Extensive Dredging Experience

Neumann Contractors has over 50 years’ experience in contract dredging and dredging in mining applications, with our first dredge being built in the late 1950’s for mineral sand mining. Since then we have built several dredges for our contracting fleet.

These dredges are modern cutting and recovery machines with a well-earned reputation for performance and reliability in tailings dredging and mining.

The dredges are de-mountable and can be cost effectively transported to remote sites around Australia. They have proven to provide a safe and cost effective method for the relocation or reprocessing of tailings and other fine wet materials.

Operational expertise built on contract dredging experience enables us to constantly improve our equipment. This culture of innovation gives us the edge as dredging contractors of choice.

Cutter Suction Dredge Nu Compact remining tailings at Ernest Henry Mine, near Cloncurry, Queensland.
Vessel Profile

Vessel Name: **NU-ENDEAVOUR**
Registration Number: **9264QE**
Trading Name: **DRG006**

- **Length**: 34.78m
- **Builder**: Neumann Equipment
- **Nominal Production Rate**: 650m3/hr
- **Total Horsepower**: 1,950 hp
- **Horsepower on Pumps**: 1,400 hp
- **Pipeline Diameter**: 450 mm
- **Maximum Digging Depth**: 15 metres
- **Hull Material**: Steel
- **Superstructure Material**: Steel/Aluminium
- **Gross Weight**: 220 Tonnes

*NEUMANN CONTRACTORS*

*THINK Safe  WORK Safe  HOME Safe*
Vessel Name: Nu Bounty
Registration Number: 25128QE
Trading Name: DRG007

Length: 41.30m
Builder: Neumann Equipment
Nominal Production Rate: 650 m³/hr
Total Horsepower: 1,950 hp
Horsepower on Pumps: 1,400 hp
Pipeline Diameter: 450 mm
Maximum Digging Depth: 22 metres
Hull Material: Steel
Superstructure Material: Steel/Aluminium
Gross Weight: 240 Tonnes
Vessel Name: **Nu Compact**
Registration Number: **25013QE**
Trading Name: **DRG008**

- **Length**: 26.8m
- **Builder**: Neumann Equipment
- **Nominal Production Rate**: 250m³/hr
- **Total Horsepower**: 850 hp
- **Horsepower on Pumps**: 500 hp
- **Pipeline Diameter**: 300 mm
- **Maximum Digging Depth**: 8 metres
- **Hull Material**: Steel
- **Superstructure Material**: Steel/Aluminium
- **Gross Weight**: 75 Tonnes
Vessel Name: **Nu Enterprise**  
Registration Number: **25013QE**  
Trading Name: **DRG009**

Length: 12.0m (18.0m LOA)  
Builder: Neumann Equipment  
Nominal Production Rate: 125m³/hr  
Total Horsepower: 290 hp  
Horsepower on Pumps: 230 hp  
Pipeline Diameter: 250 mm  
Maximum Digging Depth: 7.5 metres  
Hull Material: Steel  
Superstructure Material: Steel  
Gross Weight: 32 Tonnes
**Vessel Profile**

**Vessel Name:** Nu Explorer  
**Trading Name:** DRG011

---

**Length:** 11.0m  
**Builder:** Neumann Contractors  
**Nominal Production Rate:** 110 m³/hr  
**Engine:** Cummins 6CTA8.3-C  
**Total Horsepower:** 240 hp  
**Horsepower at Pump:** 220 hp  
**Slurry Pump:** GIW KSB LCC-M 200-600  
**Pipeline Diameter:** 250 mm  
**Maximum Digging Depth:** 7.5 metres  
**Hull Material:** Steel  
**Superstructure Material:** Steel/Aluminium  
**Gross Weight:** 17.5 Tonnes

---

**EASILY TRANSPORTED TO SITE:**  
When dismounted, this unit is transportable in 2 x standard 40’ shipping containers to provide cost-effective mobilisation logistics.
Vessel Name: Nu Kathleen

Registration Number: AGE080C

Trading Name: DRG001

Length: 9.30m
Builder: Neumann Equipment
Nominal Production Rate: 50m3/hr
Total Horsepower: 275 hp
Horsepower on Pumps: 200 hp
Pipeline Diameter: 150 mm
Maximum Digging Depth: 6.5 metres
Hull Material: Steel
Superstructure Material: Steel/Aluminium
Gross Weight: 15 Tonnes
During the period in which Neumann Contractors has been developing and upgrading dredges it was recognised that the support equipment must also be capable of undertaking larger scale projects.

**Booster Stations**

Neumann Contractors currently has several booster stations capable of working with any of the dredges. These boosters range in size from 375 Hp to 2000 Hp.

All boosters have been sound conditioned to levels which comply with EPA noise level criteria.

Boosters can either be pontoon mounted or land based. Telemetry communications enable monitoring and control from the dredge operator’s console.

**Pipe Handling Equipment**

Neumann Contractors has a range of late model pipe handling equipment for pipe handling on shore. Other equipment such as dozers and excavators needed for bunding etc are sourced as required.

**Workboats and Barges**

Neumann Contractors has a range of support vessels and work boats in 2C, 2D and 2E Marine Survey. We also hire in work vessels as required. We also have various lifting and fuelling barges available to service project requirements.
Project: **Ernest Henry Mine – Tailings Dredging**

**Principal:**
*Ernest Henry Mining (Xstrata Copper)*

**Location:**
*Near Cloncurry, Queensland*

**Contract Value:**
*$4,500,000*

**Completion Date:**
*August 2013*

---

Our 300mm CSD Nu Compact has been commissioned by Ernest Henry Mining to remine tailings from the Tailings Storage Facility to recover magnetite. Nu Compact pumps the reclaimed tailings via a 1000 metre long HDPE pipeline directly into a process circuit in which the magnetite is concentrated.

**Scope of Work**

Supply and operate dredging equipment on a 24/7 basis. Dredge and pump a consistent feed density to the processing plant.

**Innovations**

The dredge is fitted with an RTK navigation system to ensure the mining plan is followed accurately. Flow and density meters are fitted to the slurry line to help ensure a steady tonnage is pumped into the magnetite circuit. In addition, slurry density control plates are fitted to the suction pipe to assist density control.

---

**Nu Compact – Cutter Suction Dredge**

- **Length**: 26.8 m
- **Gross Weight**: 75 tonnes
- **Pipe Dia.**: 300 mm
- **Digging Depth**: 2.0 – 8.0 m
Project: **Cadia Gold Mine – Tailings Dredging**

**Principal:**
Newcrest Mining Limited

**Location:**
*Cadi Valley, NSW Near Orange*

**Contract Value:**
$500,000 +

**Completion Date:**
Ongoing

---

The dredging of the process water pond at Cadia Gold Mine in Orange N.S.W. was undertaken by Neumann Contractors for Newcrest Mining Ltd.

The project was undertaken using our 150mm dredge, used as a suction dredge only, and fitted with high pressure water jets to loosen the material. As the pond is fitted with a High Density Polythene liner, it was not suitable to use a cutter or spud mounted dredge.

The project required the removal of approximately 50,000m³ of sand and silts which were pumped about 300 lineal metres and 15 metres static, to a thickener.

The dredging of the material was made more difficult due to layers of harder material approximately 300-500mm thick throughout the material to be dredged.

---

**Dredge**
Nu-Kathleen – Cutter Suction Dredge or option of option Suction Only Dredge

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length</td>
<td>9.3 m</td>
<td>Gross Weight 15 tonnes</td>
</tr>
<tr>
<td>Pipe Dia.</td>
<td>150 mm</td>
<td>Digging Depth 2.0 – 6.0 m</td>
</tr>
</tbody>
</table>
Project: **Penrith Lakes – Tailings Dredging**

**Principal:**

*Penrith Lakes Development Corporation*

**Location:**

*Penrith, New South Wales*

**Contract Value:**

*$7,850,000*

**Completion Date:**

*August 2008*

The Penrith Lakes Scheme covers an area of just under 2,000 hectares, located in the Penrith Valley bounded by the Nepean River and the foothills of the Blue Mountains.

The project involved dredging of approximately 1,300,000m³ of sand, silts and clays from a central tailings storage facility to a land reclamation site 4.4 km away. The materials are being placed in a manner which enabled the coarser fractions of the tailings to be separated from the silts and clays. This methodology allowed the coarser material to remain in the reclamation area where it was placed as a level one fill. The fine material was picked up with the tailwater from the reclamation site and pumped to a purpose built tailings facility adjacent to the reclamation.

A key objective of the project was the creation of enough volume in the central tailings storage facility to enable continued operation of the quarry processing plants. Also, the material dredged was used to increase the amount of land available at the Penrith Lakes site for future urban development as an end use for the site after completion of the quarry activities.

**Scope of Work:**

- Establishing a pipeline from the central tailings storage facility to Farleys Bay, a distance of 4,400 metres.
- Set up and maintenance of a Tailwater system to pump the fine material from the reclamation site.
- Establishment of a 1500 metre return water system to maintain adequate water levels for the dredge working in the central tailings facility.
- Dredge 1,300,000m³ of sand, silts and clays.
- Separation of tailings into two divided areas of Farleys Bay. The eastern storage area for the coarser materials and the western storage area for silts and clays.
- Compacting of coarser tailings for future urban development.

**Challenges:**

- Ensuring that the project was carried out with minimal disruption to the effectiveness of existing earthworks being carried out at the site.
- Controlling the separation process of coarse and fine materials.
- Ensuring all work activities were undertaken in accordance with the mine sites OHS&E requirements.

**Dredge Nu-Endeavour – Cutter Suction Dredge**

- **Length:** 34.5 m
- **Gross Weight:** 220 tonne
- **Pipe Dia.:** 450 mm
- **Digging Depth:** 2.5 – 15.0 m
Project Profile

**Project:** Moura Mine – Tailings Dredging

**Principal:** Coal Recoveries

**Location:** Moura, Central Queensland

**Contract Value:** $3,200,000

Neumann’s Nu-Endeavour was chosen to reclaim coal tailings from the Moura 2C pit.

These tailings were processed to recover the fine coal lost in earlier operations and it was part of a program to empty the pit to enable ongoing mining underground from the pit floor.

The dredge was called upon to produce 450 tonnes per hour of coal tailings, which were pumped distances of up to 2.5km to the processing plant. As the pit was some 45m deep, the end of the job necessitated pumping a vertical cliff face of some 30m to the booster station located at the top of the cliff.

The operation was on a 24 hour, 7 day per week basis and the coal tailing in various places were interspersed with some “liquorice” (a very fine type of coal tailings which bind together like plasticine). On several occasions the dredge was also called upon to dredge through rocky clay shale which were embankments put across the pit during the filling process.

**Outcome**
The outcome for the dredging operation was positive for all Stakeholders. The successful completion of this project allowed the mine to continue its operation with renewed capacity in the tailings pit. The dredging was completed on time and within budget.

**Dredge**
- **Nu-Endeavour – Cutter Suction Dredge**
- **Length:** 34.5 m
- **Gross Weight:** 220 tonne
- **Pipe Dia.:** 450 mm
- **Digging Depth:** 2.5 – 15.0m
Project: Superior Coal – Tailings Dredging

Principal: Superior Coal Limited
Location: Gladstone, Queensland
Contract Value: $900,000
Completion Date: February 2011

Neumann Contractors were engaged as Dredging Contractors to carry out the dredging works to clear a pond 150 meters wide, 650 meters long of coal tailings that washed in over several years. The coal tailings, ranging from fine silt to approximately 70mm in size, were pumped to a screening and washing plant for recovery and then placed in stockpiles in the coal storage area.

Scope of Work:
- Mobilise to site 1 x 250mm Dredge [Dredge 009], 600 meters of [200mm-250mm] pipeline and associated equipment.
- Dredging fine to medium sized coal tailings.
- Dredge material to be pumped to screening Plant.

Challenges
- Pumping material at a slow rate 100 litres/second.
- Uneven floor to dredge, rocky and hard material floor.
- Blockages [rocks] in the booster and pipeline.
- Maintaining consistent feed rates to the plant.

Dredge Nu-Enterprise – Cutter Suction Dredge
Length 11.9 m
Pipe Dia. 250 mm
Gross Weight 32 tonne
Digging Depth 1.2 – 6.0 m
Neumann Contractors provided a 1350hp diesel-powered slurry pump to shift coal tailings slurry at BHP’s Mt Arthur mine.

The use of the Neumann equipment to pump the tailings to their new tailings dam was a temporary arrangement put in place by the mine operator until delivery of new permanent equipment.

This unit, which ran 24/7, was fitted with a Warman 14/12GGAH slurry pump, floating intake hose with foot valve and a self-bunded fuel tank.
Project: **Corridor Sands – Resource Dredging**

**Principal:** Corridor Sands  
**Location:** Woongoolba, Queensland  
**Contract Value:** Ongoing...

---

**CORRIDOR SANDS**

The CSD Nu Ultra has been working on a permanent basis at Corridor Sands since 2009.

Corridor Sands pride themselves on supplying premium quality sands, excellent customer service and fast, efficient loading. The Nu-Ultra is able efficiently supply raw sand to the production plant where quality; washed sand, fill sand and brickies loam is produced.

Corridor Sands’ river sand resource is strategically located next to the Logan River and the transport corridor between Brisbane and the Gold Coast, enabling us to cover the Brisbane, Logan, Redlands and Gold Coast areas.

The large sand reserve will ensure supply of high quality washed sand, fill sand, bedding sand and brickies loam to the concrete, asphalt, quarry, construction, building and landscaping industries for many years to come.

Corridor Sands has received Queensland Department of Main Roads Quarry Assessment and Certification approval.

For more info on this site see:  

---

**Dredge**  
**Nu-Ultra – Cutter Suction Dredge**  
**Length** 34.78 m  
**Gross Weight** 220 tonnes  
**Pipe Dia.** 450 mm  
**Digging Depth** 2.0 – 11.0 m
## Past Dredging Experience

### Previous Mine and Resource Dredging Experience and Referees

<table>
<thead>
<tr>
<th>Contract Name/Location</th>
<th>Quantity</th>
<th>Project Dates</th>
<th>Scope of Works</th>
<th>Contract Amount</th>
<th>Client</th>
<th>Client Referees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ernest Henry Mine Tailings</td>
<td>1,500,000 tonnes +</td>
<td>Oct 2012 – Aug 2013</td>
<td>Tailings Dredging</td>
<td>$4.5M</td>
<td>Ernest Henry Mining</td>
<td>Phil Jeffs (07) 4769 4568 0478 320 930</td>
</tr>
<tr>
<td>Reprocessing Cloncurry, Qld</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Xstrata Copper</td>
<td></td>
</tr>
<tr>
<td>Cadia Gold Mine Dredging Orange,</td>
<td>Ongoing Works</td>
<td>Sep 2011 – Ongoing</td>
<td>Tailings Dredging</td>
<td>Ongoing</td>
<td>Newcrest Mining Limited</td>
<td>Peter Lord 0408 728 705</td>
</tr>
<tr>
<td>NSW</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Penrith, NSW</td>
<td></td>
<td></td>
<td>Reclamation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Superior Coal – Tailings Dredging</td>
<td>75,000 tonnes</td>
<td>Feb 2011</td>
<td>Tailings Dredging</td>
<td>$900,000</td>
<td>Superior Coal Limited</td>
<td>Brisbane Office (07) 3220 1000</td>
</tr>
<tr>
<td>Gladstone, Qld</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corridor Sands Woongoolba, Qld</td>
<td>10,000 tonne/week</td>
<td>2009 – Ongoing</td>
<td>Resource Dredging</td>
<td>Ongoing</td>
<td>Corridor Sands</td>
<td>Glen Thornton 0411 215 345</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Water Pumps and Booster Stations details

<table>
<thead>
<tr>
<th>Pump</th>
<th>Installed Power Kw</th>
<th>Pump Size in mm</th>
<th>Head Capacity and Flowrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>BST010</td>
<td>1500</td>
<td>450</td>
<td>85 metres @ 550 L/sec</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>75 metres @ 1000 L/sec</td>
</tr>
<tr>
<td>BST009</td>
<td>1000</td>
<td>450</td>
<td>85 metres @ 400 L/sec</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>75 metres @ 800 L/sec</td>
</tr>
<tr>
<td>BST006</td>
<td>900</td>
<td>450</td>
<td>90 metres @ 400 L/sec</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>75 metres @ 750 L/sec</td>
</tr>
<tr>
<td>BST005</td>
<td>450</td>
<td>450</td>
<td>35 metres @ 400 L/sec</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>30 metres @ 800 L/sec</td>
</tr>
<tr>
<td>Floating Water Pump</td>
<td>200</td>
<td>400</td>
<td>25 metres @ 350 L/sec</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20 metres @ 500 L/sec</td>
</tr>
<tr>
<td>BST002</td>
<td>450</td>
<td>300</td>
<td>90 metres @ 250 L/sec</td>
</tr>
<tr>
<td>This pump is currently in design phase</td>
<td></td>
<td></td>
<td>82 metres @ 350 L/sec</td>
</tr>
</tbody>
</table>

All Boosters can be land based or mounted on pontoons and floated.

We have built these pumping units in our workshop in SE Queensland. We would also be able to build new purpose-built land based or floating units.

**We have the following pipeline available**

- 1200 metres of 500mm flanged steel pipeline
- 2000 metres of 450mm steel pipeline
- 2000 metres of 450mm HPDE pipeline
- 1500 metres of 400mm flanged steel pipeline

We would require approximately three (3) weeks for mobilisation of Water Pumps and Pipeline.
Environment Management

Neumann Contractors are meeting the environmental challenges of the 21st century in a progressive manner and are proud of our ongoing commitment to ecologically sustainable development.

The company’s environmental team includes environmental managers with significant experience in the dredging and construction industry.

Our strong working relationship with environmental authorities and leading environmental scientists has led to the development of important innovations, particularly in the management of acid sulphate soils.

Neumann’s believes that a pro-active approach, involving integration of environmental and operational management, is the cornerstone of successful environmentally sensitive projects and positive client outcomes.

In recognition of our commitment to environmental best practice, Neumann Contractors have received both a National and State Case Earth Award for Environmental Excellence.

Comprehensive Environmental Service

Neumann Contractors environmental services range from dedicated environmental managers through to state-of-the-art soil and water treatment equipment.

Our technical staff has all the skills and qualifications necessary to implement complex management plans backed by internal environmental auditing.

The company’s inventory of test and measuring equipment means water quality; dust, noise and vibration monitoring can be provided in-house.

Our qualified trainers ensure that all levels of personnel receive on-going environmental training in best environmental practice and current legislation.

With over 50 years’ experience in dredging and extraction, Neumann has valuable knowledge of development and licence approval processes.

Capability & Experience

Neumann Contractors has a proven track record in environmentally sensitive dredging and construction projects.

Neumann’s success in this field has relied on our skill and expertise in:

- Management of environmental licences and compliance with strict statutory guidelines
- Implementation of complex environmental management strategies
- Large scale acid sulphate soils management including innovative hydro-sluicing and neutralisation treatment technology
- Dewatering in sensitive soil and water conditions
- Design and implementation of monitoring programs
- Interpretation of monitoring data and technical information
- Producing management plans and technical reports
- Internal and external environmental auditing
Quality Management

Neumann Contractors has a comprehensive Quality Management System in place. This system can be tailored to each individual project we undertake to ensure we deliver quality products and always meet our client’s standards and project specifications. This is achieved through our detailed planning, implementation, testing and review processes which enable our team to consistently demonstrate a high level of quality on all projects.

Health and Safety Management

Neumann Contractors is committed to maintain a safe and healthy working environment for all employees and stakeholders. This is accomplished through the continuous improvement of our comprehensive occupational health and safety management systems which are utilised in all areas of the company’s activities.

Contact Details

Should you require further information please contact

General Manager
Mr Bill Neumann
email: bill.neumann@neumann.com.au

Dredging Manager
Mr David Neumann
email: david.neumann@neumann.com.au

Office Location
Building 20
13 Nuban Street
Currumbin Qld 4223

Phone: 07 5589 2746
Fax: 07 5589 2775

email: neumann.contractors@neumann.com.au
Website: www.neumanncontractors.com.au