



**MANHATTAN**

MANHATTAN CORPORATION LIMITED

## SEPTEMBER QUARTER 2017 HIGHLIGHTS

- *Manhattan's 100% owned ISR Ponton uranium project in WA has reported Inferred Resources of 20Mlb uranium oxide in two deposits*
- *Double 8 Inferred Resource of 17.2Mlb is located within QVSNR with the Stallion Inferred Resource of 3.3Mlb being located to the north, and outside, the QVSNR*
- *In addition, Exploration Results reported, for the palaeochannels within QVSNR at Ponton, have identified four wide spaced drilled uranium oxide Exploration Targets*
- *WA Labor government's policies not to approve uranium mines, or allow mineral exploration in A Class reserves, suggests there is little likelihood of progressing the Ponton uranium project over the four year term of the present government*
- *Whilst nuclear energy remains well established in the global energy mix, and there is a record new build underway, ordered and planned, our view is uranium prices are unlikely to improve in the near term sufficient to facilitate new mine development opportunities*
- *The key drivers subduing the current uranium price, with the long term price now down to US\$31lb, are slower than anticipated recommissioning of the Japanese nuclear power plants, increased secondary supply of enriched primary fuel and new mine developments by Chinese interests in Africa*
- *Manhattan has rationalised its Ponton tenement holdings to reduce holding costs and expenditure commitments*
- *The Company retains control of the key tenements and uranium deposits at Ponton as a potential future low cost ISR uranium mine development opportunity when the Labor policies, or the WA government, change*
- *Manhattan is now developing a revised business plan and looking to acquire a new resource project with near term certainty of development and commodity price outlook*
- *The Company continues to assess new opportunities and an update on developments in relation to those opportunities will be provided to investors in the coming months*
- **SPOT MARKET URANIUM OXIDE REMAINS DEPRESSED AT US\$19.90 POUND**



## REVIEW OF OPERATIONS

### INTRODUCTION

Manhattan Corporation Limited's ("Manhattan") flagship Ponton uranium project is located approximately 200km northeast of Kalgoorlie on the edge of the Great Victoria Desert in WA. The Company has 100% control of around 520km<sup>2</sup> of exploration tenements underlain by Tertiary palaeochannels within the Gunbarrel Basin. These palaeochannels are known to host a number of uranium deposits and drilled uranium prospects (Figures 1 & 2).

The Company is drill testing and developing palaeochannel sand hosted uranium mineralisation amenable to in-situ metal recovery ("ISR").

**FIGURE 1: MANHATTAN'S PONTON URANIUM PROJECT**



On 23 January 2017 Manhattan reported an upgraded JORC Code 2012 Inferred Resource for the Double 8 uranium deposit at Ponton in WA of 26 million tonnes ("Mt"), for 17.2 million pounds ("Mlb") grading 300ppm uranium oxide ("U<sub>3</sub>O<sub>8</sub>") at a 200ppm cutoff. As well, a maiden JORC Code 2012 Inferred Resource estimate for the Stallion uranium deposit of 9.9Mt for 3.3Mlb grading 151ppm U<sub>3</sub>O<sub>8</sub> at a 100ppm cutoff was reported.

The two Inferred Resource estimates reported for Ponton project are:

- Double uranium deposit of 17.2Mlb U<sub>3</sub>O<sub>8</sub> at 200ppm cut off; and
- Stallion uranium deposit of 3.3Mlb U<sub>3</sub>O<sub>8</sub> at 100ppm cutoff;

Exploration Results at Ponton, reported on 7 February 2014, have also identified four wide spaced drilled Exploration Targets with tonnage ranges of 4 to 45Mt, grade ranges of 250 to 450ppm U<sub>3</sub>O<sub>8</sub> totalling 33 to 67Mlb U<sub>3</sub>O<sub>8</sub> at the 200ppm U<sub>3</sub>O<sub>8</sub> cutoff. In accordance with clause 17 of the JORC Code 2012, the potential quantity and grade reported as Exploration Targets 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 Mineral Resource.



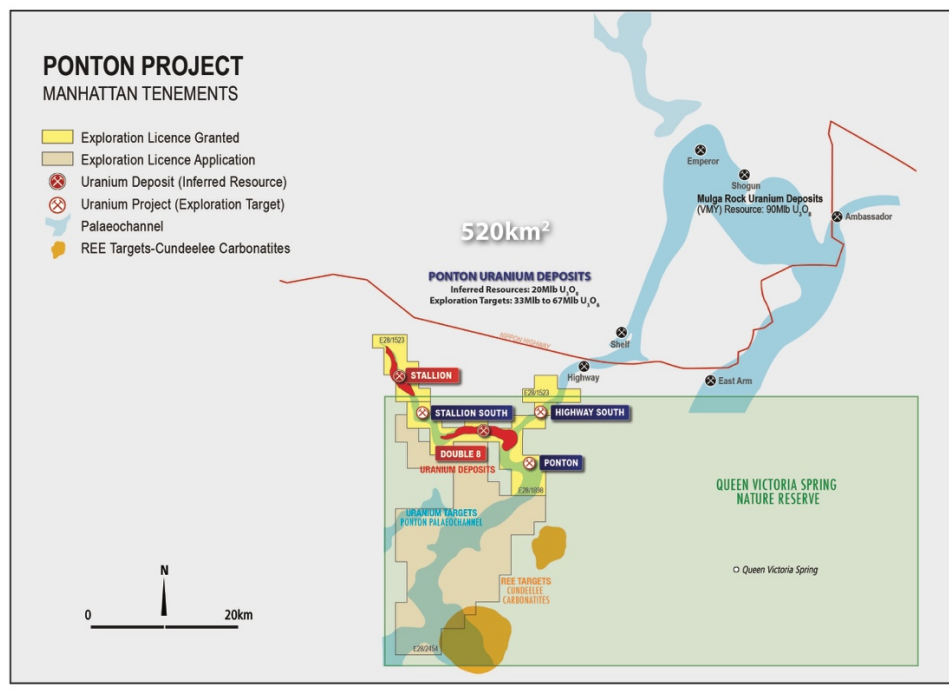
The four Exploration Targets reported for the Ponton project are:

- Double 8 of between 2.5 and 5.5Mlb  $U_3O_8$ ;
- Stallion South of between 8 and 16Mlb  $U_3O_8$ ;
- Highway South of between 8 and 16Mlb  $U_3O_8$ ; and
- Ponton of between 15 and 30Mlb  $U_3O_8$

The four Inferred Resource estimates and four Exploration Targets at Ponton reported here were prepared by the Company's independent resource consultants H&S Consultants ("H&SC").

The Double 8 uranium deposit and the four Exploration Targets at Double 8, Stallion South, Highway South and Ponton are all located on granted exploration licence, E28/1898, located mostly within the Queen Victoria Spring Nature Reserve ("QVSNR") (Figures 2 & 3).

**FIGURE 2: MANHATTAN'S PONTON TENEMENT**



The two Mineral Resource Estimates reported in January 2017, and the four Exploration Targets previously reported in 2014, are based on actual exploration results including Manhattan's aircore and sonic drilling of over 767 holes and 52,700 metres of drilling along the palaeochannels immediately to the north of QVSNR in 2009 and 2010, 21 holes and 1,170 metres of drilling by Manhattan in 2016 and over 70km of conductive palaeochannels defined by the Company's airborne EM and magnetic surveys within QVSNR (Figure 3) and uranium mineralised sands discovered in previous drilling of 114 holes and 6,900 metres of drilling and down hole gamma logging by PNC Exploration ("PNC") and Uranerz Limited ("Uranerz") in the area in the 1980's.

Whilst a proposal has been developed to excise granted E28/1898 (that equates to 6% or 160km<sup>2</sup> of the 2,700km<sup>2</sup> QVSNR) from the QVSNR by a Reserves Amendment Bill in the WA parliament this proposal is now on hold. The WA state Labor government's policy of not to approve any new uranium mines, or permit mineral exploration in A Class reserves, suggests there is little likelihood of progressing the exploration and development of the Ponton uranium project over the next four year term of the present WA government.



## REVIEW OF PROJECTS

### 1. PONTON PROJECT (WA)

**Interest:** Manhattan 100%

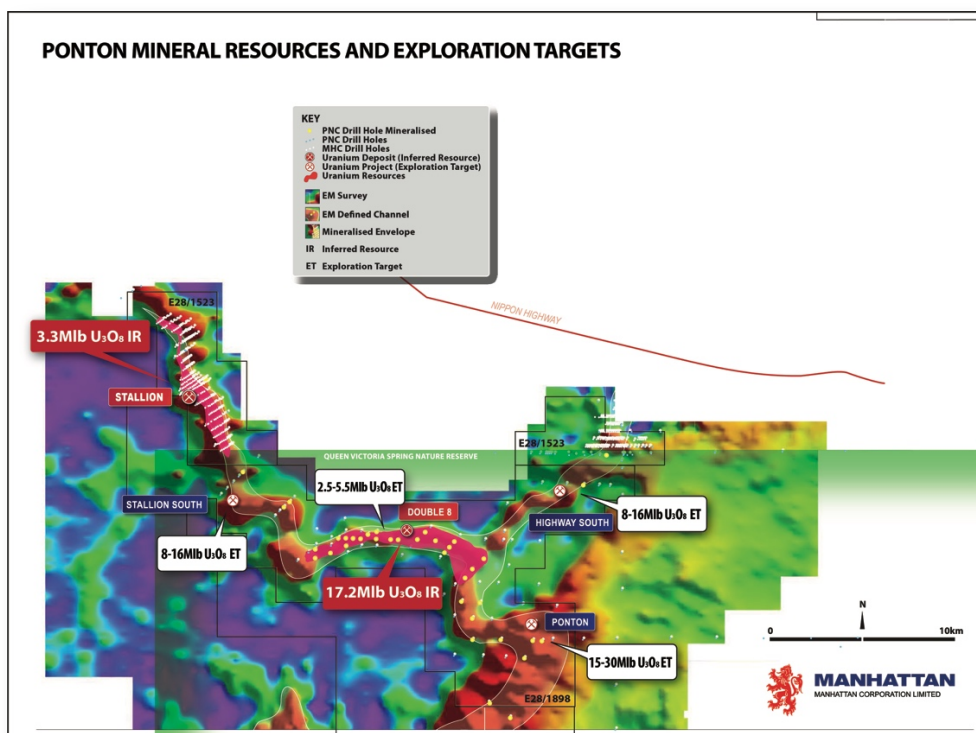
**Operator:** Manhattan Corporation Limited

The Ponton project area is underlain by Tertiary palaeochannels within the Gunbarrel Basin. Carbonaceous sand hosted uranium mineralisation, below 40 to 70 metres of cover, has now been defined by drilling along 55 kilometres of the palaeochannels at Stallion, Stallion South, Double 8, Ponton, Highway, Highway South and Shelf uranium deposits and prospects (Figure 3). At a depth of 40 to 70 metres the uranium mineralisation is in shallow reduced sand hosted tabular uranium deposits in a confined palaeochannel that is potentially amenable to ISR metal recovery, the lowest cost method of producing yellowcake with the least environmental impact.

Within E28/1898 approximately 6,900 metres of drilling, in 114 drill holes, was drilled and down hole gamma logged by PNC and Uranerz in 1983 to 1986. This drilling discovered the palaeochannel sand hosted uranium mineralisation at Double 8, Stallion South, Highway South and Ponton (Figure 3). Manhattan has obtained and compiled all the PNC and Uranerz exploration results including the geological drill logs, assay results, down hole gamma logs, logging tool calibrations and estimated disequilibrium factors. These drill logs and gamma logs have been digitised and verified by Manhattan's independent consultants.

In 2009 Uranio drilled 1,683 metres of aircore in 20 holes and from December 2009 to September 2016 Manhattan drilled over 52,400 metres of aircore and sonic drilling in 735 holes along the palaeochannels at Ponton to the north of the QVSNR. Manhattan and Uranio's exploration and drilling results and the historic PNC and Uranerz data have been reviewed and the Inferred Resource estimated for Double 8, Stallion, Highway and Shelf deposits and Exploration Targets reported for Double 8, Stallion South, Highway South and Ponton prospects.

**FIGURE 3: DOUBLE 8, STALLION, HIGHWAY AND SHELF INFERRED RESOURCES (IR)  
DOUBLE 8, STALLION SOUTH, HIGHWAY SOUTH & PONTON EXPLORATION TARGETS (ET)**





## 2. DOUBLE 8 URANIUM DEPOSIT (WA)

**Interest: Manhattan 100%**

**Operator: Manhattan Corporation Limited**

The Double 8 uranium deposit is located in granted tenement E28/1898 in the southwest of the project area within the QVSNR (Figures 2 & 3).

### DOUBLE 8 INFERRED RESOURCE ESTIMATES

An Inferred Resource of 7,800 tonnes (17.2Mlb) of uranium oxide at a 200ppm  $U_3O_8$  cutoff for the Double 8 uranium deposit was reported on 23 January 2017. The reported resources are based on RC drilling by PNC in the mid 1980's. This information was prepared and first disclosed under the JORC Code 2004. This updated JORC Code 2012 resource estimate was prepared by H&SC.

#### Double 8 Inferred Resources

DOUBLE 8 INFERRED RESOURCE ESTIMATES				
CUTOFF GRADE $eU_3O_8$ (ppm)	TONNES (MILLION)	GRADE $eU_3O_8$ (ppm)	TONNES $U_3O_8$ (t)	POUNDS (MILLION) $U_3O_8$ (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

H&SC's resource estimate for the Double 8 uranium deposit is based on approximately 2,706m of drilling from 44 aircore holes drilled by PNC in the early 1980's along 10 kilometres of the palaeochannel at Double 8 (Figure 3). The drilling has covered an area of approximately 9 x 1.2 km of the Ponton palaeochannel. 40 holes were successfully logged for uranium decay products using a down hole gamma radiometric probe. The original analog gamma logging data has been digitized and recalibrated by the Company's consultants as digitized logs converted to  $eU_3O_8$ .

The uranium mineralisation at Double 8 remains open and is yet to be closed off by drilling. Manhattan considers that further drilling, on 100m x 400m centres, of the Double 8 deposit and Exploration Target will expand on the reported resources and targets and the confidence levels of reported resources will improve.

### DOUBLE 8 EXPLORATION TARGET

The Double 8 Exploration Target, reported in January 2014, is based on 44 drill holes totalling approximately 2,700 metres of drilling and down hole gamma logs in areas of the deposit where drill spacing is considered too wide to define a Mineral Resource to an inferred resource status.

#### Double 8 Exploration Target

DOUBLE 8 EXPLORATION TARGET				
CUTOFF GRADE $U_3O_8$ (ppm)	TONNAGE RANGE (MILLION)	GRADE RANGE $U_3O_8$ (ppm)	TONNAGE RANGE $U_3O_8$ (t)	POUNDS RANGE (MILLION) $U_3O_8$ (Mlb)
200	4 - 8	250 - 450	1,100 - 2,500	2.5 - 5.5

*In accordance with clause 17 of the JORC Code 2012, the potential quantity and grade reported as Exploration Targets 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 Mineral Resource.*



Exploration Results have identified a drilled Exploration Target with uranium mineralisation potential, at a 200ppm  $U_3O_8$  cutoff, at Double 8 of 4 to 8Mt grading 250 to 450ppm  $U_3O_8$  containing 1,100 to 2,500 tonnes or 2.5 to 5.5Mlb of contained  $U_3O_8$ .

The uranium mineralisation at Double 8 remains open and is yet to be closed off by drilling. Manhattan considers that further drilling, on 100m x 400m centres, of the Double 8 deposit and Exploration Target will expand on the reported resources and targets and the confidence levels of reported resources will improve.

On gaining exploration access to E28/1898, and approval of Manhattan's Program of Work ("POW") by the Department of Mines and Petroleum ("DMP"), the Company plans to complete infill resource definition drilling on 400 x 100m centres along the defined palaeochannel within the reported Inferred Resource and Exploration Target areas at Double 8. This drilling program, including the resource definition drilling planned for the Stallion South, Highway South and Ponton prospects, will be completed in approximately one year of POW approval (Figure 3).

### 3. STALLION (WA)

**Interest: Manhattan 100%**

**Operator: Manhattan Corporation Limited**

The Stallion uranium prospect is located in E28/1523 and centred 14 kilometres northwest of the Double 8 uranium deposit at Ponton (Figures 2 & 3).

#### STALLION INFERRED RESOURCE ESTIMATES

An Inferred Resource of 1,490 tonnes (3.3Mlb) of uranium oxide at a 100ppm  $U_3O_8$  cutoff for the Stallion uranium deposit was reported on 23 January 2017. The reported resources are based primarily on Manhattan's aircore and sonic drilling in 2010 and 2016. This JORC Code 2012 resource estimate was prepared by H&SC.

##### *Stallion Inferred Resources*

STALLION INFERRED RESOURCE ESTIMATES				
CUTOFF GRADE $eU_3O_8$ (ppm)	TONNES (MILLION)	GRADE $eU_3O_8$ (ppm)	TONNES $U_3O_8$ (t)	POUNDS (MILLION) $U_3O_8$ (Mlb)
100	9.9	151	1,490	3.3
150	3.6	200	720	1.6
200	1.3	253	330	0.7

H&SC's resource estimate for the Stallion uranium deposit is based on a total of 252 drill holes totalling 18,746m of drilling including 7 aircore holes for approximately 401 metres of drilling by PNC in the early 1980s and Manhattan's 226 vertical aircore drill holes totalling 16,914m and 16 duplicate sonic drill holes totalling 1,179m of drilling along 8 kilometres of the palaeochannel at Stallion in 2009 and 2010 and 3 aircore holes for 252m, utilising improved high resolution gamma probe technology, drilled into the Stallion deposit twinning previously drilled Manhattan aircore and sonic drill holes in 2016 (Figure 3). Drilling has been completed on 200m and 400m spaced lines with holes drilled at 100m centres along each grid line across the palaeochannel within mineralised zones. All drill holes were gamma logged. The original PNC analog gamma logging data has been digitized and recalibrated by the Company's consultants as digitized logs converted to  $eU_3O_8$ .

The geological controls and style of the palaeochannel sand hosted uranium mineralisation at Stallion are similar to the mineralisation encountered at Double 8.





#### 4. STALLION SOUTH (WA)

**Interest: Manhattan 100%**

**Operator: Manhattan Corporation Limited**

Stallion South is located immediately to the south of Stallion and northwest of Double 8 along the Ponton palaeochannel. This prospect is within granted licence E28/1898 within the QVSNR (Figures 2 & 3).

The drilled uranium mineralisation at Stallion South is also hosted in palaeochannels within reduced carbonaceous sands and weathered granitic sands in a confined aquifer overlying crystalline granite basement.

#### STALLION SOUTH EXPLORATION TARGET

The Stallion South Exploration Target, reported in January 2014, is based on 13 drill holes totalling approximately 780 metres of drilling and down hole gamma logs. This drilling, on approximately 400m x 3km centres along the palaeochannel, is considered too wide to define a Mineral Resource to an inferred resource status.

Exploration Results have identified a drilled Exploration Target with uranium mineralisation potential at a 200ppm  $U_3O_8$  cutoff, for Stallion South of 12 to 24Mt grading 250 to 350ppm  $U_3O_8$  containing 3,600 to 7,300 tonnes or 8 to 16Mlb of contained  $U_3O_8$ .

#### *Stallion South Exploration Target*

STALLION SOUTH EXPLORATION TARGET				
CUTOFF GRADE $U_3O_8$ (ppm)	TONNAGE RANGE (MILLION)	GRADE RANGE $U_3O_8$ (ppm)	TONNAGE RANGE $U_3O_8$ (t)	POUNDS RANGE (MILLION) $U_3O_8$ (Mlb)
200	12 - 24	250 - 350	3,600 - 7,300	8 - 16

*In accordance with clause 17 of the JORC Code 2012, the potential quantity and grade reported as Exploration Targets 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 Mineral Resource.*

On gaining exploration access to E28/1898, and approval of Manhattan's POW by DMP, the Company plans to complete infill resource definition drilling on 400 x 100m centres along the defined palaeochannel at Stallion South. This drilling program, including the resource definition drilling planned for Double 8 and the Highway South and Ponton prospects, will be completed within approximately one year of POW approval (Figure 3).

#### 5. HIGHWAY SOUTH (WA)

**Interest: Manhattan 100%**

**Operator: Manhattan Corporation Limited**

Highway South is centred 5km along the palaeochannel to the northeast of Double 8. This prospect is within granted licence E28/1898 within the QVSNR (Figures 2 & 3).

The drilled uranium mineralisation at Highway South is also hosted in palaeochannels within reduced carbonaceous sands and weathered granitic sands in a confined aquifer overlying crystalline granite basement.

#### HIGHWAY SOUTH EXPLORATION TARGET

The Highway South Exploration Target, reported in January 2014, is based on 33 drill holes totalling approximately 1,980 metres of drilling and down hole gamma logs. This drilling, on approximately 400m x 2km centres along the palaeochannel, is considered too wide to define a Mineral Resource to an inferred resource status.



Exploration Results have identified drilled Exploration Targets with uranium mineralisation potential at a 200ppm  $U_3O_8$  cutoff, for Highway South of 12 to 24Mt grading 250 to 350ppm  $U_3O_8$  containing 3,600 to 7,300 tonnes or 8 to 16Mlb of contained  $U_3O_8$ .

#### Highway South Exploration Target

HIGHWAY SOUTH EXPLORATION TARGET				
CUTOFF GRADE $U_3O_8$ (ppm)	TONNAGE RANGE (MILLION)	GRADE RANGE $U_3O_8$ (ppm)	TONNAGE RANGE $U_3O_8$ (t)	POUNDS RANGE (MILLION) $U_3O_8$ (Mlb)
200	12 - 24	250 - 350	3,600 - 7,300	8 - 16

*In accordance with clause 17 of the JORC Code 2012, the potential quantity and grade reported as Exploration Targets 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 Mineral Resource.*

On gaining exploration access to E28/1898, and approval of Manhattan's POW by DMP, the Company plans to complete infill resource definition drilling on 400 x 100m centres along the defined palaeochannel at Highway South. This drilling program, including the resource definition drilling planned for Double 8 and the Stallion South and Ponton prospects, will be completed within approximately one year of POW approval (Figure 3).

#### 6. PONTON (WA)

**Interest: Manhattan 100%**

**Operator: Manhattan Corporation Limited**

Ponton is located along the palaeochannel to the southeast of Double 8. This prospect is within granted licence E28/1898 within the QVSNR (Figures 2 & 3).

The drilled uranium mineralisation at Ponton is also hosted in palaeochannels within reduced carbonaceous sands and weathered granitic sands in a confined aquifer overlying crystalline granite and Patterson Group shale basement.

#### PONTON EXPLORATION TARGET

The Ponton Exploration Target, reported in January 2014, is based on 24 drill holes totalling approximately 1,440 metres of drilling and down hole gamma logs. This drilling, on approximately 1km x 1km centres along the palaeochannel, is considered too wide to define a Mineral Resource to an inferred resource status.

Exploration Results have identified drilled Exploration Targets with uranium mineralisation potential, at a 200ppm  $U_3O_8$  cutoff, for the Ponton prospect of 23 to 45Mt grading 250 to 350ppm  $U_3O_8$  containing 6,800 to 13,600 tonnes or 15 to 30Mlb of contained  $U_3O_8$ .

#### Ponton Exploration Target

PONTON EXPLORATION TARGET				
CUTOFF GRADE $U_3O_8$ (ppm)	TONNAGE RANGE (MILLION)	GRADE RANGE $U_3O_8$ (ppm)	TONNAGE RANGE $U_3O_8$ (t)	POUNDS RANGE (MILLION) $U_3O_8$ (Mlb)
200	23 - 45	250 - 350	6,800 - 13,600	15 - 30

*In accordance with clause 17 of the JORC Code 2012, the potential quantity and grade reported as Exploration Targets 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 Mineral Resource.*





On gaining exploration access to E28/1898, and approval of Manhattan's POW by DMP, the Company plans to complete infill resource definition drilling on 400 x 100m centres along the defined palaeochannel at the Ponton prospect. This drilling program, including the resource definition drilling planned for Double 8 and the Stallion South and Highway South prospects, will be completed within approximately one year of POW approval (Figure 3).

## SUMMARY

Manhattan has rationalised its Ponton tenement holdings, whilst maintaining control of the key uranium deposits, reported resources and defined exploration targets, to reduce holding costs and expenditure commitments.

The two JORC 2012 Inferred Mineral Resources reported in January 2017 of over 20Mlb uranium oxide at Ponton are in addition to the four Exploration Targets at Double 8, Stallion South, Highway South and Ponton previously reported in 2014 of 33 to 67Mlb uranium oxide.

The Ponton project is a potential future low cost in-situ metal recovery development opportunity for Manhattan with reported Resources and Targets of 53Mlbs to 87Mlbs making it the third largest uranium resource in WA and positioning the project as one of key regional, state and national significance.

Manhattan's key licence at Ponton, E28/1898, is located mostly within the remote QVSNR, 200km east northeast of Kalgoorlie. The proposal to excise granted E28/1898 from the QVSNR by a Reserves Amendment Bill in the WA parliament is now on hold. The WA state Labor government's policy of not to approve any new uranium mines, or to allow mineral exploration in A Class reserves, suggests there is little likelihood of progressing the exploration and development of the Ponton uranium project over the next four year term of the present WA government.

Manhattan will maintain its Ponton project, with a view that the WA government's policy on uranium approvals may change in the future and or the Labor government will be replaced by a government that is supportive of the industry.

Manhattan is now developing a revised business plan to take the Company forward. Unless there is a very sudden and positive turnaround in the fortunes of the uranium sector the Board, and management team, at Manhattan are looking to diversify into other mineral exploration and development activities in the resource sector with near term certainty of development and commodity price outlook.

As reported in our 30 September 2017 Appendix 5B Cash Flow Report Manhattan has limited cash resources. Material to this in September 2017 the Company received an R&D refund of \$122,399 and currently retains cash reserves of \$181,000.

The Company is continuing to assess new opportunities to maximise shareholder value. An update on developments in relation to those opportunities will be provided in the coming months. In the meantime, the Company is closely monitoring its cash position.

## ALAN J EGGERS

Executive Chairman

31 October 2017

## COMPETENT PERSON'S STATEMENT

*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 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves "JORC Code 2012". 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.*