



**MANHATTAN**

MANHATTAN CORPORATION LIMITED

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**REVISED DOUBLE 8 INFERRED RESOURCE  
AND  
DOUBLE 8, STALLION SOUTH, HIGHWAY SOUTH & PONTON  
MINERALISATION POTENTIAL REPORTED**

ASX Announcement

11 March 2011

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**65% INCREASE IN INFERRED RESOURCE REPORTED FOR DOUBLE 8  
TO  
17.2 MILLION POUNDS URANIUM OXIDE**

**ADDITIONAL MINERALISATION POTENTIAL REPORTED  
FOR**

<b>DOUBLE 8</b>	<b>2.5 to 5.5Mlb U<sub>3</sub>O<sub>8</sub></b>
<b>STALLION SOUTH</b>	<b>8 to 16Mlb U<sub>3</sub>O<sub>8</sub></b>
<b>HIGHWAY SOUTH</b>	<b>8 to 16Mlb U<sub>3</sub>O<sub>8</sub></b>
<b>PONTON</b>	<b>15 to 30Mlb U<sub>3</sub>O<sub>8</sub></b>

- *Latest Inferred Resource estimate for Double 8 uranium deposit in Western Australia of 26Mt at an average grade of 300ppm uranium oxide (“U<sub>3</sub>O<sub>8</sub>”) for 7,800t or 17.2Mlb of contained U<sub>3</sub>O<sub>8</sub>*
- *Additional Mineralisation Potential reported for Double 8 deposit at an average grade of 250 to 450ppm of 2.5 to 5.5Mlb of contained U<sub>3</sub>O<sub>8</sub>*
- *Mineralisation Potential reported for Stallion South at an average grade of 250 to 350ppm of 8 to 16Mlb of contained U<sub>3</sub>O<sub>8</sub>*
- *Mineralisation Potential reported for Highway South at an average grade of 250 to 350ppm of 8 to 16Mlb of contained U<sub>3</sub>O<sub>8</sub>*
- *Mineralisation Potential reported for Ponton deposit at an average grade of 250 to 350ppm of 15 to 30Mlb of contained U<sub>3</sub>O<sub>8</sub>*
- *All Inferred Resource and Mineralisation Potential are reported at 200ppm U<sub>3</sub>O<sub>8</sub> cutoff*

*The reported Inferred Resource for Double 8 of 17.2Mlb of uranium oxide is a 65% increase on the previously reported resource (Manhattan May 2009) and the deposit now ranks as number twenty of reported uranium resources in Australia and the seventh largest in Western Australia.*

*The Inferred Resource of 17Mlb at Double 8 and the additional reported Mineralisation Potential at Double 8 and Stallion South, Highway South and Ponton prospects in the order of 33 to 67Mlbs, all located in contiguous palaeochannels within Manhattan’s project area at Ponton, demonstrates the potential of the project to host a world class ISL sand hosted uranium resource.*



## EXECUTIVE SUMMARY

Manhattan Corporation Limited (“Manhattan”) announces an increased Inferred Resource for the Double 8 uranium deposit at Ponton in Western Australia of 17.2Mlb uranium oxide (“U<sub>3</sub>O<sub>8</sub>”). The Resource, at a 200ppm cutoff, has been prepared by independent resource consultants Hellman & Schofield Pty Ltd in accordance with the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves “JORC Code (2004)”.

In addition, Exploration Results reported by Hellman & Schofield have identified Mineralisation Potential at the 200ppm U<sub>3</sub>O<sub>8</sub> cutoff at:

- Double 8 of between 2.5 and 5.5Mlb U<sub>3</sub>O<sub>8</sub>
- Stallion South of between 8 and 16Mlb U<sub>3</sub>O<sub>8</sub>
- Highway South of between 8 and 16Mlb U<sub>3</sub>O<sub>8</sub>
- Ponton prospect of between 15 and 30Mlb U<sub>3</sub>O<sub>8</sub>

The uranium mineralisation at Double 8 remains open and is yet to be closed off by drilling. Manhattan considers that further drilling of the Double 8 deposit will expand and the confidence levels of reported resources will improve and report to higher confidence categories under the JORC Code (2004). Manhattan is also confident that further drilling along the Ponton palaeochannels at Stallion South, Highway South and Ponton will confirm the Mineralisation Potential, as outlined in this announcement, and generate significant resources under the JORC Code (2004).

Stallion, Highway and Shelf prospects have been systematically drilled to a detail that would support resource estimations. Resource estimates will be completed and reported when further secular disequilibrium data are received, models refined and conversion procedures for Manhattan’s down hole gamma probe data finalised. Preliminary information gives a strong likelihood that a disequilibrium factor for these prospects may be significantly higher than the x1.2 currently assumed for the Inferred Resources at Double 8.

The Double 8 uranium deposit and the Stallion South, Highway South and Ponton Prospects are located on EL28/1898 within QVSNR. EL28/1898 application has been offered for grant in December 2010. The grant requires the consent of the Minister for Mines and Petroleum, with the concurrence of the Minister for Environment, to commence exploration activities within the QVSNR. This Ministerial consent, for E28/1898, is now being sought by Manhattan.

Manhattan’s priority is now to obtain the grant of, and Ministerial consent to explore on, E28/1898. This access will enable Manhattan to recommence drill testing and evaluation of the Double 8 uranium resource and the Mineralisation Potential identified at Double 8, Stallion South, Highway South and Ponton Prospects.

*Hellman & Schofield’s confidential report entitled “Review of Resource Estimates and Mineralisation Potential, Ponton Project” dated 9 March 2011 referred to was prepared for Manhattan and received by the Company on that date.*



## REPORTED RESOURCE ESTIMATES PONTON PROJECT

An Inferred Resource of 26 million tonnes grading 300ppm U<sub>3</sub>O<sub>8</sub> containing 7,800 tonnes (17.2Mlb) of uranium oxide at a 200ppm U<sub>3</sub>O<sub>8</sub> cutoff for the Double 8 uranium deposit is reported. The reported Resources are based on RC drilling by PNC Exploration ("PNC") in the mid 1980's and are classified as Inferred in accordance with the JORC Code (2004). Inferred Resources for Double 8 at a range of cutoff grades are presented in Table 1.

**Table 1: Double 8 Reported Inferred Resources**

DOUBLE 8 INFERRED RESOURCE ESTIMATES				
CUTOFF GRADE U <sub>3</sub> O <sub>8</sub> (ppm)	TONNES (MILLION)	GRADE U <sub>3</sub> O <sub>8</sub> (ppm)	TONNES U <sub>3</sub> O <sub>8</sub> (t)	POUNDS (MILLION) U <sub>3</sub> O <sub>8</sub> (Mlb)
100	110	170	18,700	42.0
150	51	240	12,240	26.0
200	26	300	7,800	17.2
250	14	360	5,040	11.0

Where U<sub>3</sub>O<sub>8</sub> is reported it relates to grade values calculated from down hole radiometric gamma logs. Double 8 drill holes were logged by PNC using Austral L300 Middiloggers for natural gamma radiation. Four Austral L300 loggers were used by PNC in the area, calibrated against each other on a regular basis, and gamma responses compared to chemical assays from a number of core holes. Conversion factors for gamma response to U assays assuming secular equilibrium were then established. eU<sub>3</sub>O<sub>8</sub> grades are then estimated by converting down hole radiometric gamma logs to equivalent uranium eU and multiplied by 1.179 to convert to equivalent uranium grades eU<sub>3</sub>O<sub>8</sub>. A further disequilibrium factor is applied by multiplying eU<sub>3</sub>O<sub>8</sub> by 1.2 to establish U<sub>3</sub>O<sub>8</sub>. Down hole radiometric gamma logging in sand hosted uranium deposits, similar to Double 8, is a common and well established method of estimating uranium grades. All U<sub>3</sub>O<sub>8</sub> grade results reported are subject to possible disequilibrium factors that should be taken into account when assessing the reported grades.

## REPORTED MINERALISATION POTENTIAL PONTON PROJECT

Manhattan's Exploration Results, based on Manhattan's reported resource estimates for Double 8, PNC's early 1980's reconnaissance RC drilling, Manhattan's 2009 and 2010 aircore and sonic drilling results and Manhattan's airborne EM surveys, have identified further uranium Mineralisation Potential at Double 8, Stallion South, Highway South and Ponton.

At a 200ppm U<sub>3</sub>O<sub>8</sub> cutoff reported Mineralisation Potential at Double 8 includes 4 to 8Mt grading 250 to 450ppm U<sub>3</sub>O<sub>8</sub> containing 1,100 to 2,500 tonnes or 2.5 to 5.5Mlb of contained U<sub>3</sub>O<sub>8</sub>; 12 to 24Mt grading 250 to 350ppm U<sub>3</sub>O<sub>8</sub> containing 3,600 to 7,300 tonnes or 8 to 16Mlb of U<sub>3</sub>O<sub>8</sub> at Stallion South; 12 to 24Mt grading 250 to 350ppm U<sub>3</sub>O<sub>8</sub> containing 3,600 to 7,300 tonnes or 8 to 16Mlb of U<sub>3</sub>O<sub>8</sub> at Highway South and 23 to 45Mt grading 250 to 350ppm U<sub>3</sub>O<sub>8</sub> containing 6,800 to 13,600 tonnes or 15 to 30Mlb of contained U<sub>3</sub>O<sub>8</sub> at Ponton. Mineralisation Potential reported for Double 8, Stallion South, Highway South and the Ponton prospects are summarised in Table 2.

**Table 2: Ponton Project Reported Mineralisation Potential**

PONTON PROJECT MINERALISATION POTENTIAL				
PROSPECT & CUTOFF GRADE U <sub>3</sub> O <sub>8</sub> (ppm)	TONNAGE RANGE (MILLION)	GRADE RANGE U <sub>3</sub> O <sub>8</sub> (ppm)	TONNAGE RANGE U <sub>3</sub> O <sub>8</sub> (t)	POUNDS RANGE (MILLION) U <sub>3</sub> O <sub>8</sub> (Mlb)
DOUBLE 8 200	4 - 8	250 - 450	1,100 - 2,500	2.5 - 5.5
STALLION SOUTH 200	12 - 24	250 - 350	3,600 - 7,300	8 - 16
HIGHWAY SOUTH 200	12 - 24	250 - 350	3,600 - 7,300	8 - 16
PONTON 200	23 - 45	250 - 350	6,800 - 13,600	15 - 30
Total Range	50 - 100		15,000 - 31,000	33 - 67

In accordance with clause 18 of the JORC Code (2004), tonnage and grade ranges reported as Mineralisation Potential in this report must be considered conceptual in nature as there has been insufficient exploration and drilling to define a mineral resource and it is uncertain if further exploration and drilling will result in the determination of a reportable resource.



## LOCATION, GEOLOGICAL SETTING AND DRILLING

The Ponton Project is located in the eastern goldfields of Western Australia, approximately 180 kilometres north east of Kalgoorlie on the edge of the Great Victoria Desert on the Cundeelee SH51-11 and Minigwal SH51-07 1:250,000 map sheets. The project is comprised of eleven granted exploration licences and seven exploration licence applications totaling 2,140 square kilometres (Figure 1).

The Double 8 deposit and the Stallion South, Highway South and Ponton prospects are located on Exploration Licence application EL28/1898 within the Queen Victoria Spring Nature Reserve ("QVSNR"). Manhattan's tenement applications that encroach on the QVSNR were offered for grant in December 2010 by the WA Department of Mines and Petroleum. The grants require the consent of the Minister for Mines and Petroleum, with the concurrence of the Minister for Environment, to commence exploration activities within the QVSNR. Ministerial consent for the key licence application, E28/1898, is now being sought by Manhattan.

The Ponton project area is underlain by tertiary palaeochannels within the Gunbarrel Basin that are highly prospective for uranium (Figures 1 & 2). These palaeochannels connect to the Mulga Rock uranium deposits where Energy and Minerals Australia has recently released an inferred resource estimate of 27,200 tonnes (60Mlb)  $U_3O_8$ .

Drilling by PNC Corporation and Uranerz within the Queen Victoria Spring Nature Reserve ("QVSNR") in 1983 to 1986 discovered the sandstone hosted uranium mineralisation at Double 8. Additional drilling within the palaeochannel system identified the Stallion South, Highway South and Ponton prospects within the QVSNR. Drilling, then, also included anomalous responses in the Stallion, Highway and Shelf areas to the north of QVSNR (Figures 1 & 2).

Approximately 100 holes were drilled and radiometric gamma logged in the Nature Reserve between 1983 and 1986, of which 44 were in the Double 8 area.

The Double 8 prospect was found to host roll-front or tabular type uranium mineralisation in the lower parts of the palaeochannel (40-70m depth) in reduced sands potentially amenable to in-situ leach recovery ("ISL"). The uranium mineralisation was drill intersected in an area along approximately nine kilometres of palaeochannel, at widths of approximately 500m on average and down hole thicknesses of 3 to 25 metres.

Manhattan has obtained and compiled all historical exploration results including geological drill logs, assay results, logging tool calibrations and estimated disequilibrium factors from historic PNC documents.

From December 2009 to December 2010 Manhattan drilled over 52,700 metres of aircore and sonic drilling in 767 holes along the palaeochannels at Ponton to the north of the QVSNR. Manhattan's exploration results and the historic PNC data have been reviewed and an Inferred Resource estimated for the Double 8 uranium deposit and further Mineralisation Potential reported for Double 8, Stallion South, Highway South and the Ponton prospects (Figure 2). Initial results for the Stallion, Highway and Shelf prospects indicate that more information is required to finalise and refine secular disequilibrium models and conversion procedures to enable resource estimates to be completed.

Details of sample location control for PNC and Manhattan's drilling, down hole surveying and recovery, PNC and Manhattan's data, gamma logging, radiometric determination of  $U_3O_8$ , secular disequilibrium and chemical assay equivalent  $cU_3O_8$ , the relationships between radiometric and assay sample support effects and disequilibrium, processing of PNC's gamma logs to produce  $eU_3O_8$ , processing of Manhattan's gamma logs to produce  $eU_3O_8$  and bulk density are addressed by Hellman & Schofield and provided to Manhattan in their confidential report.



Figure 1: Ponton Project Tenements, Deposits and Prospects

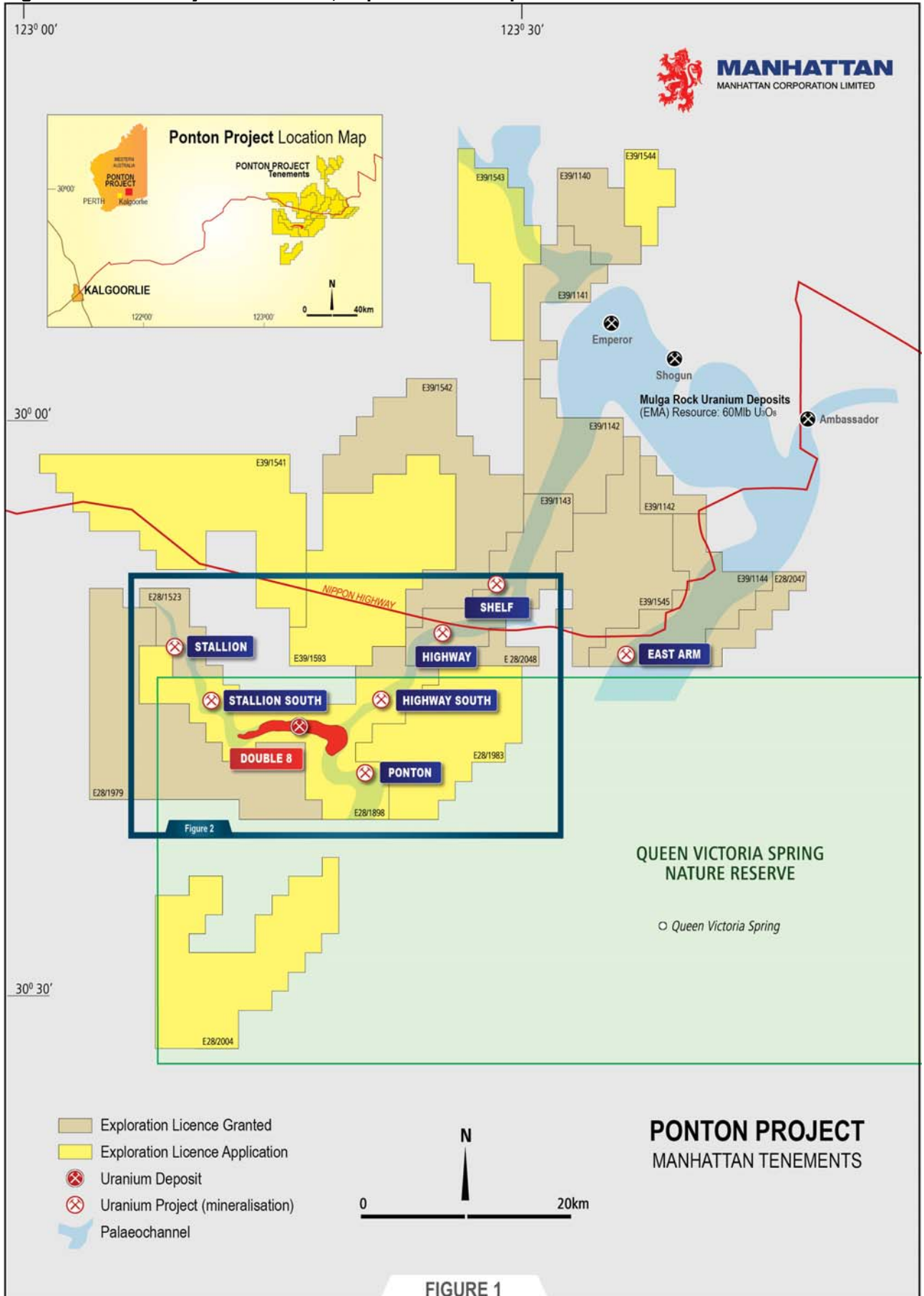
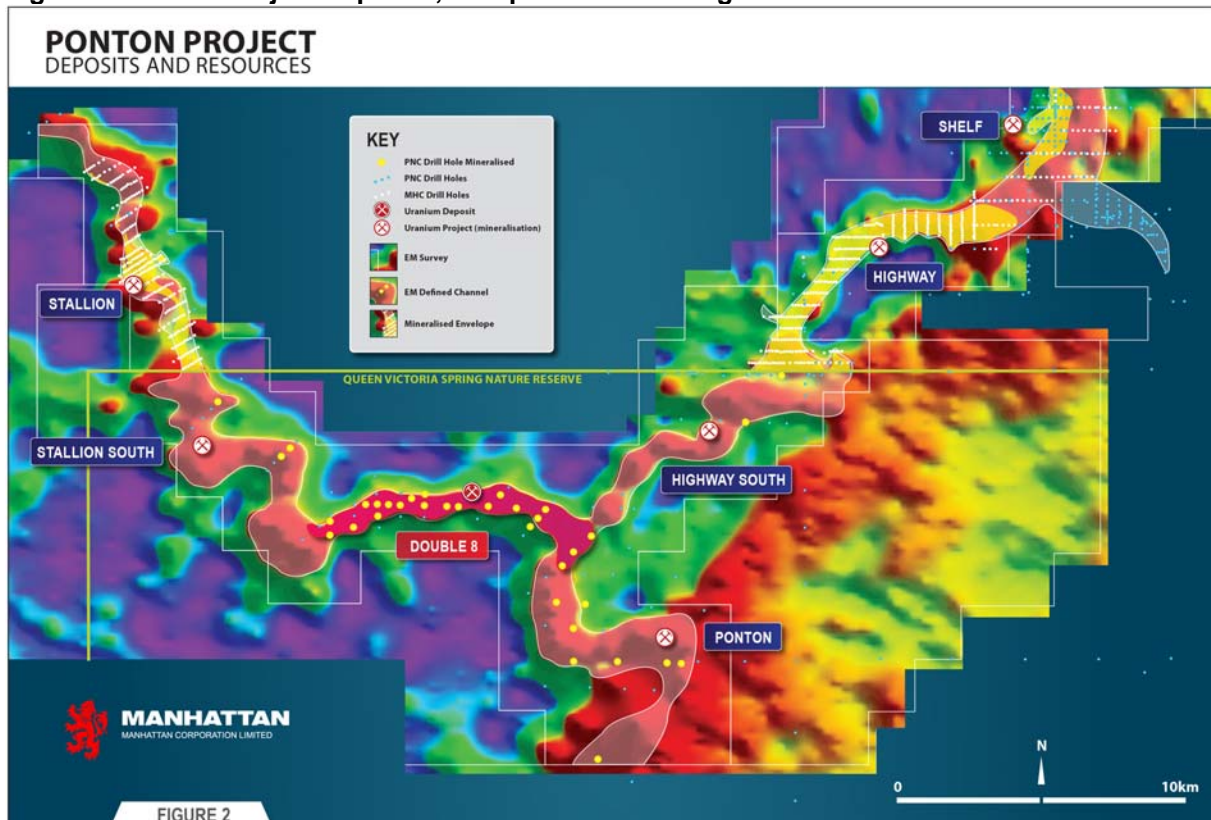






Figure 2: Ponton Project Deposits, Prospects and Drilling



## METHODOLOGY FOR REPORTED INFERRED RESOURCES

Hellman & Schofield's Resource Estimates for the Double 8 deposit are based on approximately 2,700m of drilling from 44 RC holes drilled and logged by PNC in the early 1980s.

The methodology, estimation details and assumptions used by Hellman & Schofield in estimating the Inferred Resource and the additional Mineralisation Potential for Double 8 are summarised as follows:

- Digitised copies of the original down hole logs were converted to equivalent uranium (eU) grades by 3D Exploration Pty Ltd using original calibration data from PNC. Data was composited at 50cm to minimise nugget effects and converted from eU to  $eU_3O_8$  using the standard conversion multiplier of 1.179
- Average disequilibrium ratio at Double 8 has been assumed to be 1.2
- The average bulk density of the host formation has been assumed to be  $1.8t/m^3$
- The granitic basement of the palaeochannel was modelled. Reported resource estimates do not include uranium in the granitic basement
- A series of  $U_3O_8$  cutoff grades between 100 and 250ppm, at 50ppm increments, have been reported
- It has been assumed that the sandy sediments hosting the uranium at Double 8 will be permeable to leaching solutions for metal recovery
- Grade continuity models have been determined from variography constructed from radiometric grades composited into 0.5m intervals. High grade values have not been cut as no grades in the 0.5m composites were considered extreme
- Resource Estimates and Exploration Results for Double 8 have been reported on the basis of Ordinary Kriging
- The resource mineralisation estimates for Double 8 have been classified as Inferred in accordance with the JORC Code (2004)

Stallion, Highway and Shelf areas have been systematically drilled by Manhattan and estimates would in normal circumstances be reported as Inferred Resources. Resource estimates for these prospects



have not been reported because disequilibrium data is pending and thus estimates of grade and tonnes above cutoff are not considered sufficiently robust to report as Inferred Resources. However, preliminary disequilibrium information gives a strong likelihood that a disequilibrium factor may be significantly higher than the x1.2 currently assumed for the Inferred Resources at Double 8. A comparison of radiometric  $eU_3O_8$  grades from aircore holes to radiometric  $eU_3O_8$  in sonic holes and further to chemical assay  $cU_3O_8$  in sonic holes indicates that a simply determined disequilibrium factor of around x1.7 may be more appropriate.

Ra226 disequilibrium measurements on 56 samples, by Western Radiation Services, that assayed greater than 100ppm  $U_3O_8$  from sonic holes at Stallion and Highway broadly support the disequilibrium factor of x1.7 indicated by direct comparison of assay and radiometric data. However, due to the grade based selection of samples and some technical ambiguities in the Ra226 measurements from Western Radiation Services, a further 50 samples have been dispatched to the Australian Nuclear Science and Technology Organisation for definitive U to Ra226 disequilibrium measurements. Once these data are available in about 8 weeks' time, and have been appropriately interpreted, it is expected that disequilibrium factors for Highway and Stallion will have sufficient confidence to make a statement about resource estimates for these prospects.

## METHODOLOGY FOR REPORTED MINERALISATION POTENTIAL

Hellman & Schofield's reported Exploration Results that include Mineralisation Potential for the Double 8 deposit based on the PNC drilling used to complete the Inferred Resource. Mineralisation Potential reported for the Stallion South, Highway South and Ponton prospects are based on approximately 4,200m of drilling from 53 RC holes drilled and logged by PNC in the early 1980s, over 52,700 of aircore and sonic drilling from 767 holes drilled by Manhattan at Stallion, Highway and Shelf Prospects in 2009 and 2010 and Manhattan's airborne EM survey data.

Additional Mineralisation Potential occurs in areas where a few historic drill holes (effectively undrilled from the resources point of view) have intersected radiometric intervals exceeding 100ppm  $eU_3O_8$  within permissive channel sands along interpreted palaeochannels between the more intensively drilled palaeochannels at Stallion, Highway, Shelf and Double 8.

The methodology and assumptions used by Hellman & Schofield in reporting the Mineralisation Potential for these prospects are summarised as follows:

- *Assessments are based on average grades at a 200ppm  $U_3O_8$  cutoff of in nearby palaeochannels that have been systematically drilled by PNC at Double 8 and by Manhattan at Stallion and Highway*
- *The assessments are based on palaeochannel length and by analogy to uranium productivity per kilometre of well drilled palaeochannels nearby*
- *Digitised copies of the original down hole logs were converted to equivalent uranium (eU) grades by 3D Exploration Pty Ltd using original calibration data from PNC. Data was composited at 50cm to minimise nugget effects and converted from eU to  $eU_3O_8$  using the standard conversion multiplier of 1.179*
- *Average disequilibrium ratio at Double 8 has been assumed to be 1.2 and a ratio of 1.7 applied to the preliminary Stallion and Highway assessments*
- *The average bulk density of the host formation has been assumed to be  $1.8t/m^3$*
- *PNC drill holes included in Mineralisation Potential assessments have intersected mineralised intersections of greater than 100ppm  $eU_3O_8$*
- *It has been assumed that the sandy sediments hosting the uranium at Stallion South, Highway South and Ponton are similar to those drilled by PNC at Double 8 and those drilled by Manhattan at Stallion and Highway and will be permeable to leaching solutions for metal recovery*
- *Palaeochannels are interpreted from Manhattan's airborne EM survey data*
- *The additional Mineralisation Potential reported for Stallion South, Highway South and Ponton have been reported as tonnage and grade ranges but cannot be termed a resource in the meaning of the JORC Code (2004)*



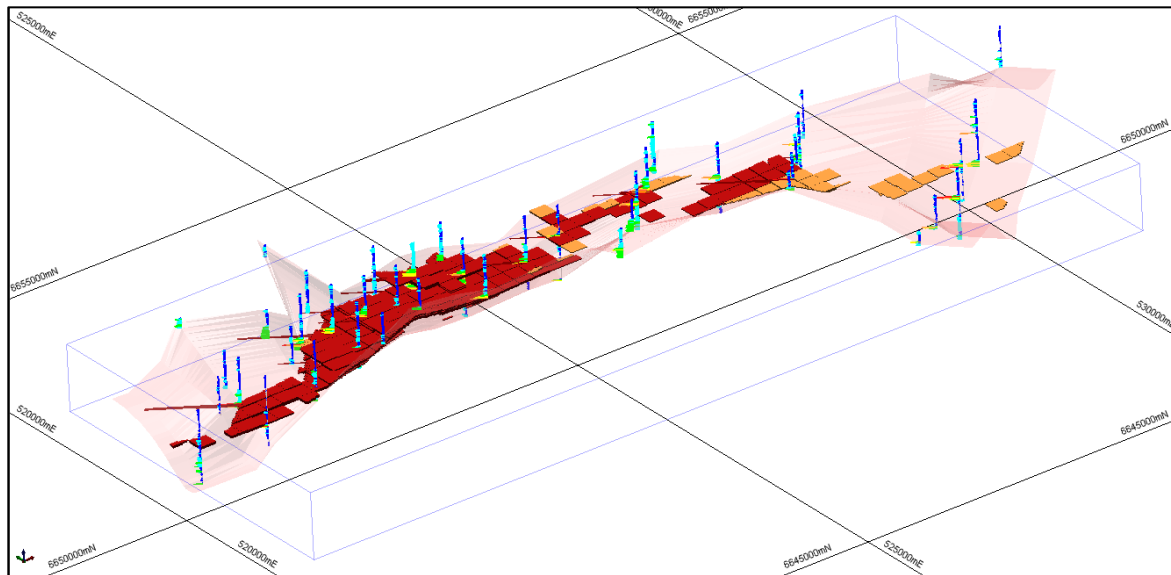
The Stallion South area between Stallion and Double 8, the Highway South area between Highway and Double 8 and the Ponton area to the south of Double 8 are all considered by Hellman & Schofield to have significant potential for additional resources of the style already outlined at Double 8. The methodology and assumptions used to report Mineralisation Potential provides support for a broad assessment of what may potentially be discovered by further drilling in these areas.

The Mineralisation Potential reported for each area were assessed by Hellman & Schofield using the methodology and assumptions described and then confidence ranges for tonnage and grade were applied in accordance with the requirements of the JORC Code (2004).

### DOUBLE 8 INFERRED RESOURCE BLOCK MODELS

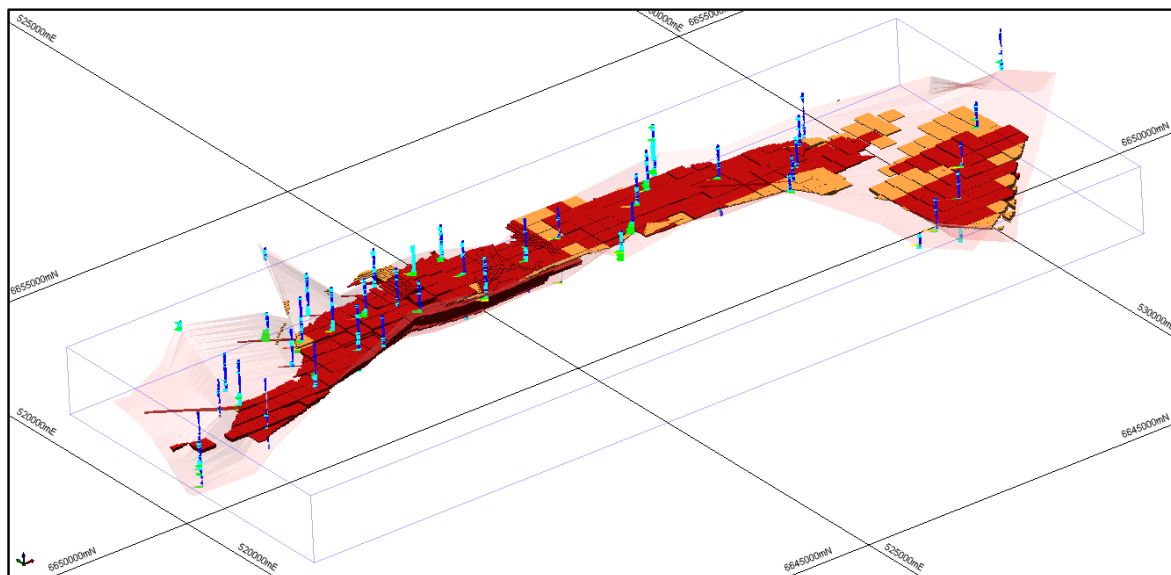
Block models for the Double 8 resource estimates at 100ppm  $U_3O_8$  and 200ppm  $U_3O_8$  cutoffs are presented in Figures 3 and 4.

**Figure 3: Hellman & Schofield 3D Block Model of Double 8 Deposit at 200ppm  $U_3O_8$  Cutoff**



Red Blocks Inferred Resources & Orange Blocks Mineralisation Potential

**Figure 4: Hellman & Schofield 3D Block Model of Double 8 Deposit at 100ppm  $U_3O_8$  Cutoff**



Red Blocks Inferred Resources & Orange Blocks Mineralisation Potential





The resources were estimated into blocks of 200mE x 200mN x 1m vertical which is approximately ½ the current drill hole spacing (at their closest) in the horizontal plane and twice the compositing interval in the vertical. H&S considered that smaller blocks could not be supported with the current information density. Drilling density and radiometric composite intervals constrained block sizes used for interpolation.

*A full explanation of resource classifications, the Double 8 Inferred Resources, validation and check modelling and the Exploration Results and Mineralisation Potential reported for Stallion South, Highway South and Ponton were provided to Manhattan in Hellman & Schofield's confidential report.*

**ALAN J EGGERS**  
**Executive Chairman**  
**Manhattan Corporation Limited**  
**11 March 2011**

#### COMPETENT PERSONS' STATEMENTS

*The information in this report that relates to reported Exploration Results or Mineral Resources is based on information compiled by Mr Alan J Eggers, who is a Corporate Member of the Australasian Institute of Mining and Metallurgy ("AusIMM"). Alan Eggers is a professional geologist and an executive director of Manhattan Corporation Limited. Mr Eggers has sufficient experience that is relevant to the style of mineralisation and type of mineral deposits being reported on in this report and to the activity which 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 "JORC Code (2004)". Mr Eggers consents to the inclusion in this report of the information on the Exploration Results or Mineral Resources based on his information in the form and context in which it appears.*

*The information in this report that relates to estimation Mineral Resources and assessment of Exploration Results is based on work completed by Mr Simon Gatehouse, who is a Member of the Australian Institute of Geoscientists ("AIG"). Simon Gatehouse is a consulting geologist and full time employee of Hellman & Schofield Pty Ltd. Mr Gatehouse has sufficient experience that is relevant to the style of mineralisation and type of mineral deposits being reported on in this report and to the activity which 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 "JORC Code (2004)". Mr Gatehouse consents to the inclusion in this report of the information on the Exploration Results or Mineral Resources based on his information in the form and context in which it appears.*



#### BUSINESS OFFICE

Ground Floor  
 15 Rheola Street  
 WEST PERTH WA 6005  
 PO Box 1038  
 WEST PERTH WA 6872  
 Telephone: +61 8 9322 6677  
 Facsimile: +61 8 9322 1961

Email: [info@manhattancorp.com.au](mailto:info@manhattancorp.com.au)  
 Web Site: [www.manhattancorp.com.au](http://www.manhattancorp.com.au)