

**J. TUACH GEOLOGICAL CONSULTANTS, INC.  
DIAMOND DRILL CORE LOG**

Sheet No. 1

|                                              |                |     |                     |                      |                                          |
|----------------------------------------------|----------------|-----|---------------------|----------------------|------------------------------------------|
| LATITUDE _____                               | Tests<br>Depth | Dip | Magnetic<br>Bearing | Corrected<br>Bearing | Project No. _____ Hole No. <u>1733</u>   |
| DEPARTURE <u>11.185.44N 13.956.23E</u>       |                |     |                     |                      | Property <u>Buchans - Middle Branch</u>  |
| ELEVATION <u>3808.03</u>                     |                |     |                     |                      | NTS _____ Grid Name <u>Mine grid</u>     |
| DIP AT COLLAR <u>-90°</u>                    |                |     |                     |                      | Date started <u>1958</u> Completed _____ |
| BEARING _____                                |                |     |                     |                      | Contractor _____                         |
| TOTAL DEPTH <u>1226'</u> CORE SIZE <u>Ax</u> |                |     |                     |                      |                                          |
| REMARKS <u>Start log @ 784'</u>              |                |     |                     |                      | Logged by <u>J. Harris - 1996</u>        |

| Depth & Lithology | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Alteration                                                                                                                                         | Mineralization                                                                                                                                                                        |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0 - 60'           | - Overburden                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                    |                                                                                                                                                                                       |
| 60 - 784'         | - (Not Logged - Notes 397 - 489' )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                    |                                                                                                                                                                                       |
| - 397'            | - Felsic dyke fine grained pink                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                    |                                                                                                                                                                                       |
| 397 - 406'        | - Thinly bedded mafic tuffs or sediments<br>- Bedding @ $\approx 50^\circ$ to core - Mostly silt sized particles but some sandy tuffaceous seds. Gradational contact to next unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                    | 397 - 406' - veins (beds) and blebs of Py. 5 - 6%                                                                                                                                     |
| 406 - 489'        | - Crystal lithic tuff, dacitic (unusual) Almost intrusive looking -<br>- green colour with pink chips and clasts<br>- Quartz and feldspar and lithic fragments in a chloritic groundmass<br>- Lithic clasts are mainly pink rhyolitic<br>- 433 - 435 mafic tuff<br>- Gradational to finer grained and more mafic at about 443<br>- Sheared/foliated at $\approx 70^\circ$ to the core at 451'<br>- 455 - 459' Hard, siliceous, mafic looking with porphyritic epidote<br>- 459 - 461' Mainly pale green cherry siltstone (or silicification)<br>- 461 - 177' Interbedded at 70 - 80° to core, mafic tuffs or grits and prominent quartz dacitic tuff<br>- 477 - 489' Prominent quartz dacitic tuff - altered | Some black chloritic alteration, local silicification<br><br><br><br><br><br><br><br><br><br>477 - 489 - sericitic alteration local silicification | Py. 3 - 5% overall but mostly concentrated in bands - beds or alteration?<br><br><br><br><br><br><br><br><br><br>483 - 484' $\approx$ 10 - 15% cpy. and minor Py. with silicification |

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| Depth & Lithology           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Alteration                                                                                                                                                                             | Mineralization                                                                                           |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| 784 - 802'                  | - Felsic volcanic - dacite tuff<br>- Pink to greenish porphyritic rock - Prominent quartz and smaller feldspars (Plag.) and dark (black) chlorite flecks in an aphanitic (glassy) matrix - Poor core recovery 792 - 802                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                        |                                                                                                          |
| 802 - 821'                  | - Mafic dyke - black, fine grained - magnetic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Weakly sericitic                                                                                                                                                                       | <1% py.<br>@ 786 - Small veinlet py.                                                                     |
| 821 - ≈ 858'<br>(lost core) | - As for 784 - 802'<br>- 839 - 841 Weakly foliated at ≈ 80 - 85° to core - strongest @ ≈ 840'<br>- Lower 8" mafic volcanic                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                        |                                                                                                          |
| 858 - 920'                  | - Rhyolite to felsite dyke or sill<br>- Pink colour - porphyritic - altered feldspars<br>- 860 - 865 some included parts of above unit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Weak sericitic alteration<br>Poor core recovery 846 - 878                                                                                                                              |                                                                                                          |
| 920 - 937'                  | - Interbedded shale and arkose<br>- Black to grey shale thinly bedded at ≈ 45 - 50° to the core but bedding disrupted by fractures and soft sediment? structures<br>- 928 - 930 - conglomerate, mafic and felsic volcanic clasts                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                        |                                                                                                          |
| 937 - 951'                  | - Arkose, lithic arkose - (conglomerate over lower 1" with large clast of Sandy Lake Fm. basalt.)<br>Arkose is pink with lithic pebbles                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Cut by thin silica - epidote stringers                                                                                                                                                 |                                                                                                          |
| 951 - 1082'                 | - Dacitic tuff, (could be called a conglomerate) minor quartz and more common feldspar crystals and assorted - lithic fragments in a sericitic and chloritic matrix<br>- Lithic fragments are mainly felsic volcanic with some mafic volcanic and are mostly pebble sized with a few larger porphyritic rhyolite clasts.<br>- Upper 2 - 3' oriental type dacite (as per Thurlow) finer grained and foliated/layered at ≈ 50° to core<br>- Small shear zone at 988' ≈ 50° to core<br>- Small chilled mafic dykes @ 1022 - 1024 and 1050 - 1055<br>- Some small beds of pebble conglomerate<br>- Grades down into a fine weakly pyritic siltstone with clasts and/or thin beds of dacitic tuff at 1071' | Sericitic and chloritic alteration of matrix<br><br>Silica - epidote fracture infill - cementing a brittle breccia @ 964'<br><br>Dacite clasts look like they have settled in soft mud | Siltstone has to 1% fine py. - disseminated earthy blue clay mineral, mainly in dacite clasts or layers. |
| 1082 - 1100'                | - Mafic dyke - fine grained, black, magnetic, diabase                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                        |                                                                                                          |
| 1100 - 1105'                | - Fine sandstone - light green siliceous                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                        | 1 - 2 % disseminated py.                                                                                 |

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| Depth & Lithology | Description                                                                                                                                                                                                                                                                                                                                                                   | Alteration                                        | Mineralization                                                                                                                     |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| 1105 - 1127'      | <ul style="list-style-type: none"> <li>- Rhyolite conglomerate</li> <li>- Mainly pink rhyolite fragments, rounded to angular</li> <li>- Upper 8' clast supported with a silicified and sericitic matrix</li> <li>- Grades down into a pyritic siltstone matrix and siltstone interbeds, matrix supported</li> <li>- Rhyolite clasts may have settled in soft silt.</li> </ul> | 1105 - 1203 silicified and sericitic              | <p>1 - 2% Pyrite and minor Pb - Zn fragments in matrix. Pb - Zn mainly in upper 8'</p> <p>Pyritic siltstone ≈ 5% very fine py.</p> |
| 1127 - 1160'      | <ul style="list-style-type: none"> <li>- Siltstone mainly very fine, grey green - a few thin sandy beds - bedding often disrupted but generally around 45° to core</li> </ul>                                                                                                                                                                                                 |                                                   | <p>- 5% and very fine py.</p>                                                                                                      |
| 1160 - 1217'      | <ul style="list-style-type: none"> <li>- Rhyolite fragmental - conglomerate</li> <li>- Large purple to maroon rhyolite clasts - boulders, feldspar porphyritic clasts somewhat rounded</li> <li>- Very little matrix - of green pyritic siltstone as above</li> <li>- Grades down to next unit, lower foot has tuffaceous matrix</li> </ul>                                   | @ 1200' 1 - 2" shear cemented with silica-epidote | <p>very fine py. in siltstone matrix overall ≈ 1%</p>                                                                              |
| 1217 - 1226'      | <ul style="list-style-type: none"> <li>- Felsic to intermediate tuff</li> <li>- Dark to medium green colour - massive</li> <li>- Occasional rhyolite fragments down to 1221</li> <li>- Faint feldspar phenos Lower 3' almost intrusive looking - some biotite</li> <li>- Some black chl. on fracture</li> </ul>                                                               | moderate silicification and sericitization        | <p>&lt;1% disseminate magnetic (and hematite?)</p>                                                                                 |

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