BRAZILIAN CRITICAL MINERALS

EMA REE PROJECT ACHIEVES BREAKTHROUGH IN ENVIRONMENTAL RESTORATION

Washing following ISR has successfully re-balanced the clay chemistry, returning the system to its natural, pre-leach conditions

Highlights

- **Successful** return of pH to baseline values after **in-situ leaching (ISR) field trial** operation reaching a **key environmental and regulatory milestone**
- **Magnesium** reduced to natural background levels following controlled water washing
- **Aluminium and Iron concentrations** reduced to **zero levels**
- **>90% recovery** of magnesium ions allowing for **lixiviant recycling and recovery** reducing operating costs
- **Sulphur values in the form of sulphate (SO_4)** show no net accumulation in the residual clays
- Clays successfully neutralised and stabilised post leaching **confirms the ability to return the** clays **pH, conductivity, and ion balance** back to baseline levels
- Completion of the restoration phase marks the final stage of field trials, delivering positive results that support regulatory approvals and advance the Ema ISR project

Brazilian Critical Minerals Limited (**ASX: BCM**) ("**BCM**" or the "**Company**") is pleased to report successful clay restoration results from the water flushing phase of the in-situ recovery (ISR) field trials at the Ema Project in Brazil. The outcomes confirm that clays can be neutralised and stabilised post-leaching, representing a key environmental milestone that supports the project's pathway to regulatory approvals and near-term rare-earth production.

To view the video of MD, Andrew Reid, discussing this announcement, click on the link below

https://braziliancriticalminerals.com/link/PZ3R7y

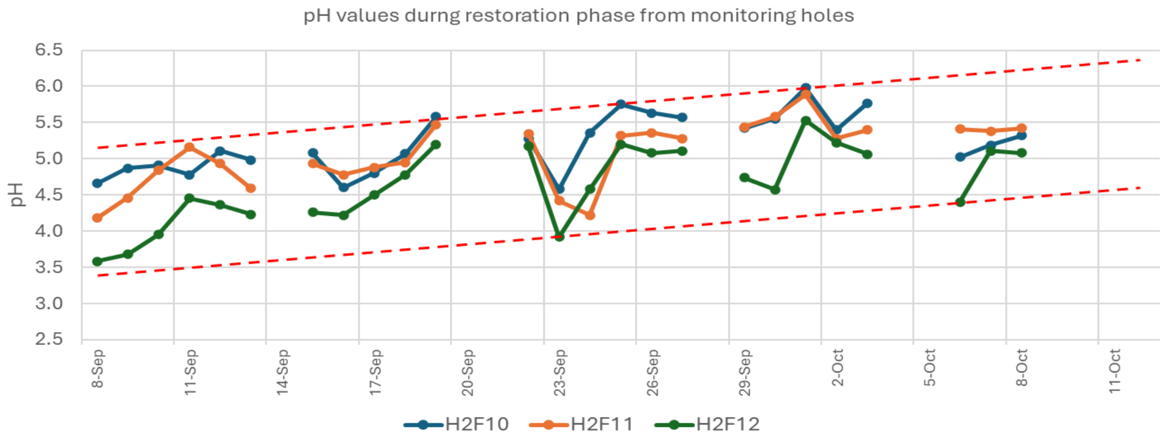

Figure 1. pH measurement values from restoration phase. Water solution extracted from monitoring holes H2F10, H2F11 and H2F12. Local river water at approximately pH7 was injected into the clays during the restoration phase.

Andrew Reid, Managing Director, commented:

"BCM has now completed the entire ISR process in the field over the last several months. Early results from our field trials during the water washing (or restoration) phase confirm that the pH, chemistry, and equilibrium of the mineralised clays can be effectively restored. These outcomes are exactly what we had anticipated.

Iron and aluminium concentrations dropped rapidly to zero once the controlled flushing program commenced. The process is also highly effective at removing and reducing sulphur in the form of sulphate to low levels whilst magnesium levels have fallen to near-zero values, now matching pre-leaching baseline grades.

Not only have we now proven that we can not only remove residual ions but also prevent their migration beyond the in-situ leaching perimeter.

Restoration of the clays is a critical step in our ISR workflow. A well-managed restoration phase demonstrates responsible mining practice and plays a central role in permitting, ESG reporting, and community engagement — underscoring the company's commitment to environmental protection and long-term stewardship."

Comments on Results

The water washing or restoration phase is a critical stage in the in-situ recovery (ISR) process, ensuring the operation meets high environmental standards and avoids any potential liabilities. The process gradually re-equilibrates the clay chemistry, allowing natural geochemical reactions to stabilize the formation and restore baseline conditions.

Following leaching, the mineralised clays still contain residual lixiviant, with primary constituents of magnesium (added as part of the leaching process) and aluminium (naturally leached from the clays) and sulphur. Without proper flushing, these constituents can remain elevated in the clays, potentially affecting clay chemistry.

Magnesium being the principal leaching agent of $MgSO_4$, its recovery and recycling provide several key benefits:

- **Cost reduction**: Magnesium salts can be expensive. Recovering and reusing them significantly reduces reagent costs
- **Efficiency improvement**: Recovered magnesium can be reinjected to continue the leaching process or maintain the desired chemical conditions, reducing the need for fresh chemicals and keeping reagent usage efficient
- **Environmental benefits**: Less fresh $MgSO_4$ means fewer chemicals remain in the clays

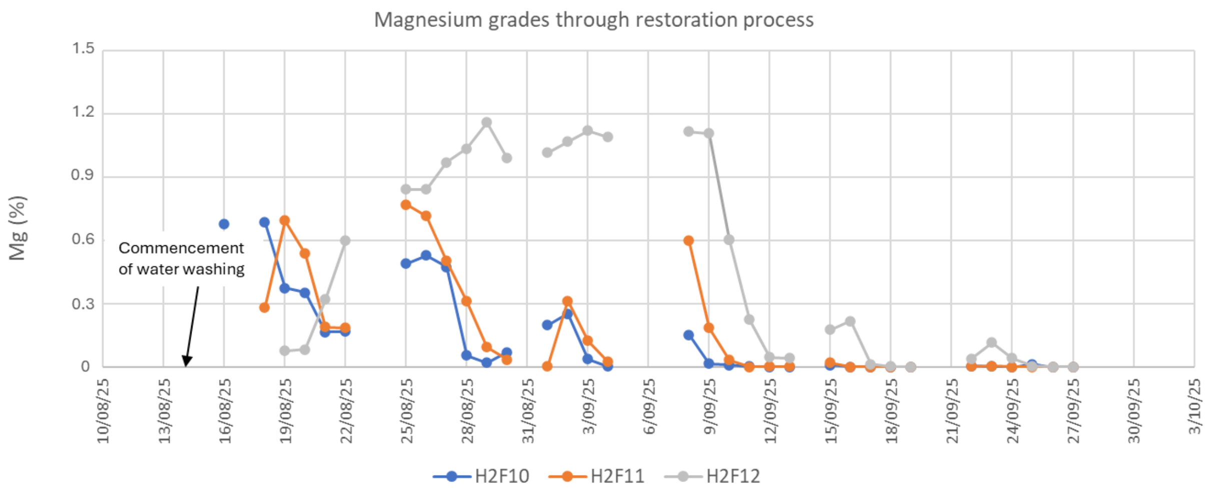

Figure 2. Field pilot trial extraction and monitoring holes H2F10, H2F11, H2F12 showing magnesium values over time post the commencement of water washing. Gaps in data collection represent non field workdays (no water injection).

Figure 2 shows the rapid reduction of Mg values to the point where on 17 September (4 weeks after commencement) the laboratory values were approaching laboratory equipment detection levels reporting zero levels for both aluminium and iron. Importantly, Mg decline shows the cation phase of the lixiviant has been flushed or precipitated whilst Al decline (Figure 3) is important because Al can be mobile in low-pH conditions and its reduction is a positive sign that any potential acidifying effects have been neutralized.

Laboratory leach and post-wash analyses show no net sulphur accumulation in the residual clays (table1). Sulphur introduced during leaching in the form of sulphate (SO_4) is effectively removed through water washing, restoring sulphur concentrations to below pre-leach baseline levels.

Total sulphur levels averaging 0.01% (table 1.) is an order of magnitude below the commonly accepted threshold of concern for acid mine drainage generation (typically >0.3% sulphur). At such low concentrations, the acid generation potential is negligible as sulphur is not in the form of sulphides. These results confirm that the material is non-acid forming (NAF) and poses no risk of acid mine drainage or associated environmental impacts.

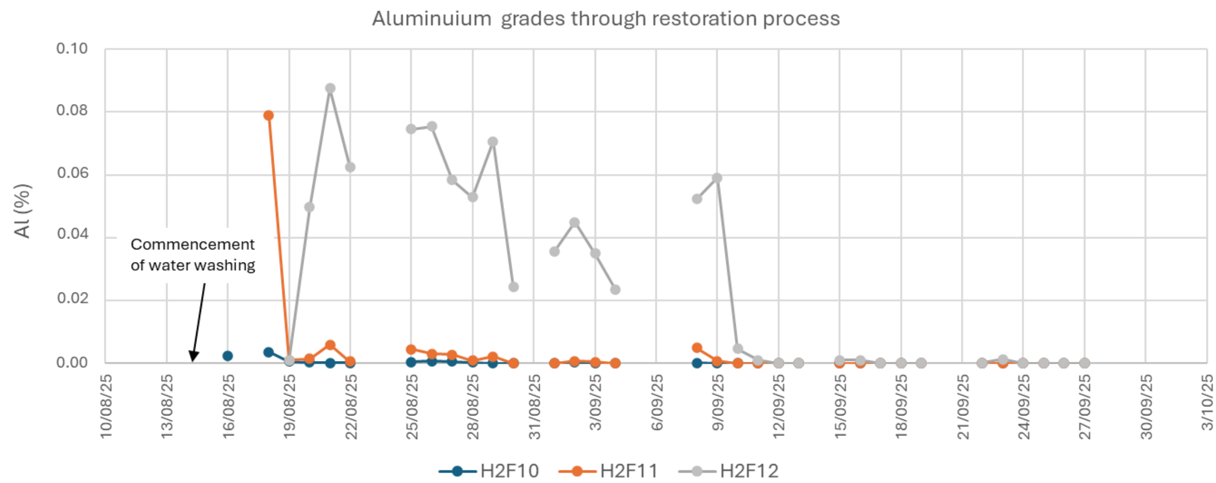

Figure 3. Field pilot trial extraction and monitoring holes H2F10, H2F11, H2F12 showing aluminium values over time post the commencement of water washing. Gaps in data collection represent non field workdays (no water injection).

Table 1. Laboratory values of field trial ISR samples analysed for magnesium, aluminium and iron as of 17 September 2025. Water washing commenced on 14 August 2025. Sulphur samples and analysis taken from a master composite sample **(ASX: 7 May 2024)** were tested in Brazil.

Hole ID	Magnesium (%)	Aluminium (%)		Iron (%)	
H2F10	0.00009	0		0	
H2F11	0.0012	0		0	
H2F12	0.0035	0		0	

Samp ID			Sulphur %
MS 1		sulphur content pre ISR column leaching	0.03
MS 2		sulphur content post ISR column leaching	0.01

Hole H2F12 being the furthest away from the injection holes takes longer to register a response and therefore stabilise the clays (Figure 4).

It is important to note that the proposed Ema ISR project intends to leach rare earth clays and collect the PLS solution from topographic highs (hills) only and therefore all leaching activities are well above the current known levels of the regional water table. Water in the region is used for livestock watering, but is not used for community supply, irrigation or any other industrial use.

Figure 4. Field pilot trial and setup showing distribution of monitoring holes H2-F10, H2-F11, H2-F12. Rings indicate approximate area of leaching influencing grades received from the PLS, with H2-F10 being the smallest leaching area.

This announcement has been authorised for release by the Board of Directors.

Enquiries

For more information please contact:

Andrew Reid
Managing Director
Brazilian Critical Minerals Limited
Andrew.reid@braziliancriticalminerals.com

Brazilian Critical Minerals Limited (BCM) is a mineral exploration company listed on the Australian Securities Exchange.

Its major exploration focus is Brazil, in the Apuí region, where BCM has discovered a world class Ionic Adsorbed Clay (IAC) Rare Earth Elements deposit. The Ema IAC project is contained within the 781 km² of exploration tenements within the Colider Group and adjacent sediments.

BCM has defined an indicated and inferred MRE of 943Mt of REE's with metallurgical recoveries averaging 68% MREO, representing some of the highest for these types of deposits anywhere in the world.

The Company has commenced a bankable feasibility study due for completion in Q1 2026, is engaging with regulators regarding permitting approvals and has commenced a resource extension drilling program which will inform the BFS economic analysis.

Ema REE Global Mineral Resource Estimate @COG 500ppm TREO

JORC Category	cut-off ppm TREO	Tonnes Mt	TREO ppm	NdPr ppm	DyTb ppm	MREO ppm	MREO: TREO %
Indicated	500	248	759	176	16	192	25
Inferred	500	695	701	165	16	181	26
Total	**500**	**943**	**716**	**168**	**16**	**184**	**26**

The information in this announcement relates to previously reported exploration results and mineral resource estimates for the Ema Project released by the Company to ASX on 22 May 2023, 17 July 2023, 19 July 2023, 31 July 2023, 13 Sep 2023, 19 Oct 2023, 06 Dec 2023, 06 Feb 2024, 22 Feb 2024, 13 Mar 2024, 02 Apr 2024, 08 Oct 2024 19 Nov 2024, 21 Jan 2025, 17th Feb 2025, 26th Feb 2025, 10th March 2025, 13th March 2025, 28th April 2025, 27th May 2025, 28th May, 13 June 2025, 01 July 2025, 18 August 2025, 01 Sep 2025 and 22 Sep 2025. The Company confirms that is not aware of any new information or data that materially affects the information included in the above-mentioned releases and CONTINUES TO APPLY and have not materially changed in accordance with listing Rule 5.23.2.

Competent Person Statement

The information in this announcement that relates to exploration results is based on information compiled by Mr. Antonio de Castro, BSc (Hons), MEMBER of AusIMM, CREA, who acts as BCM´s Senior Consulting Geologist through the consultancy firm, ADC Geologia Ltda. Mr. de Castro has sufficient experience which is relevant to the type of deposit under consideration and to the reporting of exploration results and analytical and metallurgical test work to qualify as a competent person 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". Mr. Castro consents to the report being issued in the form and context in which it appears.

Appendix 1: Table 1 Ema project – JORC Code (2012 Edition) metallurgical sampling techniques and data.

Item	JORC code explanation	Comments
Sampling Techniques	• Nature and quality of sampling. • Include reference to measures taken to ensure sample representativity and the appropriate calibration of any measurement tools or systems used. • Aspects of the determination of mineralisation that are Material to the Public Report.	• Exploration results are based on solution samples extracted during ISR field trials conducted by WSP with support of BCM´s exploration team. • The data presented is based on solution collected from the monitoring holes after percolation through soils and saprolite, mined by in-situ techniques. • Sampling and measurements were supervised by the Chief Metallurgist and WSP´s hydrogeologist. • Sample was extracted from deep wells drilled down to bedrock basement whereby solution was pumped to the surface for collection and further analysis • Solution samples were tested for pH with a probe called Incoterm brand pen-type digital pH meter, after calibration. • Rare Earths + impurities were precipitated by the addition of sodium carbonate. • These results are specific for the tracer test area.
Drilling Techniques	• Drill type (eg core. reverse circulation. open-hole hammer. rotary air blast. auger. Bangka. sonic. etc) and details (eg core diameter. triple or standard tube. depth of diamond tails. face-sampling bit or other type. whether core is oriented and if so. by what method. etc).	• All auger holes in the test area were drilled with 6" bit. • The deep injection holes in H2 area were the only ones cased with 2" sliced PVC pipes, all others were cased with sliced 4" PVC pipes. • Coarse gravel sand was inserted between the pipes and the edges of the holes to create the filter zone. • Cement around the collars were built to prevent running waters from rain to contaminate the underground water. • Holes drilled are not included in any Mineral Resource Estimation.

Item	JORC code explanation	Comments
Drill Sample Recovery	• Method of recording and assessing core and chip sample recoveries and results assessed. • Measures taken to maximise sample recovery and ensure representative nature of the samples. • Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	• n/a. Not used in this technique.
Logging	• Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation. mining studies and metallurgical studies. • Whether logging is qualitative or quantitative in nature. Core (or costean. channel. etc) photography. • The total length and percentage of the relevant intersections logged.	• n/a. Not used in this technique.
Sub-Sampling Techniques and Sampling Procedures	• If core. whether cut or sawn and whether quarter. half or all core taken. • If non-core. whether riffled. tube sampled. rotary split. etc and whether sampled wet or dry. • For all sample types. the nature. quality and appropriateness of the sample preparation technique. • Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples. • Measures taken to ensure that the sampling is representative of the in-situ material collected. including for instance results for field duplicate/second-half sampling. • Whether sample sizes are appropriate to the grain size of the material being sampled.	• n/a. Not used in this technique.
Quality of Assay Data and Laboratory Tests	• The nature. quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools. spectrometers. handheld XRF instruments. etc. the parameters used in determining the analysis including instrument make and model. reading times. calibrations factors applied and their derivation. etc. • Nature of quality control procedures adopted (eg standards. blanks. duplicates. external laboratory checks) and whether acceptable	• The filtered solution samples were assayed using a Varian ICP-OES instrument (model Vista MPX710), calibrated using Specsol certified standards for each of the rare earth elements. Quality control is conducted using a standard reference sample previously prepared from Ema mineralisation and assayed by SGS in Vaspasiano, Brazil. The reference sample is read for each element before and after running each assay batch. Any batches in which the standard sample result plots outside two standard deviations from the established value are re-run.

Item	JORC code explanation	Comments
	levels of accuracy (ie lack of bias) and precision have been established	• The assaying methodology is in line with industry standard and is considered appropriate for rare earth solutions. The technique is considered to be total.
Verification of Sampling and Assaying	• The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data. data entry procedures. data verification. data storage (physical and electronic) protocols. • Discuss any adjustment to assay data.	• n/a. Not used in this technique.
Location of Data Points	• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys). trenches. mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control.	• The UTM WGS84 zone 21S grid datum is used for current reporting. The drill holes collar locations were picked up by a licensed surveyor using a Trimble total station (+/-5cm), referenced to a government survey point.
Data Spacing and Distribution	• Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied.	• n/a. Not used in this technique.
Orientation of Data in relation to Geological Structure	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known. considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias. this should be assessed and reported if material.	• n/a. Not used in this technique.
Sample security	• The measures taken to ensure sample security.	• The solution samples sealed in plastic bags were sent directly to Catalão by airfreight and courier to the laboratory. The Company has no reason to believe that sample security poses a material risk to the integrity of the assay data.
Audit or Reviews	• The results of any audits or reviews of sampling techniques and data.	• The sampling techniques and data have been reviewed by the Competent Person and are found to be of industry standard.

JORC (2012) Table 1 - Section 2: Reporting of Exploration Results

Criteria	JORC code explanation	Commentary
Mineral Tenement and Land Tenure Status	• 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. • The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	• The EMA and EMA EAST leases are 100% owned by BCM with no issues in respect to native title interests. historical sites. wilderness or national park and environmental settings. • The company is not aware of any impediment to obtain a licence to operate in the area.
Exploration done by Other Parties	• Acknowledgment and appraisal of exploration by other parties.	• No exploration by other parties has been conducted in the region.
Geology	• Deposit type. geological setting and style of mineralisation.	• The REE mineralisation at EMA is contained within the tropical lateritic weathering profile developed on top of felsic rocks. rhyolites as per the Chinese deposits. • The REE mineralisation is concentrated in the weathered profile where it has dissolved from the primary mineral. such as monazite and xenotime. then adsorbed on to the neo-forming fine particles of aluminosilicate clays (e.g. kaolinite. illite. smectite). • This adsorbed iREE is the target for extraction and production of REO.

Drill Hole Information	• 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:
	  ◦ easting and northing of the drill hole collar
	  ◦ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar
	  ◦ dip and azimuth of the hole
	  ◦ down hole length and interception depth
	  ◦ hole length.
	• 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.
		• Auger locations and diagrams are presented in this announcement.
		• Details are tabulated in the announcement.

BRAZILIAN CRITICAL MINERALS

Criteria	JORC code explanation	Commentary
Data aggregation methods	• 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. • 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. • The assumptions used for any reporting of metal equivalent values should be clearly stated.	• REE grades reported refer to solution collected to monitor the ISR process. • No metal equivalent values are reported.
Relationship between mineralization widths and intercepted lengths	• These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known. its nature should be reported. • 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').	• REE grades reported refer to solution collected to monitor the ISR process. • Mineralisation orientation is assumed to be flat.
Diagrams	• 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.	• Maps and tables of the auger hole's location and target location are inserted.
Balanced reporting	• 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.	• REE grades reported refer to solution collected to monitor the ISR process.
Other substantive exploration data	• 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.	• No other significant exploration data has been acquired by the Company.

Criteria	JORC code explanation	Commentary
Further Work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). • Diagrams clearly highlighting the areas of possible extensions. including the main geological interpretations and future drilling areas. provided this information is not commercially sensitive.	• Additional metallurgical test work with magnesium sulphate leach. • Extraction of PLS for stream line precipitation and impurity removals at ANSTO. • Detail topography survey with LIDAR for mine planning • Geophysics survey, Electro resistivity to define the saprolite/fresh rock boundary and faults in the rock.

Appendix 2 – List of Drill Hole Collars

Hole ID	East	North	RL (m)	Depth (m)	Azimuth	Dip
TANKS	185682,99	9183028,31	146,27	na		
HI01-F1	185670,65	9183034,56	144,36	10.0	0	-90
HI01-F2	185673,64	9183034,40	144,25	9.7	0	-90
HI01-F3	185676,63	9183034,13	144,40	9.3	0	-90
HI01-F4	185679,64	9183033,91	144,36	11.2	0	-90
HI01-F5	185682,60	9183033,81	144,55	11.5	0	-90
HI01-F6	185672,24	9183037,43	143,99	11.6	0	-90
HI01-F7	185675,16	9183037,22	143,81	11.4	0	-90
HI01-F8	185678,26	9183036,92	143,90	10.7	0	-90
HI01-F9	185681,29	9183036,74	143,67	10.0	0	-90
HI02-F1	185658,77	9183055,00	141,37	5.7	0	-90
HI02-F2	185660,73	9183054,87	141,58	5.7	0	-90
HI02-F3	185662,73	9183054,95	141,38	5.7	0	-90
HI02-F4	185658,75	9183057,06	141,16	5.7	0	-90
HI02-F5	185660,59	9183056,71	141,08	5.7	0	-90
HI02-F6	185662,62	9183056,84	141,21	5.7	0	-90
HI02-F7	185658,54	9183059,01	140,83	5.7	0	-90
HI02-F8	185660,56	9183058,92	140,69	5.7	0	-90
HI02-F9	185662,53	9183058,74	140,80	5.7	0	-90
HI02-F10	185659,77	9183057,94	140,82	12.0	0	-90
HI02-F11	185659,62	9183060,83	140,37	12.0	0	-90
HI02-F12	185659,51	9183062,82	140,09	12.0	0	-90