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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

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**FORM 8-K**

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**CURRENT REPORT**

**Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

**Date of Report (Date of earliest event reported): September 24, 2009**

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**LEGEND INTERNATIONAL HOLDINGS, INC**

(Exact name of registrant as specified in its charter)

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**Delaware**  
(State or Other Jurisdiction  
of Incorporation)

**000-32551**  
(Commission  
File Number)

**23-3067904**  
(I.R.S. Employer  
Identification No.)

**Level 8, 580 St Kilda Road, Melbourne, Victoria Australia 3004**  
(Address of Principal Executive Office) (Zip Code)

**61-3-8532-2866**  
(Registrant's telephone number, including area code)

**N/A**  
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
  - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
  - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
  - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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## Item 8.01: Other Events

### Introduction

Legend International Holdings, Inc (OTCBB: LGDI) (“Legend”) announced today an update to its phosphate project including exploration results from drilling completed so far from the Paradise North deposit (EPM 17330, formally Lady Jane). The highlights include:

- Thick (~7m), high grade (>30% P<sub>2</sub>O<sub>5</sub>) and near surface (average 12m overburden) drill intersections at Paradise Nth deposit provide Legend with opportunity to produce a higher quality Direct Shipping Ore (DSO) with lower operational costs.
- Paradise North DSO Mining Lease (MLA 90191) awarded “No-EIS” decision and to be progressed under an Environmental Management Plan consistent with Legends fast tracked DSO project.
- Pilot beneficiation plant commissioned and commences operation.
- Bankable Feasibility Study for 1Mtpa beneficiation plant awarded to Ausenco Minerals.

Legend is an exploration company actively exploring and developing phosphate projects in the Georgina Basin in North West Queensland, Australia (see figure 1).

The purpose of this report is to release an update of exploration and resource development results on the Paradise North Direct Shipping Ore (DSO) project and also to give an update on the general developments of the phosphate project. The results currently returned from the assay laboratory will be used to develop an Australian JORC<sup>1</sup> Guidelines 2004 compliant Mineral Resource estimate by the end of 2009.

The Paradise North project is a known phosphate deposit which contains a historical non-JORC compliant resource reported within publically available documentation<sup>2</sup>. The historical estimate is not a Mineral Reserve estimate as defined by the US SEC Industry Guidelines. Legend has confidence in these historic resources and they have been used as an ‘exploration target’. The drilling results reported in this document confirm historical drilling results and the presence of a significant phosphate deposit. These results will form the basis of any future estimates of Mineral Reserves.

### Tenure

The Paradise North tenement (EPM17330) is 3,190 acres and was granted in 23 July 2009. The tenement forms part of the Paradise Phosphate Project with the other tenements listed in Table 1.

Tenement	Status	Date	Area (acres)	Legend Interst
EPM16942	Granted	28/08/2009	11,870	100%
EPM17330	Granted	23/07/2009	3,190	100%
EPM15014	Granted	21/08/2006	67,000	100%
EPM15015	Granted	21/08/2006	59,000	100%
EPM17441	Application	3/03/2008	14,340	100%
EPM17447	Application	3/03/2008	7,160	100%
EPM17930	Application	17/11/2008	5,580	100%
EPM18209	Application	27/07/2009	48,700	100%

Table 1: Tenement list and standing for Paradise Phosphate Project

<sup>1</sup> Joint Ore Reserve Committee Guide for the reporting of Exploration Results, Mineral Resources and Ore Reserves. This Guide is also comparable to the Society of Mining, Metallurgy and Exploration, Inc. (SME) 2005 guide for reporting Exploration Results, Mineral Resources, and Mineral Reserves.

<sup>2</sup> Denaro, T, Ramsden, C, & Brown, D. ‘Queensland Minerals A Summary of Major Mineral Resources, Mines and Projects, 4th Edition). Queensland Government Department of Mines & Energy, 2007

Legend currently has four granted tenements within the package; these consist of the Paradise North, Barr Creek and Paradise South tenements, the latter of which was granted on August 28, 2009. A detailed drill program is planned to start at Paradise South at the start of October 2009 with the aim of developing future beneficiation stage reserves for the project.

### **Access**

During the second half of 2009, Legend embarked on an extensive resource drilling program of the Paradise North deposit which is located 160 kilometres from the regional centre of Mt Isa. Access is granted by driving 65 kilometres along the sealed Barkly Highway, followed by driving 50 kilometres along the McNamara's Haul Road. The last part is 45 kilometres along an existing access road (see figure 1).

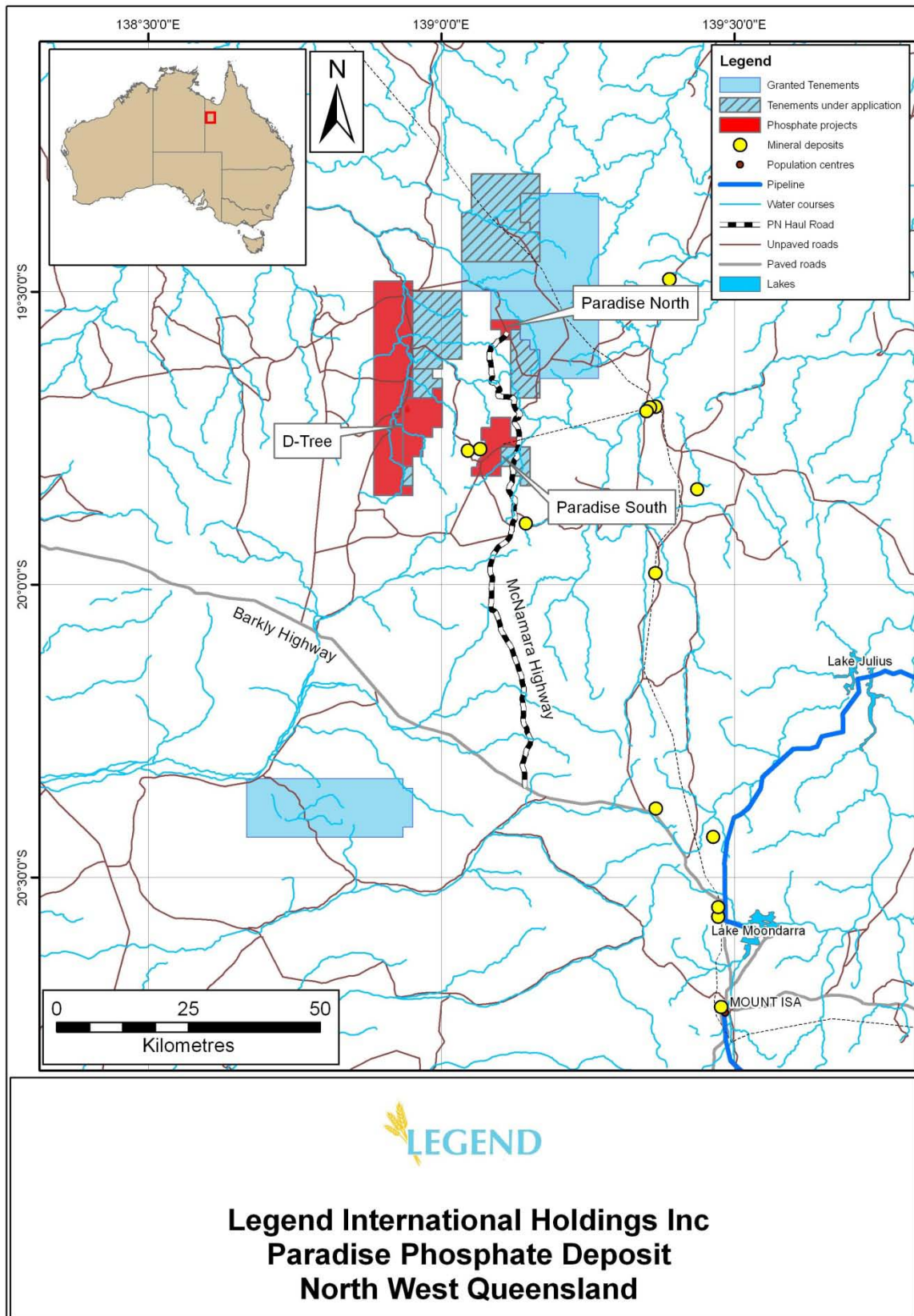


Figure 1: Access to the Paradise North Deposit

## **Geology**

The Paradise North phosphate rock deposit, discovered in the late 1960's and formerly known as the Lady Jane phosphate deposit, is located in an outlier of the Georgina Basin and is separated from the D-Tree deposit to the west by outcropping Precambrian sediments. The Paradise phosphate deposits (North and South) are confined to an area of low relief, approximately 25 km long and 5 km wide, trending north-south between ridges and hills of Precambrian shales, quartzites, siltstones and dolomite. The large sedimentary phosphate rock deposit at Paradise North is hosted by the Beetle Creek Formation; a marine sedimentary succession that was deposited in an embayment of the inland sea that covered the Georgina Basin during the early Middle Cambrian.

The phosphate mineralisation occurs as beds of mudstone phosphorite (termed microspherite in historic reports), and friable fine to coarse grained peloidal grainstone phosphorite (termed pelletal phosphorite in historic reports). A third type of high-grade phosphorite has been recognised in the Paradise region, and is termed replacement phosphorite. The phosphorite intervals of the Beetle Creek Formation are interbedded with phosphatic siltstones and cherts, as well as bioclastic cherts, chert breccia and siliceous siltstone, all generally phosphatic.

Within the Paradise project area, the economic Beetle Creek Formation outcrops in the northern part of the tenement and is overlain by quartz sandstones of Mesozoic age in the southern portions of the tenement. The Mesozoic sediments unconformably overlie the Beetle Creek Formation and range in thickness from 0 to 25m. Typically underlying the Beetle Creek Formation is the Mt Hendry Formation, however in parts, a thin interval of the slightly phosphatic Thornton Limestone has been deposited between the Mt Hendry and Beetle Creek Formations. The Mount Hendry Formation consists of polymictic conglomerate, ferruginous breccias, and poorly sorted clayey sandstone and siltstones. This unit is typically <2 m thick and in the Paradise North area tends to be less than 1 m thick.

The Proterozoic basement in the Paradise North area is typically formed by the Gunpowder Creek Formation. This unit is comprised of flaggy micaceous shale, siltstone and minor dolomite and sandstone. Within the project area, these sediments are oxidised and are characteristically pink-purple in colour.

To the northwest of the deposit, the Paradise Creek Formation forms the basement and is characterised by dolomite, dolomitic siltstone, shale and sandstone.

## **Drilling and Sampling Methodology**

The phosphate drilling program was drilled on a nominal 200 metre by 200 metre grid pattern. Due to the success of this drilling it has been decided to drill the phosphate deposit on a 100 metre by 100 metre grid, this drilling is being conducted at this time. All delineated higher grade zones will then be drilled on a 50 metre by 50 metre grid to better define the ore.

All drilling reported has been performed using a reverse circulation (RC) drill rig. Within the deposit PQ diamond drill holes have been drilled on a 200 metre by 200 metre grid. These diamond holes are to be used to reference against the RC drilling to compare sampling quality. The diamond core will also be used to perform detailed geological logging of the deposit. All remaining material will then be available for metallurgical test work as required.

All RC samples were collected using a cone splitter at 1 metre composites to obtain a 2-3 kg sample used for assay analysis. A second split has also been collected from some high and lower grade intervals to use in quality assurance of the sampling process. All field duplicate samples received so far show the sampling technique to be appropriate.

The RC holes drilled have been completed using either a 4.5" (114.3mm) or 5" (127mm) drill bit. All diamond core has been drilled at PQ triple tube size which have an outside diameter of 122.6mm which is significantly larger than HQ (96.0mm). The large drill size has been used to ensure a large sample is available for metallurgical testwork as well as giving much greater sample recovery.

All phosphate samples have been submitted to either one of two commercial laboratories located in either Mt Isa or Brisbane. The analytical technique used was fused bead XRF. Results of these samples showed good correlation within acceptable limits. The samples were all analysed for P<sub>2</sub>O<sub>5</sub>, Al<sub>2</sub>O<sub>3</sub>, Fe<sub>2</sub>O<sub>3</sub>, MgO, CaO and SiO<sub>2</sub>.

A series of pulp duplicates were taken at the preparation stage to test for quality with all results showing good correlation and were within acceptable limits. A series of matrix matched reference standards have also been submitted with the samples to ensure accuracy and precision of assaying. The standards results were within acceptable limits. During sample preparation a quartz wash was used between each phosphate sample to ensure no cross contamination during the prep stage.

## Results

Legend has received results for 45 of 108 drilled RC holes. A total of 2,264 metres of drilling is complete with results received so far totalling 1,143 assays.

Out of the 45 holes with received results a total of 33 holes have a significant intercept of greater than 10% P<sub>2</sub>O<sub>5</sub>. (see Figure 2). All significant intercept results are listed in Appendix A which is calculated with a 10% minimum P<sub>2</sub>O<sub>5</sub> cut, minimum 2 metre intercept and maximum of 2 metres contiguous internal dilution.

Table 2 shows all significant intercepts of greater than 30% P<sub>2</sub>O<sub>5</sub>. These zones were calculated using a minimum width of two metres and a maximum internal dilution of two contiguous metres. See Appendix A for collar coordinates. This table represents the drill intercepts that have the greatest potential for delivering high grade direct shipping ore.

Two east-west cross sections through the deposit are shown in figure 3. The sections chosen are in the north of the deposit along northing 7,836,800mN and in the south along northing 7,835,800mN. The sections in figure 3 show the ore continuity over several hundred metres and the significant overall thickness of the high-grade core averaging ~7m. Also of note is the close proximity of the ore to the surface. From the intercepts in table 2 the average depths and phosphate intersections widths greater than 30% P<sub>2</sub>O<sub>5</sub> indicate low stripping ratios of less than 2 to1.

Hole_ID	From (m)	To (m)	Width (m)	P2O5 (%)	Fe2O3 (%)	Al2O3 (%)	*R2O3 (%)	MgO (%)	SiO2 (%)	CaO (%)	CaO:P2O5 Ratio
PNRC0003	4	11	7	30.70	0.70	2.45	3.14	0.58	17.49	42.79	1.39
PNRC0004	4	13	9	31.13	0.50	2.27	2.77	0.38	18.92	42.62	1.37
PNRC0005	4	8	4	30.68	0.82	4.45	5.28	0.41	16.76	41.75	1.36
PNRC0015	14	17	3	31.47	0.57	3.15	3.72	0.37	12.64	45.27	1.44
PNRC0017	10	23	13	30.35	0.75	2.55	3.30	0.22	19.67	41.78	1.38
PNRC0018	8	14	6	30.23	0.55	3.58	4.14	0.16	19.09	41.55	1.37
PNRC0022	12	15	3	32.03	0.91	2.17	3.08	0.13	15.02	44.43	1.39
PNRC0030	14	20	6	30.35	0.64	2.61	3.25	0.22	19.60	41.77	1.38
PNRC0034	14	21	7	30.16	0.79	2.25	3.04	0.32	16.65	43.33	1.44
PNRC0036	25	32	7	30.30	0.78	2.91	3.68	0.24	18.43	42.11	1.39
PNRC0037	22	29	7	30.44	0.72	2.00	2.72	0.15	21.55	41.34	1.36
PNRC0041	17	26	9	31.24	1.18	1.96	3.14	0.22	15.68	43.93	1.41
<b>Min</b>	<b>4.0</b>		<b>3.0</b>	<b>30.16</b>	<b>0.50</b>	<b>1.96</b>	<b>2.72</b>	<b>0.13</b>	<b>12.64</b>	<b>41.34</b>	<b>1.36</b>
<b>Max</b>	<b>25.0</b>		<b>13.0</b>	<b>32.03</b>	<b>1.18</b>	<b>4.45</b>	<b>5.28</b>	<b>0.58</b>	<b>21.55</b>	<b>45.27</b>	<b>1.44</b>
<b>Weighted Average</b>	<b>12.3</b>		<b>6.8</b>	<b>30.67</b>	<b>0.75</b>	<b>2.59</b>	<b>3.33</b>	<b>0.28</b>	<b>18.12</b>	<b>42.53</b>	<b>1.39</b>

Table 2: Significant intercepts >30% P<sub>2</sub>O<sub>5</sub>, calculated using 30% P<sub>2</sub>O<sub>5</sub> cut, minimum width of 2 metres and maximum contiguous dilution of 2 metres. \*R<sub>2</sub>O<sub>3</sub> = Fe<sub>2</sub>O<sub>3</sub> + Al<sub>2</sub>O<sub>3</sub>

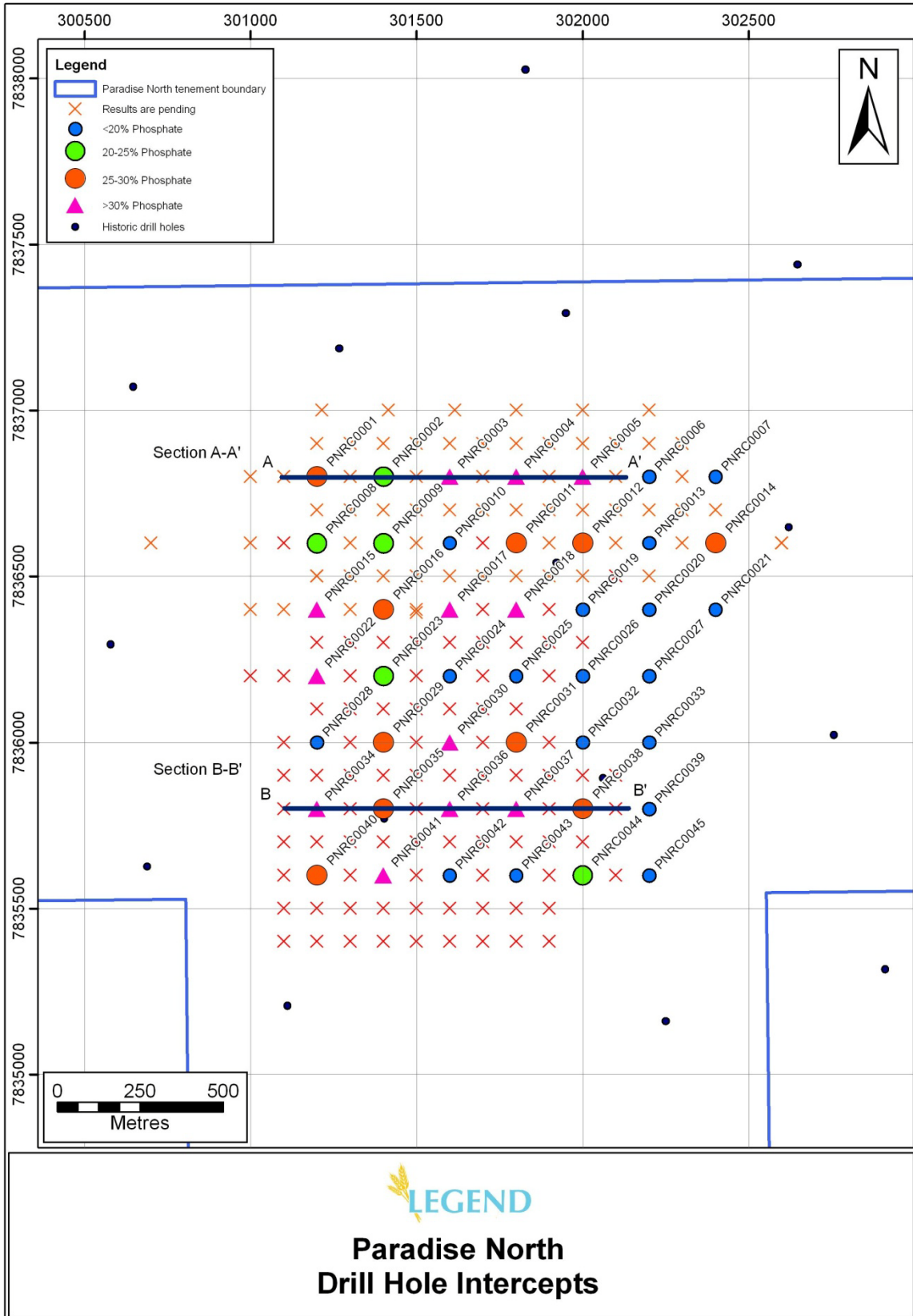
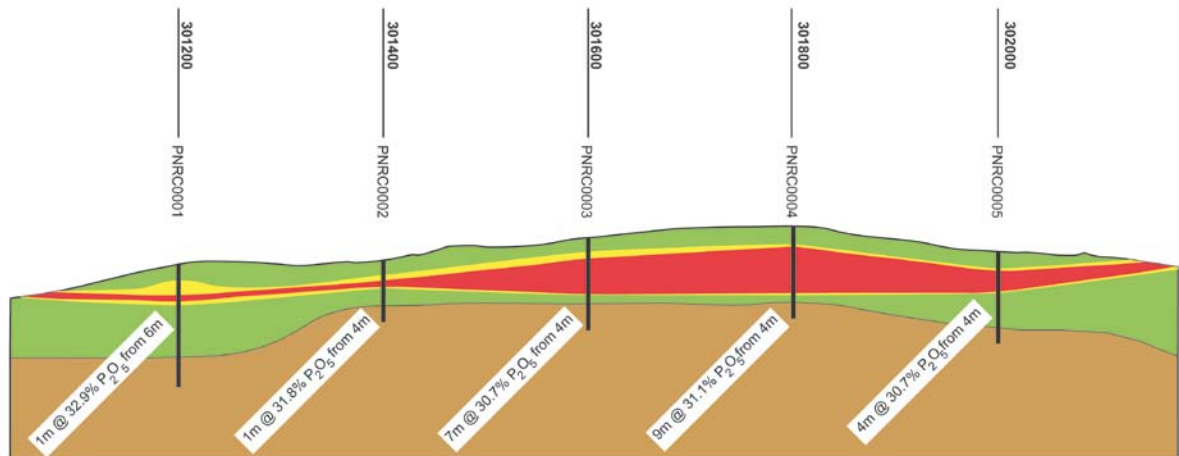
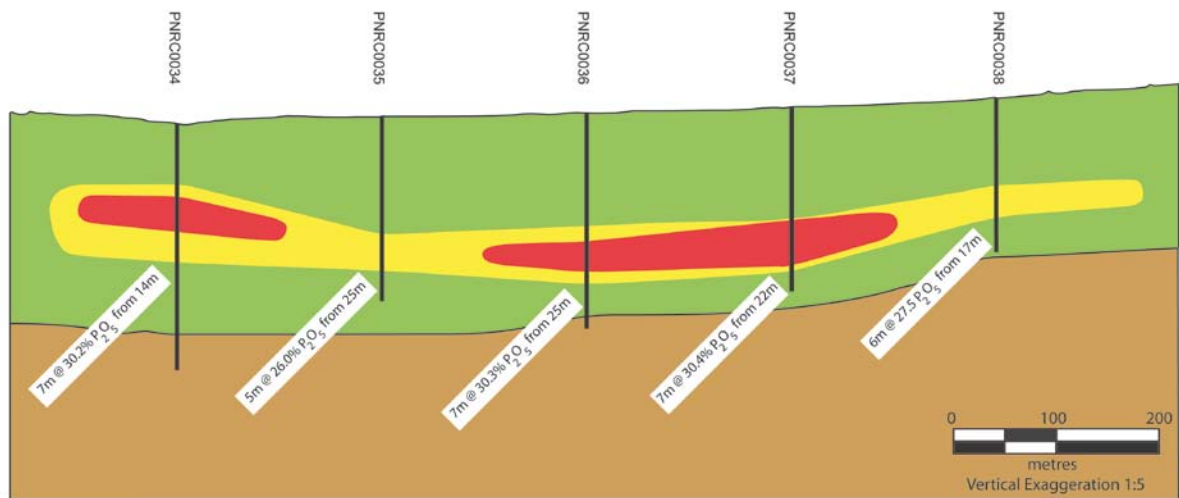


Figure 2: Map showing significant intercept locations for the Paradise North Project





Section 7836800



Section 7835800

- +20%  $P_2O_5$
- +30%  $P_2O_5$
- Beetle Creek Formation
- Proterozoic basement

**Paradise North  
Phosphate Intersections  
Section A-A' (top)  
Section B-B' (bottom)**



Figure 3: Cross-Sections through Paradise North



## Project Update

### *DSO Phosphate Project*

Legend intends to use the drilling results reported here to begin developing an Australian JORC 2004 and United States SME 2005 guidelines for reporting a JORC and SME compliant Mineral Resource estimate for the deposit. This estimate will form part of the preliminary work that will be used to develop a Mineral Reserve estimate for Paradise North. The resource estimate will be completed before the end of 2009. Detailed metallurgical testing including phosphoric acid production testing is currently underway.

In previous announcements, Legend has described its plans for a DSO operation at its D-Tree Project with production to commence in the 4th quarter 2009. The results outlined in this report in conjunction with other factors which will be discussed below have caused Legend to modify its project strategy which also affects the project timeline for DSO production. Legend has decided that Paradise North should become the priority project for DSO production. The factors influencing this decision are:

- Based on initial drilling results reported above; Paradise North, as compared to D-Tree North, appears to provide Legend with an opportunity for increasing initial revenue and minimise operational costs through the production of a higher quality product from a thicker and more accessible near surface high grade phosphate orebody.
- These initial drilling results for Paradise North are strongly indicating that the resource size potential for DSO quality rock is significantly greater than that of D-Tree North (1.0 Mt @ 29.4% P<sub>2</sub>O<sub>5</sub> as announced June 29, 2009). This would give a longer life of mine schedule (LoM) for the Paradise North DSO operation.
- The thicknesses of the phosphate intersections at a 30% P<sub>2</sub>O<sub>5</sub> cut are significantly greater than that of D-Tree North. The thicker mineralization zones will help lower the levels of possible ore dilution and this aspect combined with the shallow depth to the ore zones where stripping ratios are expected to be very low at less than 2 to 1, will positively impact mining operational costs.
- The P<sub>2</sub>O<sub>5</sub> grades reported in these drilling results are generally higher than those intersected at D-Tree North. This will positively impact the price that Legend receives for the rock.
- The levels of deleterious elements (R<sub>2</sub>O<sub>3</sub>) reported in these drilling results are lower than that of D-Tree rock. This will also positively impact the price that Legend receives for the rock.
- The extended LoM, better rock price received and reduced mining costs give a stronger net present value (NPV) for the Paradise North DSO project. The higher NPV indicates Paradise North to be a more favourable location for any initial capital expenditure on haul road upgrades and other mine related infrastructure.

The factors listed above have caused Legend to modify its DSO development strategy so that Paradise North is now the priority development project. The indication of higher revenue for a premium rock product and lower mining costs due to more favourable stripping ratios has elevated the priority of Paradise North above D-Tree North in the development schedule. Approval of the D-Tree North Mining Lease is now expected by December 2009, and pending market conditions for phosphate rock, remains a quality project for development. Given the possible timing of approval of the Mining lease for D-Tree and its proximity to the commencement of the wet season in late 2009, development of mining operations at D-Tree are now not able to commence until the end of quarter 1, 2010. Other options for D-Tree rock are currently being investigated including the potential sale of direct application rock, or other phosphate rock products, to local markets.

As reported on July 23, 2009 Legend received the exploration permit granted by the Queensland government for Paradise North (EPM 17330). Legend has since then embarked on an aggressive drilling schedule having completed over 2,264m of RC drilling and 690m of diamond core drilling. A Mining Lease application (MLA 90191) has already been submitted and is expected to be granted by the 1st quarter 2010 whereby mining operations and production will then commence in the 2nd quarter 2010.

Legend is also pleased to announce that on September 23, 2009 the Queensland Governments' Department of Environment and Resource Management (DERM) decided that environmental authority for mining activities at the proposed Paradise North Direct Shipment Ore (DSO) mine on MLA90191 will be assessed without an Environmental Impact Statement (EIS). This 'No EIS' decision means environmental authority will be assessed under an Environmental Management Plan which is consistent with Legend's fast-track DSO project as it does not involve recourse to the longer duration EIS process. Legend will submit an Environmental Management Plan to the Department for assessment in early October 2009.

Legend will continue to work closely with DERM to obtain environmental authority for mining activities at the proposed Paradise North DSO mine and is on target to begin production by the second quarter of next year.

#### *Beneficiation Phosphate Project*

As reported on August 28, 2009, the Paradise South (previously Lady Annie) EPM 16942 exploration permit was granted. This has allowed Legend to begin clearances for drilling which will commence early October 2009 and is aimed at delineating an initial 20-30 million tonnes of reserves by the second quarter 2010 to support a 1 Mtpa beneficiation plant.

A pilot beneficiation plant operation has commenced near Adelaide in South Australia with Amdel Ltd having commissioned the plant on September 22, 2009. This plant is processing four 40 tonne samples from both Paradise and D-Tree phosphate deposits. The plant, operated by Amdel Ltd, will run for 4 weeks and is the final test work proving the flotation flow sheet which has been developed after four successful stages of bench scale flotation tests. The information provided by the pilot plant will form an input into the Bankable Feasibility Study for the design and operation of a 1Mtpa beneficiation plant. The Bankable Feasibility Study is expected to commence soon with a number of international minerals processing companies having tendered for the study. The completion date of this study is the 2<sup>nd</sup> quarter 2010.

#### **Review**

This work has been reviewed by a competent person as required under the JORC and SME guidelines by Stephen Hyland - BSc (Geology), MAusIMM, GAA, CIMM.

Stephen Hyland has had extensive experience of over 20 years in exploration geology and resource modelling and has worked extensively within Australia as well as offshore in Africa, Eastern and Western Europe, Central and South East Asia, modelling base metals, gold, precious metals and industrial minerals. Stephen's extensive resource modelling experience commenced whilst working with Eagle Mining Corporation NL in the diverse and complex Yandal Gold Province where for three and half years he was their Principal Resource Geologist. Whilst the majority of his time there had been developing the historically successful Nimary Mine, he also assisted the regional exploration group with preliminary resource assessment of Eagle's numerous exploration and mining leases. Since 1997 Stephen has been a full time Consultant with the minerals consulting firm Ravensgate where he is responsible for all geological modelling and reviews, mineral deposit evaluation, computational modelling, resource estimation, resource reporting for ASX / JORC and other regulatory compliance areas. Primarily Stephen specialises in Geological and Resource Block Modelling generally with the widely used MedSystem / Minesight 3D mine-evaluation and design software. Stephen Hyland holds the relevant qualifications and professional associations required by the ASX, JORC and ValMin Codes in Australia. He is a Qualified Person under the rules of the CIMM and NI43-101.

## **Forward-Looking Statements**

Forward-looking statements in this press release are made pursuant to the “safe harbour” provisions of the Private Securities Litigation Reform Act of 1995. Investors are cautioned that such forward-looking statements involve risks and uncertainties including, without limitation, the risks of exploration and development stage projects, risks associated with environmental and other regulatory matters, mining risks and competition and the volatility of mineral prices. Actual results and timetables could vary significantly. Additional information about these and other factors that could affect the Company’s business is set forth in the Company’s fiscal 2008 Annual Report on Form 10-K and other filings with the Securities and Exchange Commission.

For further information, please contact:

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## APPENDIX A

Hole_ID	Easting (WGS 84)	Northing (WGS 84)	Intercept P2O5 (%)
PNRC0001	301200	7836800	8m @ 25.1% from 1m      inc. 4m @ 28.4% from 4m
PNRC0002	301400	7836800	4m @ 21.6% from 2m
PNRC0003	301600	7836800	9m @ 29.5% from 2m
PNRC0004	301800	7836800	9m @ 31.1% from 4m
PNRC0005	302000	7836800	5m @ 28.3% from 4m
PNRC0007	302400	7836800	2m @ 11.9% from 2m
PNRC0008	301200	7836600	12m @ 19.2% from 2m
PNRC0009	301400	7836600	5m @ 18.3% from 1m
PNRC0010	301600	7836600	4m @ 18.3% from 5m
PNRC0011	301800	7836600	5m @ 21.7% from 6m      inc. 2m @ 28.4% from 7m
PNRC0012	302000	7836600	3m @ 22.8% from 6m
PNRC0013	302200	7836600	2m @ 21.9% from 2m
PNRC0014	302400	7836600	4m @ 22.3% from 1m      inc. 2m @ 28% from 2m
PNRC0015	301200	7836400	11m @ 20.1% from 9m      inc. 3m @ 31.5% from 14m
PNRC0016	301400	7836400	4m @ 23% from 16m
PNRC0017	301600	7836400	16m @ 28.4% from 7m
PNRC0018	301800	7836400	13m @ 24.7% from 5m      inc. 8m @ 29.2% from 7m
PNRC0022	301200	7836200	10m @ 22.8% from 11m      inc. 5m @ 28.1% from 12m
PNRC0023	301400	7836200	6m @ 20.6% from 17m
PNRC0027	302200	7836200	2m @ 25.1% from 8m
PNRC0029	301400	7836000	9m @ 19.3% from 19m
PNRC0030	301600	7836000	11m @ 25.9% from 12m      inc. 9m @ 28.6% from 14m
PNRC0031	301800	7836000	10m @ 20.7% from 16m      inc. 2m @ 28.1% from 18m
PNRC0034	301200	7835800	18m @ 24.9% from 12m      inc. 13m @ 28.4% from 12m
PNRC0035	301400	7835800	11m @ 21.7% from 22m
PNRC0036	301600	7835800	14m @ 22.8% from 22m      inc. 8m @ 29.7% from 25m
PNRC0037	301800	7835800	12m @ 26.9% from 21m      inc. 10m @ 28.7% from 22m
PNRC0038	302000	7835800	9m @ 23.7% from 15m      inc. 3m @ 28.1% from 19m
PNRC0040	301200	7835600	10m @ 23.4% from 6m      inc. 3m @ 29.2% from 12m
PNRC0041	301400	7835600	9m @ 31.2% from 17m
PNRC0041	301400	7835600	5m @ 12% from 28m
PNRC0042	301600	7835600	5m @ 15.4% from 19m
PNRC0043	301800	7835600	2m @ 13.6% from 27m
PNRC0044	302000	7835600	5m @ 21.4% from 15m

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

LEGEND INTERNATIONAL HOLDINGS, INC.  
(Company)

By:

A handwritten signature in black ink, appearing to read "Peter Lee", written over a horizontal dashed line.

Peter Lee  
Secretary

Dated: September 24, 2009