



**NORTHERN<sup>127</sup>  
CoBALT**

# SAEMC PRESENTATION

8<sup>th</sup> DECEMBER 2017



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The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Michael Schwarz who is a member of the Australian Institute of Geoscientists. Mr Michael Schwarz is a full-time employee of the company and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Michael Schwarz consents to the inclusion in the report of the matters based on his information in the form in which it appears.

This report contains historical exploration results announced on 20 September 2017 as "Prospectus" (historical estimate). The Company confirms it is not in possession of any new information or data relating to the historical estimate that materially impacts on the reliability of the estimates or the Company's ability to verify the historical estimate. Supporting information provided in the announcement of 20 September 2017 continues to apply and has not materially changed. This report also contains exploration results announced on 24 November 2017 as "High Grade First Drill Results - Stanton Cobalt Deposit", 29 November 2017 as "Further High Grade Cobalt Results - Stanton Cobalt Deposit" and 7 December 2017 as "Stanton Cobalt Resource Remains Open in Multiple Directions"







# CORPORATE OVERVIEW

## Len Dean *Chairman*

Metallurgist, experienced ASX Chairman BHP Marketing Director Iron Ore and Group General Manager Minerals Marketing. MD of India's largest listed Iron Ore Company. Over 50 years industry experience.



## Michael Schwarz *Managing Director*

Michael has over 20 years' senior experience in mineral exploration spanning industry and government as a geologist and in senior management. Michael was previously Managing Director of Monax Mining (ASX:MOX) and has held Directorships with several ASX listed exploration companies.



## Duncan Chessell *Director*

Project vendor representative (Coolabah Group) with 20+ years experience in business and oil, gas and mineral exploration. BSc, MAusIMM, GAICD.



## Andrew Shearer *Director*

Resource Analyst with PAC Partners (Lead Manager on IPO), Corporate Advisor, Geophysicist with a technical and corporate background. BSc (Hons), MBA



## Capital Structure 8<sup>th</sup> December 2017

Ordinary Shares (m)	37.0
Market Capitalisation (A\$m)	\$14.65
Cash (A\$m) <i>(raised at IPO 22 September 2017)</i>	\$4.2
Options (\$0.20/sh, 14/9/19) (m)	9.3
Options (\$0.25/sh, 6/9/21) (m)	5.8
Options (\$0.25/sh, 21/03/21) (m)	6.5
Performance Shares - Class A (m)	9.6
Performance Shares - Class B (m)	3.6

## *Performance Shares on JORC Code Project Milestones*

*Class A: upon 6,000t contained Co equivalent*

*Class B: upon 15,000t contained Co equivalent*



# THE COBALT ISSUE = THE COBALT OPPORTUNITY

The price of cobalt has increased from **US\$25,000/t** in  
2016 to **US\$68,000/t** in December 2017\*.

But is still HALF of the 2008 High of **\$115,000/t**

\*Source: [www.infomine.com](http://www.infomine.com)







**COBALT IS CENTRAL TO  
THE EXPANDING “GREEN ECONOMY”**

# COBALT DEMAND DRIVER

## ELECTRIC VEHICLE INVESTMENT IS RAMPING UP

Li-ion (cobalt) batteries are suited to electric vehicles, where weight and energy density are important factors.



- China announced its intention to phase out the production and sale of gas and diesel vehicles altogether
- Norway agreed to end sales of petrol and diesel cars by 2025
- Netherlands voted through a motion to end all petrol and diesel car sales by 2025
- India announced that it would end sales of petrol and diesel cars by 2030
- Scotland announced it would phase out petrol and diesel cars by 2032
- France announced it would end sales of petrol and diesel cars by 2040
- Britain announced it would end sales of petrol and diesel cars by 2040

### COUNTRIES INVESTING IN ELECTRIC VEHICLES





# COBALT DEMAND DRIVER

## ELECTRIC VEHICLE INVESTMENT IS RAMPING UP

Li-ion (cobalt) batteries are suited to electric vehicles, where weight and energy density are important factors.



- Volkswagen announced electric versions of all 300 of its models
- Daimler (owner of Mercedes-Benz) announced it was accelerating its EV program and would have 10 new EVs to market by 2022
- Volvo announced that all its models introduced in 2019 and after would be hybrid or electric
- BMW announced that by 2025 it would have 12 new BEVs and 13 new hybrids on the road
- Jaguar Land Rover announced that all of its new models from 2020 onward would be hybrid or electric
- And then there is Tesla.....



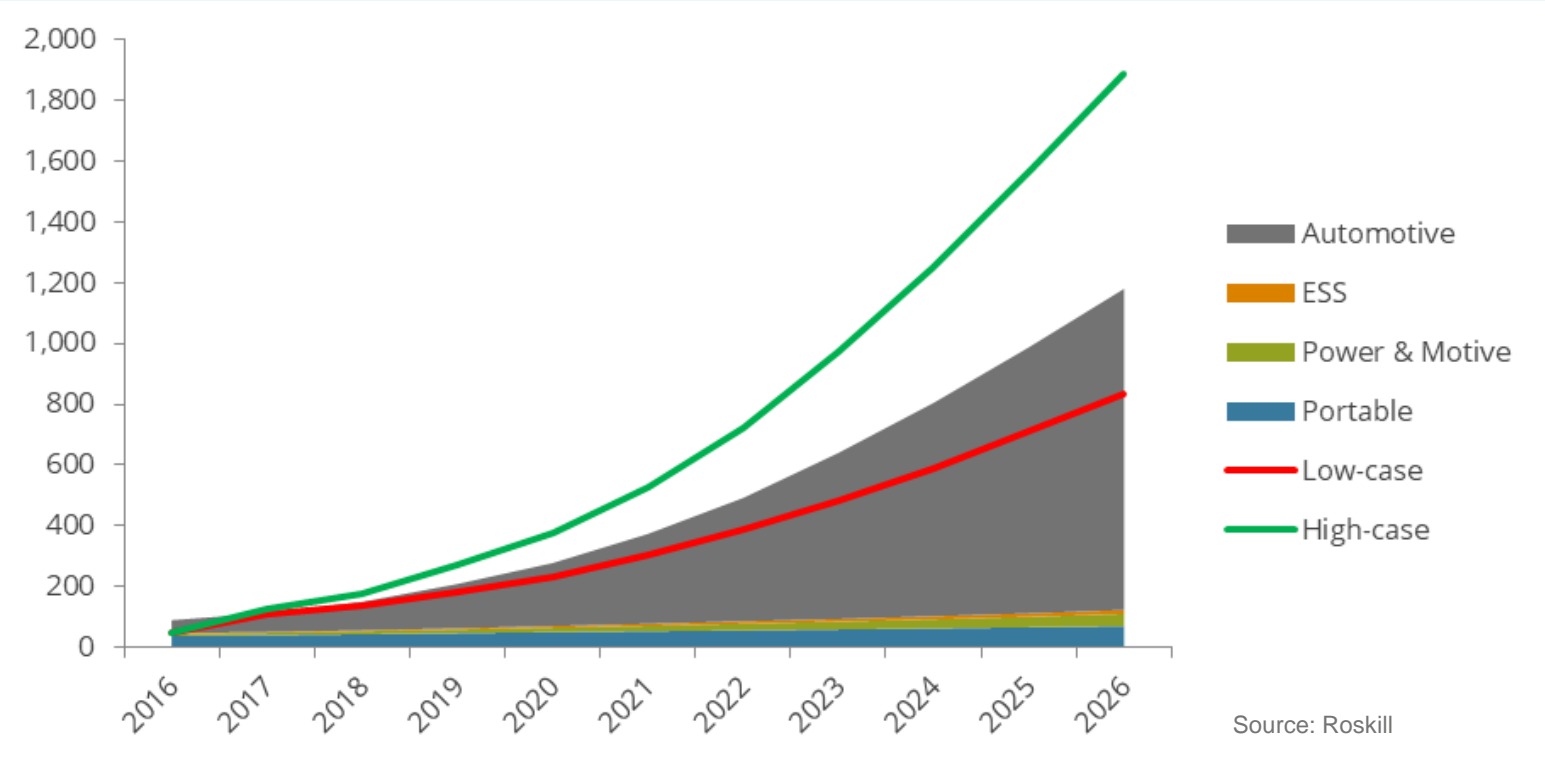
COMPANIES INVESTING IN ELECTRIC VEHICLES





# COBALT DEMAND DRIVER

World: Market Li-ion batteries by end use, 2016-2026 (GWh)



COMPANIES INVESTING IN ELECTRIC VEHICLES

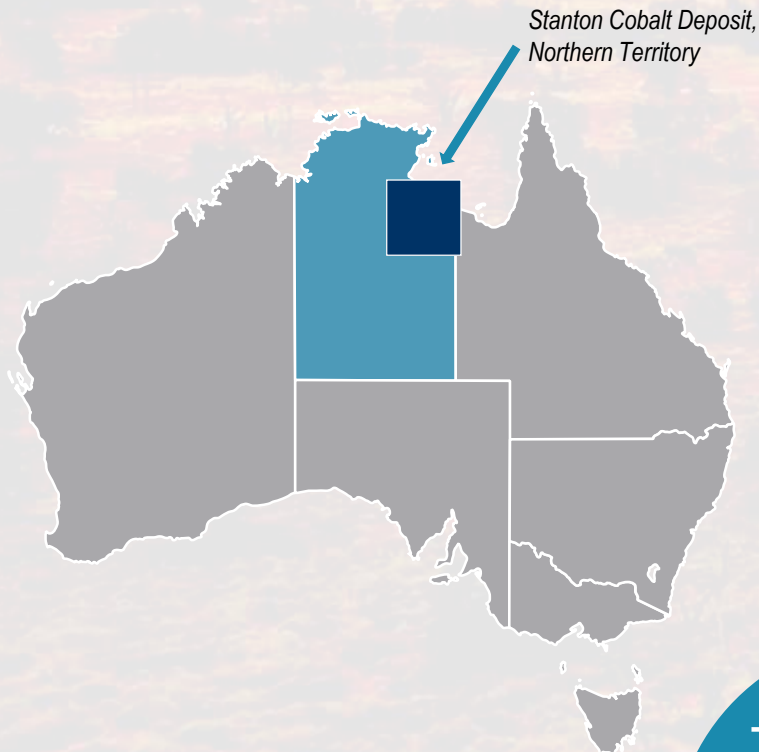


An aerial photograph of a construction site in a forest. The site is cleared, showing dirt paths and several pieces of heavy machinery, including a red crane and a white truck. There are some small buildings and a large white tank. The surrounding forest is dense with green trees. The sky is a mix of orange, pink, and blue, indicating sunset or sunrise. A large blue diagonal overlay covers the right side of the image.

# PROJECT & PLAN



# LOCATION, MINERALISATION STYLE



Stanton Cobalt Deposit,  
Northern Territory

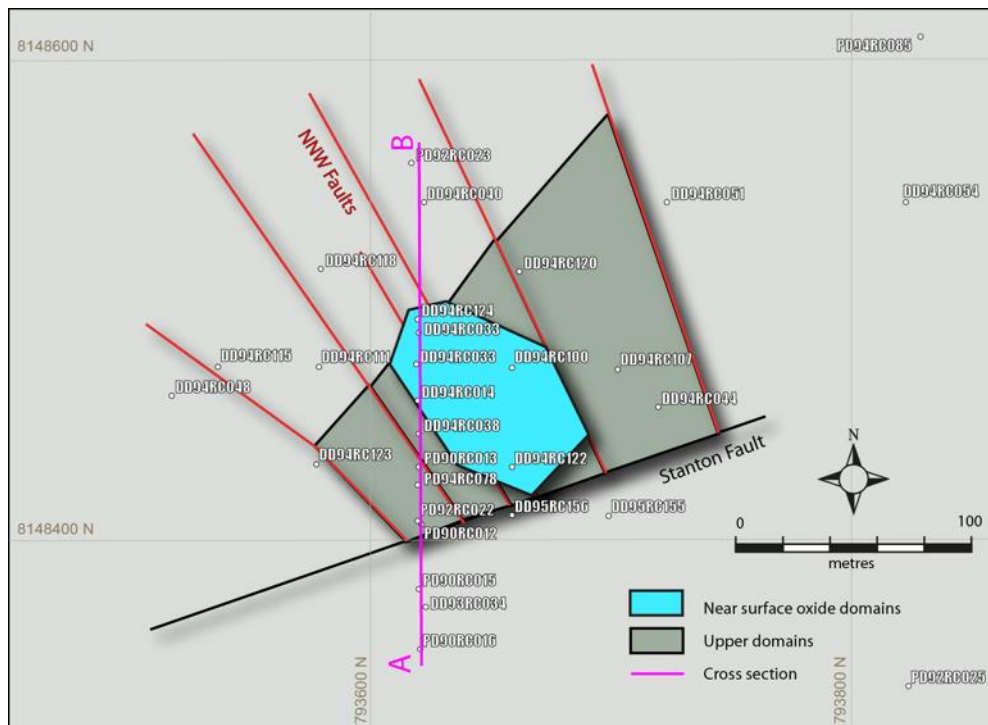
**THE STANTON  
COBALT DEPOSIT  
IS IN THE  
NORTHERN  
TERRITORY,  
AUSTRALIA**

**N27's Wollogorang Cobalt Project is a sediment hosted cobalt mineralisation system which has potential for low CAPEX and OPEX options due to:**

- Non-refractory mineralisation (predominantly siegenite - a cobalt sulphide mineral)
- Cobalt dominant mineralisation occurs from surface
- Flat lying sediment hosted mineralisation - likely open pit operations
- Occurs in a supportive first-world mining jurisdiction

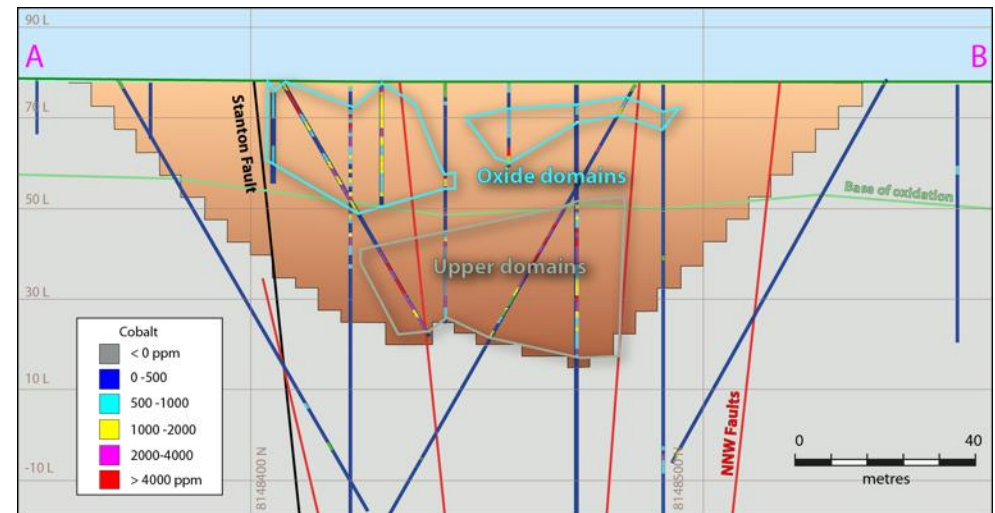
NORTHERN COBALT has recognised the growing importance of cobalt sourced from developed world jurisdictions

# WOLLOGORANG PROJECT - GEOLOGY



Plan of Stanton Deposit Drilling, Interpreted Faults and Domains

JORC 2012 compliant resource of:  
500,000t @ 0.17% Co, 0.09% Ni and 0.17% Cu



Cross Section Showing Drilling, Domains and Open Pit Optimisation

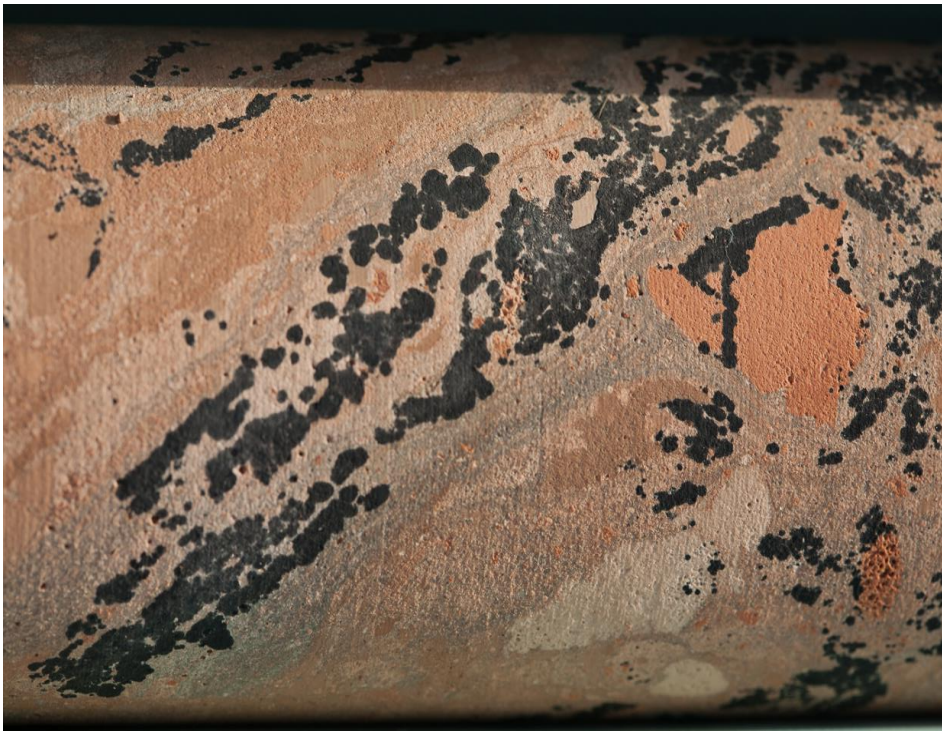
Mineralisation is separated by oxidation state

- **Oxide mineralisation** – Asbolane (hydrated oxide of manganese and cobalt)
- **Sulphide mineralisation** – Siegenite ( $(\text{Ni}, \text{Co})_3\text{S}_4$  (cobalt–nickel sulphide)



# WOLLOGORANG PROJECT - GEOLOGY

Oxide mineralisation



**Asbolane**



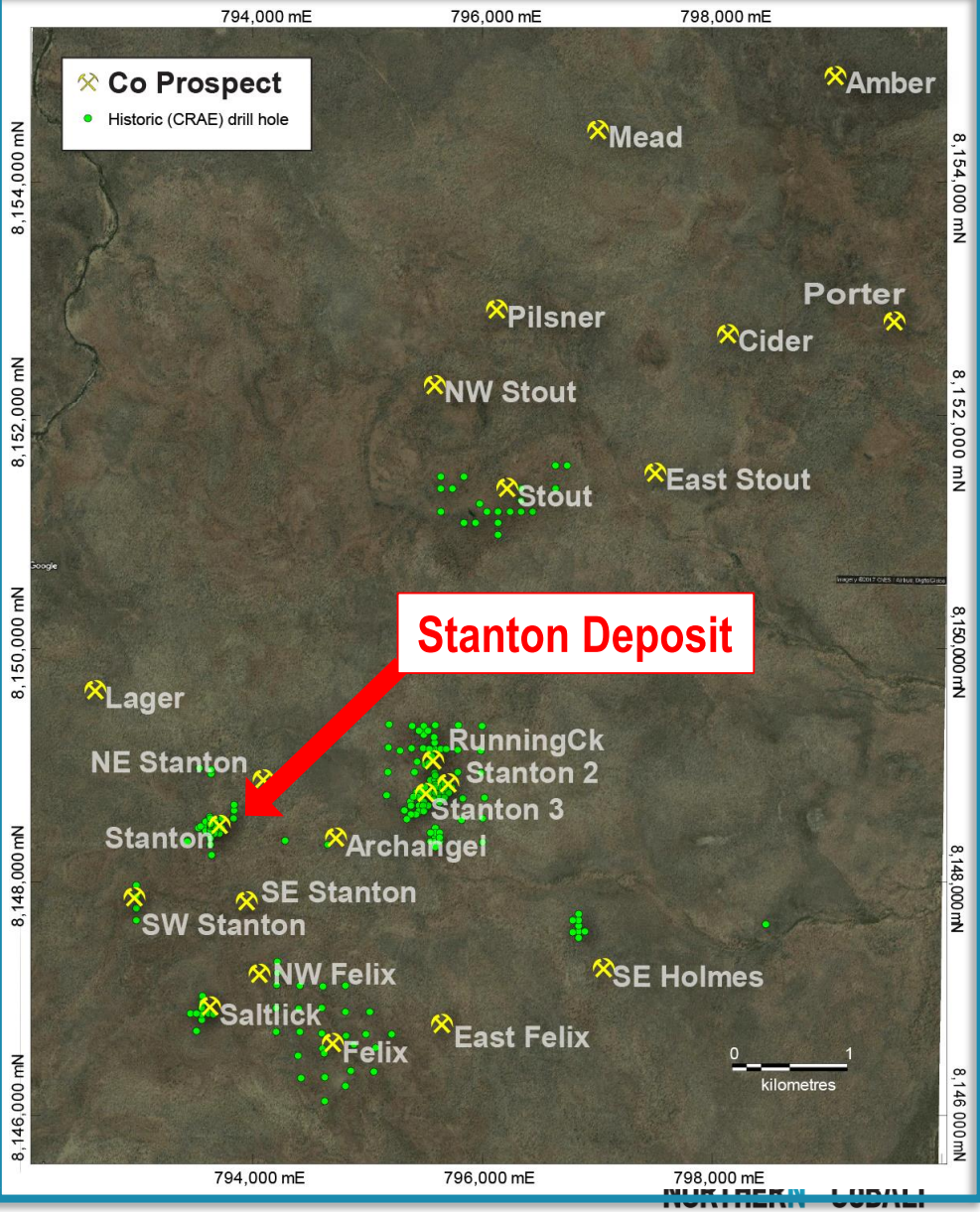
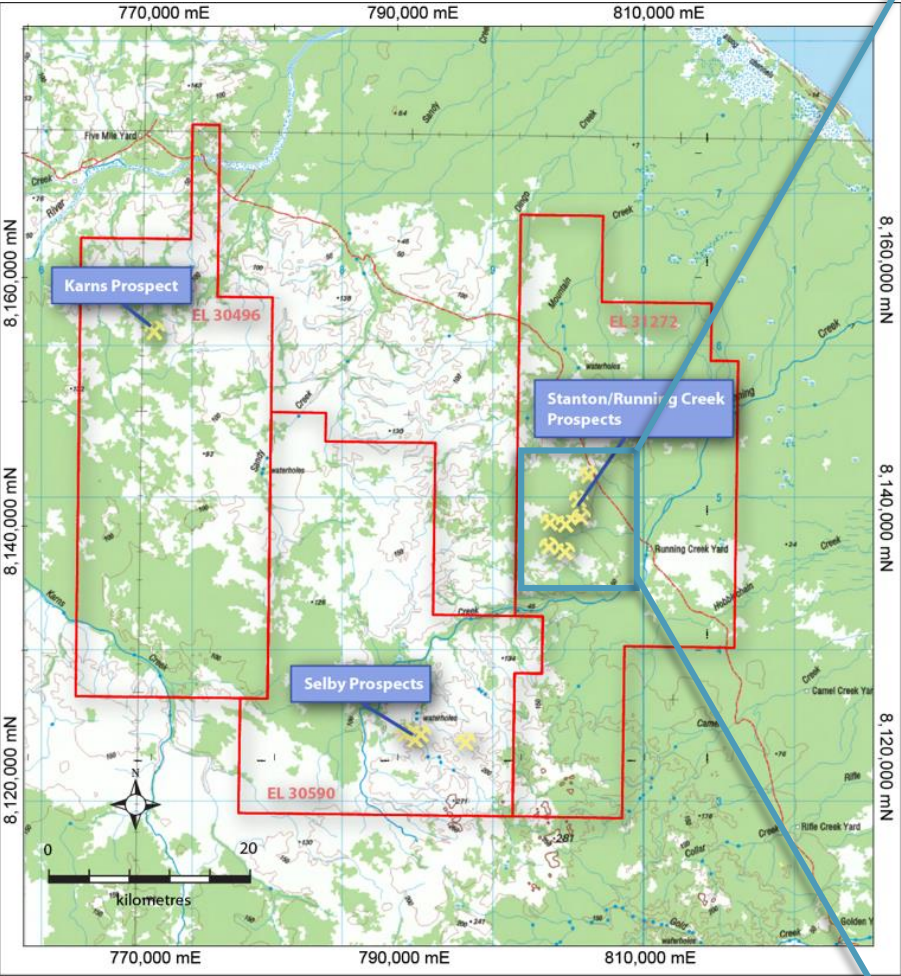
Sulphide mineralisation - below base of oxidation



**Siegenite  $(\text{Ni},\text{Co})_3\text{S}_4$**

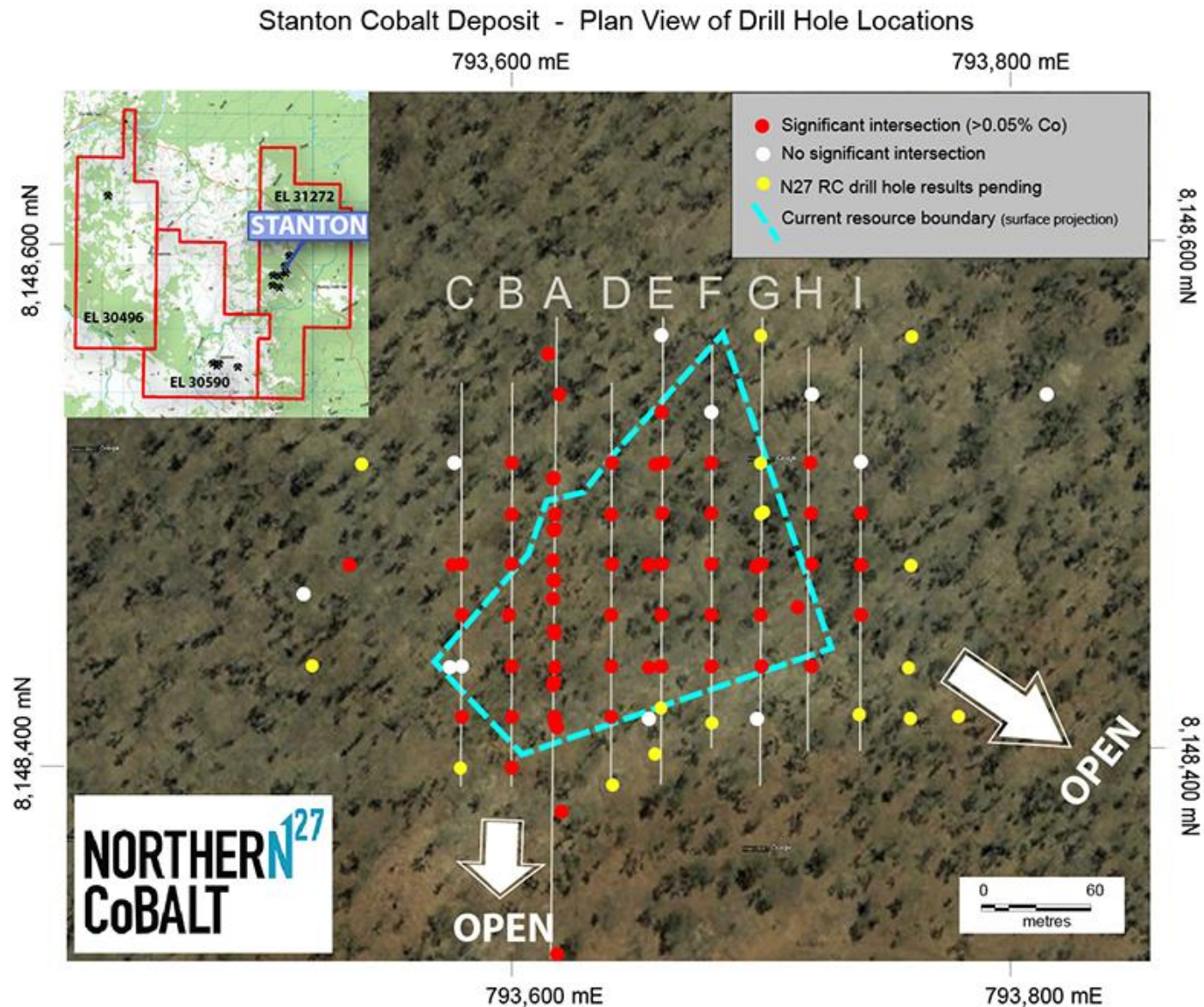


# EXPLORATION POTENTIAL – CRAE Drilling



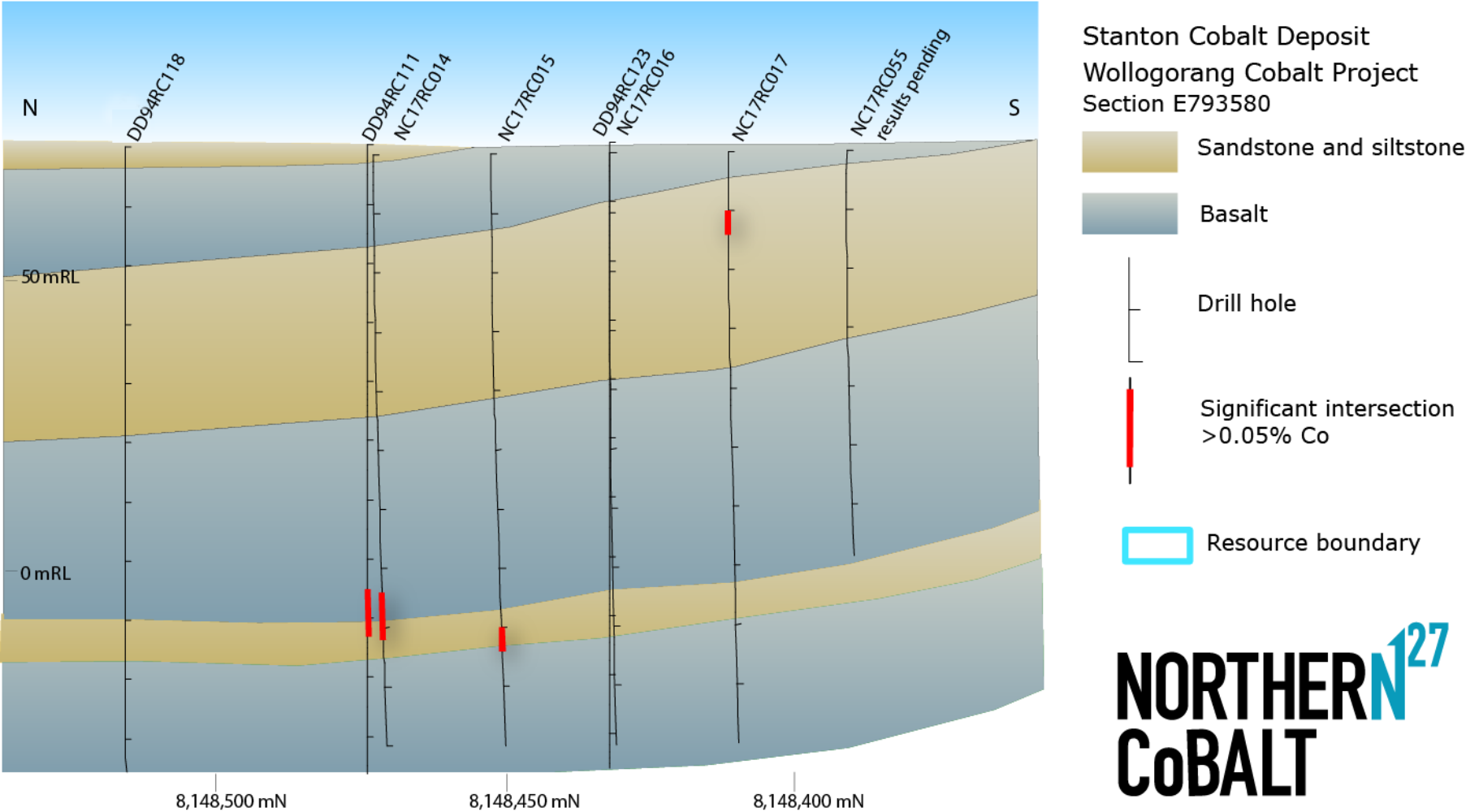


# RESOURCE DRILLING– Stanton Cobalt Deposit



# RESOURCE DRILLING- Stanton Co Deposit

Section C - showing Northern Cobalt drill holes with historic drill holes

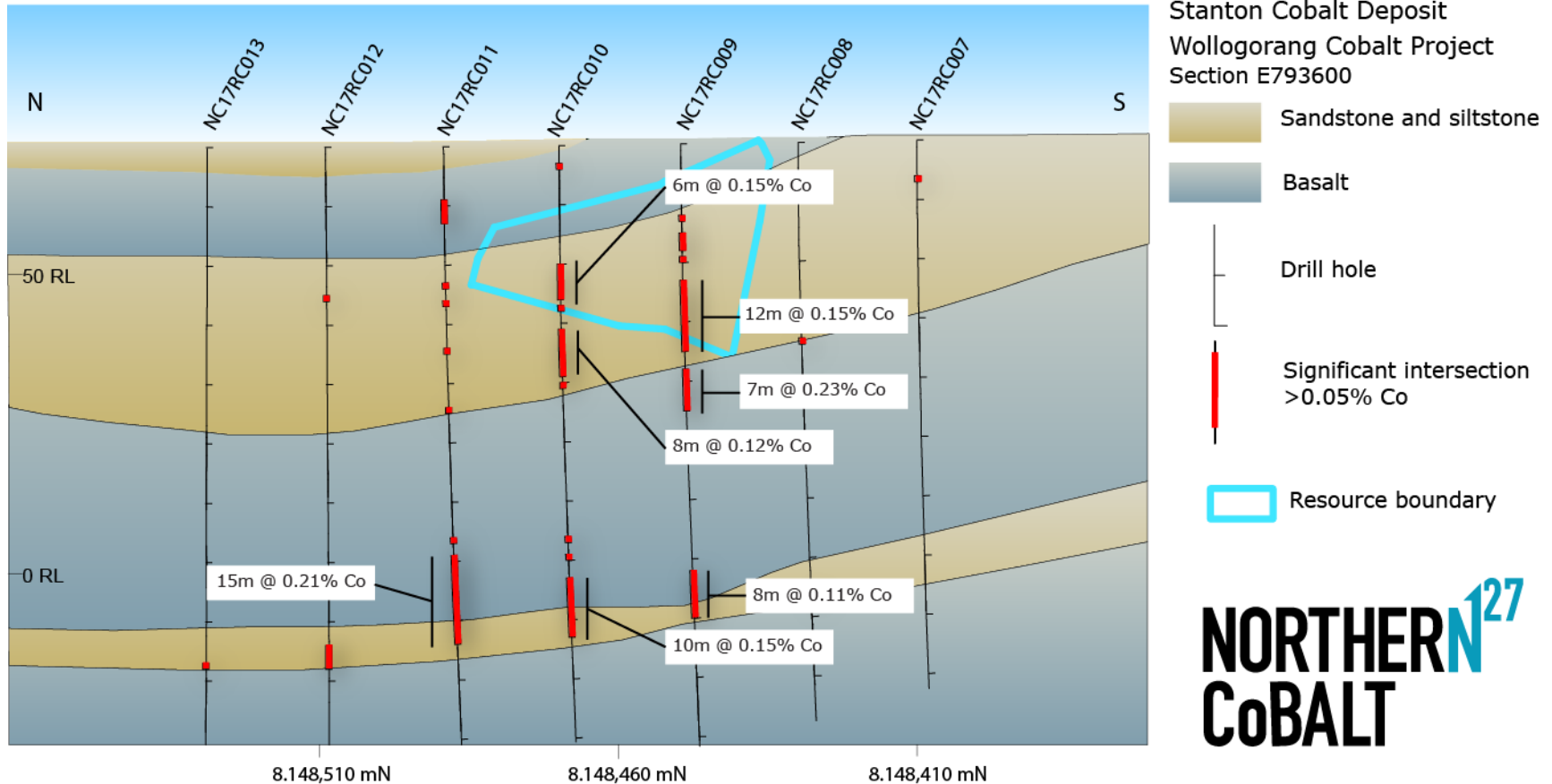


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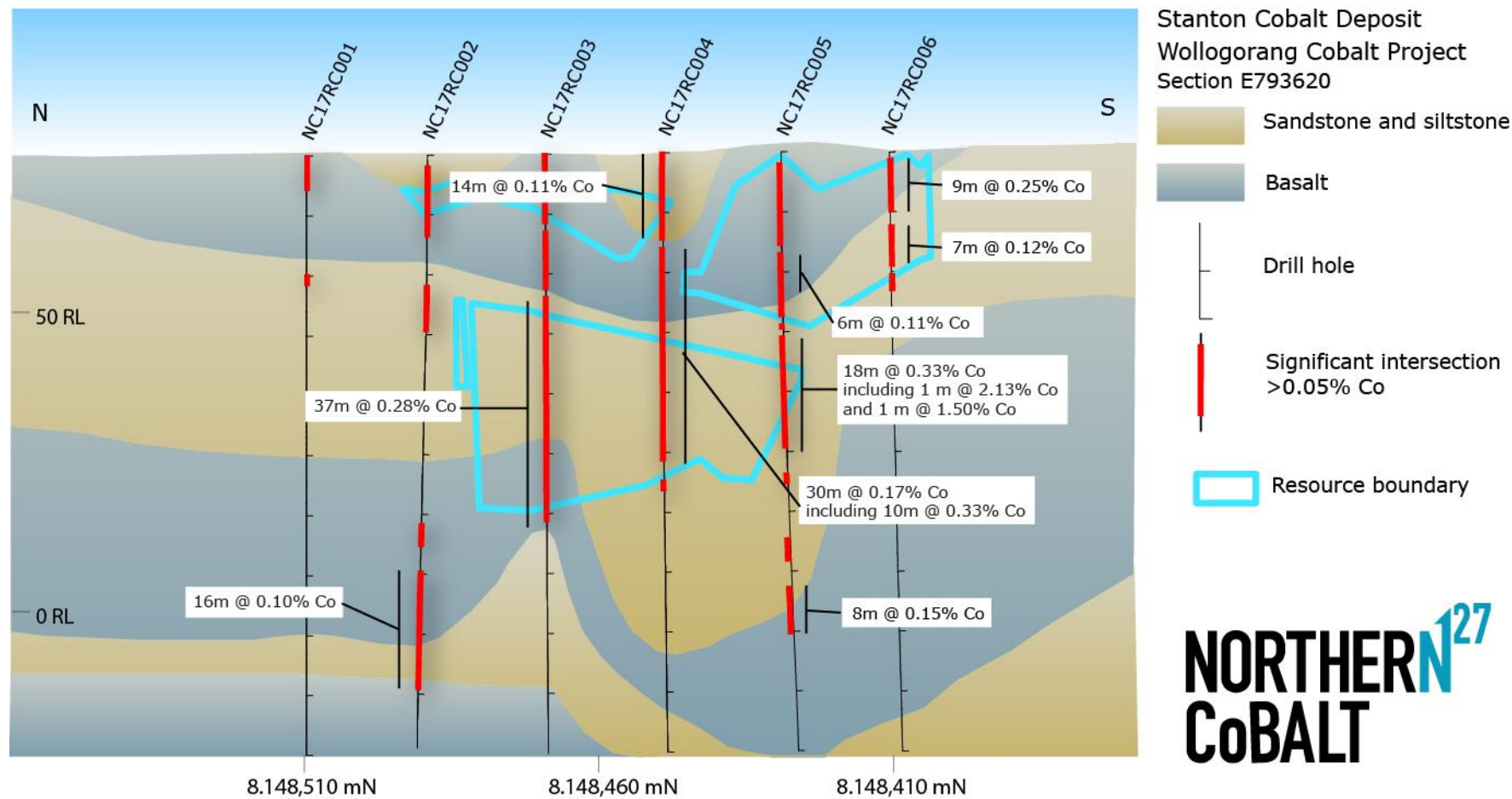
# RESOURCE DRILLING- Stanton Co Deposit

Section B - showing Northern Cobalt drill holes



# RESOURCE DRILLING– Stanton Co Deposit

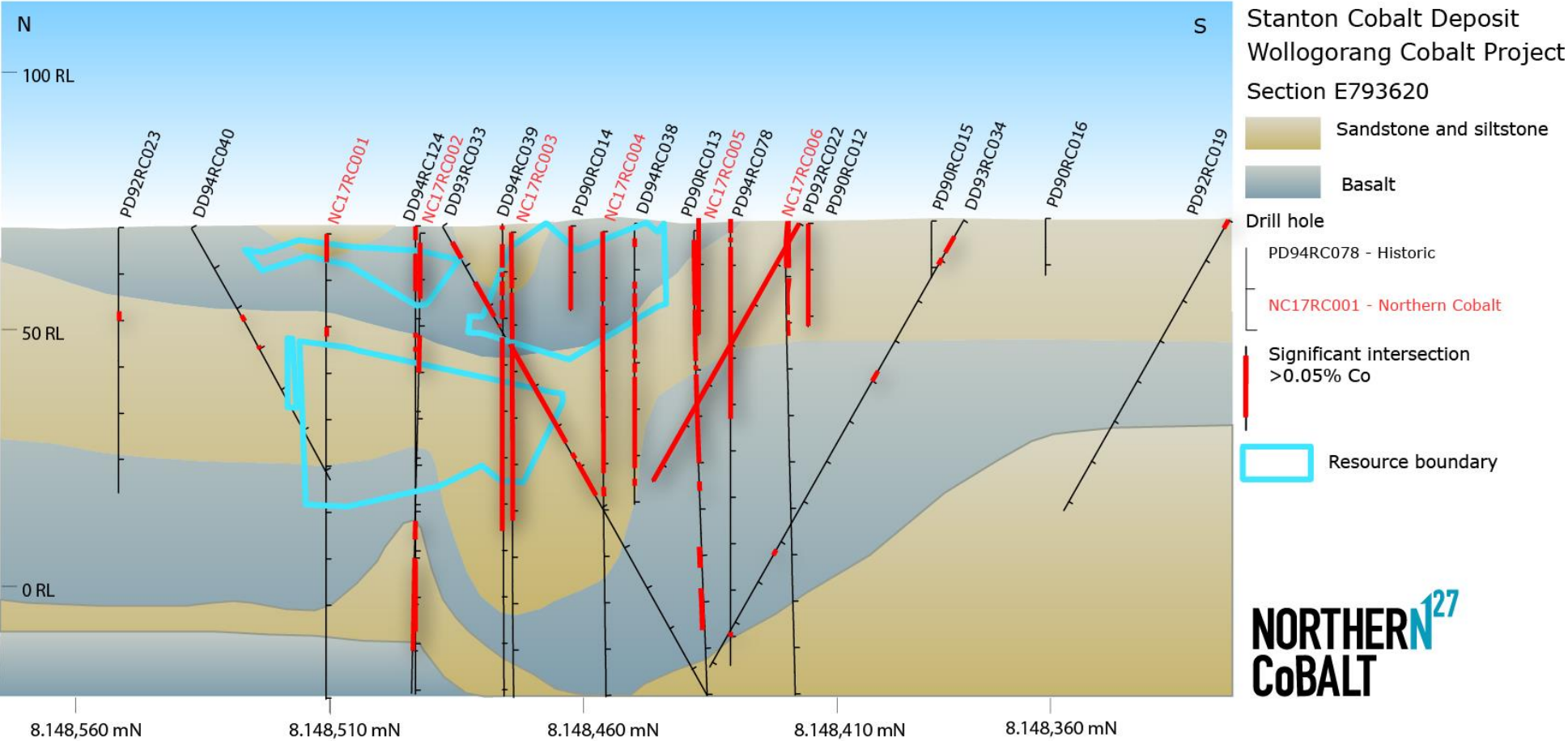
Section A - showing Northern Cobalt drill holes without historic drill holes





# RESOURCE DRILLING- Stanton Co Deposit

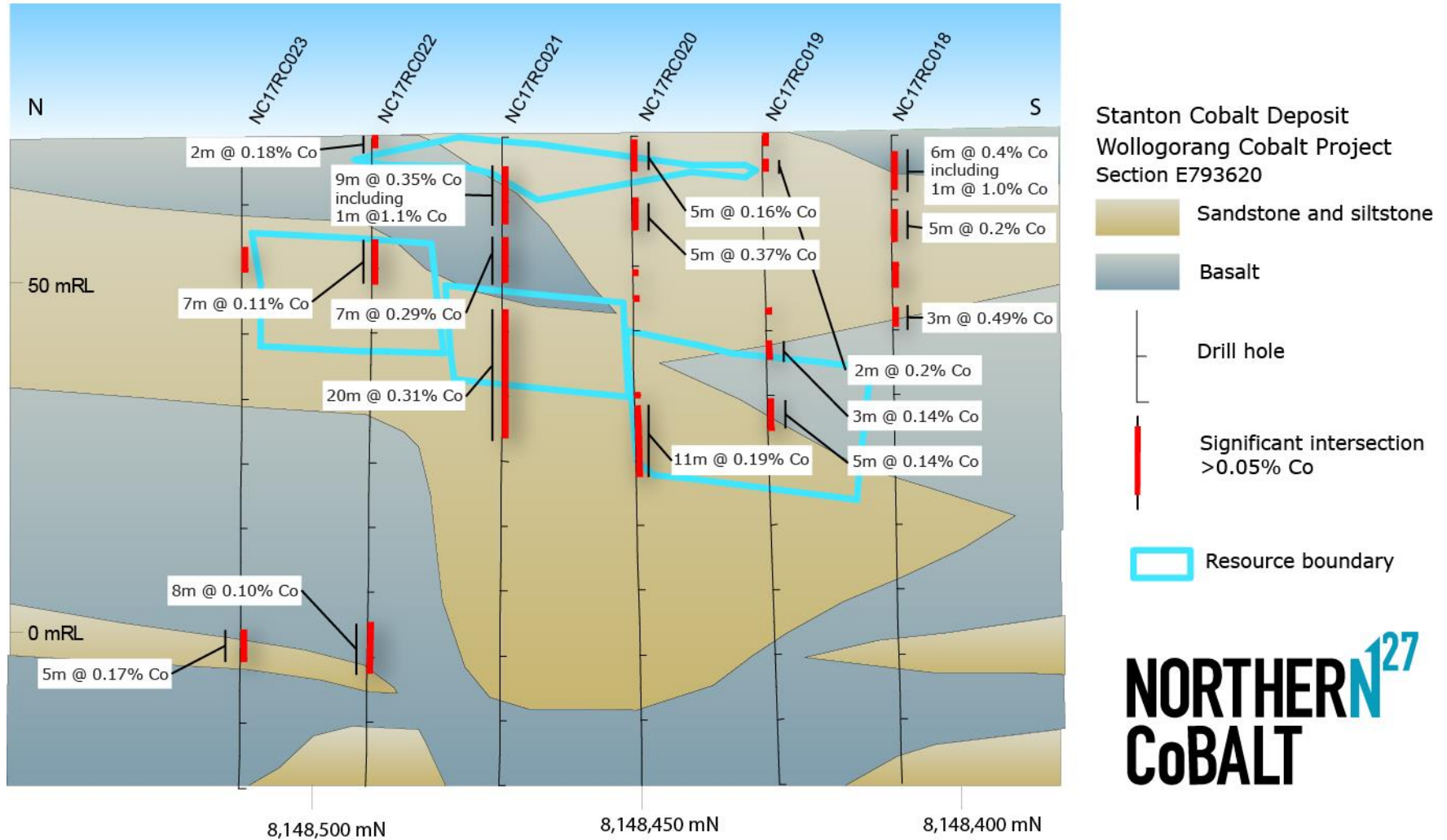
Section A - Cross section showing Northern Cobalt drill holes with historic CRA drill holes



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# RESOURCE DRILLING– Stanton Co Deposit

Section D - showing Northern Cobalt drill holes



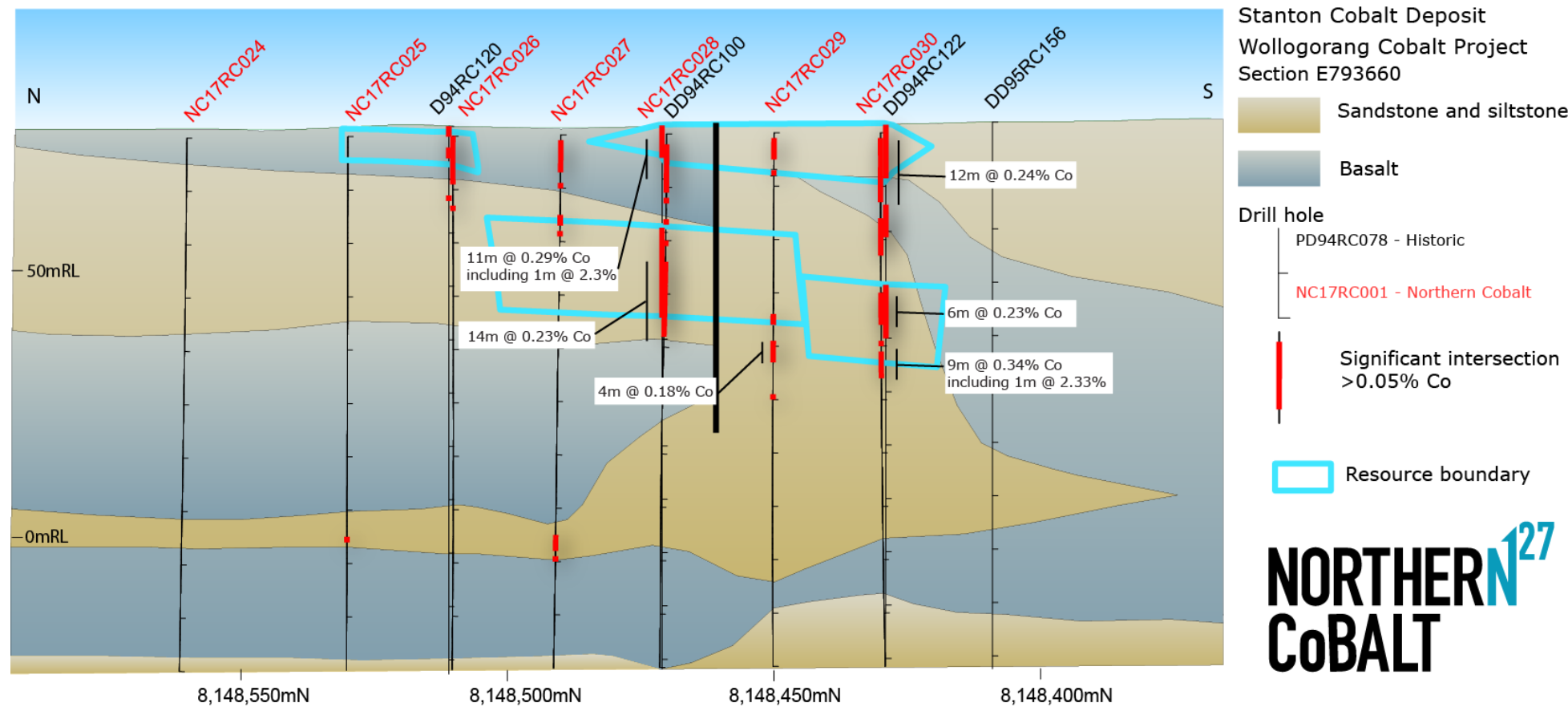
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**CoBALT**

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# RESOURCE DRILLING- Stanton Co Deposit

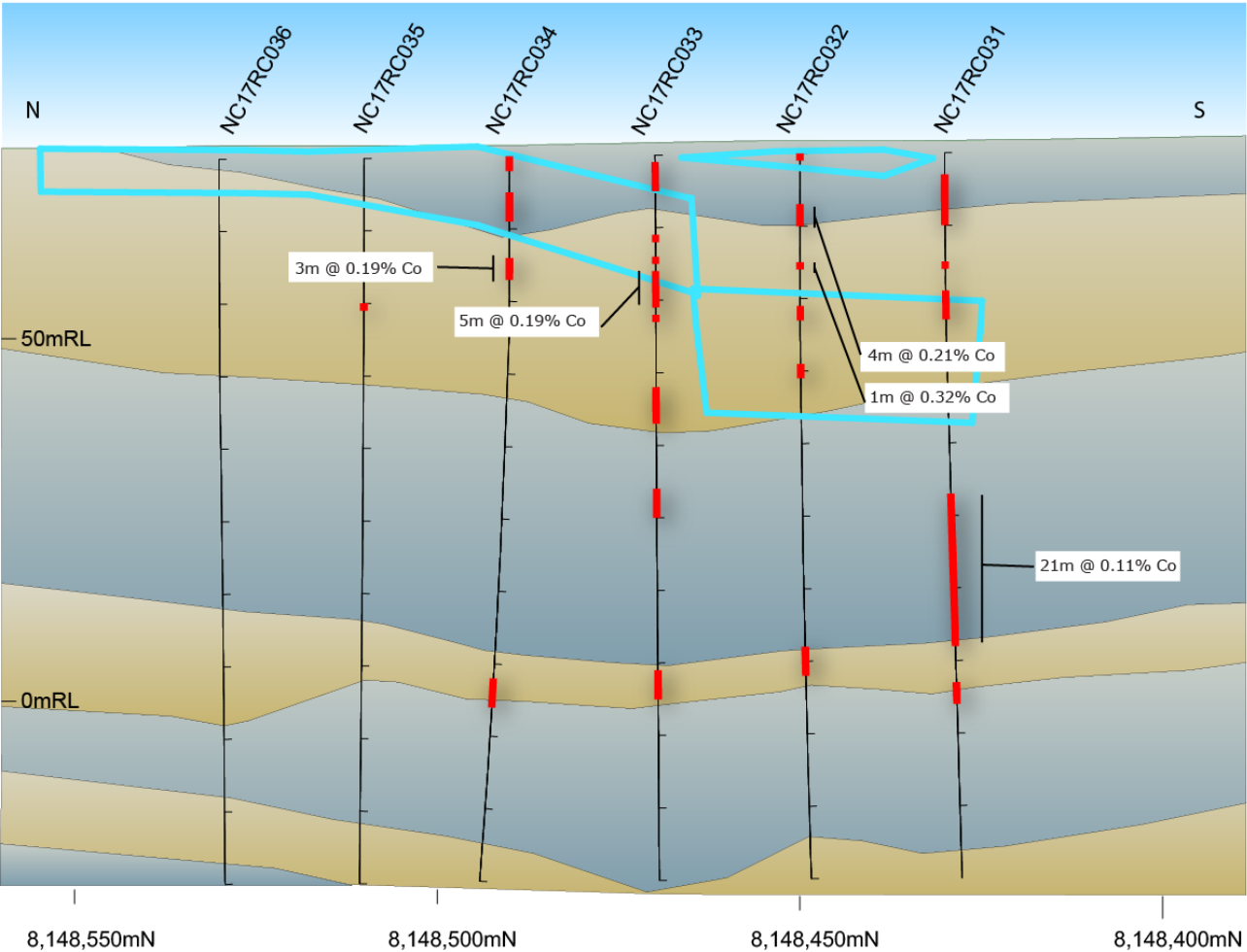
Section E - showing Northern Cobalt drill holes with historic drill holes



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# RESOURCE DRILLING- Stanton Co Deposit

Section F - showing Northern Cobalt drill holes



Stanton Cobalt Deposit  
Wollogorang Cobalt Project  
Section E793680

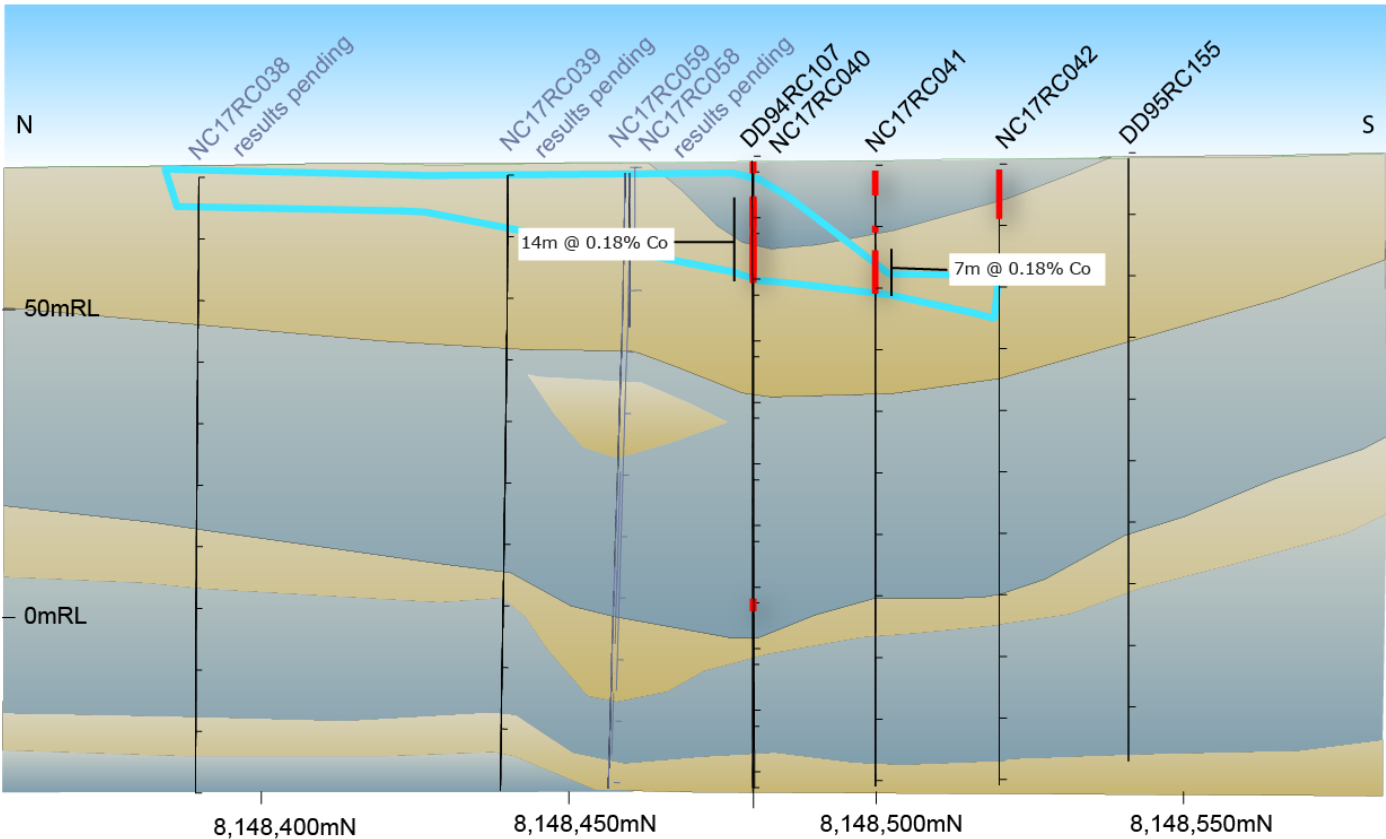
- Sandstone and siltstone
- Basalt
- Drill hole
- Significant intersection >0.05% Co
- Resource boundary

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# RESOURCE DRILLING- Stanton Co Deposit

Section G - showing Northern Cobalt drill holes with historic drill holes



Stanton Cobalt Deposit  
Wollogorang Cobalt Project  
Section E793700

Sandstone and siltstone

Basalt

Drill hole

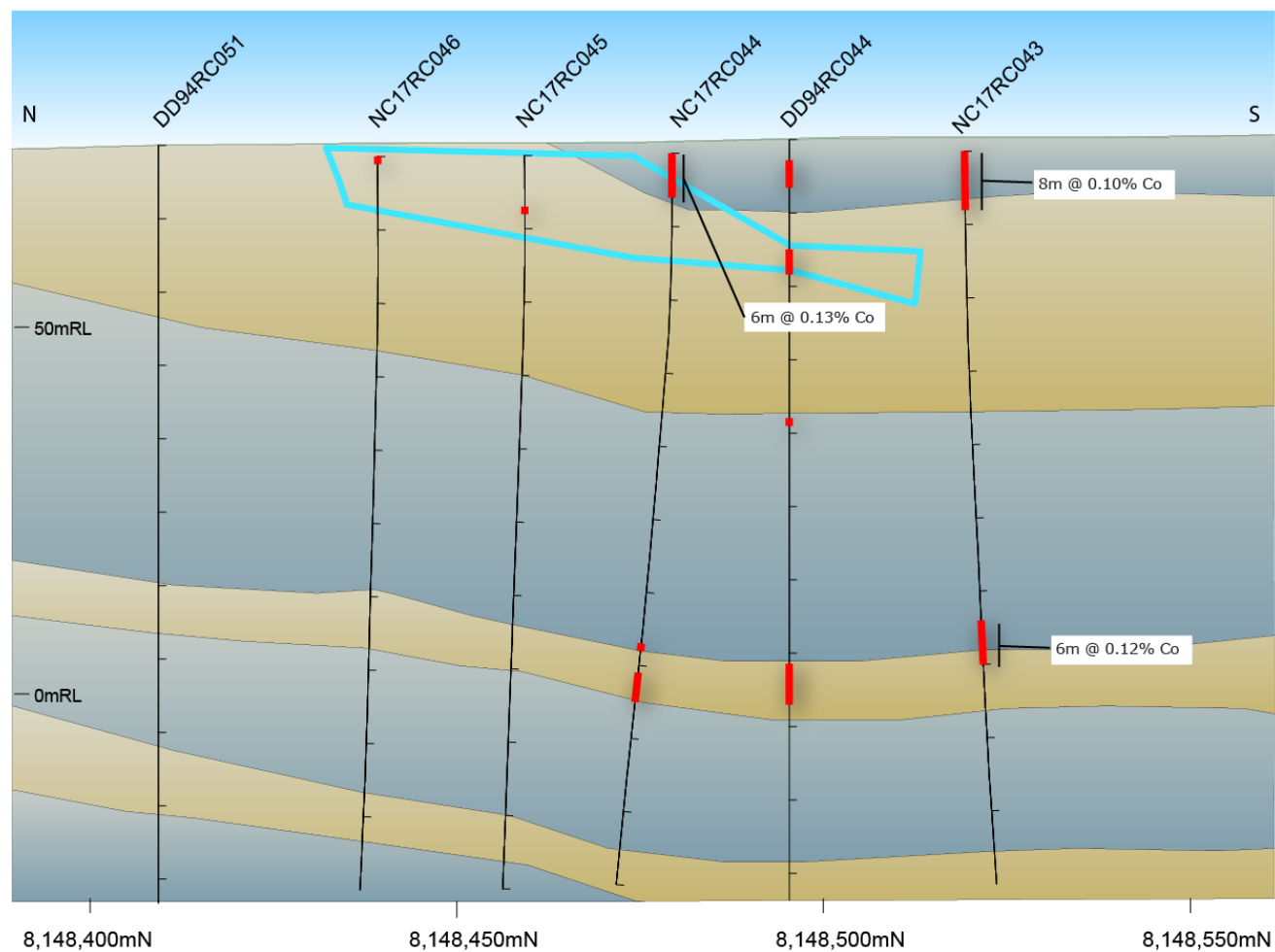
Significant intersection  
>0.05% Co

Resource boundary



# RESOURCE DRILLING– Stanton Co Deposit

Section H - showing Northern Cobalt drill holes with historic drill holes



Stanton Cobalt Deposit  
Wollogorang Cobalt Project  
Section E793720

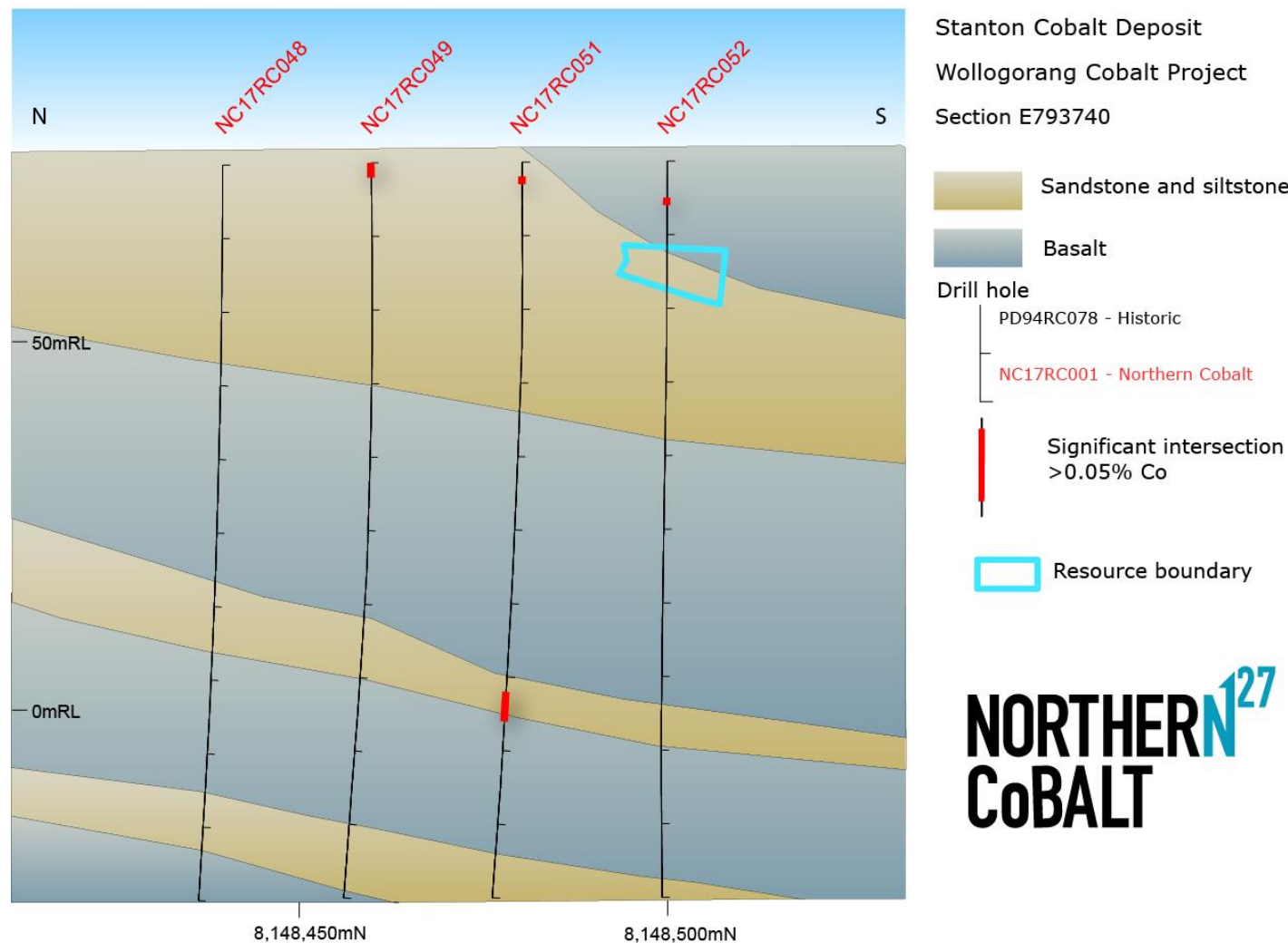
- Sandstone and siltstone
- Basalt
- Drill hole
- Significant intersection >0.05% Co
- Resource boundary

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# RESOURCE DRILLING- Stanton Co Deposit

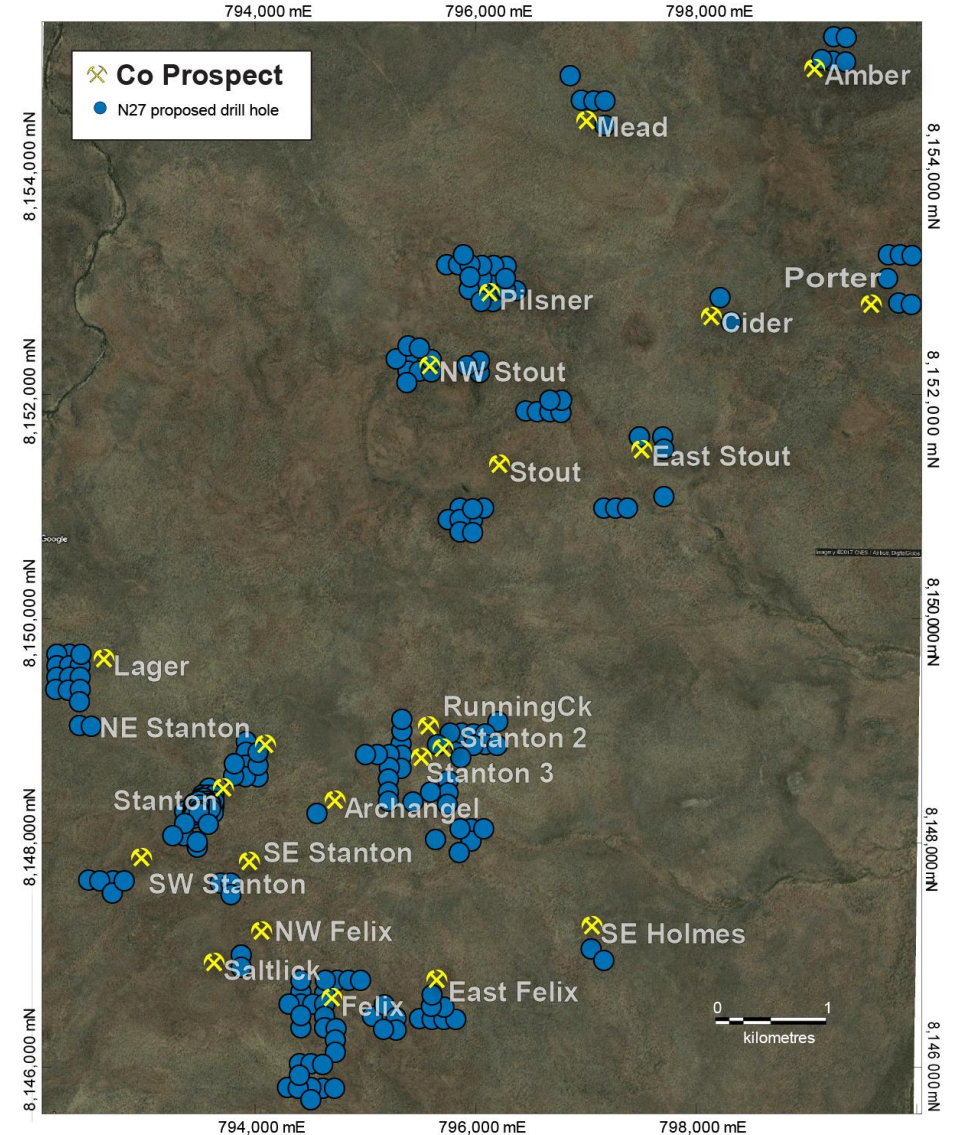
Section I - showing Northern Cobalt drill holes



# EXPLORATION POTENTIAL – Wollongorang Project

## Current drilling has tested:

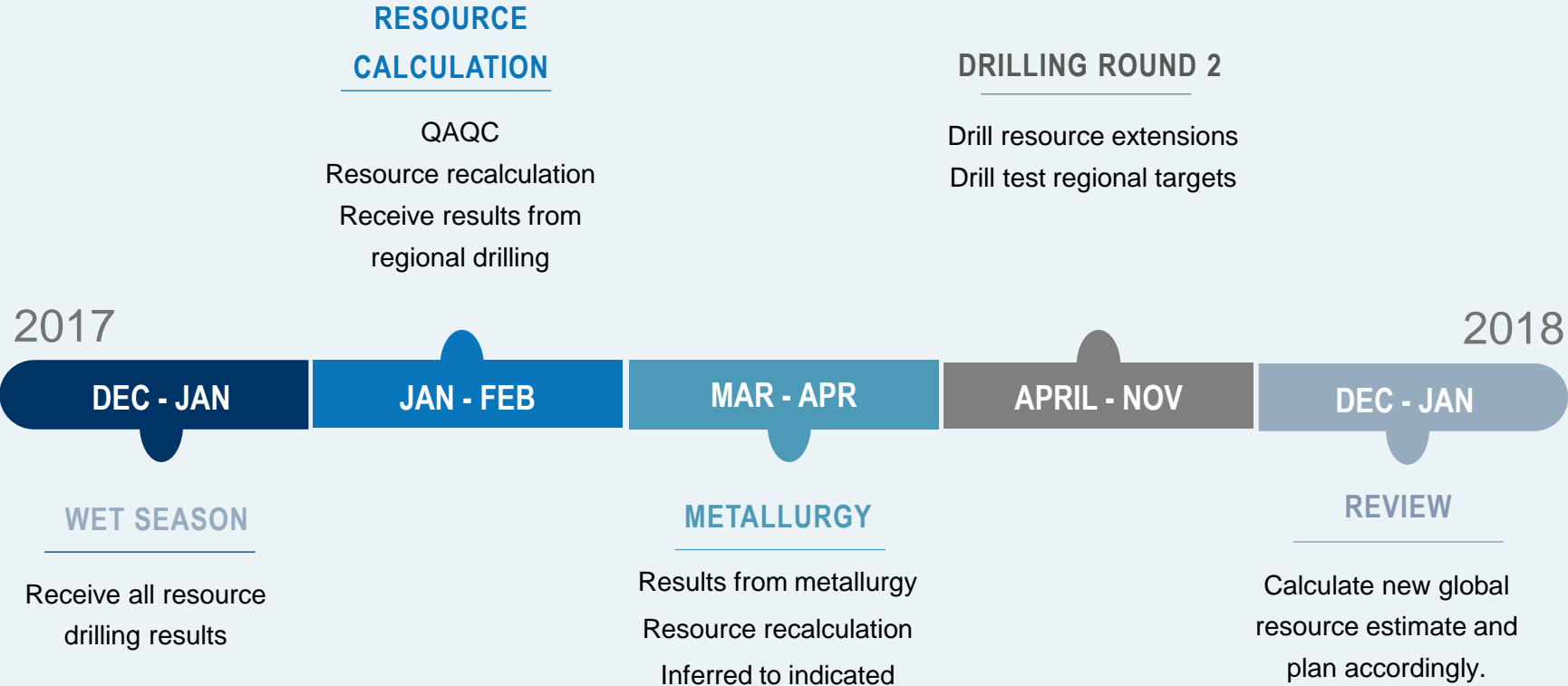
- Running Creek
- Stanton 2
- Stanton 3
- NE Stanton
- SW Stanton
- SE Stanton
- East Felix



*\*230 drill holes to test cobalt prospects*



# EXPLORATION PLAN





# THANK YOU

## WEBSITE

[www.northerncobalt.com.au](http://www.northerncobalt.com.au)

## ADDRESS

67 Goodwood Rd, Wayville,  
Adelaide, South Australia 5034

## EMAIL

[mschwarz@northerncobalt.com.au](mailto:mschwarz@northerncobalt.com.au)

## TELEPHONE

+61 402 101 790 (Michael Schwarz)