



GEOMASTER

GEODETTIC & GEOPHYSICAL
SURVEY

"GEOMASTER" LLC was established in January 1998 as an integrated professional high-tech geodetic and geophysical surveying and related service provider based on the most modern technologies.

The sound experience in topographic, geophysical and GIS applications allows us to incorporate most modern technology for rapid, accurate and cost effective services. With over 50 professional and competent staff we can handle projects of any size.

Geodetic Service

Various geodetic surveys, networking, engineering-geodetic surveys, cadastral surveys and as-built drawings

Aerial Imagery

1:500-1:10 000 scale topographic mapping, DEM, DTM, 3D modeling, monitoring, volume calculation, as built survey and etc...

Satellite Imagery Service

Optic & Radar imaging, 1:5000 - 1:100 000 scale topographic mapping, DEM, DTM, Ortho Mosaic, various monitoring and intelligence, volume calculation, defence and disaster management, geological interpretation, remote sensing, precision agriculture and many more.

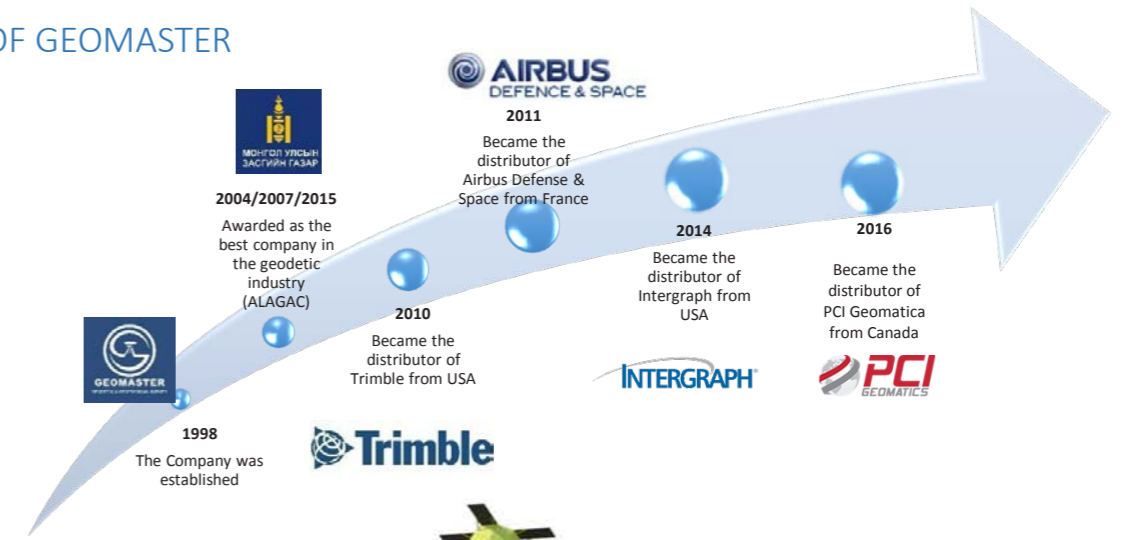
Utility Survey Service

Survey for underground utility, construction composite, mapping of buried and unburied utility made by metallic and non-metallic, construction scanning

Geophysical Survey

Mineral exploration, water exploration, earth structural and layer analysis, archeological research, borehole logging and etc...

TIMELINE OF GEOMASTER



Geomaster LLC is the leading geodetic service providing company in Mongolia. Our vast experience in geodesy and GIS field leads us to deliver high quality, reliable, and prompt services. You can be completely assured of the quality and the reliability of our services as you are guaranteed to get positive references from any of our customers. Our company is capable of performing surveys as small as family land plot cadastral to as large as nationwide GIS upgrade and re-arrangement planning.

We are offering you following geodetic services but not limited to the list:

- Mapping, reference and primary network survey and post processing by satellite technology
- I, II, III, IV class leveling survey
- Civil engineering survey and data processing
 - Construction survey for baseline
 - Auditing of construction frame, tilt and other conformity check
- Alignment survey
- Mining survey and data processing
 - Open pit mining survey
 - Underground mining survey
 - Development of mining plan
- Landplot and cropland cadastral survey
- Creation, update and referencing of 1:200 – 1:100 00 scale topographic maps
- Land management
- GIS database creation
- Remote sensing service
- Underground utility surveying
- 3D scanning and modeling

70% OF ALL DECISIONS ARE BASED ON GEOSPATIAL INFORMATION



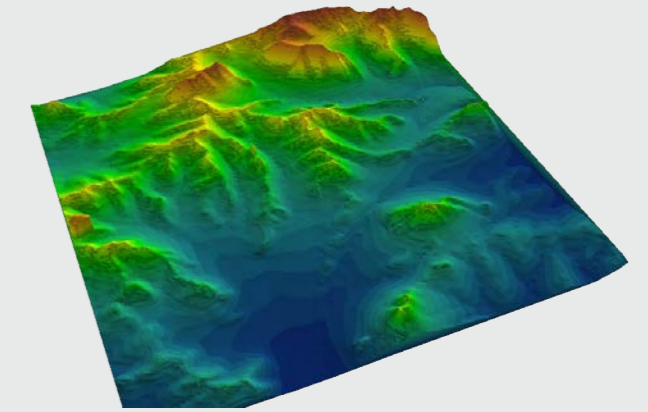
Field Survey



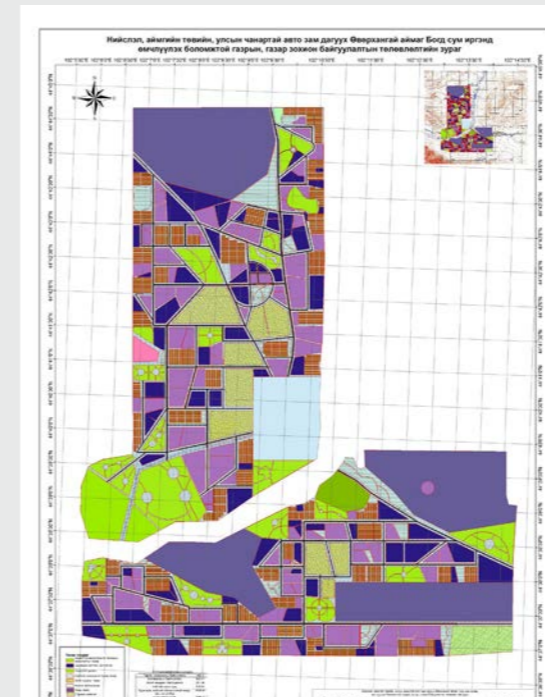
Alignment Survey



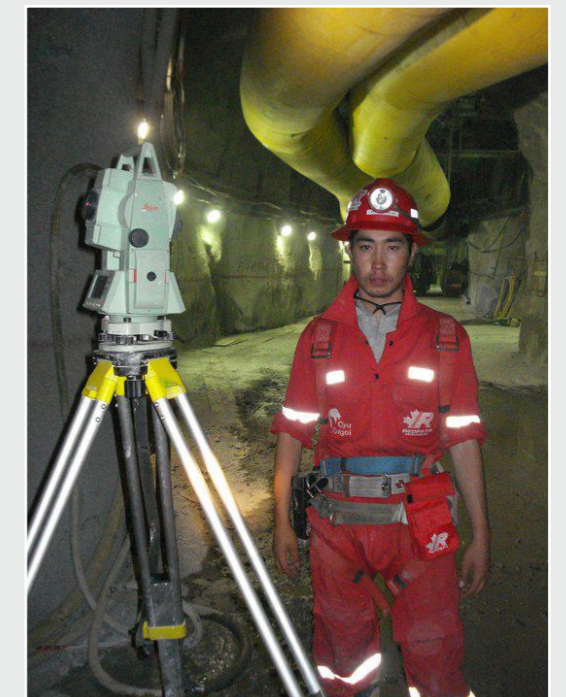
Construction Survey



Remote Sensing



Land Management



Underground mine/tunnel survey



Network Survey

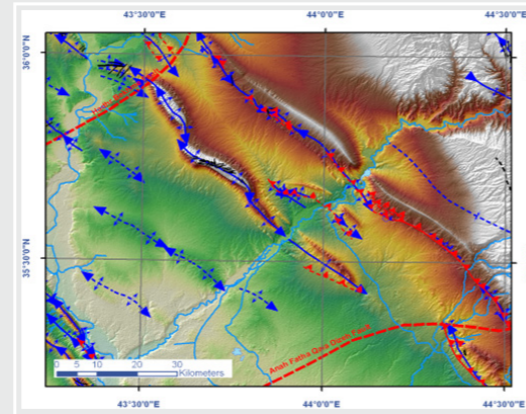
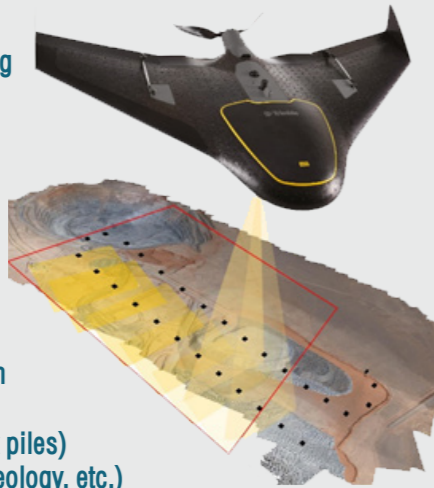


Civil Engineering

With Geomaster's UAV service you can obtain rapid, high quality images wherever and whenever you need with low cost and quick result. We are offering following UAV service for your need.



- Engineering and Surveying
- Mining
- Oil & Gas
- Agriculture and Forestry
- Environmental & Landfill
- Public Agencies
- Waste management
- Disaster management
- Safety assessment
- Flooding change detection
- Erosion monitoring
- Volume calculation (stock piles)
- Research (geology, archaeology, etc.)
- Asset management



Geological Imaging

The best geospatial deliverables require accurate and timely image and position data. Our UAV lead the market in precise data by integrating a high-performance GNSS receiver and a new full-frame sensor, 36MP high-resolution camera. The camera in addition to the GNSS receiver achieves a leading level of image accuracy—orthomosaics resolution down to 1 cm and 3D models with up to 1,000 pts/m2. Post-processed kinematic (PPK) GNSS technology is used to establish image locations in absolute coordinate systems, minimizing, or even eliminating in some cases, the need for ground control and greatly increasing the value of the deliverable. This level of precision is ideal for power line modeling, field leveling and site planning.



Agricultural Imaging



Monitoring



Change detection Volume Calculation

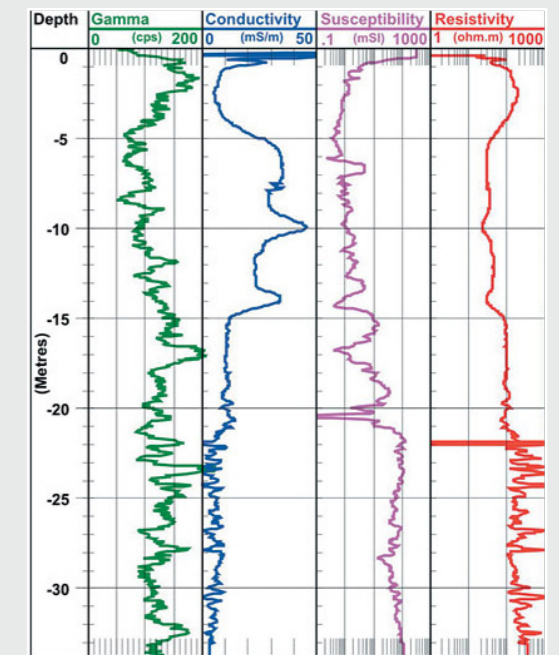
Geomaster LLC has been conducting geophysical survey in Mongolia for more than 18 years with advanced equipment and integrated technologies in field acquisition, processing and interpretation.

One of the early pioneers in geophysical service providers in Mongolia, Geomaster LLC acquires, analyses geological structural data according to local and international standards and provides consultancy and analytical information to clients wishing to assess mineral and geological resources.

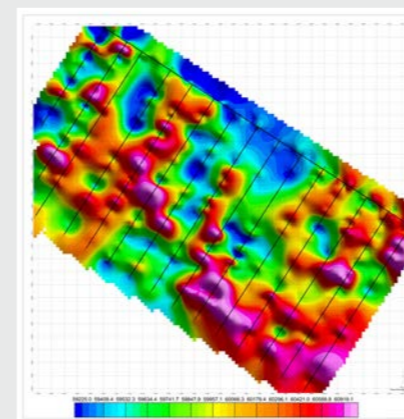
Geophysical survey allows the customer to identify underground structure with precision without harming the environment and explores vast area within short period of time thus saves great value of time and cost.

We are offering following geophysical surveys in following applications:

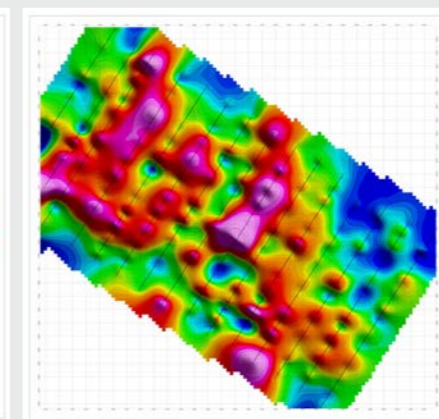
- MINING EXPLORATION
Exploration of gold, copper, iron, coal, oil, manganese and etc
Experience: Copper exploration for Tethys Mining, Sulfide exploration for Ivan Hoe Mines, Gold exploration for QGX Mongolia.
- GROUND WATER EXPLORATION
Exploration of groundwater for various projects, mines, factories and etc... Experience: Rangeland water sourcing project of Millennium Challenge Account, Spring water exploration in Khutag Undur sub province for UFC group, Water exploration for Oyu Tolgoi LLC.
- ENVIRONMENTAL STUDY
Identification of earth layers, archaeological research, exploration of utilities, buried objects and etc..
- CIVIL ENGINEERING
Soil condition assessment, groundwater, permafrost identification, earth layers and their thicknesses, radio activity and etc. – Research of utilities, deep bedrocks, location of voids, buried metal objects, buried storage tanks, utilities. Experience: Gravel exploration along the route of railway Tsogt Tsetsii to Gashuun Sukhait sub province for Tavan Undes.



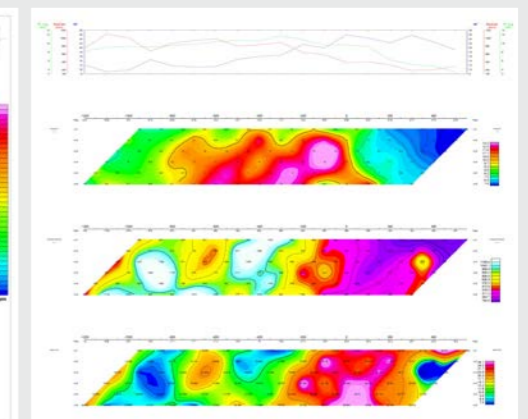
Borehole Logging



Magnetic

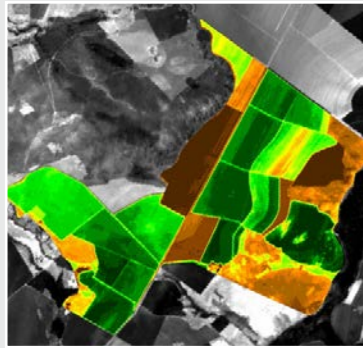


Radiometric

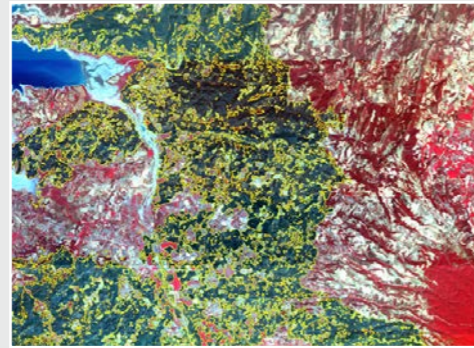


Electric

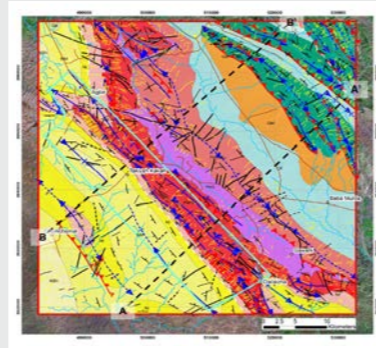
With unmatched access to Earth observation satellite imagery, unique expertise and decades of experience, Airbus Defence and Space (DS) is recognised as a World leader in geo-intelligence. Based on exclusive access to the Pleiades, SPOT, TerraSAR-X and TanDEM-X Earth observation satellites, its extensive portfolio spans the entire geo-information value chain. Airbus DS provides decision-makers with sustainable solutions to increase security, optimise mission planning and operations, boost performance, improve management of natural resources and, last but not least, protect our environment. Geomaster is proud to distribute Airbus Defense and Space services in Mongolia with exclusive rights.



Precision Agriculture



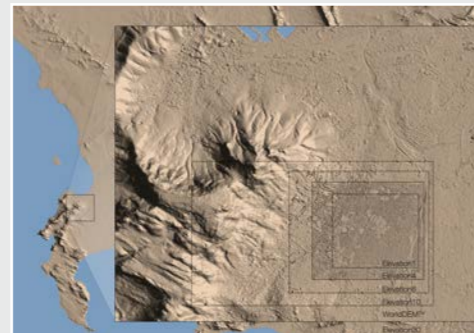
Forestry



Geological Interpretation

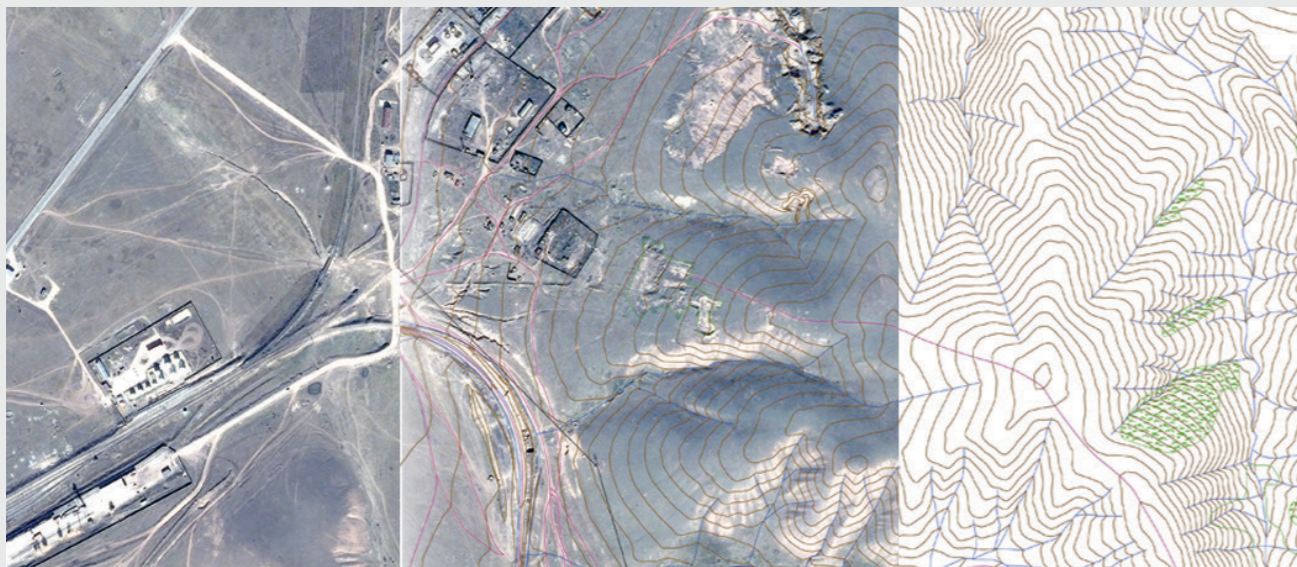


Mine Volume calculation



VHR DEM/DSM and DTM

Topographic map, DEM/DSM DTM, Ortho imagery, 3D models, Monitoring, Volume calculation, Data Processing, Spatial Database Infrastructure, Surveillance, Remote sensing, Geological Interpretation, Permafrost study, Agriculture analysis, Forestry, Emergency response



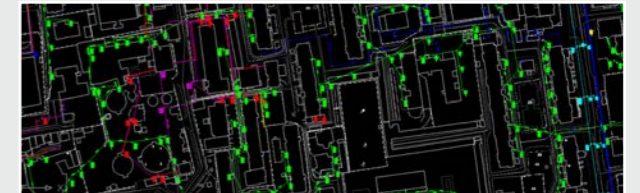
Topographic Mapping

Geomaster LLC offers survey of known or unknown underground utilities. Buried metallic and non-metallic services and utilities such as water, power, telecommunication, fibre optics, drainage, and other objects.

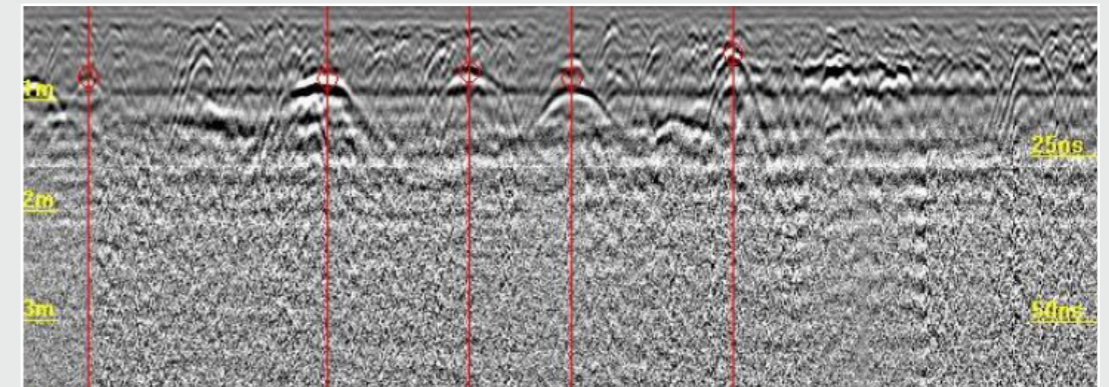
We use most modern technologies such as Mala X3M Ground Penetrating Radar, Radio Detection RD8000 locator and Optimal Ranging Spar 300 automated magnetic sensors for our works.

Our technologies are not only used for locating utilities but also for detection of faults, road, wall and earth composites, construction re-bar checks and many more.

We have extensive range of experience from small construction site survey to Ulaanbaatar city wide utility mapping for Ministry of Construction and Urban Development.



Ground Penetrating Radar



Ground Penetrating Radar Result



Electromagnetic Locator

Geomaster LLC offers 3D laser scanning services using Faro X130 3D laser scanner and Trimble VX spatial station. Our laser scanner based products are essential tool for collecting field data in areas that are unsafe or difficult to access, or in situations where conventional field measurement is not possible. Laser scanning is also a valuable tool for conducting fabrication and construction inspections and design and interference checking.

Our technical staff produce 3D models for following applications and more:

- Alignment
- As-Built Documentation
- Dimensional Analysis
- Asset and Facility Management
- Building Information Modelling
- CAD-Based Inspection
- Crime Scene Analysis
- First Article Inspection
- Incoming Inspection
- In-Process Inspection
- Large Part Inspection
- Machine Calibration
- Non-Contact Inspection
- Reverse Engineering
- Robot Calibration
- Tool Building & Setup
- Virtual Simulation
- Accident Reconstruction

The application of 3D laser scanning provides availability and opportunity where the virtual world of plants, pits underground facility can be traversed with relative ease and many aspects of measurements could be obtained without having to visit the working place again, potentially saving countless man-hours and still delivering precision work with significant savings in downtime, stoppages, and exposure to safety incidents.

Any deviation from the original design can be identified within hours, allowing corrections to be made within a working shift.



2015
Oyu Tolgoi
Administration of Land Affairs Geodesy and Cartography
Clean Energy
The Best Geodetic Company – ALAGAC 2015



2013
Northern Railways
Khet
Ministry of Environment and Green Development
Peabody Winsway Resources
Rio Tinto Mongolia
Tavan Tolgoi Power
Gratitude – Millenium Challenge Account 2013



2011
Bold Tumor Yuruu Gol
Newcom
Tetsens Mining
Mongolian Railway
Shine Shivee
MonEnCo
QGX exploration



2009
RedPath
Asian Development Bank
Boroo Gold
Information Technology Post Telecommunication and Agency
ALAGAC



2016
Ministry of Construction and Urban Development
Samsung Construction and Engineering
Newcom Mining Service

2014
Asian Foundation
RCSC
Chinggis Land Development
Golden medal – Professional competition 2014



2012
Millenium Challenge Account Mongolia
Ministry of Road, Transport, Construction and Urban Development
Energy Resource Rail
TIB
Ivan Hoe Mines Mongolia Inc

Best contractor of the Month 2012
June – Oyu Tolgoi LLC 2012

2010
Centerra Gold
Gobyn zam
Bold Tumor Yuruu Gol

Gratitude – Asian Development Bank 2010



GEOMASTER

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