

NEUMANN EQUIPMENT PTY LTD

Arab Potash Project

VIDEO DOCUMENTARY SCRIPT

DRAFT #2

DURATION: Approx 7 minutes

© Newton's Pty Ltd

PRONUNCIATION SCHEDULE:

Paragraph No.

7	Al Jubail	Al Jew- <u>bail</u>
10	Ingebrigt	<u>Inge</u> (as in hinge)-bright
10	350-12LD	Three-fifty twelve LD
13	350-14D	Three-fifty fourteen D
13	Aqaba	<u>Ack</u> - aabaa

VISION	NARRATION
1	Of all the elements essential to life - potassium is perhaps among the most important - 90 percent of the world's production being used for fertilisers.
2	These rich - if very salty - waters are a valuable chemical resource for industry and agriculture.
3	But like many of the elements, nature makes it as difficult as possible to extract them from their natural deposits - in this case rock salt in the waters of the Dead Sea - the infamous <u>Salt Sea</u> of the Bible.
4	Extraction of the rock salt provided a real challenge for a bucketwheel cutter suction dredge from the Neumann factory in Australia.

5	Winning this Arab Potash Company Limited contract against fierce world competition, came down to sheer power and strength of the equipment.
6	Neumann's have done it before.
7	They became the first dredge designer in the world to successfully adapt the proven bucketwheel technology to the mining of rock salt for the Saudi Petrochemical Company at Al Jubail, Saudi Arabia.
8	This dredge has been gouging its way through rock salt virtually non-stop since commissioning in 1984.
9	The salt has an unconfined compressive strength of ten to sixteen megapascals- considered the hardest substance in the world to extract by this method - and usually avoided by dredge makers.
10	At the other end of the scale, a Neumann Series 350-12LD bucketwheel dredge is mining sodium sulphate salt in rock form at a design capacity of 400 cubic yards per hour at the Ingebrigt plant of Saskatchewan Minerals in Canada.
11	In winter, there's a 300 millimetre skin of ice on the working pond, with ambient temperatures of 35 degrees Celsius below zero.
12	This dredge was commissioned in 1985.

13	The Neumann Series 350-14D dredge for Arab Potash was shipped from Australia in large components and landed at Aqaba in Jordan where it was transferred to low loaders for the 200 kilometre journey to the Dead Sea site.
14	On this vast salt mine, the dredge is confidently producing its minimum design capacity of 325 metric tonnes per hour.
15	The rock salt has an unconfined compressive strength of up to sixteen megapascals.
16	To achieve this throughput - Neumanns purposely designed power and pump capacity higher than contract design requirements.
17	Their dredges are built for heavy work and this structural superiority shows both internally and externally.
18	At the business end, the two metre bucketwheel - specially designed for maximum break-out force in shallow dredging - is driven by low-speed, high-torque hydraulic motors through a Neumann designed Two-hundred-and-seventy-five kilowatt gearbox.
19	Power comes from two Seven-hundred-and-fifteen horsepower diesels - one dedicated to the hydraulics and the other to drive the deck mounted slurry pumps.

20	Designed for 24-hour operation, Neumanns installed a pair of 42 kVA generator sets - one for continuous power and the other as a stand-by.
21	To cope with the hardness of the seabed, the spuds are driven hydraulically, delivering a penetration force of up to 22 tonnes at the tip.
22	A conventional free-fall spud would not achieve adequate penetration into the sea bed to withstand the reactionary forces created by the bucketwheel.
23	The Neumann team relied on its 40-years of experience in dredging in all conditions to resolve design questions for the Arab Potash project.
24	By carefully studying the performance of its own extensive dredging fleet, Neumanns is able to provide its world-wide clients with "value-added" technology and know-how.
25	Dredges have to perform up to design expectations, around the clock, with minimum down time.
26	...and on the salt fields of the Dead Sea - one of the harshest dredging environments in the world - there are no second prizes.
DISSOLVE TO ANIMATED NEUMANN EQUIPMENT LOGO	

	<u>SOURCE OF GRAPHIC MATERIAL</u>
<p>GRAPHIC -</p> <p>Acknowledgements are due to the following companies who have purchased and are operating dredges designed and manufactured by Neumann Equipment Pty Ltd of Currumbin, Queensland Australia.</p> <p>NEUMANN DREDGING CO: Burleigh Queen Nu Endeavour Nu Bounty Nu Compact Nu Enterprise Nu Ultra</p>	<p>Computer generated by Paul</p> <p>Computer generated by Paul + frozen frames from the following sources:</p> <p>Burleigh Queen - IAN C Nu Endeavour - ALL DREDGES GREAT AND SMALL- TAPE COUNTER APPROX 02:01 (Mainly all bucketwheel and forward assembly) Nu Bounty - GET PRINT Nu Compact - 02:36 Nu Enterprise - 05:27 Nu Ultra - HARBOURS AND RIVERS (VHS) 02:09</p>

<p>COOPER DREDGING, WESTERN AUSTRALIA</p>	<p><u>IAN CARSTENS</u></p>
<p>PAVEWAYS PTY LTD, QUEENSLAND</p>	<p>ALL DREDGES 02:35</p>
<p>PEKO-WALLSEND LTD AND AUSTRALIAN ANGLO-AMERICAN LIMITED (Mt MORGAN MINES QUEENSLAND)</p>	<p>ALL DREDGES 08:12</p>
<p>NIKEX TRADING COMPANY, HUNGARY</p>	<p><u>USE ANY OTHER PIC FROM CABIN OF PEKO DREDGE (the one mentioned previously)</u></p>
<p>SIERRA RUTILE LIMITED SIERRA LEONE, WEST AFRICA</p>	<p>ALL DREDGES 02:37 (with flag)</p>

SAUDI PETROCHEMICAL COMPANY, SAUDI ARABIA	ALL DREDGES 08:59
SASKATCHEWAN MINERALS, CANADA	ALL DREDGES 03:58
PT AMPALIT MAS PERDANA - JASON-PELSART, INDONESIA	THE CLAY BUSTERS 04:17
PT MONTERADO MAS MINING RTZ TECHNICAL SERVICES PROJECT, INDONESIA	Any other shot from one of the dredges in the above show, the Clay Busters
PEKO GOLD LIMITED, NORTHERN TERRITORY, AUSTRALIA	USE ANY SHOT IN CLOSE UP OF A BUCKETWHEEL
INDIAN RARE EARTHS LTD INDIA	ALL DREDGES 05:39
RZ MINES (NEWCASTLE) PTY LTD, AUSTRALIA	ANY FULL PIC OF DREDGE FROM "Once a Dredge - Now a Technology"
SWEETCRETE PTY LTD WESTERN AUSTRALIA	IAN CARSTENS
ARAB POTASH COMPANY JORDAN	ANY WHOLE OF DREDGE SHOT FROM THIS CURRENT SHOW
ISLAMIC REPUBLIC OF PAKISTAN, GOVERNMENT OF SINDH, IRRIGATION AND POWER DEPARTMENT	A WHOLE OF DREDGE SHOT FROM THE PAKISTAN DREDGE WILDS
DISSOLVE TO ANIMATED NEWTON'S LOGO	