

20 October 2023

Development Update - Pioneer Dome Lithium Project, WA

Essential Metals Limited (ASX: ESS) (“Essential”) is pleased to provide an update on the progress of various key work programmes that are underway, as was outlined in ASX announcement dated 5 September 2023 titled “Development Update – Pioneer Dome Lithium Project.”

KEY HIGHLIGHTS

- **Drilling:** The Diamond Drill (DD) programme to obtain core samples from the Cade deposit for metallurgical optimisation test work and project engineering design has been completed. Mineralisation was intersected where expected. The core will now be cut and sectioned to provide suitable samples for assaying and for conducting the metallurgical test work.
- **Water targeting:** Three Reverse Circulation (RC) holes were drilled in three heritage cleared target areas at the end of the DD drill programme. Following completion of the heritage survey that is underway, the remainder of the water target areas with potential to provide future production water sources will also be drilled.
- **Flora & Fauna survey update:** The update survey was completed in late September completing all of the Flora & Fauna requirements.
- **Heritage Survey:** A heritage survey over Mining Lease M15/1896 has commenced and is anticipated to be completed in November. This will clear the way for the future mining operation and for the completion of additional water exploration.
- **Clearing Permit:** Outputs from the flora and fauna surveys (baseline and update) will be used to apply for a clearing permit covering the footprint of the future mining operation. This is expected to be granted by the June Quarter of 2024.

Dome North – Cade deposit metallurgical drill programme

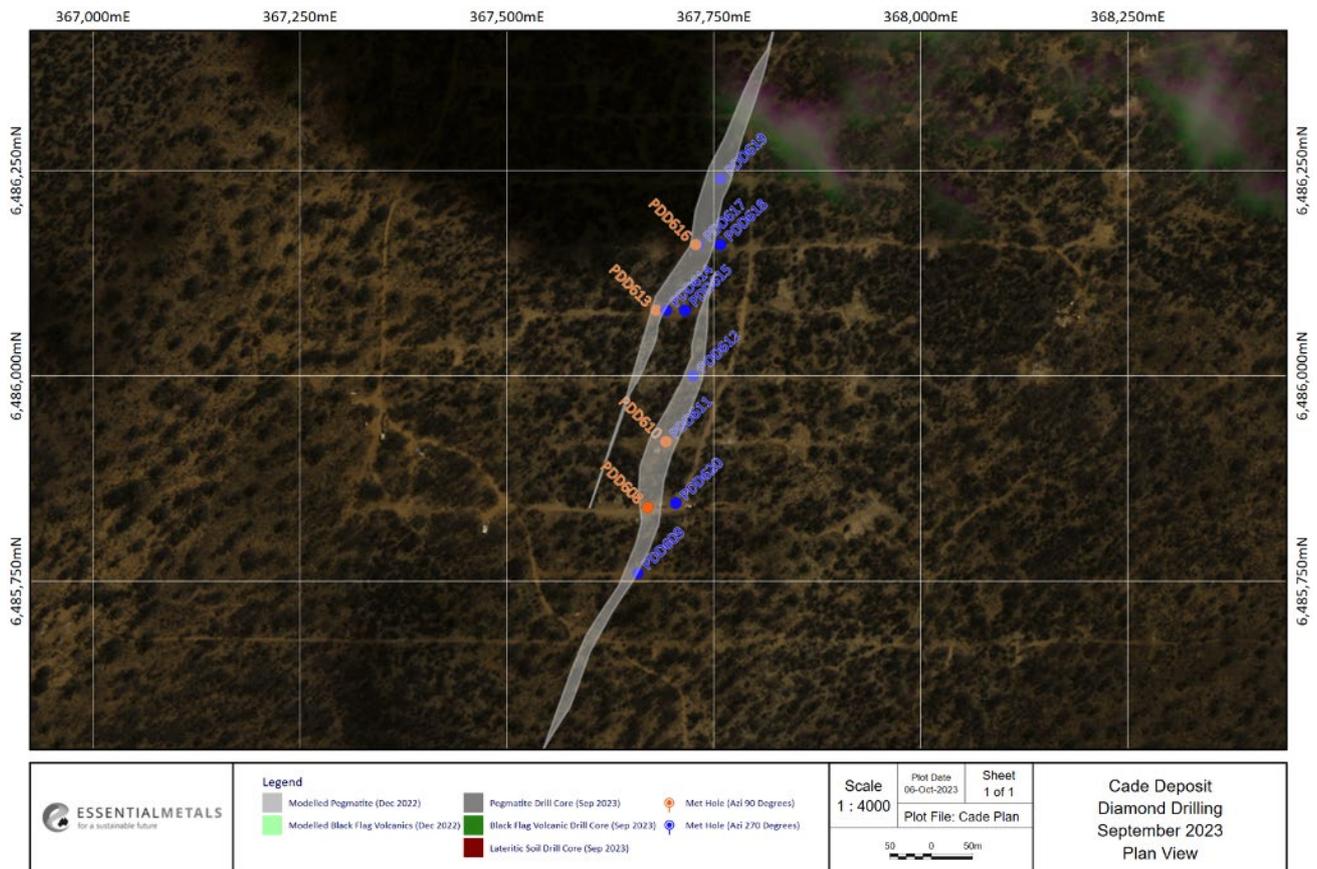


Figure 1: Cade deposit and location of diamond drill holes

The diamond drill (DD) programme consisted of 13 DD holes for a total of 861.6m of drilling into the upper half of the Cade deposit. The core samples collected will be used for a third round of metallurgical test work, which will inform the design of the beneficiation concentrator plant.

Four drill holes were drilled ‘down dip’ into the Cade deposit (the IDs of these holes are coloured orange in Figure 1) to obtain samples within mineralisation from surface and down to a vertical depth of approximately 120 metres, penetrating through the oxide, transition and fresh mineralisation zones.

A further 9 drill holes were drilled sub-perpendicular in the Cade deposit (the IDs of these holes are coloured blue in Figure 1) to obtain samples across the mineralised section of the pegmatite including the contact zones with the host rock.

The assay results are expected to be received by the end of the year (including allowing time to log, cut and prepare the drill core).

The metallurgical test work will then commence and is expected to take four to five months to complete with the results expected to be received in the June Quarter 2024.

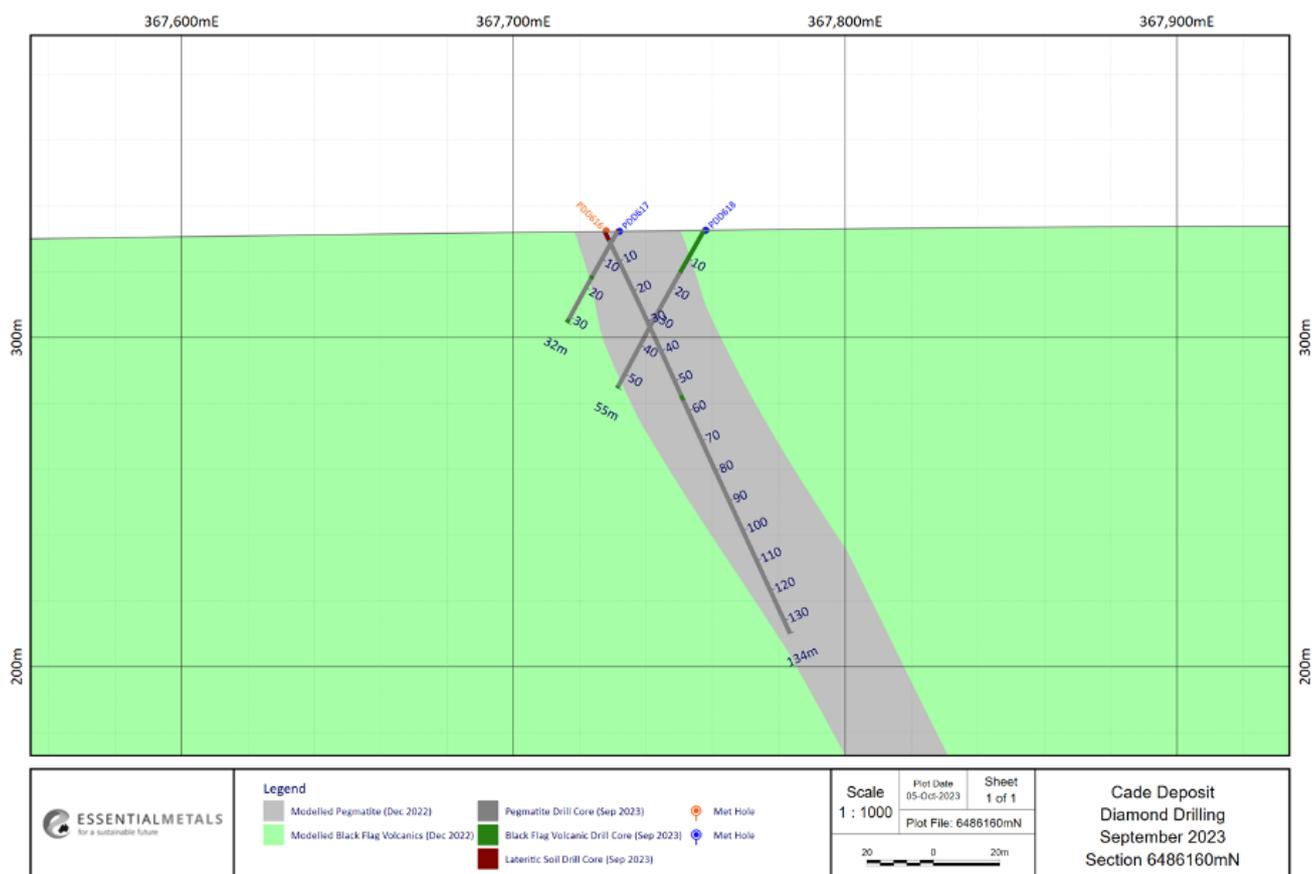


Figure 2: Cross section of Cade deposit showing a 'down-dip' drill hole (PDD616) and two perpendicular drill holes (PDD617 and PDD 618)

Water targeting

Three water targets located in areas with previous heritage clearance were drilled with water intersected in all holes. Samples have been collected for analysis and flow rates were estimated (between 2-5 litres per second).

Flora & Fauna survey update

A flora and fauna baseline survey was completed in the spring of 2021 with no sensitive flora or fauna related issues identified. An update survey has just been completed, covering M15/1896 and areas peripheral to the mining lease, such as access roads. The baseline and update surveys will be used as part of the application for a clearing permit over M15/1896 and will feed into a future mining proposal required for approval of a mining operation.

Heritage Survey

An archaeological and ethnographic Work Area Clearance survey over the mining lease (M15/1896) commenced on 8 October and is expected to be completed in November.

Clearing Permit

Following completion of the flora and fauna survey update, an application for a clearing permit covering the conceptual footprint of the future mining operation will be submitted and is currently being prepared. It is anticipated that approval of the clearing permit will take 3-4 months from the submission date.

This ASX release has been approved by the Board of Directors.

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PIONEER DOME LITHIUM PROJECT

The 450km² Pioneer Dome Project (ESS: 100%) is in the core of Western Australia’s lithium corridor in the Eastern Goldfields, approximately 130km south of Kalgoorlie and 275km north of the Port of Esperance. A Mineral Resource¹ of 11.2Mt @ 1.16% Li₂O has been defined at Dome North in the northern area of the Project. The southern Yilgarn area is recognised as being well-endowed with spodumene deposits, including Pioneer Dome, the Bald Hill Mine, the Mt Marion Mine, the Manna Project and the Buldania Project – all of which are located within a 90km radius. The world-class Greenbushes Deposit, the Mt Holland Mine and the Mt Cattlin Mine are located further west, south-west and south-south-west, respectively.

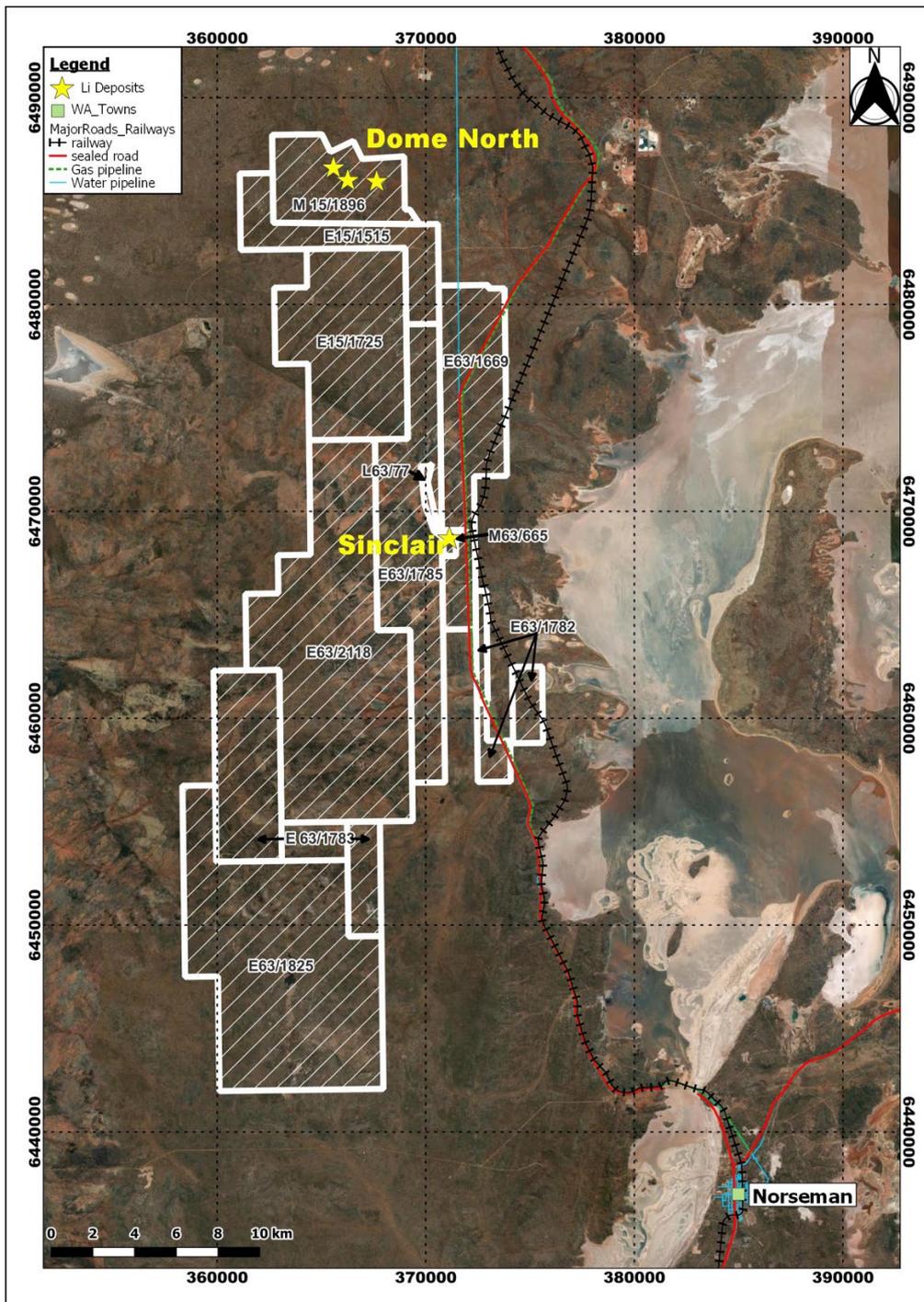


Figure 3 – Pioneer Dome Lithium Project lithium deposits, tenements and major infrastructure.

¹ Refer ASX:ESS announcement 20 December 2022 “Dome North Resource upgrade”

ABOUT ESSENTIAL METALS LIMITED

Essential Metals is a well-funded and active explorer/developer focussed on the discovery of lithium and other key global demand-driven commodities, for the creation of shareholder wealth through exploration and project development. The Company operates three strategically located lithium and gold projects in Western Australia.

100% OWNED AND MANAGED PROJECTS:

- **LITHIUM:** The **Pioneer Dome Lithium Project** is highly prospective for lithium-caesium-tantalum (LCT) mineral systems and includes the **Dome North Lithium Mineral Resource** of 11.2 million tonnes @ 1.16% lithium (Li₂O) including 8.7 million tonnes @ 1.23% lithium (Li₂O) within the Indicated Category.²
- **GOLD:** The **Juglah Dome Project** is located 60km east-south-east of Kalgoorlie and is highly prospective for gold and has potential for VHMS style polymetallic deposits.
- **GOLD:** The **Golden Ridge Project** is located ~20km south-east of Kalgoorlie, WA. Our activities are focussed on reappraising known prospects as well as identifying new areas within the large land tenure.

JOINT VENTURE INTERESTS:

- **GOLD:** The **Acra Project** is near Kalgoorlie. Northern Star Resources Limited (ASX:NST) has earned a 75% Project Interest and continues to fully fund exploration programmes until approval of a Mining Proposal by DMIRS is received with Essential Metals holding a 25% interest.
- **GOLD:** The **Kangan Project** is in the West Pilbara and part of a joint venture with Novo Resources Corp (TSXV:NVO), who will fund 100% of gold exploration programmes until a decision to mine is made, with Essential Metals holding a 30% interest in precious metals and 100% of all other minerals.
- **GOLD:** The **Balagundi Project** is subject to a farmin & JV agreement where Black Cat Syndicate Limited (ASX:BC8) is earning a 75% interest in the Project located at Bulong, near Kalgoorlie. Black Cat will then fully fund exploration programmes until completion of a bankable feasibility study with Essential Metals retaining a 25% interest in all minerals.
- **GOLD:** The Company holds a 25% interest, free-carried interest up to a decision to mine, in all minerals except 20% for nickel rights in the **Larkinville Project** near Kambalda, WA, with Maximus Resources Ltd (ASX:MXR).
- **NICKEL:** The nickel mineral rights on the **Blair-Golden Ridge Project**, which includes the suspended Blair Nickel Sulphide Mine, are subject to a Farmin/Joint Venture with Australian Nickel Company Ltd, a nickel exploration specialist which is earning up to a 75% interest. The Company will retain a 25% interest, free-carried interest up to a decision to mine.
- **NICKEL:** The Company holds a 20% (nickel only) interest, free-carried to a completion of a feasibility study which recommends that commercial mining operations be commenced, in the **Wattle Dam project** near Kambalda, WA, with Maximus Resources Ltd (ASX:MXR).
- **NICKEL:** The Company holds a 20% interest, free carried up to completion of a feasibility study which recommends the establishment of a mining area, in the **Maggie Hays project** near Lake Johnson, WA, with Poseidon Nickel Ltd (ASX:POS).

² Refer ASX announcement 20 December 2022 "Dome North Resource upgrade".

Forward Looking Statement

This announcement may contain forward-looking statements which involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions, and estimates should change or to reflect other future developments.

Reference to previous market announcements

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The company confirms that the form and context in which Exploration Results or Competent Person's findings are presented have not been materially modified from the original market announcements.

Exploration Results – Competent Person Statement

Mr Matthew Watson (AusIMM) holds the position of Chief Geologist and is employed full-time by Essential Metals Limited. Mr Watson is eligible to receive equity-based securities in Essential Metals Limited under the Company's employee incentive schemes. Mr Watson compiled the technical aspects of this Announcement pertaining to Exploration Results, which is based on and fairly represents information compiled by Mr Watson. Mr Watson is a member of the Australian Institute of Mining and Metallurgy and has sufficient experience that is relevant to this style of mineralisation and type of deposit under consideration and to the activity that is being reported on to qualify as a Competent Person as defined in the 2012 edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Watson consents to the inclusion in the report of the matters in the form and context in which it appears.

Dome North Lithium Mineral Resource – Competent Person Statement

The information in this report that relates to the Dome North Lithium Project Mineral Resource is based on information compiled by Mr Andrew Dunn (previously the Exploration Manager and permanent employee of Essential Metals Limited) and Mr Lauritz Barnes (consultant with Trepanier Pty Ltd). Mr Dunn was eligible to receive equity-based securities in Essential Metals Limited under the Company's employee incentive schemes. Mr Dunn and Mr Barnes are both members of the Australian Institute of Geoscientists. Mr Dunn and Mr Barnes both have sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Specifically, Mr Dunn was the Competent Person for the database (including all drilling information), the geological and mineralisation models plus completed the site visits. Mr Barnes is the Competent Person for the construction of the 3-D geology / mineralisation model plus the estimation. Mr Dunn and Mr Barnes consent to the inclusion in this report of the matters based on their information in the form and context in which they appear.

Dome North Mineral Resource by deposit and category: (0.3% Li₂O cut-off grade)

| Deposit | Classification | Tonnes (Mt) | Li₂O (%) | Ta₂O₅ (ppm) | Contained Li₂O (T) | Fe₂O₃ (%) |
|----------------|-----------------------|--------------------|----------------------------|--|--------------------------------------|--|
| Cade | Indicated | 6.9 | 1.26 | 49 | 88,000 | 0.44 |
| | Inferred | 1.3 | 0.88 | 49 | 11,000 | 0.44 |
| Davy | Indicated | 1.6 | 1.08 | 81 | 18,000 | 0.54 |
| | Inferred | 0.6 | 0.89 | 73 | 4,000 | 0.58 |
| Heller | Inferred | 0.7 | 1.02 | 76 | 8,000 | 0.72 |
| Total | Total | 11.2 | 1.16 | 57 | 129,000 | 0.48 |

Note: Appropriate rounding applied.

Appendix 1
Hole Statistics for September 2023 DD and RC Drilling

| Deposit | Hole_ID | Hole Type | Max Depth (m) | MGA94 Z51 Easting (m) | MGA94 Z51 Northing (m) | AHD RL (m) | Azi (°) | Dip (°) |
|---------|---------|-----------|---------------|-----------------------|------------------------|------------|---------|---------|
| Cade | PDD608 | DD | 133 | 367670.0 | 6485840.0 | 335.1 | 90 | -70 |
| Cade | PDD609 | DD | 25.1 | 367658.0 | 6485760.0 | 334.7 | 270 | -60 |
| Cade | PDD610 | DD | 138.8 | 367692.0 | 6485920.0 | 334.9 | 90 | -65 |
| Cade | PDD611 | DD | 27.7 | 367691.0 | 6485920.0 | 334.8 | 270 | -60 |
| Cade | PDD612 | DD | 15.7 | 367725.0 | 6486000.0 | 335.0 | 270 | -60 |
| Cade | PDD613 | DD | 143.1 | 367680.0 | 6486080.0 | 333.2 | 90 | -60 |
| Cade | PDD614 | DD | 25.7 | 367692.0 | 6486080.0 | 333.3 | 270 | -60 |
| Cade | PDD615 | DD | 55 | 367715.0 | 6486080.0 | 333.6 | 270 | -60 |
| Cade | PDD616 | DD | 134.2 | 367728.0 | 6486160.0 | 332.4 | 90 | -65 |
| Cade | PDD617 | DD | 31.9 | 367732.0 | 6486160.0 | 332.3 | 270 | -60 |
| Cade | PDD618 | DD | 54.7 | 367758.0 | 6486160.0 | 332.5 | 270 | -60 |
| Cade | PDD619 | DD | 20.3 | 367758.0 | 6486240.0 | 331.5 | 270 | -60 |
| Cade | PDD620 | DD | 56.4 | 367704.0 | 6485845.0 | 335.4 | 270 | -60 |
| Heller | PWD01 | RC | 73 | 365772.0 | 6486422.5 | 358.0 | 225 | -90 |
| Cade | PWD02 | RC | 73 | 368173.0 | 6486077.5 | 332.0 | 90 | -90 |
| Cade | PWD03 | RC | 78 | 367614.5 | 6485840.5 | 334.0 | 90 | -90 |