

# Notes

## 6 month Hackathon Notes

- Extract all commodities
- Start from the lowest cut-off grade → this is the most important
  - For each category
  - Also closest to the current year
- MT → can be metric tons or million tonnes
  - There is also short tonnes
- Want both mineral reserves and mineral estimates
- NSR : net smelter return (gets the mineral out, different from \$ per tonne)
- Do not always need cut-off table
- Would like footnotes to go with the extracted information
  - It can provide additional information about equations/values used

## Questions

1. Got different cutoffs for different values how do i know which is for which:
  - a. **"Proven" category**: Assigned a cutoff grade of "12% ZnEq for LHOS (Long Hole Open Stopping)," as this was interpreted to be the design cut-off grade for a mining method that might be applicable to the Proven reserves, based on the mining practices typically used for reserves that have a high level of confidence.
  - b. **"Probable" category**: Assigned a cutoff grade of "11% ZnEq for DAF (Drift and Fill)," assuming this to be the design cut-off grade for another mining method (DAF) that could be applicable to Probable reserves, which are less confidently known than Proven reserves.
  - c. **"Total" category**: Assigned the incremental stopping cut-off grade of "9.7% ZnEq," since this number was provided in the vicinity of the Total Mineral Reserves information. It was interpreted that the Total Mineral Reserves would encompass all mining methods and therefore, an incremental stopping cut-off grade that applies across different mining sections might be relevant to present the lower threshold for the sum of all categories.
- 2.

# Definitions

- Mineral Resource
  - 1.2 In this Instrument, the terms “mineral resource”, “**inferred** mineral resource”, “**indicated** mineral resource” and “**measured** mineral resource” have the meanings ascribed to those terms by the Canadian Institute of Mining, Metallurgy and Petroleum, as the CIM Definition Standards on Mineral Resources and Mineral Reserves adopted by CIM Council, as amended.
- Mineral Reserve
  - 1.3 In this Instrument, the terms “mineral reserve”, “**probable** mineral reserve” and “**proven** mineral reserve” have the meanings ascribed to those terms by the Canadian Institute of Mining, Metallurgy and Petroleum, as the CIM Definition Standards on Mineral Resources and Mineral Reserves adopted by CIM Council, as amended.
- Vein
  - A fracture with minerals filled in it

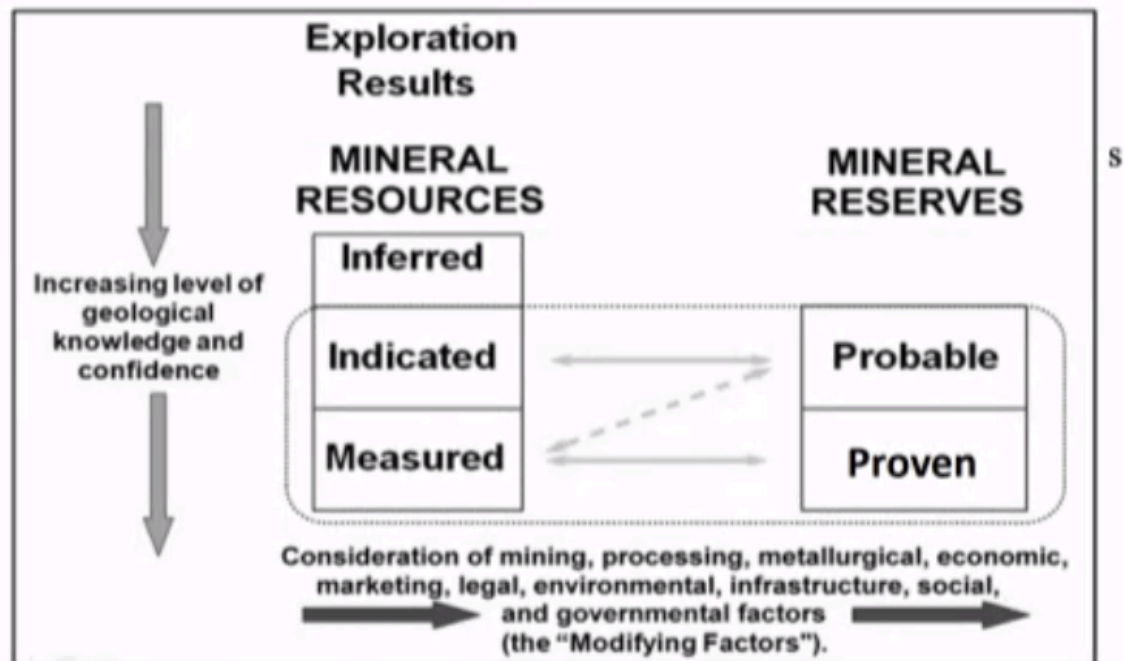


Figure 1, Relationship between Mineral Reserves and Mineral Resources

## New program Notes

- Get an understanding of the summary tables & how those were decided
- Only certain tables care more about Resources but should collect Reserves
- Change the prompt to include when the cut-off is not present

- Also look at the section of the table where total is represented
  - Extract summaries but want to focus on the totals rather than specific area
  - Try to also get the paragraph near where the tables are discussed→ it can probably give more context. Make sure that its before or after and it
- Resources = the whole pie
  - Larger total
- Reserves = a slice of the pie
  - Economic to mine at current time
- GENERALLY WANT RESOURCES
  - Sometimes exclude reserves when placing reserves
  - Quick mathematical check: if reserves > resources or if grade is dramatically different then there is something weird in the reporting
  - Pull out the terms then it indicates: proven → reserve
- Should only get one table. One from the year.

## New files

Looks like there are only 4 attached allotted

- Bleiberg Pb Zn 5-2017.pdf
  - Found the information not via a table but within the text on page 17. Interesting
  - Besides that no good tables
- Prairie Creek Zn Pb Ag 5-2016 PFS.pdf - DONE
  - NO TABLE OF CONTENTS
  - Was able to find the tables but wasn't pulling the whole table.. Interesting
  - Said it was New Polaris rather than this actual file
- Prairie Creek Zn Pb Ag 9-2017 FS.pdf- DONE
  - NO TABLE OF CONTENTS
  - Found table 15.5 and is working on pulling the information
- Galmoy Pb Zn Ag 4-2005.pdf - DONE
  - When directly asking for the full prompt only captures one table
  - But when asking first identify relevant tables it will look & gather a larger list
    - Then can find the full value
  - Will need to ask for the full video
- Reocin Zn 3-2002.pdf
  - NO TABLE OF CONTENTS
  - Able to pull table 3-1
  - It worked so well in being able to pulling the information
- Mehdiabad Zn 3-2005.pdf
  - No table of contents
  - Able to find three tables of interest & now trying to have it return those values
- San Vicente Ag Pb Zn Au 2-2018.pdf
  - Does not show relevant tables
- New Polaris Au 10-2006.pdf
  - NO RELEVANT TABLES

- New Polaris Au 10-2007.pdf
  - NO ZINC
- New Polaris Au 6-2002.pdf
  - No viable information
- San Vicente Ag Pb Zn Au 9-2019.pdf
  - Not able to find any tables
  - Can confirm that I didn't find any relevant information
- Silvermines Zn Pb 11-2017.pdf
  - Also does not have any tables
  - Assistants didn't retrieve it either
- New Polaris Au 2-2019.pdf
  - Does not have any tables discussing resource elements using Zinc
  - Checked the important ones
- New Polaris Au 4-2011.pdf
  - Focuses on gold as well
- Florida Canyon Au 6-2020.pdf
  - List of tables does not include word table
  - Also has gold or no indication or specification for Zinc
- Florida Canyon Au 11-2018.pdf
  - Only talks about gold

## Assistants Tool Notes

- Noticed that you should ask for all of the relevant tables within the document first
- Then ask to cycle through
- Wording matters. Asking for just tables that talk about mineral reserves or summaries of that helps. Asking for specific headers does not help but actually has reduced the number of tables
- Does a great job of actually working through the table
- Probably better to add one table at a time

## Example Structure

```
{
  "MineralSite": [
    {
      "id": 0,
      "name": "jhghjgk",
      "location_info": {
        "location": "POINT (-75.33292 44.28331)",
        "country": "United States",

```

```

    "state_or_province": "NY",
    "location_source_record_id": "22",
    "location_source": "MRDS_Zinc",
    "crs": "NAD83"
  },
  "geology_info": {

  },
  "same_as": "",
  "MineralInventory": [
    {
      "id": 0,
      "commodity": {
        "id": "comm89",
        "name": "zinc",
        "sameAs": "Q403"
      },
      "category": "https://minmod.isi.edu/resource/Measured",
      "ore": {
        "ore_unit": "https://minmod.isi.edu/resource/Q200",
        "ore_value": 850100
      },
      "grade": {
        "grade_unit": "https://minmod.isi.edu/resource/Q201",
        "grade_value": 13.19
      },
      "cutoff_grade": {
        "grade_unit": "https://minmod.isi.edu/resource/Q201",
        "grade_value": 6
      },
      "contained_metal": 112128.19,
      "reference": {
        "id": 0,
        "document": {
          "id": "doc_id_0",
          "title": "NI 43-101 PRELIMINARY ECONOMIC ASSESSMENT
TECHNICAL REPORT ON THE EMPIRE STATE MINES, GOUVERNEUR, NEW YORK, USA",
          "uri": "https://w3id.org/usgs/z/4530692/MHU8MJUV",
          "month": 9,
          "year": 2017
        },
        "page_info": [
          {
            "page": 137,
            "bounding_box": {
              "x_min": 1,

```

```

        "x_max": 2,
        "y_min": 3,
        "y_max": 4
    }
},
{
    "page": 138,
    "bounding_box": {
        "x_min": 5,
        "x_max": 6,
        "y_min": 7,
        "y_max": 8
    }
}
]
},
"date": "09-19-2017"
}
],
"deposit_type":
{
    "id": "https://minmod.isi.edu/resource/Q24"
}
},
{
    "id": 1,
    "name": "jhgjhgjghjghjjhjk",
    "location_info": {
        "location": "POINT (-75.33292 44.28331)",
        "country": "United States",
        "state_or_province": "NY",
        "location_source_record_id": "22",
        "location_source": "MRDS_Zinc",
        "crs": "NAD83"
    },
    "geology_info": {},
    "same_as": "",
    "MineralInventory": [
        {
            "id": 0,
            "commodity": {
                "id": "comm89",
                "name": "zinc",
                "sameAs": "Q403"
            },
            "category": "https://minmod.isi.edu/resource/Measured",

```

```

    "ore": {
      "ore_unit": "https://minmod.isi.edu/resource/Q200",
      "ore_value": 850100
    },
    "grade": {
      "grade_unit": "https://minmod.isi.edu/resource/Q201",
      "grade_value": 13.19
    },
    "cutoff_grade": {
      "grade_unit": "https://minmod.isi.edu/resource/Q201",
      "grade_value": 6
    },
    "contained_metal": 112128.19,
    "reference": {
      "id": 0,
      "document": {
        "id": "doc_id_0",
        "title": "NI 43-101 PRELIMINARY ECONOMIC ASSESSMENT
TECHNICAL REPORT ON THE EMPIRE STATE MINES, GOUVERNEUR, NEW YORK, USA",
        "uri": "https://w3id.org/usgs/z/4530692/MHU8MJUV",
        "month": 9,
        "year": 2017
      },
      "page_info": [
        {
          "page": 137,
          "bounding_box": {
            "x_min": 1,
            "x_max": 2,
            "y_min": 3,
            "y_max": 4
          }
        },
        {
          "page": 138,
          "bounding_box": {
            "x_min": 5,
            "x_max": 6,
            "y_min": 7,
            "y_max": 8
          }
        }
      ]
    },
    "date": "09-19-2017"
  }
],

```

```

        "deposit_type":
        {
            "id": "https://minmod.isi.edu/resource/Q24"
        }
    }
]
}

```

## Empty Json Structure:

### Mineral Site

```

{
  "MineralSite": [
    {
      "id": 0,
      "name": "Name of Site",
      "location_info": {
        "location": "POINT() ",
        "country": "",
        "state_or_province": "",
        "location_source_record_id": NULL,
        "location_source": NULL,
        "crs": NULL
      },
      "geology_info": {

    },
      "same_as": "",

```

### Deposit Types

```

{
  "deposit types": [
    {
      "id": "https://minmod.isi.edu/resource/" + value
    },

```



```

    {
      "id": "https://minmod.isi.edu/resource/" + value
    }
  ]
}

```

## Mineral Inventory

```

"MineralInventory": [
  {
    "id": 0,
    "commodity": {
      "id": "",
      "name": "zinc",
      "sameAs": "minmodID"
    },
    "category": "https://minmod.isi.edu/resource/" + Classification,
    "ore": {
      "ore_unit": "https://minmod.isi.edu/resource/" + value,
      "ore_value": value
    },
    "grade": {
      "grade_unit": "https://minmod.isi.edu/resource/" + value,
      "Grade_value": value
    },
    "cutoff_grade": {
      "grade_unit": "https://minmod.isi.edu/resource/" + value,
      "grade_value": value
    },
    "contained_metal": 112128.19,
    "reference": {
      "id": 0,
      "document": {
        "id": "doc_id_0",
        "title": Document Title
        "uri": ,
        "month": mm,
        "year": yyyy
      },
      "page_info": [
        {
          "page": page number,
          "bounding_box": {

```

```

        "x_min": "",
        "x_max": "",
        "y_min": "",
        "y_max": ""
    }
}
]
}
"date": document published date mm/yyyy
}
]
}

```

## Prompts to use:

### Intro JSON:

1. Tell it to remember each of the different JSON structures.
  - a. Here are three different json structures with their names that I need you to remember:
2. Ask for the title of the document to make sure you have the correct one
  - a. what is the title of this document?

### Site Information

3. For the **Site Info**, you asked to find the geographic location of the mining site in the document and put it in geographic coordinates using latitude and longitude, changed into a single-line format like "394000E 5164500N," and then place it in a JSON format structure under the name "location\_info" within a larger structure called "Site Info." Here is an example format: Site Info: MineralSite = { 'id':0 'name':"", 'location\_info': "394000E 5164500N" , 'geology\_info':", 'same\_as':" }. If there is no location\_info, leave the string empty. Please return the filled in Site info json Structure.

## Deposit Types

4. For the **Deposit Types**, identify the deposit types from the attached document from a provided list of acceptable deposit types. The output was to be formatted in a JSON with "id" and "name" fields for each deposit type identified. That looks like `{"deposit types": [{"id": 0, "name": "Deposit type Name"}, {"id": 1, "name": "Deposit type Name"}]}`. If the no deposit types are found please return an empty list in the json. Please return the filled in Deposit Types json Structure.

Here is the list of acceptable deposit types: Residual placer tin, Residual placer lead, Fluvial placer gold, Fluvial placer PGE, Fluvial placer tin, Fluvial placer niobium-tantalum, Fluvial placer tungsten, Fluvial placer REE, Fluvial placer diamond, Fluvial placer gemstones, Fluvial placer garnet, Heavy mineral sands, Shoreline placer gold, Paleoplacer heavy mineral sands, Paleoplacer tin, Paleoplacer gold  $\pm$  uranium, Bauxite, Karst bauxite, Laterite nickel, Carbonatite laterite REE, Laterite magnesite, Residual clay, Underclay, over- clay, Ion adsorption REE, Supergene silver, Supergene lead, Supergene uranium, Supergene vanadium, Supergene gold, Supergene zinc, Supergene copper, Supergene manganese, Supergene iron, Exotic copper, Paleochannel iron, Sandstone uranium, Carbonate uranium, Coal/peat/bog uranium, Calcrete uranium, Nodular magnesite, Marine evaporite gypsum, Marine evaporite salt, Marine evaporite potash, Marine evaporite magnesite, Lacustrine evaporite trona, Lacustrine evaporite salt, Lacustrine evaporite potash, Lacustrine evaporite carnallite-bischofite, Lacustrine evaporite borate, Lacustrine evaporite magnesite, Lacustrine evaporite nitrate, Marine brine potash ( $\pm$ Mg, Li, and so on), Lacustrine brine potash, Lacustrine brine lithium, Lacustrine zeolite ( $\pm$  Li, B), Lacustrine clay lithium, Black shale vanadium  $\pm$  Mo  $\pm$  Ni, Black shale nickel  $\pm$  Mo- PGE, Black shale gold, Black shale uranium, Phosphorite, Superior-type banded iron formation, Oolitic iron formation, Lacustrine iron formation, Superior-type banded manganese, Sedimentary manganese, Crust manganese, Nodule manganese, Lacustrine manganese, Unconformity- related uranium, Unconformity- related REE, Collapse breccia pipe uranium, Volcanic-hosted copper, Sediment-hosted copper  $\pm$  Co, Siliciclastic-mafic zinc-lead, Siliciclastic-mafic barite, Siliciclastic- carbonate zinc-lead, Irish-type sediment- hosted zinc- lead, Kipushi-type sediment- hosted copper- zinc-lead, MVT zinc-lead, MVT barite, MVT fluorspar, MVT strontium, Sandstone-hosted zinc-lead, Non-sulfide zinc-lead  $\pm$  Mn, Vein five-element, Hypozonal orogenic gold, Mesozonal orogenic gold, Epizonal orogenic gold, Epizonal orogenic antimony  $\pm$  gold, Epizonal orogenic mercury, Orogenic

silver-lead- zinc-copper- antimony, Orogenic copper  $\pm$  gold, Orogenic graphite, Metamorphic graphite, Metamorphic kyanite, Low Iron alkali-calcic, Albitite-hosted uranium, Ferroan carbonate polymetallic, Iron sulfide polymetallic, Iron silicate polymetallic, Iron oxide poly- metallic, Iron oxide uranium, Iron oxide gold, Hematite-dominant IOCG, Magnetite- dominant IOCG, Hematite- dominant IOA, Magnetite-dominant IOA, Mafic-ultramafic VMS, Mafic-siliciclastic VMS, Bimodal-mafic VMS, Bimodal felsic VMS, Felsic-siliciclastic VMS, Algoma-type banded iron formation, Volcanogenic manganese, Low-sulfidation (LS) epither- mal gold-silver, Intermediate-sulfidation (IS) epithermal silver-gold  $\pm$  Zn, Pb, Cu, Sn, Mn, High-sulfidation (HS) epithermal silver-gold  $\pm$  Cu, Alkalic epithermal gold  $\pm$  Ag, Epithermal mercury, Epithermal beryllium, Epithermal uranium, Vein  $\pm$  replacement nickel, Vein cobalt  $\pm$  Ni, Vein copper, Vein tin, Vein tungsten, Vein tin polymetallic, Vein fluorite, Vein polymetallic, Breccia pipe copper, Breccia pipe gold, Breccia pipe molybdenum, Breccia pipe REE, Carlin-type gold, Distal- disseminated silver-gold, Replacement polymetallic, Replacement gold-silver, Replacement tin, Replacement copper, Replacement zinc-lead, Replacement manganese, Replacement magnesium, Replacement fluorite, Skarn iron, Skarn copper, Skarn tungsten  $\pm$  Mo, Skarn tin  $\pm$  copper  $\pm$  Mo, Skarn gold  $\pm$  copper  $\pm$  tungsten, Skarn zinc-lead-silver, Skarn molybdenum, Skarn beryllium- fluorite, Skarn uranium- REE, Porphyry copper  $\pm$  gold, Porphyry copper- molybdenum, Porphyry gold  $\pm$  copper, Climax-type porphyry molybdenum, Low-fluorine porphyry molybdenum, Porphyry tungsten, Porphyry tin, Greisen tin  $\pm$  W-Mo, Greisen tungsten- molybdenum  $\pm$  Bi, Greisen beryllium  $\pm$  Li, Reduced intrusion- related gold, Oxidized intrusion- related gold, Simple pegmatite, LCT pegmatite, NYF pegmatite, Abyssal pegmatite REE, Carbonatite REE, Carbonatite niobium, Peralkaline igneous HFSE- REE, Apatite- nepheline- titanite intrusion, Apatite intrusion REE, Kimberlite diamond, Komatiite nickel-copper-PGE, U-M layered intrusion chromium, U-M layered intrusion nickel- copper-PGE, U-M layered intrusion PGE, U-M layered intrusion iron-titanium- vanadium, U-M intrusion nickel-copper- PGE, U-M conduit nickel-copper- PGE, Ophiolite chro- mium, Ophiolite nickel-copper-PGE, Arc U-M intrusion titanium- vanadium, Arc U-M intru- sion nickel-copper-PGE, Anorthosite mas- sif titanium, Anorthosite conduit nickel- copper-PGE, Impact U-M intrusion nickel- copper-PGE

## Mineral Resources

### 5. For the **Mineral Inventory**

- a. Can you go through the document, find any tables that discuss mineral resources? Please return the list of tables.
- b. From the tables mentioned above, create a JSON structure that captures the essential Zinc resource estimate data from these tables. Each entry in the JSON should include the following fields: Zone: The specific location within the mining project. Classification: The category of resource confidence, such as measured, indicated, total or, inferred. Zn Cut-Off: The threshold grade used to determine the economic viability of mining the Zinc resource (this might not be provided in some tables). Zn Tonnage: The calculated or estimated tonnage for the Zinc resource. Zn Grade %: The concentration of Zinc in the resource, expressed as a percentage. Contained\_metal is the tonnage times grade and then divided by 100 but should be reported as the final number. The page number should be found by starting from the first page of the document as page 1 and incrementing by 1 until the referenced table is found in the document.

Note: The term "cut-off" is sometimes not provided within the resource estimates and the JSON output should acknowledge this by entering "Not Provided" where applicable. Use this specific instruction to analyze mining reports for gold resource estimates and format the findings in JSON. {

```
"MineralInventory": [
  {
    "id": 0,
    "commodity": commodity,
    "category": classification,
    "ore": tonnage (Tonnes),
    "grade": {
      "grade_unit": "percent",
      "grade_value": grade_value
    },
    "Cutoff_grade": cut_off grade,
    "Contained_metal": contained_metal,
    "reference": {
      "page": page_number    },
    "Date": document published date mm/yyyy
  }
]
}
```

# Need to Grade

## Reocin Zn 3-2002.pdf

- Relevant Tables:
  - Chat GPT: Table 3-1 – Summary of reserves and resources
  - Adriana: Table 2-1 has summary of reserves but gets caught in table 3-1,
    - Table 3-1
- Amount of Rows that are correct:
  - Chat GPT: 6 rows all correct
- Deposit types:
  - Chat GPT: {"id": 0, "name": "Siliciclastic-carbonate zinc-lead"}, {"id": 1, "name": "MVT zinc-lead"}
  - Adriana: did not find any deposit types
- Geographic Location
  - Chat GPT : couldn't find
  - Adriana : 4 locations but on the map rather than discussed
- Additional Notes
  - Page number is still wrong
  - Pulled all the rows correctly

Output:

```
{
  "MineralSite": {
    "id": 0,
    "name": "",
    "location_info": "",
    "geology_info": "",
    "same_as": ""
  },
  "deposit_types": [
    {
      "id": 0,
      "name": "Siliciclastic-carbonate zinc-lead"
    },
    {
      "id": 1,
      "name": "MVT zinc-lead"
    }
  ],
  "MineralInventory": [
    {
      "id": 0,
      "commodity": "Zinc",
```

```
"Zone": "Underground",
"category": "Measured",
"ore": 417000,
"grade": {
  "grade_unit": "percent",
  "grade_value": 11.73
},
"Cutoff_grade": "Not Provided",
"Contained_metal": 48941.01,
"reference": {
  "page": 27
},
"Date": "03/2002"
```

```
},
{
  "id": 1,
  "commodity": "Zinc",
  "Zone": "Opencut",
  "category": "Measured",
  "ore": 745000,
  "grade": {
    "grade_unit": "percent",
    "grade_value": 7.78
  },
  "Cutoff_grade": "Not Provided",
  "Contained_metal": 57951.00,
  "reference": {
    "page": 27
  },
  "Date": "03/2002"
```

```
},
{
  "id": 2,
  "commodity": "Zinc",
  "Zone": "Underground",
  "category": "Proved",
  "ore": 488000,
  "grade": {
    "grade_unit": "percent",
    "grade_value": 10.04
  },
  "Cutoff_grade": "Not Provided",
  "Contained_metal": 49007.20,
  "reference": {
```

```
"page": 27
},
"Date": "03/2002"
},
{
  "id": 3,
  "commodity": "Zinc",
  "Zone": "Opencut",
  "category": "Proved",
  "ore": 953000,
  "grade": {
    "grade_unit": "percent",
    "grade_value": 6.08
  },
  "Cutoff_grade": "Not Provided",
  "Contained_metal": 57932.24,
  "reference": {
    "page": 27
  },
  "Date": "03/2002"
},
{
  "id": 4,
  "commodity": "Zinc",
  "Zone": "Total",
  "category": "Measured",
  "ore": 1162000,
  "grade": {
    "grade_unit": "percent",
    "grade_value": 9.20
  },
  "Cutoff_grade": "Not Provided",
  "Contained_metal": 106944.00,
  "reference": {
    "page": 27
  },
  "Date": "03/2002"
},
{
  "id": 5,
  "commodity": "Zinc",
  "Zone": "Total",
  "category": "Proved",
  "ore": 1441000,
```



```

"grade": {
  "grade_unit": "percent",
  "grade_value": 7.42
},
"Cutoff_grade": "Not Provided",
"Contained_metal": 106900.20,
"reference": {
  "page": 27
},
>Date": "03/2002"
}
]
}

```

## Prairie Creek Zn Pb Ag 5-2016 PFS.pdf

- Relevant Tables:
  - Chat GPT: Table ES.1.2 September 2015 Mineral Resources Prairie Creek Mine
    - Uses measured, indicated, inferred, measured & indicated
  - Adriana: Table ES.1.2 September 2015 Mineral Resources Prairie Creek Mine
    - Table ES 1.3 March 2016 Mineral Resources
      - Uses proven, probable and total
    - Table 14.8 September 2015 Mineral Resource at 8% ZnEq grade cut-off
    - Table 14.9
    - Table 14.10
    - Table 14.11
    - Table 15.2
    - Table 15.3\*\*
    - Table 15.4
    - Table 25.2
- Amount of Rows that are correct:
  - Chat GPT: 1/15
- Deposit types:
  - Chat GPT: { "id": 0, "name": "Mississippi Valley type" }
  - Adriana:
    - Don't get any in the acceptable types of depositys
    - Mississippi Valley Type
    - Hydrothermal quartz veins
    - Stratabound Mineralization
- Geographic Location
  - Chat GPT : latitude 61° 33' North and longitude 124° 48' West
  - Adriana : The Property is located in the Northwest Territories (NWT), Canada, near the Yukon border, at latitude 61° 33' North and longitude 124° 48' Wes

- Additional Notes
  - Page number wrong
  - Did not get the Zones past measured. This total table has 15 rows.
  - There are other tables that need to be looked at

Output:

```
{
  "SiteInfo": {
    "MineralSite": {
      "id": 0,
      "name": "",
      "location_info": "latitude 61° 33' North and longitude 124° 48' West",
      "geology_info": "",
      "same_as": ""
    }
  },
  "DepositTypes": {
    "deposit_types": [
      {
        "id": 0,
        "name": "Mississippi Valley type"
      }
    ]
  },
  "MineralInventory": [
    {
      "id": 0,
      "commodity": "Zinc",
      "category": "Measured",
      "ore": 1313000,
      "grade": {
        "grade_unit": "percent",
        "grade_value": 13.2
      },
      "Cutoff_grade": "Not Provided",
      "Contained_metal": 173316,
      "reference": {
        "page": 37
      },
      "Date": "09/2015"
    }
  ]
}
```

## Prairie Creek Zn Pb Ag 9-2017 FS.pdf

- Relevant Tables:
  - Chat GPT:
    - Table 14.8: September 2015 Mineral Resource summary at 8% ZnEq grade cut-off.
    - Table 15.4: Conversion of Mineral Resources to Mineral Reserves
    - Tables 14.8, 14.9, 14.10, and 14.11 - looked at more tables than what was previously given
  - Adriana:
    - Table ES 1.2 : Mineral RESOURCES uses measured, inferred, indicated talks about September 2015
    - Table ES 1.3 : proven & probable August 2017 RESERVES (in title)
    - Table 14.8: September 2015 Mineral Resource summary at 8% ZnEq grade cut-off.
    - Table 14.9 : range cut offs
    - Table 14.10 similar to above but different zone site
    - Table 14.11 similar to above
    - Table 15.3 August 2017 Mineral Reserves
    - Table 15.4 conversion of Mineral Resources to Mineral Reserves
    - Table 15.5 Comparison of 2017 and 2016 mineral reserves
    -
- Amount of Rows that are correct:
  - Chat GPT:
- Deposit types:
  - Chat GPT: Hydrothermal Quartz Veins (MQV and STK), Stratabound Mineralization (SMS), and Mississippi Valley Type (MVT) \*\*
    - But only puts exactly matching MVT into the json
  - Adriana: Hydrothermal Quartz Veins (MQV and STK), Stratabound Mineralization (SMS), and Mississippi Valley Type (MVT)
    - None in the acceptable types
- Geographic Location
  - Chat GPT : Latitude: 61° 33' North Longitude: 124° 48' West
  - Adriana : Latitude 61° 33' North and longitude 124° 48' West
- Additional Notes

Output:

```
{
  "SiteInfo": {
    "MineralSite": {
      "id": 0,
      "name": "",
      "location_info": "",
      "geology_info": "",
      "same_as": ""
    }
  }
}
```

```

    }
  },
  "DepositTypes": {
    "deposit_types": [
      {"id": 0, "name": "Mississippi Valley Type (MVT)"}
    ]
  },
  "MineralInventory": [
    {
      "id": 0,
      "commodity": "Zinc",
      "category": "Measured & Indicated",
      "ore": 8704000,
      "grade": {
        "grade_unit": "percent",
        "grade_value": 8.9
      },
      "Cutoff_grade": "Not Provided",
      "Contained_metal": 774256,
      "reference": {
        "page": 150
      },
      "Date": "09/2015"
    }
  ]
}

```

## Galmoy Pb Zn Ag 4-2005.pdf

- Relevant Tables:
  - Chat GPT:
    - Table 8: Galmoy Mine Mineral Resources
    - Table 9: Galmoy Mine Mineral Reserves
    - Table 10: Proven and Probable Mineral Reserves by zone
  - Adriana:
    - Table 8: uses measured & indicated
    - Table 9: proven & probable
    - Table 10: proven & probable
    - Table 13: R Zone Comparative Results
    - Table 14 R Zone comparative results mineral reserve
- Amount of Rows that are correct:
  - Chat GPT:
- Deposit types:

- Chat GPT: "name": "Irish-type sediment-hosted zinc-lead"
- Adriana: carbonate-hosted Irish zinc-lead
  - Not in acceptable list
- Geographic Location
  - Chat GPT : '52°50'N 7°35'W',
  - Adriana : 52°50'N latitude, 7°35'W longitude.
- Additional Notes:
  - Need to update to get all unique rows and extractions
  - The rows are not actually from a labeled TABLE but does seem to have the information that we want
    - But actually correlates to table 8 and 9
    - Table 10 has zones so unclear if we want those

## Output

```
{
  "SiteInfo": {
    "id": 0,
    "name": "",
    "location_info": "52°50'N 7°35'W",
    "geology_info": "",
    "same_as": ""
  },
  "DepositTypes": {
    "deposit_types": [
      {
        "id": 0,
        "name": "Irish-type sediment-hosted zinc-lead"
      }
    ]
  },
  "MineralInventory": [
    {
      "id": 1,
      "commodity": "Zinc",
      "category": "Measured",
      "ore": 3418000,
      "grade": {
        "grade_unit": "percent",
        "grade_value": 15.90
      },
      "Cutoff_grade": "Not Provided",
      "Contained_metal": 543462,
      "reference": {
        "page": 59 ACTUALLY 7 or 64, Table 8
```

```
},
  "Date": "Not Provided"
},
{
  "id": 2,
  "commodity": "Zinc",
  "category": "Indicated",
  "ore": 2096000,
  "grade": {
    "grade_unit": "percent",
    "grade_value": 11.31
  },
  "Cutoff_grade": "Not Provided",
  "Contained_metal": 237033.6,
  "reference": {
    "page": 59
  },
  "Date": "Not Provided"
},
{
  "id": 3,
  "commodity": "Zinc",
  "category": "Inferred",
  "ore": 79000,
  "grade": {
    "grade_unit": "percent",
    "grade_value": 5.9
  },
  "Cutoff_grade": "Not Provided",
  "Contained_metal": 4661,
  "reference": {
    "page": 59
  },
  "Date": "Not Provided"
},
{
  "id": 4,
  "commodity": "Zinc",
  "category": "Proven",
  "ore": 2615674,
  "grade": {
    "grade_unit": "percent",
    "grade_value": 15.9
  },
  "Date": "Not Provided"
}
```

```

    "Cutoff_grade": "6% ZnEq",
    "Contained_metal": 415891.966,
    "reference": {
      "page": 60
    },
    "Date": "Not Provided"
  },
  {
    "id": 5,
    "commodity": "Zinc",
    "category": "Probable",
    "ore": 1340724,
    "grade": {
      "grade_unit": "percent",
      "grade_value": 10.6
    },
    "Cutoff_grade": "6% ZnEq",
    "Contained_metal": 142116.944,
    "reference": {
      "page": 60
    },
    "Date": "Not Provided"
  }
}
// Additional entries would follow for other zones listed in Table 10...
]
}

```

## Mehdiabad Zn 3-2005.pdf

- Relevant Tables:
  - Chat GPT:
    - Table 5: In Pit Resources
    - Table 4: JORC Compliant Resource Estimates 2001.
    - Table 9: Zinc minerals (This table lists zinc minerals but not resources per se, it may still be relevant to your interests).
    - Table 10: Metallurgical Recoveries Expected
    - Table 11: Oxide Plant Capital Costs (This table does not directly discuss resources but might include relevant economic information)
    - Table 12: Total Plant Operating Cost (This table also does not directly discuss resources but might include relevant economic information)
  - Adriana:
    - Table 4
    - Table 5 i am unsure

- Amount of Rows that are correct:
  - Chat GPT: 4/6
    - Technically 3/3 in my opinion
- Deposit types:
  - Chat GPT: The document does not explicitly name a deposit type that matches any of the acceptable deposit types listed. It provides detailed descriptions of the mineralization and the geological setting for the deposit, such as "carbonate hosted zinc-lead and silver deposit," but does not assign a specific deposit type name like those provided in the list. Considering this, it seems no deposit types from the list can be confidently matched to those described in the document.
  - Adriana: hybrid carbonate-hosted deposit type that is characterised by a Mississippi Valley Type (MVT)
- Geographic Location
  - Chat GPT : empty bc it says its not clear
  - Adriana : given in the a figure, central Iran, approximately 80 kilometres south east of the city of Yazd and approximately 550 kilometres directly south east of Tehran
- Additional Notes
  - Still not clear on the page numbers
  - Took one row from table 5
  - But all 3 correctly from table 4

Output

```
{
  "SiteInfo": {
    "MineralSite": {
      "id": 0,
      "name": "",
      "location_info": "",
      "geology_info": "",
      "same_as": ""
    }
  },
  "DepositTypes": {
    "deposit types": []
  },
  "MineralInventory": [
    {
      "id": 0,
      "commodity": "Zinc",
      "category": "Inferred",
      "ore": 142684688,
      "grade": {
        "grade_unit": "percent",
```



```
    "grade_value": 7.10
  },
  "Cutoff_grade": "4%",
  "Contained_metal": 101308556.05,
  "reference": {
    "page": 27
  },
  "Date": "03/2005"
},
{
  "id": 1,
  "commodity": "Zinc",
  "category": "Indicated",
  "ore": 75165938,
  "grade": {
    "grade_unit": "percent",
    "grade_value": 7.38
  },
  "Cutoff_grade": "4%",
  "Contained_metal": 5549230.2,
  "reference": {
    "page": 27
  },
  "Date": "03/2005"
},
{
  "id": 2,
  "commodity": "Zinc",
  "category": "Total",
  "ore": 217850625,
  "grade": {
    "grade_unit": "percent",
    "grade_value": 7.20
  },
  "Cutoff_grade": "4%",
  "Contained_metal": 15685245,
  "reference": {
    "page": 27
  },
  "Date": "03/2005"
},
{
  "id": 3,
  "commodity": "Zinc",
```

```
"category": "Measured/Indicated",
"ore": 249000000,
"grade": {
  "grade_unit": "percent",
  "grade_value": 6.2
},
"Cutoff_grade": "3%",
"Contained_metal": 15438000,
"reference": {
  "page": 26, page 11, table 5
},
>Date": "03/2005"
}
]
}
```

```

{
  "MineralInventory": [
    {
      "id": 0,
      "commodity": "Au",
      "category": "Indicated",
      "ore": 1880000,
      "grade": {
        "grade_unit": "g/t",
        "grade_value": 10.0 / 10000
      },
      "Cutoff_grade": "6.0 g/t",
      "Contained_metal": 605000,
      "reference": {
        "page": 20
      },
      "Date": "02/2019"
    },
    {
      "id": 1,
      "commodity": "Au",
      "category": "Indicated",
      "ore": 1798000,
      "grade": {
        "grade_unit": "g/t",
        "grade_value": 10.4 / 10000
      },
      "Cutoff_grade": "6.0 g/t",
      "Contained_metal": 599000,
      "reference": {
        "page": 20
      },
      "Date": "02/2019"
    },
    {
      "id": 2,
      "commodity": "Au",
      "category": "Indicated",
      "ore": 1687000,
      "grade": {
        "grade_unit": "g/t",
        "grade_value": 10.8 / 10000
      },
      "Cutoff_grade": "6.0 g/t",

```

```
"Contained_metal": 586000,
"reference": {
  "page": 20
},
>Date": "02/2019"
},
{
  "id": 3,
  "commodity": "Au",
  "category": "Indicated",
  "ore": 1556000,
  "grade": {
    "grade_unit": "g/t",
    "grade_value": 11.3 / 10000
  },
  "Cutoff_grade": "6.0 g/t",
  "Contained_metal": 567000,
  "reference": {
    "page": 20
  },
  "Date": "02/2019"
},
{
  "id": 4,
  "commodity": "Au",
  "category": "Indicated",
  "ore": 1403000,
  "grade": {
    "grade_unit": "g/t",
    "grade_value": 12.0 / 10000
  },
  "Cutoff_grade": "6.0 g/t",
  "Contained_metal": 540000,
  "reference": {
    "page": 20
  },
  "Date": "02/2019"
},
{
  "id": 5,
  "commodity": "Au",
  "category": "Indicated",
  "ore": 1260000,
  "grade": {
```

```
"grade_unit": "g/t",
"grade_value": 12.6 / 10000
},
"Cutoff_grade": "6.0 g/t",
"Contained_metal": 509000,
"reference": {
  "page": 20
},
>Date": "02/2019"
},
{
  "id": 6,
  "commodity": "Au",
  "category": "Indicated",
  "ore": 1105000,
  "grade": {
    "grade_unit": "g/t",
    "grade_value": 13.3 / 10000
  },
  "Cutoff_grade": "6.0 g/t",
  "Contained_metal": 472000,
  "reference": {
    "page": 20
  },
  "Date": "02/2019"
},
{
  "id": 7,
  "commodity": "Au",
  "category": "Indicated",
  "ore": 947000,
  "grade": {
    "grade_unit": "g/t",
    "grade_value": 14.1 / 10000
  },
  "Cutoff_grade": "6.0 g/t",
  "Contained_metal": 428000,
  "reference": {
    "page": 20
  },
  "Date": "02/2019"
},
{
  "id": 8,
```

```
"commodity": "Au",
"category": "Inferred",
"ore": 1639000,
"grade": {
  "grade_unit": "g/t",
  "grade_value": 9.5 / 10000
},
"Cutoff_grade": "6.0 g/t",
"Contained_metal": 502000,
"reference": {
  "page": 20
},
>Date": "02/2019"
},
{
  "id": 9,
  "commodity": "Au",
  "category": "Inferred",
  "ore": 1582000,
  "grade": {
    "grade_unit": "g/t",
    "grade_value": 9.8 / 10000
  },
  "Cutoff_grade": "6.0 g/t",
  "Contained_metal": 497000,
  "reference": {
    "page": 20
  },
>Date": "02/2019"
},
{
  "id": 10,
  "commodity": "Au",
  "category": "Inferred",
  "ore": 1483000,
  "grade": {
    "grade_unit": "g/t",
    "grade_value": 10.2 / 10000
  },
  "Cutoff_grade": "6.0 g/t",
  "Contained_metal": 485000,
  "reference": {
    "page": 20
  },
}
```

```
"Date": "02/2019"
},
{
  "id": 11,
  "commodity": "Au",
  "category": "Inferred",
  "ore": 1351000,
  "grade": {
    "grade_unit": "g/t",
    "grade_value": 10.7 / 10000
  },
  "Cutoff_grade": "6.0 g/t",
  "Contained_metal": 464000,
  "reference": {
    "page": 20
  },
  "Date": "02/2019"
},
{
  "id": 12,
  "commodity": "Au",
  "category": "Inferred",
  "ore": 1223000,
  "grade": {
    "grade_unit": "g/t",
    "grade_value": 11.2 / 10000
  },
  "Cutoff_grade": "6.0 g/t",
  "Contained_metal": 441000,
  "reference": {
    "page": 20
  },
  "Date": "02/2019"
},
{
  "id": 13,
  "commodity": "Au",
  "category": "Inferred",
  "ore": 942000,
  "grade": {
    "grade_unit": "g/t",
    "grade_value": 12.5 / 10000
  },
  "Cutoff_grade": "6.0 g/t",
```

```
"Contained_metal": 380000,
"reference": {
  "page": 20
},
>Date": "02/2019"
},
{
  "id": 14,
  "commodity": "Au",
  "category": "Inferred",
  "ore": 753000,
  "grade": {
    "grade_unit": "g/t",
    "grade_value": 13.8 / 10000
  },
  "Cutoff_grade": "6.0 g/t",
  "Contained_metal": 334000,
  "reference": {
    "page": 20
  },
  "Date": "02/2019"
},
{
  "id": 15,
  "commodity": "Au",
  "category": "Inferred",
  "ore": 653000,
  "grade": {
    "grade_unit": "g/t",
    "grade_value": 14.6 / 10000
  },
  "Cutoff_grade": "6.0 g/t",
  "Contained_metal": 306000,
  "reference": {
    "page": 20
  },
  "Date": "02/2019"
}
]
}
```