

PRELIMINARY REPORT ON GRAPHITE MINERALIZATION
AT WELANRUPPA POTHUHENA AREA IN
DODANGASLANDA
(KURUNEGALA DISTRICT)



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PITAKOTTE

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1. Introduction

As per the request made by the CEO RS Mines Mr Ranjith Wijekoon, Geological Survey and Mines Bureau (GSMB) has conducted a drilling investigation for the development of graphite mine at Dodangaslanda (Figure1).

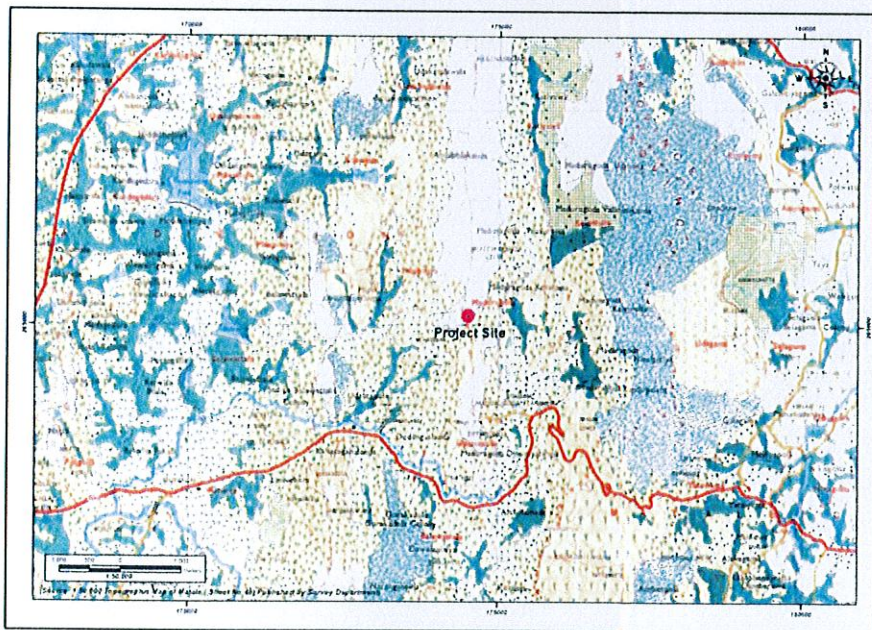


Figure 1 - Location map of the survey area in 1:50,000 topographic sheet

Under this drilling investigation, initially proposed three drill holes were put down to a depth of 200m each. Co-ordinates of these three drill holes locations are given in Table- 1 and drill hole location map is given in Figure- 2. All three drill holes situated along the abandoned tunnel trace at Pothuhena, Welanruppa in Dodangaslanda area.

Table No: 01- Co-ordinates of Drill hole Locations

Drill Hole No	Co-ordinates	
	East	North
DH1	174501	265218
DH2	174500	265224
DH3	174535	265109

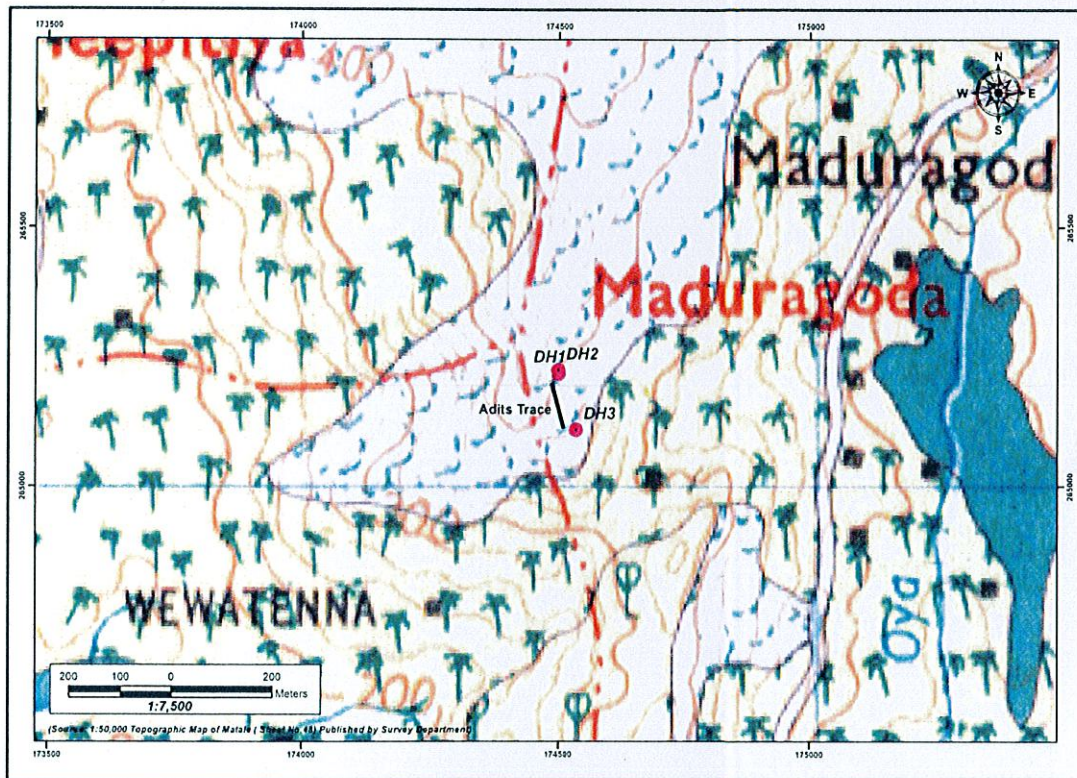


Figure 2- Drill hole Locations and adit

2. Drilling Work

The Drilling crew of the GSMB comprises of an experienced Driller (Mr. Chandima Paliyadeniya- Technical Officer) and skilled drilling assistants.

The total core length of 416.6 m (mainly NQ size - 52 mm diameter) has been drilled under this project. Of this total drilling depth, initial 15m depth was gone through the overburden soil cover while the rest was in moderately weathered and fresh rock formations. Details of the overburden drilling, rock drilling, bearing, inclination and final depths of drill holes are given in log sheets in Annex- 1 and Table - 2.

Table 2. Summary Bore hole Description

DH No	Overburden Depth(m)	Rock drilling depth(m)	Bearing	Inclination	Final depth of drill holes (m)
DH 1	5	61.5	330 ⁰	60 ⁰	66.6
DH 2	3	147	280 ⁰	60 ⁰	150
DH 3	7	193	317 ⁰	60 ⁰	200

DH 1 was contacted with few graphite veins which was mineralized along the drill hole direction. Therefore DH1 was terminated at 66.6m under the instruction of Mr Ranjith Wijekoon. The DH 2 was carried out at the same location in 280⁰ direction with 60⁰ inclinations. Total drilling depth of the of the DH 2 was 150m. Within this 150m depth, very thin graphite veins were found between 29m and 30m depth and also at 44.9m depth. Details of the identified veins are given in the Table-3. The DH2 was terminated at 150m depth due to the request of CEO, RS mines.

The DH 3 was put down in 317⁰ direction with 60⁰ inclination. Three graphite mineralization could be observed in DH 3 drill hole and are as follows (Table-3)

1. 48m depth to 49m depth
2. 86m depth to 93m depth
3. 107m depth to 114m depth

Graphite mineralization observed between 107m and 114m depth in DH 3 is located mainly in high possibility zone. It contains somewhat promising economically viable graphite mineralization than the rest of the survey area. According to the drill hole logs (Annex-I) and sections of the boreholes (Annex -II), identified crosscut graphite veins could be summarized as follows.

Table -3 Description of the graphite veins in drill holes

Drill Hole No	Vein depth (m)	Vein Thickness (cm)	Graphite vein type	Comment
DH 1	49.3	1cm	mixed with pyrite	The hole was along the veins
	49.5	13cm	graphite	
DH2	29	0.5	graphite	
	30	0.5	graphite	
	49	1	graphite	
DH3	48.28	2	graphite	
	48.73	1	graphite	
	48.79	13	graphite	
	55.15	1	graphite	
	86.64	14	graphite	
	87.05	0.5	graphite	
	93.35	1	graphite	
	107.12	22	graphite	
	109.2	0.5	graphite veinlet	
	109.77	16	graphite vein	
110	60	graphite vein		
110.6	10	graphite vein		
111	3	graphite vein		
112	10	graphite vein		
114	2	vein let		

3. Summary of Findings

1. According to the drilling data of DH 1, DH 2 and DH3, considerable number of graphite veins (having thicknesses varying from 0.5-60 cm) can be observed in DH3 drill hole between 107m and 114m depth. These veins could be considered as economically viable graphite veins.
2. The three dimensional module (Figure-3) from cross cut graphite veins could be interpreted and extrapolate as follows.

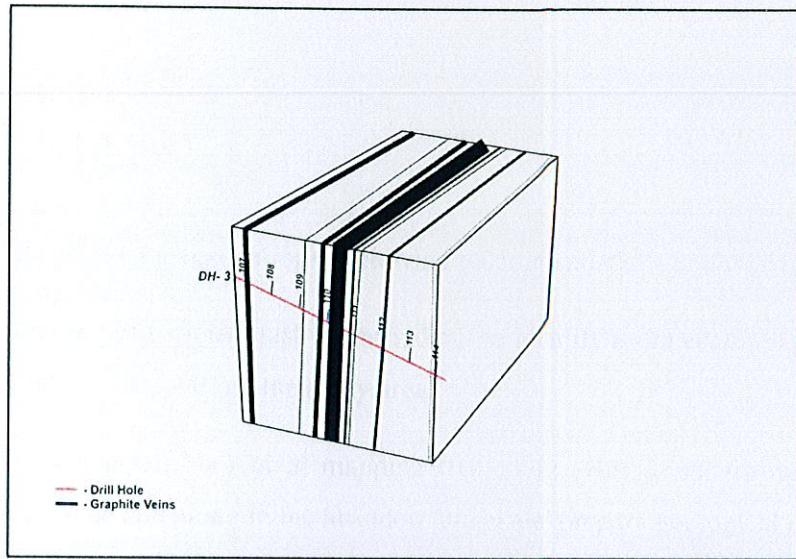


Figure 3- Cross cut graphite veins

3. By observing graphite veins at Dodangaslanda and Kahatagaha mine and considering the geology of the survey area (Figure-4), the graphite vein could be located in dilatational jugs structures. Therefore very thick graphite portions could be found along the veins. Three bore hole data were not adequate to identify this type of formation.

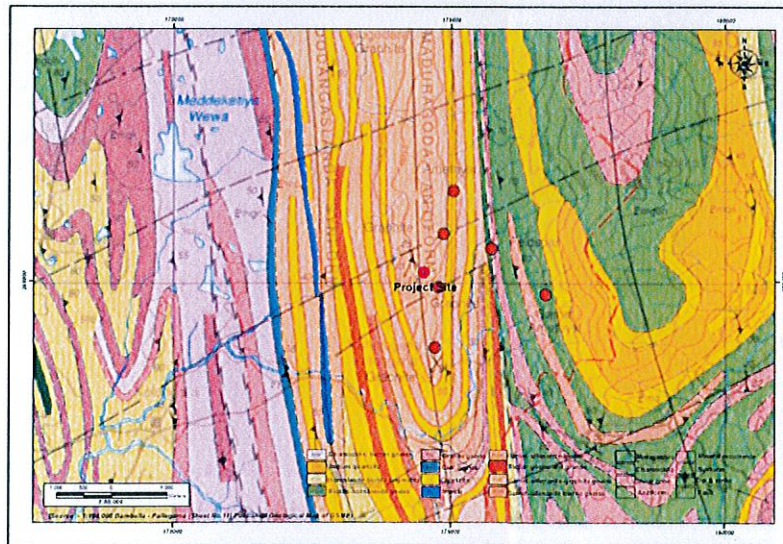


Figure 4 - Geology of the survey area

4. Nearly about 200m distance away from the abandoned tunnel trace, more promising areas for graphite mineralization could be recognized.

4. Recommendations

Based on the drilling investigations, following recommendations could be made.

1. Further investigations must be carried out to identify more economically viable graphite veins covering the study area.
2. Carry out detail geological mapping (including veins joints fractures) in the surface area and along in the abandon tunnel and prepare geological module.
3. Using the 3D geological module, it could be possible to locate further drill holes in order to identify economically viable additional graphite vein systems.

5. Acknowledgments

I would like to thank CEO RS Mines Mr Ranjith Wijekoon for awarding this project to the GSMB.

Mr. H.S Lasantha (geologist) is thanked for giving his assistance for the investigations and preparation of Bore Hole Log Sheets.

Mr. Chandima Paliyadeniya (Technical Officer of GSMB) gave an invaluable service during the entire drilling work. I would also like to thank Mr. Priyanga for the preparation of cross sections and Ms. A.M Dhananjaya helped during the report compilation within very short period of time.

Annex-I

Bore Hole Log Sheets

PROJECT :- DODANGASLANDE GEAPHITE EXPLORATION PROJECT.



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REF. DEPTH (m)	ELEVATION (m)	DEPTH (m)	GENERAL DESCRIPTION AND REMARKS	GRAPHICAL LOG	GRAPHITE MINERALIZATION					QUALITY OF SOIL OR ROCK		WEATHERING			COMPACTION				
					MINERALIZATION	DEPTH (m)		VEIN TYPE	FILLING MATERIALS	THICKNESS (m)	COMMENT	CORE RECOVERY %	ROD %	FRESH	SILTY SAND/S-SG	SANDY MUDSTONE	MUDS MUDS	HARD	LOCALLY SANDY
						FROM TOP	TO BOTTOM												

65	66.80					22.45	52.47	Va	Gmp	0.010	Graphite veinlet	100	100					
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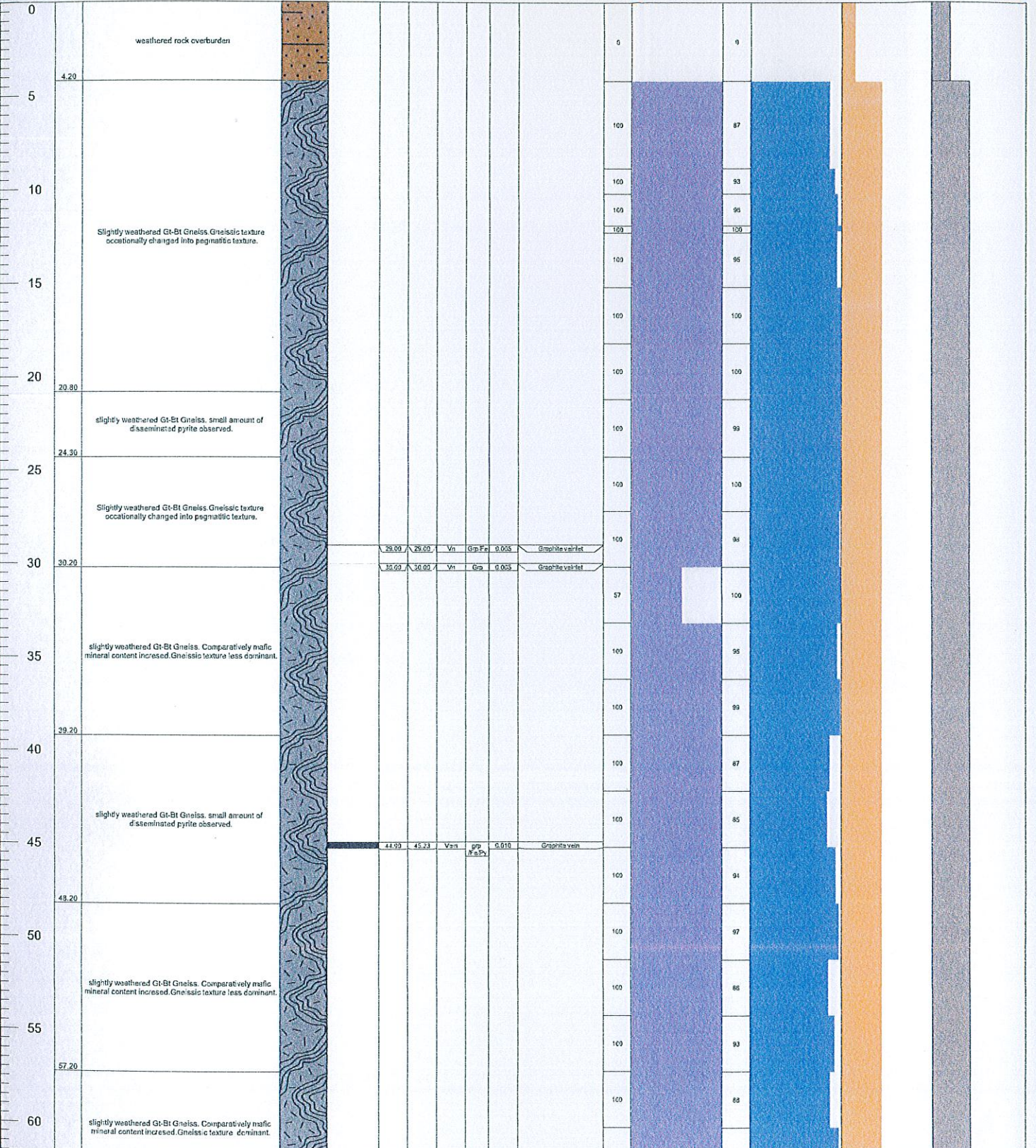
DRILLING AND BOREHOLE DATA

LOCATION	- Dodangaslande	BORE HOLE No.	- DH02	FINAL DEPTH	- 150.00 m
DRILLING METHOD	- Rotary	X-COORDINATE	- 174500	CASING DEPTH	- 5.00 m
MACHING TYPE	- XY-42	Y-COORDINATE	- 255224	INCLINATION	- -60°
GEOLOGIST	- H.S.Lasantha	ELEVATION (COLLAR)	- 388.00 m	BEARING	- 280°
TECHNICAL OFFICER	- Pelihawadana/ Chamara	CORE BARREL, BIT	- NQ		

LEGEND FOR GRAPHIC LOG

	weathered rock overburden		Vein
	Gt-Bt Gneiss		Vn

REF. DEPTH (m)	ELEVATION (m)	DEPTH (m)	GENERAL DESCRIPTION AND REMARKS	GRAPHICAL LOG	GRAPHITE MINERALIZATION					QUALITY OF SOIL OR ROCK		WEATHERING			COMPACTION	
					MINERALIZATION	DEPTH (m)	VEIN TYPE	FILLING MATERIALS	THICKNESS (m)	COMMENT	CORE RECOVERY %	RQD %	FRESH	SUBSLIGHTLY WEATHERED	HEAVILY WEATHERED	VERY HARD



PROJECT :- DODANGASLANDE GEAPHITE EXPLORATION PROJECT.



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REF. DEPTH (m)	ELEVATION (m)	DEPTH (m)	GENERAL DESCRIPTION AND REMARKS Rock type, colour, grain size, texture and structure (compaction, solution cavities, cavity fillings etc.)	GRAPHICAL LOG	GRAPHITE MINERALIZATION					QUALITY OF SOIL OR ROCK		WEATHERING	COMPACTION			
					MINERALIZATION	DEPTH (m)		VEN TYPE	FILLING MATERIALS	THICKNESS (m)	COMMENT		CORE RECOVERY %	RQD %	RPOH	VERY HARD
						FROM TOP	TO BOTTOM									

63.20										100	97					
65			Quartz rich slightly weathered Gt-Bt Gneiss. Gneissic texture less dominant. small amount of disseminated pyrite observed.							100	100					
70											100				98	
75											100				98	
80											100				97	
85											100				95	
90											100				100	
92.20											100				97	
95					slightly weathered Gt-Bt Gneiss. Comparatively mafic mineral content increased. Gneissic texture dominant.										100	100
99.20															100	98
100											100				59	
105			slightly weathered Gt-Bt Gneiss. Comparatively felsic mineral content increased. Gneissic texture dominant.							100	100					
110										88	100					
114.20									100	97						
115			slightly weathered Gt-Bt Gneiss. Comparatively mafic mineral content increased. Gneissic texture dominant.							100	100					
117.20										100	97					
120			slightly weathered Gt-Bt Gneiss. Comparatively felsic mineral content increased. Gneissic texture dominant.							100	100					
125										100	100					
126.20									100	100						

PROJECT :- DODANGASLANDE GEAPHITE EXPLORATION PROJECT.



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REF. DEPTH (m)	ELEVATION (m)	DEPTH (m)	GENERAL DESCRIPTION AND REMARKS	GRAPHICAL LOG	GRAPHITE MINERALIZATION						QUALITY OF SOIL OR ROCK		WEATHERING			COMPACTION				
					MINERALIZATION	DEPTH (m)		VEIN TYPE	FILLING MATERIALS	THICKNESS (m)	COMMENT	CORE RECOVERY %	ROD %	RIPEN	SLIGHTLY RIPENED	MODERATELY RIPENED	VERY HARD	HARD	LOCALLY HARD	SOFT
						FROM TOP	TO BOTTOM													
			Rock type, colour, grain size, texture and structure (compaction, solution cavities, cavity fillings etc.)																	
130			slightly weathered Gt-Bt Gneiss. Comparatively mafic mineral content increased. Gneissic texture dominant. small amount of disseminated pyrite observed.								100	100								
135	135.20		slightly weathered Gt-Bt Gneiss. Comparatively felsic mineral content increased. Gneissic texture dominant.								100	100								
140	139.20										100	100								
145			slightly weathered Gt-Bt Gneiss. Comparatively mafic mineral content increased. Gneissic texture dominant. Hole was terminated at 150.00 m depth.								80	100								
150	150.00										83	100								
											100	100								
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PROJECT :- DODANGASLANDE GEAPHITE EXPLORATION PROJECT.



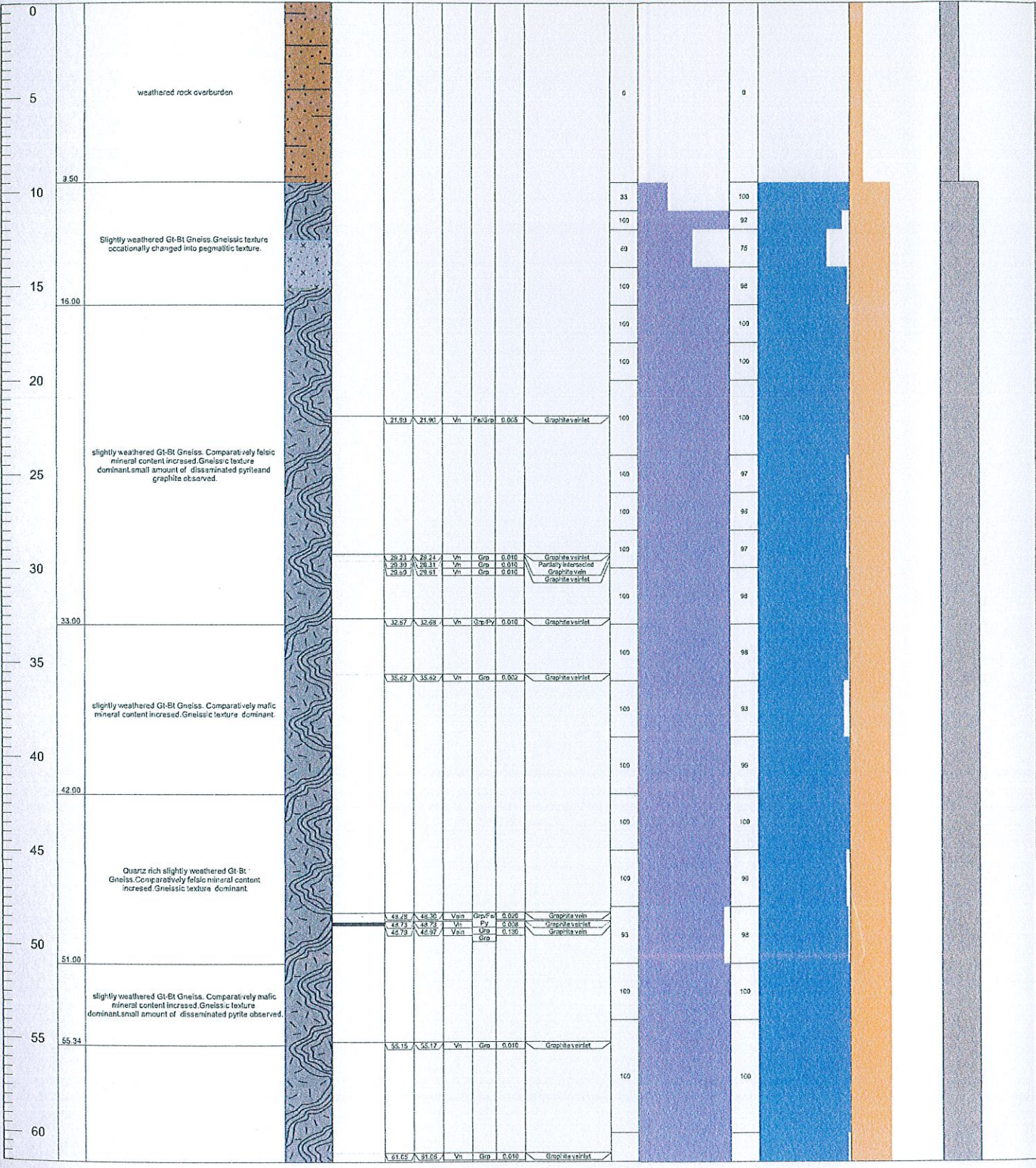
DRILLING AND BOREHOLE DATA

LOCATION :- Dodangaslanda	BORE HOLE No. :- DH03	FINAL DEPTH :- 199.90 m
DRILLING METHOD :- Rotary	X-COORDINATE :- 174535	CASING DEPTH :- 10.00 m
MACHING TYPE :- XY-42	Y-COORDINATE :- 255109	INCLINATION :- -60°
GEOLOGIST :- H.S.Lasantha	ELEVATION (COLLAR) :- 353.00 m	BEARING :- -317°
TECHNICAL OFFICER :- Pelihawadana/ Chamara	CORE BARREL, BIT :- NQ	

LEGEND FOR GRAPHIC LOG

	weathered rock overburden		Vein
	Gt-Bt Gneiss		Vn
	Pegmatite		

REF. DEPTH (m)	ELEVATION (m)	DEPTH (m)	GENERAL DESCRIPTION AND REMARKS	GRAPHICAL LOG	GRAPHITE MINERALIZATION					QUALITY OF SOIL OR ROCK		WEATHERING		COMPACTION	
					MINERALIZATION	DEPTH (m)	VEIN TYPE	FILLING MATERIALS	THICKNESS (m)	COMMENT	CORE RECOVERY %	RQD %	FROM	TO	VERY HARD



Annex-II
Cross Sections

