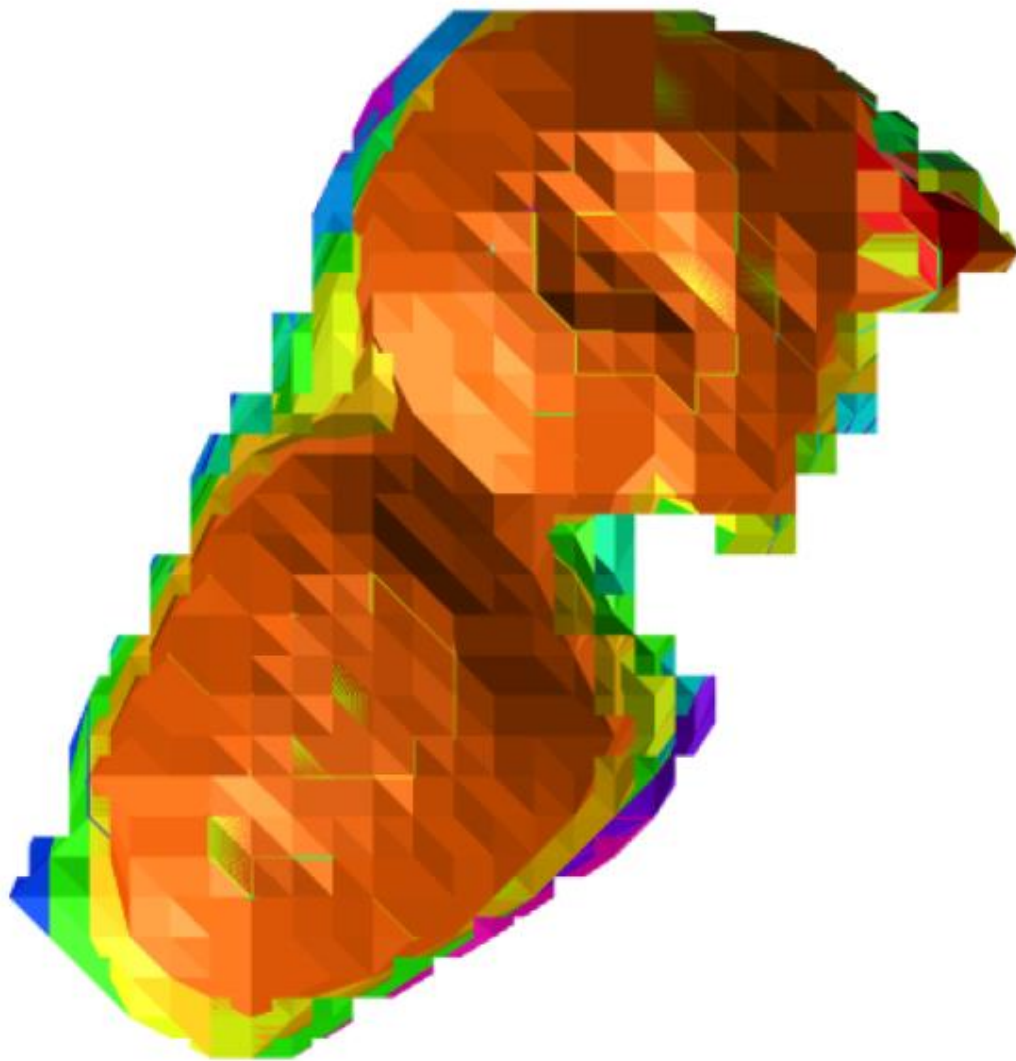
64°19'33"N

64°19'32"N

64°19'31"N

64°19'30"N

3°24'10"E 3°24'11"E 3°24'12"E 3°24'13"E 3°24'14"E 3°24'15"E 3°24'16"E 3°24'17"E 3°24'18"E 3°24'19"E 3°24'20"E 3°24'21"E 3°24'22"E 3°24'23"E



Datum :World Geodetic System 1984
 System Grid :Grid Geographic - Interval 1 Second
 Projection :WGS 1984 UTM Zone 51S

LEGEND

| | | | |
|--|--------------|--|--------------|
| | Pit Shell 1 | | Pit Shell 11 |
| | Pit Shell 2 | | Pit Shell 12 |
| | Pit Shell 3 | | Pit Shell 13 |
| | Pit Shell 4 | | Pit Shell 14 |
| | Pit Shell 5 | | Pit Shell 15 |
| | Pit Shell 6 | | Pit Shell 16 |
| | Pit Shell 7 | | Pit Shell 17 |
| | Pit Shell 8 | | Pit Shell 18 |
| | Pit Shell 9 | | Pit Shell 19 |
| | Pit Shell 10 | | |

64°19'34"N

64°19'33"N

64°19'32"N

64°19'31"N

64°19'30"N

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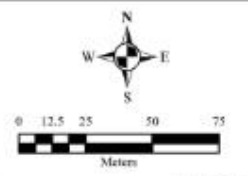
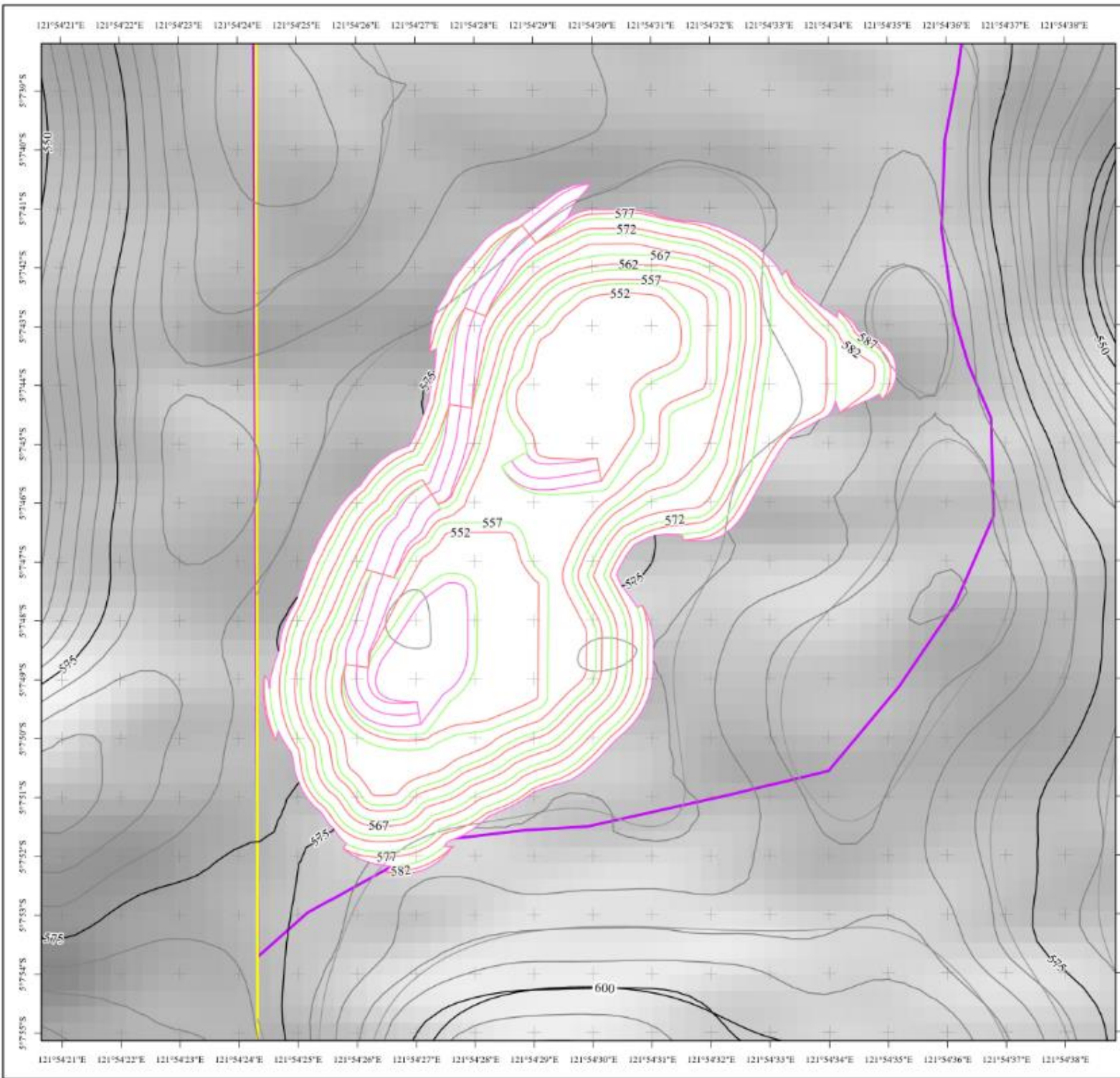
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 CONCEPTUAL PLANNING OF NORTH BLOCK NICKEL ORE MINE
 PT PACIFIC ORE RESOURCES, BOMBANA REGENCY,
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**THE MAP OF PIT SHELLS
 PT PACIFIC ORE RESOURCES**



APPENDIX 5
PIT DESIGN



Datum : World Geodetic System 1984
 System Grid : Grid Geographic - Interval 1 Second
 Projection : WGS 1984 UTM Zone 51S

LEGEND

| | | | |
|--|---------------|--|------------------|
| | Contour | | Pit Boundary |
| | Contour Index | | IUP Boundary |
| | Toe | | North Block Plan |
| | Crest | | South Block Plan |



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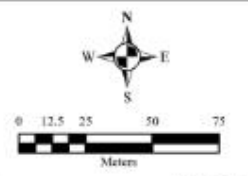
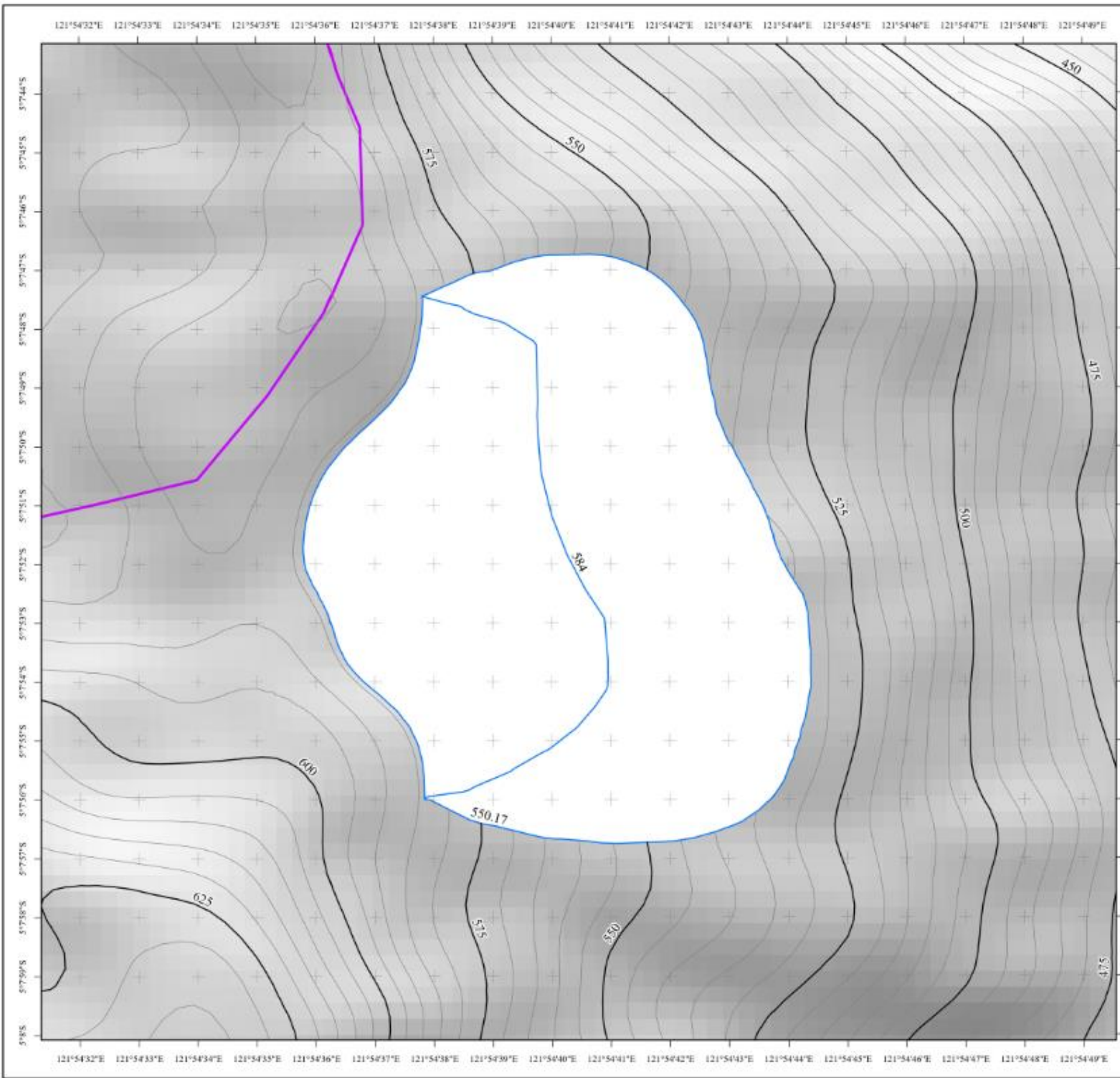
THE MAP OF NORTH BLOCK PIT DESIGN
PT PACIFIC ORE RESOURCES

| | |
|-------------------|-----------------|
| APPENDIX 5 | PAGE 149 |
|-------------------|-----------------|



APPENDIX 6

WASTE DUMP DESIGN



Datum : World Geodetic System 1984
 System Grid : Grid Geographic - Interval 1 Second
 Projection : WGS 1984 UTM Zone 51S

LEGEND

- Contour
- Contour Index
- Waste Dump Design
- IUP Boundary
- North Block Plan
- South Block Plan



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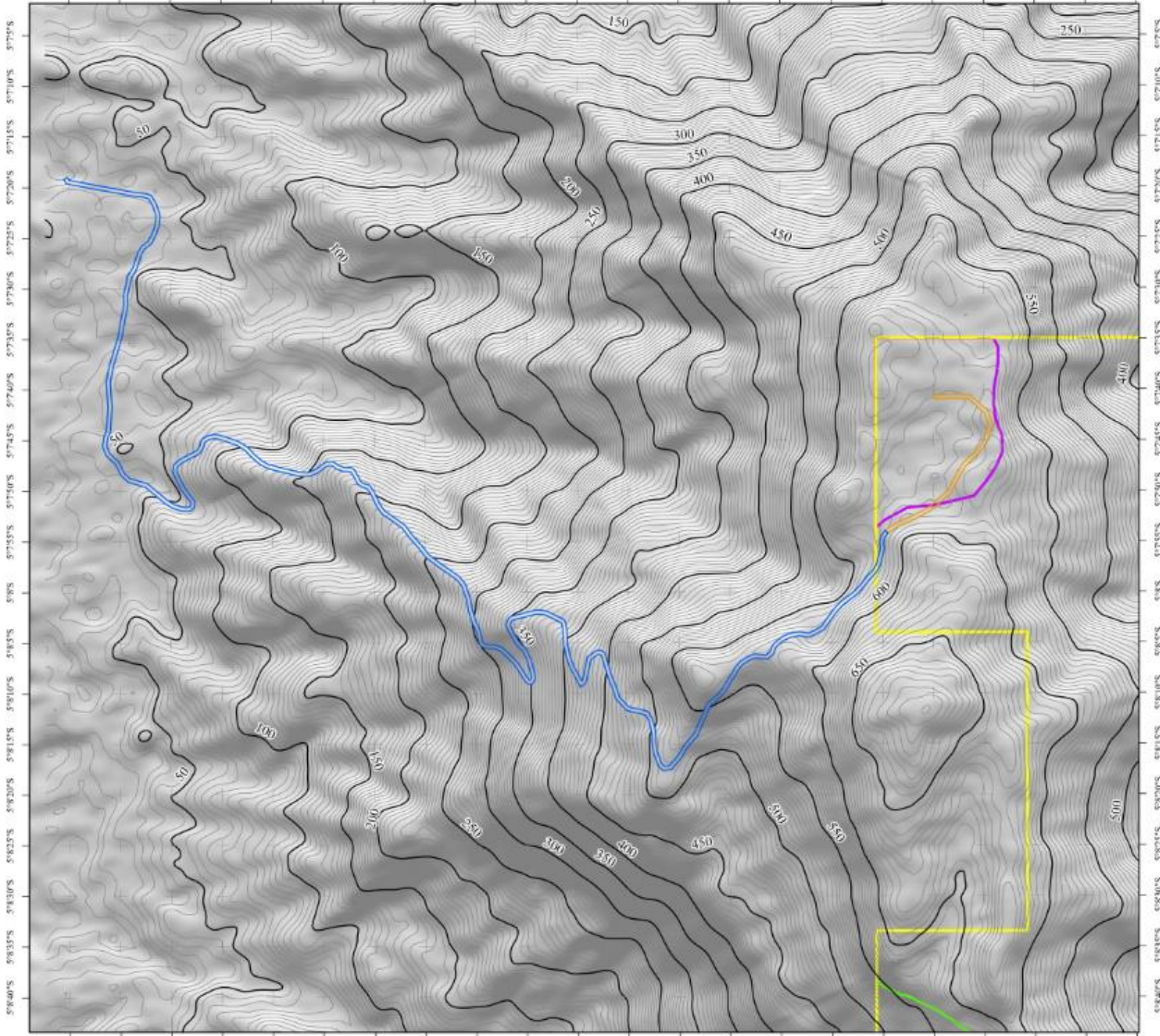
**THE MAP OF NORTH BLOCK WASTE DUMP DESIGN
 PT PACIFIC ORE RESOURCES**



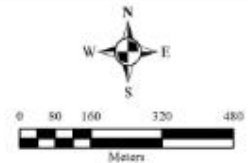
APPENDIX 7

MINE HAUL ROAD DESIGN

121°53'55"E 121°53'10"E 121°53'15"E 121°53'20"E 121°53'25"E 121°53'30"E 121°53'35"E 121°53'40"E 121°53'45"E 121°53'50"E 121°53'55"E 121°54'E 121°54'5"E 121°54'10"E 121°54'15"E 121°54'20"E 121°54'25"E 121°54'30"E 121°54'35"E 121°54'40"E 121°54'45"E 121°54'50"E



121°53'55"E 121°53'10"E 121°53'15"E 121°53'20"E 121°53'25"E 121°53'30"E 121°53'35"E 121°53'40"E 121°53'45"E 121°53'50"E 121°53'55"E 121°54'E 121°54'5"E 121°54'10"E 121°54'15"E 121°54'20"E 121°54'25"E 121°54'30"E 121°54'35"E 121°54'40"E 121°54'45"E 121°54'50"E

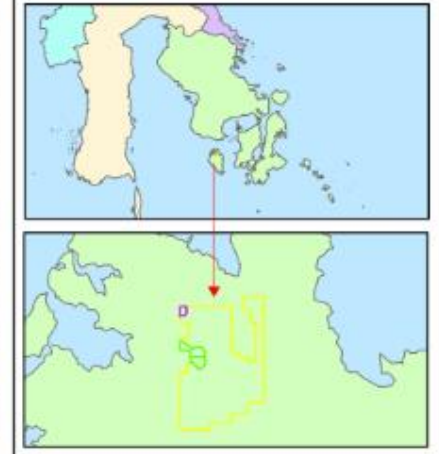


Datum : World Geodetic System 1984
 System Grid : Grid Geographic - Interval 15 Second
 Projection : WGS 1984 UTM Zone 51S

LEGEND

| | | | |
|--|---------------|--|------------------|
| | Contour | | IUP Boundary |
| | Contour Index | | North Block Plan |
| | New Road | | South Block Plan |
| | Existing Road | | |

SITUATION MAP

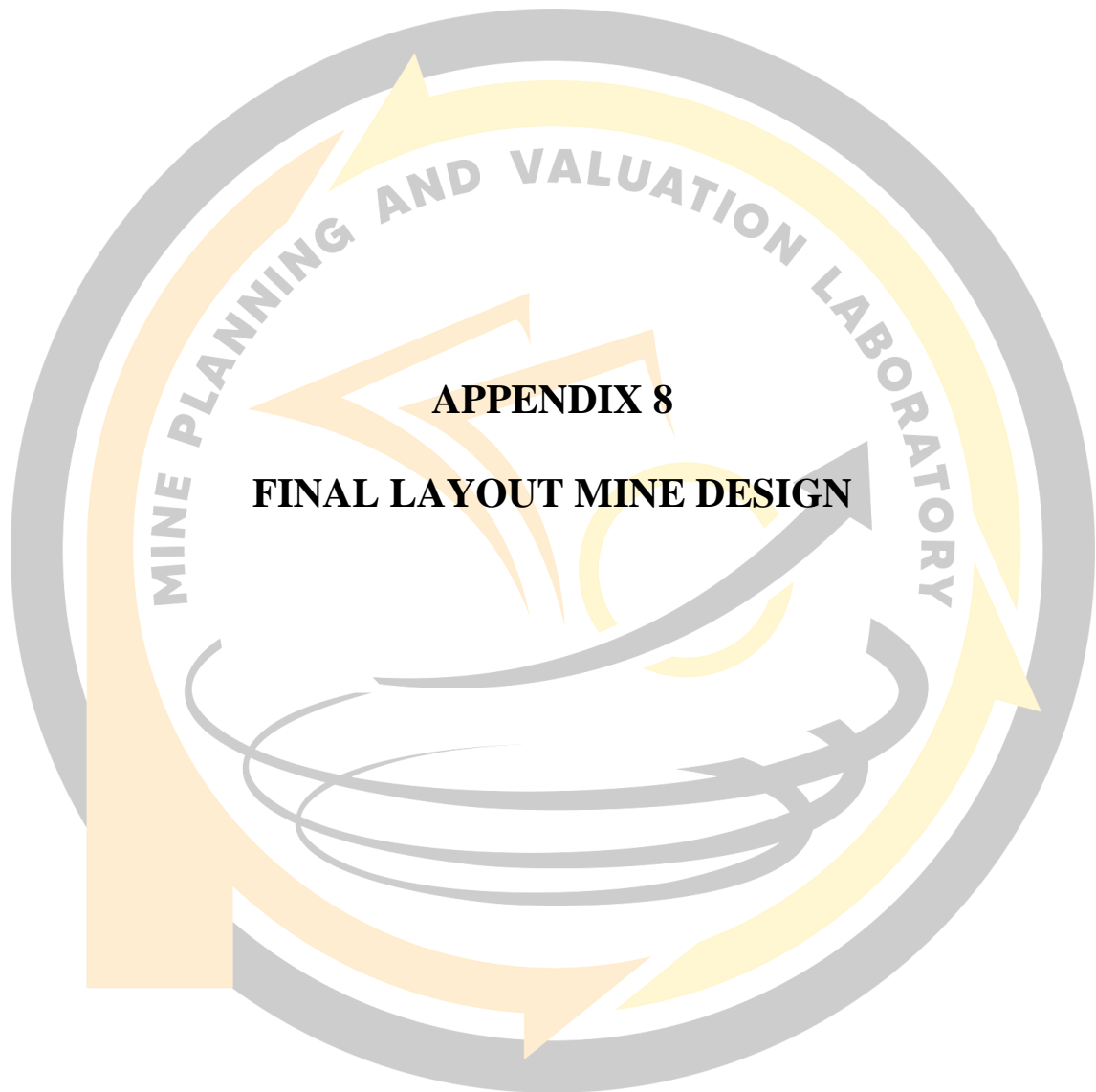


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THESIS
 CONCEPTUAL PLANNING OF NORTH BLOCK NICKEL ORE MINE
 PT PACIFIC ORE RESOURCES, BOMBANA REGENCY,
 SOUTHEAST SULAWESI PROVINCE

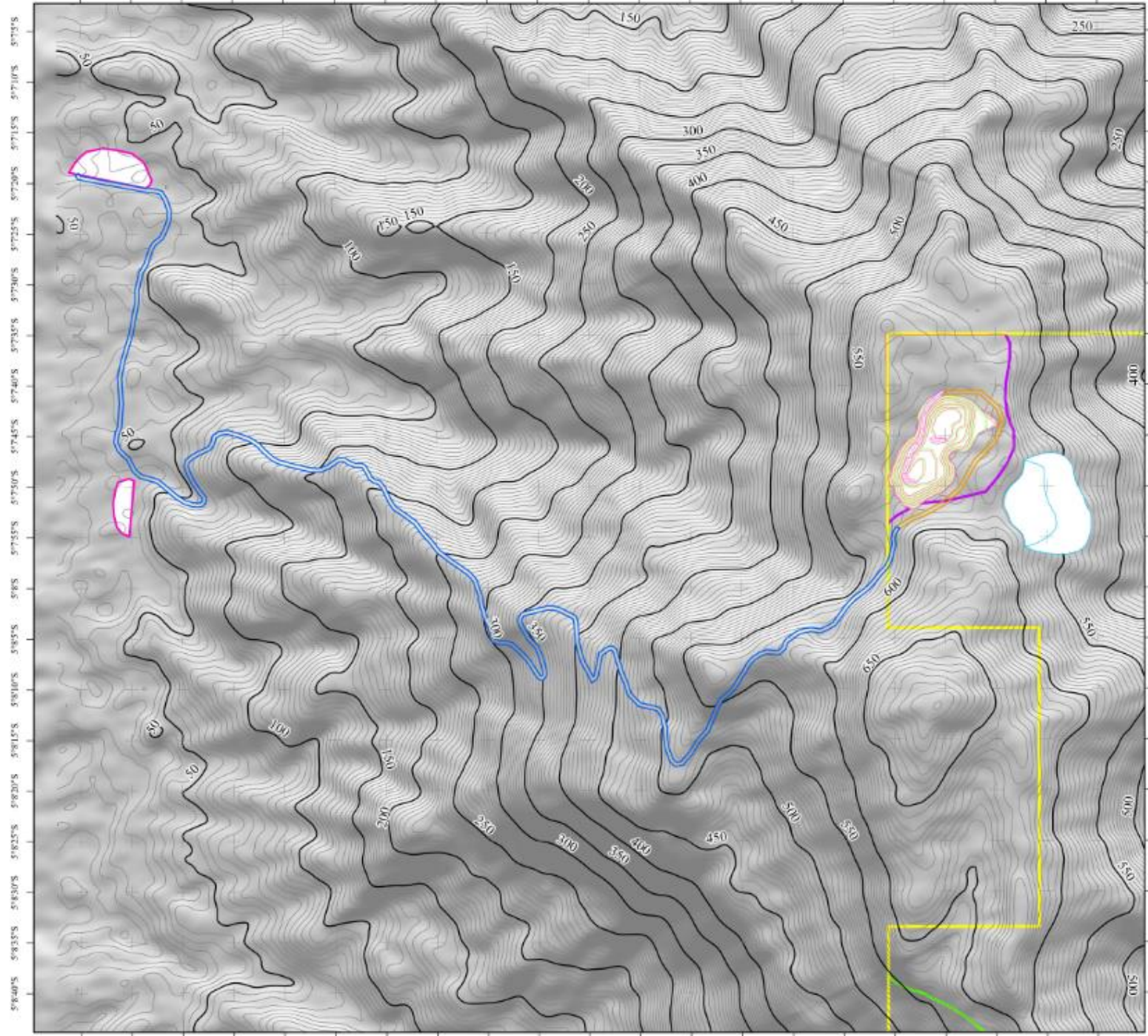
| | |
|---------------|---|
| DRAWN BY | M. FAHMI D111181018 |
| SUPERVISOR | DR. ARVANTI VIRIANTIANAS, S.T., M.T. NIP. 197010052008012020 |
| CO-SUPERVISOR | RIZKI AMALIA, S.T., M.T. NIP. 199205042019016001 |

**THE MAP OF NORTH BLOCK MINE HAUL ROAD
 PT PACIFIC ORE RESOURCES**



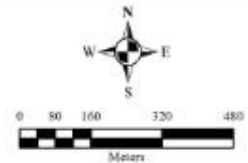
APPENDIX 8
FINAL LAYOUT MINE DESIGN

121°53'5"E 121°53'10"E 121°53'15"E 121°53'20"E 121°53'25"E 121°53'30"E 121°53'35"E 121°53'40"E 121°53'45"E 121°53'50"E 121°53'55"E 121°54"E 121°54'5"E 121°54'10"E 121°54'15"E 121°54'20"E 121°54'25"E 121°54'30"E 121°54'35"E 121°54'40"E 121°54'45"E



5710'S 5715'S 5720'S 5725'S 5730'S 5735'S 5740'S 5745'S 5750'S 5755'S 5760'S 5765'S 5770'S 5775'S 5780'S 5785'S 5790'S 5795'S 5800'S 5805'S 5810'S 5815'S 5820'S 5825'S 5830'S 5835'S 5840'S

121°53'5"E 121°53'10"E 121°53'15"E 121°53'20"E 121°53'25"E 121°53'30"E 121°53'35"E 121°53'40"E 121°53'45"E 121°53'50"E 121°53'55"E 121°54"E 121°54'5"E 121°54'10"E 121°54'15"E 121°54'20"E 121°54'25"E 121°54'30"E 121°54'35"E 121°54'40"E 121°54'45"E

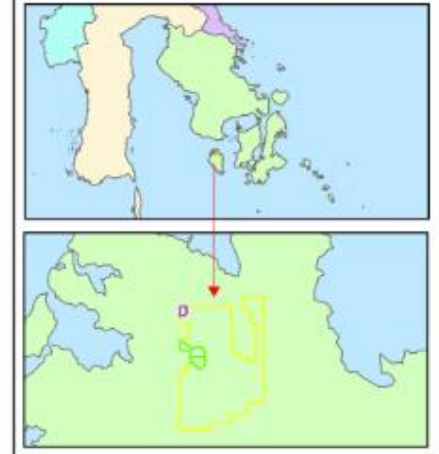


Datum : World Geodetic System 1984
 System Grid : Grid Geographic - Interval 15 Second
 Projection : WGS 1984 UTM Zone 51S

LEGEND

| | | | |
|--|-------------------|--|------------------|
| | Contour | | Existing Road |
| | Contour Index | | Stockpile |
| | Pit Design | | IUP Boundary |
| | Waste Dump Design | | North Block Plan |
| | New Road | | South Block Plan |

SITUATION MAP

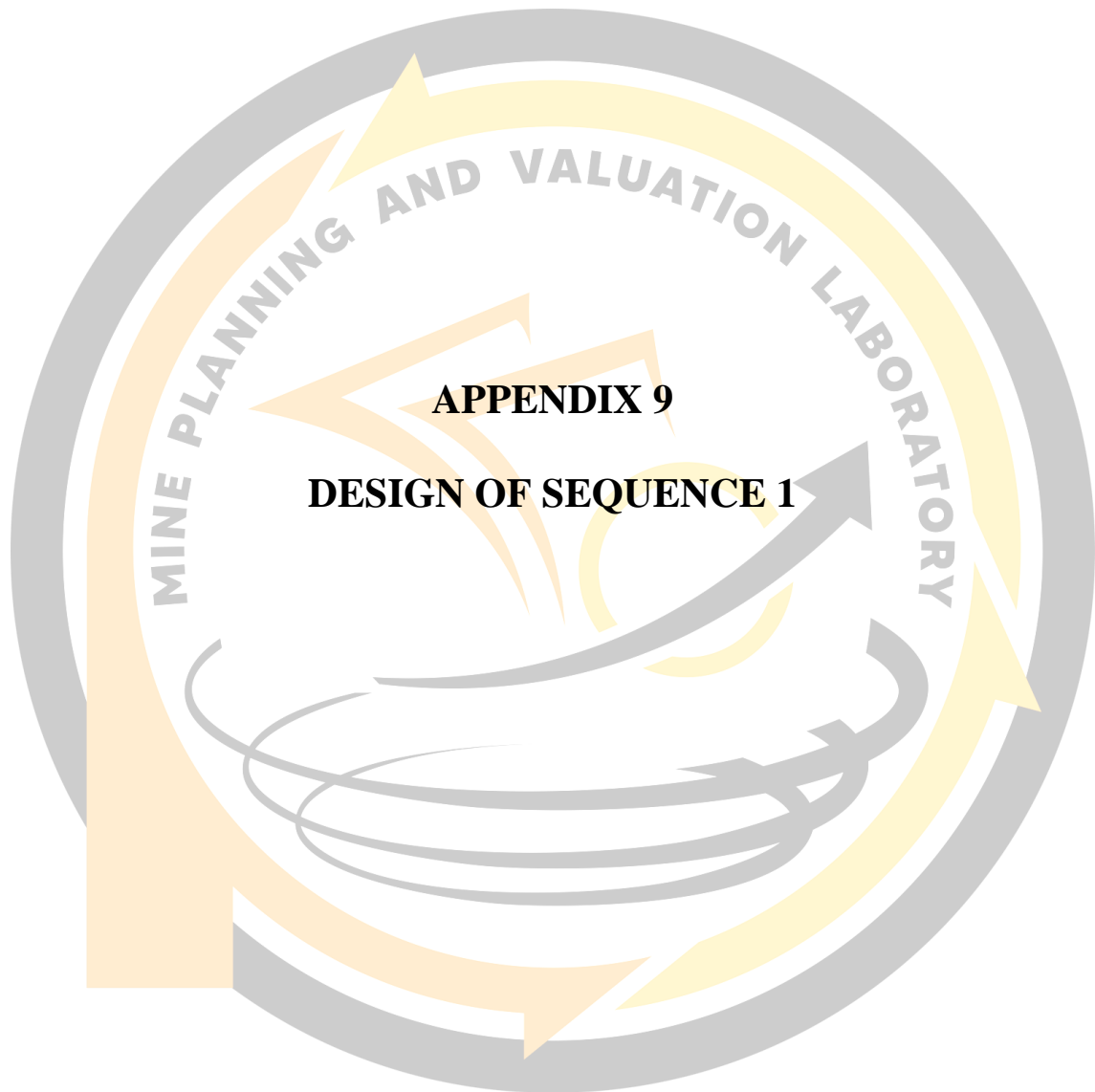


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THESIS
 CONCEPTUAL PLANNING OF NORTH BLOCK NICKEL ORE MINE
 PT PACIFIC ORE RESOURCES, BOMBANA REGENCY,
 SOUTHEAST SULAWESI PROVINCE

| | |
|---------------|---|
| DRAWN BY | M. FAHMI D111181018 |
| SUPERVISOR | DR. ARVANTI VIRIANTIANAS, S.T., M.T. NIP. 197010052008012020 |
| CO-SUPERVISOR | RIZKI AMALIA, S.T., M.T. NIP. 199205042019016001 |

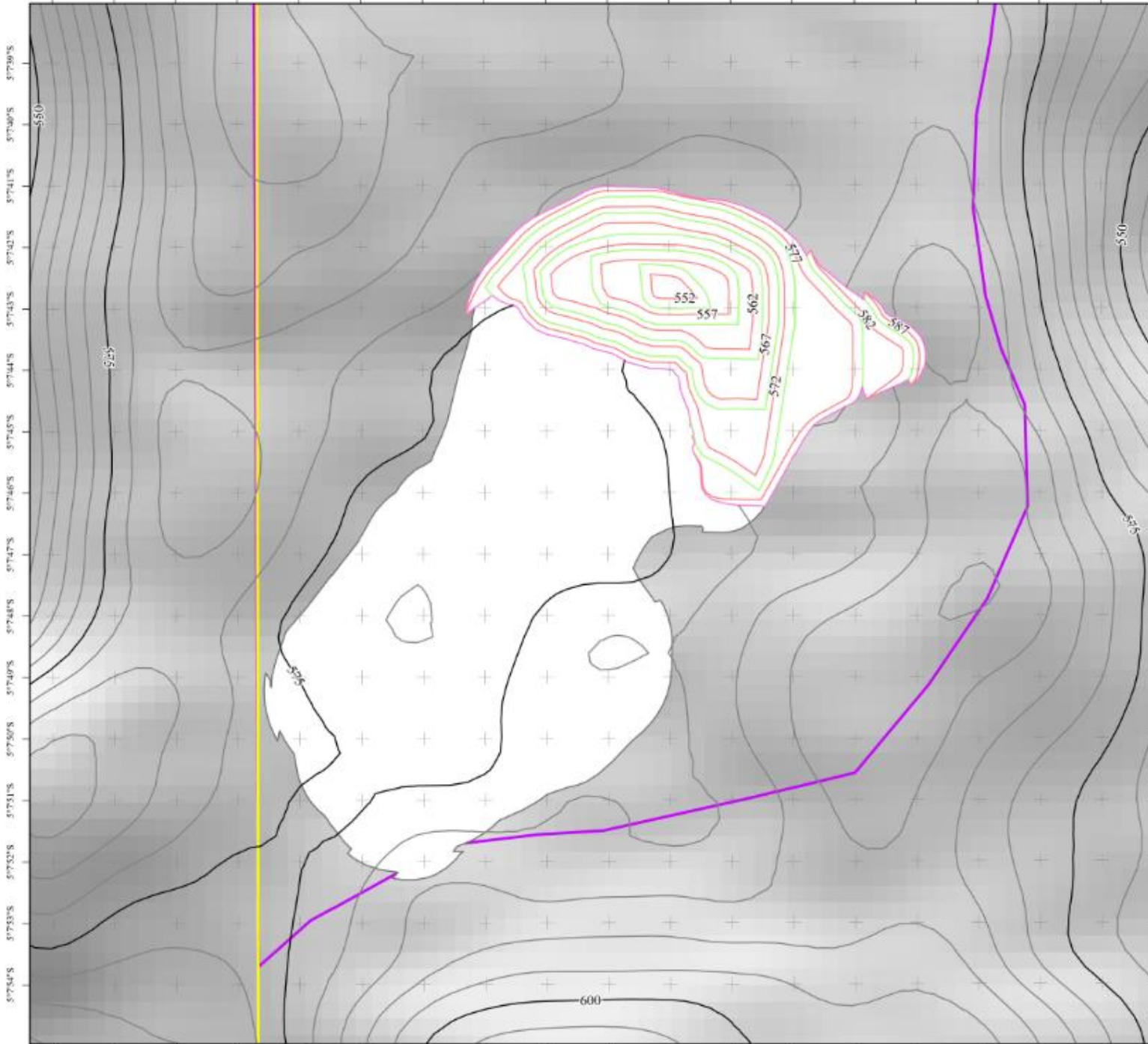
**THE MAP OF NORTH BLOCK FINAL LAYOUT
 PT PACIFIC ORE RESOURCES**



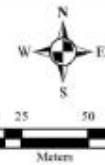
APPENDIX 9

DESIGN OF SEQUENCE 1

121°54'21"E 121°54'22"E 121°54'23"E 121°54'24"E 121°54'25"E 121°54'26"E 121°54'27"E 121°54'28"E 121°54'29"E 121°54'30"E 121°54'31"E 121°54'32"E 121°54'33"E 121°54'34"E 121°54'35"E 121°54'36"E 121°54'37"E 121°54'38"E



121°54'21"E 121°54'22"E 121°54'23"E 121°54'24"E 121°54'25"E 121°54'26"E 121°54'27"E 121°54'28"E 121°54'29"E 121°54'30"E 121°54'31"E 121°54'32"E 121°54'33"E 121°54'34"E 121°54'35"E 121°54'36"E 121°54'37"E 121°54'38"E



Datum : World Geodetic System 1984
 System Grid : Grid Geographic - Interval 1 Second
 Projection : WGS 1984 UTM Zone 51S

LEGEND

- Contour
- Contour Index
- Sequence 1
- Pit Boundary
- IUP Boundary
- North Block Plan
- South Block Plan

SITUATION MAP

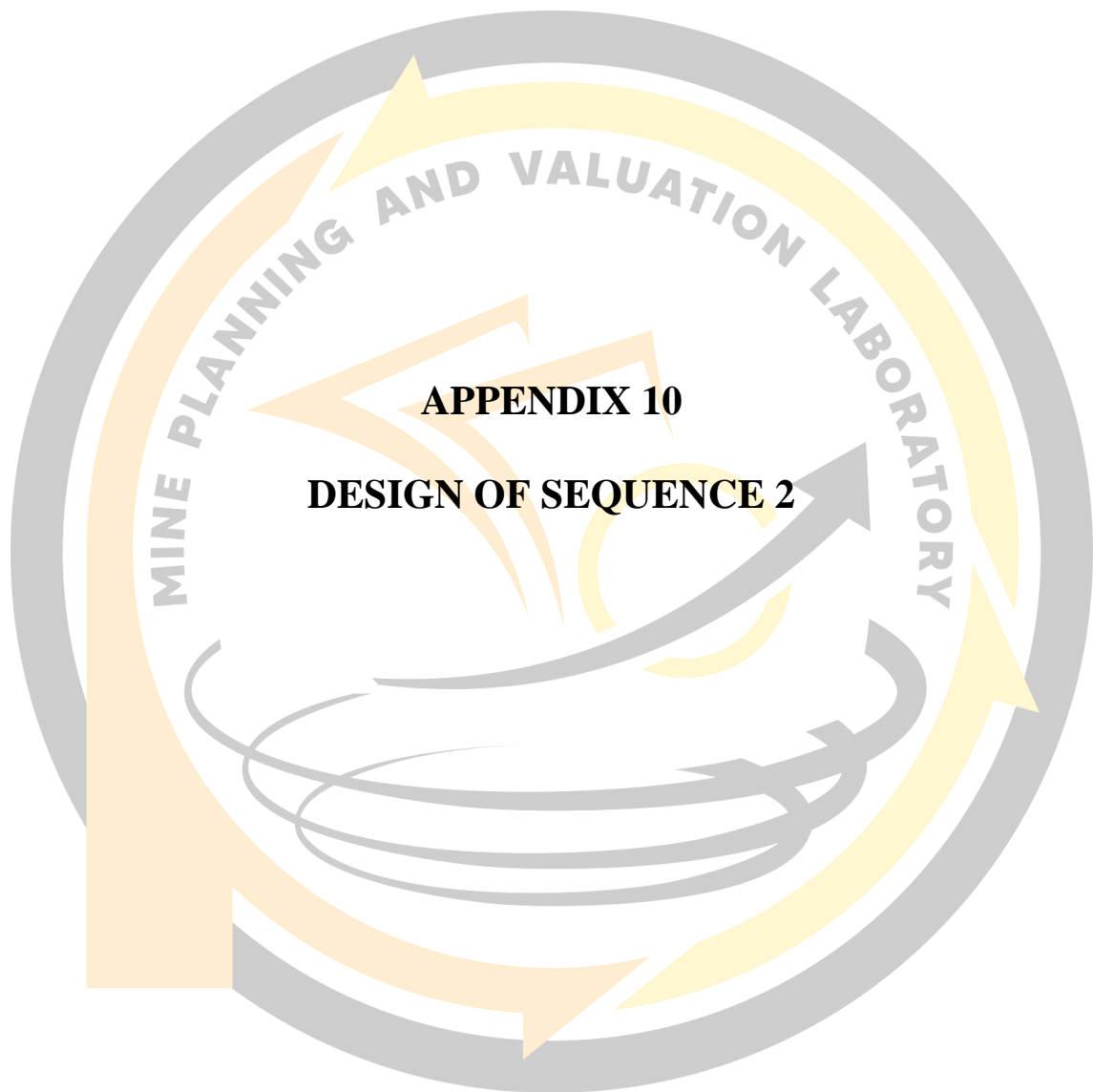


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THESIS
 CONCEPTUAL PLANNING OF NORTH BLOCK NICKEL ORE MINE
 PT PACIFIC ORE RESOURCES, BOMBANA REGENCY,
 SOUTHEAST SULAWESI PROVINCE

| | |
|---------------|--|
| DRAWN BY | M. FAHMI D111181018 |
| SUPERVISOR | DR. ARVANTI VIRTANTI ANAS, S.T., M.T. NIP. 197010052008012020 |
| CO-SUPERVISOR | RIZKI AMALIA, S.T., M.T. NIP. 199205042019016001 |

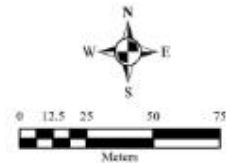
**THE MAP OF NORTH BLOCK SEQUENCE 1
 PT PACIFIC ORE RESOURCES**



APPENDIX 10

DESIGN OF SEQUENCE 2

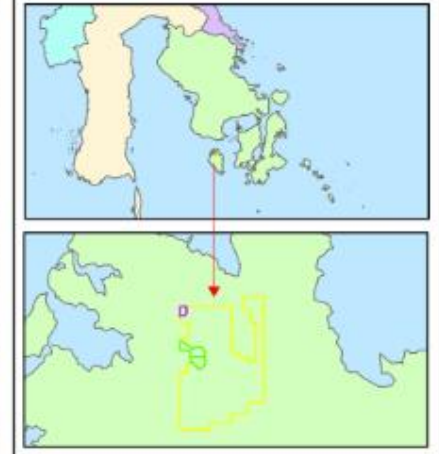
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Datum : World Geodetic System 1984
 System Grid : Grid Geographic - Interval 1 Second
 Projection : WGS 1984 UTM Zone 51S

- LEGEND**
- Contour
 - Contour Index
 - Sequence 2
 - Sequence 1 Already been mined
 - Pit Boundary
 - ILP Boundary
 - North Block Plan
 - South Block Plan

SITUATION MAP



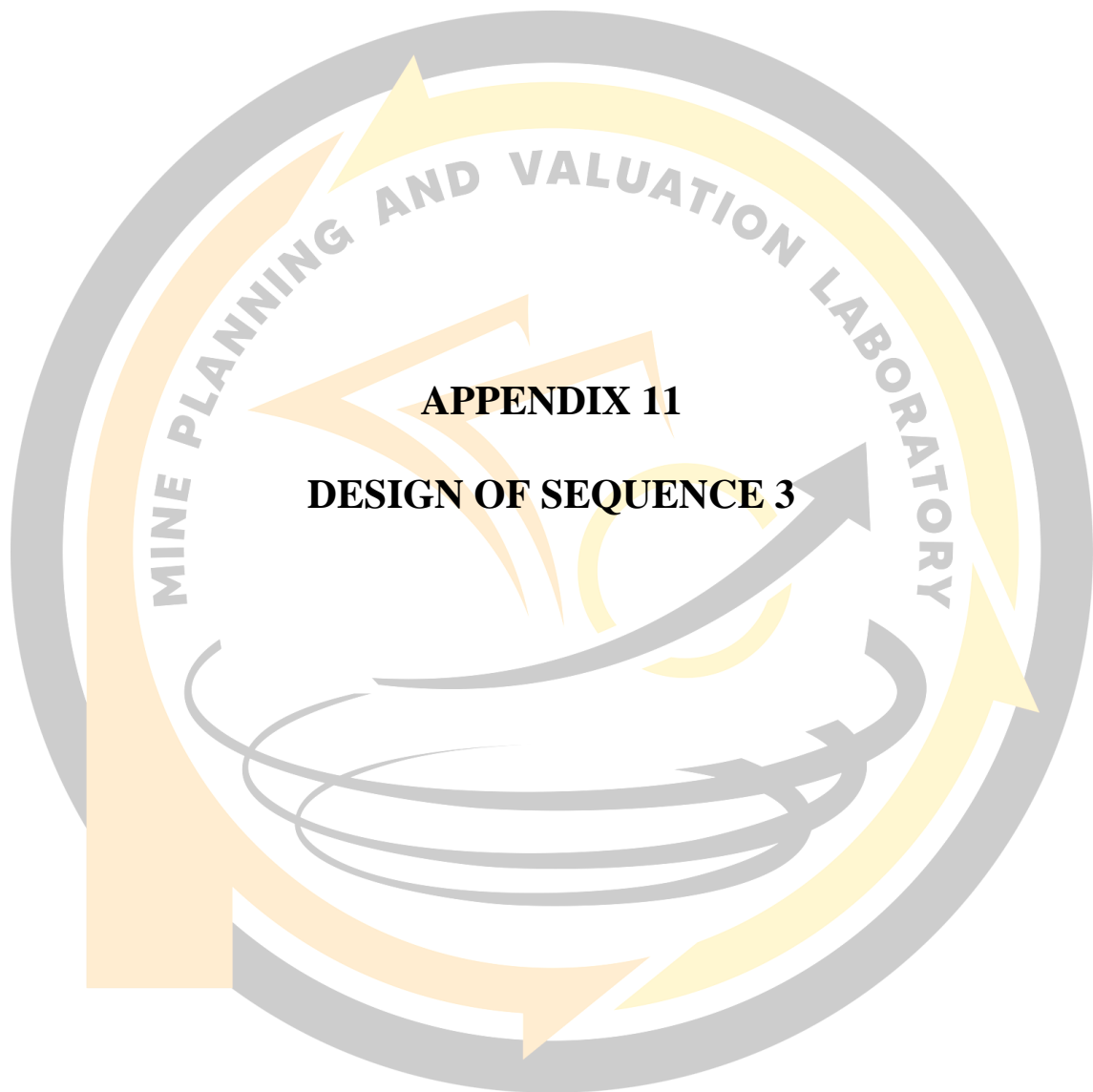
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 PT PACIFIC ORE RESOURCES, BOMBANA REGENCY,
 SOUTHEAST SULAWESI PROVINCE

| | |
|---------------|--|
| DRAWN BY | M. FAHMI D11181018 |
| SUPERVISOR | DR. ARVANTI VIRTANTI ANAS, S.T., M.T. NIP. 197010052008012020 |
| CO-SUPERVISOR | RIZKI AMALIA, S.T., M.T. NIP. 199205042019016001 |

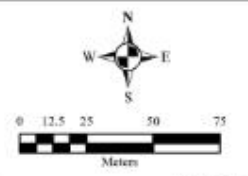
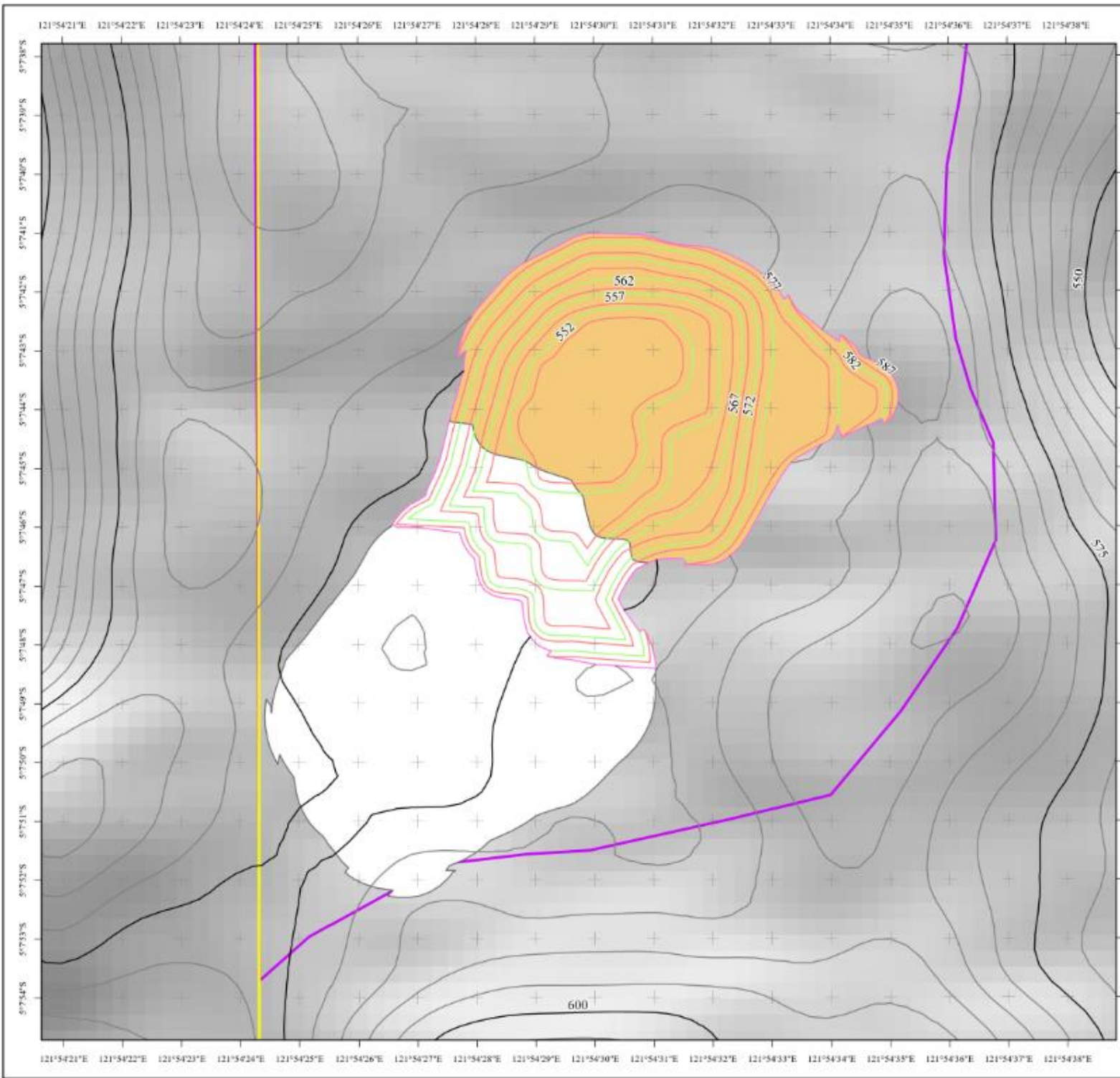
**THE MAP OF NORTH BLOCK SEQUENCE 2
 PT PACIFIC ORE RESOURCES**

121°54'21"E 121°54'22"E 121°54'23"E 121°54'24"E 121°54'25"E 121°54'26"E 121°54'27"E 121°54'28"E 121°54'29"E 121°54'30"E 121°54'31"E 121°54'32"E 121°54'33"E 121°54'34"E 121°54'35"E 121°54'36"E 121°54'37"E 121°54'38"E



APPENDIX 11

DESIGN OF SEQUENCE 3



Datum : World Geodetic System 1984
 System Grid : Grid Geographic - Interval 1 Second
 Projection : WGS 1984 UTM Zone 51S

LEGEND

- Contour
- Contour Index
- Sequence 3
- Sequence 2 Already been mined
- Pit Boundary
- IUP Boundary
- North Block Plan
- South Block Plan

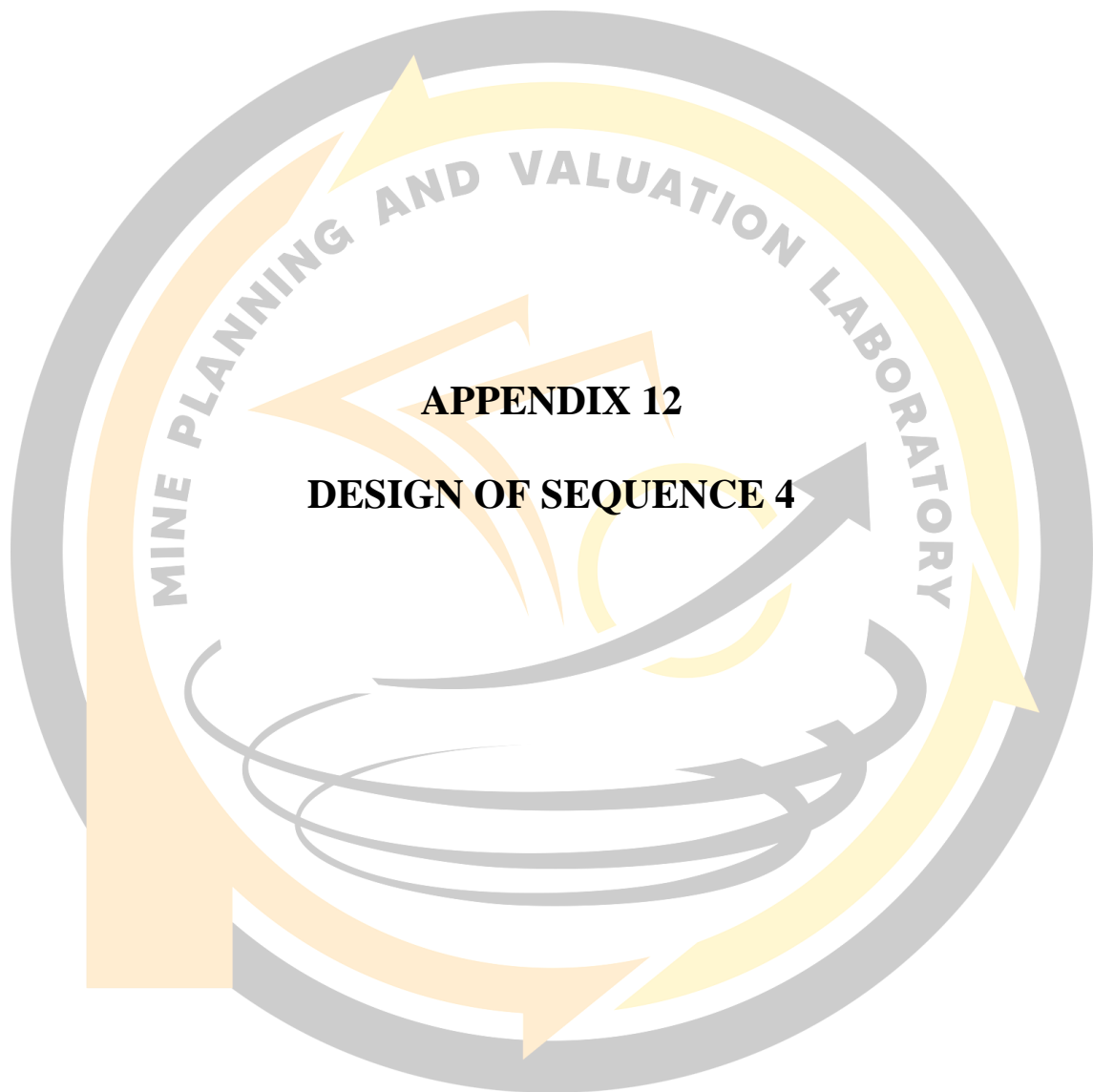


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THESIS
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 PT PACIFIC ORE RESOURCES, BOMBANA REGENCY,
 SOUTHEAST SULAWESI PROVINCE

| | |
|---------------|--|
| DRAWN BY | M. FAHMI D111181018 |
| SUPERVISOR | DR. ARVANTI VIRTANTI ANAS, S.T., M.T. NIP. 197010052008012020 |
| CO-SUPERVISOR | RIZKI AMALIA, S.T., M.T. NIP. 199205042019016001 |

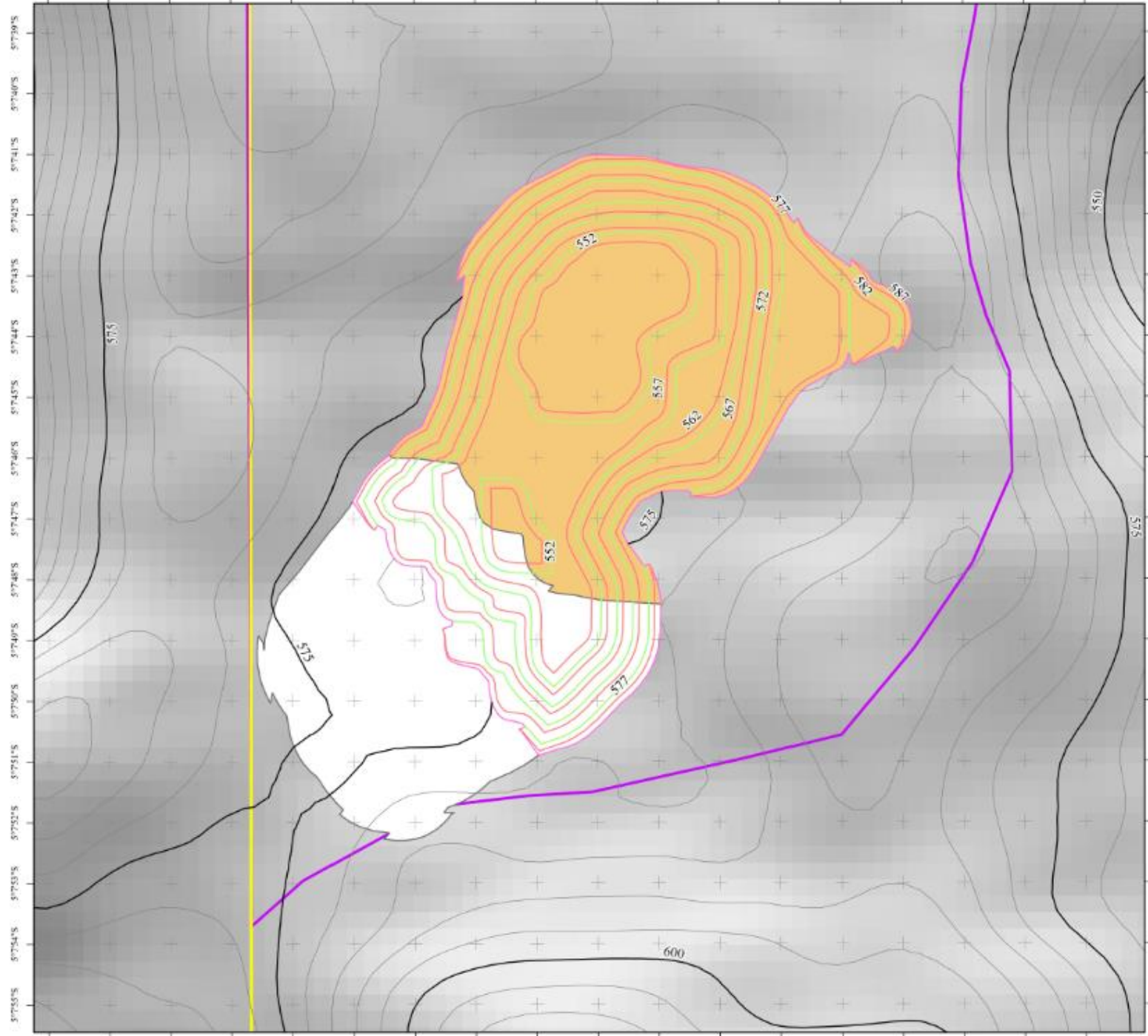
**THE MAP OF NORTH BLOCK SEQUENCE 3
 PT PACIFIC ORE RESOURCES**



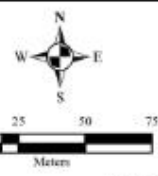
APPENDIX 12

DESIGN OF SEQUENCE 4

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121°54'21"E 121°54'22"E 121°54'23"E 121°54'24"E 121°54'25"E 121°54'26"E 121°54'27"E 121°54'28"E 121°54'29"E 121°54'30"E 121°54'31"E 121°54'32"E 121°54'33"E 121°54'34"E 121°54'35"E 121°54'36"E 121°54'37"E 121°54'38"E



Datum :World Geodetic System 1984
 System Grid :Grid Geographic - Interval 1 Second
 Projection :WGS 1984 UTM Zone 51S

LEGEND

- Contour
- Contour Index
- Sequence 4
- Sequence 3
Already been mined
- Pit Boundary
- IUP Boundary
- North Block Plan
- South Block Plan

SITUATION MAP

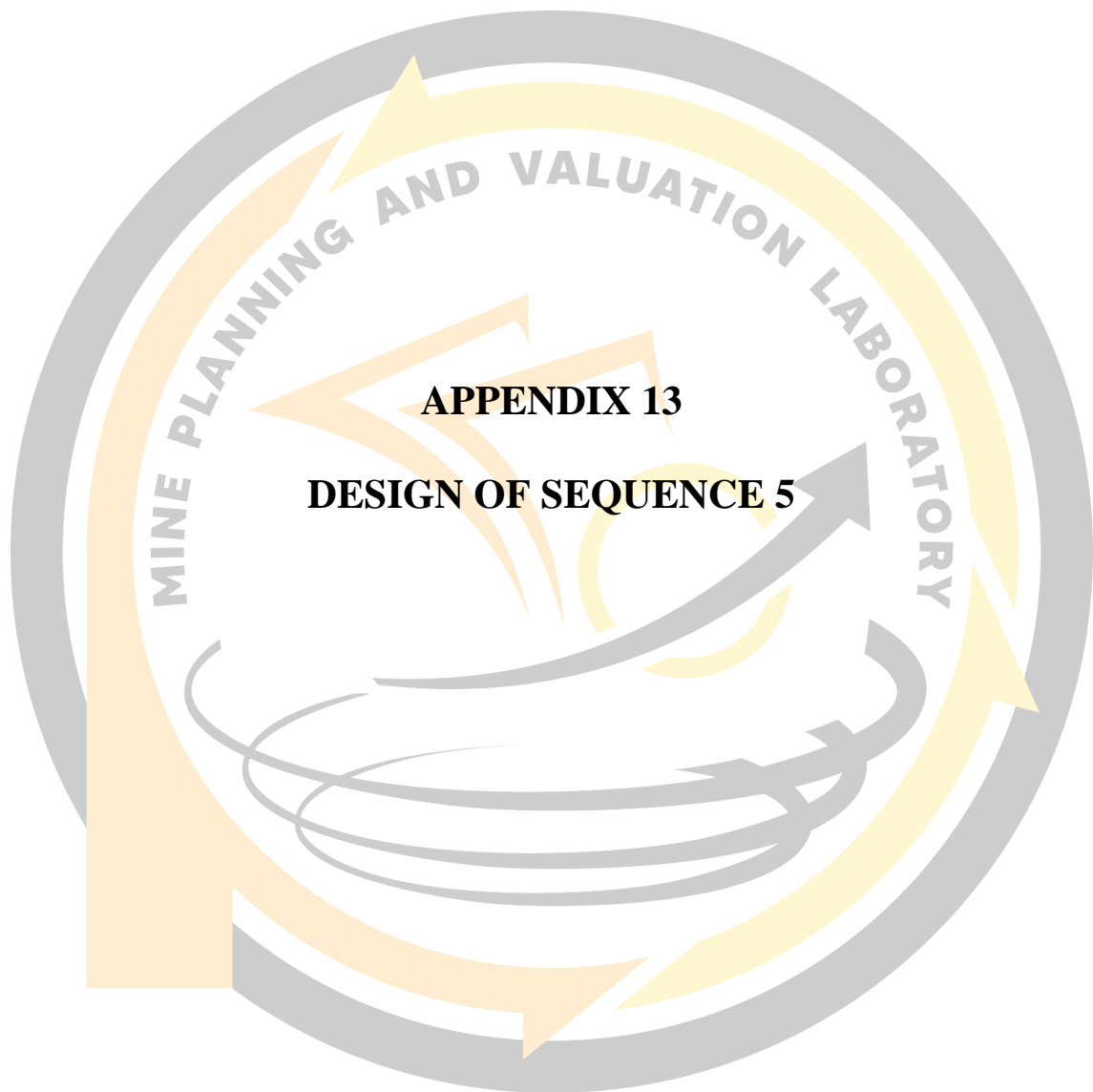


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THESIS
 CONCEPTUAL PLANNING OF NORTH BLOCK NICKEL ORE MINE
 PT PACIFIC ORE RESOURCES, BOMBANA REGENCY,
 SOUTHEAST SULAWESI PROVINCE

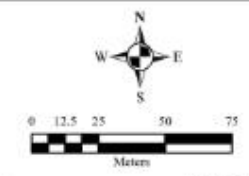
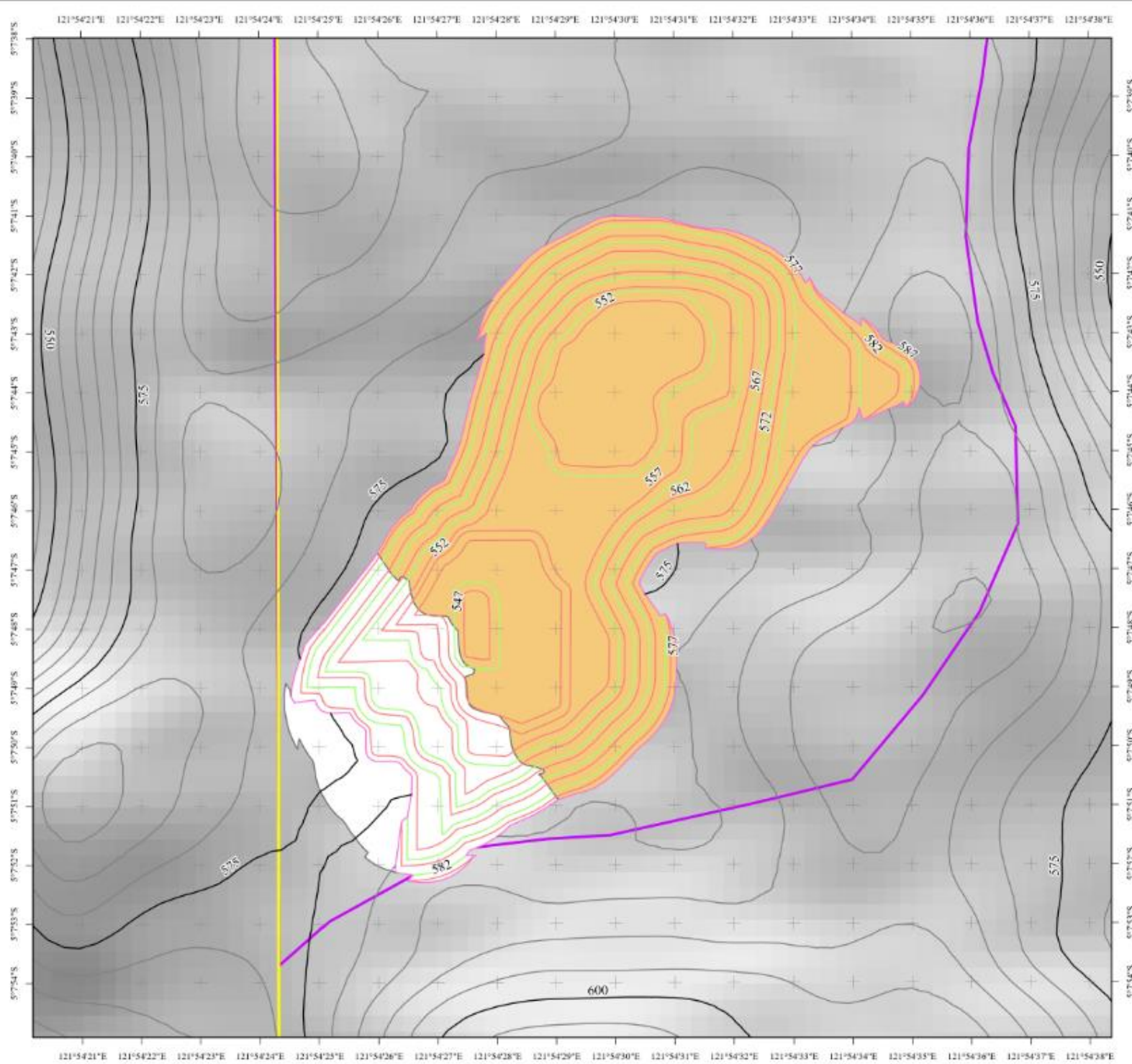
| | |
|---------------|--|
| DRAWN BY | M. FAHMI D111181018 |
| SUPERVISOR | DR. ARVANTI VIRTANTI ANAS, S.T., M.T. NIP. 197010052008012020 |
| CO-SUPERVISOR | RIZKI AMALIA, S.T., M.T. NIP. 199205042019016001 |

**THE MAP OF NORTH BLOCK SEQUENCE 4
 PT PACIFIC ORE RESOURCES**



APPENDIX 13

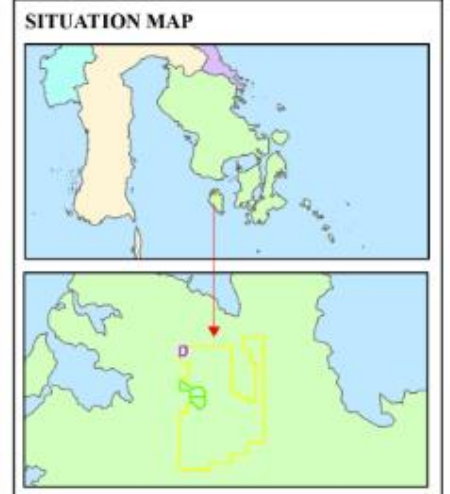
DESIGN OF SEQUENCE 5



Datum : World Geodetic System 1984
 System Grid : Grid Geographic - Interval 1 Second
 Projection : WGS 1984 UTM Zone 51S

LEGEND

- Contour
- Pit Boundary
- Contour Index
- IUP Boundary
- Sequence 5
- North Block Plan
- Sequence 4
- South Block Plan
- Already been mined

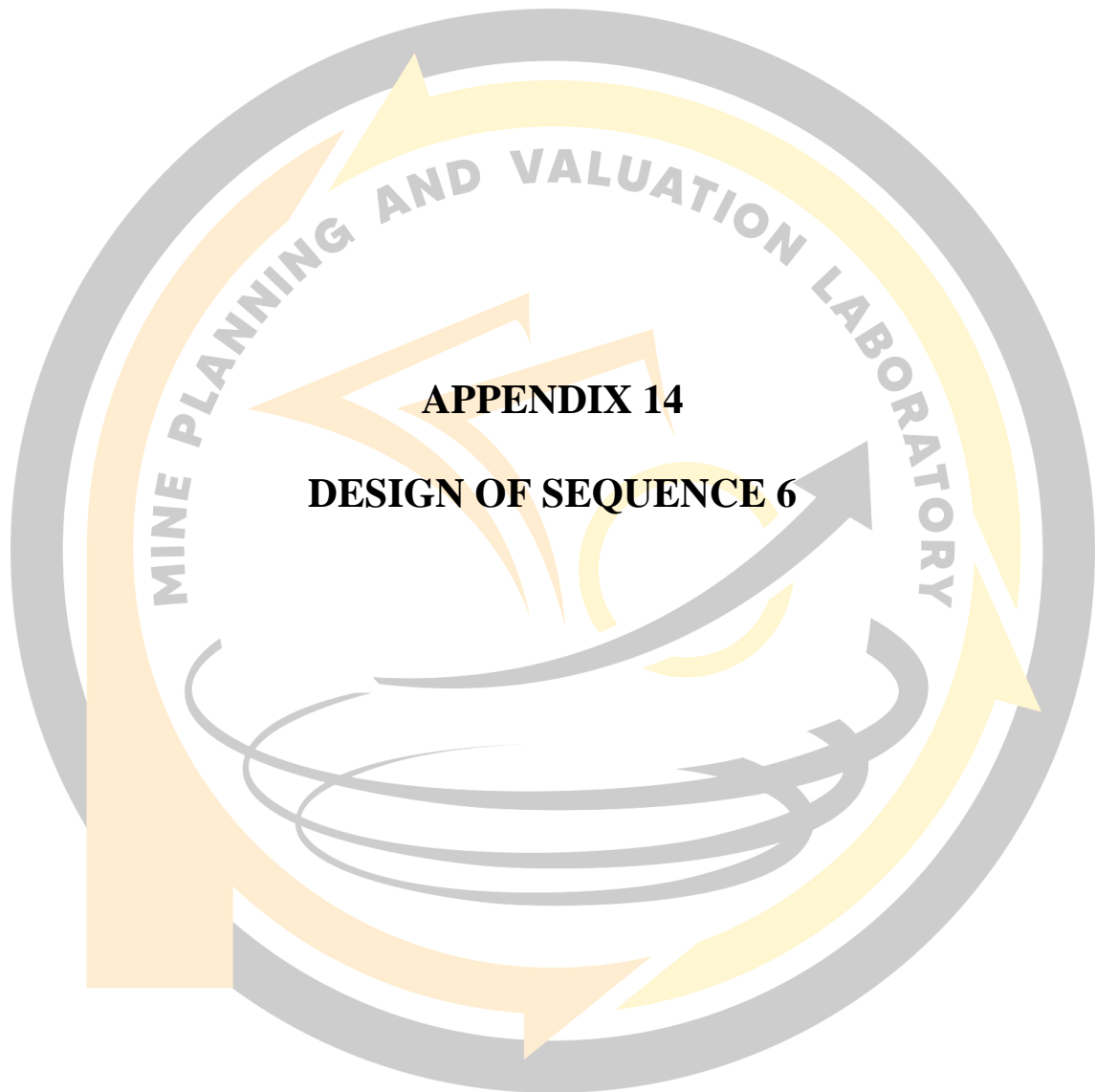


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THESIS
CONCEPTUAL PLANNING OF NORTH BLOCK NICKEL ORE MINE
PT PACIFIC ORE RESOURCES, BOMBANA REGENCY,
SOUTHEAST SULAWESI PROVINCE

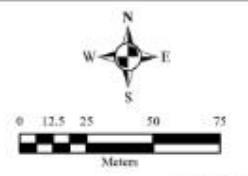
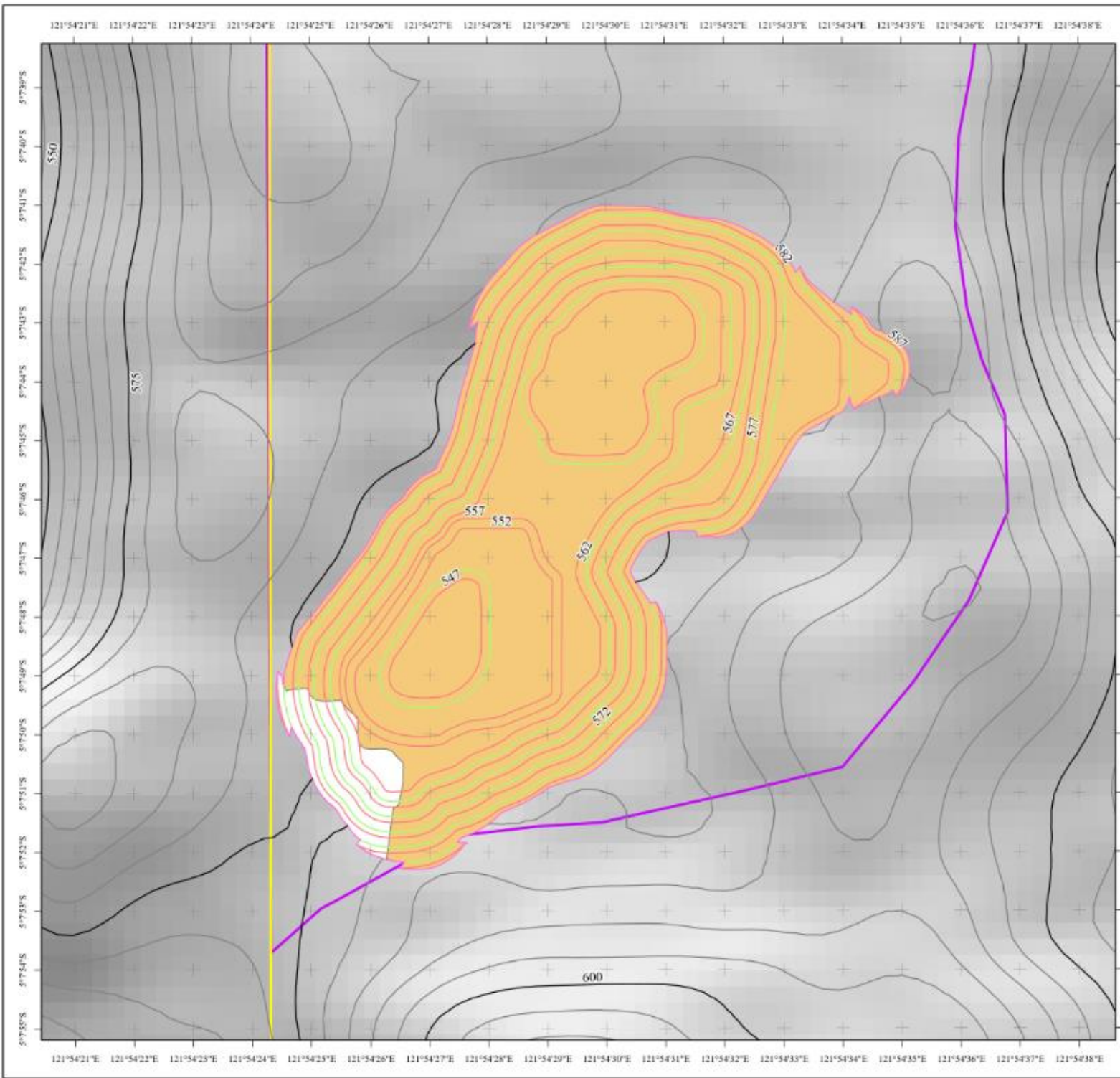
| | |
|----------------------|--|
| DRAWN BY | M. FAHMI D111181018 |
| SUPERVISOR | DR. ARVANTI VIRTANTI ANAS, S.T., M.T. NIP. 197010052008012020 |
| CO-SUPERVISOR | RIZKI AMALIA, S.T., M.T. NIP. 199205042019016001 |

**THE MAP OF NORTH BLOCK SEQUENCE 5
PT PACIFIC ORE RESOURCES**



APPENDIX 14

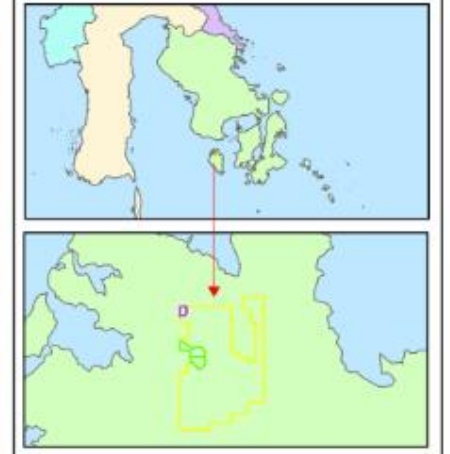
DESIGN OF SEQUENCE 6



Datum : World Geodetic System 1984
 System Grid : Grid Geographic - Interval 1 Second
 Projection : WGS 1984 UTM Zone 51S

- LEGEND**
- Contour
 - Contour Index
 - Sequence 6
 - Sequence 5
 - Already been mined
 - Pit Boundary
 - IUP Boundary
 - North Block Plan
 - South Block Plan

SITUATION MAP

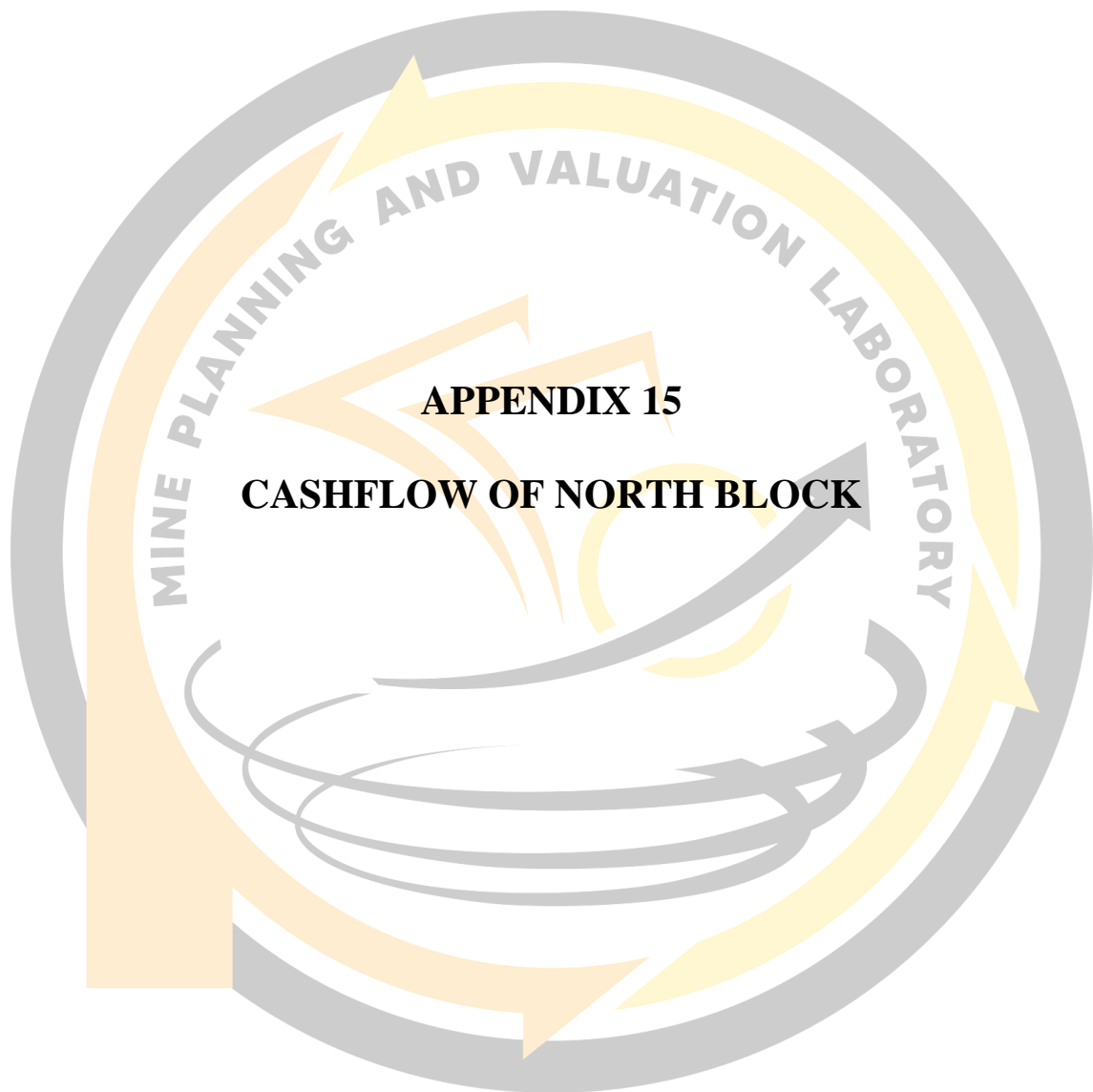


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THESIS
 CONCEPTUAL PLANNING OF NORTH BLOCK NICKEL ORE MINE
 PT PACIFIC ORE RESOURCES, BOMBANA REGENCY,
 SOUTHEAST SULAWESI PROVINCE

| | |
|---------------|--|
| DRAWN BY | M. FAHMI D111181018 |
| SUPERVISOR | DR. ARVANTI VIRTANTI ANAS, S.T., M.T. NIP. 197010052008012020 |
| CO-SUPERVISOR | RIZKI AMALIA, S.T., M.T. NIP. 199205042019016001 |

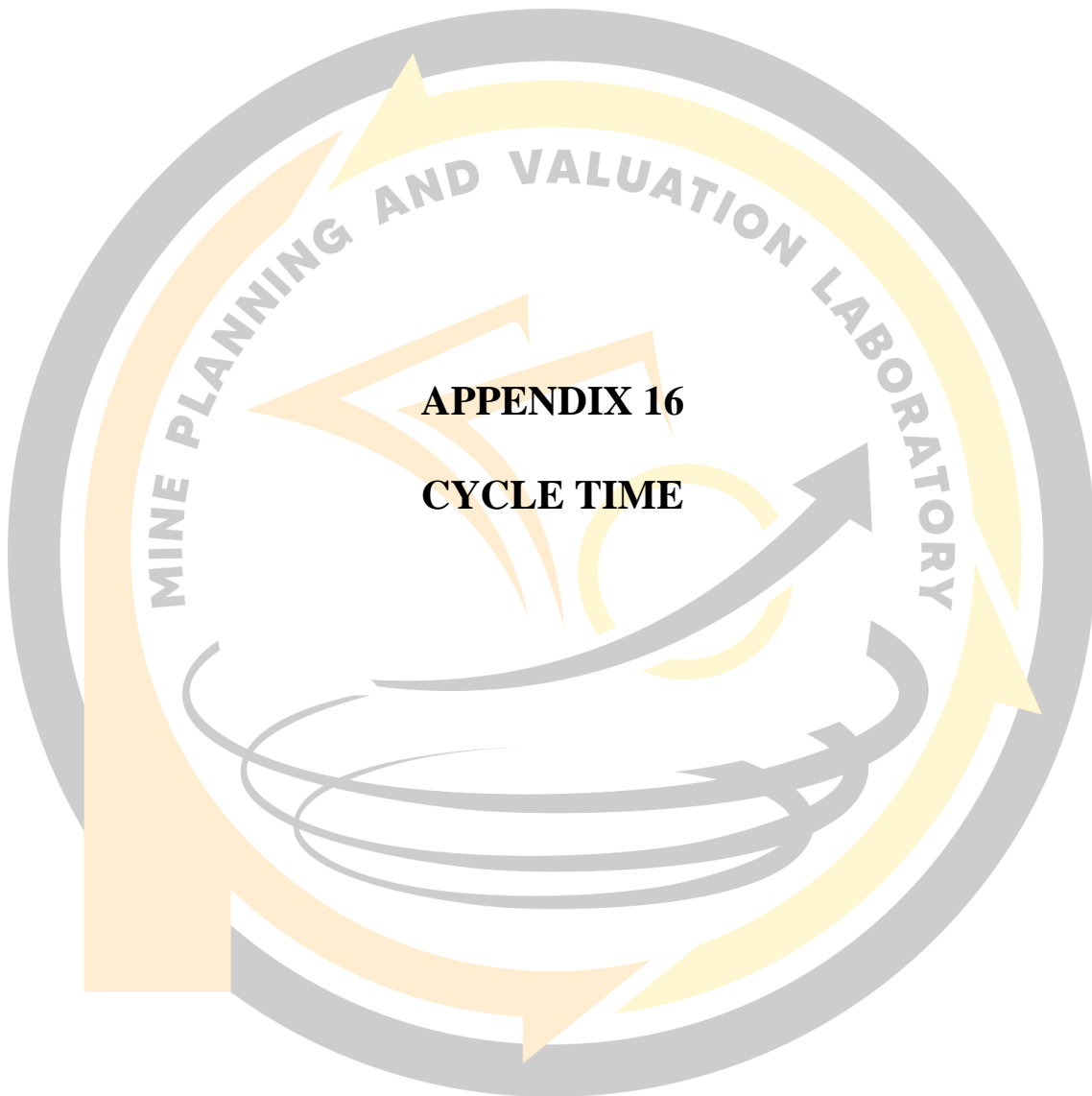
**THE MAP OF NORTH BLOCK SEQUENCE 6
 PT PACIFIC ORE RESOURCES**



APPENDIX 15
CASHFLOW OF NORTH BLOCK

| Month | Investment | First (USD) | Second (USD) | Third (USD) | Fourth (USD) | Fifth (USD) | Sixth (USD) |
|---|----------------|-------------------|---------------------|---------------------|---------------------|---------------------|-------------------|
| Production waste (BCM) | | 129,279.20 | 100,781.42 | 119,065.02 | 117,674.17 | 113,629.61 | 100,053.08 |
| Production ore (ton) | | 23,237.67 | 43,007.50 | 41,249.08 | 42,173.03 | 42,891.38 | 27,777.59 |
| Price | | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 | 30.00 |
| Gross revenue | | 697,130.10 | 1,290,225.00 | 1,237,472.40 | 1,265,190.90 | 1,286,741.40 | 833,327.70 |
| Royalty | | (69,713.01) | (129,022.50) | (123,747.24) | (126,519.09) | (128,674.14) | (83,332.77) |
| Dead rent | | (7.59) | (3.04) | (3.37) | (4.24) | (4.32) | (1.21) |
| Net revenue | | 627,409.50 | 1,161,199.46 | 1,113,721.79 | 1,138,667.57 | 1,158,062.94 | 749,993.72 |
| Sustaining capital | | (27,885.20) | (51,609.00) | (49,498.90) | (50,607.64) | (51,469.66) | (33,333.11) |
| Digging and hauling | | (114,329.34) | (211,596.90) | (202,945.47) | (207,491.31) | (211,025.59) | (136,665.74) |
| Grade control | | (5,344.66) | (9,891.73) | (9,487.29) | (9,699.80) | (9,865.02) | (6,388.85) |
| Surveying and drilling | | (3,020.90) | (5,590.98) | (5,362.38) | (5,482.49) | (5,575.88) | (3,611.09) |
| Land acquisition | | (1,394.26) | (2,580.45) | (2,474.94) | (2,530.38) | (2,573.48) | (1,666.66) |
| Environmental protection and monitoring | | (3,485.65) | (6,451.13) | (6,187.36) | (6,325.95) | (6,433.71) | (4,166.64) |
| K3 and work equipment | | (4,415.16) | (8,171.43) | (7,837.33) | (8,012.88) | (8,149.36) | (5,277.74) |
| Salary | | (14,872.11) | (27,524.80) | (26,399.41) | (26,990.74) | (27,450.48) | (17,777.66) |
| Reclamation and mine closure | | (929.51) | (1,720.30) | (1,649.96) | (1,686.92) | (1,715.66) | (1,111.10) |
| Maintenance and repair | | (1,394.26) | (2,580.45) | (2,474.94) | (2,530.38) | (2,573.48) | (1,666.66) |
| More | | (9,062.69) | (16,772.93) | (16,087.14) | (16,447.48) | (16,727.64) | (10,833.26) |
| Selling cost | | (4,182.78) | (7,741.35) | (7,424.83) | (7,591.15) | (7,720.45) | (4,999.97) |
| Administration and overhead | | (9,527.44) | (17,633.08) | (16,912.12) | (17,290.94) | (17,585.47) | (11,388.81) |
| Operating Income (EBITD) | | 427,565.54 | 791,334.96 | 758,979.71 | 775,979.51 | 789,197.07 | 511,106.45 |
| Principal | | (11,149.83) | (11,149.83) | (11,149.83) | (11,149.83) | (11,149.83) | (11,149.83) |
| Interest expenses | | (4,459.93) | (4,459.93) | (4,459.93) | (4,459.93) | (4,459.93) | (4,459.93) |
| Deprecation | | (4,936.12) | (4,936.12) | (4,936.12) | (4,936.12) | (4,936.12) | (4,936.12) |
| Income before tax | | 407,019.66 | 770,789.08 | 738,433.83 | 755,433.63 | 768,651.19 | 490,560.57 |
| Corporate tax (22%) | | (89,544.33) | (169,573.60) | (162,455.44) | (166,195.40) | (169,103.26) | (107,923.33) |
| Net income | | 317,475.33 | 601,215.48 | 575,978.39 | 589,238.24 | 599,547.93 | 382,637.25 |
| Deprecation | | 4,936.12 | 4,936.12 | 4,936.12 | 4,936.12 | 4,936.12 | 4,936.12 |
| Capital expenditure | (1,114,982.60) | | | | | | |

| Month | Investment | First (USD) | Second (USD) | Third (USD) | Fourth (USD) | Fifth (USD) | Sixth (USD) |
|--|-----------------------|-------------------|-------------------|---------------------|---------------------|---------------------|---------------------|
| Mineral resources drilling and reporting | 271,777.00 | | | | | | |
| Mine infrastructure | 592,334.40 | | | | | | |
| Stockyard construction | 55,749.20 | | | | | | |
| Disposal construction | 55,749.20 | | | | | | |
| Land acquisition | 139,372.80 | | | | | | |
| Cashflow | (1,114,982.60) | 322,411.45 | 606,151.60 | 580,914.51 | 594,174.36 | 604,484.05 | 387,573.37 |
| Discount rate | 1.00 | 0.90 | 0.81 | 0.73 | 0.66 | 0.59 | 0.54 |
| Discounted cashflow | (1,114,982.60) | 290,513.11 | 492,143.57 | 424,989.36 | 391,683.27 | 359,055.22 | 207,436.70 |
| Cashflow accumulative | (1,114,982.60) | 322,411.45 | 928,563.06 | 1,509,477.57 | 2,103,651.92 | 2,708,135.97 | 3,095,709.34 |



APPENDIX 16
CYCLE TIME

Cycle Time Hino 500

| No. DT | Rate | Description / Time (Minute) | | | | | | CT (Minute) |
|--------|------|-----------------------------|---------|---------|-----------------|---------|---------|-------------|
| | | Loading manuver | Loading | Hauling | Dumping manuver | Dumping | Loading | |
| 11 | 1 | 0.63 | 2.05 | 29.00 | 0.88 | 1.68 | 32.00 | 66.24 |
| | 2 | 0.47 | 2.43 | 31.00 | 0.32 | 1.12 | 48.00 | 83.33 |
| | 3 | 0.43 | 2.60 | 34.00 | 1.27 | 1.30 | 49.00 | 88.60 |
| | 4 | 0.67 | 2.20 | 29.00 | 0.50 | 0.92 | 33.00 | 66.28 |
| | 5 | 0.72 | 2.32 | 32.00 | 0.42 | 1.00 | 31.00 | 67.45 |
| | 6 | 1.50 | 1.53 | 33.00 | 0.87 | 0.98 | 36.00 | 73.88 |
| | 7 | 1.05 | 2.33 | 27.00 | 0.43 | 1.30 | 30.00 | 62.12 |
| | 8 | 0.53 | 2.22 | 29.00 | 0.37 | 0.72 | 34.00 | 66.83 |
| | 9 | 0.63 | 2.42 | 24.00 | 0.18 | 0.58 | 30.00 | 57.82 |
| | 10 | 1.30 | 1.97 | 27.00 | 0.30 | 1.15 | 32.00 | 63.72 |
| | 11 | 0.87 | 2.32 | 25.00 | 0.37 | 0.50 | 29.00 | 58.05 |
| | 12 | 0.72 | 2.68 | 28.00 | 0.37 | 0.85 | 36.00 | 68.62 |
| | 13 | 0.50 | 3.10 | 44.00 | 0.48 | 0.80 | 42.00 | 90.88 |
| | 14 | 1.62 | 2.15 | 29.00 | 0.82 | 0.88 | 35.00 | 69.47 |
| | 15 | 0.72 | 2.55 | 28.00 | 0.95 | 0.93 | 33.00 | 66.15 |
| | 16 | 0.47 | 2.10 | 28.00 | 1.03 | 0.75 | 33.00 | 65.35 |
| | 17 | 0.33 | 2.15 | 23.00 | 0.95 | 0.95 | 30.00 | 57.38 |
| | 18 | 0.57 | 2.08 | 33.00 | 0.63 | 0.80 | 37.00 | 74.08 |
| | 19 | 0.53 | 2.75 | 34.00 | 0.58 | 0.80 | 40.00 | 78.67 |
| | 20 | 0.63 | 2.55 | 26.00 | 0.62 | 0.83 | 30.00 | 60.63 |
| | 21 | 0.85 | 2.57 | 29.00 | 0.85 | 0.97 | 32.00 | 66.23 |
| | 22 | 0.57 | 2.32 | 24.00 | 0.75 | 0.67 | 32.00 | 60.30 |
| | 23 | 0.52 | 2.17 | 23.00 | 0.80 | 0.72 | 30.00 | 57.20 |
| | 24 | 1.45 | 2.68 | 24.00 | 0.77 | 0.62 | 35.00 | 64.52 |
| | 25 | 0.90 | 2.22 | 30.00 | 0.42 | 0.78 | 36.00 | 70.32 |
| | 26 | 0.90 | 2.42 | 28.00 | 0.60 | 0.62 | 32.00 | 64.53 |
| | 27 | 1.05 | 2.17 | 25.00 | 0.80 | 0.92 | 30.00 | 59.93 |
| | 28 | 0.70 | 2.03 | 28.00 | 0.65 | 0.95 | 33.00 | 65.33 |
| | 29 | 0.88 | 2.37 | 29.00 | 0.70 | 0.97 | 32.00 | 65.92 |
| | 30 | 0.52 | 2.05 | 30.00 | 0.67 | 0.92 | 34.00 | 68.15 |

Cycle Time Mercy Axor

| No. DT | Rate | Description / Time (Minute) | | | | | | CT (Minute) |
|-----------|------|-----------------------------|---------|---------|--------------------|-----------------|---------|-------------|
| | | Loading manuver | Loading | Hauling | Dumping manuver | Loading manuver | Loading | |
| 641 | 1 | 0.65 | 2.47 | 26.00 | 0.33 | 0.97 | 30.00 | 60.42 |
| | 2 | 0.57 | 2.52 | 29.00 | 0.35 | 1.07 | 33.00 | 66.50 |
| | 3 | 1.00 | 2.48 | 48.00 | 0.57 | 0.67 | 42.00 | 94.72 |
| | 4 | 0.78 | 2.58 | 32.00 | 0.98 | 1.05 | 37.00 | 74.40 |
| | 5 | 1.82 | 1.53 | 30.00 | 0.48 | 0.78 | 34.00 | 68.62 |
| | 6 | 0.50 | 1.55 | 25.00 | 1.40 | 0.87 | 29.00 | 58.32 |
| | 7 | 0.58 | 2.43 | 22.00 | 0.47 | 0.83 | 26.00 | 52.32 |
| | 8 | 0.75 | 2.50 | 27.00 | 0.33 | 0.88 | 32.00 | 63.47 |
| | 9 | 0.75 | 2.50 | 28.00 | 0.58 | 1.05 | 32.00 | 64.88 |
| | 10 | 1.07 | 2.60 | 26.00 | 0.27 | 1.15 | 31.00 | 62.08 |
| | 11 | 0.65 | 2.73 | 27.00 | 0.42 | 0.93 | 31.00 | 62.73 |
| | 12 | 0.67 | 3.30 | 26.00 | 0.47 | 0.72 | 31.00 | 62.15 |
| | 13 | 0.32 | 2.75 | 31.00 | 2.07 | 0.83 | 36.00 | 72.97 |
| | 14 | 0.38 | 2.97 | 29.00 | 0.80 | 0.88 | 34.00 | 68.03 |
| | 15 | 0.42 | 2.23 | 34.00 | 0.95 | 0.97 | 38.00 | 76.57 |
| | 16 | 0.78 | 2.32 | 22.00 | 0.47 | 0.82 | 29.00 | 55.38 |
| | 17 | 0.62 | 2.52 | 18.00 | 0.62 | 1.18 | 25.00 | 47.93 |
| | 18 | 0.68 | 2.27 | 29.00 | 0.55 | 1.08 | 33.00 | 66.58 |
| | 19 | 0.85 | 2.13 | 29.00 | 0.62 | 0.93 | 33.00 | 66.53 |
| | 20 | 0.82 | 2.17 | 26.00 | 0.37 | 0.48 | 29.00 | 58.83 |
| | 21 | 0.72 | 2.17 | 20.00 | 0.48 | 0.85 | 24.00 | 48.22 |
| | 22 | 1.52 | 2.33 | 26.00 | 1.67 | 0.87 | 32.00 | 64.38 |

Cycle Time Excavator

| Equipment Type | Description / Time (Second) | | | | CT (Second) |
|----------------|-----------------------------|--------------|---------|-------------|-------------|
| | Digging | Filled Swing | Dumping | Empty Swing | |
| SK 200 | 4.21 | 3.82 | 4.29 | 5.31 | 17.63 |
| | 5.8 | 3.94 | 2.74 | 5.52 | 18 |
| | 4.73 | 4.26 | 3.33 | 5.05 | 17.37 |
| | 6.8 | 5.67 | 3.04 | 4.47 | 19.98 |
| | 6.64 | 6.29 | 2.95 | 4.88 | 20.76 |
| | 5.12 | 4.84 | 3.66 | 4.15 | 17.77 |
| | 6.38 | 5.33 | 3.28 | 5.08 | 20.07 |
| | 4.91 | 4.22 | 2.42 | 4.93 | 16.48 |
| | 6.25 | 5.71 | 3.11 | 4.34 | 19.41 |
| | 6.72 | 4.73 | 2.33 | 3.64 | 17.42 |
| | 6.04 | 6.32 | 2.68 | 3.76 | 18.8 |
| | 5.42 | 4.25 | 2.36 | 3.68 | 15.71 |
| | 7 | 4.47 | 3.6 | 3.92 | 18.99 |
| | 6.61 | 5.35 | 3.17 | 5.03 | 20.16 |
| | 4.6 | 4.39 | 3.64 | 3.69 | 16.32 |
| | 3.67 | 4.02 | 2.33 | 3.46 | 13.48 |
| | 4.78 | 3.87 | 2.85 | 3.55 | 15.05 |
| | 5.38 | 4.63 | 2.42 | 3.06 | 15.49 |
| | 4.41 | 3.86 | 2.42 | 3.33 | 14.02 |
| | 4.32 | 4.78 | 3.13 | 5.88 | 18.11 |
| | 3.5 | 3.94 | 2.19 | 3.42 | 13.05 |
| | 5.63 | 4.99 | 3.36 | 2.93 | 16.91 |
| | 3.72 | 4.6 | 2.51 | 3.39 | 14.22 |
| | 3.81 | 4.27 | 2.66 | 3.23 | 13.97 |
| | 4.42 | 5.45 | 3.15 | 3.94 | 16.96 |
| | 4.93 | 4.6 | 3.21 | 3.55 | 16.29 |
| | 3.93 | 4.23 | 3.42 | 3.16 | 14.74 |
| | 4.54 | 4.16 | 2.21 | 3.44 | 14.35 |
| 5.19 | 3.77 | 2.21 | 2.96 | 14.13 | |
| 3.87 | 3.42 | 2.58 | 4.97 | 14.84 | |
| SK 330 | 7.16 | 5.62 | 2.22 | 6.13 | 21.13 |
| | 4.03 | 2.64 | 4.35 | 6.05 | 17.07 |
| | 5.73 | 2.32 | 5.63 | 3.95 | 17.63 |
| | 5.71 | 2.71 | 6.45 | 5.32 | 20.19 |
| | 6.05 | 2.03 | 5.67 | 4.78 | 18.53 |
| | 6.35 | 2.35 | 7.05 | 3.03 | 18.78 |

| Equipment Type | Description / Time (Second) | | | | CT (Second) |
|----------------|-----------------------------|--------------|---------|-------------|-------------|
| | Digging | Filled Swing | Dumping | Empty Swing | |
| | 5.44 | 1.1 | 2.26 | 4.39 | 13.19 |
| | 8.84 | 5.8 | 2.22 | 6.66 | 23.52 |
| | 7.61 | 7.63 | 1.6 | 6.14 | 22.98 |
| | 9.97 | 6.77 | 2.35 | 7.12 | 26.21 |
| | 8.06 | 6.71 | 1.84 | 6.65 | 23.26 |
| | 5.49 | 7.23 | 2.99 | 4.31 | 20.02 |
| | 7.73 | 5.28 | 4.61 | 3.28 | 20.9 |
| | 7.41 | 7.66 | 1.88 | 4.74 | 21.69 |
| | 5.99 | 7.4 | 1.57 | 8.16 | 23.12 |
| | 6.26 | 5.39 | 2.31 | 7.09 | 21.05 |
| | 4.75 | 5.93 | 2.28 | 6.89 | 19.85 |
| | 3.78 | 6.52 | 6.08 | 7.53 | 23.91 |
| | 4.32 | 4.85 | 4.57 | 5.52 | 19.26 |
| | 2.69 | 7.48 | 7.53 | 5.84 | 23.54 |
| | 4.42 | 4.35 | 5.41 | 7.03 | 21.21 |
| | 2.47 | 5.63 | 6.43 | 4.3 | 18.83 |
| | 2.59 | 5.7 | 5.4 | 5.98 | 19.67 |
| | 4.99 | 2.5 | 4.62 | 5.78 | 17.89 |
| | 5.37 | 2 | 4.4 | 5.7 | 17.47 |
| | 4.42 | 2.05 | 3.94 | 5.69 | 16.1 |
| | 6.23 | 1.84 | 3.94 | 6.69 | 18.7 |
| | 2.63 | 2.05 | 4.66 | 6.27 | 15.61 |
| | 5.04 | 8.26 | 7.33 | 4.39 | 25.02 |
| | 1.48 | 1.75 | 6.28 | 3.55 | 13.06 |
| | 2.39 | 3.77 | 4.05 | 5.91 | 16.12 |
| | 4.15 | 1.64 | 4.25 | 3.81 | 13.85 |
| | 6.93 | 1.52 | 4.43 | 2.95 | 15.83 |
| | 1.9 | 2.49 | 4.92 | 5.08 | 14.39 |
| | 4.46 | 5.18 | 1.89 | 5.26 | 16.79 |
| | 8.56 | 4.62 | 1.48 | 5.61 | 20.27 |
| | 7.26 | 5.52 | 2.5 | 4.63 | 19.91 |