

GALAXY

Galaxy Resources Limited

Lithium Asia Conference – Shanghai PRC

Iggy Tan

Managing Director

...meeting a lithium future



The following presentation represents Galaxy's management's best judgment at the time of presentation. The contents include forward looking statements prepared on the basis of assumptions which may prove to be incorrect. This presentation should not be relied upon as recommendation or forecast by Galaxy Resources Limited. No representation or warranty is made as to accuracy, completeness or reliability of the information

Competent Persons

The information in this report that relates to Mineral Resources is based on information compiled by Mr. Robert Spiers who is a full time employee of Hellman & Schofield Pty Ltd and who is a Member of the Australian Institute of Geoscientists. Mr. Spiers has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Spiers consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Mineral Ore Reserves is based on information compiled by Mr. Roselt Croeser who is a full time employee of Croeser Pty Ltd. Mr. Croeser has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Croeser consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Exploration Results, including exploration data and geological interpretations is based on information compiled by Mr Philip Tornatora who is a full time employee of the Company and who is a Member of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr. Tornatora has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Tornatora consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

James Bay Competent Person

The mineral resources are reported in accordance with National Instrument 43-101 and have been estimated in conformity with generally accepted CIM "Estimation of Mineral Resource and Mineral Reserves Best Practices" guidelines. Resource evaluation work was completed by Mr. Sébastien Bernier, P.Geo (OGQ#1034, APGO#1847) an independent Qualified Person as defined by NI 43-101.

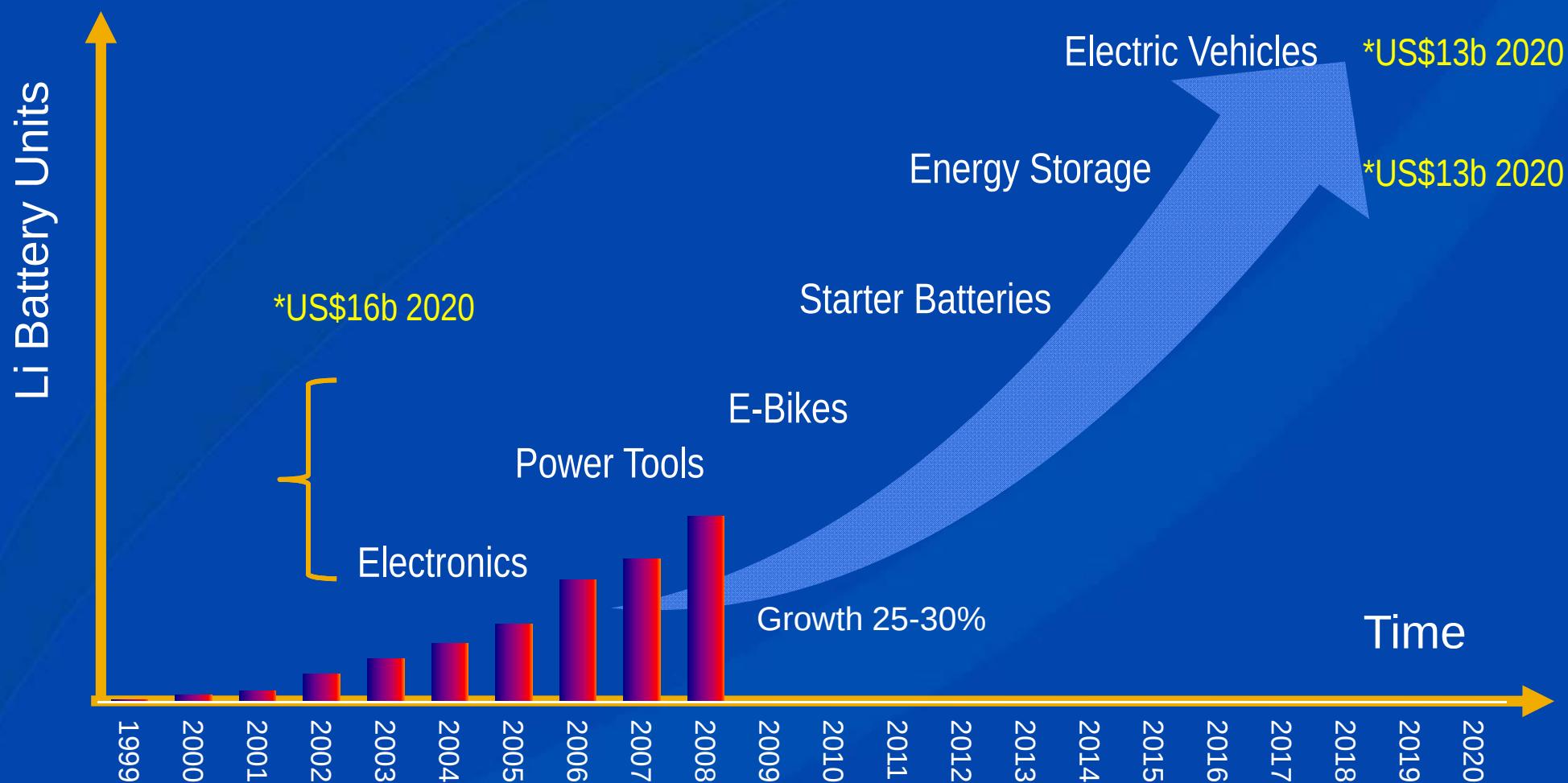
COMMENTS

INVESTMENT OVERVIEW



- ✦ Lithium Pure Play
- ✦ Downstream Integration – Value Add
- ✦ Resource, Chemical, Battery
- ✦ Operating mine and ore resources – Australia / Canada
- ✦ Lithium Carbonate chemical facility in China
- ✦ Lithium battery project in China

GROWTH PROFILE



PRESSURE ON LEAD BATTERIES



RESOURCE DIVISION



MT CATTLIN MINE



meeting a lithium future

- ✦ Operating spodumene mine
- ✦ Resource of 18 mt at 1.08% Li_2O *
- ✦ Expected mine life of 18 years at 1 mtpa
- ✦ 137,000 tpa spodumene grading 6% Li_2O
- ✦ Record construction of <11 months
- ✦ Project on time and on budget (A\$80m)
- ✦ Third shipment end October 11



*

Resource	Tonnes	Li ₂ O %	Ta ₂ O ₅ ppm
Measured	3,193,000	1.17	149
Indicated	10,613,000	1.06	168
Inferred	4,382,000	1.07	132
TOTAL	18,188,000	1.08	156



Conveyor 1

Process Water

Fine Ore Bin

Waste Bin

Control Room

DMS Plant

Laboratory

Final Product Stockpile



CHEMICAL DIVISION

CHINA LC INDUSTRY



JIANGSU PLANT IS STRATEGICALLY LOCATED

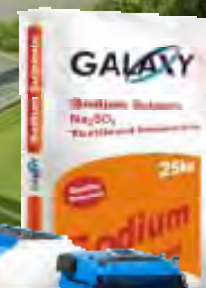


- ✦ Zhangjiagang Free Trade Zone
- ✦ Galaxy owns 100%
- ✦ 120 top foreign companies
- ✦ Chemical Industrial Park
- ✦ Adjacent to a wharf
- ✦ Supply of sulfuric acid and soda ash
- ✦ Close to markets

JIANGSU LITHIUM CARBONATE PLANT

- ✦ Largest LC plant in China
- ✦ 17,000 tpa of high quality LC
- ✦ Continuous production technology
- ✦ Capability - 99.9% purity and above
- ✦ Focus lithium-ion battery industry
- ✦ Currently under construction
- ✦ Commissioning by end Q4 2011
- ✦ On schedule and budget





Artist Impression - Jiangsu Lithium Carbonate Plant







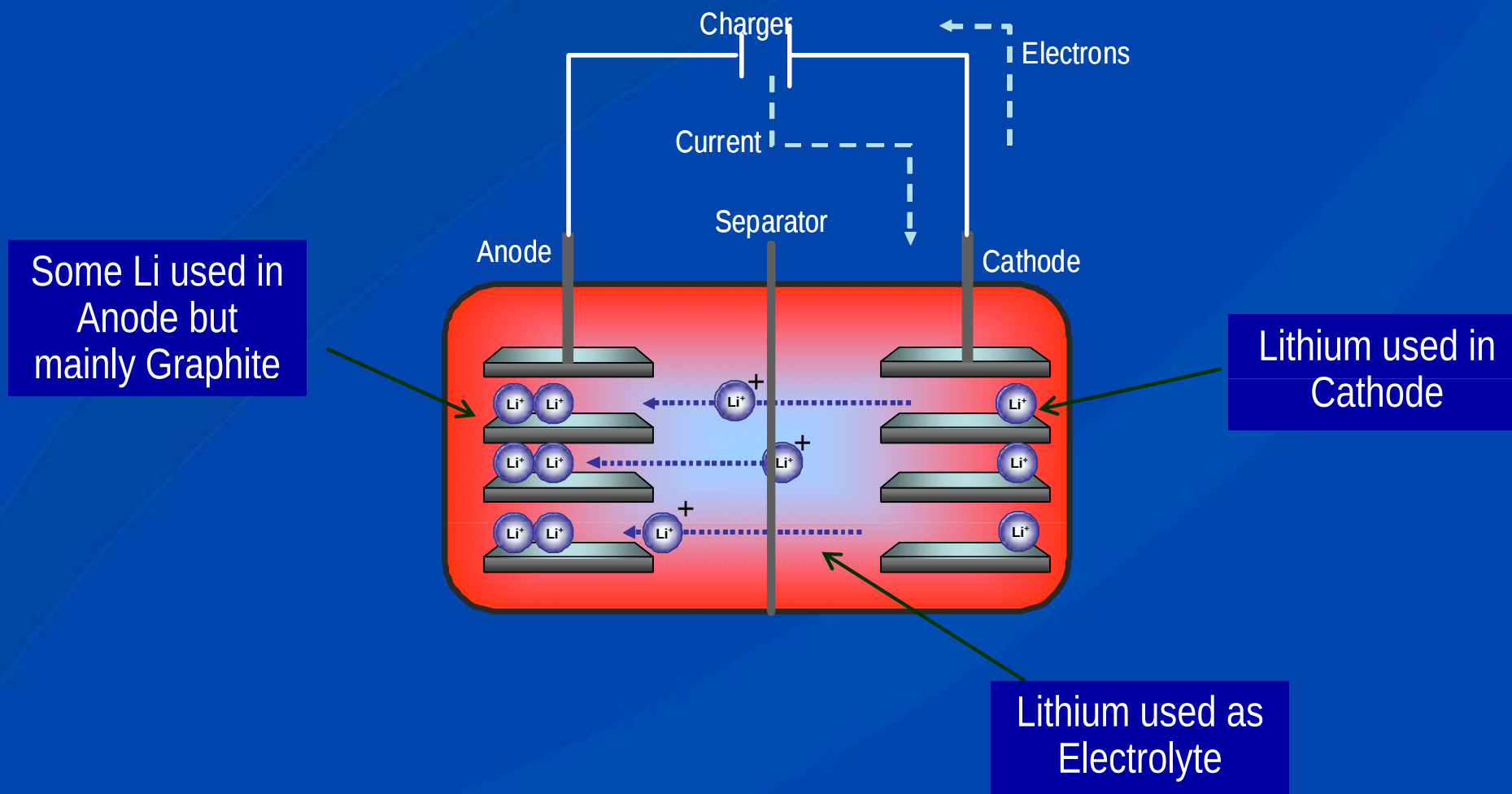






PRODUCING FOR THE BATTERY INDUSTRY

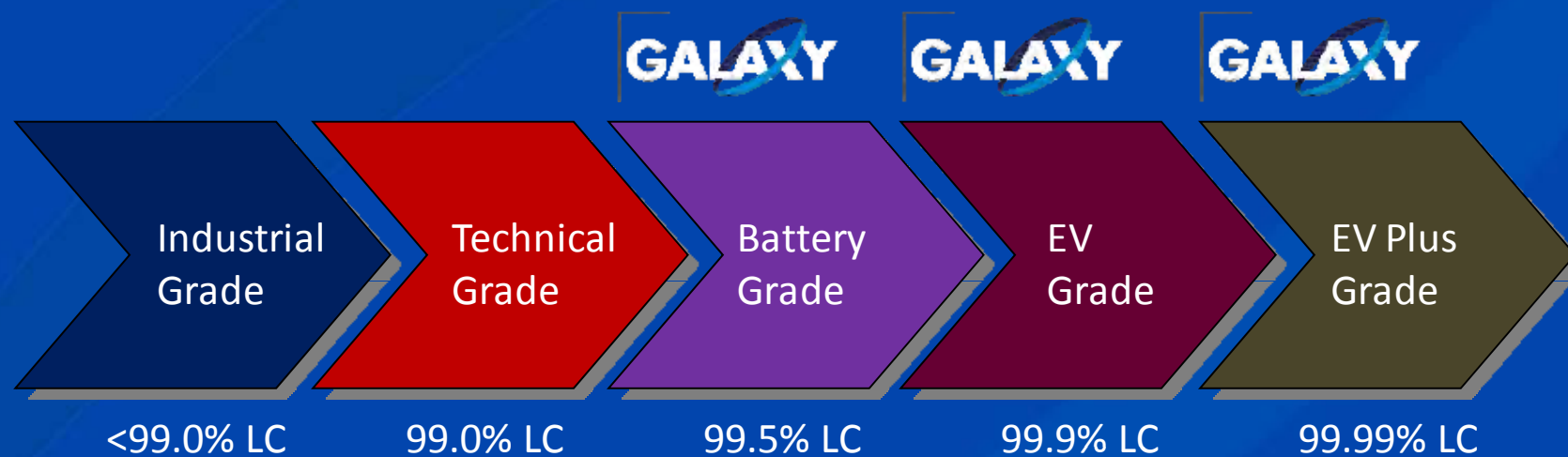
LITHIUM CONSUMPTION – BATTERIES



WHY LITHIUM BATTERIES?

Performance Comparison of Different Chemistries of Batteries					
Battery Chemistry	Pb-Acid	Ni-Cd	Ni-MH	LMO	LFP
Working Voltage	2V	1.2V	1.2V	3.7V	3.3V
Energy Density (Wh/L)	100	150	250	285	255
Energy Density (Wh/Kg)	30	57	80	110	115
Cycle Life	400	500	500	>800	>2000
Self Discharge Rate (%)	20%	30%	35%	10%	8%
Safety	Good	Good	Good	Moderate	Good
Environment Friendliness	No	No	Yes	Yes	Yes

HIGHER GRADES FOR LI BATTERIES



IMPURITIES IN LITHIUM CARBONATE

- ✦ Metal impurities enter into the lattice of electrodes
- ✦ Electrochemical reaction changing crystal structure
- ✦ Making batteries electrochemically inactive
- ✦ Reduction and ultimately failure in cycle life
- ✦ Metal deposition on electrode developing Dendrites
- ✦ Short-circuiting the batteries

IMPURITIES IN LITHIUM CARBONATE

- ✦ Sodium
 - ✦ May form metal on electrode → explosive compound
 - ✦ Enter spinel crystal structure - affect discharge capacity
 - ✦ Forms sodium oxide, decomposed leads to gassing
- ✦ Magnesium, Calcium and Potassium
 - ✦ Crystal structure of lithium spinel
 - ✦ Fades the capacity of the batteries



Gassing in prismatic cell

IMPURITIES IN LITHIUM CARBONATE

- ✦ Iron
 - ✦ Can be corroded (electrolyte), oxygen, gassing → cell leakage
- ✦ Sulfates
 - ✦ Decomposing into sulphur solid, enter spinel decrease the performance of the batteries
 - ✦ Sulfates can decompose to produce oxygen



BATTERY DIVISION

CHINA'S LITHIUM BATTERY INDUSTRY



- ✦ Thousands of small medium factories
- ✦ High labour assembly lines
- ✦ Cheap low quality raw materials
- ✦ Prone to quality inconsistencies
- ✦ High defect rates affecting life of batteries
- ✦ All trying to do their own R&D
- ✦ Cannot compete with Japanese & Korean batteries

GALAXY'S APPROACH



- ✦ Feasibility study completed
 - ✦ “Turn key” equipment supplied by KUBT (Korea)
 - ✦ Full automation – extremely low reject rates
 - ✦ Suppliers of Samsung and LG Chem
 - ✦ K2 Energy US lithium battery partner
 - ✦ Leap frog R&D
 - ✦ 350,000 E-bike battery packs pa – easy entry point
- ✦ More stable Lithium Iron Phosphate batteries
- ✦ Securing battery sales off-take

INTERNATIONAL PARTNERS



Owner
Galaxy Resources
Australia



Technology Partner
K2 Energy Solutions
USA



Turn Key Partner
KOBET Consortium
Korea



EPCM Manager
M+W Group
Germany



Plant Location
Zhangjiagang
China





PROJECT STATISTICS

Statistic	
Number of Battery Packs pa	350, 000
Battery Pack Capacity	36V, 10Ah
Cathode Base Material	Li Iron Phos
Anode Base Material	Graphite
Capital Cost	A\$134m



36
cylindrical
cells

K2 ENERGY PARTNERSHIP

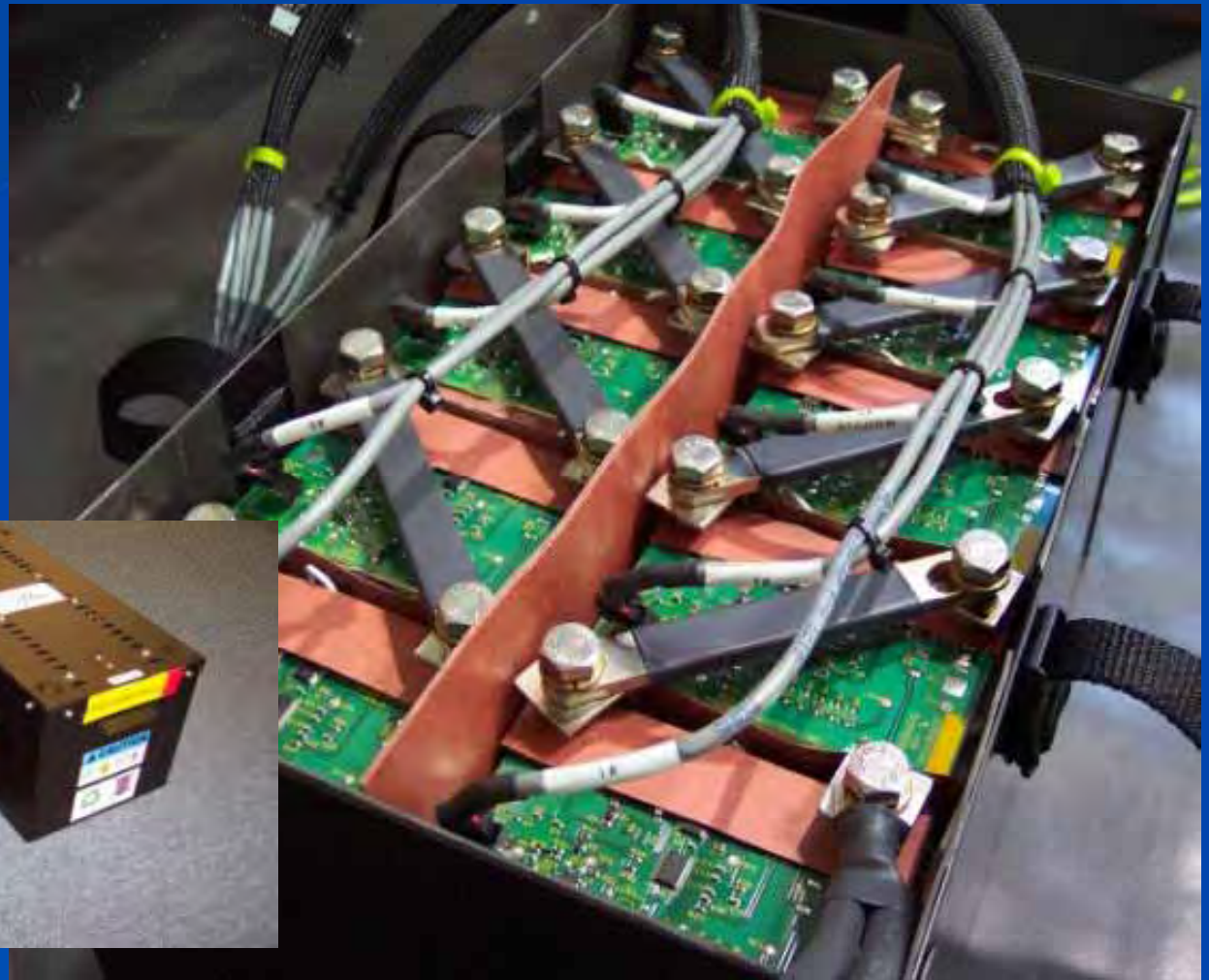
- ✦ Established US lithium battery producer
- ✦ License to use all K2 Energy's technology
- ✦ K2 provides recipe, expertise, commissioning support
- ✦ Highest energy densities of any LFP products on the market
- ✦ Intellectual property



Table 1 - Energy Density (Wh/l)

Battery type	K2	Comp 1	Comp 2	Comp 3
18650 E	290		261	213
18650 P	242	220		
26650 P	241	220	223	
26650 EV	297			

EXPERIENCE IN LARGE FORMAT BATTERIES





Typical KUBT mixers



Typical KUBT mixer



KUBT coating and drying machinery



KUBT rolling and slitting machinery



KUBT rolling and slitting machinery



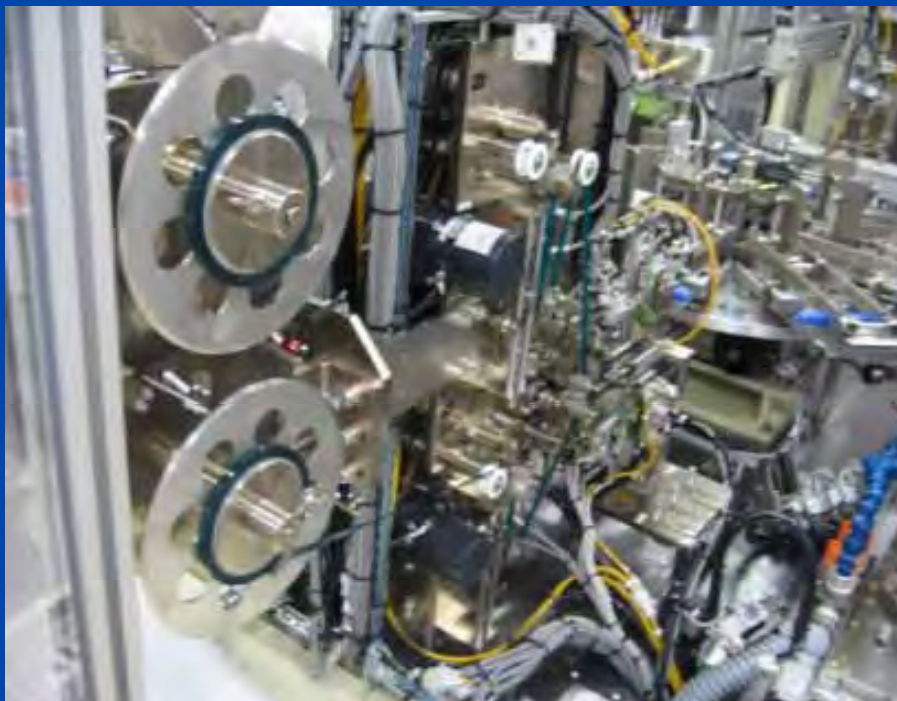
KUBT separator formation machinery



KUBT separator formation machinery



KUBT jelly roll machine

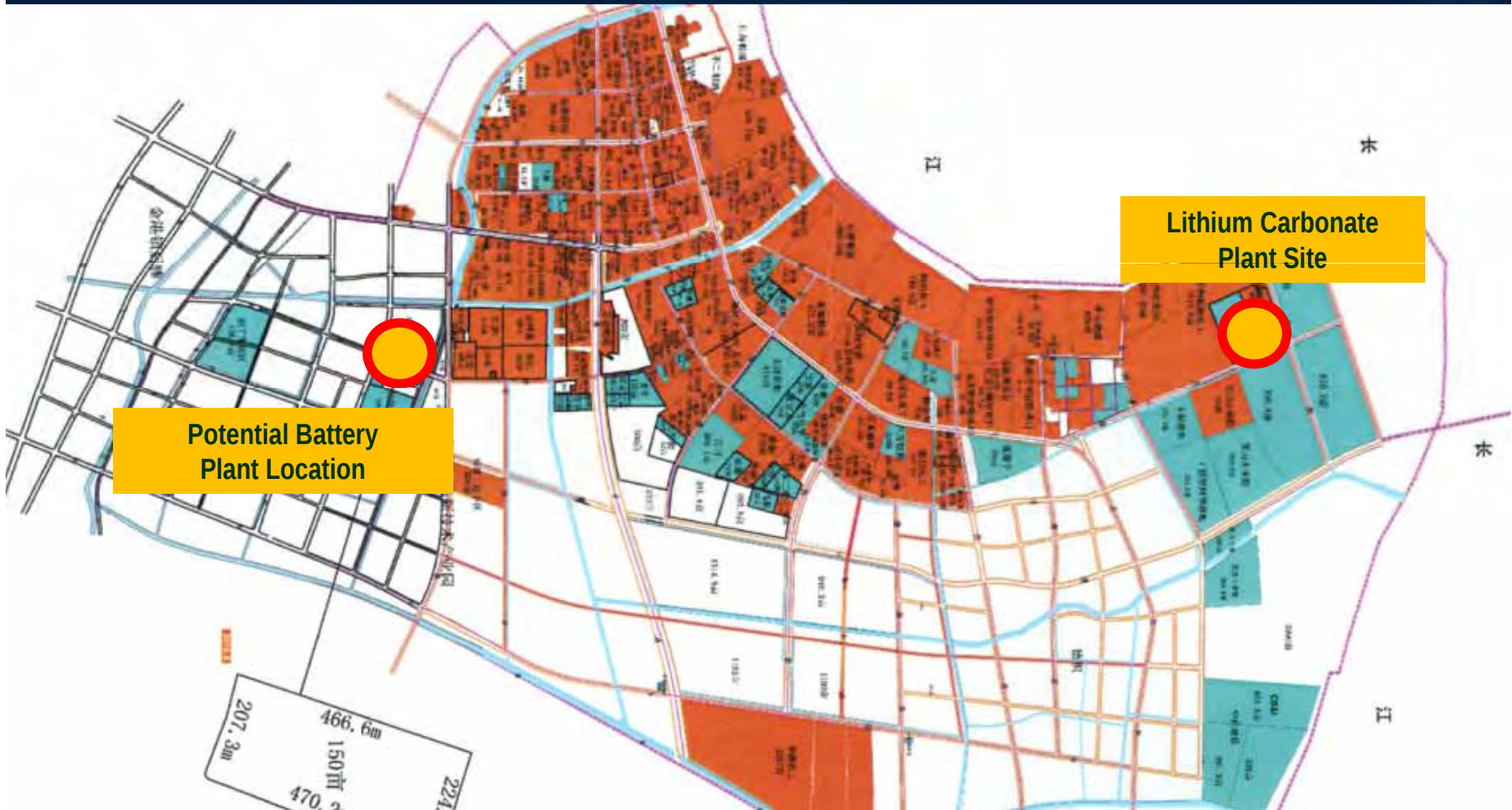


KUBT tapping machine



KUBT aging and degassing machinery

POTENTIAL LOCATION OF BATTERY PLANT



THANK YOU