



**ASX Announcement**

**31<sup>st</sup> May 2016**

## **EM Conductor Discovered Mt Day Nickel Project**

### **Highlights**

- *A moderate strength conductor, MDC01, was detected by the recently completed ground EM survey at Mt Day, 25km NW of Poseidon Ltd's Maggie Hayes nickel mine*
- *Conductor MDC01 may represent Kambalda style nickel sulphide mineralisation in komatiite lavas which remain untested by drilling*
- *Previous shallow drilling at Mt Day intersected up to 1.51% Ni with strong supporting copper values up to 0.17% Cu in weathered ultramafics*
- *Drilling is planned to commence as soon as possible*

### **CORPORATE SUMMARY**

#### **Executive Chairman**

Paul Poli

#### **Director**

Frank Sibbel

#### **Director & Company Secretary**

Andrew Chapman

#### **Shares on Issue**

144.15 million

#### **Unlisted Options**

8.44 million @ \$0.25 - \$0.40

#### **Top 20 shareholders**

Hold 52.15%

#### **Share Price on 30<sup>th</sup> May 2016**

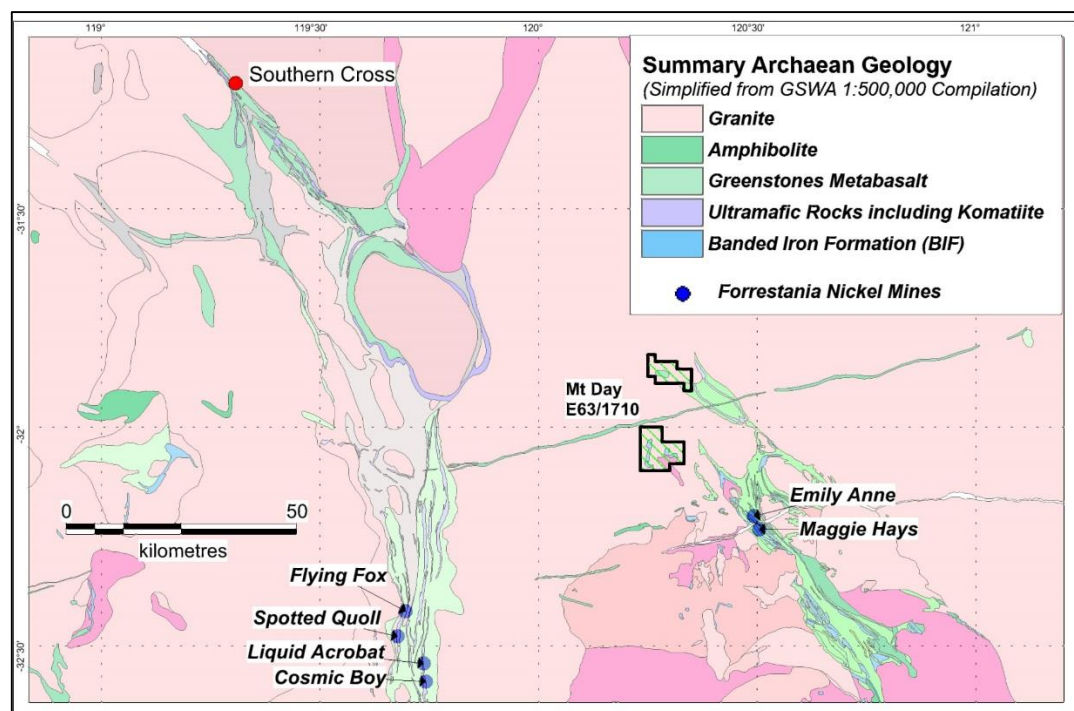
13 cents

#### **Market Capitalisation**

\$18.74 million

Matsa is pleased to announce the successful completion of a first pass Moving Loop EM (MLEM) survey at its 100% owned Mt Day nickel project located 25km NW of Poseidon's Emily Anne and Maggie Hayes nickel mines near Lake Johnston (Figure 1). (MAT announcement to the ASX 3<sup>rd</sup> May 2016)

Matsa believes that there is strong untested nickel potential in this highly prospective greenstone belt, where previous exploration achieved a number of shallow drill intersections in weathered ultramafic rocks containing significant nickel values up to 1.51% Ni with supporting copper values up to 0.17%Cu.



**Figure 1: Location and regional geology of Mt Day Project**

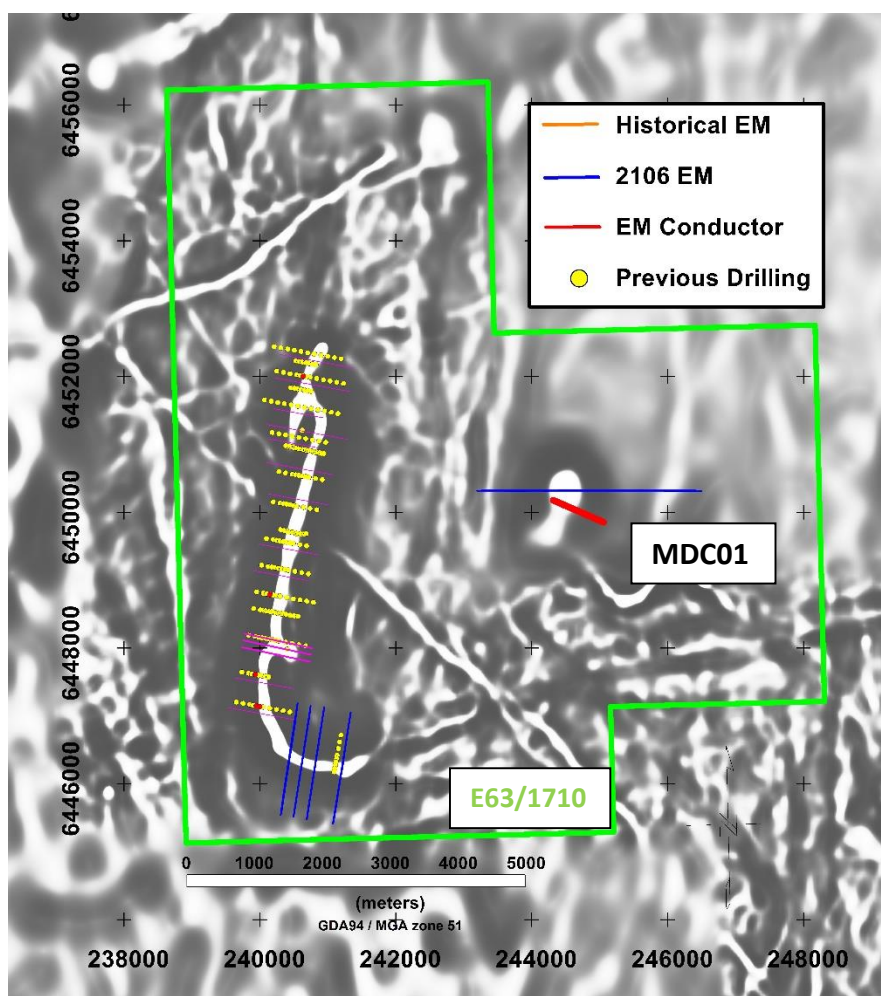
## EM Survey Results

MLEM survey lines were carried out over two komatiite targets as interpreted from detailed aeromagnetic data (Figure 2). The survey techniques and other key information is included in Appendix 1.

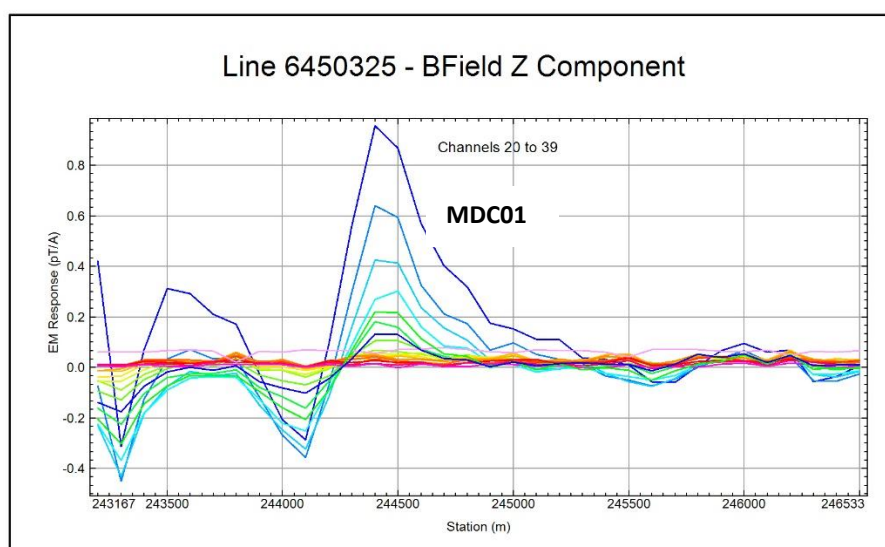
Conductor MDC01 is a moderate EM anomaly on EW line 6450325N over a discrete magnetic anomaly which probably represents a faulted offshoot of the main western komatiite trend. The MDC01 conductor is observed in all three components namely:

- a single-peak response in the Z component,
- a crossover in the X component (indicating a single conductor is present) and a
- positive peak in the Y component (indicating that the conductor lies to the south of line).

The anomalous response is best seen across channels 24 – 28 (14.473ms – 34.380ms). Decay curve analysis of station 244500E yields a time constant of 18.4ms. The conductor displays a reasonable fit to an exponential decay, suggesting the possibility of a confined conductor of limited strike.



**Figure 2:** Mt Day, EM survey outlines and past drilling on aeromagnetic image



**Figure 3:** Conductor MDC01 showing Z component profile on line 6450325mN

Modelling of these responses indicates a moderately conductive plate of approximately 1100m by 80m, at a depth of approximately 60m, dipping moderately to the east-south-east.

Conductor location (top centre of plate): 244302mE / 6450199mN. (Figure 2)

- Approximate depth to top centre: 60m.
- Dip, Dip Direction and Rotation: 87°, 28°, -45°.
- Strike Length: 78m.
- Depth extent: 1132m.
- Best fitting conductance (conductivity thickness): 1922S.

While the model for MDC01 is based upon the data from one line only (6450325N) the anomaly is sufficiently well defined to design a first pass drilling programme. Downhole EM surveys and potentially additional ground survey lines may be carried out to more accurately constrain the conductor and possible extensions if drilling results are encouraging.

## Mt Day Project Background

Previous exploration has shown prospective komatiite lavas coincide with high amplitude aeromagnetic anomalies. The western komatiite belt has been traced over a strike length of 8km and the presence of komatiite lavas was confirmed by mostly shallow aircore drill holes. *(Relevant past drilling activities are summarised in Appendix 1 and a list of past drill holes containing >0.4% Ni and 0.1% Cu is presented in Appendix 2.)* Support for the potential of significant nickel occurrences in this deeply weathered ultramafic belt is provided in significant results from aircore drilling by previous explorers as listed below:

- JSA066 3m @ 1.02% Ni from 69m
- JSA170 3m @ 1.03% Ni and 0.08% Cu from 36m
- JSA179 3m @ 1.03% Ni and 0.05% Cu from 51m
- JSA180 3m @ 1.51% Ni and 0.17% Cu from 21m

These highly anomalous and encouraging intercepts have all been made in deeply weathered ultramafic rocks. The presence of supporting copper values in three of the anomalous nickel intercepts above suggests that the intersections were made at least partly in weathered sulphides or “gossan” rather than simply reflecting lateritic enrichment of nickel in the weathering profile, which typically is not accompanied by elevated copper values.

Based on trends visible in the aeromagnetic image in Figure 2, the main western komatiite continues around a fold closure towards the east to where additional interpreted fold closures can be seen as distinctive magnetic anomalies. Conductor MDC01 is located within one of these

Past exploration including EM surveys and drilling was focused on the northern portion of the 8km long western komatiite belt.

**For further information please contact:**

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**Exploration results**

*The information in this report that relates to Exploration results, is based on information compiled by David Fielding, who is a Fellow of the Australasian Institute of Mining and Metallurgy. David Fielding is a full time employee of Matsa Resources Limited. David Fielding has sufficient experience which is relevant to the style of mineralisation and the type of ore deposit under consideration and the activity which he is undertaking 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'. David Fielding consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

## Appendix 1 - Matsa Resources Limited – Mt Day Project

### Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

| Criteria                                       | JORC Code explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Commentary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mineral tenement and land tenure status</b> | <ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>                                                                                                                                                                                                                                                                                                                        | <ul style="list-style-type: none"> <li>The project is entirely located in E63/1710.</li> <li>The Project is Located on Vacant Crown Land.</li> <li>A heritage agreement has been signed and exploration is carried out within the terms of that agreement.</li> <li>At the time of writing these licenses expire between 14<sup>th</sup> June 2013 and 8<sup>th</sup> July 2017.</li> </ul>                                                                                                                                                  |
| <b>Exploration done by other parties</b>       | <ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>Most significant past work was carried out by Lionore Australia between 1995 and 2004, including, aeromagnetic surveys, surface geochemical sampling, ground electromagnetic surveys, RAB, AC, RC and DD drilling.</li> <li>A table summarising drill holes containing &gt;0.4% Ni and &gt;0.1% Cu is presented in Appendix 2.</li> <li>Limited soil geochemistry and a comprehensive review of past EM surveys and drilling was carried out by Norilsk Nickel in the period 2008 to 2013.</li> </ul> |
| <b>Geology</b>                                 | <ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <ul style="list-style-type: none"> <li>Kambalda or Lake Johnston style Ni sulphide mineralisation in komatiite lavas.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Drill hole Information</b>                  | <ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul> | <ul style="list-style-type: none"> <li>Not applicable, the coordinate system used to project drill hole collar information is GDA94 Zone 51S</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                      |

| Criteria                                                                | JORC Code explanation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Commentary                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Data aggregation methods</b>                                         | <ul style="list-style-type: none"> <li><i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li><i>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></li> <li><i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul> | <ul style="list-style-type: none"> <li>Exploration results summarized are drawn from public information.</li> </ul>                                                                                                                                                                                                                      |
| <b>Relationship between mineralisation widths and intercept lengths</b> | <ul style="list-style-type: none"> <li><i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li><i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li><i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</i></li> </ul>                                                                                                                                                                             | <ul style="list-style-type: none"> <li>All drill hole intercepts reported in Appendix 2 are composite samples measured in down hole metres.</li> </ul>                                                                                                                                                                                   |
| <b>Diagrams</b>                                                         | <ul style="list-style-type: none"> <li><i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>                                                                                                                                                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>A suitable summary plans and sections been included in the body of the report.</li> </ul>                                                                                                                                                                                                         |
| <b>Balanced reporting</b>                                               | <ul style="list-style-type: none"> <li><i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>                                                                                                                                                                                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>Not applicable.</li> </ul>                                                                                                                                                                                                                                                                        |
| <b>Other substantive exploration data</b>                               | <ul style="list-style-type: none"> <li><i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul>                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>High Power MLEM survey May 2016, carried out by Highpower EM Geophysical Services.</li> <li>Transmitter HPTS 200Amps Fluxgate Fully ROPS UTV's</li> <li>Time base /Frequency. Soundings at site to determine best t/b</li> <li>200m loops, 100m moves, approximately 150 stations read</li> </ul> |
| <b>Further work</b>                                                     | <ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided</i></li> </ul>                                                                                                                                                                                                                                                                                  | <p>EM surveys proposed are being carried out by Highpower EM Surveys Pty Limited.</p>                                                                                                                                                                                                                                                    |

| Criteria | JORC Code explanation                                  | Commentary |
|----------|--------------------------------------------------------|------------|
|          | <i>this information is not commercially sensitive.</i> |            |

**Appendix 2 -- Mt Day Project- Summary of past drilling intercepts with >0.4% Ni and intercepts >0.1% Cu**

**(Aircore holes prefix JSA, Diamond holes prefix JSC, RC holes prefix JSR)**

| HOLEID | East      | North   | RL  | Dip | Azi | From (m) | To (m) | Thick (m) | Cu % | Ni % |
|--------|-----------|---------|-----|-----|-----|----------|--------|-----------|------|------|
| JSA057 | 240791    | 6452334 | 449 | -60 | 270 | 21.0     | 27.0   | 6.0       | 0.04 | 0.63 |
| JSA057 | 240783    | 6452334 | 449 | -60 | 270 | 36.0     | 44.0   | 8.0       | 0.01 | 0.61 |
| JSA066 | 240607    | 6452007 | 450 | -60 | 270 | 66.0     | 73.0   | 7.0       | 0.00 | 0.78 |
|        | including |         |     |     |     | 69.0     | 72.0   | 3.0       | 0.00 | 1.02 |
| JSA076 | 240352    | 6451601 | 457 | -60 | 270 | 18.0     | 24.0   | 6.0       | 0.01 | 0.54 |
| JSA081 | 240839    | 6451510 | 451 | -60 | 270 | 30.0     | 33.0   | 3.0       | 0.10 | 0.05 |
| JSA100 | 240656    | 6450526 | 457 | -60 | 270 | 30.0     | 39.0   | 9.0       | 0.03 | 0.64 |
| JSA102 | 240803    | 6450499 | 456 | -60 | 270 | 36.0     | 39.0   | 3.0       | 0.00 | 0.54 |
| JSA107 | 240378    | 6450120 | 463 | -60 | 270 | 33.0     | 36.0   | 3.0       | 0.09 | 0.43 |
| JSA107 | 240374    | 6450120 | 463 | -60 | 270 | 39.0     | 48.0   | 9.0       | 0.03 | 0.77 |
| JSA108 | 240419    | 6450111 | 462 | -60 | 270 | 48.0     | 54.0   | 6.0       | 0.01 | 0.67 |
| JSA109 | 240460    | 6450102 | 462 | -60 | 270 | 66.0     | 69.0   | 3.0       | 0.01 | 0.44 |
| JSA110 | 240519    | 6450093 | 461 | -60 | 270 | 33.0     | 63.0   | 30.0      | 0.01 | 0.67 |
| JSA112 | 240715    | 6450056 | 460 | -60 | 270 | 48.0     | 49.0   | 1.0       | 0.00 | 0.53 |
| JSA117 | 240269    | 6449579 | 462 | -60 | 270 | 51.0     | 54.0   | 3.0       | 0.01 | 0.53 |
| JSA117 | 240263    | 6449579 | 462 | -60 | 270 | 63.0     | 69.0   | 6.0       | 0.01 | 0.86 |
| JSA118 | 240325    | 6449570 | 463 | -60 | 270 | 30.0     | 48.0   | 18.0      | 0.05 | 0.67 |
| JSA121 | 240478    | 6449542 | 463 | -60 | 270 | 27.0     | 30.0   | 3.0       | 0.01 | 0.52 |
| JSA127 | 240209    | 6449185 | 462 | -60 | 270 | 24.0     | 33.0   | 9.0       | 0.02 | 0.59 |
| JSA127 | 240204    | 6449185 | 462 | -60 | 270 | 36.0     | 39.0   | 3.0       | 0.01 | 0.44 |
| JSA129 | 240298    | 6449167 | 462 | -60 | 270 | 36.0     | 57.0   | 21.0      | 0.01 | 0.82 |
| JSA138 | 240131    | 6448791 | 462 | -60 | 270 | 36.0     | 42.0   | 6.0       | 0.01 | 0.88 |
| JSA139 | 240184    | 6448782 | 462 | -60 | 270 | 30.0     | 33.0   | 3.0       | 0.00 | 0.41 |

|        |           |         |     |     |     |       |       |      |      |      |
|--------|-----------|---------|-----|-----|-----|-------|-------|------|------|------|
| JSA139 | 240177    | 6448782 | 462 | -60 | 270 | 45.0  | 48.0  | 3.0  | 0.00 | 0.52 |
| JSA139 | 240168    | 6448782 | 462 | -60 | 270 | 63.0  | 66.0  | 3.0  | 0.01 | 0.52 |
| JSA140 | 240229    | 6448773 | 462 | -60 | 270 | 39.0  | 42.0  | 3.0  | 0.00 | 0.47 |
| JSA150 | 240090    | 6448546 | 463 | -60 | 270 | 27.0  | 33.0  | 6.0  | 0.01 | 0.48 |
| JSA151 | 240135    | 6448536 | 463 | -60 | 270 | 33.0  | 45.0  | 12.0 | 0.11 | 0.49 |
| JSA155 | 239918    | 6448170 | 462 | -60 | 270 | 30.0  | 36.0  | 6.0  | 0.03 | 0.66 |
| JSA156 | 239969    | 6448161 | 462 | -60 | 270 | 27.0  | 30.0  | 3.0  | 0.00 | 0.41 |
| JSA168 | 239813    | 6447629 | 457 | -60 | 270 | 42.0  | 45.0  | 3.0  | 0.06 | 0.41 |
| JSA170 | 239916    | 6447611 | 458 | -60 | 270 | 30.0  | 39.0  | 9.0  | 0.06 | 0.83 |
|        | including |         |     |     |     | 36.0  | 39.0  | 3.0  | 0.08 | 1.03 |
| JSA171 | 239953    | 6447602 | 459 | -60 | 270 | 57.0  | 60.0  | 3.0  | 0.00 | 0.46 |
| JSA178 | 239886    | 6447159 | 454 | -60 | 270 | 27.0  | 33.0  | 6.0  | 0.08 | 0.57 |
| JSA179 | 239924    | 6447150 | 455 | -60 | 270 | 51.0  | 54.0  | 3.0  | 0.05 | 1.03 |
| JSA179 | 239919    | 6447150 | 455 | -60 | 270 | 60.0  | 63.0  | 3.0  | 0.02 | 0.50 |
| JSA180 | 239988    | 6447141 | 456 | -60 | 270 | 15.0  | 30.0  | 15.0 | 0.12 | 0.77 |
|        | including |         |     |     |     | 21.0  | 24.0  | 3.0  | 0.17 | 1.51 |
| JSA197 | 240616    | 6452213 | 449 | -60 | 270 | 24.0  | 27.0  | 3.0  | 0.10 | 0.13 |
| JSA198 | 240668    | 6452204 | 449 | -60 | 270 | 18.0  | 21.0  | 3.0  | 0.10 | 0.06 |
| JSA208 | 240637    | 6451802 | 451 | -60 | 270 | 33.0  | 36.0  | 3.0  | 0.02 | 0.51 |
| JSA209 | 240683    | 6451793 | 450 | -60 | 270 | 33.0  | 48.0  | 15.0 | 0.01 | 0.53 |
| JSD001 | 240290    | 6448000 | 462 | -60 | 270 | 238.2 | 238.4 | 0.2  | 0.17 | 0.14 |
| JSD001 | 240254    | 6448005 | 462 | -60 | 270 | 319.0 | 320.0 | 1.0  | 0.02 | 0.50 |
| JSR029 | 240516    | 6449699 | 462 | -90 | 0   | 18.0  | 20.0  | 2.0  | 0.01 | 0.62 |
| JSR047 | 240383    | 6448499 | 463 | -90 | 0   | 14.0  | 16.0  | 2.0  | 0.02 | 0.43 |