

## Emerging Gold Producer

### MINING THE TERRITORY

ASX CODE: AHK www.arkmines.com.au

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#### **Competent Persons Report**

The information in this report is based on information compiled by Mr. Roger Jackson who is a 20+ year Member of the Australasian Institute of Mining and Metallurgy and a Member of Australian Institute of Company Directors. Mr. Jackson has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration 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'. Mr. Jackson consents to the inclusion of this report on the matters based on his information in the form and context in which it appears.



### Ark Mines Ltd

- 2011 listing on the Australian Securities Exchange
- ASX code AHK
- Emerging junior gold producer
  - Mining Leases in Northern Territory (Mt. Porter and Glencoe)
  - Exploration Leases in N.T & N.S.W, Australia
- Planning for gold production November 2016
- Headquartered in CBD, Sydney, Australia and Pine Creek NT
- 3 directors (includes Company Secretary)



### Gold Assets

#### Northern Territory, Australia 100% owned by AHK



- Mount Porter/Pine Creek
  - Mining Licence 22839 and ELR116
  - 34,200 Au ounces JORC 2004
  - In production Q4 2016 23-25,000 poured ozs



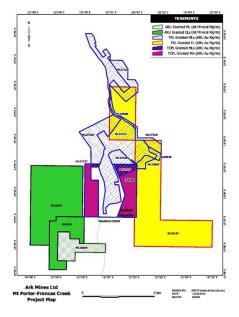
Mt Porter North



Mt Porter South



- Golden Honcho
  - 2 exploration licenses and 7 mining prospects
  - Amigo, Austerian, Bandito, Gulf, Honcho, Senorita & Slips

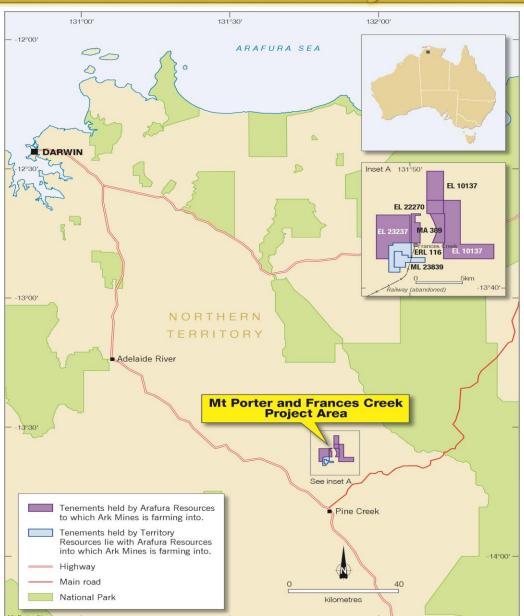




- 42,900 Au ounces JORC 2004 expandable resource
- In production within twelve months when required
- Actively engaged in securing other gold resources
  - 3 under verbal offer



### Northern Territory Assets



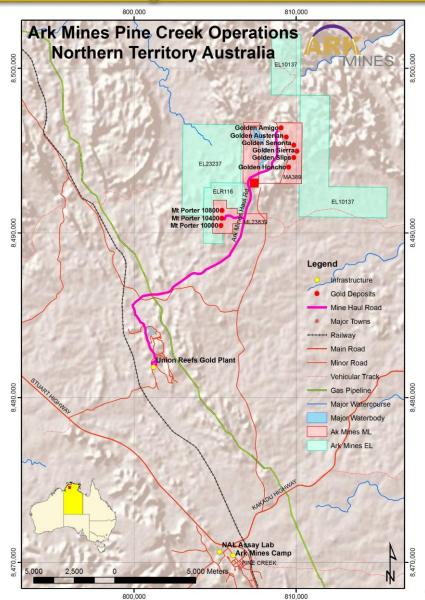


# Mt Porter Project

- Located 15km from the Union reef plant
- Haul road extends to the Mill from Mt Porter
- Mine worker accommodation in Pine Creek







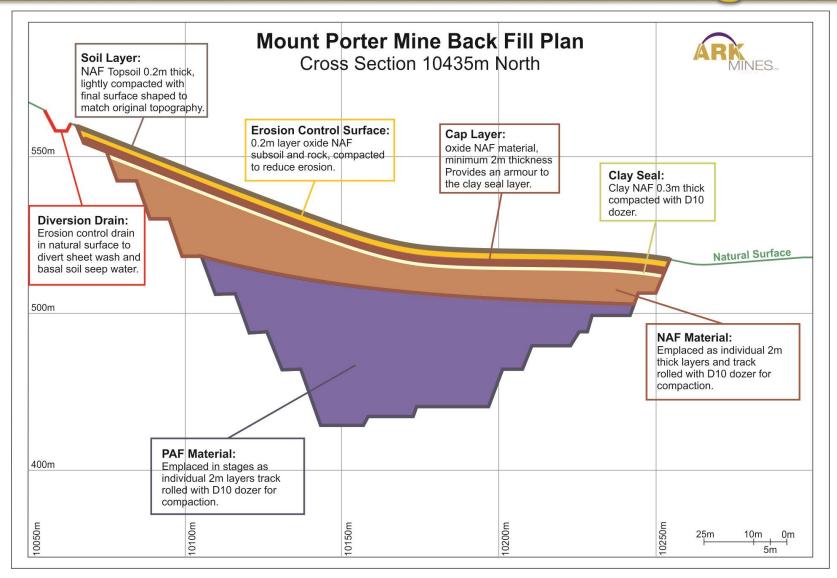


## Mining Mt Porter

- Mt Porter Mining Lease 22389 is in good standing
- Extensive and independent metallurgical testing completed
  - Metallurgical test work oxide gold recoveries circa 92%
  - Metallurgical test work sulphide gold recoveries circa 73%
- Mt Porter optimisation
  - Supports cash flow positive mining case due to
    - Low strip ratio
    - 2.5 g/t head grade
    - Small capex
    - Mill located approx. 15km from Mt Porter pit
- Native title agreements and approvals obtained and in place
- Final costs will be known when NTDME provide their final conditions to the MMP Additional mining and rehabilitation requirements caused by delays in permit approval may impact on costs as a result of:
  - Mining in the wet season due to delays in permit approval
    - Lower mining productivity in the Wet Season
    - Increased ore haulage road management costs
    - Tarping (temporary covering) of all waste stockpiles
    - Increased dewatering and water management requirements
    - Standby Reverse Osmosis plants required on site
    - Engineered sedimentary dams
  - Increased backfilling and rehabilitation requirements from DME
    - Backfilling the pit with compacted 2m layers
    - Engineered clay capping and buffer covering
    - Surface catchment and monitoring



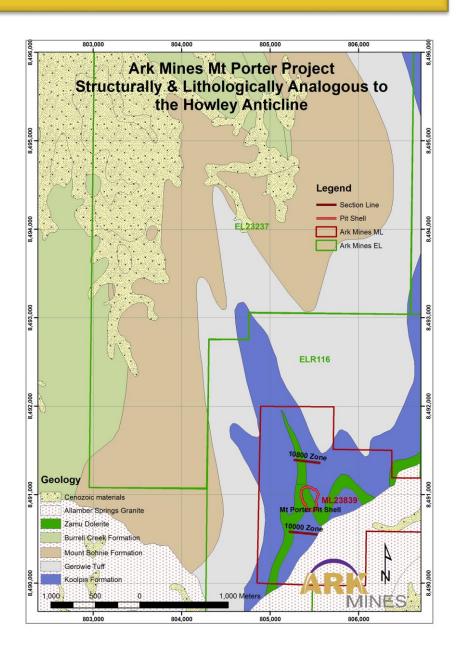
## Mt Porter Backfill Design





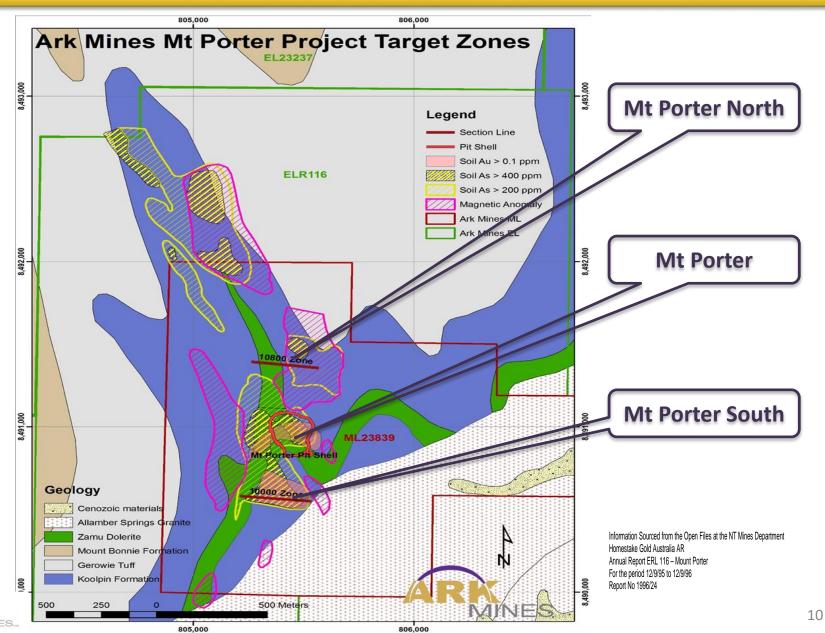
### Mt Porter Anticline

- Mt Porter discovered 1987 and has undergone sporadic light exploration until 2006, with little work carried out away from the initial discovery target.
- Mt Porter has never been mined.
- The Mt Porter tenement pack represents near virgin ground in an ideal structural and lithological environment for Pine Creek Orogen style gold mineralisation.





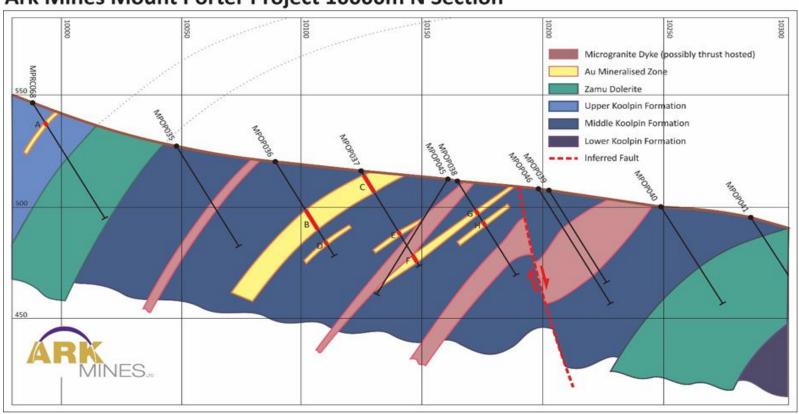
## Mt Porter Anticline





## Mt Porter South

#### Ark Mines Mount Porter Project 10000m N Section



#### Intercept Table

A: 2m at 1.12 g/t Au

B: 10m at 1.15 g/t Au

C: 9m at 1.55 g/t Au (inc. 4m at 2.69 g/t Au)

D: 2m at 1.03 g/t Au

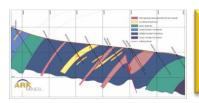
E: 2m at 0.61 g/t Au F: 4m at 0.56 g/t Au G: 2m at 0.74 g/t Au H: 2m at 1.03 g/t Au Cutoff grade: 0.50 g/t Au Topcut grade: 20.0 g/t Au

Information Sourced from the Open Files at the NT Mines Department Homestake Gold Australia AR

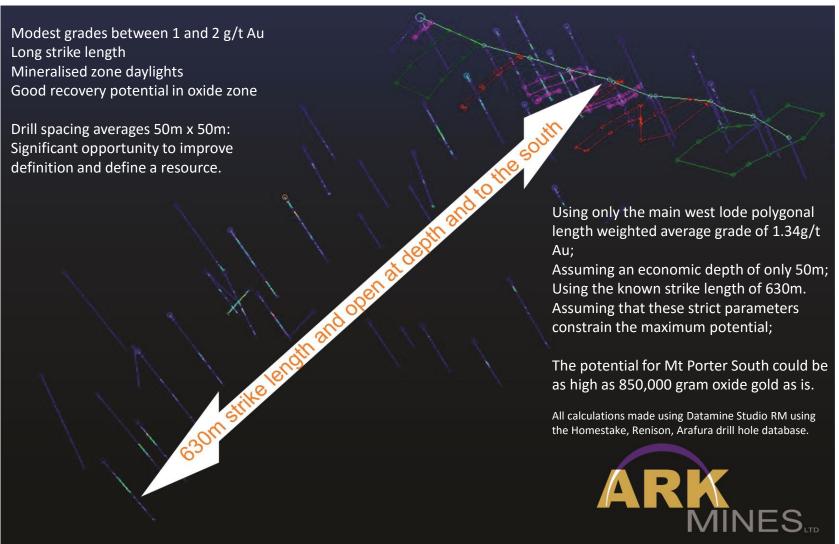
Annual Report ERL 116 – Mount Porter

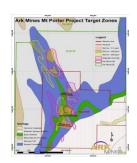
For the period 12/9/95 to 12/9/96 Report No 1996/24





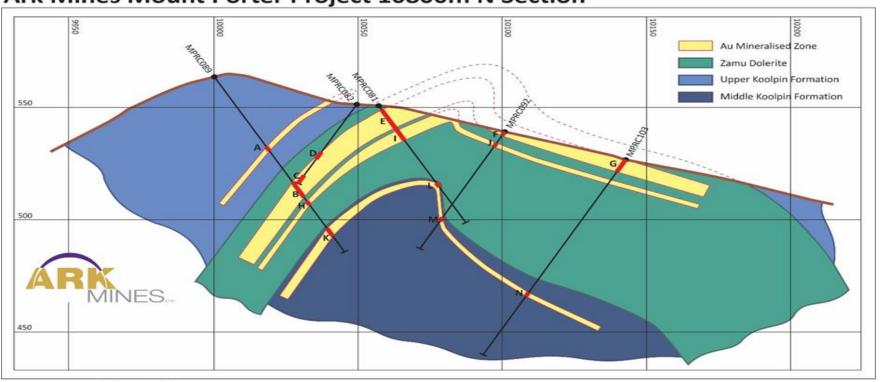
### Mt Porter South





## Mt Porter North

#### Ark Mines Mount Porter Project 10800m N Section



#### Intercept Table

A: 2m at 1.46 g/t Au B: 8m at 8.38 g/t Au (inc. 4m at 14.35 g/t Au) C: 4m at 43.05 g/t Au D: 4m at 1.14 g/t Au

E: 10m at 1.56 g/t Au (inc. 4m at 3.03 g/t Au)

F: 2m at 2.28 g/t Au G: 6m at 1.39 g/t Au H: 2m at 1.01 g/t Au I: 4m at 1.63 g/t Au

J: 2m at 5.20 g/t Au

K: 4m at 0.53 g/t Au L: 2m at 0.58 g/t Au

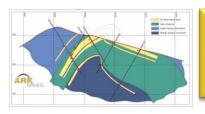
M: 2m at 1.46 g/t Au N: 2m at 0.54 g/t Au

Cutoff grade: 0.50 g/t Au Topcut grade: 20.0 g/t Au

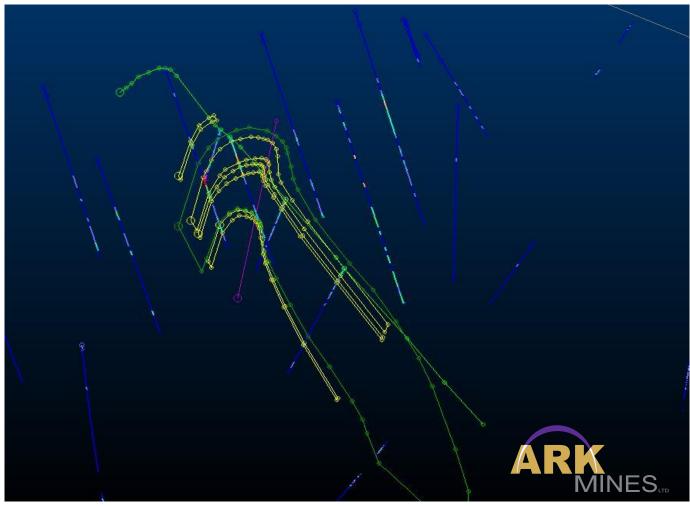


Information Sourced from the Open Files at the NT Mines Department Homestake Gold Australia AR Annual Report ERL 116 – Mount Porter

For the period 12/9/95 to 12/9/96 Report No 1996/24



## Mt Porter North



Good grades in structurally consistent sections, but poor drill targeting and wide spaced reconnaissance drilling at 50m x 50m has failed to delineate the orebody.

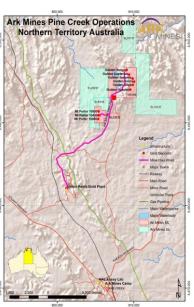
Mt Porter North is open at depth and along strike with potential for a modest sized high grade orebody at surface by carefully planned infill drilling supported by ground penetrating radar to ensure structural definition and minimise wasted drill metres.

# Golden Honcho

- Exploration License's 10137 & 23237 in good standing
- Seven (7) highly prospective gold exposed reefs in a 2.5km zone amenable to simple, low cost, open pit mining and further underground expansion
- Over 2.4km of strike length only 390m (16.25%) drilled
- Recent mapping and rock chip sampling indicates there may be other significant deposits within this lease
- Ark intends to commence a drill out program soon









# Golden Honcho

- Oxide zone between 40m and 50m
- High Grade OP and underground Mining potential
- Low cost development Short Adit entry
- 45 AHK & ARU holes have intersected gold
- Current strike length circa. 2400m
- 51 intersections >1m over 5g/t including: (refer to AHK ASX announcement 3/11/15)

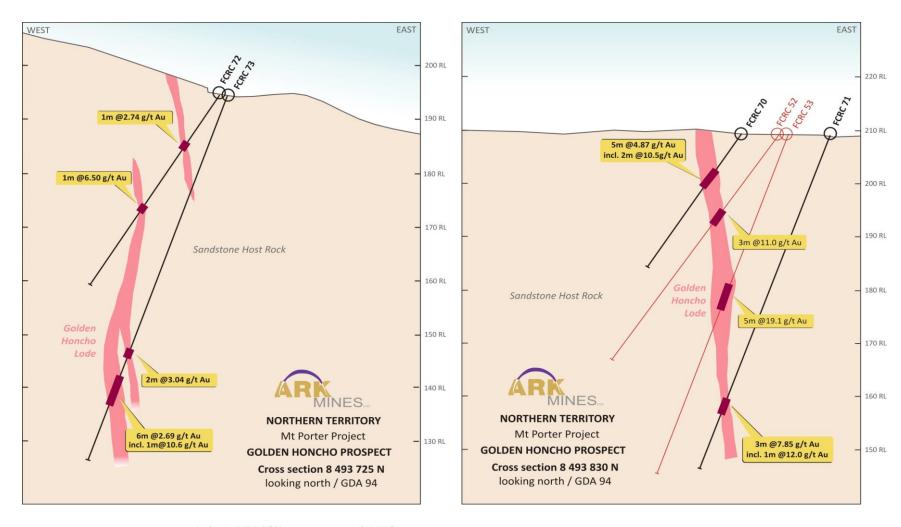
•	5m@19.11g/t	•	4m@47.54g/t
•	3m@10.96g/t	•	2m@13.29g/t
•	2m@13.29g/t	•	2m@10.5g/t
•	2m@21g/t	•	2m@12.9g/t
•	5m@19.11g/t	•	3m@10.66g/t
•	2m@13.29g/t	•	2m@10.5g/t
•	2m@11.9g/t	•	3m@9.59g/t
•	2m@11.61g/t	•	2m@8.15g/t







### Honcho Cross Sections





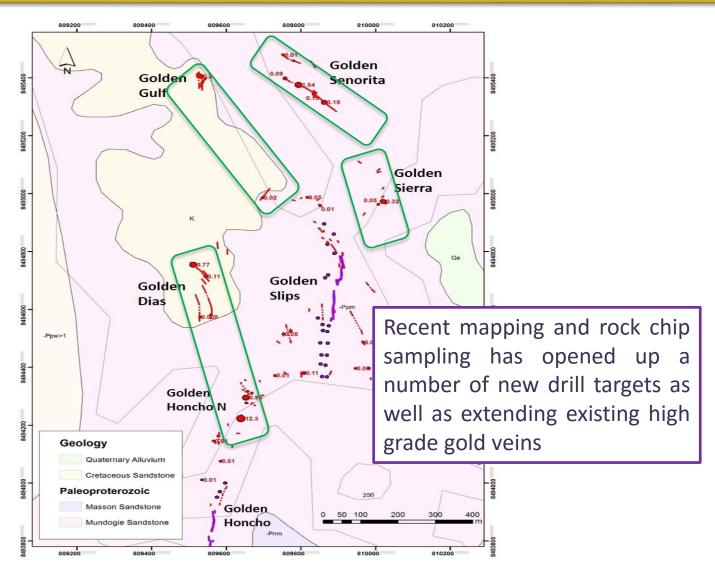
# Excellent Drilling Results

- Best 2015 AHK intersections :
  - 3m @ 13.41 g/t Au, including 1m @ 30.8 g/t Au;
  - 2m @ 12.9g/t Au, including 1m @14.5
    g/t Au;
  - 2m @ 6.65g/t Au, including 1m @11.7 g/t Au;
  - 1m @ 6.42g/t Au.
- Best 2014 AHK intersections :
  - 2m @ 21g/t Au;
  - 2m @ 11.9g/t Au;
  - 2m @ 10.5g/t Au; and
  - 3m @7.5g/t Au;
  - with 21 other intersections over 1m over 5g/t Au.

- Best 2004 Arafura (ARU) intersections :
  - 5m @ 19.11g/t Au;
  - 4m @ 47.54g/t Au;
  - 2m @ 10.07g/t Au;
  - 2m @ 13.29g/t Au;
  - 2m@ 11.61g/t Au;
  - 3m @ 10.96g/t Au;
  - 3m @ 10.66 g/t Au;
  - 2m @ 21g/t Au;
  - 2m @ 11.9g/t Au;
  - 2m @ 10.5g/t Au;
  - 2m @9.92g/t Au; and
  - 3m @7.5g/t Au
- with 30 other intersections over 1m over 5g/t Au
  - (refer to AHK ASX announcement 3/11/15)



# New Targets





### GLENCOE ML29679

- 704,000 tonnes @1.9g/t Au with 253,000 tonnes @2.2 g/t Au oxide and 451,000 tonnes @ 1.7 g/t Au Fresh, this mineral resource estimate complies with recommendations in the Australasian Code for Reporting of Mineral Resources and Ore Reserves (2004) by the Joint Ore Reserves Committee (JORC)
- Metallurgical test work has shown high gravity/cyanidation recoveries of 95.85% (Ammtec 2012). Reagent consumptions were relatively low, with lime and cyanide consumption of 1.01 and 0.77 kg/t, respectively
- Bulk sample has been undertaken and reconcilable
- Pre strip completed
- The oxide zone is 30m below surface
- The deposit is proximal to the other AHK tenements and within trucking distance of Newmarket's Union Reef Gold Mill;
- A strike length of 800m (from 3,300mE to 4,100mE) with potential for extensions
- The deposit being located in three mineralized zones, the largest of which is a round 700m in strike length, 100m down dip and up to 15m in width
- Sealed road access
- Flat and easily accessible terrain
- No existing entitlements



### In Summary

- Upon receiving the Mt Porter mine approval, Ark has an opportunity to commence mining and become the first Gold Mining operator to be granted a permit since 2014
- More importantly, Ark has the opportunity to replicate the Mt Porter model with a better insight into understanding the requirements of permitting in NT
- Ark has a significant land tenure in the Pine Creek region
- Ark has a pipeline of gold projects to develop
- Ark has a high grade surface and underground project in Golden Honcho





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