MINE DEVELOPMENT ASSOCIATES
MINE ENGINEERING SERVICES

Technical Report and Preliminary Feasibility Study: Hasbrouck and Three Hills Gold-Silver Project Esmeralda County, Nevada

Prepared for

WEST KIRKLAND MINING, INC.

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Paul Tietz, C.P.G.
Thomas L. Dyer, P.E.
Herbert Osborne
Ryan Baker, P.E.
Carl Defilippi

775-856-5700

210 South Rock Blvd.
Reno, Nevada 89502
FAX: 775-856-6053

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CONTENTS

1.0 EXECUTIVE SUMMARY 1
- 1.1 Introduction 1
- 1.2 Access, Property Description and Land 1
- 1.3 History 2
- 1.4 Geology and Mineralization 3
- 1.5 Drilling 3
- 1.6 Sample Preparation, Analyses and Security 4
- 1.7 Data Verification 4
- 1.8 Metallurgical Testing 4
- 1.9 Mineral Resources Estimate 5
- 1.10 Mineral Reserves Estimate 6
- 1.11 Mining Methods 8
- 1.12 Mineral Processing 9
- 1.13 Project Infrastructure -Water, Power and Buildings 9
- 1.14 Environmental Studies, Permitting and Social Impact 10
- 1.15 Capital and Operating Costs 10
- 1.16 Economic Analysis 13
- 1.17 Project Sensitivity 15
- 1.18 Risks and Opportunities 17
- 1.19 Recommendations 21

2.0 INTRODUCTION AND TERMS OF REFERENCE 23
- 2.1 Project Scope and Terms of Reference 23
- 2.2 Frequently Used Acronyms, Abbreviations, Definitions, and Units of Measure 24

3.0 RELIANCE ON OTHER EXPERTS 27

4.0 PROPERTY DESCRIPTION AND LOCATION 28
- 4.1 Location 28
- 4.2 Land Area 28
- 4.3 Agreements and Encumbrances 32
- 4.4 Environmental Considerations 33
  - 4.4.1 Environmental Liabilities 33
  - 4.4.2 Permits Required 34
- 4.5 Easements for Local Infrastructure 34

775-856-5700

210 South Rock Blvd.
Reno, Nevada 89502
FAX: 775-856-6053

5.0 ACCESSIBILITY, PHYSIOGRAPHY, CLIMATE, LOCAL RESOURCES AND INFRASTRUCTURE 36
5.1 Access 36
5.2 Physiography....36
5.3 Climate....36
5.4 Local Resources and Infrastructure 37
5.4.1 Human Resources, Accommodation, and Amenities 37
5.4.1.1 Electrical Power 37
5.4.1.2 Raw Water Supply 37
5.4.1.3 Potable Water 37

6.0 HISTORY 38
6.1 Three Hills Exploration History....38
6.1.1 Hasbrouck Exploration History....39
6.2 Historical Mineral Resource Estimates....42
6.2.1 Historical Three Hills Estimates....42
6.2.2 Historical Hasbrouck Estimates 44
6.3 Historical Production 47

7.0 GEOLOGIC SETTING AND MINERALIZATION 48
7.1 Geologic Setting....48
7.1.1 Regional Geology....48
7.1.2 Project Geology....50
7.1.2.1 Three Hills Deposit Geology....50
7.1.2.2 Hasbrouck Deposit Geology 53
7.2 Mineralization....55
7.2.1 Three Hills Mineralization 55
7.2.2 Hasbrouck Mineralization 57

8.0 DEPOSIT TYPES....60

9.0 EXPLORATION....62
9.1 Three Hills Exploration....62
9.2 Hasbrouck Deposit Exploration....62

10.0 DRILLING....64
10.1 Drilling at Three Hills....67
10.1.1 Drilling at Three Hills by Allied Nevada 68
10.1.2 Drilling at Three Hills by West Kirkland Mining 68
10.1.3 Collar and Down-hole Surveys at Three Hills 68
10.1.4 Summary of Drilling Results at Three Hills....69
10.2 Drilling at Hasbrouck Mountain 69
10.2.1 Drilling At Hasbrouck by Allied Nevada....72
10.2.2 Drilling At Hasbrouck by West Kirkland Mining....73
10.2.3 Collar and Down-hole Surveys at Hasbrouck Mountain....74
10.2.4 Core Recovery at Hasbrouck Mountain 75
10.2.5 Summary of Drilling Results at Hasbrouck Mountain 76

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY 77
11.1 Historic Sample Preparation and Analyses 77
11.1.1 Three Hills Surface Samples 77
11.1.2 Hasbrouck Surface and Underground Samples 77
11.1.3 Three Hills Drilling Samples 78
11.1.4 Hasbrouck Drilling Samples 79
11.2 Sample Preparation and Analysis by West Kirkland 81
11.2.1 Surface Sampling by West Kirkland at Three Hills and Hasbrouck 81
11.2.2 West Kirkland's Drill Samples at Three Hills and Hasbrouck 81
11.3 Sample Security 81
11.4 Summary Statement 82

12.0 DATA VERIFICATION 83
12.1 Database Audit 83
12.1.1 MDA Audit of pre-Allied Data 83
12.1.1.1 Pre-Allied Drilling Data for Three Hills 83
12.1.1.2 Pre-Allied Drilling Data for Hasbrouck 84
12.1.2 MDA Audit of Allied Data 84
12.1.3 Database Audit Summary 85
12.2 Site Visit 85
12.3 Quality Assurance/ Quality Control 85
12.3.1 Three Hills Standards 87
12.3.2 Hasbrouck Deposit Standards 87
12.3.3 Three Hills Blanks 88
12.3.4 Hasbrouck Deposit Blanks 88
12.3.5 Historical Check Assays—Three Hills 89
12.3.6 Historical Check Assays—Hasbrouck Deposit 89
12.3.7 MDA Check Assays – Three Hills 90
12.4 Summary Statement 91

13.0 METALLURGICAL TESTING AND MINERAL PROCESSING 92
13.1 Three Hills Historical Metallurgical Testing 92
13.2 Hasbrouck Historical Metallurgical Testing 92
13.3 Three Hills Metallurgical Testing By West Kirkland 92
13.4 Hasbrouck Metallurgical Testing By West Kirkland 92
13.5 Three Hills – Analysis of Test Results 95
13.5.1 Three Hills Ore Description 95
13.5.2 Three Hills Sample Locations 95
13.5.3 Three Hills Bottle Roll Test Results 96
13.5.4 Three Hills Column Leach Test Results 97
13.5.5 Three Hills - Recovery versus Particle Size 98
13.5.6 Three Hills Leach Cycle Duration 100
13.5.7 Projected Recovery of Gold at Three Hills 101
13.5.8 Projected Consumption of Reagents 102
13.5.8.1 Three Hills Cyanide Consumption 102
13.5.8.2 Three Hills Cement and Lime Consumption 102

13.5.9 Three Hills - Compacted Permeability Results 102
13.5.10 Three Hills Comminution Test Results 102
13.6 Hasbrouck Test Results..103
13.6.1 Hasbrouck Ore Description 103
13.6.2 Hasbrouck Sample Locations 103
13.6.3 Hasbrouck Deposit Bottle Roll Test Results 105
13.6.4 Hasbrouck Deposit Column Tests 106
13.6.5 Hasbrouck Deposit – Gold Recovery by Size Fraction.........................108
13.6.6 Hasbrouck Deposit - Gold and Silver Recovery by Lithology and Elevation...109
13.6.7 Hasbrouck Deposit High Pressure Grinding Roll Testing 110
13.6.8 Hasbrouck Deposit - Work Index and Abrasion Index Test Results.....117
13.6.9 Hasbrouck Deposit - Agglomeration and Permeability Test Results....117
13.6.10 Hasbrouck Deposit - Leach Cycle Time Results...................................119
13.6.11 Hasbrouck Deposit - Predicted Recovery of Gold and Silver...............121
13.6.12 Hasbrouck Deposit - Cyanide Consumption 122
13.6.13 Hasbrouck Deposit - Cement and Lime Consumption..........................122
13.6.14 Detailed Results of Bottle Roll and Column Leach Tests.....................122
13.7 Summary of Test Results and Conclusions 130
13.8 Hasbrouck Project Metallurgical Parameter Summary.......................................131

14.0 MINERAL RESOURCES 133
14.1 Introduction...133
14.2 Three Hills Deposit 136
14.2.1 Three Hills Data 136
14.2.2 Deposit Geology Pertinent to Resource Modeling................................137
14.2.3 Three Hills Geologic Model 137
14.2.4 Mineral-Domain Grade Model 138
14.2.5 Three Hills Sample Coding and Compositing.......................................141
14.2.6 Density...141
14.2.7 Three Hills Block Model Coding 142
14.2.8 Resource Model and Estimation..142
14.2.9 Three Hills Mineral Resources 143
14.2.10 Model Checks 147
14.2.11 Comments on the Three Hills Resource Modeling 147
14.3 Hasbrouck Deposit...147
14.3.1 Data..148
14.3.2 Deposit Geology Pertinent to Resource Modeling................................148
14.3.3 Lithology/Alteration Model...150
14.3.4 Mineral-Domain Grade Model 150
14.3.5 Sample Coding and Compositing..154
14.3.6 Density...155
14.3.7 Underground Workings 155
14.3.8 Block Model Coding 156
14.3.9 Resource Model and Estimation..156
14.3.10 Hasbrouck Mineral Resources 157

14.3.11 Model Checks 162
14.3.12 Comments on the Hasbrouck Resource Modeling 162

15.0 MINERAL RESERVE ESTIMATES 163
15.1 Introduction 163
15.2 Pit Optimization 165
15.2.1 Economic Parameters 165
15.2.2 Geometrical Parameters 166
15.2.2.1 Three Hills Mine Slope Parameters 166
15.2.2.2 Hasbrouck Mine Slope Parameters 167
15.2.3 Cutoff Grades 167
15.2.4 Pit-Optimization Method and Results 168
15.2.4.1 Three Hills Pit Optimization Results 169
15.2.4.2 Three Hills Pit Shell Selected for Design Guidance 172
15.2.4.3 Hasbrouck Pit Optimization Results 172
15.2.4.4 Hasbrouck Pit Shells Selected for Design Guidance 175
15.3 Pit Designs 175
15.3.1 Bench Height 175
15.3.2 Pit Design Slopes 176
15.3.2.1 Three Hills Pit Slope Design Parameters 176
15.3.2.2 Hasbrouck Pit Slope Design Parameters 176
15.3.3 Haulage Roads 177
15.3.4 Ultimate Pit Designs 177
15.3.5 Pit Phasing 179
15.4 Dilution 182
15.5 Three Hills and Hasbrouck Mine Proven and Probable Reserves 183
15.5.1 Three Hills and Hasbrouck Mines In-pit Inferred Resources 185

16.0 MINING METHODS 187
16.1 Definition of Mine Material Types 187
16.2 Mine Roads and Equipment Access 187
16.3 Mine-Waste Facilities 187
16.3.1 Geotechnical Aspects of Waste Rock Storage Areas 187
16.3.2 Waste Rock Storage Area Designs 188
16.4 Stockpiles 189
16.5 Mine-Production Schedule 190
16.5.1 Three Hills Production Schedule 190
16.5.2 Hasbrouck Production Schedule 191
16.5.3 Combined Annual Production Schedule 192
16.6 Equipment Selection and Productivities 195
16.7 Mining Personnel and Staffing 195
16.8 Mine Pit Dewatering 196

17.0 RECOVERY METHODS 197
17.1 Three Hills Proposed Mine Recovery Methods 197
17.1.1 Three Hills Process Description Summary 197

17.1.2 Three Hills Process Design Criteria 200
17.1.3 Three Hills Lime Storage and Addition 200
17.1.4 Three Hills Stacking 200
17.1.5 Three Hills Solution Application and Leaching 200
17.1.6 Three Hills Leach Pad Design and Solution Collection 201
17.1.6.1 Three Hills Basic Design..201
17.1.6.2 Three Hills Mine Heap Leach Facilities Geotechnical 202
17.1.7 Three Hills Solution Storage 203
17.1.7.1 Three Hills Event Pond 203
17.1.7.2 Three Hills Pregnant and Barren Solution Tanks.................203
17.1.8 Three Hills Solution Management..203
17.1.9 Three Hills Process Water Balance 204
17.1.9.1 Three Hills Process Solution and Makeup Water 205
17.1.9.2 Three Hills Precipitation Data...205
17.1.9.3 Three Hills Water Balances..206
17.1.10 Three Hills Adsorption-Desorption Recovery Plant 207
17.1.10.1 Three Hills Adsorption...207
17.1.10.2 Three Hills Carbon Acid Wash 207
17.1.10.3 Three Hills Desorption...208
17.1.10.4 Three Hills Electrowinning 208
17.1.10.5 Three Hills Carbon Thermal Regeneration 208
17.1.10.6 Three Hills Refining and Smelting.....................................208
17.1.11 Three Hills Adsorption-Desorption Recovery Reagents and Mixing ...209
17.1.11.1 Three Hills Cyanide 209
17.1.11.2 Three Hills Sodium Hydroxide (“NaOH”)..........................209
17.1.11.3 Three Hills Hydrochloric Acid..209
17.1.11.4 Three Hills - Other Reagents...210
17.1.12 Three Hills Carbon Handling 210
17.1.13 Three Hills Process Reagents Delivery, Storage and Consumption Estimates...210
17.1.13.1 Three Hills Pebble Lime 211
17.1.13.2 Three Hills Sodium Cyanide (“NaCN”)..............................211
17.1.13.3 Three Hills Carbon...211
17.1.13.4 Three Hills Hydrochloric Acid (“HCl”)..............................211
17.1.13.5 Three Hills Sodium Hydroxide 212
17.1.13.6 Three Hills Diesel Fuel 212
17.1.13.7 Three Hills Antiscalant...212
17.1.13.8 Three Hills Fluxes 212
17.2 Hasbrouck Proposed Mine Recovery Methods...212
17.2.1 Hasbrouck Process Description Summary 212
17.2.2 Hasbrouck Process Design Criteria 216
17.2.3 Hasbrouck Ore Stockpiles 216
17.2.4 Hasbrouck Crushing 216
17.2.5 Hasbrouck Agglomeration...217
17.2.6 Hasbrouck Stacking...218
17.2.7 Hasbrouck Solution Application and Leaching..................................218

17.2.8 Hasbrouck Leach Pad Design 219
17.2.8.1 Hasbrouck Basic Design 219
17.2.9 Hasbrouck Mine Heap Leach Facilities Geotechnical 219
17.2.10 Hasbrouck Solution Storage 220
17.2.10.1 Hasbrouck Event Pond 220
17.2.10.2 Hasbrouck Pregnant and Barren Solution Tanks 220
17.2.11 Hasbrouck Solution Management 221
17.2.12 Hasbrouck Process Water Balance 221
17.2.12.1 Hasbrouck Process Solution and Makeup Water 222
17.2.12.2 Hasbrouck Precipitation Data 222
17.2.12.3 Hasbrouck Water Balances 222
17.2.13 Hasbrouck Adsorption 226
17.2.14 Hasbrouck Carbon Handling 226
17.2.15 Hasbrouck Process Reagents Delivery, Storage and Consumption Estimates 226
17.2.15.1 Hasbrouck Cement 227
17.2.15.2 Hasbrouck Sodium Cyanide (“NaCN”) 227
17.2.15.3 Hasbrouck Carbon 227
17.2.15.4 Hasbrouck Antiscalant 228

18.0 PROJECT INFRASTRUCTURE 229
18.1 Site Facilities 229
18.1.1 Access and Site Roads 229
18.1.2 Security and Fencing 229
18.1.3 Water Supply 234
18.1.4 Water Distribution 235
18.1.5 Fire Water 236
18.1.6 Fuel Handling Facility 236
18.1.7 First Aid and Emergency Preparedness 237
18.1.8 Communications 237
18.1.9 Transportation 237
18.1.10 Buildings 237
18.1.10.1 Three Hills Process Area Buildings 238
18.1.10.2 Three Hills Process Maintenance Shop and Warehouse 239
18.1.10.3 Hasbrouck Process Maintenance Shop and Warehouse 239
18.1.11 Explosive Storage and Handling 239
18.2 Electrical Power Supply and Distribution 239
18.2.1 Offsite Electrical Power 239
18.2.2 Three Hills Mine Onsite Electrical Power 240
18.2.2.1 Three Hills Backup Power 241
18.2.2.2 Three Hills Onsite Electrical Distribution 241
18.2.3 Hasbrouck Mine Onsite Electrical Power 242
18.2.3.1 Hasbrouck Electrical Substation 242
18.2.3.2 Hasbrouck Backup Power 242
18.2.3.3 Hasbrouck Onsite Electrical Distribution 243

19.0 MARKET STUDIES AND CONTRACTS....244

20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT....246
20.1 Introduction....246
20.2 BLM Plan of Operations / BMRR Nevada Reclamation Permit....248
20.2.1 BLM Pre-Application Planning....248
20.2.2 Plan of Operations Processing....248
20.3 National Environmental Policy Act....249
20.3.1 Environmental Assessment Process....249
20.3.2 Environmental Impact Statement Process....249
20.4 State of Nevada Permits....250
20.4.1 Water Pollution Control Permit....250
20.4.2 Air Quality Operating Permit....251
20.4.3 Mercury Operating Permit....251
20.5 Esmeralda County....251
20.6 Nye County....252
20.7 Other Permits....252
20.8 Environmental Study Results and Known Issues....253
20.9 Waste Disposal, Monitoring, Water Management....254
20.9.1 Waste Handling and Disposal....254
20.9.1.1 Hazardous Wastes....254
20.9.1.2 Non-Hazardous Wastes....254
20.9.1.3 Domestic Waste Disposal....254
20.9.2 Waste Water (Sewage) Disposal....255
20.9.3 Waste Rock Characterization....255
20.10 Social and Community Issues....255
20.11 Reclamation Plan and Mine Closure....255
20.11.1 Reclamation....256
20.11.1.1 Central Operating Area (Administration, HLF, and Process)256
20.11.1.2 Mine Pits....257
20.11.1.3 Mine Waste Dumps....257
20.11.1.4 Roads....258
20.11.2 Closure Activities....258
20.11.2.1 Slope Stabilization....258
20.11.2.2 Final Engineering and Monitoring Plans....259
20.11.2.3 Heap Rinsing and Neutralization....259
20.11.2.4 Ponds and Pump Stations....259
20.11.2.5 Roads, Diversion Works and Erosion Controls....260
20.11.2.6 Fencing....260

21.0 CAPITAL AND OPERATING COSTS....261
21.1 Mining Capital....263
21.2 Three Hills Process Capital....264
21.2.1 Three Hills HLF....266
21.2.2 Three Hills Event Pond....267

21.2.3 Three Hills Civils and Foundations........267
21.2.4 Three Hills Structural Steel........267
21.2.5 Three Hills Platework........267
21.2.6 Three Hills Mechanical Equipment........267
21.2.7 Three Hills Piping, Electrical and Instrumentation........267
21.2.8 Three Hills Installation and Commissioning........268
21.2.9 Three Hills Freight........268
21.2.10 Three Hills Sales Tax and Other Taxes........268
21.2.11 Three Hills Site Earthworks Capital Costs........268
21.2.12 Three Hills Power Supply & Distribution Capital Costs........269
21.2.13 Three Hills Water Capital Costs........269
21.2.14 Three Hills Buildings, Lighting, Fire Fighting, Support Equipment........269
21.2.14.1 Three Hills Buildings........269
21.2.14.2 Three Hills Support Equipment – Mobile Equipment........269
21.2.14.3 Three Hills Support Equipment –Communications........270
21.3 Three Hills Indirect Capital Costs........270
21.3.1 Three Hills Spare Parts........270
21.3.2 Three Hills Initial Fills Inventory........270
21.3.3 Three Hills Engineering, Procurement and Construction Management 271
21.3.4 Three Hills Contingency........271
21.3.5 Three Hills Sustaining Capital........271
21.3.5.1 Three Hills Exclusions........272
21.4 Hasbrouck Process Capital Costs........272
21.4.1 Hasbrouck HLF and Event Ponds........275
21.4.2 Hasbrouck Civils and Foundations........275
21.4.3 Hasbrouck Structural Steel........275
21.4.4 Hasbrouck Platework........276
21.4.5 Hasbrouck Mechanical Equipment........276
21.4.6 Hasbrouck Piping, Electrical and Instrumentation........276
21.4.7 Hasbrouck Installation........277
21.4.8 Hasbrouck Freight........277
21.4.9 Hasbrouck Sales Tax and Other Taxes........277
21.4.10 Hasbrouck Power Supply and Distribution Capital Costs........277
21.4.11 Hasbrouck Water Capital Costs........278
21.4.12 Hasbrouck Buildings, Lighting, Fire Fighting, Support Equipment Capital Costs........278
21.4.12.1 Hasbrouck Buildings........278
21.4.12.2 Hasbrouck Fire Fighting........278
21.4.12.3 Hasbrouck Mobile Equipment........278
21.5 Hasbrouck Indirect Capital Costs........278
21.5.1 Hasbrouck Spare Parts........279
21.5.2 Hasbrouck Initial Fills Inventory........279
21.5.3 Hasbrouck Engineering, Procurement and Construction Management 279
21.5.4 Hasbrouck Contingency........279
21.5.5 Hasbrouck Sustaining Capital........280
21.5.5.1 Hasbrouck Exclusions........280

21.6 Other Capital Costs 280
21.7 Mine Operating Costs 282
21.8 Process Operating Costs 283
21.8.1 Three Hills Process and Support Services Operating Costs 284
21.8.1.1 Three Hills Process Personnel and Staffing 286
21.8.1.2 Three Hills Power 286
21.8.1.3 Three Hills Consumable Items 287
21.8.1.4 Three Hills Laboratory 288
21.8.1.5 Three Hills Fuel 289
21.8.1.6 Three Hills Mobile Equipment 289
21.8.1.7 Three Hills Repair Materials 289
21.8.2 Hasbrouck Process and Support Services Operating Costs 289
21.8.2.1 Hasbrouck Process Personnel and Staffing 293
21.8.2.2 Hasbrouck Power 293
21.8.2.3 Hasbrouck Consumable Items 294
21.8.2.4 Hasbrouck Laboratory 296
21.8.2.5 Hasbrouck Fuel 296
21.8.2.6 Hasbrouck Spare HPGR Parts 296
21.8.2.7 Hasbrouck Mobile Equipment 296
21.8.2.8 Hasbrouck Repair Materials 297
21.9 Other Operating Costs 297

22.0 ECONOMIC ANALYSIS 300
22.1 Economic Parameters and Assumptions 302
22.1.1 Royalties 302
22.1.2 Taxes 302
22.1.3 Project Physical Values 303
22.1.4 Other Economic Assumptions 305
22.2 Pre-Feasibility Cash Flow 305
22.3 Cash-Flow Sensitivity 307
22.4 Project Timing Sensitivity 309
22.4.1 Three Hills Mine Only 309
22.4.2 Hasbrouck Mine Construction Delay 310

23.0 ADJACENT PROPERTIES 313

24.0 OTHER RELEVANT DATA AND INFORMATION 314
24.1 Project Execution 314
24.2 Other Relevant Information 314

25.0 INTERPRETATION AND CONCLUSIONS 315
25.1 Data and Mineral Resources 315
25.2 Hasbrouck Estimated Mineral Resources 315
25.3 Three Hills Estimated Mineral Resources 316
25.4 Mineral Reserves 317
25.5 Processing and Recovery Methods 318
25.6 Capital and Operating Costs 318

25.7 Economic Analysis and Sensitivity 318
25.8 Risks and Opportunities 319
25.8.1 External Risks 319
25.8.2 Internal, Project-Specific Risks 319
25.8.3 Opportunities 321

26.0 RECOMMENDATIONS 324
26.1 Feasibility Study 324
26.2 Resource Expansion 324
26.3 Resource Upgrade 325
26.4 Mining 325
26.5 Pit Slope Confirmation and Steepening 325
26.6 Metallurgical Testing 325
26.7 Processing 326
26.8 Crushing and Screening Plant Optimization 326
26.9 HPGR Size 326
26.10 Hasbrouck Pug Mill 326
26.11 Hasbrouck Mine Adsorption Plant 326
26.12 Used Equipment 326
26.13 Civil Construction Using Mining Equipment 327
26.14 Water Supply 327
26.15 Fire Fighting Water 327
26.16 Environmental327
26.17 Land Ownership 327

27.0 REFERENCES 328

28.0 DATE AND SIGNATURE PAGE 331

29.0 CERTIFICATE OF QUALIFIED PERSON 333

TABLES

Table 1.1 Three Hills Reported Mineral Resources (0.005oz Au/ton Cutoff)............................5
Table 1.2 Hasbrouck Deposit Reported Mineral Resources (0.006oz AuEq/ton Cutoff)...........6
Table 1.3 Pre-Feasibility Economic Parameters 6
Table 1.4 Metallurgical Recoveries 7
Table 1.5 Three Hills In-Pit Probable Reserves..7
Table 1.6 Hasbrouck In-Pit Proven and Probable Reserves 7
Table 1.7 Total Hasbrouck Project In-Pit Proven and Probable Reserves..................................8
Table 1.8 Existing Disturbance and Notices for the Hasbrouck Project....................................11
Table 1.9 Hasbrouck Project Capital Cost Summary 12
Table 1.10 Operating Cost Summary...13
Table 1.11 Hasbrouck Project Highlights Based on 100% of the Project 13
Table 1.12 After-Tax Project Sensitivity 15
Table 1.13 Three Hills Only Scenario Economic Results 16
Table 1.14 Hasbrouck Project Recommendations 21
Table 4.1 Existing Disturbance and BLM Notices for the Hasbrouck Project 33
Table 4.2 Operating Permits Required..34
Table 6.1 Historical Three Hills Resource Estimates: 1988 through 1996...............................43
Table 6.2 Historic Three Hills Resource Estimate 2003 and 2006...43
Table 6.3 Summary of 2014 Estimated Resources, Three Hills 43
Table 6.4 Historical (Non-43-101) Resource and Reserve Estimates for the Hasbrouck.........44
Table 6.5 2003 and 2006 Historic MDA Resource Estimate for the Hasbrouck Deposit 45
Table 6.6 2012 Hasbrouck Inferred Resource Estimate at Various Cut-off Grades.................46
Table 6.7 Summary of 2014 Hasbrouck Resource Estimate from Wilson (2014) 46
Table 10.1 Summary of Drilling in the Hasbrouck Project 64
Table 10.2 Summary of Drilling in the Vicinity of Three Hills 67
Table 10.3 Summary of Drilling in the Vicinity of Hasbrouck Mountain..................................69
Table 10.4 Historic Drilling Contractors and Rig Types 70
Table 12.1 Summary of QA/QC Reference Materials for the Allied Nevada Drilling at Three Hills and Hasbrouck Deposits..86
Table 12.2 West Kirkland QA/QC Sample Insertion Template 87
Table 13.1 Summary of Process Test Work 93
Table 13.2 Three Hills Bottle Roll Test Results 97
Table 13.3 Three Hills Column Tests, Grades and Reagent Consumption 97
Table 13.4 Three Hills ROM Column Testing Drain Down...98
Table 13.5 Three Hills ROM Column Testing Retained Moisture...98
Table 13.6 Predicted Three Hills Field Leaching Times 101
Table 13.7 Summary of Bottle Roll Test Results on Cone Crushed Material..........................106
Table 13.8 Gold Recovery in Column Tests..107
Table 13.9 HPGR Test Series 1 – Column Test Recoveries..112
Table 13.10 Hasbrouck HPGR – Upper Siebert Bottle Roll Gold and Silver Recoveries 114
Table 13.11 Hasbrouck HPGR – Lower Siebert Bottle Roll Gold and Silver Recoveries.........115
Table 13.12 Bond Crusher Work Index and Abrasion Index 117
Table 13.13 Hasbrouck Preliminary Agglomeration Testing...118
Table 13.14 Hasbrouck Compacted Permeability Test...119
Table 13.15 Summary of Hasbrouck Leach Cycle Duration Results for Gold 120

Table 13.16 Hasbrouck Leach Cycle Duration....121
Table 13.17 Hasbrouck Bottle Roll Test Results....123
Table 13.18 Hasbrouck Column Tests, Grades and Reagents....126
Table 13.19 Hasbrouck Column Tests, Extractions and Tails....128
Table 13.20 Three Hills and Hasbrouck Recovery Factors....131
Table 13.21 Hasbrouck and Three Hills Predicted Reagent Consumptions....132
Table 14.1 Three Hills Mineral Domain Assay Statistics....141
Table 14.2 Three Hills Mineral Domain Composite Statistics....141
Table 14.3 Descriptive Statistics of Three Hills Tonnage Factor (ft^3/ton) Values by Rock Type....142
Table 14.4 Three Hills Search Ellipse Orientations....142
Table 14.5 Summary of Three Hills Estimation Parameters....143
Table 14.6 Three Hills Classification Parameters....143
Table 14.7 Three Hills Reported Mineral Resources (0.005oz Au/ton Cutoff)....144
Table 14.8 Three Hills Mineral Resources....144
Table 14.9 Hasbrouck Mineral Domain Assay Statistics....154
Table 14.10 Hasbrouck Mineral Domain Composite Statistics....155
Table 14.11 Descriptive Statistics of Hasbrouck Tonnage Factor (cuft/ton) by Rock Type....155
Table 14.12 Hasbrouck Search Ellipse Orientations....156
Table 14.13 Summary of Hasbrouck Estimation Parameters....157
Table 14.14 Hasbrouck Classification Parameters....157
Table 14.15 Hasbrouck Reported Mineral Resources (0.006oz AuEq/ton cutoff grade)....158
Table 14.16 Hasbrouck Mineral Resources....159
Table 15.1 Pre-Feasibility Economic Parameters....165
Table 15.2 Metallurgical Recoveries....166
Table 15.3 Three Hills Slope Parameters....167
Table 15.4 Hasbrouck Slope Recommendations....167
Table 15.5 Calculated Cutoff Grades (oz Au/ton)....168
Table 15.6 Three Hills Pit Optimization Results....170
Table 15.7 Three Hills Pit by Pit Analysis Results....171
Table 15.8 Hasbrouck Pit Optimization Results....173
Table 15.9 Hasbrouck Pit by Pit Analysis Results....174
Table 15.10 Three Hills Slope Design Parameters....176
Table 15.11 Hasbrouck Pit Design Parameters....176
Table 15.12 Three Hills Probable Reserves....183
Table 15.13 Hasbrouck Proven and Probable Reserves....183
Table 15.14 Combined Three Hills and Hasbrouck Proven and Probable Reserves....183
Table 15.15 Proven and Probable Reserves and Stripping by Pit Phase....184
Table 15.16 Total In-Pit Inferred Resources, Hasbrouck Project....186
Table 16.1 Three Hills Lag Time for Recoverable Gold Ounces....191
Table 16.2 Hasbrouck Lag Time for Recoverable Ounces....191
Table 16.3 Annual Mine Production Schedule....193
Table 16.4 Annual Process Production Schedule....194
Table 16.5 Owners General Mine Personnel....196
Table 17.1 Process Design Criteria Summary....200
Table 17.2 Mean Modeled Monthly Precipitation....206

Table 17.3 Three Hills Projected Annual Reagent Consumption and Storage.........................211
Table 17.4 Hasbrouck Process Design Criteria Summary...216
Table 17.5 Average Year Water Balance, Hasbrouck Mine..223
Table 17.6 Extreme Wet Year Water Balance, Hasbrouck Mine...224
Table 17.7 Extreme Dry Year Water Balance, Hasbrouck Mine..225
Table 17.8 Projected Annual Reagent Consumables, Hasbrouck..227
Table 18.1 Three Hills Heap Leach and Process Facilities Power 241
Table 18.2 Three Hills Heap Leach and Process Facilities Power – Years 3 to 8....................241
Table 18.3 Hasbrouck Power For Heap Leach and Process Facilities.....................................242
Table 19.1 Kitco Reported Monthly Gold Prices (USD/oz Au – May 2014 to April 2015)....244
Table 19.2 Kitco Reported Monthly Silver Prices (USD/oz Ag – May 2014 to April 2015)...245
Table 20.1 WK Mining (USA)'s Notices 246
Table 20.2 Ministerial Permits, Plans, and Notifications 253
Table 21.1 Hasbrouck Project Capital Cost Summary 262
Table 21.2 Operating Cost Summary..263
Table 21.3 Summary of Estimated Project Mining Capital...264
Table 21.4 KCA Three Hills Process Capital Costs by Area...265
Table 21.5 KCA Three Hills Process Capital Costs by Discipline..266
Table 21.6 NewFields Estimated Capital for Three Hills (K USD) 266
Table 21.7 Initial Fills – Three Hills...271
Table 21.8 KCA Hasbrouck Process Capital Costs by Area 273
Table 21.9 KCA Hasbrouck Process Capital Costs by Discipline...274
Table 21.10 NewFields Estimated Capital for Hasbrouck (K USD) 275
Table 21.11 Structural Steel Unit Rates...276
Table 21.12 Hasbrouck Initial Fills 279
Table 21.13 Administration Capital...280
Table 21.14 Safety and Security Capital Costs..281
Table 21.15 Owner's Capital Costs 282
Table 21.16 Light Vehicles...282
Table 21.17 Mine Contractor Operating Cost..283
Table 21.18 Owner Mine Operating Cost..283
Table 21.19 Three Hills Process and Support Operating Costs...285
Table 21.20 Three Hills Process Power and Consumption..287
Table 21.21 Three Hills Process Consumable Items 287
Table 21.22 Support Equipment Operating Costs – Three Hills 289
Table 21.23 Hasbrouck Process & Support Operating Cost..291
Table 21.24 Hasbrouck Process Power and Consumption 294
Table 21.25 Process Consumable Items – Hasbrouck 294
Table 21.26 Hasbrouck Support Equipment Operating Costs 296
Table 21.27 General and Administration Costs 298
Table 22.1 Hasbrouck Project Economic Summary 301
Table 22.2 NPT Tax Rate Base on Net Proceeds to Gross Proceeds Ratio..............................303
Table 22.3 Project Physicals...304
Table 22.4 Hasbrouck Project Cash Flow...306
Table 22.5 Metal Price Sensitivity...307
Table 22.6 Operating Cost Sensitivities...308

Table 22.7 Capital Cost Sensitivities 308
Table 22.8 Three Hills Only Scenario Economic Results 310
Table 22.9 After-Tax Economics for Delay Scenarios 312
Table 24.1 Pre-Feasibility Schedule for the Three Hills and Hasbrouck Mines 314
Table 25.1 Hasbrouck Reported Mineral Resources (0.006oz AuEq/ton cutoff grade) 316
Table 25.2 Three Hills Reported Mineral Resources (0.005oz Au/ton Cutoff) 316
Table 25.3 Three Hills and Hasbrouck Combined Proven and Probable Reserves 317
Table 26.1 Cost Estimate for Recommendations 324
Table 28.1 List of Responsibilities of Qualified Persons 332

FIGURES

Figure 1.1 After-Tax Project Sensitivity 16
Figure 4.1 Hasbrouck Project Location Map 29
Figure 4.2 Land Status Map of the Three Hills Property 30
Figure 4.3 Land Status Map of the Hasbrouck Deposit Area 31
Figure 7.1 Regional Geologic Map of the Three Hills and Hasbrouck Area, Nevada 49
Figure 7.2 Geologic Map of the Three Hills Deposit Area 51
Figure 7.3 Three Hills East-West Cross-section 13821570 Looking North 52
Figure 7.4 Three Hills North-South Cross-section 1565110 Looking West 52
Figure 7.5 Geologic Map of the Hasbrouck Deposit 54
Figure 7.6 East-West Cross-section Hasbrouck Deposit 54
Figure 7.7 Hasbrouck Deposit North-South Au Section 1563700 Looking West 55
Figure 7.8 Three Hills Level Plan 5730 Elevation 57
Figure 7.9 Hasbrouck Deposit Level Plan 5845 Elevation 59
Figure 10.1 Drill-Hole Location Map for the Three Hills Area 65
Figure 10.2 Drill-Hole Location Map for the Hasbrouck Mountain Area 66
Figure 10.3 Hasbrouck Deposit Core Recovery versus Gold Grade 75
Figure 13.1 Map Showing Locations of Metallurgical Test Samples 96
Figure 13.2 Three Hills Head and Tail Screen Gold By Size Fraction 99
Figure 13.3 Three Hills Column Recovery by Size Fraction 99
Figure 13.4 48in Column Test Recovery vs. Time (KCA, 2014) 101
Figure 13.5 Hasbrouck Deposit Drill-hole Metallurgical Samples 2012 – 2014, ...104
Figure 13.6 Locations of 2012 – 2014 Samples for Metallurgical Testing, ...105
Figure 13.7 2012 Column Leach Gold Recovery by Size Fraction 108
Figure 13.8 Column Gold Recovery by Size Fraction 108
Figure 13.9 Column Leach Gold Recovery by Stratigraphic Unit and Sample Elevation 109
Figure 13.10 Column Leach Silver Recovery by Stratigraphic Unit and Sample Elevation 110
Figure 13.11 View of SMALLWAL HPGR unit at KCA Used for Testing Hasbrouck Samples 111
Figure 13.12 HPGR versus Conventional-Crush Size Distributions 112
Figure 13.13 HPGR Column Recovery by Size Fraction 116
Figure 14.1 Three Hills Section 13821570 Showing Geology and Gold Mineral Domains, Looking North 139
Figure 14.2 Three Hills Section 13822170 Showing Geology and Gold Mineral Domains, Looking North 140

Figure 14.3 Three Hills Section 13821570 Showing Block Model Gold Grades, Looking North....145
Figure 14.4 Three Hills Section 13822170 Showing Block Model Gold Grades, Looking North....146
Figure 14.5 Hasbrouck Deposit Section 1563300 Showing Geology and Gold Mineral Domain Looking West....152
Figure 14.6 Hasbrouck Deposit Section 1563700 Showing Geology and Gold Mineral Domain Looking West....153
Figure 14.7 Hasbrouck Deposit Section 1563300 Showing Block Model Gold Grades Looking West....160
Figure 14.8 Hasbrouck Deposit Section 1563700 Showing Block Model Gold Grades, Looking West....161
Figure 15.1 Three Hills PbP Graph....172
Figure 15.2 Hasbrouck PbP Graph....175
Figure 15.3 Three Hills Ultimate Pit Design....178
Figure 15.4 Hasbrouck Ultimate Pit Design (Phase 4)....179
Figure 15.5 Hasbrouck Phase 1 Pit Design....180
Figure 15.6 Hasbrouck Phase 2 Pit Design....181
Figure 15.7 Hasbrouck Phase 3 Pit Design....182
Figure 17.1 Simplified General Project Flow Sheet – Three Hills....198
Figure 17.2 General Arrangement – Three Hills....199
Figure 17.3 Heap-Leach Make-up Water Requirement....205
Figure 17.4 Simplified General Project Flow Sheet – Hasbrouck....214
Figure 17.5 General Arrangement – Hasbrouck....215
Figure 18.1 Three Hills Mine General Arrangement Map....231
Figure 18.2 Hasbrouck Mine General Arrangement Map....232
Figure 18.3 Waterline Alignment Map, Three Hills and Hasbrouck....233
Figure 18.4 Example of LNG Powered Reciprocating Piston Engine Generator....240
Figure 20.1 Hasbrouck Project Pre-Feasibility Schedule with Planned Permitting....246
Figure 22.1 Pre-Tax Project Sensitivities....308
Figure 22.2 After-Tax Project Sensitivities....309
Figure 22.3 After-Tax Cash On Hand – Delay Options....311

APPENDICES

Appendix A List of Claims for the Hasbrouck Project
Appendix B Three Hills Mine End of Year Pits and Dumps
Appendix C Hasbrouck Mine End of Year Pits and Dumps

1.0 EXECUTIVE SUMMARY

1.1 Introduction

Mine Development Associates ("MDA") has prepared this Technical Report and Preliminary Feasibility Study on the Hasbrouck gold-silver project, located in the state of Nevada, at the request of West Kirkland Mining Inc. ("West Kirkland"), a Canadian corporation publicly traded on the TSX Venture Exchange (TSX: WKM). In January, 2014, West Kirkland entered into an agreement with Allied Nevada Gold Corp. ("Allied") to acquire up to a 100% interest in Allied's Hasbrouck and Three Hills properties in Esmeralda County, Nevada. West Kirkland's subsidiary, WK Mining (USA) Ltd. ("WK"), subsequently completed the acquisition of an initial 75% interest in the Hasbrouck and Three Hills properties from subsidiaries of Allied Nevada Gold Corp. ("ANV") on April 24, 2014. On September 11, 2014 WK Mining (USA) entered into a mining lease to purchase agreement with Eastfield Resources (USA) Inc., covering 7 patented mining claims that became part of the Three Hills Property. Total consideration to be paid over the life of the lease is CDN$280,000, of which CDN$30,000 has been paid. On June 19, 2015, Allied announced that the United States Bankruptcy Court for the District of Delaware had approved the sale of Allied's exploration properties and related assets (excluding the Hycroft operation) to Clover Nevada LLC ("Clover Nevada"), a wholly-owned subsidiary of Waterton Precious Metals Fund II Cayman, LP ("Waterton"), including the 25% interest in the Hasbrouck project. The sale does not materially affect the contractual rights of West Kirkland and West Kirkland holds the title to the Hasbrouck properties.

The purpose of this Technical Report and Preliminary Feasibility Study ("PFS") is to provide current mineral resource and reserve estimates and an economic analysis for the Hasbrouck project, which includes both the Hasbrouck gold-silver deposit and the nearby Three Hills gold deposit. This report and the estimates provided herein have been prepared in accordance with the disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101 ("NI 43-101"), Companion Policy 43-101CP, and Form 43-101F1, as well as with the Canadian Institute of Mining, Metallurgy and Petroleum's "CIM Definition Standards - For Mineral Resources and Reserves, Definitions and Guidelines" ("CIM Standards") adopted by the CIM Council on May 10, 2014.

1.2 Access, Property Description and Land

The Hasbrouck gold-silver project includes two separate deposits, Hasbrouck and Three Hills, located in the northern portion of Esmeralda County, Nevada. The Three Hills deposit is located approximately 1 mile west of the town of Tonopah and is accessed via county maintained roads from the northwest end of Tonopah. U.S. Highway 6 passes 1.25 miles north of the Three Hills deposit, and is a major east-west transportation corridor through central Nevada. The Hasbrouck deposit is located approximately 5 miles by road south of the town of Tonopah, and is accessed by a gravel road off U.S. Highway 95. U.S. Highway 95 is the main north–south transportation corridor through central Nevada and passes immediately to the west of the Hasbrouck deposit.

Elevations of the p roperties vary between 5,600ft and 6,300ft. The principal physiographic features of the Hasbrouck and Three Hills deposits are prominent hills that rise 200-700ft off the valley floor. Vegetation in the area consists of sagebrush and other desert plants on the lower slopes and valleys. Trees are absent from the properties. The climate is semi-arid.. Average annual precipitation is 5 inches, which is accumulated through winter snows and, to a lesser extent, summer thunderstorms.

The Three Hills deposit is covered by 13 patented claims and 100 unpatented lode claims occupying a total of approximately 1,967 acres in Sections 2, 3, 4, 5, 8, 9, 10 and 11, T2N, R42E, and Sections 33 and 34, T3N , R42E of the Mount Diablo Base and Meridian. The Hasbrouck deposit is covered by 28 patented mining claims and 583 unpatented mining claims occupying an area of approximately 10,750 total acres within Sections 1, 2, 3, 4, 5, 9, 10, 11, 12,13,14, 15,16, 21, 22, 23 and 24, T1N, R42E, Sections 6, 7, 18, 19 and 20, T1N, R43E, and Sections 27, 28, 29, 32, 33, 34, and 35, T2N, R42E of the Mount Diablo Base and Meridian.

All claims are located on U.S. federal land managed by the Battle Mountain District of the U.S. Bureau of Land Management ("BLM"). The claims are registered and recorded with the BLM, Esmeralda and Nye Counties as appropriate, but have not been surveyed by a mineral land surveyor. Mineral tenure is held in the name of WK Mining (USA) Ltd. ("WK"), which is a wholly-owned subsidiary of West Kirkland. All required payments have been made to the appropriate authorities and the claims are in good standing.

Patented and unpatented claims at Three Hills are subject to mineral production royalties of between 2% and 4% net smelter return ("NSR"). At the Hasbrouck deposit, 19 of the patented claims and three of the unpatented mining claims are subject to a mineral production royalty of 4% NSR. The remaining 9 patented mining claims and 256 of the unpatented mining claims are subject to a mineral production royalty of 2% NSR.

1.3 History

Silver and gold mineralization was first discovered on Hasbrouck Mountain in 1902. Early mining exploited the Kernick vein, which was worked on a small scale through the mid-1920s. The early miners completed about 6,500ft of adits and 1,000ft of raises and recorded production of 740 tons of ore that grossed $10,406. A large, near surface, low-grade gold-silver deposit was outlined by Cordex Exploration following surface and underground sampling, geologic mapping, rotary drilling and metallurgical testing conducted in 1974-1975 and 1980. During the 1980's and 1990's Franco-Nevada, FMC, Euro-Nevada, and Corona successively drilled the property before Newmont merged with Euro-Nevada in 2002 and took control of the property. Newmont vended the property to Vista Gold in 2003. Allied Nevada gained control of Hasbrouck when it was formed as a spin-off company from Vista in 2007. Allied Nevada conducted surface mapping, geochemical sampling, drilling, data verification, metallurgical studies, CSAMT and gravity surveys, and completed a preliminary economic assessment which is superseded by this report. In 2014 West Kirkland carried out geologic mapping, surface sampling, drilling and a structural geologic interpretation. West Kirkland also conducted a re-interpretation of geophysical data obtained by previous operators.

Modern exploration at Three Hills began in 1974 when Cordex Exploration obtained the property. During the 1970's, 1980's and 1990's, Cordex, Saga Exploration, Echo Bay, Gexa Gold, Coeur D'Alene Mines, Eastfield Resources, and Euro-Nevada carried out various campaigns of surface mapping, sampling, geophysical surveys and drilling. Newmont acquired control of Three Hills via their merger with Euro-Nevada and subsequently sold the property to Vista Gold in 2003. Vista did not conduct exploration at Three Hills; the property was part of the spin-off to Allied Nevada in 2007. Allied Nevada initiated exploration at Three Hills in 2012; drilling in 2012 and 2013 was focused on expanding known mineralization. During 2014 West Kirkland performed geologic mapping, sampling, a gravity survey, drilling and detailed structural analysis at Three Hills.

1.4 Geology and Mineralization

The Three Hills deposit, located in the Tonopah Mining District, is a low-sulfidation, epithermal gold deposit, and occurs in a zone of pervasive silicification within the outcropping Siebert Formation immediately above and along the contact with the underlying Fraction Tuff. Mineralization occurs in discontinuous, irregular 0.05in to 0.5in-wide veinlets, vein stockworks, and erratic breccia veins of chalcedony and quartz. Oxidation has destroyed sulfide minerals within the deposit. The currently drill-defined extent of mineralization is approximately 1,000ft east–west by 2,700ft north–south with a maximum depth of 500ft. Mineralization remains open at depth, down-dip to the east along the Siebert/Fraction Tuff contact.

The Hasbrouck deposit is a low-sulfidation, epithermal gold–silver deposit located in the western portion of the Divide Mining District. Host rocks are primarily tuffs and sediments of the Siebert Formation with limited mineralization within the underlying Fraction Tuff. An erosional remnant of silica sinter, deposited during hot spring activity, has been mapped near the top of the mountain. Gold and silver mineralization consists principally of 0.1in to 1.0in wide, discontinuous silica-pyrite veinlets, sheeted veinlets and stockworks, all closely associated with larger, but erratic bodies of hydrothermal breccia. Sulfide minerals have been largely oxidized. Mineralization is accompanied by strong pervasive silicification, with associated adularia and pyrite, and has a known extent of 2,800ft east–west by 2,400ft north–south, with a maximum depth of 900ft. Mineralization is open at depth and to a limited extent to the northwest and east.

1.5 Drilling

For Three Hills, the current database includes 291 drill holes with a total of 88,199ft of historical drilling performed from 1974 through 2013. During 2014, West Kirkland drilled 3 diamond-core holes and 11 RC holes. The diamond-core holes were drilled within the Three Hills gold-silver deposit to obtain samples for geotechnical studies. The 2014 RC holes were drilled mainly to expand the eastern and down-dip portions of the Three Hills resource. It is MDA's opinion that the 2014 RC holes do not materially affect the current resource estimate due to their locations and therefore have not been included in the current resource database. The drilling does show that the deposit is open to the east, and more drilling may add more resources in this area.

The current database for the Hasbrouck deposit contains a total of 216,760ft of historical drilling completed by five companies from 1974 through 2012. This includes 28,606ft of diamond-core drilling in 43 holes, and 188,154ft of RC and conventional rotary drilling in 274 holes. During 2014, West Kirkland completed a total 4,150ft of RC drilling in 14 drill holes at the Hasbrouck deposit. All of the 2014 holes are external to the estimated mineral resources and are not included in the current database.

1.6 Sample Preparation, Analyses and Security

MDA has evaluated the available information for historical sample preparation methods, analytical procedures and sample security. MDA concludes that the sampling, assaying, and security procedures used at Three Hills and Hasbrouck have followed industry standard procedures, and are adequate for the estimation of the current mineral resources.

1.7 Data Verification

MDA completed a full audit of the Allied 2010-2013 drill data at Three Hills and Hasbrouck for the current resource estimate. QA/QC data are not available for drilling conducted before 2010. MDA has reviewed the available QAQC data and the assessments of that data made by Wilson (2014) and references therein, including Prenn (2003) and Prenn and Gustin (2003, 2006). MDA agrees with the conclusions of these preceding studies and considers the assay data to be adequate for the estimation of the current mineral resources.

1.8 Metallurgical Testing

Column-leach and bottle-roll cyanide extraction tests indicate that mineralization comprising the Three Hills and Hasbrouck gold-silver deposits is amenable to cyanide heap leaching. An average gold recovery of 79.0% is estimated for Three Hills mineralization based on expected run-of-mine (no crushing) particle sizes. Silver contents are low and recovery of silver has not been estimated, but is expected to be negligible.

Testing of material from the Hasbrouck deposit has shown that gold recoveries increase with diminishing particle size and also vary with the stratigraphic hosts to the mineralization. An average gold recovery of 75.8% has been estimated for mineralization in the lower Siebert unit, and an average gold recovery of 61.0% has been estimated for mineralization in the upper Siebert. Silver recovery has been estimated to average 11% for both units. These recoveries assume primary jaw crushing and secondary cone crushing, followed by tertiary high pressure grinding roll crushing.

1.9 Mineral Resources Estimate

The modeling and estimation of the mineral resources at the Hasbrouck Project were completed under the supervision of Paul Tietz, a qualified person with respect to mineral resource estimations under NI 43-101.

To complete the resource estimation for the Three Hills deposit, the drill data were evaluated statistically, geology and gold mineral domains were interpreted on east-west oriented cross sections spaced at 100-foot intervals that span the extents of the presently defined deposit, and the gold mineral domains were refined on north-south oriented long sections spaced at 20-foot intervals. The final modeled gold mineral domains were then coded into a 20ft x 20ft x 20ft block model and used to constrain the gold grade estimation. Grade estimation was by Inverse Distance Cubed ("ID3"). The effective date of the Three Hills resource estimate is August 5, 2014.

The Three Hills deposit gold resources, at the reported 0.005oz Au/ton cutoff grade, are inclusive of estimated reserves and are summarized in Table 1.1 (effective date: August 4, 2014).

Table 1.1 Three Hills Reported Mineral Resources (0.005oz Au/ton Cutoff)

Class	Tons	oz Au/ton	oz Au
Indicated	10,897,000	0.017	189,000
Inferred	2,568,000	0.013	32,000

Note: rounding may cause apparent inconsistencies

To complete the resource estimation for the Hasbrouck deposit, the drill data were evaluated statistically, geology and gold and silver mineral domains were interpreted on cross sections spaced at 50- and 100-foot intervals that span the extents of the presently defined deposit, and the mineral domains were refined on level plans spaced at 10-foot intervals. The final modeled mineral domains were then coded into a 20ft x 20ft x 20ft block model and used to constrain the gold and silver grade estimations. Grade estimation was by Inverse Distance Squared ("ID2"). The effective date of the Hasbrouck deposit resource estimate is November 3, 2014.

The Hasbrouck deposit gold and silver resources, at the reported 0.006oz AuEq/ton cutoff grade, are inclusive of estimated reserves and are summarized in Table 1.2 (effective date: November 3, 2014). The AuEq grade is calculated using the individual gold and silver grades of each block, along with a gold price of $1,300.00 per ounce gold and a silver price of $22 per ounce silver. The AuEq grade calculation includes an approximate 4:1 difference in gold versus silver recovery in the proposed heap-leach processing scenario.

Table 1.2 Hasbrouck Deposit Reported Mineral Resources (0.006oz AuEq/ton Cutoff)
oz AuEq/ton = oz Au/ton + (oz Ag/ton x 0.000417)

Class	Tons	oz Au/ton	oz Au	oz Ag/ton	oz Ag
Measured	8,261,000	0.017	143,000	0.357	2,949,000
Indicated	45,924,000	0.013	595,000	0.243	11,147,000
M+I	54,185,000	0.014	738,000	0.260	14,096,000
Inferred	11,772,000	0.009	104,000	0.191	2,249,000

Note: rounding may cause apparent inconsistencies

1.10 Mineral Reserves Estimate

MDA has used Measured and Indicated resources as the basis to define reserves for both the Three Hills and Hasbrouck deposits, which together compose the Hasbrouck project. Open-pit mining was selected as the mining method. Reserve definition was done by identifying ultimate pit limits using economic parameters and pit optimization techniques. The economic parameters used are presented in Table 1.3.

Table 1.3 Pre-Feasibility Economic Parameters

	Three Hills	Hasbrouck	
Mining	$ 2.00	$ 2.00	$/ton Mined
Crushing & Stacking	NA	$ 3.20	$/ton Processed
Leaching	$ 2.33	$ 1.30	$/ton Processed
G&A Cost per Ton	$ 0.42	$ 0.42	$/ton Processed
Refining - Au	$ 5.00	$ 5.00	$/oz Au Produced
Refining - Ag	NA	$ 0.25	$/oz Ag Produced
Royalty	4%	4%	NSR

Crushing and stacking costs do not apply to Three Hills because Three Hills material will be processed using run-of-mine leaching.

Silver was not used to generate value in Three Hills because there are no stated silver resources for the Three Hills deposit. For Hasbrouck, the value from silver was calculated with constant silver to gold ratio based on $1,250/oz Au to $18.00/oz Ag prices. Gold and silver recoveries were applied based on initial estimates provided by Herb Osborne of H.C. Osborne and Associates, the Qualified Person responsible for Section 13.0. Table 1.4 shows the recoveries used for each deposit.

Table 1.4 Metallurgical Recoveries

	Gold	Silver
Three Hills	79.0%	NA
Hasbrouck Upper Seibert	61.0%	11.0%
Hasbrouck Lower Seibert	75.8%	11.0%

The ultimate pit limits were determined using prices of $1,250 and $18.00 per ounce of gold and silver respectively. The ultimate pit was selected on Whittle discounted evaluations using a 5% discount rate and a processing limit of 5,400,000 tons per year. The final gold price used for the Hasbrouck project cash flow was $1,225 per ounce Au and $17.50 per ounce Ag. MDA believes that the pit designs resulting from the initial analysis are well within reason.

Pit designs were created using 20ft bench heights for mining. This corresponds to the resource model block heights. Because the resource models have been diluted to the block grades, MDA considers the block size to be reasonable with respect to dilution and equipment anticipated to be used in mining, and believes that this represents an appropriate amount of dilution for statement of reserves.

Proven and Probable reserves for the Three Hills and Hasbrouck deposits are shown in Table 1.5 and Table 1.6, respectively. Total Proven and Probable reserves for the entire Hasbrouck project are shown in Table 1.7. These reserves are shown to be economically viable based on the Hasbrouck project cash flows and MDA believes that they are reasonable for the statement of Proven and Probable reserves.

Table 1.5 Three Hills In-Pit Probable Reserves

	K Tons	oz Au/ton	K Ozs Au
Probable	9,653	0.018	175

Three Hills Proven and Probable reserves were defined using a 0.005 oz Au/t cutoff

Table 1.6 Hasbrouck In-Pit Proven and Probable Reserves

Upper Siebert	K Tons	oz Au/ton	K Ozs Au	oz Ag/ton	K Ozs Ag
Proven	1,301	0.020	26	0.387	504
Probable	5,576	0.016	89	0.260	1,452
Proven & Probable	6,877	0.017	114	0.284	1,955
Lower Siebert					
Proven	4,942	0.021	101	0.417	2,058
Probable	23,798	0.016	372	0.275	6,555
Proven & Probable	28,740	0.016	473	0.300	8,614
Total Hasbrouck					
Proven	6,242	0.020	127	0.410	2,562
Probable	29,374	0.016	461	0.273	8,007
Proven & Probable	35,617	0.017	588	0.297	10,569

Hasbrouck upper Siebert Proven and Probable reserves were defined using a 0.008 oz Au/t cutoff
Hasbrouck lower Siebert Proven and Probable reserves were defined using a 0.007 oz Au/t cutoff

Table 1.7 Total Hasbrouck Project In-Pit Proven and Probable Reserves

	K Tons	oz Au/ton	K Ozs Au	oz Ag/ton	K Ozs Ag
Proven	6,242	0.020	127	0.410	2,562
Probable	39,028	0.016	635	0.205	8,007
Proven & Probable	45,270	0.017	762	0.233	10,569

Some summation discrepancies may be noticeable to minor rounding issues

1.11 Mining Methods

The Hasbrouck project pre-feasibility study includes mining at both the Three Hills Mine and the Hasbrouck Mine. These are planned as open-pit, truck and loader operations. Access roads were included in the pit and waste rock storage area designs, which were considered suitable for the type of equipment used. Waste rock storage areas were designed to contain the rock waste associated with the reserves. One main waste rock storage areas was identified for Three Hills and 2 additional waste rock storage areas were designed for Hasbrouck. Safety berms were designed between the designed pits and dumps and US Highway 50 to contain any material that may try and roll off of the mining site.

The pre-feasibility study has been based on contract mining. Only Proven and Probable reserves were used to schedule mine production, and Inferred resources inside of the pit were considered as waste.

Three Hills production schedules have been completed based on a 15,000tpd production requirement for the ROM heap leach pad. Very little pre-stripping is required because ore is located near the surface. As such, mining is planned to start at the beginning of production. However, some costs were applied in the pre-production year assuming that some waste would be mined for construction use from inside of the pit footprint. Material placed on the pad had a lag time applied so that gold production was not assumed at time of placement. The schedule assumed that the full recovery of 79% would take up to 8 months.

Hasbrouck Mine production schedules were completed based on a 17,500tpd production requirement. Mining at Hasbrouck was assumed to start during the second year of production for the project. Little pre-stripping is required as ore is located near the surface, though waste is mined early to assist in obtaining construction fill material.

A lag time was applied to material sent through the crusher. The schedule assumed that the full recovery of recoverable gold placed on the pad would take up to 8 months. Upper Siebert material was assigned a 61% recovery and lower Siebert was assigned a 75.8% recovery. Both material types were assigned 11% recovery for silver.

It is anticipated that the contractor will have between 20 and 40 operators and staff involved with the operation. It has been assumed that the contractor will work between 10 and 12 hour shifts, 2 shifts per day, 6 to 7 days per week. Other mine personnel will be maintained by the owner for general activities, including mine supervision, engineering, surveying, geology, and ore control.

All mining is anticipated to be above the water table, so no dewatering wells will be required. Storm water that enters the pit will be handled by allowing for sumps in the pit as needed. Any excess water that doesn't naturally infiltrate into the ground will be placed in water trucks using a portable pump and then used for dust control on haul roads.

1.12 Mineral Processing

The Hasbrouck heap-leach project includes two separate facilities to be located approximately 5 miles apart. The Three Hills Mine will be constructed and operated first, and will be a 15,000 ton per day, run-of-mine operation, utilizing conventional, cyanide heap-leaching of material stacked on a single use pad. Gold will be leached with dilute cyanide solution and recovered from the solution using a carbon adsorption-desorption-recovery plant to produce doré bars.

The Hasbrouck Mine will be constructed after production commences at the Three Hills Mine and will be a 17,500 ton per day heap-leach operation utilizing conventional heap leaching of crushed material stacked on a single use pad. Crushing will be performed in 3 stages: mined material will pass first through a primary jaw crusher and a secondary cone crusher, and then through a high pressure grinding roll unit. Agglomeration with cement will be required prior to stacking of ore on the heap. Gold and silver will be leached with a dilute cyanide solution and recovered using a carbon adsorption-desorption-recovery process to produce doré bars. The adsorption equipment will be located at Hasbrouck. The carbon will be loaded into bins and trucked to Three Hills for desorption and precious metals recovery to produce doré bars. Reactivated carbon will be transported back to Hasbrouck for reuse.

1.13 Project Infrastructure -Water, Power and Buildings

Water for both the Three Hills and Hasbrouck mines is planned to be obtained from the Tonopah Public Utilities ("TPU"). This water will be of potable quality and thus will meet the potable, as well as the raw water needs for the project. TPU has voiced interest in selling water to the project and has the legal right to do so. The water will be sourced from the TPU's well field in Ralston Valley and will be supplied to a point of demarcation located on the western edge of Tonopah, immediately south of U.S. Highway 95. West Kirkland plans to install a buried HDPE pipeline from there to the Three Hill Mine, and will later install a buried HDPE pipeline from the Three Hills Mine to the Hasbrouck Mine. A 350,000 gallon water supply tank will be installed near the Hasbrouck site to serve as a header tank and a fire water storage tank.

Should it not prove possible or economic to obtain water from TPU, raw water and potable water will be sourced from a well or wells installed next to each deposit. This would involve obtaining a water right to appropriate groundwater. Water rights for this option have been applied for in 2014 and are currently under review by the state engineer.

Electrical power at the Three Hills Mine will be supplied by a generator fueled by liquified natural gas. Power at the Hasbrouck Mine will be supplied by NV Energy, the regional power distribution company. An overhead powerline will be installed connecting the switching station to the Hasbrouck Mine.

The estimated attached load at the Three Hills mine site, for the water supply system, the process plant including the reagents area, the laboratory, and any ancillary equipment, is 1.4MW, with an average draw of 0.9MW.

At the Hasbrouck Mine the attached load for the water supply system, the crushing system, the conveying and stacking system, the adsorption plant and ancillary equipment is estimated to be 5.7 MW, with an average draw of 3.7 MW.

Diesel-fired backup generators will be installed in the process area at each mine site to provide emergency power.

Administration, safety, mine operations, warehouse, assay laboratory, process buildings, and process maintenance buildings are planned for the Hasbrouck project. Three trailers of double- and triple-wide sizes will be procured for offices, safety, and conference and training purposes. These office trailers will be located at the Three Hills Mine at the beginning of operations and some or all of these buildings may be relocated to Hasbrouck when operations have transitioned away from Three Hills.

A full service, 102ft x 60ft laboratory will be constructed at the Three Hills Mine site, sized to process 100 solid samples per day and 150 solution samples per day. The laboratory also includes office space and a restroom.

The reagents storage building at Three Hills will be 1500 ft^2. The ADR plant will be a steel building approximately 145ft x 42ft x 44ft high. An additional section approximately 14ft x 25ft x 20ft high for the caustic area will be attached to the ADR section. The refinery will be approximately 79.5ft x 44.5ft x 22.75ft high, and will share a wall with the ADR building. The refinery area will contain a secure space for a safe.

The process shop and warehouse at Three Hills will be a single, 2,900 ft^2 steel building located near the ADR plant. The process shop and warehouse at Hasbrouck will be a 3,430 ft^2 steel building located near the CIC circuit.

1.14 Environmental Studies, Permitting and Social Impact

Mineral exploration at both the proposed Three Hills Mine and the proposed Hasbrouck Mine is authorized by the U. S. Bureau of Land Management ("BLM") under multiple Notices, each of which authorizes up to five acres of disturbance and is bonded with the BLM. Existing disturbances and bond amounts for each Notice are shown in Table 1.8.

Table 1.8 Existing Disturbance and Notices for the Hasbrouck Project

Notice #	Disturbance Acreage	Bond Amount
NVN-91216	4.88	$ 65,450.00
NVN-89964	1.84	$ 14,033.00
NVN-89750	4.53	$ 18,758.00

The proposed Three Hills Mine and the proposed Hasbrouck Mine, will be permitted separately and sequentially, beginning with the proposed Three Hills Mine, and later the proposed Hasbrouck Mine. Remaining baseline environmental work will be carried out and permits obtained independently for both operations.

West Kirkland has submitted an application for a Mine Plan of Operations (“Plan”) to the BLM, an initial step to obtain the necessary permits for the construction, operation, reclamation, and closure of an open pit, heap leach mining operation at the Three Hills site. West Kirkland is in the latter stage of planning for the initiation of the permit acquisition process for the Hasbrouck site. The Plan Application will be submitted for the proposed Hasbrouck Mine when operational and baseline surveys are complete and operations and design for the project are at a level where a Plan Application can be developed to the necessary level of detail.

The review and approval process for the Plan by the BLM constitutes a federal action under the National Environmental Policy Act (“NEPA”) and BLM regulation. Thus, for the BLM to process the Plan Application the BLM is required to comply with NEPA and prepare either an Environmental Assessment (“EA”), or an Environmental Impact Statement (“EIS”).

1.15 Capital and Operating Costs

MDA has authored Section 21, Capital and Operating Costs, with subsections for Process Capital and Process Operating costs provided by KCA. NewFields has provided inputs for Processing Capital and also some input to Infrastructure Capital Costs, which are included in the Other Capital Costs (Section 21.9).

Total initial capital costs at the start of the project are attributed to the startup of Three Hills Mine at $54,327,000, which includes working capital of $8,992,000. A total of $82,986,000 growth capital is attributed to the startup of Hasbrouck, and sustaining capital is $7,304,000 including the return of working capital. A summary of capital costs is shown in Table 1.9.

Table 1.9 Hasbrouck Project Capital Cost Summary

Direct Costs	**Units**	**Initial**	**Growth**	**Sustaining**	**Total**
Pre-Production	K USD	$ 633	$ 269		$ 902
Mining	K USD	$ 260	$ -	$ 448	$ 708
Plant and Recovery	K USD	$ 13,106	$ 35,148	$ -	$ 48,253
Leach Pads	K USD	$ 8,209	$ 12,176	$ 11,361	$ 31,747
Ponds and Site Infrastructure	K USD	$ 2,158	$ 3,232	$ -	$ 5,389
Water Supply	K USD	$ 3,105	$ 2,518	$ -	$ 5,622
Roads	K USD	$ 762	$ 1,161	$ -	$ 1,923
Light Vehicles	K USD	$ 490	$ 113	$ 336	$ 938
Site and Administration	K USD	$ 125	$ -	$ -	$ 125
Safety & Security	K USD	$ 82	$ 5	$ 10	$ 97
Owner's Capital	K USD	$ 6,241	$ 5,307	$ 96	$ 11,644
Total Direct Costs	K USD	$ 35,169	$ 59,928	$ 12,251	$ 107,348
Indirect Costs					
Initial Fills	K USD	$ 137	$ 1,748	$ -	$ 1,884
Indirects	K USD	$ 1,623	$ 2,699	$ 511	$ 4,833
EPCM	K USD	$ 1,915	$ 5,268	$ 625	$ 7,808
Newmont Buyout	K USD	$ -	$ 1,000	$ -	$ 1,000
Total Indirects	K USD	$ 3,675	$ 10,715	$ 1,136	$ 15,526
Contingencies					
Mining (15%)	K USD	$ 39	$ -	$ 2	$ 41
Plant and Recovery (20%)	K USD	$ 2,820	$ 6,920	$ -	$ 9,740
Leach Pads (15% - 25%)	K USD	$ 1,231	$ 3,044	$ 2,840	$ 7,116
Roads, Ponds, Water, and Infrastructure (25%)	K USD	$ 1,360	$ 1,566	$ -	$ 2,926
Other (15%)	K USD	$ 1,040	$ 814	$ 66	$ 1,921
Total Contingency	K USD	$ 6,491	$ 12,344	$ 2,909	$ 21,743
Total Capital Cost	K USD	$ 45,335	$ 82,986	$ 16,296	$ 144,618
Working Capital	K USD	$ 8,992	$ -	$ (8,992)	$ -
Total Capital Cost w/ Working Capital	K USD	$ 54,327	$ 82,986	$ 7,304	$ 144,618

Mining and re-handle operating costs were estimated by MDA based on contractor quotations. Processing operating costs were estimated by KCA. General and administrative costs and Nevada net proceeds tax were estimated by MDA. Reclamation costs were estimated using BLM reclamation cost estimate spreadsheets.

The total cost per ton processed for all material is $8.87. Table 1.10 shows a summary of the operating cost estimate.

Note that Table 1.12 shows an operating cost of $8.86 per ton based on the World Gold Council Adjusted Operating Cost definition. This apparent discrepancy is due to inclusion of silver credits and exclusion of reclamation costs in the World Gold Council definition.

Table 1.10 Operating Cost Summary

		K USD	USD per ton Processed
Three Hills	Mining Cost	$ 37,471	$ 3.88
	Process Cost	$ 25,338	$ 2.62
Hasbrouck	Mining Cost	$142,246	$ 3.99
	Process Cost	$146,826	$ 4.12
	Re-handle	$ 2,137	$ 0.06
Total	Mining Cost	$179,718	$ 3.97
	Process Cost	$172,164	$ 3.80
	Re-handle	$ 2,137	$ 0.05
	G&A Cost	$ 20,264	$ 0.45
	Reclamation	$ 12,047	$ 0.27
	Nevada Net Proceeds Tax	$ 15,334	$ 0.34
	Net Operating Cost	$401,663	$ 8.87

1.16 Economic Analysis

MDA completed an economic analysis based on the cash flow developed from the production schedule and the capital and operating costs previously discussed. Table 1.12 shows a summary of key matrixes for the Hasbrouck project. The life-of-project after-tax net present value is $75,272,000 using a 5% discount rate. The payback period is 3.69 years and the internal rate of return is 26%. These values are based on 100% of the project; West Kirkland has a 75% interest in the project and has the right to make an offer on the remaining 25%.

Hasbrouck Project economic results are shown in Table 1.11.

Table 1.11 Hasbrouck Project Economic Results

Pre-Tax Payback Period	Years	3.53
After-Tax Payback Period	Years	3.69
Pre-Tax Net Present Value	5%	$ 90,593
	8%	$ 69,630
	10%	$ 57,934
Pre-Tax Internal Rate of Return	IRR	29%
After-Tax Net Present Value	5%	$ 75,272
	8%	$ 56,753
	10%	$ 46,421
After-Tax Internal Rate of Return	IRR	26%

Table 1.12 Hasbrouck Project Highlights Based on 100% of the Project

	Units	Three Hills	Hasbrouck	Total Hasbrouck Project
Reserves (see "Reserves" tables 1.5, 1.6, and 1.7)				
Gold Grade	oz Au/ton (Au g/t)	0.018 (0.62)	0.017 (0.57)	0.017 (0.58)
Silver Grade	oz Ag/ton (Ag g/t)	-	0.297 (10.17)	0.233 (8.00)
Ore	million tons	9.7	35.6	45.3
Gold	kOz	175	588	762
Silver	kOz	-	10,569	10,569
Mining				
Annual Ore	million tons	4.8	6.3	6.1
Processing Rate	tons per day	15,000	17,500	16,531
Stripping Ratio	waste:ore	0.8:1	1.1:1	1.1:1
Processing				
Gold Recovery	%	79.00%	72.90%	74.30%
Silver Recovery	%	-	11.00%	11.00%
Gold Produced	kOz	138	429	567
Silver Produced	kOz	NA	1,163	1,163
Average Annual Gold Production	kOz	65	71	71
Average Annual Silver Production(2)	kOz	NA	194	194
Capital Costs				
Initial Capex (Three Hills build)	US$ million	54.3	-	-
Growth Capex (Hasbrouck build)	US$ million	-	83	-
Sustaining Capex	US$ million	-	7.3	-
LOM Capex	US$ million	-	-	144.6
Contingency (included)	US$ million	6.5	15.3	21.7
Working Capital (included)	US$ million	9.0	-9.0	-
Funding				
Funding (Three Hills build)	US$ million	54.3	-	-
Funding (at Year 1)(3) (in addition to Three Hills FCF of $43.5 M)	US$ million	-	34.8	-
Peak Funding	US$ million	-	-	89.1
Adjusted Op Cost per Ton of Ore(4)	US$/ton ore	8.09	9.07	8.86
Mining	US$/ton ore	3.88	4.05	4.02
Processing	US$/ton ore	2.62	4.12	3.80
G&A	US$/ton ore	0.51	0.43	0.45
Other (4)	US$/ton ore	1.07	0.46	0.59
Adjusted Operating Cost (5)	US$/ounce Au	566	754	708
All-in Sustaining Cost (AISC) (6)	US$/ounce Au	598	837	779
All-in Costs (AIC) (7)	US$/ounce Au	926	1,030	1,005
Mine Life	year	1.9	6.1	8
Gold Price	US$/oz	1,225	1,225	1,225
Silver Price	US$/oz	NA	17.5	17.5
NPV (5%) - pre tax	US$ million	-	-	90.6
IRR - pre tax	%	-	-	29
NPV (5%) - after tax	US$ million	-	-	75.3
IRR - after tax	%	-	-	26
Payback Period	year	-	-	3.7

Notes:
(1) Numbers may not add up due to rounding
(2) Silver production is averaged over the Hasbrouck mine life only
(3) Difference between Funding and Capex requirements is due to free cash flow from Three Hills mine
(4) "Other" category includes royalties, production taxes, permitting, refining, and by-product credit
(5) World Gold Council - Adjusted Operating Costs include: On-site mining and G&A, royalties and production taxes, permitting and community cost related to current operations, 3rd party smelting, refining and transport costs, stock-piles and inventory write-downs, site-based non-cash remuneration, operational stripping costs and by-product credits
(6) World Gold Council - All-in Sustaining Costs includes: Adjusted Operating Costs (above) plus corporate G&A (including share-based remuneration), reclamation & remediation - accretion & amortization (on-site), sustaining exploration and study costs, sustaining capital exploration, capitalized stripping and sustaining capital expenditure.
(7) World Gold Council All-In Cost includes: All-In Sustaining Costs (above) plus community, permitting, an reclamation and remediation costs not related to current operations and non-sustaining exploration and study costs, capital exploration, capitalized stripping and capital expenditure

1.17 Project Sensitivity

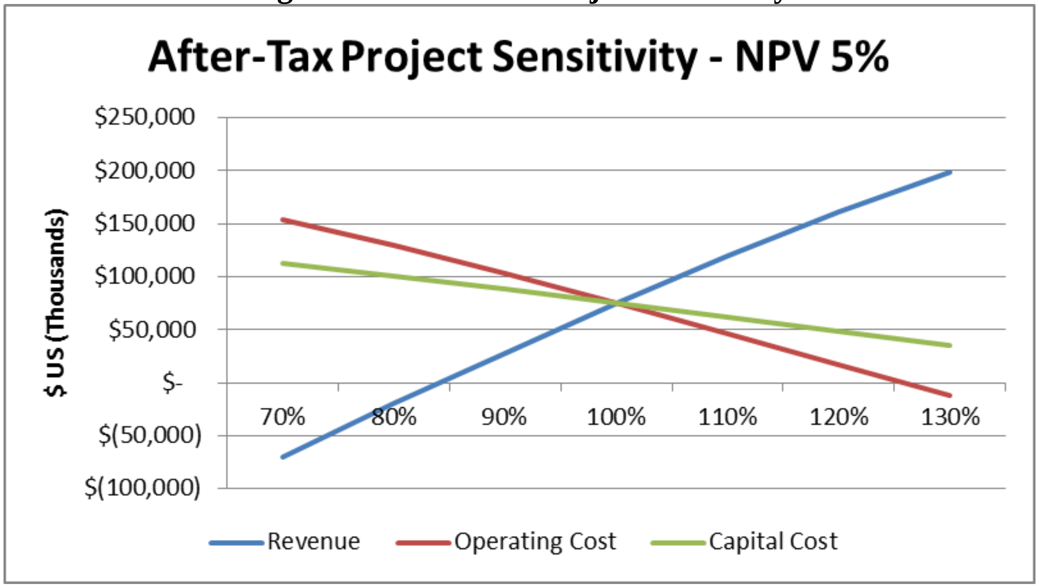
Project sensitivities were analyzed with respect to gold price, revenues, operating costs, and capital costs. As with most precious metal projects, the Hasbrouck Project is most sensitive to gold price and revenue. Table 1.13 shows the sensitivity analysis by gold price. Figure 1.1 shows the project sensitivity to changes in revenue, operating costs, and capital costs graphically.

Table 1.13 After-Tax Project Sensitivity

	After Tax Sensitivity - Metal Price (K USD)					
Au Price	**Undisc. CF**	**NPV 5%**	**NPV 8%**	**NPV 10%**	**IRR**	**Ag Price**
$ 1,000	$ 3,860	$ (11,931)	$ (18,746)	$ (22,434)	1%	$ 14.29
$ 1,050	$ 29,572	$ 7,907	$ (1,589)	$ (6,797)	7%	$ 15.00
$ 1,100	$ 54,768	$ 27,395	$ 15,290	$ 8,599	13%	$ 15.71
$ 1,150	$ 79,655	$ 46,624	$ 31,935	$ 23,779	18%	$ 16.43
$ 1,200	$ 104,346	$ 65,730	$ 48,485	$ 38,878	23%	$ 17.14
$ 1,225	$ 116,676	$ 75,272	$ 56,753	$ 46,421	26%	$ 17.50
$ 1,250	$ 128,705	$ 84,592	$ 64,832	$ 53,795	28%	$ 17.86
$ 1,300	$ 152,348	$ 102,908	$ 80,708	$ 68,286	32%	$ 18.57
$ 1,350	$ 175,821	$ 121,076	$ 96,451	$ 82,651	37%	$ 19.29
$ 1,400	$ 198,947	$ 138,993	$ 111,984	$ 96,831	41%	$ 20.00
$ 1,450	$ 221,566	$ 156,542	$ 127,212	$ 110,739	45%	$ 20.71
$ 1,500	$ 243,565	$ 173,630	$ 142,050	$ 124,298	49%	$ 21.43
$ 1,386*	$ 192,513	$ 134,006	$ 107,659	$ 92,881	40%	$ 19.80

*** $1,386 per ounce of gold was the 3-year rolling average as of the end of May, 2015**

Figure 1.1 After-Tax Project Sensitivity



The Hasbrouck project has been presented with mining starting at Three Hills and then continuing at Hasbrouck in such a way that the gold production is continuous without interruption between mining of the two deposits and is considered the "base case" for the project timing sensitivity analysis. Using the current cash-flow model, MDA has created additional scenarios to investigate: the value of mining only Three Hills; and project economics considering a delay between Three Hills and Hasbrouck mining.

The resulting project from mining only Three Hills has a 1.6 year mine life recovering 138,000 ounces of gold. Revenues are generated from the pad through month 30, followed by reclamation.

As with the full project the initial year -1 capital investment remains $54.3 million. The total undiscounted operating cash flow through reclamation is $84.4 million. The economic results for the Three Hills only project are shown in Table 1.14. The after-tax net present value (5%) is $20.6 million with a 28% internal rate of return.

Table 1.14 Three Hills Only Scenario Economic Results

Pre-Tax Payback Period	Years	1.50
After-Tax Payback Period	Years	1.56
Pre-Tax Net Present Value	5%	$ 27,626
(K USD)	8%	$ 23,258
	10%	$ 20,616
Pre-Tax Internal Rate of Return	IRR	35%
After-Tax Net Present Value	5%	$ 20,627
(K USD)	8%	$ 16,854
	10%	$ 14,571
After-Tax Internal Rate of Return	IRR	28%

MDA analyzed the impact of various time delays for the construction and startup of the Hasbrouck Mine. There is a substantial amount of cash flow that will come from Three Hills that can be directed to the construction of the Hasbrouck Mine if a delay of several months is chosen, thereby reducing the amount of addition funds to be injected into the project at the time of the Hasbrouck Mine construction.

Delays from one to eight months were evaluated. The ultimate purpose of this was to examine funding requirements, as well impact on the internal rate of return and net present value for the project.

Growth capital expenditures to build the Hasbrouck Mine start to occur in month 1 of production with purchases of long lead time equipment and are spent over a period of about 20 months. From a funding point of view, delay in start-up of the Hasbrouck Mine would allow for West Kirkland to defer spending of growth capital until free cash flow from the Three Hills Mine has been maximized.

MDA evaluated the cash on hand on a monthly basis to determine when additional funding would be required. For the zero month delay (i.e. the base case), the minimum cash on hand occurs in month 19 at a negative $25.8 million, which is the total growth capital of $34.8 million, less working capital of $9.0 million. The 4 month delay maintains a positive cash balance through the growth expenditure period, indicating that the full amount of growth capital to build the Hasbrouck Mine could be internally funded using cash-flow from Three Hills Mine. Delaying the Hasbrouck mine build by 4 months would provide the advantage of being able to fund the construction of the Hasbrouck Mine without additional financing, while preserving as much NPV and IRR as possible. Payback of capital is delayed by the same number of months that the Hasbrouck Mine construction is delayed.

The negative impact of delaying the construction of the Hasbrouck Mine is that it defers revenue and therefore reduces the net present value of the project. From an economic standpoint, the construction of the Hasbrouck mine without delay advances revenues and provides the best economic performance, but requires the injection of $34.8 million in additional funds in years 1 and 2. From a funding standpoint, a four month delay provides a project that would not require the additional funding, but the net present value for the project is about $4.4 million less and the internal rate of return is 2% less.

1.18 Risks and Opportunities

MDA has identified a number of external and internal risks and opportunities that may affect the economics of the Hasbrouck project.

External Risks

- The project's economic viability is generally at risk from changes in external factors which would lead to increases in input costs (construction costs, operating costs), or a fall in the price of gold or silver which would reduce revenue.

- A decrease in gold or silver price would not only reduce revenue, but would also reduce the amount of economically minable ore as a decrease in metal prices would result in a higher cut-off grade Under the current gold price environment, the reserves are considered robust.
- The project's economic viability is generally at risk from internal factors not being as predicted in this study, such as poor construction or operational execution. These include such things as construction and operational execution.
- While no environmental and permitting risks are currently identified, this is an area where risk to cost and schedule generally exist, which would have the effect of extending schedules and increasing permitting costs.

Internal Risks

- Current drill spacing is adequate and there is a low risk of a decrease in resources due to additional drilling and subsequent re-modeling and re-estimations.
- The project's economic viability is generally at risk from internal factors such as poor construction or operational execution, with resultant cost and schedule over-runs, scope creep, and increased operating costs.
- Should the metallurgical efficiencies and reagent consumption rates assumed in this study not be generally achieved, the project would not achieve the economic performance predicted in this study.
- There is a risk that permeability in a full-scale heap leach at Three Hills will be inadequate. The particle size distribution of ROM ore will be coarser than that tested, and the risk of poor permeability at full-scale is deemed to be low. This risk can be mitigated by performing permeability tests on ROM material and making appropriate adjustments during the early phases of mining.
- Predicted gold recovery from Three Hills ore is based on the results of a column leach test on material that is finer than ROM ore is expected to be. The expected gold recovery predicted by the test could therefore be biased high. This risk can be mitigated by performing column leach tests using ore that is representative of ROM material.
- This study contemplates using certain pieces of mobile crushing and screening equipment at the Hasbrouck Mine, that will tend to have lower availability and higher maintenance costs over time than non-mobile equipment. Thus the availability factor in this study may have been overstated. This risk can be mitigated by increasing the robustness of foundations that mobile equipment will be mounted on to approximate those of non-mobile equipment.
- There are multiple transfer points and multiple complex splitting chutes in the crushing design for the Hasbrouck ore. Material handling complications might reduce the throughput of the crushing circuit. This risk can be mitigated by minimizing the number of splitting chutes, and where they remain in the circuit, paying careful attention to their design to avoid restrictions to material flow by computer-modelling of material flows.

- Fuel price used in this study for contract mining is $2.50 per gallon. However, if the cost of fuel rises, mining costs will be adversely affected.
- Geotechnical studies are preliminary at Hasbrouck Mine and additional drilling is recommended to raise the level of certainty for final pit slope angles. There is a risk that additional geotechnical studies might result in flatter pit slopes than used in this study, which would have an adverse impact on costs and reserves.
- There is a risk that Tonopah Public Utilities either cannot, or will not, supply water for the project, or that the terms under which they offer to supply water are unacceptable. This risk can be mitigated by developing alternative sources of water, one of which would be to appropriate ground water each mine.
- Contract mining costs are based on quotations received from contractors prior to the increase in production rates for Hasbrouck from 15,000 tpd of ore to 17,500 tpd. MDA adjusted the received contract mining costs based on unit rates, and while this is believed to be a reasonable approach for a pre-feasibility study, the costs so derived have not been vetted by the contractors. This risk can be mitigated by obtaining budget costs from contractors for a production rate of 17,500 tpd of ore.
- Finding and keeping the skilled employees required to operate the Hasbrouck project might prove a challenge, given its rural location. Inadequate staffing would tend to increase operating costs by reducing operating efficiencies and increasing repair and maintenance costs. Recruiting costs might be higher than predicted.

Opportunities

- Additional drilling along the periphery of the Hasbrouck and Three Hills deposits has the potential to extend the resources. Such expansion could improve the project economics by reducing waste, extending the life of mine and increasing overall revenues.
- Additional drilling could also result in reclassification of resources from Inferred to Indicated, and from Indicated to Measured. Within the pits there are 3.3 million tons of Inferred resources that are currently treated as waste. Upgrade of Inferred material to Indicated or higher classification could improve the project economics by reducing waste, extending the life of mine and increasing overall revenues.
- Contract mining costs are based on budgetary quotations from contractors. Competitive bidding based on a full understanding of the project may result in additional reduction to contractor pricing.
- Engaging contractors more closely in the mine planning and design might result in identifying cost-reducing efficiencies
- The possibility of putting in one large cone crusher vs. 2 small units with associated screens and conveyors should be investigated to determine if crushing capital and operating costs would be reduced.
- Mining costs may be reduced by West Kirkland operating the mines using their own equipment and employees, thus avoiding paying for the contractor's profit. The increase

in initial and sustaining capital for mining equipment might be mitigated by leasing equipment.

- Additional geotechnical studies might result in pit slopes being steepened, leading to a smaller amount of waste rock to be mined per ton of ore.
- HPGR crushing and micro-fracturing performance might be understated in the laboratory due to the very short time that samples take to be crushed by the HPGR, typically measured in seconds or, for larger samples, several minutes. Such short runs do not allow time to optimize HPGR settings. It is expected that under steady-state running at full-scale that fine tuning of crushing parameters, such as the amount of choke feeding, recirculation, roll rotation speed, and roll closing force, will result in greater efficiency in crushing and micro-fracturing which in turn will result in higher gold and silver recovery than indicated by laboratory scale tests.
- The HPGR model selected for this study was a first-pass choice. A larger machine would allow a greater amount of recirculation which would result in a finer product size and consequently a greater recovery of gold and silver.
- Bottle roll tests on HPGR crushed lower Siebert material may have understated gold recovery relative to gold recovery that could be expected from column leach tests, perhaps by an amount similar to the 6% increase demonstrated with upper Siebert ore.
- Faster gold recovery from solution, and hence more efficient operation, might be achieved at the Hasbrouck Mine by increasing the number of carbon columns in the adsorption plant from 5 to 6 columns.
- Additional metal recovery from both the Three Hills and Hasbrouck mines might occur beyond the leach cycle time assumed in this study.
- The overall design of the crushing and screening plant presented in this study is a first-pass design and was not reviewed by equipment suppliers. The opportunity exists to optimize the crushing and screening plant general arrangement, and individual components, with the help of equipment suppliers' input. Areas that are especially targeted for review include the configuration of grizzlies at the primary crusher (both static and vibrating), and conveyor layouts to and from the secondary crushers.
- A pug mill was included in the Hasbrouck process plant to address the concerns that clays may form caked material that would tend to reduce agglomeration and access of solutions to the ore once place in the heap. Caked material might not form at all, making the pug mill unnecessary, or cake might only form under wet weather conditions which would allow material to by-pass the pug mill under most conditions and so reduce operating costs.
- The various construction and capital equipment costs used in this study are based on budget costs obtained from one source in each case. It is possible that lower costs might be obtained by more broadcast competitive bidding.
- It is possible that mobile offices, certain crushing and screening equipment, conveying equipment, emergency diesel generators, certain laboratory equipment, certain pumps, fork-lifts, tele-hoists, skid-steer loaders and certain electrical equipment might be

purchased used, either as-is or refurbished, which would have the effect of reducing capex while still providing cost-effective performance.

- The earthworks component of civil construction might be performed in part, or all, by mining equipment which tends to operate at a lower unit cost than civil equipment, and in addition might eliminate the need for mobilization and de-mobilization of construction equipment.
- It is possible that carbon might be stripped and regenerated under contract at a third-party facility, removing the need for an Adsorption/Desorption plant to be erected at the Three Hills Mine and thus reducing initial capital requirements and rehabilitation costs. It would probably mean an increase in operating cost.
- It is common in many heap leach operations to utilize a lower cyanide concentration than predicted by laboratory-scale testing. Actual consumption may be lower than has been assumed in this study, leading to lower cyanide costs.
- It may be possible to reduce operating costs by optimizing crew rotations and hours.
- Mobile equipment has been included in the Hasbrouck crushing circuit design. A thorough review of the crushing system could identify possible design changes that could result in lower operating costs.

1.19 Recommendations

In order to advance the Hasbrouck project to production, MDA has made several recommendations as shown in Table 1.15.

Table 1.15 Hasbrouck Project Recommendations

FEASIBILITY STUDY	**$ 1,820,000**
Mineral Reserve	$ 50,000
Metallurgy Testwork	$ 350,000
Process Engineering	$ 400,000
Heap Leach, Civils, Infrastructure	$ 350,000
Survey	$ 20,000
Geotechnical	$ 650,000
PERMITTING	**$ 810,000**
Permit Application Development (3HM)	$ 190,000
Permit Application Development (HBM)	$ 620,000

The estimated costs of the recommendations total $2,630,000. Additional exploration drilling is not included in the immediate production recommendations. However, Three Hills will benefit from additional drilling to the east and northeast of the main deposit in the future while there is potential for resource expansion along trend to the west and east at Hasbrouck. This drilling is planned to take place once WK has developed sufficient cash flow from operations and will likely occur during Hasbrouck deposit mining. This cost is not included in the economic analysis at this time.

2.0 INTRODUCTION AND TERMS OF REFERENCE

Mine Development Associates ("MDA") has prepared this Technical Report and Preliminary Feasibility Study ("PFS") on the Hasbrouck gold-silver project, located in the state of Nevada, at the request of West Kirkland Mining Inc. ("West Kirkland"). West Kirkland is listed on the Toronto Venture Exchange ("TSX.V") under the symbol "WKM". In January, 2014, West Kirkland announced it had entered into an agreement with Allied Nevada Gold Corp. ("Allied") to acquire up to a 100% interest in Allied's Hasbrouck and Three Hills gold-silver properties (the "Hasbrouck Project"). West Kirkland subsequently has announced that its subsidiary WK Mining (USA) Ltd. ("WK") completed the acquisition of an initial 75% interest in the Hasbrouck Project. On September 11, 2014 WK Mining (USA) entered into a mining lease to purchase agreement with Eastfield Resources (USA) Inc., covering 7 patented mining claims that became part of the Three Hills Property. Total consideration to be paid over the life of the lease is CDN$280,000, of which CDN$30,000 has been paid. On June 19, 2015, Allied announced that the United States Bankruptcy Court for the District of Delaware had approved the sale of Allied's exploration properties and related assets (excluding the Hycroft operation) to Clover Nevada LLC ("Clover Nevada"), a wholly-owned subsidiary of Waterton Precious Metals Fund II Cayman, LP ("Waterton"), including Allied's 25% interest in the Hasbrouck project. The sale does not materially affect the contractual rights of West Kirkland and West Kirkland holds the title to the Hasbrouck properties.

This report has been prepared in compliance with the disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101 ("NI 43-101"), Companion Policy 43-101CP, and Form 43-101F1, as well as with the Canadian Institute of Mining, Metallurgy and Petroleum's "CIM Definition Standards - For Mineral Resources and Reserves, Definitions and Guidelines" ("CIM Standards") adopted by the CIM Council on May 10, 2014.

Gold and silver mineralization occurs at the Three Hills and Hasbrouck deposits in high-level, low-sulfidation, hot spring-type epithermal systems. Technical Reports by Prenn (2003, 2006) and Prenn and Gustin (2003, 2006) have provided previous descriptions of the two deposits separately. An earlier description of the Three Hills deposit was given by Hardy (1996). The two deposits have also been described jointly in Technical Reports by Flint et al. (2012) and, most recently, by Wilson (2014).

2.1 Project Scope and Terms of Reference

The purpose of this Technical Report is to present the mineral resource and reserves estimates, and Preliminary Feasibility Study ("PFS") of the Hasbrouck gold-silver project for West Kirkland Mining, Inc. This report has been prepared by Paul Tietz, C.P.G., Senior Geologist for MDA, and by Thomas L. Dyer, P.E., Senior Engineer for MDA, with contributions from Herbert C. Osborne of Osborne and Associates, Ryan T. Baker, Principal Engineer with NewFields Mining Design & Technical Services, LLC, and Carl E. Defilippi, Senior Engineer for Kappes, Cassiday & Associates. The Mineral Resources were estimated and classified under the supervision of Mr. Tietz to the standards and requirements stipulated in NI 43-101. The PFS was prepared under the supervision of Mr. Dyer. Mineral Reserves have been estimated and classified for this report under the supervision of Mr. Dyer to the standards and requirements stipulated in NI 43-101. Mr. Tietz and Mr. Dyer are Qualified Persons under NI 43-101. There is no affiliation between either Mr. Tietz or Mr. Dyer and West Kirkland, except that of independent consultant/client relationships.

The scope of this study included a review of pertinent technical reports and data provided to the authors by West Kirkland relative to the general setting, geology, project history, exploration activities and results, methodology, quality assurance, interpretations, drilling programs, and metallurgy. MDA has relied on the data and information provided by West Kirkland for the completion of this report. Mr. Tietz visited the Hasbrouck and Three Hills properties on July 25, 2014. The site visit followed inspections in June, 2014 of project drill core stored at Allied's Hycroft Mine near Gerlach, Nevada, and at Kappes Cassiday and Associates in Reno, Nevada. During the site visit, Mr. Tietz reviewed the project geology and drill locations with project personnel. Mr. Dyer visited the Hasbrouck project on May 1, 2014, and inspected drill core in June, 2014 with Mr. Tietz at Kappes Cassiday's facility. MDA has made such independent investigations as deemed necessary in the professional judgment of the authors to be able to reasonably present the conclusions discussed herein.

The authors have relied almost entirely on data and information provided by West Kirkland and previous companies involved with the project. The authors have reviewed much of the available data, made a site visit, and have made judgments about the general reliability of the underlying data. Where deemed either inadequate or unreliable, the data were either eliminated from use or procedures were modified to account for lack of confidence in that specific information. MDA has made such independent investigations as deemed necessary in the professional judgment of the authors to be able to reasonably present the conclusions discussed herein.

The effective date of this Technical Report is June 19, 2015, which is the date of Waterton's purchase of Allied's interest in the project as described in West Kirkland's June 23 press release. The Three Hills resource database has an effective date of July 15, 2014 while the effective date of the Three Hills resource estimate is August 4, 2014. The Hasbrouck deposit resource database has an effective date of October 15, 2014 while the effective date of the Hasbrouck deposit resource estimate is November 3, 2014. The effective date of the PFS is June 3, 2015, which is the date of the press release on the project economics. A total of 14 holes at Three Hills and 14 holes at Hasbrouck were drilled by West Kirkland in late 2014, and this information has been reviewed by MDA. It is MDA's opinion that West Kirkland's 2014 drilling would not materially change the resource estimates and is not material to the conclusions of the PFS. For this reason the 2014 resource databases have not been updated to include the West Kirkland drilling of 2014.

2.2 Frequently Used Acronyms, Abbreviations, Definitions, and Units of Measure

In this report, measurements are given in Imperial units, except where the original information was reported in metric units. Assays have been reported in the manner in which they were received; all early work is in Imperial units (troy oz/short ton), and more recent work is reported in ppm.

Currency, units of measure, and conversion factors used in this report include:

Linear Measure

1 centimeter	= 0.3937 inch	
1 meter	= 3.2808 feet	= 1.0936 yard
1 kilometer	= 0.6214 mile	

Area Measure

1 hectare	= 2.471 acres	= 0.0039 square mile

Capacity Measure (liquid)

1 liter	= 0.2642 US gallons

Weight

1 tonne (metric)	= 1.1023 short tons	= 2,205 pounds
1 kilogram	= 2.205 pounds	

Currency Unless otherwise indicated, all references to dollars ($) in this report refer to currency of the United States.

Frequently used acronyms and abbreviations

3-D	three dimensional
AA	atomic absorption spectrometry
Ag	silver
As	arsenic
Au	gold
Bi	bismuth
BLM	United States Department of the Interior, Bureau of Land Management
BMRR	Bureau of Mining Regulation and Reclamation
C.P.G.	Certified Professional Geologist
CN	cyanide
Cu	copper
F	Fahrenheit
ft	feet
G&A	general and administrative
g	grams
g/t	grams per tonne
gal	gallons (US)
gal/h	gallons (US) per hour
GCL	geosynthetic clay liner
gpm	gallons (US) per minute
GPS	Global Positioning System
Hg	mercury
HDPE	high-density polyethylene
HPGR	High Pressure Grinding Roll
ICP	inductively coupled plasma method of analysis
in	inches
K	thousands
km	kilometer

lb	pound or pounds (2,000lb to 1 ton, 2,204.6lb to 1 tonne)
IRR	internal rate of return
kwh	kilowatt hour
LOM	life of mine
m	meter
M	mesh
Ma	million annum
MDA	Mine Development Associates, the authors of this Technical Report
mil	one thousandth of an inch (0.0254mm)
NaCN	sodium cyanide
NDEP	Nevada Division of Environmental Protection
NPV	net present value
NSR	net smelter return
oz	troy ounce (12oz to 1 pound)
oz/ton	troy ounce per short ton (used in metallurgical tables)
opt	troy ounce per short ton (used in historical drilling assays and resource estimates)
P70	crushed to 70% passing through a specified screen size.
P80	crushed to 80% passing through a specified screen size.
Pb	lead
P.E.	Professional Engineer
PFS	Preliminary Feasibility Study
ppb	parts per billion
psig	pounds per square inch at gauge
ppm	parts per million (1ppm to 0.0292oz/ton)
QA/QC	quality assurance/quality control
RC	reverse circulation drilling method
ROM	run of mine
Se	selenium
st	short ton, used in metallurgical test result tables
Tl	thallium
T	short ton (imperial) 2,000lb
ton	short ton (imperial) 2,000lb
t	metric ton (tonne)
tonne	metric ton
Tpd	(short) tons per day
TPD	(short) tons per day
Tph	(short) tons per hour
USD	currency of the United States
USGS	United States Geologic Survey
Zn	zinc

3.0 RELIANCE ON OTHER EXPERTS

The authors are not experts in legal matters, such as the assessment of the legal validity of mining claims, private lands, mineral rights, and property agreements. The authors rely on information provided by West Kirkland as to the title of the unpatented mining claims and private mineral rights comprising the Hasbrouck project, the terms of property agreements, and the existence of applicable royalty obligations. Sections 4. 2 and 4.3 are based on information provided by West Kirkland, and the authors offer no professional opinions regarding the provided information.

The authors did not conduct any investigations of the social-economic issues associated with the Hasbrouck gold-silver project, and the authors are not experts with respect to these issues. MDA has relied on West Kirkland to provide full information concerning the legal status of the company and related companies, as well as current legal title and material terms of all agreements relating to the property.

The authors are not experts with regard to environmental permitting or liabilities. For Sections 4.4, 4.5, 4.6, 4.7 and Section 20.0 on Environmental Considerations, MDA has relied on Mr. Richard Delong, President of Enviroscientists Inc., an environmental permitting and government relations consultancy, who provided expertise to West Kirkland for environmental and permitting issues. Mr. Richard DeLong is a Certified Environmental Manager and a Licensed Professional Geologist.

4.0 PROPERTY DESCRIPTION AND LOCATION

The authors are not experts in land, legal, environmental, and permitting matters. This Section 4.0 is based on information provided to the authors by West Kirkland. The authors present this information to fulfill reporting requirements of NI 43-101 and can express no opinion regarding the legal or environmental status of the Hasbrouck project.

4.1 Location

The Hasbrouck project includes the Three Hills and Hasbrouck gold and silver deposits, located 2 miles west and 5 miles south of Tonopah, Nevada, respectively (Figure 4.1). Tonopah is an historic mining town in south-central Nevada, approximately 4 hours by car southeast of Reno, and 3 hours northwest of Las Vegas, Nevada.

The topographic maps covering the project area are the Mount Butte, Klondike and Mud Lake 7.5 minute quadrangles, Nevada, at 1:24,000-scale, published by the U.S. Geologic Survey. The approximate center of the Hasbrouck deposit is at latitude 37°59’32” North and longitude 117°16’0” West, and the approximate center of the Three Hills deposit is at latitude 38°3’46” North and longitude 117°15’44’ West.

4.2 Land Area

West Kirkland has acquired a 75% interest in the Hasbrouck gold-silver project in Nevada from subsidiaries of Allied Nevada Gold Corp. The project consists of two deposits: Three Hills and Hasbrouck. The Three Hills deposit (Figure 4.2) is covered by 13 patented claims and 100 unpatented lode claims (Appendix A) occupying a total of approximately 1,967 acres in Sections 2, 3, 4, 5, 8, 9, 10 and 11, T2N, R42E, and Sections 33 and 34, T3N , R42E of the Mount Diablo Base and Meridian. Each claim within the property boundary is identified by 2 by 2in by 4ft wood posts marked with a scribed aluminum tag as required by Nevada statutes. The claims have not been surveyed by a mineral land surveyor, but they are registered and recorded with the BLM, Esmeralda and Nye Counties. The claims have not been surveyed by a mineral land surveyor, but they are registered and recorded with the BLM and Esmeralda County.

The Hasbrouck deposit (Figure 4.3) is covered by 28 patented and 583 unpatented lode mining claims occupying an area of approximately 10,750 acres (Appendix A). All claims are located on U.S. federal land managed by the Battle Mountain District of the U.S. Bureau of Land Management (“BLM”). The claims are in a contiguous block that is located in Sections 1, 2, 3, 4, 5, 9, 10, 11, 12,13,14, 15,16, 21, 22, 23 and 24, T1N, R42E, Sections 6, 7, 18, 19 and 20, T1N, R43E, and Sections 27, 28, 29, 32, 33, 34, and 35, T2N, R42E of the Mount Diablo Base and Meridian. Each claim within the property boundary is identified by 2 by 2in by 4ft wood posts marked with a scribed aluminum tag as required by Nevada statutes. The claims have not been surveyed by a mineral land surveyor, but they are registered and recorded with the BLM, Esmeralda and Nye Counties.

Current holding costs for unpatented mining claims are $155 Maintenance Fee per claim, each year to the BLM, and $10.50 Intent to Hold Fee per claim, each year to Esmeralda County. West

Kirkland has provided documentation that all federal fees to maintain the claims for another year have been paid through September 1, 2015. County fees and taxes for both the patented and unpatented claims have been paid in full to Esmeralda and Nye Counties through November, 1, 2014. West Kirkland maintains title insurance on the properties.

Figure 4.1 Hasbrouck Project Location Map

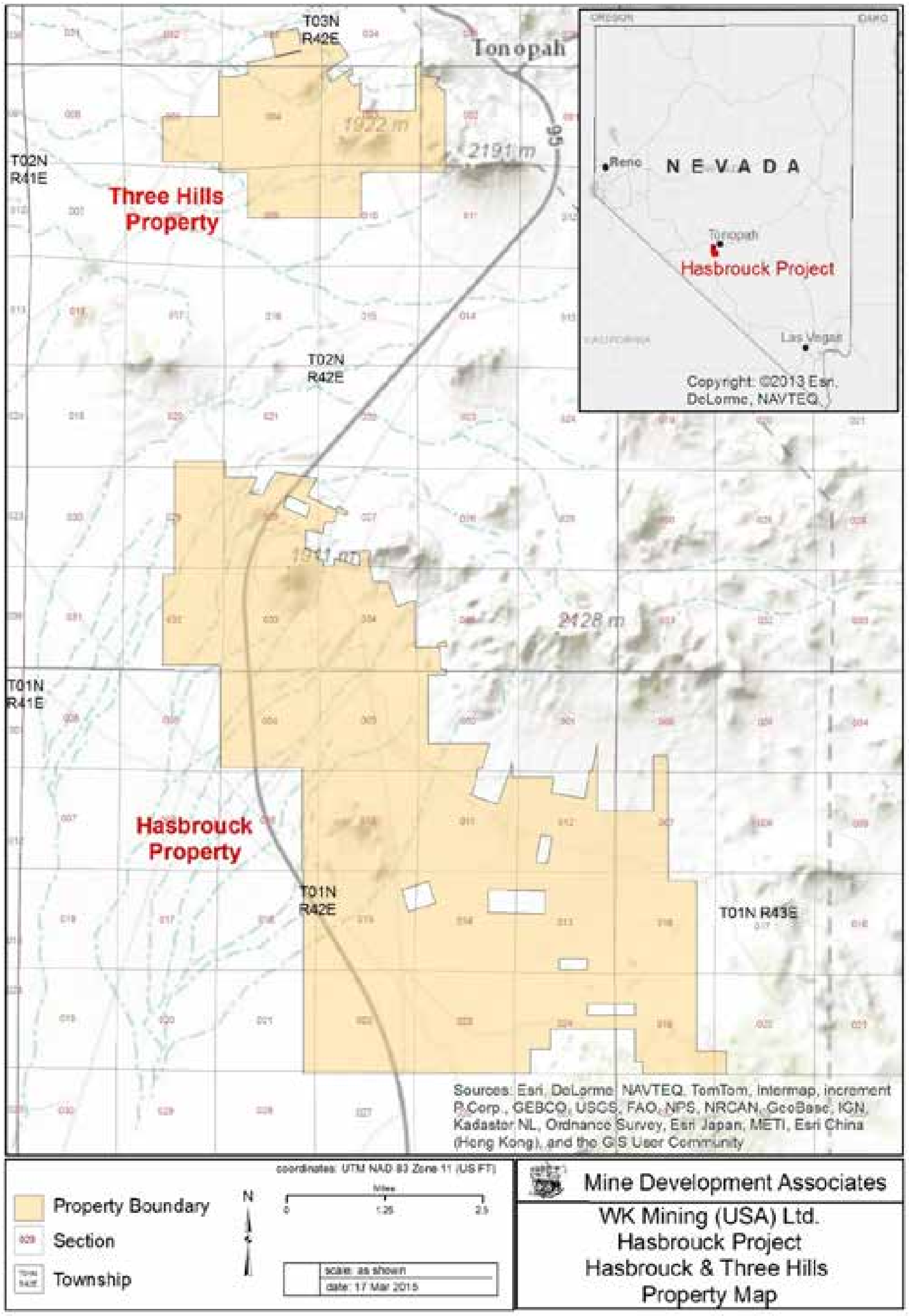


Figure 4.2 Land Status Map of the Three Hills Property
(Land data provided by West Kirkland Mining, 2014)

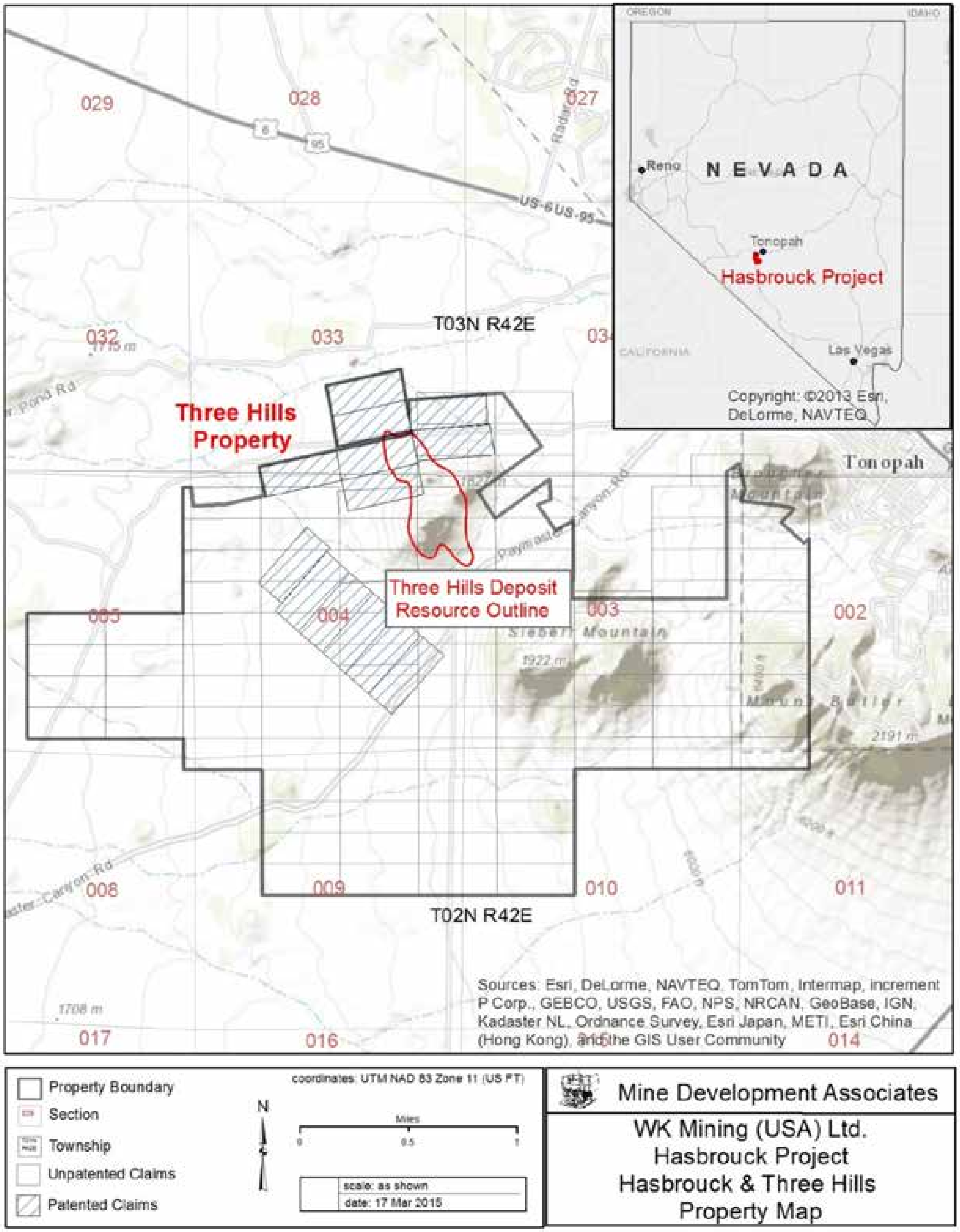
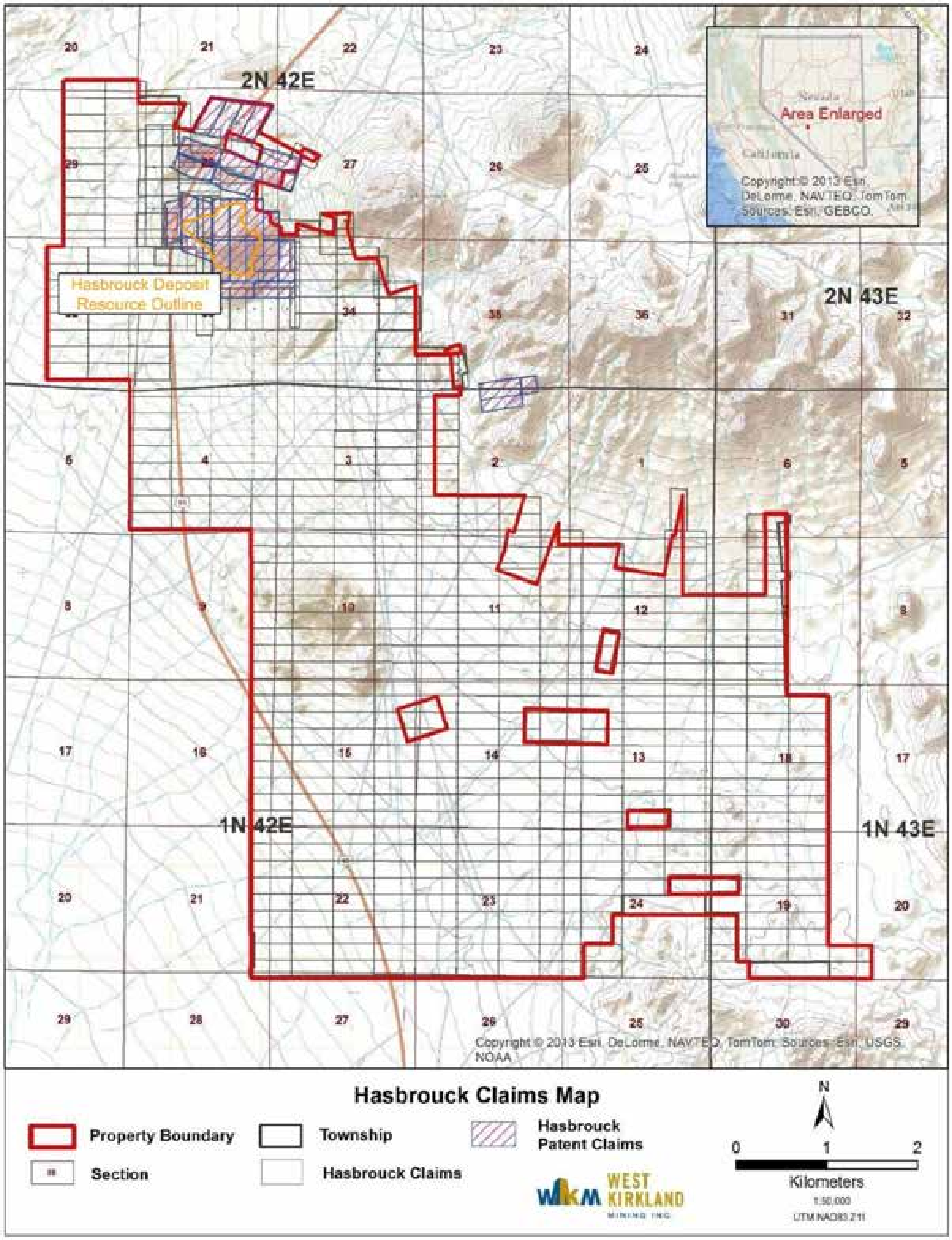


Figure 4.3 Land Status Map of the Hasbrouck Deposit Area
(Land data provided by West Kirkland Mining, 2014)



4.3 Agreements and Encumbrances

West Kirkland's subsidiary WK Mining (USA) Ltd. ("WK") has finalized and executed a Purchase and Sale Agreement (the "PSA") with Allied to acquire the Hasbrouck and Three Hills properties. WK has paid both the deposit and initial payment with total consideration having been paid to Allied being US$20,000,000. Title to the properties has been transferred to WK.

On September 11, 2014 WK entered into a mining lease to purchase agreement with Eastfield Resources (USA) Inc., covering 7 patented mining claims that became part of the Three Hills Property. Total consideration to be paid over the life of the lease is CDN$280,000, of which CDN$30,000 has been paid.

On June 19, 2015, Allied announced that the United States Bankruptcy Court for the District of Delaware had approved the sale of Allied's exploration properties and related assets (excluding the Hycroft operation) to Clover Nevada LLC ("Clover Nevada"), a wholly-owned subsidiary of Waterton Precious Metals Fund II Cayman, LP ("Waterton"), including the 25% interest in the Hasbrouck project.

Pursuant to the PSA, WK has the option of making an additional US$10,000,000 payment (the "Final Payment") on or before October 23, 2016 (the "Final Payment Deadline"). If WK pays the Final Payment to Waterton, and Waterton accepts the payment in accordance with the terms and conditions of the PSA, it will acquire the remaining 25% interest in the properties and own a 100% interest in the properties.

If WK does not make the Final Payment to Waterton on or before the Final Payment Deadline, or if WK offers payment and Waterton chooses to decline the Final Payment, the properties shall be transferred into a limited liability company (the "LLC") with WK retaining a 75% interest in the LLC and Waterton retaining 25% interest in the LLC. Upon entering the LLC both parties will be responsible for their share of the costs on a pro rata basis with Waterton's share of the costs accruing and payable in full 30 months after the signing of the PSA. WK has no work commitments, but the project is subject to certain underlying royalties as described below.

The Hasbrouck property patented and unpatented claims are also subject to a purchase agreement between Vista Nevada and Newmont Capital Limited ("Newmont"), which was executed on May 23, 2003. This agreement covers both the Hasbrouck and the Three Hills deposits. Terms of the purchase agreement included a $50,000 cash payment on signing (completed), $200,000 or the equivalent in Vista Gold shares one year after signing (completed), and $500,000 upon commencement of commercial production on the property. An additional payment of $500,000 shall accrue if the average gold price over any three-month period of commercial production exceeds $400/oz.

Newmont held a one-time election to enter into a joint venture on the property. During 2010, Allied achieved the threshold trigger and Newmont elected not to enter into a joint venture and retained an NSR royalty of 2% on the Hasbrouck property.

For the Three Hills deposit, all claims are subject to a mineral production royalty of between 2% and 4%. Fifteen of the unpatented claims are subject to a mineral production royalty of 4% NSR. The remaining 85 unpatented claims and 3 of the patented claims at Three Hills are subject to a mineral production royalty of 2% NSR. The remaining 8 patented claims are subject to a mineral production royalty of 4% NSR.

At the Hasbrouck deposit, 19 of the patented claims and three of the unpatented mining claims are subject to a mineral production royalty of 4% of the net smelter returns ("NSR"). The remaining 9 patented mining claims and 256 of the unpatented mining claims are subject to a mineral production royalty of 2% NSR. The remaining 327 unpatented mining claims are not subject to a royalty.

4.4 Environmental Considerations

Enviroscientists Inc., an environmental permitting and government relations consultancy, provided the following information on environmental liabilities and permitting. West Kirkland's U.S. subsidiary, WK Mining (USA) Ltd., conducted the most recent exploration at Hasbrouck and Three hills, and environmental permits were in WK's name.

4.4.1 Environmental Liabilities

Environmental liabilities at the Hasbrouck and Three Hills deposits are limited to exploration drill roads and pads. Current bonding is in place to support this work, associated with multiple Notices authorized by the United States Bureau of Land Management ("BLM") for less than 5 acres of disturbance each. Existing disturbances and bond amounts for each Notice are shown in Table 4.1. Other than reclamation obligations, which consist of re-contouring and re-vegetating exploration drill roads and sites, there are no known environmental liabilities associated with the recent exploration activities conducted at the Hasbrouck and Three Hills deposits by Allied and WK Mining.

Table 4.1 Existing Disturbance and BLM Notices for the Hasbrouck Project

Notice #	Disturbance Acreage	Bond Amount
NVN-91216	4.88	$ 65,450.00
NVN-89964	1.84	$ 14,033.00
NVN-89750	4.53	$ 18,758.00

The Tonopah district is the center of extensive mining and exploration activity that has occurred over the past 110 years. Old workings and prospects are located throughout the Hasbrouck and Three Hills deposit areas. Contamination may occur in association with historic surface and underground workings, or from former operators in relation to drill pads and sumps where chemicals or oils may have collected.

4.4.2 Permits Required

The proposed Three Hills Mine and the proposed Hasbrouck Mine will be permitted separately and sequentially, beginning with the proposed Three Hills Mine. Baseline environmental work will be carried out and permits obtained independently for both operations.

West Kirkland has submitted an application for a Mine Plan of Operations ("Plan") to the BLM, an initial step to obtain the necessary permits for the construction, operation, reclamation, and closure of an open pit, heap leach mining operation at the Three Hills site. West Kirkland is in the latter stage of planning for the initiation of the permit acquisition process for the Hasbrouck site. The Plan application will be submitted for the proposed Hasbrouck Mine when operational and baseline surveys are complete and operations and design for the project are at a level where a Plan application can be developed to the necessary level of detail.

The review and approval process for the Plan by the BLM constitutes a federal action under the National Environmental Policy Act ("NEPA") and BLM regulation. Thus, for the BLM to process the Plan application, the BLM is required to comply with NEPA and prepare either an Environmental Assessment ("EA"), or an Environmental Impact Statement ("EIS"). It has been determined by the BLM that an EA shall be prepared for the proposed Three Hills Mine. The BLM will determine the level of NEPA to perform for the proposed Hasbrouck Mine following the submittal and acceptance of the Plan application. It is anticipated that an EIS will be required for the proposed Hasbrouck Mine.

A number of county, state, and federal permits will be required prior to commencement of mining operations for both the proposed Three Hills and Hasbrouck mines as shown in Table 4.2.

Table 4.2 Operating Permits Required

Permit	Issuing Agency
Plan of Operations	Bureau of Land Management
Rights-of-Way	Bureau of Land Management
Reclamation Permit	NDEP Bureau of Regulation and Reclamation
Air Quality Operating Permit	NDEP Bureau of Air Pollution Control
Mercury Air Operating Permit	NDEP Bureau of Air Pollution Control
Water Pollution Control Permit	NDEP Bureau of Regulation and Reclamation
Artificial Pond Permit	Nevada Department of Wildlife
Dam Safety Permit	Nevada Division of Water Resources
Hazardous Material Storage Permit	Nevada State Fire Marshal
County Road Maintenance Agreement	Esmeralda and Nye Counties

4.5 Easements for Local Infrastructure

At the Hasbrouck deposit, both U.S. Highway 95 and the former U.S. Highway 95 have Right of Way boundaries and are immediately adjacent to the deposit. West Kirkland has ascertained that mining in proximity to Highway 95 is viable and that relocating U.S. Highway 95 in order to exploit the Hasbrouck deposit is not necessary. Blasting will at times be subject to the requirements and constraints of the Nevada Department of Transportation.

A north-south buried fiber optic cable, owned by AT&T Inc., runs along the eastern boundary of the Hasbrouck property, just to the west of, and approximately parallel to the old U.S. Highway 95. West Kirkland has determined that relocation of the buried cable will not be necessary after consultation with AT&T Inc.

At Three Hills, the same buried fiber optic cable runs north-south through the eastern portion of the Three Hills deposit and will require relocation for mining to take place. At a recent meeting with AT&T in Reno, Nevada, AT&T provided the opinion that it is practical to relocate the fiber optic cable and provided budget costs associated with such a move.

5.0 ACCESSIBILITY, PHYSIOGRAPHY, CLIMATE, LOCAL RESOURCES AND INFRASTRUCTURE

The information in this section has been largely taken from the Technical Report completed in 2014 (Wilson, 2014).

5.1 Access

The Three Hills property is one mile southwest of Tonopah and is accessed via county maintained roads from the northwest end of Tonopah. An alternate access route from the south is being considered. The deposit is approximately 4.75 miles north of the Hasbrouck deposit.

The Hasbrouck property is six miles south of Tonopah, Nevada, and can be accessed by a gravel road off U.S. Highway 95. U.S. Highway 95 passes through the property approximately 0.25 miles west of the Hasbrouck deposit and is an all-weather, all-season roadway suitable for commercial semi-trailer traffic. Alternatively, the property may be accessed via old Highway 95, an unmaintained paved road that transects the property 0.4 miles east of the Hasbrouck deposit.

U.S. Highway 95 is the main north–south transportation corridor through central Nevada and passes 2.25 miles east of the Three Hills deposit, and immediately to the west of the Hasbrouck deposit. U.S. Highway 6 passes 1.25 miles north of the Three Hills deposit, and is a major east-west transportation corridor through central Nevada. Both of the above provide all-weather, all-season access for commercial semi-trailers. Both highways pass through Tonopah, Nevada.

5.2 Physiography

Elevations of the properties vary between 5,600ft and 6,300ft. The principal physiographic features of the Hasbrouck and Three Hills properties are prominent hills that rise 200-700ft off the valley floor. This includes Hasbrouck Mountain, the core of the Hasbrouck deposit, which rises 700ft from the valley plain to a peak of 6,300ft. The principal physiographic features of the Three Hills property are the cluster of hills known as Three Hills, which rise 200ft from the valley floor to an elevation of about 6,100ft.

Vegetation in the area is typical of south-central Nevada and consists of sagebrush and other desert plants on the lower slopes and valleys. Trees are absent. Shadscale, white sage, and greasewood occur with sagebrush on the drier slopes and hills.

5.3 Climate

The climate is semi-arid. Average annual precipitation is 5 inches, which is accumulated through winter snows and, to a lesser extent, summer thunderstorms. The evaporation potential greatly exceeds the precipitation on an average annual basis in the area, creating a negative water balance which is addressed in Section 17.1.9.3. There are large temperature variations recorded for the Tonopah area, with an annual range of -12° F to 105° F, with the average temperatures being 23° F in winter and 73° F in summer. On average, 150 days per year are frost-free. Snow depths in winter are generally minimal on the property as storms are fairly intermittent and winter daytime high temperatures often exceed 32° F. The overall climate will permit production operations year round, although freezing winter temperatures need to be considered in the design of any heap leach processing system.

5.4 Local Resources and Infrastructure

5.4.1 Human Resources, Accommodation, and Amenities

The towns of Tonopah (population 2,800) and Goldfield (population 300) are within easy driving distance of the properties and have basic amenities, medical services, housing, apartments, and lots for sale. The residents of these two communities comprise an experienced work force with historical and recent ties to mining operations in Nevada. Taken together, these locations can provide living areas for employees and it is expected that residents of Tonopah and Goldfield will form a significant portion of the workforce.

5.4.1.1 Electrical Power

An existing 55 kV power line, owned by NV Energy, a state-wide energy provider and the sole option for grid power for the project, transects the west side of the Hasbrouck deposit. Recent discussions with NV Energy indicate that there is sufficient capacity to support the planned project requirements.

5.4.1.2 Raw Water Supply

Raw water is defined as water, other than potable water, that will be required and be used by the project. It includes water for construction purposes, make-up water for mineral processing, water for dust control on mine roads, and any other sundry uses.

Raw water is available from the Tonopah Public Utility ("TPU"), which has offered to sell water to the project. TPU has the necessary water permits and infrastructure in the form of wells, pumps, pipelines and tanks to meet the project's needs, and is legally entitled to do so. The quantity of water required is estimated at between 350 and 500 gpm.

A second source of raw water is from a well or wells, which would be installed close to each deposit. This would involve obtaining a water right to appropriate groundwater, which might be a new water right acquired from the state engineer on application, or by purchase or lease of an existing water right.

5.4.1.3 Potable Water

Water sourced from the TPU is of potable quality and will be used to meet the project's potable water needs, estimated at 5 gpm.

Should water not be obtained from the TPU then a potable water well would be installed at each deposit.

6.0 HISTORY

This section describes exploration at Hasbrouck and Three Hills prior to acquisition by West Kirkland and is largely taken from Wilson (2014).

6.1 Three Hills Exploration History

Modern exploration in the Three Hills area started in 1974 when Cordex obtained the property and completed sampling and mapping in the project area. Cordex drilled 14 rotary holes in 1978, intersecting gold mineralization in most of the holes. Saga Exploration leased the property and, between 1983 and 1988, completed 33 air track and 28 reverse circulation drill holes. Two of the air track holes and 5 of the RC holes drilled by Saga are not included in the current database. Echo Bay leased the property in 1988 and completed an additional 77 reverse circulation drill holes during the next two years. During the period 1991 to 1995, Gexa Gold and Coeur D'Alene Mines completed sampling and metallurgical studies on the property and Gexa drilled two short diamond-core holes.

In 1995 the Eastfield Resources Ltd./Prism ("Eastfield") partnership optioned the property from Coeur D'Alene Mines, who had acquired the property by way of settlement of receivership of Gexa Resources, and completed additional drilling and testing on the property between 1995 and 1997. A number of geophysical studies (including magnetics and induced polarization) were completed, as well as geochemical sampling over a regular grid. A total of 19 soil lines, spaced 300-400ft apart were completed. Eastfield's induced polarization (IP) survey was made over an area north of the Three Hills Deposit, with 12.3 line miles completed. Oxidation levels in the area are of sufficient depth to make it difficult to detect sulfide mineralization. No strong features were recognized. The Eastfield magnetic data has been useful in defining linear fault features and major lithology breaks.

A Master's thesis research project was completed by R. Thompson during the 1996 and 1997 exploration seasons at Three Hills. The thesis work included study of thin sections, whole rock geochemistry, and x-ray diffraction studies of the alteration mineralogy (Tregaskis and Garrat, 1998). Additionally, some samples were analyzed for gold, silver, arsenic, antimony, mercury, molybdenum, and occasionally copper, lead, and zinc. Arsenic, antimony, molybdenum, and mercury concentrations are elevated in the limonitic Siebert Formation over a widespread area in the northern portion of the Three Hills area.

Geologic mapping at Three Hills was completed by R. Thompson and S. Tregaskis (1997-1998). This mapping remains as the guide for exploration in the area.

Coeur D'Alene Mines sold the Three Hills property to Euro-Nevada, which subsequently merged with Newmont. Eastfield terminated their option agreement and returned the property to Newmont after the year 2000 exploration season.

On May 23, 2003, Vista executed a purchase agreement with Newmont Capital, which included both the Hasbrouck and the Three Hills properties. The terms of this agreement are detailed in

Section 4.1.3. Vista did not conduct exploration at Three Hills until the spin-off of Allied Nevada Gold Corp.

Allied initiated exploration at Three Hills in 2012 and drilled 17 RC holes that year, focused on expanding known mineralization. The best hole was TH12R-015, which returned 66m of 3.33 g/t Au. An additional 8 core holes were drilled for metallurgical samples and condemnation in 2013.

Allied identified a total of 312 rock-chip samples taken in the Three Hills area during exploration between 1974 and 2012. The bulk of the samples are channel samples taken from three road cuts and a 225ft adit. Allied was able to spatially locate and validate assay data for 204 of these samples. Rock-chip samples range from < 0.005 to 5.69ppm Au and <0.20 to >100ppm Ag. Approximately 70% of the samples were also analyzed for geochemistry, including Ba, Hg, Mn, As, Mo, and Sb. The Eastfield soil data was not located by Allied.

6.1.1 Hasbrouck Exploration History

Silver and gold mineralization was first discovered on Hasbrouck Mountain in 1902. Early mining exploited the Kernick vein, which was worked on a small scale through the mid-1920s. The only recorded production from Hasbrouck is 740 tons of ore by the Tonopah Hasbrouck Mining Company in 1923 and 1924 (Couch and Carpenter, 1943) that grossed $10,406. The early miners completed about 6,500ft of adits and 1,000ft of raises.

In 1974 Cordex completed detailed surface and road cut sampling, vertical conventional rotary drilling, geologic mapping, sampling of surface and underground workings, a mineral resource estimate, and metallurgical test work. The claims were relinquished at the end of 1975, but subsequently re-acquired in 1980. During the 1980 work program, Cordex undertook detailed underground sampling of the principal workings, including the Ore Car, Main, South, and Northeast adits. A total of 191 underground samples were collected over a total length of 3,862ft. One surface and two underground bulk samples were collected for metallurgical test work. In total, drilling by Cordex from 1974–1980 comprised 25 rotary drill holes (9,760ft) and one of the 1974 rotary drill holes was deepened using core drilling (959ft of core). A large, low-grade gold–silver deposit was outlined based on these activities. The current resource database excludes 3 of the Cordex drill holes due to uncertain collar locations.

Geological mapping of the Hasbrouck deposit area was undertaken as part of a Master’s degree thesis research (Graney, 1985). The mapping defined multiple structural orientations and a number of breccia bodies believed to represent the controlling features of precious metal mineralization, primarily the east–west-trending Kernick vein zone.

Franco-Nevada optioned the property from Cordex in 1985, drilled 30 vertical RC drill holes (10,145ft), and completed metallurgical test work. A mineral resource and “mineable reserve” estimates (not in accordance with NI 43-101) were performed in 1986. The Franco-Nevada drilling succeeded in expanding and better defining the Hasbrouck deposit.

FMC optioned the property in 1988 and drilled 76 RC angle and vertical drill holes (34,255ft) and undertook additional metallurgical test work. The FMC program consisted primarily of definition and infill drilling, including a small zone of tightly-spaced shallow drilling on a 15ft x 25ft grid. Mineral resource and "mineable reserve" (in accordance with not NI 43-101) estimations were performed in 1988. FMC also completed an E-Scan geophysical survey over a portion of the deposit, and drilled two deep RC drill holes to test a geophysical anomaly which had been interpreted as a possible high-grade feeder zone to the known mineralization. No such zone was intersected in the drilling. Four of the RC drill holes (1,160ft) were sited on the Silver King claim, north of Hasbrouck Mountain, but no anomalous gold or silver values were returned.

Following FMC's relinquishment of their interest in the property in 1990, Euro-Nevada completed a 19 line-kilometer CSAMT geophysical survey and reconnaissance surface rock chip surveys to the north, east, and southeast of Hasbrouck. A number of geochemical and geophysical targets that were considered prospective for gold mineralization were developed from this work.

Corona optioned the property from Euro-Nevada in 1992 and drilled two RC drill holes (1,210ft) to the north of Hasbrouck Mountain, in the area of the Eliza Jane patented claim. The drill holes intersected broad zones of anomalous gold, silver and molybdenum mineralization. Corona also updated the "mineable reserve" (not in accordance with NI 43-101) estimate for the Hasbrouck deposit.

Homestake acquired Corona in 1993 and vended their interest in the Hasbrouck property to Prime Equities International Corporation ("Prime") in the same year. Based on the information currently available to West Kirkland, neither Homestake nor Prime completed any substantive work on the project.

Euro-Nevada regained 100% interest in the property in 1993 and further refined the target exploration concepts that had been developed in 1990 and 1991. In 1996, Euro-Nevada completed an 18 hole RC drilling program (17,670ft) that tested these targets, which were aligned in a northwest-trending belt that passed to the north, east and southeast of Hasbrouck Mountain. Targets were identified by geophysical or geochemical anomalies, the presence of favorable alteration, structures and structural intersections, and favorable stratigraphy. The drilling failed to identify any new zones of significant gold or silver mineralization, but anomalous gold–silver values were encountered, typically over restricted down hole widths. The best results were returned from drilling in the area of the Eliza Jane patented claim.

Newmont took control of the Hasbrouck deposit by way of their merger with Euro-Nevada in 2002. Newmont then vended the property to Vista Gold on May 23, 2003. Allied Nevada assumed control of the property when Allied was floated as a spin-off company from Vista in 2007.

From 2010 to 2013, work completed by Allied included surface mapping, systematic geochemical sampling, several drill campaigns, data verification, metallurgical studies, a CSAMT geophysical program, regional gravity survey, and reinterpretation of the spatial geology, and completion of a preliminary economic assessment which is no longer relevant due to obsolescence of input costs and subsequent drilling.

Data collected prior to Allied's interest, including drill hole and surface sample data, have been located in variable grids, including truncated State Plane, and UTM NAD27 Zone 11. Allied converted these data to UTM NAD83 Zone 11 using Corpscon6. Elevation data have been based on the NGVD29 vertical datum. Field data collected by Allied utilized the UTM NAD83 Zone 11 coordinate grid system.

The greater Hasbrouck deposit was re-mapped at a scale of 1:6,000 by Allied personnel in 2011. Re-mapping by Allied personnel led to a re-interpretation of the structural framework and the relationship of various structural orientations to mineralization. In general, the stratigraphic interpretations have been retained from the previous mapping.

Selected road-cuts were systematically channel sampled by Allied on 10-ft nominal lengths with the goal of identifying structural patterns to mineralization. A total of 677 samples were collected by Allied and submitted to ALS Chemex in Reno, Nevada for precious metal and multi-element analysis. Numerous zones of outcropping mineralization were identified. Multiple structural zones were also highlighted as either mineralized, or as boundaries to mineralization.

Two geophysical surveys were undertaken by predecessors of Allied. These data were not available to the West Kirkland.

An E-SCAN (multi-directional resistivity) survey was completed over Hasbrouck Mountain in 1988 and reinterpreted in 1998. The scan shows a resistive cap at the top and at the Saddle Knob, as well as generally matching a mapped silicified northwest structural trend on the south side. A northwest linear on the north slope at Hasbrouck is also suggested by the survey. Resistive near-vertical zones were noted in the report that crudely match similar resistive zones defined in a later CSAMT survey by Allied (see below). The reprocessed color plan view files were found to generally match the near surface resistivity detailed in the later CSAMT. The 1988 E-Scan survey lacked the detail of Allied's later CSAMT.

A CSAMT survey for the areas north and south of Hasbrouck Mountain was completed in 1990. Except for a line run at the southern base of Hasbrouck Mountain (Wright, 2011a), the 1990 survey does not cover the main project. The southern line suggests a continuation to the south of a mapped fault (East Fault) under cover.

Allied completed a CSAMT survey in 2011 over Hasbrouck Mountain consisting of 11.5 line kilometers at 100 meter station spacing (Wright, 2011b). The survey identified a strong resistor in the Fraction Tuff on the eastern portion of the mountain. Drill intercepts confirm that the anomaly is likely a locally welded portion of the Fraction Tuff. The strong silicification in the upper Siebert units on Hasbrouck Mountain was outlined, and possible feeder faults are evident in the CSAMT images. The Saddle Fault Zone and the East Fault show as 'breaks' between resistive masses. The images match the mapped resistive northwest trending zones on the south and northern part of Hasbrouck. Drill testing of the upper portion of these zones confirmed the CSAMT resistivity model.

In 2010, Allied completed two gravity surveys: one over Hasbrouck proper, and a contiguous survey to the south of the Hasbrouck Mountain (Wright, 2010). Subsequently, a gravity survey was completed over the southern portion of the Hasbrouck claim block, with 729 new gravity data stations added contiguous to the 2010 gravity surveys (Wright, 2011a). This 2011 survey was combined with the previous surveys into a master gravity plot, and structural interpretations derived from the surveys were incorporated into the exploration and mapping efforts.

Regional gravity patterns indicate a strong northwest lineament, overprinted by north-south and northeast linears. This gravity signature has been interpreted as evidence of the Walker Lane shear zone, along with transverse faults. Hasbrouck Mountain lies on the northern edge of a major gravity linear (Wright, 2010, 2011a).

Drilling by Allied from 2010 through 2012 included 128 RC holes (117,093ft) and 43 diamond-core holes (28,606ft). Most of the drilling was focused on resource definition and expansion, but also included significant core drilling to provide material for metallurgical testwork. The 2012 drilling was located at the Silver King and Mastif targets, both of which are external to the Hasbrouck deposit resource.

6.2 Historical Mineral Resource Estimates

This section has been largely summarized and modified from Wilson (2014), who noted that the historic estimates provide historical perspective regarding the range of estimates produced using different data, methods, and assumptions. These historic mineral resource estimates are superseded by the current mineral resource estimate described in Section 14.0 and are not to be relied on.

6.2.1 Historical Three Hills Estimates

Historic resource estimates for the Three Hills deposit, performed by Echo Bay, GEXA Gold and Eastfield Resources in 1988 through 1996, were summarized by MDA (Prenn, 2006) and are presented in Table 6.1. MDA believes that none of these historic estimates were prepared in full compliance with the provisions of National Instrument 43-101. They are included for historical completeness and should not be relied upon, and are superseded by the current resources estimated in Section 14 of this report.

Table 6.1 Historical Three Hills Resource Estimates: 1988 through 1996
(from Prenn, 2006)

Company	Method	Year	Cutoff oz Au/t	Tons 000's	Grade oz Au/t	Oz Au 000's
Echo Bay	Section	1988	0.01 0.02	2,051.9 1,271.8	0.027 0.035	55.4 44.5
Echo Bay	Section	1988	0.01 0.02	7,357.0 3,526.0	0.026 0.036	191.0 127.0
Echo Bay	Polygon	1988	0.01 0.02	6,700.0 2,750.0	0.023 0.039	155.0 107.0
Echo Bay	Section	1990	0.01 0.02	6,450.0 3,180.0	0.026 0.036	167.7 114.5
Gexa	ID3	1991	0.01 0.02	4,203.4 1,894.3	0.021 0.029	88.3 54.9
Eastfield/Prism (MDA)	ID3	1996	0.01	6,286.0	0.023	144.6

In 2003 and 2006 MDA noted that some of the material estimated for the 1996 resource was not inside in Vista's property boundary for Three Hills. MDA subtracted the material outside the property boundary to update the 1996 resource estimate, but no additional drilling had been done that was considered material to the Three Hills resource (Table 6.2). MDA used a bulk density of 15.0ft^3/ton, based on an average of 19 drill core samples from the 1996 Eastfield drilling.

Table 6.2 Historic Three Hills Resource Estimate 2003 and 2006
(Prenn, 2006)

	Indicated			Inferred		
Cutoff oz Au/t	Tons 000's	oz Au/t	Oz Au 000's	Tons 000's	oz Au/t	Oz Au 000's
0.000	5,744.0	0.023	133.8	1,855.0	0.001	1.3
0.010	5,736.0	0.023	133.6	10.6	0.015	0.2
0.015	4,754.0	0.025	120.2	1.4	0.034	0.0
0.020	3,180.0	0.030	96.6			
0.030	1,132.0	0.041	46.5			

The most recent historic estimate of mineral resources at Three Hills was presented in the Technical Report by Wilson (2014), utilizing Allied's geologic model and a drilling database reported to contain 287 holes drilled from 1974 through 2012. Table 6.3 summarizes the 2014 estimate of resources at Three Hills.

Table 6.3 Summary of 2014 Estimated Resources, Three Hills
(Feb 21, 2014, 0.005 opt Au Cutoff; from Wilson, 2014)

Category	Tons (000	Gold opt	Silver opt	AuEq opt	Gold (000 oz)	Silver (000 oz)	AuEq (000
Measured	1,091	0.023	N/A	N/A	25	0	25
Indicated	7,413	0.017	N/A	N/A	126	0	126
Measured &	**8,504**	**0.018**	**N/A**	**N/A**	**151**	**0**	**151**
Inferred	11,002	0.014			154		154

AuEq calculated AuEq= Au + (Ag/57.14)

6.2.2 Historical Hasbrouck Estimates

Resource and reserve estimates for the Hasbrouck deposit performed prior to 2003 by various operators were summarized by Prenn and Gustin (2003) and are presented in Table 6.4. MDA believes that none of these historical estimates were prepared in full compliance with the provisions of National Instrument 43-101. They are included for historical completeness and should not be relied upon, and are superseded by the current resources estimated in Section 14 of this report. The following notes apply to some of the estimates:

1. The Cordex and FMC estimates were prepared in-house.
2. Bechtel, Inc. prepared the estimates for Franco-Nevada.

Table 6.4 Historical (Non-43-101) Resource and Reserve Estimates for the Hasbrouck Deposit Prior to 2003 (0.020 oz Au/ton cutoff)

Company	*Category as reported*	*Year*	*Tons (x 10^6)*		*Grade Au (oz/ton)*	*Grade Ag (oz/ton)*	*Ounces Gold*	*Ounces Silver*
Cordex	*"Geologic*	*1975*	*5.0*		*0.040*	*0.7*	*200,000*	*3,500,000*
Franco-Nevada	*"Geologic*	*1986*	*7.7*		*0.036*	*0.7*	*277,000*	*5,390,000*
FMC	*"Geologic*	*1988*	*10.2*		*0.038*	*0.41*	*388,000*	*4,180,000*
Franco-Nevada	*"Mineable Reserves*	*1986*	*3.16*		*0.038*	*0.61*	*120,000*	*1,930,000*
FMC	*"Mineable Reserves*	*1988*	*1.90*		*0.045*	*0.50*	*85,000*	*950,000*
Corona	*"Mineable Inventory"*	*1989*	*4.2*		*0.036*	*n/a*	*151,000*	

MDA is unaware of any of the companies listed in Table 6.4 having undertaken density measurements on the mineralized rocks at Hasbrouck. The only tonnage factor used that is known to MDA is 12 cubic feet per ton of ore, which was applied by Bechtel in the Franco-Nevada estimations and is likely a best-guess estimate. MDA concludes that generalized, unsupported tonnage factors were probably used in the historical estimations.

The Franco-Nevada "Geologic Reserve" was defined by a block model with 20ft x 20ft x 20ft blocks that were estimated using 20-foot vertical composites of drill assays and geostatistical techniques. The "Mineable Reserves" includes those portions of the "Geologic Reserve" that were defined by drill holes with approximately 100-foot spacing and that were encompassed in a pit with 45º slopes (Bechtel, 1986). The pit appears to have been placed on a best-fit basis to include the highest grade composites; economic parameters do not appear to have been used to generate the pit.

No information regarding the parameters or methods used in the Cordex and Corona (Barnett, 1989) estimations was reviewed by MDA. The Euro-Nevada "Mineable Reserves" were defined by drilling at approximately 100ft to 150ft spacing. The FMC "Mineable Reserves" estimate used assumed prices of $450/oz gold and $6.50/oz silver, and recoveries of 49% for gold and 9% for silver. MDA knows of no other parameters used in the "Mineable" estimations of Euro-Nevada, FMC and Corona.

In 2003 MDA estimated the Hasbouck gold and silver resources at the request of Vista Gold, conforming to the CIM standards and definitions of 2000 (Prenn and Gustin, 2003). The 2003 MDA estimate is shown in Table 6.5. An updated Technical Report for Vista was provided by MDA in 2006, but no new technical data were available. The 2003 resource estimate remained unchanged in the 2006 updated MDA report (Prenn and Gustin, 2006).

Table 6.5 2003 and 2006 Historic MDA Resource Estimate for the Hasbrouck Deposit

INDICATED RESOURCES					
		GOLD		SILVER	
Cutoff (oz Au/ton)	Tons (1000's)	Grade (oz Au/ton)	Ounces	Grade (oz Ag/ton)	Ounces
0.01	20,300	0.023	459,000	0.32	6,464,000
0.02	8,100	0.034	277,000	0.45	3,663,000
0.03	3,100	0.051	160,000	0.6	1,876,000
0.04	2,000	0.06	121,000	0.64	1,291,000
0.05	1,100	0.073	81,000	0.7	784,000
0.08	280	0.108	31,000	0.85	242,000
0.10	130	0.131	17,000	0.82	110,000
0.15	27	0.174	4,700	0.61	16,000
INFERRED RESOURCES					
		GOLD		SILVER	
Cutoff (oz Au/ton)	Tons (1000's)	Grade (oz Au/ton)	Ounces	Grade (oz Ag/ton)	Ounces
0.01	8,200	0.021	172,000	0.19	1,589,000
0.02	2,300	0.035	83,000	0.25	592,000
0.03	1,000	0.052	52,000	0.33	333,000
0.04	760	0.057	43,000	0.31	235,000
0.05	410	0.068	28,000	0.27	110,000
0.08	70	0.102	7,200	0.17	12,000
0.10	44	0.111	4,900	0.14	6,000
0.15	0	0	0	-	-

Allied prepared an up-dated resource estimate and Technical Report and Preliminary Economic Assessment ("PEA") in accordance with NI 43-101 utilizing a November, 2011 database that incorporated drilling done by Allied in 2010 and 2011 (Flint et al., 2012). A bulk density of 2.4 tonnes per cubic meter was applied by Flint et al. (2012), apparently based on the 5 mineralized rock samples analyzed for bulk density by MDA in 2003 (Prenn and Gustin, 2006). The Allied

2012 resource estimate used ordinary kriging and gold-equivalent cut-off grades for the reporting of Inferred-only Resources as summarized in Table 6.6

Table 6.6 2012 Hasbrouck Inferred Resource Estimate at Various Cut-off Grades
Flint et al. (January, 2012)

Cut-Off AuEq opt	Tons	Au opt	Au Oz	Ag opt	Ag oz	AuEq opt	AuEq oz
0.005	**128,608,197**	**0.009**	**1,157,474**	**0.228**	**29,322,669**	**0.013**	**1,671,907**
0.006	111,187,572	0.010	1,111,876	0.247	27,463,330	0.015	1,667,814
0.007	96,298,939	0.011	1,059,288	0.264	25,422,920	0.016	1,540,783
0.008	83,597,819	0.012	1,003,174	0.283	23,658,183	0.017	1,421,163
0.009	73,192,760	0.013	951,506	0.300	21,957,828	0.019	1,390,662
0.010	**64,634,418**	**0.014**	**904,882**	**0.316**	**20,424,476**	**0.020**	**1,292,688**
0.011	57,391,006	0.015	860,865	0.331	18,996,423	0.021	1,205,211
0.012	51,208,442	0.016	819,335	0.346	17,718,121	0.022	1,126,586
0.013	45,762,953	0.017	777,970	0.361	16,520,426	0.023	1,052,548
0.014	40,832,277	0.018	734,981	0.376	15,352,936	0.024	979,975
0.015	36,819,290	0.019	699,567	0.391	14,396,342	0.025	920,482
0.016	33,357,756	0.019	633,797	0.406	13,543,249	0.026	867,302
0.017	29,793,687	0.020	595,874	0.421	12,543,142	0.028	834,223
0.018	26,958,523	0.021	566,129	0.436	11,753,916	0.029	781,797
0.019	24,368,890	0.022	536,116	0.452	11,014,738	0.030	731,067
0.020	22,213,157	0.023	510,903	0.466	10,351,331	0.031	688,608
0.025	12,940,980	0.027	349,406	0.551	7,130,480	0.037	478,816
0.030	7,939,904	0.032	254,077	0.632	5,018,019	0.043	341,416
0.035	4,835,234	0.037	178,904	0.715	3,457,192	0.050	241,762
0.040	2,917,621	0.044	128,375	0.812	2,369,108	0.058	169,222

Following West Kirkland's acquisition of the Hasbrouck project from Allied in early 2014, an updated mineral resource estimate and Technical Report were prepared in accordance with NI 43-101 by Wilson (2014), incorporating 37 RC holes drilled in the Hasbrouck deposit by Allied in 2012. A summary of the 2014 resource estimate is presented in Table 6.7.

Table 6.7 Summary of 2014 Hasbrouck Resource Estimate from Wilson (2014)
Cut-off Grade = 0.005opt AuEq

Category	Tons	Gold	Silver	AuEq	Gold	Silver	AuEq
	(000 tons)	opt	opt	opt	(000 oz)	(000 oz)	(000 oz)
Measured	14,686	0.014	0.307	0.019	206	4,509	285
Indicated	55,002	0.011	0.248	0.015	605	13,640	844
Measured & Indicated	**69,688**	**0.012**	**0.260**	**0.016**	**811**	**18,149**	**1,128**
Inferred	58,921	0.007	0.189	0.010	412	11,136	607

AuEq calculated AuEq= Au + (Ag/57.14)

6.3 Historical Production

Although mining took place prior to 1900 in the vicinity of Tonopah, most of the production from the area took place between 1900 and 1920. Silver and gold mineralization was first discovered on Hasbrouck Mountain in 1902. Early mining exploited the Kernick vein, which was worked on a small scale through the mid-1920s. The recorded production from Hasbrouck comprises 740 tons of ore produced by the Tonopah Hasbrouck Mining Company in 1923 and 1924 that grossed $10,406 (Couch and Carpenter, 1943). The early miners excavated about 6,500ft of adits and 1,000ft of raises.

No production figures are available for the Three Hills deposit. Production from the Three Hills deposit may have included minor amounts of gold mined from several adits and shafts in the area.

7.0 GEOLOGIC SETTING AND MINERALIZATION

This section has been taken from the Technical Reports of Prenn and Gustin (2006), Wilson (2014) and sources therein.

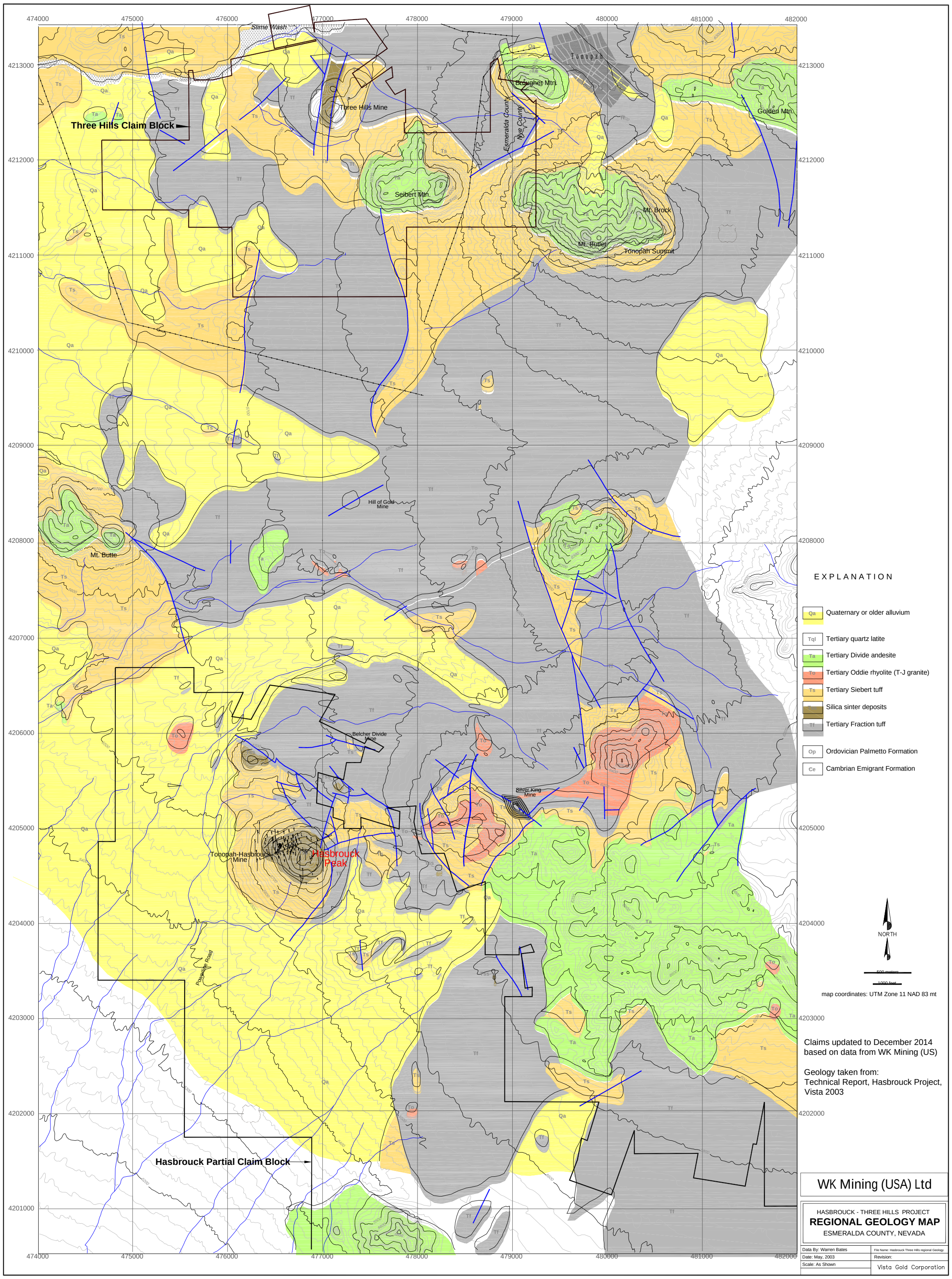
7.1 Geologic Setting

7.1.1 Regional Geology

The Three Hills and Hasbrouck properties are located in the western portions of the Tonopah and Divide mining districts, respectively, which are characterized by exposures of Tertiary volcanic and volcano-sedimentary rocks. The Divide district is believed to be related to a caldera collapse and dome-field setting (Graney, 1985). Both Tonopah and the Divide districts lie along the east margin of the Walker Lane belt, a northwest-trending province in western Nevada and eastern California (Stewart, 1988) that includes numerous epithermal precious metal deposits, many of which are related to Tertiary volcanic rocks. Prominent northwest-trending strike-slip faults and related north-south to northeast trending normal faults characterize much of the Walker Lane belt.

The Tertiary volcanic rocks of the Divide district have been assigned to the Mizpah Formation, West End Rhyolite, Fraction Tuff, Siebert Formation, Divide Andesite and Oddie Rhyolite, all of Miocene age (Bonham and Garside, 1974; Bonham and Garside, 1979). The older West End and Mizpah formations have been drilled along the northeast of the Three Hills area, and are the principal hosts to mineralization at Tonopah. These units have not been encountered at depth under Three Hills or the Hasbrouck deposit. Overlying these is the Fraction Tuff, believed to have been derived from eruptions related to the collapse of an Early Miocene caldera centered on the area. Subsequent Basin-and-Range extensional faulting led to the deposition of fluvial and lacustrine sedimentary units of the Siebert Formation, which are intercalated with air-fall and thin ash-flow tuffs. Flows and domes of the Brougher Rhyolite, overlie the Siebert, forming high hills and peaks. This unit is only known from outcrop exposures near Three Hills, and has not been encountered in drilling. Dikes and domes of the Oddie Rhyolite intrude the earlier units and are interpreted to be genetically related to the mineralization in the Divide district and at Three Hills. The Divide Andesite, variously described as high level intrusions or flows, is thought by some to be post-mineralization (e.g., Snyder, 1990). A regional geologic map of the Three Hills and Hasbrouck project area is shown in Figure 7.1.

Figure 7.1 Regional Geologic Map of the Three Hills and Hasbrouck Area, Nevada
(modified from Prenn and Gustin (2006))



7.1.2 Project Geology

7.1.2.1 Three Hills Deposit Geology

The major rock types within the Three Hills property are, from oldest to youngest, the Mizpah Formation, Fraction Tuff, Siebert Formation, the Oddie Rhyolite and the Brougher Rhyolite. The Siebert Formation unconformably overlies the Fraction Tuff and both are intruded by the Oddie Rhyolite. The majority of the deposit lies in the Siebert Formation.

The Mizpah Formation ranges from trachyandesite to dacite, consisting of up to 700ft of porphyritic lava flows, dikes, lahars, and andesitic volcanoclastics. It is commonly altered hydrothermally, with quartz-sericite-adularia alteration associated with the main stage veins in the Tonopah district. The Mizpah Formation does not crop out in the project area, but can be found in an uplifted block to the east. It is the predominant host rock for Ag-Au vein mineralization in the Tonopah district, and westward extensions of the vein systems have been intercepted by drilling in the Three Hills property. K-Ar dating of the adularia associated with the mineralization at Tonopah ranges from 19-18 Ma.

The Fraction Tuff has been divided into two compositionally similar members; the Tonopah Summit and the King Tonopah Members. The Tonopah Summit Member is typically a poorly welded, quartz latite to rhyloite, lithic tuff. The King Tonopah Member is a welded rhyolitic, lithic, crystal tuff. K-Ar dates range from 21.5 to 17 Ma for both of the members, but do not clearly define stratigraphy between the two. Alteration is widespread in the Fraction Tuff, and it hosts silver veins and gold mineralization in the Three Hills area.

The overlying Siebert Formation is a sequence of volcaniclastic siltstones, sandstones, tuffs, and conglomerates deposited in fluvial and lacustrine conditions. Rapid facies changes are common in the formation. It has been broken down into two units in the project area: a thin bedded fine-grained tuff, and a coarse-grained volcaniclastic unit. The coarser, more permeable sandstones and conglomerates of the volcaniclastic unit are the preferred hosts for gold mineralization at Three Hills. K-Ar age dating suggests the Siebert ranges between 17-13 Ma in age. The upper parts of the Siebert are likely part of the regionally extensive Mid- to Late-Miocene Esmeralda Formation.

The Oddie Rhyolite is a pinkish-grey, weakly porphyritic, biotite-bearing high-silica rhyolite. It is almost always hydrothermally altered, and is associated with mineralization at Three Hills where domes appear to have proximal lappilli ejecta aprons that formed part of the Siebert Formation. K-Ar dating of the biotite has given an age of 16.9-16.4 Ma

Structure in the project area reflects effects of the Walker Lane dextral strike-slip faulting, superimposed on the Basin and Range extensional block faulting. The ages of the structures are between 26-16 Ma. The Walker Lane strike-slip faulting dominates and trends northwest, developing northeast and north-south trending extensional structures. The Basin and Range block faults trend north-south and form horsts and grabens bounded by high-angle normal faults that flatten to low-angle listric faults at depth. These high-angle faults are a control on the mineralization in Three Hills, where they cut the Siebert Formation, dropping the Siebert to the east, against Fraction Tuff to the west.

At the center of the property the "Three Hills" consist of the north, south, and east hills. Geologic mapping by Thompson (1999) shows the east hill is capped by Brougher Rhyolite, which appears to lie directly over the Siebert Formation as a flow (Figure 7.4). Oddie Rhyolite intrudes along north-south structures in the area and occurs as dikes, flows and flow domes. The west side of the south hill contains a flow that intruded along the main fault bounding the mineralization. Several smaller plugs are noted in outcrop and drilling to the east. A minor amount of mineralization has been drilled in the Oddie flows along the western edge of the hills.

The north and south hills are underlain by ash-flow, air-fall and water-lain tuffs and epiclastic sediments of the Siebert Formation. These volcanic and epiclastic units generally dip 30° to 40° to the east, immediately under the two hills, then become west dipping to flat lying under the east hill. The Siebert contains an upper portion dominated by epiclastic sediments and a lower portion containing various lithic, crystal and lapilli ash-flow units with interbedded epiclastic sediments. This is the dominant host for mineralization at Three Hills. The underlying Fraction Tuff is a secondary host to mineralization.

Historic drilling in the northeast portion of the area has encountered West End Rhyolite and Mizpah Andesite at depth. The West End Rhyolite is described as an irregular sill that has intruded the Mizpah Andesite. Drilling is limited, although thin zones of mineralization have been noted in both units. A geological map of the Three Hills area is included as Figure 7.2. An east-west cross-section looking north through the deposit is shown in Figure 7.3, and Figure 7.4 is a north-south cross-section looking west through the deposit.

Figure 7.2 Geologic Map of the Three Hills Deposit Area
(Modified from Thompson (1999) by West Kirkland, 2015)

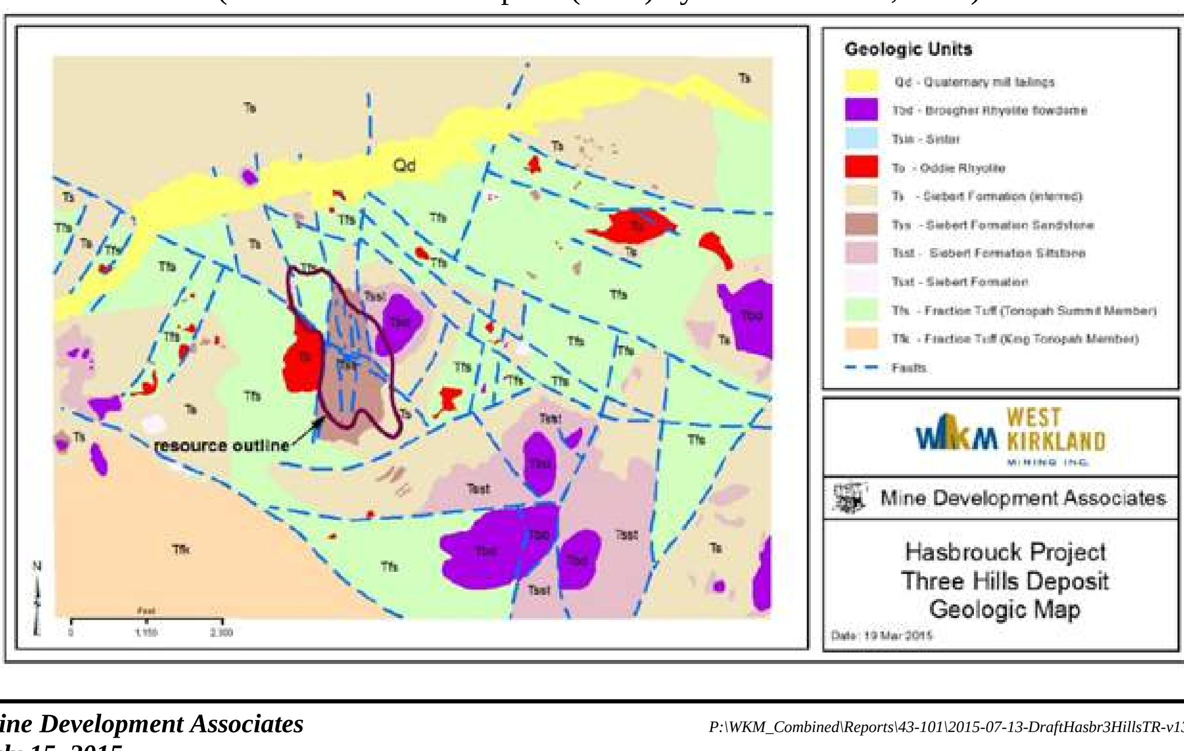


Figure 7.3 Three Hills East-West Cross-section 13821570 Looking North

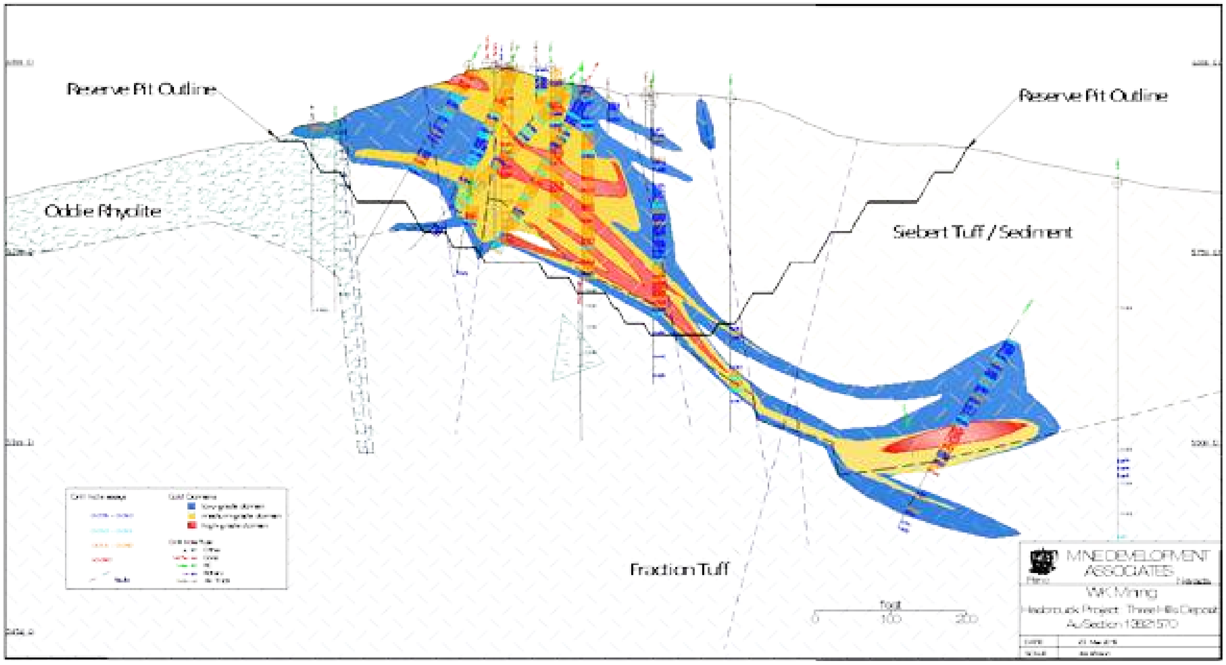
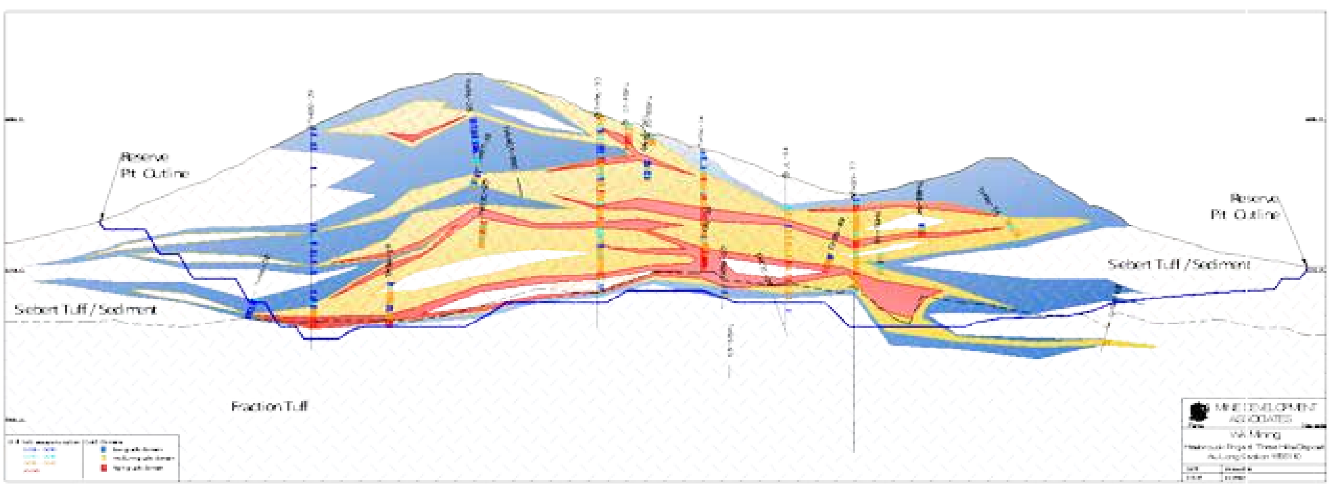


Figure 7.4 Three Hills North-South Cross-section 1565110 Looking West



7.1.2.2 Hasbrouck Deposit Geology

Details of the geology are provided by Graney (1985), who mapped Hasbrouck Mountain in detail and studied the alteration mineralogy as part of a Master's thesis supported by Cordex. The bulk of the topographic high of Hasbrouck Mountain (also known as Hasbrouck Peak) is underlain by ashflow, air-fall and waterlain tuffs and volcaniclastic sediments of the Siebert Formation. According to Graney's surface mapping, these volcanic and volcaniclastic units generally dip 10 to 40 degrees to the west and southwest, with the average dip being 20 degrees to the west. As at Three Hills, the upper portion of the Siebert Formation at Hasbrouck is dominated by epiclastic sediments, mostly sandstones and conglomerates of volcanic origin. Graney mapped several occurrences of chalcedonic sinter deposits, produced during hot spring activity, near the summit of the mountain. Hydrothermal breccias are exposed in various areas, especially along the western and northern slopes of Hasbrouck Mountain, generally to the north (in the hanging wall) of the Kernick structure. The lower portion of the Siebert Formation at Hasbrouck consists of various lithic, crystal and lapilli ash-flow units with interbedded epiclastic sediments. The Siebert Formation is underlain by the Fraction Tuff, which is exposed along the eastern base of Hasbrouck Mountain. The Fraction Tuff in this area is composed of lithic-rich ash flow tuff. Fluvial sandstones and conglomerates occur in the Siebert Formation immediately above the Fraction Tuff. The Fraction Tuff dips 40 degrees to the west (Graney, 1985).

Graney (1985) has mapped a series of generally north- to northeast-trending normal faults that cut Hasbrouck Mountain and are interpreted by Graney to be post-mineral structures. Most of these structures have displacements on the order of 100ft or less. The mineralized Kernick structure, which was the focus of historic underground production at Hasbrouck, trends roughly east-west across the western ridge of Hasbrouck Mountain and is reported to dip to the north at angles of 50 to 70 degrees (Graney, 1985).

Remapping of Hasbrouck Mountain by Allied's geologists led to a re-interpretation of the structural framework and the relationship of various structural orientations to mineralization (Figure 7.5, Figure 7.6, and Figure 7.7). High-angle faults mapped on Hasbrouck Mountain can generally be grouped into three orientations, north-south, N20°-35°E, and N40° – 60° W (Carter, 2011; Kunkel, 2012). North-south faults are the most prominent and appear to offset all other fault orientations (Figure 7.5). Offsetting relationships observed in outcrop of the northeast fault sets and northwest fault sets is equivocal.

Figure 7.5 Geologic Map of the Hasbrouck Deposit
from Wilson (2014)

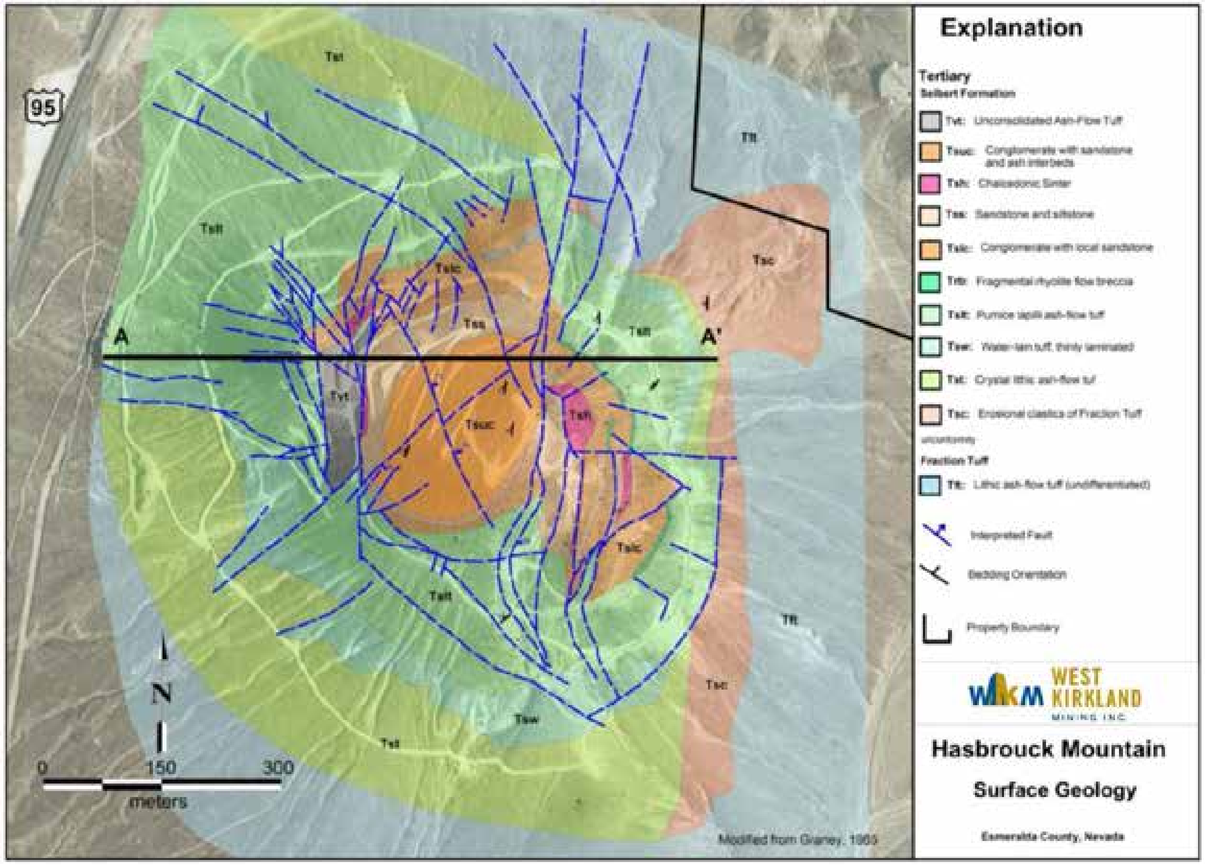


Figure 7.6 East-West Cross-section Hasbrouck Deposit
from Wilson (2014), looking north

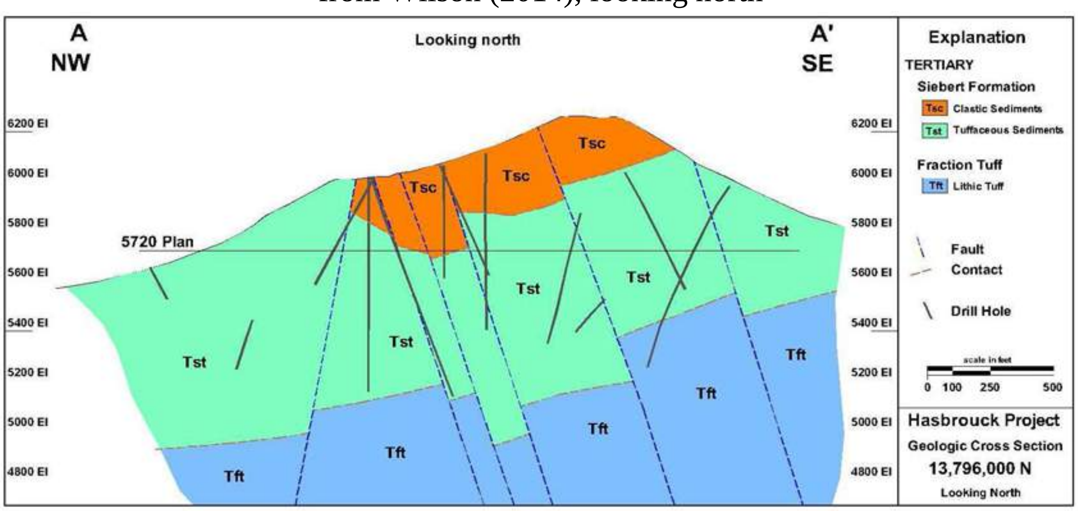
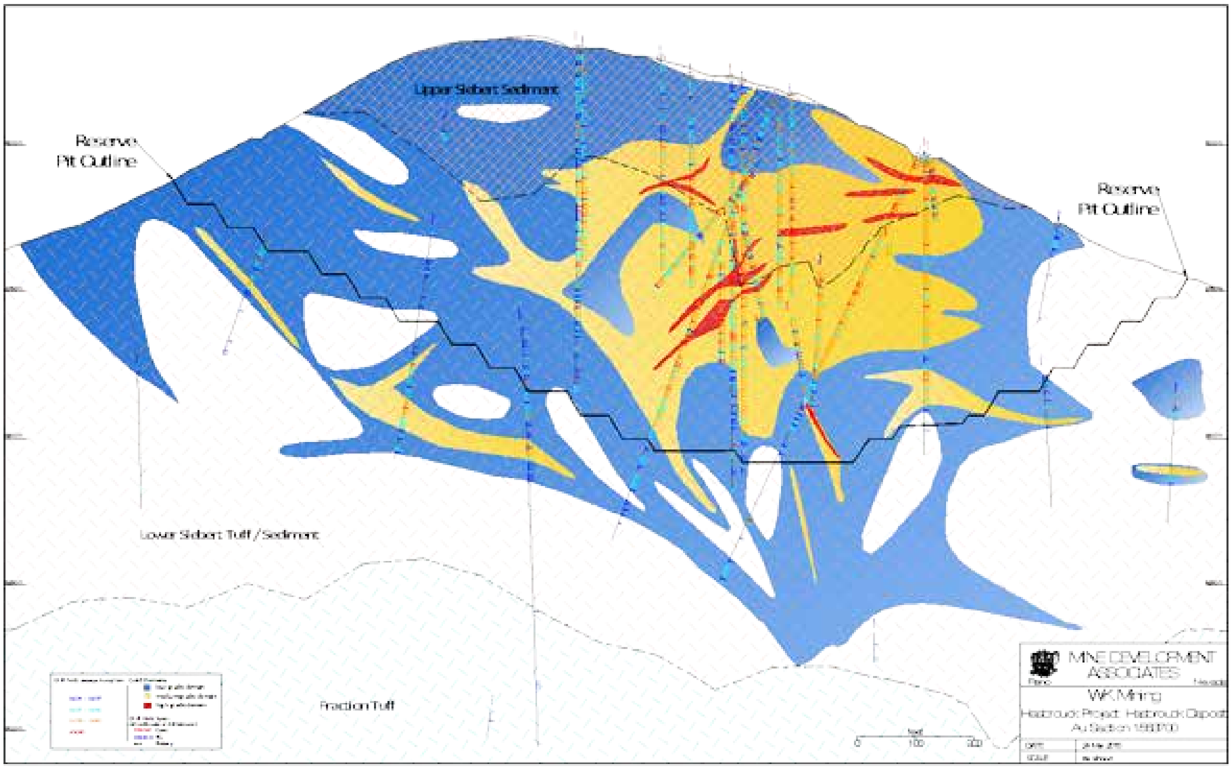


Figure 7.7 Hasbrouck Deposit North-South Au Section 1563700 Looking West



North-south faults are typically very high angle and may dip both to the east and west creating a series of horsts and grabens. Apparent normal offset appears to be on the order of several tens of feet to 100ft, but local evidence suggests there is also a strike-slip component. Northeast trending faults appear to be moderate to high-angle, dipping both to the northwest and southeast. Mapped northwest trending faults are more cryptic and discontinuous, typically forming broad, brecciated, steeply dipping zones.

7.2 Mineralization

7.2.1 Three Hills Mineralization

The drill-defined extent of Three Hills gold mineralization is approximately 1000ft east–west by 2700ft north–south with a maximum depth of 500ft along the down-dip eastern edge of the deposit. Mineralization remains open at depth to the east and southeast along the Siebert-Fraction contact.

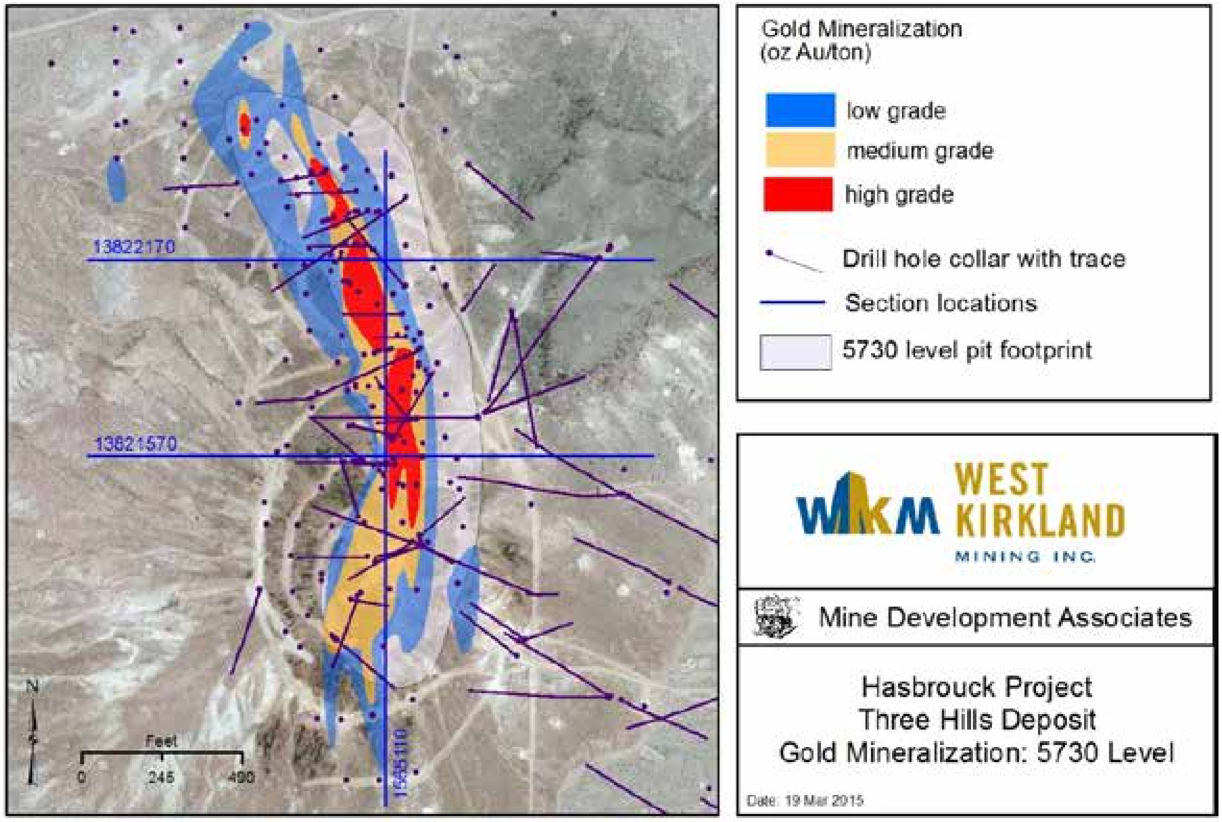
Gold mineralization at Three Hills is commonly associated with areas of higher permeability lithologies, rock unit contacts, and structural features. Previous authors have described the mineralization as "disseminated" though examination of outcrops and drill core shows the higher gold grades associated with discontinuous, irregular 0.05- to 0.5inch-wide veinlets, vein stockworks, and erratic breccia veins of chalcedony and quartz. Lower gold grades in the top of the south hill are found in zones of grey to brown chalcedony, and hydrothermal breccia veins and pipes. Figure 7.8 presents a level plan at the 5730ft elevation showing gold mineralization.

Tregaskis and Garrat (1998) describe the mineralization as being "intimately related" with alteration at Three Hills. The main resource is situated within a broad zone of pervasive silicification in the Siebert Formation and the upper 10-30ft of the Fraction Tuff. The contact between these two units contains consistently higher grades of gold and is more commonly argillized than silicified. The contact zone between the Siebert and Fraction controls mineralization lateral to the core of the deposit.

Hydrothermal fluids precipitated adularia, and quartz as the stable alteration assemblage such that the bulk of the mineralization occurred in rocks with cloudy adularized feldspar crystals, bipyramidal quartz crystals, quartz overgrowths, occasional preserved biotite flakes, and a silicified matrix. Argillic alteration (illite ± montmorillonite) forms an envelope around the silicified and mineralized zones, and along the Siebert–Fraction contact. Subsequent to mineralization the Three Hills deposit has been pervasively oxidized and Tregaskis and Garrat (1998) proposed that the gold was initially precipitated with pyrite that has now oxidized to goethite, hematite, and/or jarosite. Thompson (1999) proposed that the potassic alteration was a relatively early event and produced brittle rock that was later fractured by Walker Lane faulting.

Thompson (1999) mapped a series of Walker Lane structures oriented approximately N45W. The amount of strike slip movement is generally unknown, but is believed to have resulted in development of northeast and north-south trending extensional faults. These high angle structures form a series of horsts and grabens at the center of the property. Displacement along the north-south extensional faults ranges from 10- 500ft. The Three Hills deposit appears to be bounded by north-south faults and the western-most fault has been interpreted as a conduit for the emplacement of Oddie Rhyolite.

Figure 7.8 Three Hills Level Plan 5730 Elevation



7.2.2 Hasbrouck Mineralization

Hasbrouck mineralization has a 2,800ft east–west by 2,400ft north–south areal extent, with a maximum depth of 900ft. Mineralization is open at depth and to a limited extent to the north and east.

Precious metals mineralization at the Hasbrouck deposit is concentrated within the Siebert Formation, stratigraphically below the chalcedonic sinter horizons that outcrop near the peak of Hasbrouck Mountain (Graney, 1985). The overwhelming bulk of mineralization lies within the Main zone, a west-northwest-trending zone underlying Hasbrouck Mountain and parallel to the Walker Lane, while the smaller, east-west-trending, South zone occurs along the south flank of Hasbrouck Mountain approximately 700ft to the south of the Main zone. Weakly mineralized, sub-parallel structures occur between the Main and South zones.

The Kernick structure, which was the focus of historic underground at Hasbrouck, strikes roughly east-west across Hasbrouck Mountain and dips to the north. The majority of the mineralization in the deposit occurs in the hanging wall of the structure with the highest gold grades associated with 0.05- to 1.0inch wide, generally near-vertical, discontinuous silica-pyrite veinlets, sheeted veinlets and stockworks, all closely associated with multiple, larger and coalesced, but erratic bodies of hydrothermal breccias. Stratigraphic control, whereby the porous volcaniclastic units are preferentially mineralized, is prevalent throughout the deposit, but is especially evident in many of the moderate-grade zones (0.01 to 0.05 oz Au/ton) along the peripheries of the deposit. This stratigraphic control has been commonly cited by geologists of the various companies involved at Hasbrouck in the past (e.g., Graney, 1985).

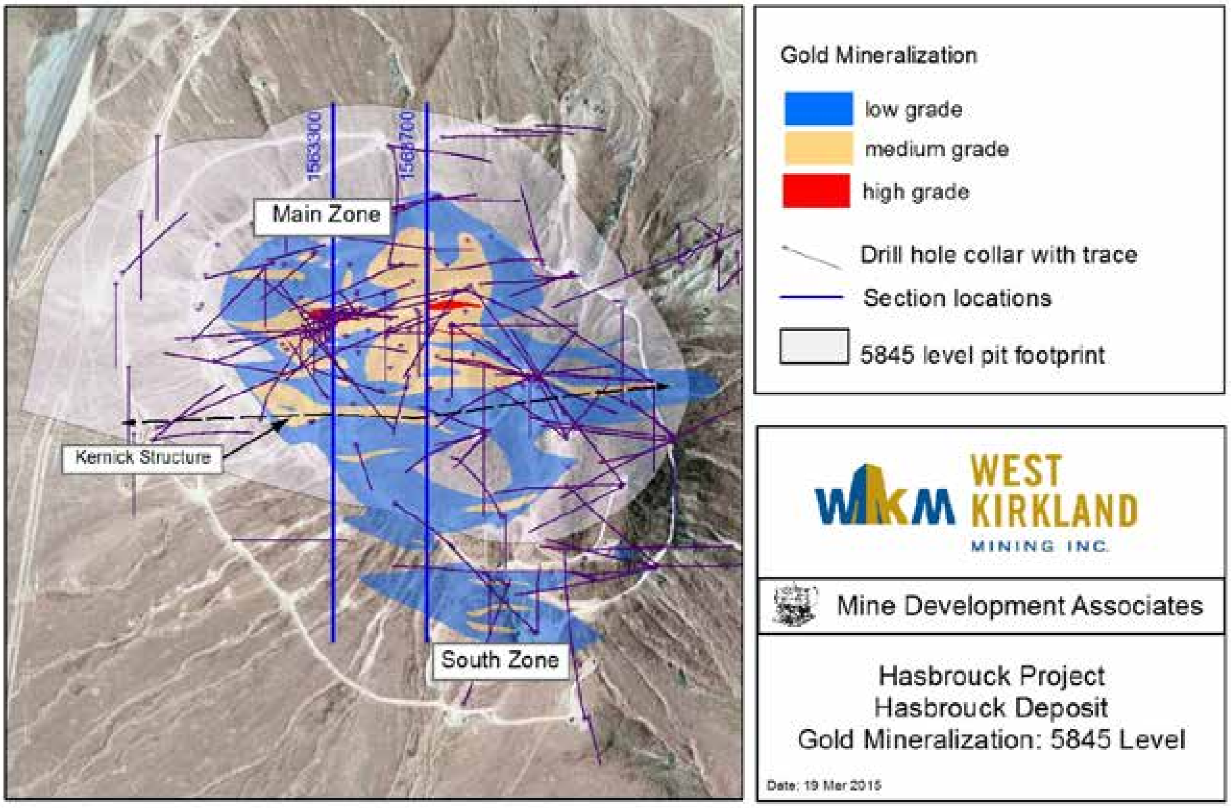
The Kernick structure served to focus higher-grade zones, although other such zones occur somewhat irregularly throughout the mineralized body in the hanging wall of the structure. A minor amount of mineralization lies in the footwall of the Kernick structure, along what are interpreted to be smaller, subsidiary structural zones.

The mineralization at Hasbrouck is accompanied by strong pervasive silicification, with associated adularia and pyrite, within the volcaniclastic rocks and lapilli tuff units of the upper Siebert Formation (Graney, 1985). Argillic alteration, characterized by the presence of illite and montmorillonite, forms an envelope around the silicified and mineralized zones.

Gold occurs as electrum, as inclusions in pyrite and in goethite derived from the partial to complete oxidation of pyrite, and within siliceous gangue minerals (Graney, 1985; Hazen, 1989). Silver occurs in the native state and in argentite (Wittkopp, 1982). Silver is also intimately associated with iron oxides derived from the oxidation of silver-rich sulfide minerals that occurred as inclusions in pyrite (Wittkopp, 1982).

Hasbrouck mineralization is primarily characterized as structurally-controlled, with secondary lithologic control. West-northwest and northeast fault orientations localize higher-grade mineralization (+0.05 oz Au/ton) with lower grade material occurring as halos and straddling the clastic and tuffaceous package contact within the Siebert Formation. North-south faults appear to be late-stage or offset mineralization. Mineralization remains open at depth along the intersection of the cross-cutting structural fabrics. However, deeper drilling into the Fraction Tuff has yet to intersect significant mineralization. Figure 7.9 presents a level plan at the 5,845ft elevation showing gold mineralization.

Figure 7.9 Hasbrouck Deposit Level Plan 5845 Elevation



Brecciated veins associated with northwest structures are dark gray to brick-red in color, and 0.05–20 inches in width. The breccia fragments are monolithic, and float in the silica matrix. Outcropping veins have the appearance of jasperoid, and strike parallel to the northwesterly-trending structural fabric. This vein type has been encountered in core holes. Banded quartz veins range from 0.05inches to as much as several inches in width. These veins parallel local structural trends, and consist of cream–white to tan to brown colored parallel bands from <0.05–0.5 inches in width. Veins have been noted in outcrop to undulate, and follow the outer trace of large blocks of fractured rock. A vein swarm trending northeast was noted to dip both to the east and west, but not to offset each other. Stockwork quartz–sulfide veins are typically up to 0.5inch in width. Silica occurs as gray or clear quartz selvages, with a center line of sulfides (typically oxidized). Occasionally, oxidized sulfides form selvages about the veins. Rare euhedral pyrite has been noted in some veins. Veins cross cut each other, and form a crude orthogonal set. Native gold in the form of small grains was noted in one vein along the center oxidized sulfide line.

Hydrothermal breccia zones contain diffuse silica flooding that crudely defines large vein zones. This silica is typically a medium brown color and has alternating bands of lighter and darker silica. The bands enclose and sometimes cross-cut breccia fragments. Veins in breccia zones often contain rock or vein fragments from rock units different than the surrounding rock, indicating transport. Vein margins may be planar, colloform, or crenulated.

8.0 DEPOSIT TYPES

The section has been modified from Prenn and Gustin (2006), Wilson (2014), and sources therein.

Hasbrouck Mountain represents an erosional remnant of a Miocene geothermal system that produced epithermal precious metals mineralization in a hot springs environment. Examples of this type of deposit include the McLaughlin deposit in California and the Crowfoot-Lewis (Hycroft) and Hog Ranch deposits in Nevada, as well as Ladolam–Lihir deposits in Papua New Guinea. In common with these larger examples, gold and silver mineralization at Hasbrouck appears to have been emplaced at very shallow depths, and is associated with young hot spring-related systems with siliceous sinter deposits. In addition, the mineralized zones are typically associated with silica ±adularia replacement of volcaniclastic host rocks. These types of deposits contain characteristically low concentrations of both total sulfide minerals and base metals.

The Three Hills deposit is also considered to be a low-sulfidation, epithermal, volcanic-hosted precious-metals system. The bulk of the mineralization is within silicified portions of the Siebert Formation and along the Fraction Tuff/Siebert contact, associated with hydrothermal breccias, discontinous narrow veins, sheeted vein zones and stockworks. Hydrothermal fluids circulated through faults and fractures until reaching the more permeable horizons of the Siebert Formation where they spread laterally, depositing gold and silver minerals.

A description for low-sulfidation epithermal deposits in general is modified below from Panteleyev (1996). Low-sulfidation epithermal deposits form within high-level, non-marine hydrothermal systems, which vary in crustal depths from about 3,280ft, to surficial hot spring settings. Host rocks range from volcanic rocks to sedimentary units. Calc-alkaline andesitic compositions predominate as volcanic rock hosts, particularly for the more base-metal rich, intermediate sulfidation subclass, but many deposits occur in more felsic units within terranes of bimodal volcanism and extensive subaerial ashflow deposits. A less common, but economically significant association is with alkalic intrusive rocks and shoshonitic volcanic rocks. Clastic and epiclastic sediments in volcanic basins and structural depressions are the principal non-volcanic host rocks.

Mineralization in the near-surface, epithermal environment takes place in and beneath hot springs, and the slightly deeper underlying hydrothermal conduits. At greater crustal depth, mineralization can occur above, or peripheral to porphyry (and possibly skarn) mineralization. Normal faults, margins of grabens, coarse clastic caldera moat-fill units, radial and ring dike fracture sets, and hydrothermal and tectonic breccias can act as hydrothermal fluid channeling structures. Through-going, branching, bifurcating, anastomosing and intersecting fracture systems are commonly mineralized. Mineralization commonly forms where dilatational openings and cymoid loops develop, typically where the strike or dip of veins change.

Epithermal precious-metal deposits are in some cases zoned vertically, over about an 800–1,200ft interval, from a base metal poor, Au–Ag-rich top, to a relatively Ag-rich base metal zone and an underlying base metal-rich zone grading at depth into a sparse base metal, pyritic zone. From surface to depth, metal zones grade from Au–Ag–As– Sb–Hg-rich zones, to Au-Ag-Pb-Zn–Cu-rich zones, to basal Ag–Pb–Zn-rich zones.

Silicification is the most common alteration type with multiple generations of quartz and chalcedony, which are typically accompanied by adularia and calcite. Pervasive silicification in vein envelopes is in many cases flanked by sericite–illite–kaolinite assemblages. Kaolinite-illite–montmorillonite ± smectite can form adjacent to veins; kaolinite–alunite (advanced argillic alteration) may form along the tops of mineralized zones, above the paleo-water table. Propylitic alteration dominates at depth and along the deposit margins.

Mineralization characteristically comprises pyrite, electrum, gold, silver, and argentite. Other minerals can include silver sulphosalt and/or selenide minerals, chalcopyrite, sphalerite, and galena. Tellurides, roscoelite and fluorite are abundant in alkalic rock hosted systems, which may inlcude significant molybdenite as an accessory mineral.

9.0 EXPLORATION

West Kirkland's subsidiary, WK Mining (USA) Ltd. ("WK"), completed the acquisition of an initial 75% interest in the Hasbrouck and Three Hills properties from subsidiaries of Allied on April 24, 2014. West Kirkland subsequently conducted a limited exploration program in 2014.

9.1 Three Hills Exploration

West Kirkland performed geologic mapping, sampling, a gravity survey and detailed structural analysis at Three Hills during 2014. A total of 27 surface rock-chip samples were collected and assayed at ALS Chemex gold, silver and 45 major-, minor- and trace-elements. The gravity survey was completed by Magee Geophysical Services in June, 2014. Gravity measurements were conducted at 164 gravity stations spaced on a 200m by 200m grid over the western two thirds of the property. In addition, West Kirkland extracted a 20-ton bulk sample of mineralized rock for testing of run of mine type metallurical recoveries.

During 2014, after completion of MDA's resource estimate as reported in Section 14.0, West Kirkland drilled 3 diamond-core holes and 11 RC holes for a total of 9,077ft of drilling at the Three Hills property (see Section 10.7). The diamond-core holes were drilled within the Three Hills gold-silver deposit to obtain samples for geotechnical studies. The 2014 RC holes were drilled mainly to expand the eastern and down-dip portions of the Three Hills resource. MDA has reviewed the 2014 drill results and it is MDA's opinion that the 2014 RC holes do not materially affect the resource estimate and therefore have not been included in the current resource database.

9.2 Hasbrouck Deposit Exploration

At Hasbouck Mountain West Kirkland carried out geologic mapping, surface sampling and a structural geologic interpretation. A sequence of 36 continous rock-chip samples were taken from a roadcut within the resource and assayed at ALS Chemex for gold, silver and 45 major-, minor- and trace-elements. The results confirmed mineralization at the surface between drill holes. Approximately 52 surface rock-chip samples were collected from the northeast flank of Hasbrouck Mountain and assayed for gold, silver and 45 major-, minor- and trace-elements at ALS-Chemex. The results from these samples led West Kirkland to identify a zone of east-west mineralized structures northeast of the Hasbrouck resource. This zone was later tested with RC drilling during West Kirkland's 2014 drilling campaign (see below and also Section 10.2). West Kirkland also conducted a re-interpretation of geophysical data obtained by previous operators.

A total of 4,150ft of reverse-circulation (RC) drilling in 14 holes was performed by West Kirkland at Hasbrouck Mountain during 2014. All of the drilling was done to the south, southeast, north and northeast of the current resource, for condemnation and to discover mineralization that may extend beyond the current resource. Eight of the RC holes were drilled northeast of the resource to test the east-west structures identified with the 2014 surface rock-chip sampling. The 2014 drilling is widely spaced, outside of, and does not materially affect the estimated resources; as such, it has not been included in the current resource database.

During 2014 West Kirkland extracted a 2-ton bulk sample of mineralized rock for testing in a High Pressure Grinding Roll (HPGR) comminution scenario (see Section 17 below).

10.0 DRILLING

Drilling at the Hasbrouck project has taken place at two separate properties: the Three Hills property and the Hasbrouck Mountain ("Hasbrouck") property. From 1974 through 2014, 6 companies have drilled in the vicinity of the estimated resources at Hasbrouck Mountain, and 7 companies have drilled at Three Hills, for a project database of approximately 319,396 in 638 drill holes (Table 10.1). This includes the drilling done in 2014 by West Kirkland.

The earliest drilling was with conventional rotary methods, but the majority of the drilling has been by reverse-circulation methods as summarized in Table 10.2 and Table 10.3 for the current databases used for the resources estimated in this report. Drill spacing for the Three Hills estimated resources is generally 75-100ft but can be less than 50ft within the center of the deposit. Drill spacing for the Hasbrouck resources is generally 100-150ft but can be less than 50ft within the center of the deposit.

Table 10.1 Summary of Drilling in the Hasbrouck Project

Year	Company	Area	Holes	Feet
1974 - 1980*	Cordex	Hasbrouck Mtn	25	10,629
1974	Cordex	Three Hills	14	5,055
1985	Franco-Nevada	Hasbrouck Mtn	30	10,156
1984 - 1988	Saga Exploration	Three Hills	59	6,715
1988	FMC	Hasbrouck Mtn	76	34,255
1988 - 1989	Echo Bay	Three Hills	72	24,420
1990	Gexa Gold	Three Hills	2	508
1992**	Corona Gold	Hasbrouck Mtn	2	1,210
1991 - 1997	Eastfield-Prism	Three Hills	119	38,822
1996	Euro-Nevada	Hasbrouck Mtn	18	17,670
2010 - 2012	Allied Nevada	Hasbrouck Mtn	171	145,699
2012 - 2013	Allied Nevada	Three Hills	25	12,679
2014***	West Kirkland	Hasbrouck Mtn	14	4,150
2014***	West Kirkland	Three Hills	14	9,077
		TOTALS	**641**	**321,045**

**includes three holes not in resource database due to uncertain locations*
*** external to resources, not in current Hasbrouck resource database*
****drilled after resource completion; not used in current estimate*

Three Cordex holes are not included within the Hasbrouck resource database due to uncertain collar locations. They are included in the project-wide drill totals for completeness.

The two RC drill holes drilled by Corona in 1992 are located well to the north of Hasbrouck. Due to their location, these latter holes are not included in the current Hasbrouck database (see Section 10.2) but are included in the project totals for completeness.

The locations of drill holes in the vicinity of the Three Hills estimated resources are shown in Figure 10.1, and Figure 10.2 shows the locations of drill holes in the vicinity of the Hasbrouck estimated resources.

Figure 10.1 Drill-Hole Location Map for the Three Hills Area

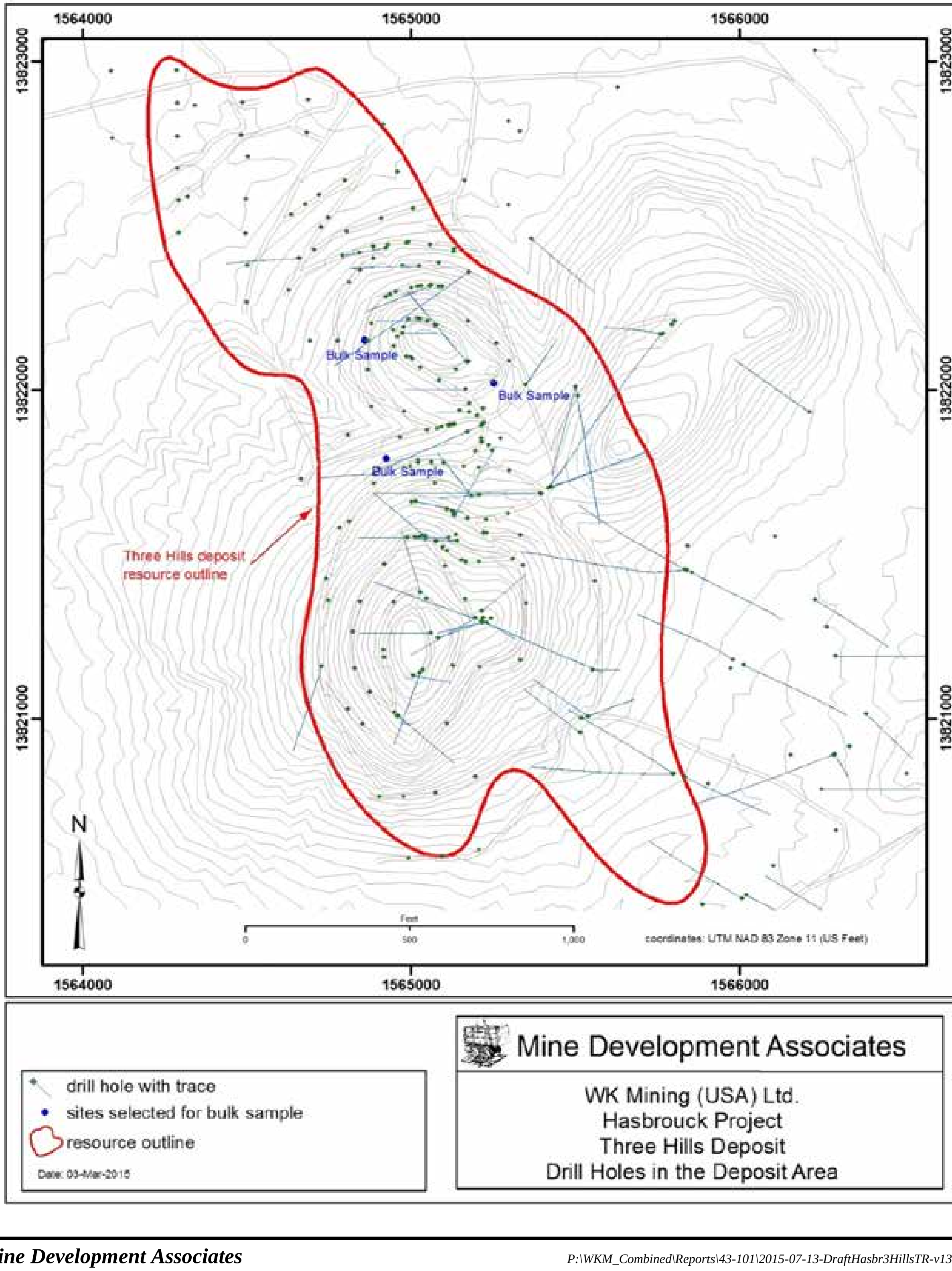
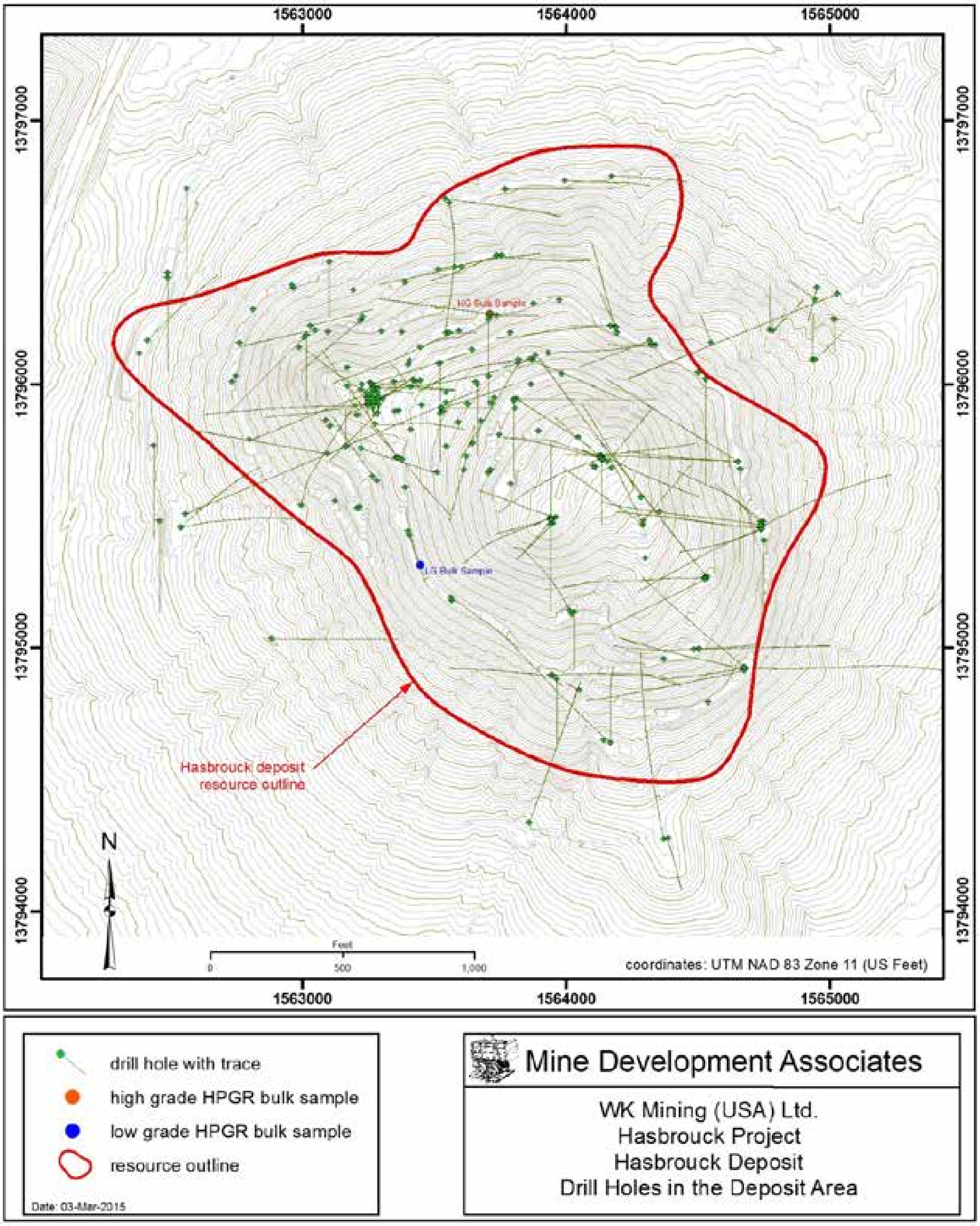


Figure 10.2 Drill-Hole Location Map for the Hasbrouck Mountain Area



10.1 Drilling at Three Hills

Drilling used for the estimation of gold resources at Three Hills is summarized in Table 10.2. The current resource database includes 291 drill holes for a total of 88,199ft of historic drilling completed from 1974 through 2013. Drilling and sampling procedures used prior to 2012 are not well known. Most of the drilling was completed by RC drilling and most of these holes did not intersect water. In 1974, Eklund Drilling completed holes using a Gardner Denver 15W drill rig. Drilling in 1996 and 1997 included that done by Hackworth Drilling of Elko Nevada, using a Schramm C-560 RC drill rig, with a nominal 5.5 in hole size, predominately using a down the hole hammer. Some drilling with tricone drillbits in difficult rock was mentioned in the reports. No information is available for drill sample recovery prior to 2012.

Table 10.2 Summary of Drilling in the Vicinity of Three Hills

Year	Company	Type	Holes	Feet
1974	Cordex	rotary	14	5,055
1984	Saga Exploration	air-track	31	1,560
1985	Saga Exploration	RC	15	2,060
1986	Saga Exploration	RC	8	1,475
1988	Echo Bay	RC	40	12,335
1989	Echo Bay	RC	37	13,705
1990	Gexa Gold	core	2	508
1991	Eastfield-Prism	unknown	31	5,312
1996	Eastfield-Prism	RC	56	20,160
1996	Eastfield-Prism	core	8	1,395
1997	Eastfield-Prism	RC	24	11,955
2012	Allied Nevada	RC	17	9,170
2013	Allied Nevada	core	8	3,509
	Totals		**291**	**88,199**
2014*	West Kirkland	RC	11	7,200
2014*	West Kirkland	core	3	1,877
*drilled after resource completion; not used in current estimate				

Little is known about the sampling methods for holes prior to 1996, however, for the most part dry samples were collected from dry RC drilling, sampled continuously down-hole on 5ft intervals. The initial sampling by Cordex in 1974, and by Saga Exploration in 1984, was from conventional rotary drilling generally sampled on 10ft intervals.

A total of 10 core holes were drilled on the property prior to 2012. Only the first two core holes completed by Echo Bay were logged, split, and sampled for assays. Of the eight core holes drilled by Eastfield/Prism, only portions of two holes were split (THC96-1 and THC96-6), while the rest of the Eastfield/Prism core drilling was used for metallurgical tests. The Eastfield/Prism hole THC96-4A is included within the database though, besides the collar location, there is no other drill information within the database; the depth is noted as zero and there are no assays.

The digital database includes lithology codes for 221 of the 266 pre-2012 drill holes. The missing lithology data is from the 1991 Eastfield-Prism drilling (a total of 31 holes) along with a few holes from the various other drill campaigns.

The assay labs used by Cordex included Hunter, Union, and Rocky Mountain Geochem. All of the Eastfield/Prism work was completed at Chemex Labs. Most of the assays are inferred to have been completed using fire assay techniques (Prenn, 2003, 2006).

10.1.1 Drilling at Three Hills by Allied Nevada

Allied Nevada drilled 17 RC holes in 2012, focused on expanding known mineralization. During 2013 Allied Nevada drilled 8 core holes for metallurgical samples and condemnation. Drilling in 2012 and 2013 totaled 12,679ft.

10.1.2 Drilling at Three Hills by West Kirkland Mining

In the fall of 2014, West Kirkland completed 11 RC holes and 3 diamond-core holes for a total of 9,077ft of drilling at Three Hills. The core holes were drilled within the estimated resource to obtain samples for geotechnical studies such as pit-slope planning. First Drilling Group USA conducted the core drilling with a track-mounted LF90 drill. PQ and HQ diameter core was recovered by triple tube methods with a 5ft core barrel.

The 2014 RC holes were drilled for resource expansion mainly in the eastern, down-dip portion of the estimated resource and are mainly east of the proposed open-pit extents. Boart Longyear performed the RC drilling with the same track-mounted MPD 1500 drill rig that was used at Hasbrouck in 2014. Drill bits of 5.5in diameter were used and samples were extracted through a conventional interchange as a continuous wet slurry on 5ft intervals.

The 2014 West Kirkland drill data was received by MDA after completion of the current resource estimate. MDA reviewed the data and determined that the 2014 drilling would have no material impact on the resource estimate or proposed open-pit mine design.

10.1.3 Collar and Down-hole Surveys at Three Hills

Early collar locations were estimated from placement on topographic maps. The locations of the 1996 and 1997 drill hole collars, and some earlier drill hole locations, were surveyed in 1996 and 1997 by Haskew Engineering, of Goldfield, Nevada. A Nevada State Plane survey grid was placed over Three Hills in 1996 by Haskew Engineering, of Goldfield, Nevada. Haskew Engineering provided drill hole collar surveys, claim corner surveys, and other location surveys for the remainder of the 1996 and 1997 drill seasons.

The 2012-2013 Allied Nevada drill hole collar locations were surveyed by a Professional Land Surveyor, Haskew Engineering of Goldfield, Nevada. West Kirkland's 2014 drill hole collar locations were initially measured with hand-held GPS. After completion each hole collar was marked in the field with a brass tag and then surveyed professionally by Haskew Engineering.

No downhole survey records are available for the pre-2012 drilling, nor were any mentioned in the reports. International Directional Services (IDS) conducted down-hole directional surveys of the majority of the 2012-2013 drill holes using gyroscopic tools. Measurements were reported at 50ft intervals. West Kirkland's 2014 drill holes with depths greater than 300ft were also down-hole surveyed by IDS and directional data were reported at 50ft intervals.

10.1.4 Summary of Drilling Results at Three Hills

It is MDA's opinion that the drilling and sampling methods used at Three Hills follow industry standard procedures, and are appropriate methods to adequately interpret the geology and mineralized zones. There is a lack of downhole survey data for the pre-2012 drilling, though this risk is mitigated since these holes are generally shallow and most were drilled vertically.

10.2 Drilling at Hasbrouck Mountain

Drilling used for the estimation of gold-silver resources at Hasbrouck Mountain is summarized in Table 10.3. For the purposes of this report, drilling performed at Hasbrouck Mountain from 1974 through 2012 is considered historical. Drilling contractors and types of drill rigs employed in the 1974 through 2012 historic drill campaigns are summarized in Table 10.4.

Table 10.3 Summary of Drilling in the Vicinity of Hasbrouck Mountain

Year	Company	Type	Holes	Feet
1974	Cordex	rotary	22	8,980
1985	Franco-Nevada	RC	30	10,156
1988	FMC	RC	76	34,255
1996	Euro-Nevada	RC	18	17,670
2010	Allied Nevada	core	14	7,613
2011	Allied Nevada	RC	92	97,163
2011	Allied Nevada	core	29	20,994
2012	Allied Nevada	RC	36	19,930
	Totals		**317**	**216,761**
2014*	West Kirkland	RC	14	4,150
**drilled after resource completion; not used in current estimate*				

Table 10.4 Historic Drilling Contractors and Rig Types
from Flint et al. (2012)

Campaign	Contractor	Rig Type
Cordex	Eklund Drilling Company	G.D.15W
	Anaconda Drilling Company	Ingersoll Rand T-4
	Unknown	C.P. 650
	Joy Drilling Company	Joy-22
Franco-Nevada	Eklund Drilling Company	TH-60
FMC	Unknown	unknown
Corona	Brown and Root	D25K truck mount
Euro-Nevada	DeLong Construction and Drilling	unknown
Allied Nevada	Tonatec Drilling	LF70
	National EWP Drilling	LF90, AC CT14
	Leach Drilling	D40
	Layne Drilling	Explorer 1500

Cordex focused its drilling in the northwest portion of the Hasbrouck Mountain. Drilling was reportedly by open rotary methods. From 1974–1980, Cordex drilled a total of 25 rotary drill holes (9,760ft) and one of the 1974 rotary drill holes was deepened using core drilling for an additional 959ft of drilling. The current resource database excludes 3 of the Cordex drill holes, including the deepened core hole, due to uncertain collar locations.

Holes H-1, 2 and 3 were drilled dry, without injecting any drilling fluids. Anaconda Drilling Company drilled H-1 and H-2 with an Ingersoll Rand T-4 rig. H-3 was drilled by a second contractor, unknown to MDA, who utilized a C.P. 650 rig. The remainder of the program was drilled by Eklund Drilling Company with a G.D.15W rig. Eklund injected water, detergent and other drilling fluids in an attempt to improve sample recoveries from those achieved by previous contractors. Cordex geologists completed fairly detailed geologic logs for each of the drill holes; MDA was provided with copies of logs for 21 of the holes.

Franco-Nevada and FMC continued with step-out drilling on Hasbrouck Mountain in the mid-1980s. Franco-Nevada drilled 30 vertical holes within the MDA resource model extents. The injection of foam and other drilling fluids is occasionally noted on the geologic logs, as is the medium of sample return (wet or dry). Intervals of no recovery are also noted. Eklund Drilling Company was contracted and used a TH-60 drill rig for this program.

MDA is not aware of what drilling company or drill rig was used in 1988 FMC program. The F88-series of holes within the MDA resource model extents were drilled to infill and expand upon holes drilled by the previous operators, while the T-series holes comprise a closely spaced drill pattern in the western portion of the MDA resource model extents. Fourteen of the T-series holes consist of 100-foot holes that were drilled on a 15 x 20 foot grid. The other T-hole lies on the grid and was drilled to a depth of 500ft. A total of 29 of the F88-series holes were angle holes, with angles varying from -45 to -75 degrees. With the exception of two holes drilled to the north, these angle holes were drilled in a southerly direction. The T-series holes were uniformly drilled at -60 degrees due south. The FMC geologic logs for the F88-series of holes provided to MDA are very summary in nature, and no comments on drilling methods are included. Intervals where no samples were collected due to lack of recovery are noted, but further specifics on recoveries are lacking. MDA was not provided with logs of any type for FMC's T-series of holes.

In 1996, following an 8 year hiatus in exploration, Euro-Nevada focused on drill targets outside of the known Hasbrouck resource area and was largely unsuccessful. The 1996 Euro-Nevada program was drilled by DeLong Construction and Drilling, but the type of drill is not known. Angle and vertical holes were drilled to cut various targets along a NW-SE trending belt that passes to the north, east and southeast of Hasbrouck Mountain, so that none of the holes lie within the MDA resource model extents. The geologic logs do not comment on sample recoveries, presence or absence of groundwater, drilling problems, etc., nor do the Euro-Nevada internal reports in MDA's possession.

No historic drill chips are available for inspection. Allied Nevada personnel and geologic consultants working for Allied Nevada, reinterpreted pre-2010 historic drill logs and recorded their reinterpretations in Allied's hand-written logging format. The hand-written reinterpretations were subsequently entered into an Excel spreadsheet. The following are comments on the pre-2010 historic geologic logs as stated by Flint et al. (2012):

- Cordex geologists completed fairly detailed geologic logs for each of the drill holes, and included lithology and alteration details;
- Franco-Nevada drill logs from the 1985 drill program (FN85-series) included lithology and localized alteration recorded primarily in a graphical format with minor associated text. Intervals of no recovery are noted;
- The FMC geologic logs for the F88-series of holes are summary in nature, with minimal geologic and alteration data recorded. No recovery data noted. Logs for the T-series drill holes have not been located;
- Poor-quality photocopies of the geologic logs from the Corona drilling are available; no comments on recoveries or sample quality recorded; and
- Geologic logs from the 1996 Euro-Nevada program denote lithology and alteration, but do not comment on sample recoveries, presence or absence of groundwater, or drilling problems.

MDA does not have information on drill bit diameters, drill sample weights, sample recoveries, and specific sampling methods for most of the pre-2010 historic drilling. Ground conditions at Hasbrouck, especially in the upper 300ft of the deposit, present difficult drilling conditions to both RC and core drilling techniques. These problematic ground conditions include clay alteration, highly fractured ground, voids, variable lithology and alteration, existing dump material and faults. As a result, RC and core recovery can be low in the upper portions of the deposit. As noted by Prenn and Gustin (2003, 2006):

- Sample recovery was a continual problem throughout the Cordex drilling program due to the highly fractured nature of the silicified rock;

- Sample recovery problems in the Franco-Nevada program were common, caused by lost circulation, open voids and the necessity of wet sampling due to the injection of water and additives;
- Geologic logs from the FMC drill programs describe intervals where no samples were collected due to lack of recovery; and
- Geologic logs from the Euro-Nevada drill programs do not provide information regarding sample recoveries, wet or dry samples, etc.

Both angled and vertical drill holes were completed. Dips of the drill holes typically range from -90° to -45°, with historic drill holes predominantly drilled at -90°. Drill hole depths ranged from 100 to 1,700ft. Few details are available for logging and sampling procedures used by the various operators from 1974 through 1996. Drill sample intervals varied from 0.5ft to 30ft, but approximately 91% of the assays were done on 5ft intervals. Assays during this period were limited to gold and silver by fire-assay and atomic absorption methods (see Section 11).

10.2.1 Drilling At Hasbrouck by Allied Nevada

In 2010, Allied Nevada completed 14 diamond-core drill holes totaling 7,613ft (Table 10.3). These drill holes were designed to confirm the results of earlier historic drilling and to provide material for metallurgical testwork. Allied Nevada initiated a more extensive core and RC drilling program in January 2011. During 2012, Allied Nevada completed 37 reverse circulation holes (20,010ft) focused on the Silver King and Mastif targets, located outside of the main Hasbrouck deposit. Thirty-six of the 2012 RC holes are included in the current resource database.

Reverse circulation drilling was accomplished with standard RC tools utilizing a crossover sub and wet sample collection in the upper portions of the hole. A center return tri-cone drill bit was used for intervals of significant ground water flow. Drill cuttings were collected continuously down the hole, with individual samples taken over 5ft intervals. Samples were submitted for assay, as collected on the rig, with standards, blanks and duplicates inserted into the sample sequence as described below in Section 11. The drill crews sequentially pre-numbered the sample bags, representing the footage interval sampled. The drill crews were provided with 20 slot chip trays, representing 100ft total per tray, and numbered each with hole number, and start and stop footage for the 5ft interval.

According to Wilson (2014) water injection was regulated to minimize the fluid return while maintaining sufficient flow for drilling and sample return. Allied Nevada geologists provided drill crews with 20 in x 24 in bags. Cuttings were collected as a continuous fraction of the return stream from the drill rig by way of a rotary 36 inch vane splitter. The splitter had vane covers that can be added or removed to provide the desired sample weight for each interval. The cuttings were diverted to a clean, 5 gallon, plastic bucket that contained a small amount of a polymer flocculent. When a bucket was full of water and sample, it was removed and allowed to settle while another bucket was placed under the sample spout. If the drilled material contained clay, more flocculent would be added to the settling bucket and the contents stirred. When the 5ft sample run was complete the last sample bucket was removed, and another clean bucket was placed under the spout. The previous interval buckets were carefully decanted and their contents poured into the 20in x 24in mesh sample bag within another bucket.

During drilling, a strainer was placed under the waste discharge spout to collect chips for the character chip tray and logging purposes. At the end of each run, the drill sampler filled the chip tray slot for the sample interval and discarded the rest. When freezing temperatures were expected the sample bags were placed on plastic sheets to prevent them from freezing to the ground and ripping when picked up. Sample bags were allowed to dry and drain at the drill site, or in a holding area near the sample processing facility.

Filled chip trays were field-checked for numbering accuracy during visits to the drill rig and collected by an Allied Nevada geologist for logging by use of a binocular microscope. Allied Nevada personnel and geologic consultants retained by Allied Nevada, logged all 2010 – 2012 core and reverse circulation drill cuttings on site for geologic and geotechnical parameters. Logs were hand-written and subsequently entered into an Excel spreadsheet. The log sheet was divided into two primary sections: geotechnical and geology. Geological data collected included information on lithology, structure, alteration, metallurgy, and veins.

Logging of alteration and metallurgical characteristics were based on a qualitative scaling of 0 to 3, with 0 denoting absent, 1 for weak, 2 for moderate, and 3 for strong. Basic geotechnical data were collected on each core hole drilled. Each core interval drilled was logged for total core recovery, total fractures, joint condition rating (JCR), and sum of all core lengths greater than four inches for rock quality designation (RQD). Hardness data was not collected. Core was digitally photographed by ALS Chemex technicians prior to being split for assay. The digital photographs were submitted to Allied Nevada on a series of DVDs.

Procedures used by Allied Nevada for sampling and assaying are given in Section 11. Assays were nearly entirely performed using 5ft samples. All drill samples were analyzed for gold and silver with a combination of fire-assay, atomic absorption and gravimetric methods. In addition, approximately 0.7% of Allied Nevada's drill samples were assayed for Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, Hg, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Th, Ti, Tl, U, V, W, and Zn using inductively - coupled plasma-emission and mass spectrometry (ICP and ICP-MS), with either 4-acid digestion or aqua-regia digestion.

10.2.2 Drilling At Hasbrouck by West Kirkland Mining

A total of 4,150ft of RC drilling in 14 holes was completed by West Kirkland in 2014. These holes were drilled for condemnation and resource expansion purposes and are located south, southeast and north of the Hasbrouck resource.

The drill data was received by MDA after completion of the current resource estimate. MDA reviewed the data and determined that the 2014 drilling would have no material impact on the resource estimate or proposed open-pit mine design.

The drilling was performed by Boart Longyear using a track-mounted MPD 1500 drill rig with 5.5in diameter drill bits. Sample extraction was by conventional interchange with water injection to inhibit dust emissions. Samples were extracted as a continuous slurry on 5ft intervals, and split with a rotating vane wet splitter to approximately 7-8kg. Eight of the RC holes were drilled northeast of the resource to test east-west structures identified by surface rock-chip samples with anomalous geochemistry. Mineralization encountered in these holes is external to the resource and may be the subject of additional future drilling.

10.2.3 Collar and Down-hole Surveys at Hasbrouck Mountain

None of the pre-2010 historic drill-hole collars were originally surveyed. The Cordex and Franco-Nevada collar coordinates are rounded to the nearest 5 or 10ft, suggesting that they are not surveyed locations, and have been based on a drill hole location map constructed by Graney (1985) and subsequently augmented by FMC. The FMC holes are reported to the nearest 0.1ft, but it is not known if these were surveyed locations. In December 2010, Allied Nevada geologists re-established collar locations for as many pre-2010 historic drill holes as possible. Most locations had physical features on the ground (i.e. drill casing) and were marked by stakes and metal tags on the side of the drill road. These sites have also been corroborated by an historic drill collar map. Kevin Haskew, a Professional Land Surveyor with Advanced Surveying & Professional Services in Goldfield, Nevada, subsequently surveyed the collars using the NAD83 datum. Seventy-three pre-2010 historic drill holes were located and surveyed. The pre-2010 and Allied Nevada drill holes were converted to UTM in United States feet, which was used as a local mine grid. From late 2010 to present, Allied Nevada's mine surveyors located drill holes using accurate Global Positioning System (GPS) equipment, reporting directly in UTM coordinates.

All of the Allied Nevada core hole collars were reportedly marked in the field by wooden lath and drill-hole collars were surveyed. The majority of Allied Nevada's holes were surveyed by a Professional Land Surveyor, but some holes were surveyed using hand held GPS devices, and some were located by measuring bearing and distance over short intervals from other surveyed holes.

No down-the-hole survey data were provided to MDA for any of the pre-2010 historic drill holes, so that constant dip angles are assumed in the database. This assumption is likely to introduce increasing error with increasing depth of the drill holes. The Euro-Nevada drill holes were apparently down-hole surveyed, but no data are available on survey methods or down-the-hole depths for which the surveys were performed. Eleven of the Allied Nevada core holes drilled in 2010 had down-hole surveys completed. The 2011 and 2012 holes were surveyed except in cases where poor ground conditions or other drilling difficulty prevented entering the hole with the survey tool. Allied Nevada's down-hole surveying was conducted by International Directional Surveying ("IDS") technicians with gyroscopic tools lowered inside the drill string and projected to total depth when necessary. Measurements were reported at 50ft intervals.

West Kirkland obtained collar locations for their 2014 RC drill holes with an initial measurement by hand-held GPS. After completion, each hole collar was marked with a brass tag; locations were then surveyed by a Professional Land Surveyor (Haskew Engineering). Down-hole directional surveys were performed for holes drilled to depths greater than 300ft. The directional surveys were done by IDS using gyroscopic methods; data was reported at 50ft intervals.

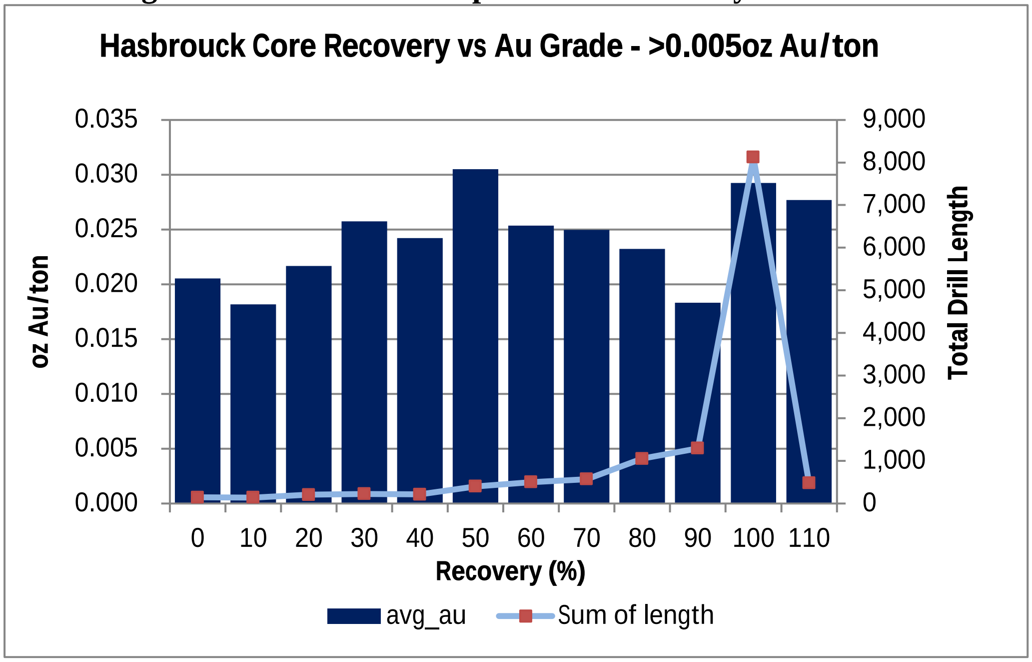
10.2.4 Core Recovery at Hasbrouck Mountain

Core recovery data is available for the Allied core drilling completed in 2010 and 2011. MDA reviewed the data set and the average core recovery for all Allied drill intervals is 89 percent, while average core recovery for those intervals assaying over 0.006 oz Au/ton is 90 percent. Over 60 percent of the core drilled has a core recovery of 100 percent, with a small percentage at greater than 100 percent, while approximately 7 percent of the total core drilled has recoveries less than 50 percent. The core is generally highly fractured within the mineralized horizons, and RQD measurements are typically low, averaging about 25 percent.

MDA checked the core recovery data against the core photos for six Allied core holes and observed that the Allied data recorded in the drill logs for these six core holes over-states core recovery by about 10 percent on average. If this observation holds true for all Allied core holes then average core recovery for the project would be 80-82 percent.

MDA analyzed the core recovery data to determine if there was a deposit-wide relationship between poor recovery intervals and changing gold grades. Figure 10.3 shows the average gold grades (blue vertical bars) and the total drill length (light blue line with orange data points) plotted in the vertical axis, while core recovery is plotted along the horizontal axis. The figure includes those mineralized intervals assaying greater than 0.005 oz Au/ton that occur within the current resource boundary. The core-recovery data have been separated into distinct bins for each ten percent increase in recovery. So the "70" value in the horizontal axis contains all data points which have core recovery values between 70 and 79 percent. All drill intervals with a recorded recovery percentage greater than 110 percent are included in the "110" recovery bin.

Figure 10.3 Hasbrouck Deposit Core Recovery versus Gold Grade



There is a sharp decrease in average gold grade associated with the initial drop in core recovery from 100 percent into the 90 percent range. Below 90 percent recovery, average gold grades gradually increase and then stay fairly level until core recovery drops below 30 percent where gold grades appear to again decrease. The small sample populations at the very low recoveries create some uncertainty in these observations.

Except for the average gold grades observed in the 50 percent recovery bin, core recovery loss is associated with a decrease in average gold grades. The sharp decrease in gold grade observed with just a small decrease in core recovery (from 100 percent to 90-99 percent core recovery) is likely due to the preferential loss of the gold-bearing fine and /or fracture-fill material occurring within silica veinlets cutting weakly mineralized wallrock. At lower core recoveries, both the fracture-fill material and the wallrock suffer core loss so average gold grades will increase as indicated in Figure 10.3

These results indicate that the gold assay values used in the resource estimate are potentially skewed low for those core intervals with less than 100 percent core recovery. This lends a conservative aspect to the current resource.

10.2.5 Summary of Drilling Results at Hasbrouck Mountain

It is MDA’s opinion that the drilling and sampling methods used at Hasbrouck follow industry standard procedures, and are appropriate methods to adequately interpret the geology and mineralized zones. There is a lack of downhole survey data for the pre-2010 drilling, though this risk is mitigated because these holes are generally shallow and were drilled vertically. Core recovery analyses indicates that the gold assay values used in the resource estimate are potentially skewed low for those core intervals with less than 100 percent core recovery. This lends a conservative aspect to the current resource estimate.

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

11.1 Historic Sample Preparation and Analyses

Information on the historic sample preparation, analytical laboratories and methods, as available, is summarized from MDA (Prenn and Gustin 2003, 2006; Prenn 2003, 2006, and sources therein), Flint et al. (2012) and Wilson (2014).

11.1.1 Three Hills Surface Samples

1974-1997:

MDA is not aware of records describing the sample collection procedures, sample preparation and assay methods used for surface sampling conducted by Cordex, Saga, Echo Bay, and Eastfield Resources. Prenn (2006) reported that the geochemical analysis of gold, silver, arsenic, antimony, mercury, molybdenum, and occasionally copper, lead, and zinc was completed on the property, and that approximately 550 rock samples were collected in 1996-1997 by Rodney Thompson for a Masters Thesis at Colorado School of Mines. MDA has no information about the sampling and preparation procedures, and the assay types or methods utilized.

2012-2013:

Sparse records indicate that Allied Nevada's surface samples were assayed by ALS Chemex, using fire-assay with atomic absorption finish for gold, and gravimetric finish for silver, as well as ICP-AES determinations for 35 major, minor and trace elements with aqua-regia digestion. Samples were crushed to <2mm, and a 1kg split was pulverized to 85% at <75 microns. Information is not available to MDA regarding sample collection procedures, or the use of standard, blank or duplicate samples.

11.1.2 Hasbrouck Surface and Underground Samples

1974-1996:

MDA knows very little of the sampling methods, sample preparation procedures and details of assay techniques employed on any of the programs undertaken at Hasbrouck prior to 2010. In 1980, Cordex sampled the Main, Ore Car, South, and Northeast adit underground workings. No details of the underground sampling program of Cordex are available to MDA, including sample size, exact sampling procedures employed, assay laboratory used, etc. Also not available to MDA, and possibly these no longer exist, are records documenting the sampling procedures, sample preparation and assay methods used for surface samples collected by Franco-Nevada, FMC and Corona during the 1980's. Surface rock samples collected by Euro-Nevada in the 1990's were largely analyzed by ALS Chemex with fire assay methods for gold, and ICP-AES methods for 32 elements, including silver. Details of Euro-Nevada's sampling procedures, sample preparation, and sample digestion are not available.

2010-2013:

Allied Nevada personnel collected 667 channel samples from selected road cuts (Flint et al., 2012). The samples were analyzed by ICP methods with 4-acid digestion at ALS Chemex for gold, silver, and as many as 34 major-, minor- and trace-elements. MDA has no information on procedures used for the sample collection and sample preparation. QAQC standards, blanks and/or duplicate samples were not inserted.

11.1.3 Three Hills Drilling Samples

1974-1997:

Laboratory and sample preparation procedures prior to the mid 1990's are unknown. Notes on drill logs from 1974 indicate that Union Assay Laboratories (Union; Denver), Rocky Mountain Geochemical Laboratories (Rocky Mountain; Reno), Humboldt Laboratory (Humboldt; location unknown), and Skyline Laboratory (Skyline; Tucson) were used, presumably for fire assays. Gold assays previous to 1996 appear to have been completed using a fire assay method, as indicated on some drill hole logs and on one assay sheet. Silver, when assayed for, was determined using atomic absorption methods with a lower detection limit of 0.2 ppm. MDA has no information about sample preparation procedures, or the use of standard, blank and duplicate samples. The 1988 drilling samples may have been assayed in Gexa's mine lab near Beatty, Nevada.

During 1996 and 1997 drilling samples were analyzed at the Chemex Laboratory, Reno Nevada. The preparation was a 0 to 3kg primary crush, then ring pulverization to <150 mesh. In 1996 and 1997 gold was determined by fire assays done with a 30g charge and atomic absorption finish. The lower detection limit was 5 ppb, with an upper limit of 10,000 ppb. Over limit results were re-assayed using a fire assay with gravimetric finish. Cold-cyanide, shake-leach gold analyses were completed on selected 1996 drill hole samples. MDA does not have information on the use of standard, blank and duplicate samples utilized in the 1996-1997 drilling at Three Hills.

2012-2013:

Allied Nevada's drilling samples during 2012-2013 were prepared and assayed by ALS in Reno, Nevada. RC drilling samples were crushed to 70% passing 2mm, and a 1 kg split was pulverized to 85% passing 75 µm. Core samples were logged and sample intervals were marked by Allied Nevada geologists prior to shipping the whole core to ALS in Reno, Nevada. The core was ½ sawn by laboratory personnel at the ALS laboratory facilities. According to Flint et al. (2012), Allied Nevada geologists marked the core with cutting guide lines to best divide the core in a representative manner where veins were visible. Otherwise, core was reportedly sawed perpendicular to bedding.

Gold was determined by cyanide leach and by fire assay with atomic absorption finish on 30g sub-samples. The lower detection limit was 0.005 ppm. In cases of gold "over limits" (> 0.29167 ounces per ton), the fire assay was repeated using a gravimetric finish. Silver was determined by atomic absorption after 4-acid digestion of a 0.5 g sub-sample. The lower detection limit for silver was 0.5 ppm. In cases of silver > 29.167 opt, silver was re-analyzed using a gravimetric finish.

Allied Nevada inserted standards into the RC sample stream at 80ft intervals prior to shipment to the assay laboratories. Pulped quartz blanks were inserted at variable intervals with the core samples. MDA is has no information on blanks that may, or may not, have been inserted with the RC samples. (see details in Section 12).

11.1.4 Hasbrouck Drilling Samples

1974-1996:

Information on sample preparation and analytical procedures for drill samples prior to 2010 is very limited, and nothing is known of the use of standard, blank and duplicate QAQC samples during this period. The Cordex RC drill hole assays were handwritten in the margin of the drill logs. During the 1970's, when Cordex operated the property, this was a common practice for Nevada projects. Cordex gold and silver assays were performed by Union Assay Laboratories (Union; Denver), Rocky Mountain Geochemical Laboratories (Rocky Mountain; Reno), Humboldt Laboratory (Humboldt; location unknown), and Skyline Laboratory (Skyline; Tucson) and were recorded in ounce per ton units. The assay method is presumed to be fire assay (fusion). The sample preparation and assay methodology used were not recorded in the information provided. Prenn and Gustin (2006) noted that the Union detection limits on all Cordex holes except for H-24, were 0.005 opt Au and 0.10 opt Au. Drill hole H-24 had a detection limit of 0.003 opt Au.

Franco-Nevada's drill sample assays were performed by Rocky Mountain. Sample preparation and assay methodology are not documented. MDA noted that the Rocky Mountain assays were performed as one-assay-ton fire assays, with detection limits of 0.005 opt Au and 0.10 opt Au; copies of the original assay certificates were provided to MDA (Prenn and Gustin 2006). Prenn and Gustin (2003, 2006) reported that Bechtel was contracted by Franco-Nevada to monitor the drilling, sampling, assaying and metallurgical testwork, to ensure that the data collection "met the requirements for the preparation of a pre-feasibility study".

The FMC reverse circulation samples were analyzed by Intermountain Analytical by two-assay-ton fire assay and were hand-written in the margins of the lithology logs. Detection limits were 0.005 opt Au and 0.05 opt Ag (Prenn and Gustin 2003, 2006). The only available information on the Corona analytical methods is reported in Prenn and Gustin (2003, 2006). The Corona RC samples were analyzed by Barringer Laboratories, Inc. (Barringer) for which copies of the original assay certificates have been provided to MDA. MDA observed that in contrast to the previous programs, which restricted the elements analyzed to gold and silver, Barringer analyzed gold by fire assay with an atomic absorption finish, and silver and molybdenum by atomic absorption. Detection limits were 2 ppb for gold, 0.1 ppm for silver and 1 ppm for molybdenum.

Chemex Labs Inc. (Chemex; location unknown) assayed the Euro-Nevada RC samples (Prenn and Gustin 2003, 2006). Gold analyses were by fire assay and atomic absorption finish, with a detection limit of 5 ppb. Silver was analyzed by atomic absorption, using an aqua regia digestion, with a detection limit of 0.2 ppm silver. Wilson (2014) reported that Quality Control data exist for the Euro-Nevada drilling program, but MDA did not review these data because these holes are external to the Hasbrouck resource area.

2010-2013:

Core samples were logged and sample intervals were marked by Allied Nevada geologists prior to shipping the whole core to ALS Minerals Laboratories (ALS, Reno, Nevada; formerly ALS Chemex). According to Flint et al. (2012), geologists marked the core with cutting guide lines to best divide the core in a representative manner where veins were visible. The core was ½ sawn by laboratory personnel at the ALS laboratory facilities. As stated by Flint et al. (2012), "*samples are prepared from a split of 70% passing -3 mesh if pieces are too large to fit in the pulverizer, and further crushing of 70% passing - 10 mesh. A 2.2 pound split is taken and pulverized to 85% passing - 200 mesh*."

Allied Nevada's RC drilling samples were prepared and analyzed at ALS in Reno, Nevada, and at Inspectorate Labs, Sparks, Nevada. ALS and Inspectorate Labs are ISO 9001:2000 registered laboratories. Samples were crushed to 70% passing 2 mm, and a 1 kg split was pulverized to 85% passing 75 µm.

Gold was determined by fire assay and atomic absorption finish on 30g sub-samples. The lower detection limit was 0.005 ppm. In cases of gold "over limits" (> 0.29167 ounces per ton or > 10 g/t), the fire assay was repeated using a gravimetric finish. Silver was determined by atomic absorption after 4-acid digestion of a 0.5 g sub-sample. The lower detection limit for silver was 0.5 ppm. In cases of silver > 29.167 opt, silver was re-analyzed using a gravimetric finish. During the last half of 2011, additional silver analyses by fire assay gravimetric methods were employed in the program. "Screen fire analyses" were completed for select high grade gold holes (HSB11-019, HSB10-001).

Gold and silver cyanide-leach assays were determined on select samples in 2010, and on most gold samples in 2011. The laboratory method used a 30g charge, subjected to a cyanide leach cycle including agitation for one hour. The solutions were then analyzed on an Atomic Absorption Spectrometer. The lower level of detection for silver was 0.5 ppm, and the gold lower detection limit was 0.03 ppm.

A small percentage of Allied Nevada's drill samples in 2010 and 2011 were also assayed by ALS using ICP-AES methods to determine 35 major, minor and trace elements with a 4-acid digestion.

A review of assay certificates indicates Allied Nevada inserted blanks as the initial sample for RC holes and then at approximately every 20 to 40 samples, without a fixed frequency. Standards were inserted into the RC sample stream every 18 to 20 samples, but not in all holes, prior to shipment to the assay laboratories. Duplicates were included at intervals of approximately every 20 samples, but not for all holes (see details in Section 12).

11.2 Sample Preparation and Analysis by West Kirkland

11.2.1 Surface Sampling by West Kirkland at Three Hills and Hasbrouck

Rock-chip samples collected at Three Hills and Hasbrouck were all prepared and analyzed at ALS in Reno, Nevada. Samples were crushed in their entirety to 70% at <2mm, then riffle split to obtain a 250g subsample. The 250g subsamples were pulverized to at least 85% at <75 microns. Gold was determined by fire-assay on 30g charges with ICP-AES finish. The lower detection limit for gold was 1ppb. Silver and 47 major, minor and trace elements were analyzed with ICP-AES-MS methods using 4-acid digestion.

West Kirkland did not insert blanks and standard samples into the sample stream for rock-chip samples taken at Three Hills and Hasbrouck.

11.2.2 West Kirkland's Drill Samples at Three Hills and Hasbrouck

Core samples were logged and sample intervals of approximately 4in to 5ft lengths were marked by West Kirkland geologists prior to shipment of the whole core to ALS in Reno, Nevada. The core was ½ sawn by laboratory personnel at the ALS laboratory facilities. Sample intervals of ½ core were crushed in their entirety to 70% at <2mm, then riffle split to obtain a 250g subsample. The 250g subsamples were pulverized to at least 85% at <75 microns. Gold was determined by fire-assay on 30g charges with ICP-AES finish. The lower detection limit for gold was 1ppb. Samples assayed at >1 g/t gold were re-assayed with atomic absorption finish. Silver and 47 major, minor and trace elements were analyzed with ICP-AES-MS methods using 4-acid digestion.

West Kirkland's RC samples were split at the drill rig to approximately 17 to 20lb samples for shipment to ALS in Reno, Nevada. After drying, the RC samples were crushed in their entirety to 70% at <2mm, then riffle split to obtain a 250g subsample. The 250g subsamples were pulverized to at least 85% at <75 microns. Gold was determined by fire-assay on 30g charges with ICP-AES finish. The lower detection limit for gold was 1ppb. Samples assayed at >1 g/t gold were re-assayed with atomic absorption finish. Silver and 47 major, minor and trace elements were analyzed with ICP-AES-MS methods using 4-acid digestion.

For both core and RC drilling, West Kirkland inserted blank, standard and duplicate samples into the drill sample stream at regular intervals. Details are given in Section 12.

11.3 Sample Security

No information is available for sample security procedures used during drilling from 1974 through 1997 at the Hasbrouck and Three Hills deposits. During 2010 through 2013 Allied Nevada personnel transported drill core on a daily basis from drill sites at Hasbrouck and Three Hills to the Allied Nevada logging facility in Tonopah, Nevada (Wilson, 2014). RC samples were retrieved from the drill rig and stored in sample bins or on pallets. Personnel and vehicles dispatched from the assay laboratories travelled to the logging facility and picked up the samples. Sample identification numbers and missing samples were verified by the site geologists prior to release of the samples to the assay lab personnel.

During 2014 sample security was maintained by West Kirkland in the following manner:

- Core samples drilled at Three Hills were under the continuous supervision of West Kirkland's geologists at the drill sites, and were then transported by West Kirkland personnel to West Kirkland's secure facility in Tonopah, Nevada. ALS personnel travelled to Tonopah, took custody of the samples from West Kirkland personnel, and transported the samples to the ALS laboratory in Reno, Nevada.
- RC drilling took place on a day-shift only basis. RC samples were transported daily by West Kirkland personnel to either a locked storage container, or West Kirkland's fenced storage area in Tonopah. Samples were not left at the drill rig unattended during the night. ALS personnel travelled to Tonopah, took custody of the samples from West Kirkland personnel, and transported the samples to the ALS laboratory in Reno, Nevada.

11.4 Summary Statement

It is MDA's opinion that the sampling, assaying, and security procedures used at Three Hills and Hasbrouck follow industry standard procedures, and are adequate for the estimation of the current mineral resources.

12.0 DATA VERIFICATION

MDA conducted an audit of the Three Hills and Hasbrouck databases and compiled and analyzed available quality control/quality assurance ("QA/QC") data collected by Allied. No QA/QC data are available for pre-Allied drilling conducted before 2010.

12.1 Database Audit

The Three Hills and Hasbrouck databases provided to MDA by West Kirkland are the same data as used in the previous 2014 resource estimate (Wilson, 2014). For the current resource estimate, MDA completed a full audit of the Allied 2010-2013 drill data at Hasbrouck and Three Hills (196 drill holes), comparing these data against original survey notes and assay certificates. The pre-Allied data was previously audited by MDA in 2003 and 2006 and the current database was compared against both these historical databases along with data compiled in 2010 by Allied.

In an effort to standardize the coordinate system, measurements and locations are expressed in US Survey feet, a change from International feet used in the Wilson 2014 estimate.

12.1.1 MDA Audit of pre-Allied Data

The pre-Allied analytical and geological (drill log) data had been previously verified by MDA for both the Hasbrouck (Prenn and Gustin, 2006) and Three Hills (Prenn, 2006) deposits. For the current resource estimate, MDA compared the previous MDA audited data, along with data compiled by Allied, against the databases provided by West Kirkland as summarized below.

12.1.1.1 Pre-Allied Drilling Data for Three Hills

Collar Locations: There are no discrepancies between the West Kirkland collar data and the previous databases.

The location of TH-13 is in question due to significant differences in the assay values and logged geology as compared with the adjacent drill holes. TH-13 remains in the database, but the assays were excluded from use in the resource estimate.

After reviewing additional historical data provided by Allied, the location of TH-01 was revised to reflect original survey data and locations noted on two plan maps.

The final drill depths for 17 drill holes were changed to reflect the current assay and geology data.

Downhole Survey: No discrepancies were noted in the downhole survey data between data sets. None of the pre-Allied drill holes were surveyed.

Assays: Eighteen assays were corrected in the Three Hills assay data received from West Kirkland; thirteen of which are considered significant (>0.004oz Au/ton difference). The "less than detection" assays were also standardized as "0" within the current database, while over 700