



1 TITLE PAGE

**TECHNICAL REPORT
MINERAL RESOURCE ESTIMATES FOR
THE PAULSENS GOLD MINE**

**Pilbara,
Western Australia**

Prepared by:

**Jonathon Abbott, BSc Appl. Geol, MAusIMM
Brook Ekers, BSc Appl. Geol, MAIG**

**FOR
INTREPID MINES LTD**

AUSTRALIA

JANUARY, 2010

**INTREPID MINES PTY LTD
LEVEL 1, 490 UPPER EDWARD STREET, SPRING HILL
QLD 4004 AUSTRALIA**

**TEL: +61 7 3007 8000
FAX: +61 7 3007 8080
EMAIL: info@intrepidmines.com**

2 TABLE OF CONTENTS

| | | |
|-----------|---|-----------|
| 1 | TITLE PAGE | 1 |
| 2 | TABLE OF CONTENTS | 2 |
| 3 | SUMMARY | 6 |
| 4 | INTRODUCTION | 7 |
| 5 | RELIANCE ON OTHER EXPERTS | 7 |
| 6 | PROPERTY DESCRIPTION AND LOCATION | 7 |
| 7 | ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY | 8 |
| 8 | HISTORY | 9 |
| | 8.1 PROJECT HISTORY AND OWNERSHIP | 9 |
| | 8.2 PRODUCTION | 9 |
| | 8.3 VOYAGER EXPLORATION | 10 |
| | 8.4 PREVIOUS RESOURCE ESTIMATES..... | 10 |
| 9 | GEOLOGICAL SETTING | 11 |
| | 9.1 REGIONAL GEOLOGY | 11 |
| | 9.2 LOCAL GEOLOGY..... | 11 |
| | 9.3 PROPERTY GEOLOGY | 12 |
| 10 | DEPOSIT TYPES | 12 |
| 11 | MINERALIZATION | 12 |
| | 11.1 PAULSENS MINERALIZATION | 12 |
| | 11.2 VOYAGER RESOURCE DOMAINS | 16 |
| 12 | EXPLORATION | 19 |
| 13 | DRILLING | 19 |
| 14 | SAMPLING METHOD AND APPROACH | 22 |
| | 14.1 INTRODUCTION | 22 |
| | 14.2 SAMPLING METHODS..... | 22 |
| | 14.3 SAMPLING INCLUDED IN CURRENT ESTIMATES..... | 23 |
| | 14.3.1 <i>Sampling types and phases</i> | 23 |
| | 14.3.2 <i>Sample spacing and coverage</i> | 23 |
| | 14.4 NUMBER OF SAMPLES AND SAMPLE LENGTHS | 25 |
| | 14.5 MINERALIZED DOMAIN INTERSECTIONS..... | 25 |
| 15 | SAMPLING PREPARATION, ANALYSES AND SECURITY | 34 |
| | 15.1 INTRODUCTION AND SUMMARY | 34 |
| | 15.2 SAMPLE PREPARATION AND ANALYSES..... | 34 |
| | 15.3 QUALITY CONTROL FOR GOLD ANALYSIS..... | 34 |
| | 15.3.1 <i>Submitted blind standards</i> | 34 |
| | 15.3.2 <i>Submitted blank samples</i> | 35 |
| | 15.3.3 <i>Laboratory internal standards</i> | 36 |
| | 15.3.4 <i>Laboratory internal analytical blanks</i> | 36 |
| | 15.3.5 <i>Laboratory internal repeats</i> | 36 |
| | 15.4 DENSITY MEASUREMENTS..... | 37 |
| 16 | DATA VERIFICATION | 40 |
| 17 | ADJACENT PROPERTIES | 40 |
| 18 | MINERAL PROCESSING | 40 |
| 19 | MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES | 40 |
| | 19.1 MINERAL RESOURCE ESTIMATES..... | 40 |

| | | |
|-----------|--|-----------|
| 19.1.1 | <i>Introduction</i> | 40 |
| 19.1.2 | <i>Data compilation</i> | 42 |
| 19.1.3 | <i>Mineralized domains</i> | 42 |
| 19.1.4 | <i>Definition of mineralized intervals for resource estimate</i> | 43 |
| 19.1.5 | <i>Composites used for estimation</i> | 46 |
| 19.1.6 | <i>Estimation of domain orientation</i> | 49 |
| 19.1.7 | <i>Kriging of gold grades</i> | 50 |
| 19.1.8 | <i>Densities assigned to current estimate</i> | 50 |
| 19.1.9 | <i>Composites versus estimated with gold grades</i> | 51 |
| 19.1.10 | <i>Resource classification</i> | 52 |
| 19.1.11 | <i>Model estimates</i> | 54 |
| 19.2 | MINERAL RESERVE ESTIMATES..... | 55 |
| 20 | OTHER RELEVANT DATA AND INFORMATION | 55 |
| 21 | INTERPRETATION AND CONCLUSIONS | 56 |
| 22 | RECOMMENDATIONS | 57 |
| 22.1 | INTRODUCTION..... | 57 |
| 22.2 | STAGE ONE..... | 58 |
| 22.3 | STAGE TWO..... | 58 |
| 22.4 | STAGE THREE..... | 59 |
| 23 | REFERENCES | 61 |
| 24 | DATE AND SIGNATURE PAGE | 62 |
| 24.1.1 | <i>Jonathon Abbott</i> | 62 |
| 24.1.2 | <i>Brook Ekers</i> | 63 |
| 25 | ADDITIONAL REQUIREMENTS FOR TECHNICAL REPORTS ON DEVELOPMENT PROPERTIES AND PRODUCTION PROPERTIES | 64 |

List of Figures

| | |
|---|----|
| FIGURE 1: PAULSENS SITE PLAN | 8 |
| FIGURE 2: PAULSENS LOCATION..... | 9 |
| FIGURE 3: PAULSENS GENERAL REGIONAL GEOLOGY | 11 |
| FIGURE 4 SCHEMATIC CROSS-SECTIONAL VIEW OF PAULSENS MINERALIZATION | 13 |
| FIGURE 5: EXAMPLE CORE PHOTOGRAPHS OF VOYAGER MINERALIZATION (PDU1098)..... | 15 |
| FIGURE 6: CROSS SECTION VIEWS OF MINERALIZED DOMAINS AND SAMPLING TRACES | 17 |
| FIGURE 7: PLAN VIEWS OF MINERALIZED DOMAINS AND SAMPLING TRACES..... | 18 |
| FIGURE 8: MINERALIZED DOMAINS AND SAMPLING TRACES | 21 |
| FIGURE 9: MINERALIZED DOMAINS AND INTERCEPTS COLOURED BY GOLD GRADE | 24 |
| FIGURE 10: DIAMOND CORE SAMPLE LENGTHS | 25 |
| FIGURE 11: HISTOGRAMS OF INTERSECTION TRUE WIDTHS AND DOWN-HOLE: TRUE WIDTH RATIO | 26 |
| FIGURE 12: SUBMITTED BLANK ASSAY RESULTS VERSUS SAMPLE IDENTIFIER..... | 35 |
| FIGURE 13: ALS INTERNAL REPEAT ASSAYS FOR VOYAGER DRILLING | 37 |
| FIGURE 14: ALS PYCNOMETER VERSUS SITE IMMERSION MEASUREMENTS | 38 |
| FIGURE 15: PYCNOMETER DENSITY VERSUS GOLD GRADE | 39 |
| FIGURE 16: EXAMPLES OF SUPPLIED AND MODIFIED DOMAIN INTERSECTIONS | 45 |
| FIGURE 17: CUMULATIVE DISTRIBUTION OF RESOURCE COMPOSITES BY DOMAIN | 47 |
| FIGURE 18: HISTOGRAMS OF ESTIMATED DOMAIN DIPS..... | 49 |
| FIGURE 19: KRIGED ESTIMATES VERSUS COMPOSITE GRADES..... | 51 |
| FIGURE 20: LONG SECTION VIEWS SHOWING OUTER EXTENTS OF INDICATED RESOURCE..... | 53 |
| FIGURE 21: REMAINING VOYAGER LOWER ZONE MINERALIZATION | 55 |
| FIGURE 22: PROPOSED DRILLING STAGES..... | 60 |

List of Tables

| | |
|---|-----------|
| TABLE 1: PAULSENS MINERAL RESOURCE ESTIMATE DECEMBER 2009 | 6 |
| TABLE 2: PAULSENS PRODUCTION | 9 |
| TABLE 3: HISTORICAL VOYAGER INTERSECTIONS | 10 |
| TABLE 4: MARCH 2009 RESOURCE ESTIMATE | 10 |
| TABLE 5: DIAMOND DRILL HOLES INTERSECTING MINERALIZED DOMAINS | 20 |
| TABLE 6: DRILL HOLES AND FACE SAMPLING INTERSECTING MINERALIZED DOMAINS | 23 |
| TABLE 7: SAMPLE LENGTHS WITHIN MINERALIZED DOMAINS | 25 |
| TABLE 8: SAMPLE LENGTHS WITHIN MINERALIZED DOMAINS | 26 |
| TABLE 9: DRILL HOLE INTERSECTIONS | 27 |
| TABLE 10: BLIND STANDARDS RESULTS FOR VOYAGER DRILLING | 35 |
| TABLE 11: BLANK RESULTS FOR VOYAGER DRILLING | 35 |
| TABLE 12: ALS INTERNAL STANDARDS FOR 2009 | 36 |
| TABLE 13: ALS INTERNAL BLANKS FOR 2009 | 36 |
| TABLE 14: ALS INTERNAL REPEATS VOYAGER RESOURCE DRILLING | 37 |
| TABLE 15: ALS PYCNOMETER VERSUS SITE IMMERSION MEASUREMENTS | 38 |
| TABLE 16: PAULSENS RESOURCE ESTIMATE DECEMBER 2009 | 42 |
| TABLE 17: SUMMARY OF SUPPLIED AND MODIFIED DRILL CORE MINERALIZED INTERCEPTS | 44 |
| TABLE 18: DIAMOND CORE COMPOSITE LENGTH SUMMARY | 46 |
| TABLE 19: COMPOSITE STATISTICS BY RESOURCE DOMAIN | 47 |
| TABLE 20: UPPER CUTS APPLIED TO ESTIMATES | 47 |
| TABLE 21: CUT COMPOSITES FROM EACH DOMAIN | 48 |
| TABLE 22: KRIGING RUNS | 50 |
| TABLE 23: VARIOGRAM MODELS | 50 |
| TABLE 24: SEARCH CRITERIA | 50 |
| TABLE 25: PRE-MINING RESOURCE ESTIMATE | 54 |
| TABLE 26: PAULSENS REMNANT RESOURCE ESTIMATE DECEMBER 2009 | 55 |
| TABLE 27: PAULSENS MINERAL RESOURCE ESTIMATE DECEMBER 2009 | 56 |
| TABLE 28: ESTIMATED COSTS OF PROPOSED VOYAGER DRILLING | 60 |
| TABLE 29: SUMMARY OF REHABILITATION BONDS LODGED WITH DMP | 64 |
| TABLE 30: OPERATING EXPENDITURE RESULTS FOR 2009 | 65 |