

# **MOD RESOURCES LTD**

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25 May 2016

# **ANNUAL GENERAL MEETING**

## MAJOR TRANSFORMATION OF MOD UNDERWAY



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Information in this presentation which relate to mineral resources, drilling and exploration at the Botswana Copper Project is reviewed and approved by Jacques Janse van Rensburg, BSc (Hons), General Manager Exploration (Africa) for MOD Resources. He is registered as a Professional Natural Scientist with the South African Council for Natural Scientific Professions (SACNASP) No. 400101/05 and has reviewed the technical information in this report. Mr Janse van Rensburg has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and the activity which it is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves. Mr Janse van Rensburg consents to the inclusion in this presentation of the matters based on information in the form and context in which it appears.

The Competent Person responsible for the geological interpretation, Mineral Resource estimation and classification of the Mahumo Copper/Silver Project is Mr A.I. Pretorius, who is a full-time employee of Sphynx Consulting CC and registered with SACNASP (400060/91). Mr Pretorius has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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'.

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# MILESTONES - PAST 12 MONTHS



#### Mahumo Project, Botswana (MOD 100%)

Feb 2015: Deepest drill hole intersects 4m @ 2.0% Cu and 55g/t Ag

Mar 2015: Initial resource of 2.7Mt @ 2.0% Cu and 50g/t Ag. Open at depth

Jul 2015: Agreement with Sedgman to fund US\$1.5M into Mahumo feasibility studies

#### Acquisition of DMI interests in Botswana (MOD 70%)

Nov 2015: Agreement to acquire 14 DMI licences with Metal Tiger (MTR)

Dec 2015: Completion of conditions precedent for DMI acquisition

Feb 2016: Ministerial consent to transfer DMI licences. Drilling commences at T4

Mar 2016: Discovery of T3, significant visible Cu in first shallow RC drill holes

Apr 2016: 52m @ 2.0% Cu (incl 14m @ 3.4% Cu & 72.7g/t Ag) in 3<sup>rd</sup> drill hole at T3

May 2016: Phase 1 Resource diamond drilling program underway at T3

#### Sams Creek Gold Project NZ (MOD 80%)

**Sep 2015**: MOD earns 80% joint venture interest at Sams Creek **Jan 2016**: Announce intention to divest part of Sams Creek JV interest

# **KALAHARI COPPER BELT**

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## BACKGROUND

- ✓ MOD well established, experienced explorer in Kalahari Copper Belt since 2011
- ✓ 11,500km<sup>2</sup> holdings : MOD 100%, plus MOD 70% / MTR 30% Joint Venture
- ✓ Sources of funding: (Metal Tiger JV, UK, Australia, potential part sale of Sams Creek)
- ✓ Exploration focus on coincident Cu soil geochemical and structural anomalies
- $\checkmark$  >10 high priority targets (T1-T10) identified for drilling during 2016
- ✓ Commitment to support Ghanzi through employment, training & small business

## T3 DISCOVERY

- ✓ T3 drilling started March 2016. Immediate success, 52m @ 2.0% Cu in 3<sup>rd</sup> hole
- ✓ 2 diamond rigs already drilling out initial resource (Phase 1) to ~200m depth
- $\checkmark$  Sediment hosted Cu sulphide mineralisation starts at very shallow depth
- ✓ T3 mineralisation unique in Botswana & completely open along strike and at depth
- ✓ T3 only ~20km from MOD's Mahumo Project. Potential for joint development

# **BOTSWANA JOINT VENTURE**





- T3 is part of 70:30 Joint Venture with UK resource company Metal Tiger Plc (MTR)
- Botswana funding from recent placement and planned rights issue
- 14 JV licences in Kalahari Cu Belt acquired 2015. Ministerial consent February 2016
- Adjacent to Cupric Canyon Capital (>5Mt Cu resources) & MOD 100% holdings
- Numerous drilling targets identified from Cu soil anomalies and magnetic structure
- Drilling commenced February 2016. Immediate success at T4, then T3 in March
- Drilling being ramped up along T3 Dome. High grade Cu in many holes to date
- Good infrastructure and easy access to MOD/MTR JV licences via regional highway



## **Coincident Cu/Pb/Zn anomalies along part of T3 Dome**





#### **SOIL ANOMALIES (Approx Location)**

Cu – Red, Pb – Black, Zn – Yellow

- T3 Dome is completely obscured by shallow calcrete cover and is previously undrilled
- Drilling to date within 1km area (white rectangle) along part of T3 Dome
- Cu/Ag appears related to previous Cu/Pb/Zn soil anomalies. Verification sampling in progress
- Low cost RC drilling very effective for defining Cu sulphides at shallow depth
- Diamond drilling now drilling out initial resource to 200-250m depth (Phase 1)
- 'T3 Target Sequence' dips very shallow (20 deg N). Potential for structural repetitions
- RC now testing other targets along T3 Dome







#### T3 Assays (MO-G-12R) – high grade Cu & Ag zones, plus Mo



• RC drilling targets shallow mineralisation. Diamond drilling provides reliable assay, geological & resource data

• Region around T3 completely unexplored. 100% MOD/MTR

• Now drilling Zn/Cu anomalies on interpreted S side of Dome

• MOD also progressing regional targets to support T3

• Operations based in Ghanzi

| INTER\ | /AL (m) | Ag       | Cu       | Cu       | Мо       | Pb       | Pb       | Zn       | Zn       |
|--------|---------|----------|----------|----------|----------|----------|----------|----------|----------|
| From   | То      | ppm      | ppm      | %        | ppm      | ppm      | %        | ppm      | %        |
|        |         | 3AD/ICP* |
| 100    | 101     | <3.0     |          |          | <2.5     |          |          | 246      |          |
| 101    | 102     | <3.0     | 1432     |          | <2.5     | 12       |          | 221      |          |
| 102    | 103     | <3.0     | 691      |          | <2.5     | 10       |          | 140      |          |
| 103    | 104     | <3.0     | 2955     |          | 2.8      | 24       |          | 170      |          |
| 104    | 105     | <3.0     | 3410     |          | <2.5     | 13       |          | 207      |          |
| 105    | 106     | 19.8     |          | 1.30     | 19       | 41       |          | 172      |          |
| 106    | 107     | 12.8     |          | 1.39     | <2.5     | 209      |          | 325      |          |
| 107    | 108     | <3.0     | 3576     |          | 4.0      | 267      |          | 211      |          |
| 108    | 109     | <3.0     | 1046     |          | <2.5     | 62       |          | 236      |          |
| 109    | 110     | <3.0     | 1465     |          | 6.6      | 55       |          | 205      |          |
| 110    | 111     | <3.0     |          | 1.23     | 6.4      | 68       |          | 247      |          |
| 111    | 112     | <3.0     | 5139     |          | 3.2      | 14       |          | 213      |          |
| 112    | 113     | <3.0     |          | 1.67     | 3.8      | 39       |          | 218      |          |
| 113    | 114     | <3.0     |          | 1.67     | 12       | 192      |          | 142      |          |
| 114    | 115     | <3.0     | 9656     |          | 9.5      | 126      |          | 139      |          |
| 115    | 116     | <3.0     | 8119     |          | <2.5     | 119      |          | 215      |          |
| 116    | 117     | 46.9     |          | 2.99     | 7.3      | 31       |          | 241      |          |
| 117    | 118     | 101.5    |          | 4.06     | 9.5      | 110      |          | 292      |          |
| 118    | 119     | 102.3    |          | 5.01     | 99       | 56       |          | 336      |          |
| 119    | 120     | 120.0    |          | 5.94     | 14       | 176      |          | 380      |          |
| 120    | 121     | 128.3    |          | 5.59     | 443      | 142      |          | 209      |          |
| 121    | 122     | 91.5     |          | 3.15     | 2075     | 100      |          | 293      |          |
| 122    | 123     | 64.9     |          | 2.57     | 722      | 157      |          | 324      |          |
| 123    | 124     | 41.4     |          | 1.75     | 9.4      | 67       |          | 261      |          |
| 124    | 125     | 92.3     |          | 4.73     | 373      | 67       |          | 322      |          |
| 125    | 126     | 22.9     |          | 1.02     | 4.8      | 30       |          | 257      |          |
| 126    | 127     | 31.0     |          | 1.41     | 30       | 41       |          | 240      |          |
| 127    | 128     | 14.5     | 7768     |          | 107      | 17       |          | 296      |          |
| 128    | 129     | 148.9    |          | 6.92     | 483      | 58       |          | 306      |          |
| 129    | 130     | 21.5     |          | 1.25     | 5.9      | 19       |          | 230      |          |

## T3 – Resource Drilling program



- Diamond drilling on 200m by 200m , & 50m by 50m grid
- Two diamond rigs on site. Producing up to 160m core /day
- ASX Guidance: unable to report visible sulphide intersections
- Priority to improve core processing & assay turnaround
- Potential for T3 and Mahumo to form one expanded project
- RC drilling testing other targets in very prospective T3 area

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## MAHUMO CONCENTRATES – high grade, low impurity



| Mineral      | Chemical Formula                                    | Cu           | Fe    | S     |
|--------------|---|--------------|-------|-------|
| Chalcopyrite | CuFeS <sub>2</sub>                                  | 34.6%        | 30.4% | 34.9% |
| Bornite      | Cu₅FeS₄   | 63.3%        | 11.1% | 25.6% |
| Chalcocite   | Cu <sub>2</sub> S                                   | <b>79.9%</b> |       | 20.1% |
| Digenite     | Cu <sub>9</sub> S <sub>5</sub>                      | 78.1%        |       | 21.9% |
| Covellite    | CuS   | 66.5%        |       | 33.5% |
| Malachite    | Cu <sub>2</sub> (CO <sub>3</sub> )(OH) <sub>2</sub> | 57.5%        |       |       |
| Enargite     | Cu <sub>3</sub> AsS <sub>4</sub>                    | 48.4%        |       | 32.6% |

Mahumo Cu sulphides dominated by high tenor Bornite and Chalcocite Testwork produced high grade & high quality concentrates (potentially up to twice global average)



Mahumo concentrate during test work

| FLOTATION TEST      | MASS<br>PULL | COPPER IN<br>CONCENTRATE |          | SILVER IN CONCENTRATE |          |  |
|---------------------|--------------|--------------------------|----------|-----------------------|----------|--|
| PRODUCT             |              | Assay                    | Recovery | Assay                 | Recovery |  |
|                     | (%)          | (%)                      | (%)      | (ppm)                 | (%)      |  |
| Cleaner Concentrate | 5.32         | 38.55                    | 96.57    | 758                   | 85.92    |  |
| Cleaner Concentrate | 5.74         | 35.88                    | 96.95    | 709                   | 86.61    |  |
| Cleaner Concentrate | 6.40         | 32.29                    | 97.25    | 641                   | 87.30    |  |
| Cleaner Concentrate | 7.61         | 27.20                    | 97.53    | 542                   | 87.97    |  |
| Cleaner Concentrate | 9.41         | 22.08                    | 97.78    | 442                   | 88.62    |  |



# **OTHER TARGETS – Phase 1 Drilling Targets (T1-T10)**



| Priority<br>Target                     | Licence                            | Phase 1 - Target Summary & Objectives   | Planned Program  |
|--|------------------------------------|---|--|
| <b>T1</b><br>Mahumo Res.<br>Extensions | PL 190<br>MOD & MTR                | Test potential extensions down dip and along strike from Mahumo resource onto MOD/MTR JV licences to $\sim$ 600m depth. Target potential increase to 10Mt. Deepest previous intersection: <b>4m @ 2.6% CuEq</b>   | -  |
| <b>T2</b><br>Mahumo<br>East            | PL 190<br>MOD & MTR                | Test potential at Mahumo East along strike from a single, shallow DMI drill hole which intersected: <b>2.2m @ 1.8% Cu &amp; 50g/t Ag</b>  | 3 RC drill holes complete<br>March 2016.   |
| <b>T3</b><br>T3 Dome                   | PL 190<br>MOD & MTR                | Confirm and test source of <b>~5km long surface Cu/Pb/Zn anomaly</b> coincident with<br>an area of structural complexity (interp buried dome) along strike from Banana<br>Dome resources (>1Mt Cu)  |  |
| <b>T4</b><br>Tshimologo                | PL 60<br>MOD & MTR                 | <b>6.12% Cu &amp; 111g/t Ag</b> and <b>4m @ 2.6% Cu &amp; 40g/t Ag</b> . Target potential of large Cu soil anomaly along regional shear up to 2km west of recent drilling   | 6 RC drill holes complete<br>March 2016. Narrow hig<br>grade shear host Cu               |
| <b>T5</b><br>Molelo                    | PL 141<br>MOD<br>80%               | Test interpreted <b>magnetic core of 10km Molelo Intrusion</b> . Only previous drill hole intersected elevated PGM in altered and veined mafic intrusion overlain by intense red IOCG type alteration   |  |
| <b>T6</b><br>Molelo Area               | PL 141 MOD<br>& PL102<br>MOD & MTR | Test previous <b>&gt;5km surface Cu anomaly</b> . Area of magnetic complexity coincident with high surface Cu values, southwest of Molelo Intrusion   | Additional surface samplin<br>to define extent of large C<br>anomaly. Target RC drilling |
| <b>T7</b><br>Ghanzi South              | PLs 34, 35, 36<br>MOD<br>100%      | Test 3 targets with extensive, widely spaced surface Cu anomalies extending over total 40kms near <b>Kaapvaal Craton margin</b> . 3 targets are: <b>Dome</b> - at eastern end of 25km basement dome, <b>Central</b> - wide zone of Cu anomalism, & <b>KC Contact</b> - infill sampling near craton margin | Cu anomalies in areas o  |
| <b>T8</b><br>South Limb                | PL 652<br>MOD                      | Infill & extend >2km surface Cu anomaly which remains open and is undrilled.<br>Located along southern bounding structure of Mahumo Structural Corridor, Banana<br>Dome resources (>1Mt Cu)   | ,  |
| <b>T9</b><br>'New Target'              | PL 102<br>MOD & MTR                | Infill & extend previous <b>&gt;100ppm Cu surface anomaly</b> associated with interpreted sheared out contact on Zeta & Zeta NE regional structure (similar magnetic signature/setting to Zone 5??)   | Significant Cu soil anomal   |
| <b>T10</b><br>Fold nose                | PL 103<br>MOD/MTR                  |   | Surface sampling of fol<br>nose to target RC drilling                                    |











#### **T3 RESOURCE & OTHER EXPLORATION**

- 1. CURRENT RESOURCE DRILLING (PHASE 1). TEST EXTENSIONS (PHASE 2)
- 2. GEOPHYSICS TO DEFINE SULPHIDES & GEOMETRY AT DEPTH
- 3. TEST NEW SHALLOW COPPER TARGETS ALONG 25KM 'T3 DOME'
- 4. TEST EXTENSIONS BELOW MAHUMO RESOURCE (>300m DEPTH)
- 5. DRILL TEST OTHER COPPER SOIL ANOMALIES ON REGIONAL LICENCES

#### EARLY DEVELOPMENT RELATED ACTIVITIES

- 1. METALLURGICAL TEST WORK ON SULPHIDE ORES FROM T3
- 2. PROGRESS MAHUMO TOWARDS POTENTIAL PRE FEASIBILITY STUDY
- 3. EVALUATE RANGE OF POTENTIAL ORE PROCESSING OPTIONS

