MAR 19780011: KEANE RIVER

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BP MINERALS LIMITED

1978 DIAMOND DRILL PROGRAM ON QUARTZ MINERAL EXPLORATION

PERMITS #229, 230, 231 near Keane River in Northern Alberta

NTS 74L/7

 $58^{\circ}15' - 30'$ North Latitude $110^{\circ}45' - 111^{\circ}$ West Longitude

AN ASSESSMENT REPORT

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> M.D. Bradley BP MINERALS LIMITED Vancouver, B.C. December, 1978





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SUMMARY

From October 16 to November 8, 1978 a total of 805 m. diamond drilling was completed in 3 holes within Permits #229, 230, and 231. The holes were sited one per permit, on 1976-1977 Track Etch anomalies having nearby water supplies. The program was to determine: -

1. the local depth of overburden,

2. the depth and nature of Athabasca Sandstone Formation overlying granitic basement,

3. the nature of the Archean basement unconformity,

4. the nature of Archean basement rocks.

Results of the program are as follows: -

1. Depth of overburden is approximately 61 m. comprised of unconsolidated sand with 0.3 - 3 m. diameter boulders of fine-grained sandstone at the overburden-bedrock interface.

2. Basement regolith was intersected at 259 m. in kDH 78-3. In excess of 200 m. of generally fine-grained (variable medium- to coarsegrained down hole), gently dipping Athabasca sandstone overlies the basement unconformity.

3. The angular unconformity, intersected in kDH 78-3, is marked by a sharp gradation between coarse-grained to conglomeratic, hematitic sandstone and coarse- to medium-grained, siliceous and hematitic metaclastics.

4. Basement composed of garnet bearing granitic gneiss and augen gneiss was intersected at 282 m. in kDH 78-3. Gneissic and metaclastic rocks are intruded by numerous, narrow, coarse-grained granite to pegmatite dykes throughout. 5. Gamma Ray probe logging of the three holes did not detect anomalous concentrations of radioactive minerals.

 6. The total cost of the drilling program including mobilization and geophysical services is approximately \$150,000.





INTRODUCTION:

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In 1976 three contiguous permits were granted to BP Minerals Limited in northeast Alberta on the west edge of the Helikian Athabasca Basin. The permit areas were selected for uranium exploration using a geological model that predicts the favourability of certain areas of Archean/Proterozoic basement rocks at the Athabasca Formation unconformity. The Rabbit Lake, Key Lake and Cluff Lake deposits in Saskatchewan are examples of the type of target being sought.

1

During the period October 16 to November 8, 1978, 3 diamond drill holes were cored in the permit areas to an aggregate depth of 805 m. The drilling was contracted to D. W. Coates Enterprises Ltd. from Kamloops. The drill employed was a Longyear 38, mobilized throughout the program by a Bell 204 helicopter. All drill holes were geophysically logged using a Scintrex GSD-4 probe (contains a 22 c.c. crystal) interfaced to a Scintrex GAD-1 Differential Gamma Ray Spectrometer. Instrumentation and geophysical services were supplied by Gledhill Consultants Inc. of Don Mills, Ontario.

This report briefly discusses the drill program and describes the bedrock geology intersected by each diamond drill hole. Geological logs for drill holes kDH 78-1, 2, 3 are presented in figures 6,7,8 (text) and total count gamma logs are summarized in figure 9 (map pocket).

2 LOCATION AND ACCESS:

The permit area is located in northeastern Alberta, 115 miles north-northeast of Fort McMurray, 30 miles southeast of Fort Chipewyan between the Maybelle and Keane Rivers near the west end of Lake Athabasca. This area is some 50 miles west of the Cluff Lake uranium deposits (see Figure 1, 2, 4).







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Access to the permits is by helicopter and float plane chartered out of Fort McMurray and Fort Chipewyan respectively. Landing strips suitable for DC-3 mobilization are located at Fort Chipewyan, Embarras and Richardson Tower.

3 PHYSIOGRAPHY - SURFICIAL GEOLOGY:

The permits are located in an area of extensive outwash plains which have a gently undulating topography. The outwash material consists almost exclusively of fine- to medium-grained quartz sand. The sands are considerably modified by winds to form aeolian sheets and dunes. Active dune fields are well developed in two areas south and southwest of the Permits. Dunes in the permit area are stabilized by jack pine trees and a carpet of caribou-moss.

The Permit area is drained along the southwestern boundary by the Maybelle River and on the eastern boundary by the Keane River. The river channels are 0.4 to 1 km.wide near their mouths in Richardson Lake and the Athabasca River, but narrow to canyons downcut 40 to 80 m., a few kilometres upstream.

Henrietta Lake is the only lake within the permits. It is a 1.6 km. long, 0.4 km. wide shallow swamp located on permit #230. The lake drains southward into an extensive boggy area then westward by a downcut stream into the Maybelle River.

Outwash sands are known to be approximately 61 m. thick in the permit area and no bedrock is locally exposed.

The direction of ice movement in the last glaciation is locally inferred to have been from the northeast to the southwest.



4 LAND STATUS:

Permits Nos. 229, 230, 231 comprise (29,391 acres) 11,854 hectares. These permits were granted to BP Minerals Limited on January 28, 1978 and will expire on January 28, 1979.

7

BP Minerals Limited has made an application to go to lease from permits Nos. 229, 230, 231.

5 HISTORY:

In 1969, a regional airborne radiometric survey was conducted over the area. The results show a uniformly flat radioactivity demonstrating the masking effect of the overburden.

BP Minerals Limited were granted permits 229, 230, 231 in January 1976 and conducted extensive Trach Etch and thoron filtered Trach Etch surveys in the summers of 1976 and 1977.

Norcen Energy drilled a series of stratigraphic holes in the area of the permits in 1977. One of these holes was drilled near the western edge of Permit 229 in the Maybelle River Valley and another was drilled on Scott Lake near the eastern boundary of Permit 229.

Eldorado Nuclear and Shell are actively engaged in a joint venture program to the southeast of the BP permits.

6 GEOLOGICAL MODEL OF TARGET (by B. E. Marten):

The major epigenetic vein-type uranium deposits of Saskatchewan are all located at or directly beneath the basal unconformity of the Athabasca Formation. An almost identical empirical relationship is observed in Australia (Jabiluka, Ranger, etc.). The common denominator is the presence of a middle to late Proterozoic fluvial sandstone sequence resting on an ancient peneplained erosion surface. Other controlling elements of the "Unconformity Model" are: (1) presence of regolith at the unconformity; (2) a source of uranium in the basement (high background granitoids, mineralized pegmatites, etc.); (3) zones of suitable host or "trap" rocks in the basement: metasediments (preferable semipelitic and pelitic), with pyritic, graphitic and dolomitic units; (4) permissive structural zones in the basement: dilational faults, fracture zones, etc., in which uranium can be precipitated.

The major known orebodies are related to these features and are also associated with extensive chloritisation of host rocks. They appear to have formed at temperatures of 150-205⁰C under the influence of a high geothermal gradient beneath a considerable thickness of sandstone cover.

7 GEOLOGICAL SETTING AND FAVOURABILITY:

Northeast Alberta lies on the edge of the Canadian Shield in the Churchill Structural Province. The Precambrian rocks consist of a basement complex of Archean-early Proterozoic age, unconformably overlain by the flat-lying Athabasca Formation (fluvial sandstone) of Helikian age. The basement complex consists of gneisses and metasediments (Tazin Group) that were internally deformed, metamorphosed and intruded by granites during the Hudsonian orogeny. The structure is dominated by linear belts of intensely deformed and mylonitised gneiss and metasediments pinched between broad more homogeneous batholiths.

On published geological maps (Green and Mellon, 1962, 1970), the permits are indicated to lie just west of the basal unconformity of the

Athabasca Formation. It is now thought, from 1978 drilling, that the unconformity lies further to the west, as in the indicated position of figure 4. Bedrock is not exposed in the region so the true position of the unconformity and the exact nature of the basement complex are unknown.

Other criteria were applied in area selection using the framework of the unconformity model. A seismic survey of the Athabasca Basin by the G.S.C. revealed the presence of a northeast-trending graben that appears to be controlled by a continuation of the structure of the Beaverlodge area into Alberta. The Permits are believed to lie on the continuation of this favourable basement geology. There is also a possibility that northerly trending fault structures in the Chipewyan belt north of Lake Athabasca extend into the area.

8 <u>GENERAL GEOLOGY</u> (after G.J. Campbell):

Description of Formations

i) Precambrian Basement:

Rocks of the Precambrian basement range in age from 1.7 to 2.3 billion years and comprise a complex of igneous and metamorphic units. Granitic gneiss forms the oldest unit and is composed of a strongly foliated assemblage of biotite, hornblende, quartz and feldspars. The gneiss encloses minor bands of metasediments and amphibolites. The metasediments consist of quartzite, paragneisses, meta arkose and biotite, hornblende and sericite schists. In some areas the metasediments form the dominant basement rocks.

In the loop of the Marguerite River, the basement complex is composed of metasedimentary rocks which strike 040⁰. The metasediments

TABLE 1: Geological Formations

| ERA | PERIOD | FORMATION | LITHOLOGY |
|-------------|---------------------------|--|---|
| MESOZOIC | LOWER CRETACEOUS | Loon River McMurray | Dark grey silty shale, laminated siltstone Shale, siltstone; fine to coarse grained sand, in part oil saturated |
| | U | nconformity | |
| PALEOZOIC | Devonian | Waterways Slave Point Middle Devon. (undivided) | Grey shale, argillaceous limestone, fine grained clastic limestone Limestone, dolomitic lime- stone, minor shale, gypsum Dolomite, gypsum, anhydrite |
| | U | nconformity | |
| | Paleohelikian. | A†habasca - | Quartz sandstone, minor conglomerate, shale |
| PRECAMBRIAN | U | nconformity | |
| | Aphebian to Archean | | Basement complex of granite gneiss, metasediments, migmatites |



are intruded by granties which, in turn, have been cut by quartz, pegmatite and aplite dikes. Basement rocks near Fort Chipewyan consist of migmatites and granites.

ii) Athabasca Formation:

This Formation covers approximately 40,000 square miles in northern Saskatchewan and Alberta and is composed predominantly of quartz sandstone with minor shale and conglomerate beds. Measurements of crossbeds indicate that the sands were deposited in a low lying basin from a source in the east and southeast. Crossbedding is in the form of narrow troughs. The sandstone is mature with a small heavy metal content and considerable chert. Locally the Formation is folded and intruded by diabase dikes. The basal Athabasca is usually, but not always, conglomeratic. The conglomerate consists of quartz pebbles or cobbles with a dark reddish to purplish hematitic matrix. It is sometimes weakly radioactive, from two to four times background. Radioactivity is caused by thorium. Age dates on rocks in the Athabasca area indicate that the Formation is on the order of 1,200 to 1,400 million years old.

iii) Paleozoic and Mesozoic Rocks:

The Middle Devonian unconformably overlies the Precambrian basement west of the Permit area. Outcrops of bedrock along the Slave River, 40 miles northwest of the Permits, consist of dolomitic limestone and dolomite which grade down into sandstone and regolithic igneous material which rests on Precambrian rocks. Outcrops along the Marguerite and Firebug Rivers, about 40 miles southwest of the Permits, consist of locally fossiliferous, fine-grained dolomite. The Upper Devonian Slave Point and Waterways Formation overlie the Middle Devonian and outcrop west of the Permits. The Slave Point consists of brownish dolomitic limestone and limestone and is overlain by greenish grey calcareous shale and argillaceous limestone of the Waterways Formation.

The Cretaceous McMurray Formation lies unconformably upon the Devonian rocks of the Waterways Formation and is well exposed along the valley of the Athabasca River. The unit is 150 to 300 feet thick and is composed of deltaic, thickly crossbedded, oil impregnated, quartz sands with interbeds of laminated grey silt and silty shale. The Loon River Formation rests conformably upon the McMurray Formation and consists of an 800 foot thick sequence of dark grey, marine shales and siltstones.

9 1978 DIAMOND DRILL PROGRAM:

i) Preamble:

Drilling contractor for the 1978 program was D.W. Coates Enterprises Ltd. of 2560 A Simpson Road, Richmond, B.C. The drill employed for the job was a Longyear 38.

The drill, equipment and camp were mobilized from Uranium City and Fort McMurray by DC-3 to Embarass airstrip on the Athabasca River (see figure 4). Mobilization from Embarass - onsite, subsequent drill moves and demobilization were by Bell 204 helicopter from Associated Helicopters in Fort McMurray.

A base camp was established 915 m. southwest of kDH 78-1 near the confluence of the Henrietta Lake tributary and Maybelle River (see figure 5). Drill crews were ferried to holes kDH 78-2 and kDH 78-3 from base camp by a



Bell 47 (G3B2) helicopter on contract from Lift Air International Ltd. of Calgary. Two 12-hour shifts were operated on kDH 78-1. A 14-hour night shift and a 10-hour day shift were employed on holes kDH 78-2, 3, to accommodate available day light for the helicopter shift changes.

Water supply for drilling was pumped through 3" diameter rubber waterline: 976 m. long from Henrietta Lake tributary to kDH 78-1; 1585 m. long from Keane River to kDH 78-2; 488 m. from Henrietta Lake to kDH 78-3. Freezing temperatures throughout the program required two diesel fired coil stoves operating continuously on the water lines.

Overburden was triconed and cased with NW diameter casing. Where drilling difficulties were encountered; e.g. in mixed boulder and sand conditions, at the overburden-bedrock interface, the hole was cased with NQ rod and drilling completed using BQ rod.

The drill holes were geophysically probed using a Scintrex GSD-4 gamma probe, containing a 22 cm. detector crystal, interfaced to a Scintrex GAD-1 Differential Gamma Ray Spectrometer which was slaved to a chart recorder. Electronics, recorder and D.C. winch were powered by a Honda generator. Metric markers on the chart recorder were triggered electronically by a switch operating off a worm-gear driven by the winch cable. The holes were logged through casing and rod hole with the spectrometer in the total count mode. Had areas of anomalous radioactivity been encountered in the first pass probing, these specific areas would have been reprobed, analyzing for uranium, thorium, and potassium concentrations. No total count anomalies were observed in the three holes.

Core recovery from all holes was near 100 per cent with the exception of few very short sections of unconsolidated sand within the



TABLE 2: SUMMARY OF DRILL RELATED DATA

| | <u>kDH 78-1</u> | <u>kDH 78-2</u> | <u>kDH 78-3</u> |
|--|---|-----------------------------|------------------------|
| Collar Elevation (a.m.s.l.) | 267 m (875') | 259 m (850') | 274 m (900') |
| Hole Attitude | 90 ⁰ | 90 ⁰ | 90 ⁰ |
| Total Depth | 307 m (1007') | 206 m (677') | 292 m (957') |
| Depth of Overburden | 59 m (203') | 64 m (210') | 62 m (203') |
| Depth of Basal Unconformity | ? | ? | 259 m (850') |
| Apparent Thickness of Sandstone Fm. | ? | ? | 197 m (647') |
| Average Dip of Sandstone Fm. | 5 ⁰ | 5 ⁰ | ج ⁰ |
| Interval of "significant" tar occurrence in Sandstone Fm. | 59 m-161.6 m (203'-530') | 64 m-113 m (210'-370') | 62 m-91 m (203'-300') |
| Number of hours drilling o/b (coring) | 15 hours (70 hours) | 29 hours (39 hours) | 14 hours (51 hours) |
| Rate of Progress: Night Shift | 40 m (130') /shift | 36.6 m (120') /shift | 33.5 m (110')/shift |
| (Av. good coring) Day Shift | 79.3 m (260') | 67 m (220') | 79.3 m (260') |
| | - day shift aver | age equivalent 61 m (200'), | in basement rocks |
| Mobilization | – 6 days includi | ng camp & hole l setup | |
| Demobilization | - 3 days | | |
| Moving - Site prep setup | 지, 영양에 가지 않는 것이 가지 않는 것이다. 이 것 같은 것이 가지 않는 것이 가지 않는 것이다. | 60 hours hole 1-2 | 54 hours hole 2-3 |
| Reduction NQ to BQ coring | 67.4 m (221') | 107 m (351') | 64.3 m (211') |
| Drill Steel left down hole NW casing | 54.9 m (180') hole | 18.3 m (60') dynamited | 12.2 m (40') dynamited |
| NQ rod | 39.6 m (130') stabilized | 15.2 m (50') dynamited | 12.2 m (40') dynamited |
| Radioactive signatures: Sandsto | ne: 20 - 40 counts Unc | onformity: 30 - 50 counts | |
| | Basement: 50 - 70 | counts | 15 |

Athabasca formation where recovery was approximately 60%, and in a section rereamed during reduction from NQ to BQ coring in hole kDH 78-1 (17% recovery), and at the overburden - bedrock interface.

The equipment and operator were mobilized from the Uranium City area at the completion of each hole. Geophysical instrumentation and services were supplied by Gledhill Consultants Inc. of Don Mills, Ontario.

Near completion of the drill program, a site inspection was performed by a Fort Chipewyan forestry officer. All sites were cleared as per his insturctions and all drill cores have now been removed from the permit area. All garbage and empty fuel drums have been removed to Fort McMurray. The diamond drill and pumps have been demobilized.

ii) Summary of Diamond Drill Hole Geology:

(a) <u>Overburden</u>: Approximately 59 m. (203') of sand overlies bedrock in the permit areas. The sand is fine-grained, white to maroon in colour, and composed of 90% quartz with minor clay, mafic and feldspar minerals. At the overburden - sandstone interface lie 3-6 m. (10'-20') of 0.5 - 3 m. diameter sandstone boulders set in a sandy matrix. There is a tendency for water and mud pumped down hole to wash away this matrix material creating voids, thereby allowing drilled boulders to shift and trap the casing. Approximately 1 m. of tar impregnated, unconsolidated sand was encountered, in overburden, in each of the three holes.

(b) <u>Athabasca Sandstone Formation</u>: (refer to Figure 6,7,8) Bedrock in the permit areas is composed of fine-grained, well sorted, moderately competent sandstone. The sandstone formation contains only



KDH 78-2





minor disseminated feldspathic minerals. The formation has a uniform apparent dip of 5° (85° t.c.a. - to core axis) with the exception of occasional crossbedding in the upper 61-91 m. (200'-300') and in some more steeply dipping ($15^{\circ}-25^{\circ}$), medium- and coarse-grained to conglomer-atic sections.

Thin subparallel bands composed of fine-grained hematite are found throughout the upper 122 m. (400') of the formation. The hematite bands frequently parallel bedding, but more often cross cut bedding planes; apparently indicating post depositional transport of iron-rich groundwater. Below 183 m. (600') depth in each hole, hematite is more common as pervasively weak to intense disseminations rather than as thin bands. Hematite is preferentially intense in coarser-grained beds apparently due to good porosity and in, or adjacent to, shale (mudstone) beds.

Another characteristic of the formation's upper 61-122 m. (200'-400') is the presence of fracture fill and bedding impregnated tar. The tar is similar in appearance and consistency to cold roofing tar and occurs in visibly significant amounts in hole kDH 78-1 from 59-162 m. (203'-530'), in hole kDH 78-2 from 64-113 m. (210'-370') and in hole kDH 78-3 from 62-91 m. (203'-300'). A single tar filled fracture was noted at the unconformity (259.8 m. - 851.5') in kDH 78-3. Tar was apparently introduced from overlying Devonian-Mississippian formations (no local erosion remnants) along steeply dipping fractures and laterally impregnated more porous sections of the Athabasca Formation.

The sandstone formation is coarser-grained below 152 m. (500'). Interbeds of medium-grained and fine-grained sandstone with occasional subrounded fragments of quartz and sandstone are common between 152-183 m.

(500'-600'). Below 183 m. the formation is predominantly medium-grained with numerous fine-grained and occasional coarse-grained sandstone interbeds. Below 213 m. (700') the formation is commonly coarse-grained to conglomeratic with some medium- and fine-grained interbeds, but considerable lateral variation is evident; e.g. between kDH 78-1 and 2. Graded bedding, cut and fill features and abrupt contacts between fine- and coarse-grained beds are found throughout the formation below 183 m. (600') in each drill hole. The coarse-grained to conglomeratic beds are composed of rounded to subrounded clasts of sandstone, quartz and weakly foliated quartzite set in a fine- to medium-grained, sandy matrix.

A sandstone breccia was intersected in kDH 78-2 from 200.5-201.2 m. (657.7'-660'). The breccia occurs within a bed of fine-grained sandstone which interbeds with medium- to coarse-grained sandstone near the bottom of the hole. It consists of 3-5 cm. diameter angular fragments of weakly altered, gray-green, fine- to medium-grained sandstone and 1 cm. diameter fragments of hematitic quartz set in an altered fine-grained matrix of sand and green clay (sericite?). The breccia is unique to hole 2.

Shale beds (mudstone) 0.5-3 cm. thick occur infrequently throughout the sandstone formation. The shales contain thinly bedded silty partings, are always flat lying $(90^{\circ}$ t.c.a. - to core axis) and are commonly green or red brown in colour. The beds are rare in hole kDH 78-1, but are common in holes kDH 78-2 and 3 between 160 m. and 198 m. (525'-650'), interbedded with fine- to medium-grained sandstone. There is an irregular but perceptible increase in disseminated clay content and argillaceous sandstone beds toward the bottom of the sandstone formation. A general increase with depth of fine-grained disseminated chlorite and sericite (?) was noted in the sandstone.

The Athabasca Formation has a characteristic radioactivity in the range of 20 - 40 counts.

(c) <u>Angular Unconformity</u>: The unconformity was intersected at 259.27 m. (850.4') in kDH 78-3. It dips 45° and marks an irregular abrupt transition between; a light orange, coarse-grained sandstone of the overlying Athabasca Formation (5° dip), and a siliceous, intensively hematitic, metaclastic containing coarse-grained, rounded clasts of quartz The highly altered metaclastic constitutes a basement paleo-regolith overlying gneissic rocks.

The unconformity has a radioactivity of 30 to 50 counts.

(d) Basement Rocks

1) <u>Metaclastic Regolith</u>: Approximately 20 m. (66') of dark grey maroon, fine- to medium-grained, strongly altered metaclastic rock overlie gneissic rocks below the unconformity. The metaclastic, in the interval 259.3 m. - 267.4 m. (850.6'-877') is medium-grained, siliceous and strongly hematitic with an indistinct schistosity. It is predominantly fine-grained and distinctly schistose with a 15° dip (75° t.c.a.) in the interval 267.4 m. - 279.6 m. (877'-917') and variably but commonly strongly altered to clay and chlorite. The metaclastic is cut by numerous steeply dipping quartz veins and narrow, coarse-grained granitic to pegmatitic dykes. The granite dykes have variably but commonly intensively altered the unit to orthoclase, chlorite and clay. These highly altered selvages are strongly schistose and friable.

The metaclastic has a characteristic radioactivity of 50 -70 counts.

2) <u>Granite Gneiss</u>: Fine-grained, siliceous metaclastic containing 1% very fine-grained biotite is in sharply gradational contact with coarse-grained granite gneiss at 281.6 m. (923.7'). The gneiss is dark gray in colour and variably fine- to medium-grained throughout. It contains much disseminated fine- to medium-grained biotite on schistosity and numerous zones of medium- to coarse-grained quartz and feldspar "augen". The gneiss is cut by several dykes of coarse-grained granite and pegmatite. The dykes commonly have narrow quartz sericite selvages with broad friable aureoles of chloritized biotite in the gneiss. The granite dykes commonly contain medium-grained "blobs" of chlorite. Feldspars in the dykes and adjacent gneiss are strongly altered to clay.

The granite gneiss has a characteristic radioactivity of 60 - 70 counts.



Geological Logs kDH 78-1









| | KEANE | PERMI | rs | | DRILL | LUG | HOLE # | 1 | Ve | rtical Ho | le | | | SHEE | ET NO | <u>).</u> |
|---------------------|----------------------------|------------|-------------|---|---|--|--|---------------------------------------|---|--|------------------|---|--|------|--------|-----------|
| | la anti-a∦rina ∎anarana | | | | | N | ORTH | | | EAST | | ELEVA | ATION | | | |
| LOC | ATION | | | <u> </u> | DRDINATES | | ing sheet An an | · · · · · · · · · · · · · · · · · · · | an shire a | | | | ala di paga di | 1 | Ļ. | 19 |
| UAI | E START | ED | | DATE COMPLETED | SURVEYS | | | | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO. | nh maiin |
| Octobe | r 16, 19 | 78 | 0 | ctober 21, 1978 | | | 9 | | | Again an | a 1 | NQ | 1007' | ٥. | D.H. 7 | 8-1 |
| D | EPTH | | E S/ Bee | | ITHOLOGY | | | | | | | | | STR | RUSTU | RE G |
| | <u>†</u> | Tuengin | 70000 | | LITHOLOGY | | | | ALIE | RATION | | MINERAL | IZATION | F | V/F1 | F/F1 |
| 0' | 180* | 180' | 0 | Overburden: fg. u dune topography. (grains with very mi coloured to very li orange brown, grey tricone. | nconsolidated aolian Composed predominant nor feldspar & mafic ght orange brown at & maroon at depth. | a sand loca y of round ss visible. surface va O/b tricon | ally for led quar Cream rying m led - 3 | rming tz n edium 5/8" | Note: cas: tight in s rock at 180 circulatio returned at coring NQ 1 | ing very uspected b 0'. Lost n at 179' t 180' - begins. | ed- | Approximately black materia to be <u>tar</u> inf around 50' in Causes drilli water pressur coats casing. | y 5 feet of al - thought tersected at n overburden. Ing to slow, re to rise - | | | |
| L80' <u>Over</u> | 185' burden | NQ 4.5' | 90% | Sandstone (Athabasc rock. Interbedded varieties. Thin (1 moderate spacing 18 Bedding plane 60 ⁰ c | a Formation): fg., medium-grey mottled a mm) hematite bands a 1'-'181.2'; close spa ore axis. Broken com | well sort and light along bedd aced 183'- re at 184. | ed, com grey-ma ing pla 184.5'. 5'. | petent roon ne,: | - hematite | banding | | | | | | |
| .85' <u>Over</u> | 195' burden | NQ 4 ' | 40% | Sandstone: fg. w competent & unconso Section 180'-185' p sand & small boulde | hite to light marcon Lidated. Broken core robably a boulder lay rs 185'-193'. | in colour e, sand & ying on bea | . Vari cave re drock. | ably covered Loose | - hematite | banding | E | Fracture fill in cave mater | tar noted ial. | | | |
| .95' | 207' | №Q 12' | 100% | Sandstone: fg., dark marcon in colo 1 mm thick hematite (hematite) superimpo Bedding plane 80° - fracture at 206'-0° | well sorted, competer ur. Colouration due bands on bedding pla sed on cryptic beddin 90° core axis. Band , 2-5 mm displacement | nt, varyin to very c anes. Wav ng at 197' ding - 30 ⁰ t. | g light losely y bandi & 202' . Slum | to spaced ng • p | - hematite cryptic bedding | banding | E J J T | Fracture fill (25 [°]), 195.5 [°] 198.5 [°] (25 [°]), 25 [°]), 203 [°] (1 (10 [°]) - heavy beddi tion adjacent | tar at 195' (25'), 199.5' (10', 0'); 205-205. ng impregna- to fracture. | | | .5 |
| 07' | 217' | NQ 10' | 100% | Sandstone: As above 208', 208.5', 208.9 matrix 216'-217'. I noted 210'-211', 215 & coarsening of grad | White coloured set A fewmg.rounde Sedding commonly 85 5.5'-216' with slight n size. | ections at ed clasts i but cross t reworking | 207.4 ¹ In fg cut bec g of mat | iding terial | - hematite dissemina throughou | banding ar tions t. | nd F 2 2 | Practure fill 208' (5 [°]), 20 210' (90 [°]), 2 214.5 (5 [°]) | <u>tar</u> at 207'- 9' (50 [°]), 13'-214' (10 ⁰ | | | .5 |



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DRILL LOG

| SHEET I | NO. |
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| | | | | NORTH | | | | **** | EAST | | | ELEVATION | | | - 40.00 | T | |
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| LOC | ATION | | | ····· | CO-0F | DINATES | | | t daga s | | | | | | | 2 2 | 19 |
| DA | TE START | ED | | DATE COMPLE | TED | SURVEYS | | | | | | | HOLE SIZE | TOTAL DEPTH | HOL D. | Z NO D.H. 7 | /8-1 |
| D From | ЕРТН То | Length | RE %Rec | | | LITHOLOGY | | | | ALTE | RATIO | N | MINERA | | ST | | JRE GRA |
| 217' | 221* | NQ 4' | 100% | Sandstone: porous. S 217'-219'. 219'-221'. - cross cu | Mainly f everal ang Four 2 i Bedding ts on 50 . | g., dark maroon i ular quartz fragmer nch wide beds of m. commonly 80 ⁰ t.c.a. | In colour hts in f -g. sandst | & rathe g. matr cone fro 219'-22 | r ix m 0.2' y | - hematit banding & through - pervasive | e bandi dissem strong | ng, ination , | <u>none</u> . | | | | 0 |
| 221' | 231' | BQ 1.7' | 17% | Sandstone: rock though zones. Bed | Predomin h apparent lding 80 ⁰ | antly mg.,dark ma ly more friable in with cross cutting | roon in c strongest beds at | olour & hemati 50°. | dense te | - strong) hematite & & banding | pervasi dissemin • | ve nations | - pyrite ble one fracture | b noted on | | | |
| - 4 | | | | Hole 1st dr for BQ rods BQ rods on substantial | rilled 221 5 - no cor through N L core los | '-231' with NQ befo e barrel used. Sec Q bit. Recoring of s. | re settin tion was section | g as ca redrill account | sing ed with s for | - minor ca fracture : | arbonata fill. | 3 | - no <u>tar</u> . | | | | ? |
| 231' | 237' | BQ 7 ' | 100% | Sandstone: and compete ding throug Cut and fil numerous po ments to 6 | Predomin ent rock. ghout. Se (1 (60°)c. borly sort mm. diamet | antly fg., medium Well sorted with s ction 236'-237' m -g. sandstone at 23 ed subangular - sub cer | marcon i mall scal g.,somewh 3.1'-233. rounded s | n colou; e graded at poro 4' with andstond | r dense 1 bed- us. 2 frag- | - hematite 233.4', we thereafter | e strong eak-mode | 231'- erate | - no <u>tar</u> . -*subcontinu ture 233.4'- vuggy contai fg. & fg pyrite in qu gangue. See section. | ous 10 ⁰ frac- 237' in part ns massive . blebby artz-carbonat also next | 2 | | 2/7 |
| 237' | 247' | BQ 10' | 100% | Sandstone: & competent fine to med & 237.9' co Bedding com | Mainly f rock. Se lium-graine ntaining monly 80°; | g., very light ma actions 237'-237.5' ad. Well sorted th 3-5 mm diameter sub 65° at 237.5' & 24 | roon in c , 239.8'- roughout rounded q 16-247'. | olour, d 241' van except : uartz fr | lense riable 237.3' agments | - hematite out. - clay on & 10 with at 237.9' | e weak t fractur quartz also 23 | hrough es 90 ⁰ frags. 2.2' | Fracture fil 237.6'-239.6 subcontinuou 241.2' (10') 20') - substantia (20') -*pyrite fra 237.5'-238.7 | <pre>1 tar at ' (10°) s. ; 242.8' (10° 1 amount 246' cture fill ' (10°)</pre> | • | | |



| | | | 1.1 | | | | NC | DRTH | 1 | EAST | | FIEVA | TION | anci | | r |
|-------------|----------|--------|------|---|---|--|---|---|--|---|---|---|--|------|---------------|------------|
| LOC | CATION | | | | C0-01 | DINATES | | | | | | <u>CLCV</u> | | | - | |
| DA | TE START | ED | | DATE COMPLE | TED | | 1 | <u> </u> | | r | r | | | 3 | | 19 |
| | | | | | | SURVEYS | | | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO. | . . |
| C | DEPTH | 00 | RE | | | Lanna ann an Anna an A | l | | | L. | L | BQ | 1007' | D. | о.н. <i>/</i> | 3-1 |
| From | | Length | %Rec | | | LITHOLOGY | | | ALTE | RATIO | V | MINERAL | 1747104 | STI | RUSTU | E Ger |
| 247' 57' | 257' | BQ | 100% | Sandstone: medium-grai (55 ⁰) 0.1 i 251.7' & 25 changes. Sandstone: dense, comp | fg. th 249'-251 ned bedde nch wide, 5.1'. Be fg., vo etent rocl | roughout. Medium ma ' & dark marcon 247' d & cross bedded sec medium gray-green, dding variable throu ery light marcon in Small scale grad | colour, we | olour except 254'-255'. 6'-249.1'. beds (85°) at 90° - rapid ell sorted, 5. Medium- | - hematite but note : crack (?) zones cros bedded hem 250.3;-250 253'. | e throug irregula appeari ss cutti matite z 0.7', 25 | yhout Ir mud ng ones 1.8'- | -Fracture fil blebs at 253' -Fracture fil 256.7'-257.6' Tar fracture | 1 pyrite (10°). 1 <u>tar</u> (10°) fill 256.7'- | | | .5 |
| 67' | 2771 | 10' | 100% | 258.3'-258.4 Bedding comp | As above. | Bedding commonly § | ions 257'- '. BO ^O , varia | 257.7', ble 70 ⁰ -90 ⁰ . | fracture f at 260.7'- - weak hem inations & | atite di banding | issem- | Far fracture subcontinuous | fill (10 ⁰ -20 ⁹ 274'-278' moderately | | | 1 |
| 77' | 287' | 10' | 100% | Sandstone: 5-20 & 900 variable 60 | As above, fracturi -80 from | though only moderat ng common throughout 283'-284'. | tely dense . Beddin | & competent. g 80° but | - weak hema - (green) a noted on 1(| atite ba S white O fract | anding - clay f cure b t t | minor fg. ractures. tar as isola lebs on most tar mod. sub hin fr. fill 10 ⁰) 277'-278 80.7'-281.1', | pyrite on fractures. stantial as coatings ', 280.3', 283'-285'. | | | 3 |
| 7' | 297' | 10' | 100% | Sandstone: small scale (80°-90° minor 293' (60°). | fg., ve: graded bed r cross be | y light maroon, den dding; well sorted t dding 287.7'-288.6' | se & compe hroughout. , 290.6'-2 | etent with Bedding 291.4' & | - very stro alt ⁿ 288'-2 hematite co 2 mm diamet 292'. | ong hema 288.2' s oncretio er 291.9 | tite - minor ns 5' - | Tar fracture at 288.6' & 2 | fill (50 [°]) 89.4'. | | | 1 |





| <u></u> | | and the second secon | - | | | DRILL | LOG | | | | والمراجع والمراجع المراجع المراجع | | | | SHEE | TNO | <u>. </u> |
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| LOC | ATION | | | | CO-OR | DINATES | | · · · | | | | | | | 4 | | 19 |
| DA. | TE START | ED | | DATE COMPLE | TED | | | | 1 | | | 1 | HOLE SIZE | TOTAL DEPTH | HOLE | NO. | |
| | | | | | | SURVEYS | 1997 - 1997 1997 - 1997 1997 - 1997 | | | | | 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - | BO | 10071 | D.0 | .H. 7 | 8-1 |
| D | ЕРТН | COF | ε | | | | Learnin | مرید میں میں اور | ali na sa | | 1 | | | | STR | υστυ | RET |
| From | То | Length | %Rec | | | LITHOLOGY | | | | ALTI | ERATIO | N | MINERA | LIZATION | F | V/FI | F/FI |
| 297' | 307' | 10' | 100% | Sandstone: | As above | :. Vug at 300.8'. | Bedding : | regular | at 80 ⁰ . | - weak he - minor c ture. | ematite. clay on | frac- | none | | | | .4 |
| 307 ' | 317' | 10' | 100% | Sandstone: | As above | • | | | | - weak he | ematite. | | - Tar fractu ing 315' (10 (30 ⁰). | re fill coat- D ^O), 315.5' | | | 3/10 |
| 917' | 327' | 10' | 100% | Sandstone: along tar d | As above coated fra | , core substantial ctures from 321'-3 | ly broken 23.8'. | & friab | le | - weak ho - possibl walls of fractures | matite. y clay tar in 3. | along filled | - Tar fractu at 317'(10 ⁰) 325'-326' (4 - very subst wide plus se | ore fill: mino , 320' (30 [°]) i0 [°]). cantial 1 cm cams 321'-323. | r B | | |
| 271 | 337' | 10' | 100% | <u>Sandstone</u> : 334.5'-337' variable 70 at 335.3'. | As above with var 9-85°. C | . Less dense and m iable fine- to med lay seam (85 ⁰) at | moderately ium-grain 328.3'. (| / porous size. Clay inc | from Bedding lusion | - weak he out. - clay on | ematite A fractu | through res | | | | | |
| 371 | 347' | 10' | 100% | Sandstone: sandstone, competent. 338.4'-338. | Alternat light mar Small sc .9'. Bedd | ing interbedded fin con in colour, mod ale graded bedding ing 75°-85° except | ne- & medi erately de . Cross b 345.5' - | um-grai ense and edding 346.6' | ned at - (55 ⁰). | ditt | :0 | | - Tar fractu 342.2' (60 [°]) | <pre>ire filling .</pre> | | | |
| 17 • | 3571 | 10' | 100% | Sandstone: hematized s & 348.7' be 347.7'-348. | As above sections r added on 9 3' appear | . More medium-gra ather friable. Muc 0 - 1 cm wide. Bo s to a large inclu: | ined 355'- Istone sea edding 80 sion. Sea | -357'. ums at 3 -90 ⁰ . e diagra | Strongly 47.6' Section m over. | - weak he & banded - strong in 1 inch 357 - talc af fractures 348.7' | matite through hematit bands ter cla at 347 | dissem. out e alt ⁿ 355.8- y 90 ⁰ .6', | - Tar fractu 349' (20 [°]), 352' (30 [°]), - minor (80 [°] bands, 5-8 m 356.5' subst | ure filling 350.8' (30 [°]), 352.4' (55 [°]) bedded) 8 m wide 355.8' antial | | | |



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|-------------------------|-----------|--------|-------------|--|---|---|---|---|---|----------------------------|---|---|-----------|--------|----------|
| | e ta é la | | | | | NOF | RTH | | EAST | | ELEV | ATION - | | - | ŕ |
| | CATION | | | | CO-ORDINATES | | | | | | | | | 5 | 19 |
| | CC START | 20 | | DATE COMPLETED | SURVEYS | | | | | Τ | HOLE SIZE | TOTAL DEPTH | HOL | E NO. | L |
| | VCD7U | 1 00 | | | | | | | | a de la sur | BO | 1007 | 0 | D.H.78 | -1 |
| From | To | Lenoth | NE 1%Bec | | LITHOLOGY | | | | | | | | ST | RUSTU | RE Ger |
| a grandation and a sub- | 1 | T. | 1 | | =,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | | RATIO | N | MINERA | LIZATION | F | V/Ft F | 5/FI L |
| 357' | 367' | 10' | 100% | Sandstone: Com sorted, quite of medium-grained 366.5'. Beddin | monly fg., very light lense and competent. Thi sandstone throughout. C ng 70°-80°. Fracturing r | marcon in co In beds of fi Concentric (f restricted to | olour. Well Ine- to ?) bedding a p bedding | - weak hen | atite 1 | anding | - Tar impreg @ 360.7' (1½ 362.3'5', 365.6', 365. | nated bedding inch wide), 363.5' (2"); 8'. 366'. | | | |
| | | | | | | | | | | | 366.2', 366. - Fracture f (25 [°]). | 4'. ill @ 363.9' | | | * |
| 367' | 377' | 10' | 100% | Sandstone: As throughout. Fr green clay and | above. Bedding 60° -80°. actures 0°-10°, 20°-30°, in part, by tar. | Moderately 90° - heale | fractured d with ligh | - hematite ations thr - green (& noted ± ta 0°-10° fra | as dis oughout white) r heali ctures. | semin- clay ng | - Substantia fill subcont 372' (6 mm w 371') also 3 376.6'9'. | t <u>tar</u> fracture Inuous 367'- ide seam @ 75'-376', | - | | 5 |
| 377* | 387' | 9.8' | 98% | Sandstone: As at 384'-384.5' isolated beddin 10°, 25°-30°, 7 | above. Bedding 75 ⁰ exception 80° to 387'. Minor g & fracture planes throm 0 -80°. | pt 25 ⁰ cross green clay ughout. Fra | cutting noted on cturing on | - weak hem - green cl. & bedding. | atite b ay on f | anding. racture | - Tar fractur 10 fr, 337.4' fr. 380.1'-36 - Substantial 380.3', 380.7 385.4', 383', | <pre>:e fillings:379.4'. 26 55.7'. @ 379.2', '' (6 mm seam) 383.3'.</pre> | | | 4 |
| 387' | 397' | 10' | 100% | Sandstone: As a 25 from 388.6' fractures throug 389.2', 392.4', | above. Bedding 85 ⁰ . Mod -395.4'. Green clay note ghout; prominent on beddi 393.4'-395'. | derately fra ed on beddin ing (85 ⁰) @ | ctured on g planes & 388.7'- | - weak hema - green cla & fractures - white cla tures only. | atite b ay on b s. ay, 25 ⁰ | anding. edding frac- | - Tar bedding at 388.2' & . - Tar fractur ings mainly 2 from 389.2'-3 from 391'-393 from 394.4'-3 | <pre>impregnation 6'. e fill coat- 5 fr.: 10 fr 90.4'; 17 fr .1'; 11 fr. 95.4'.</pre> | • | | 6 |
| 397' | 407' | 10* | 100% | Sandstone: As a clay moderate on 10°, 20°-30°, 85 | bove. Light maroon to w bedding throughout. Be | white in colo adding 85°. | our. Green Fracturing | - weak hema except mode - green cla ture & bedd | atite ba erate al ny on fi ling. | inding, : 4052' :ac- | - Tar bedding at 402.1'4' - Tar fr. fil -400'; 2 fr. | <pre>impregnation ; 398.3' 1: 8 fr. 397.7 402.6'-405.1'</pre> | | | 4 |







| | | | e • 27 - 3 | | | | N | ORTH | FAST | | FIEU | ATION | Shu | | ŕ |
|------|--|--------|------------|---|---------------------------------------|---|---|---|--|-------------------------|--|--|------------|--------|-------|
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| DA | TE START | ED | | DATE COMPLE | TED | | - | | | | | | | 6 | 19 |
| | | | | | | SURVEYS | | | | | HOLE SIZE | TOTAL OEPTH | HOL | E NO. | |
| D | EPTH | CO | RE | ····· | l | | | l | | | BQ | 1007' | D . | D.H, 7 | 8-1 |
| From | To | Length | %Rec | | | LITHOLOGY | | | ALTERATION | | | | STI | RUCTU | E 60 |
| | 1997 - 1997 - 1997 1997 - | · . | 1 | | | | | | ALIERATION | | MINERA | LIZATION | F | V/FI F | /F1 1 |
| 407' | 417' | 9.8' | 98% | Sandstone: regularly 8 tar in this | As above. 0°-85°. s section. | Very light mar ubstantial impreg Broken core 415. | oon in colc nation and 5'-417'. | ur. Bedding fracture fill | - weak hematite ban - weak green clay c bedding @ 407.2'. | ıding. m | - Substantia (10°-20°) ta: ated tar impided sands, su 408.3'-417'. - Specimen ta 414.8'. | l fracture fil r with associ- regnated bed- ubcontinuous aken 414'- | Д | | 4 |
| 417' | .427' | 9.8' | 98% | Sandstone: Very minor | As above. green clay | Bedding commonly on bedding planes | y 80 ⁰ -85 ⁰ v 5 throughou | arying 70 ⁰ -75 ⁰ | - ditto - a few 5 mm diamet hematite "mottles" (concretions?) thro out. | er ugh- | - Tar impregr 417.1', 417.5 419.7'. - substantial uous 422.6'-4 - Speciman ta 422.6'-423.1' | ated bedding: ', 418.3', & subcontin- 25.7' ken (Utah) | | | .5 |
| 27' | 437' | 10' | 100% | Sandstone: Bedding 85° "concentric' | As above. to 426.4' ' and cross | Light to medium then irregularly cutting bedding. | maroon in c 70° with mu | colour. uch | weak to moderate hematite banding. green & white clay on fractures. <u>minor</u> bedded green clay throughout sect | 75 1 2:ion 4 4 | - Tar impregn (85°) @ 427.2 129', 430.6'- 132.8', 433', 134.2', 435.4 136.5', 436.7 - Fracture fi 132.7'. | ated bedding ', 427.6', 431', 432.4', 433.4', 434', ', 435.8', '. 11 430.4'- | | | 5 |
| 37' | 447 | 10' | 100% | Sandstone: 437'-441' th | As above. en regular | Irregular beddin at 80° | g as per la | st 10' from | ditto green clay more co mon on fractures. | | Tar impregna 80') @ 429' 40.1', 440.3 Substantial 42.3', 445.6 | ated bedding , 430.7', '. from 441.8'- '8'. | | | 5 |


| | | | | | | | 1 | HTRO | | E A | ST. | EI EU | ATION | SALE | <u>r no</u> | i |
|-----|---------------|--------|------|--|---|--|--|---------------------------------|-------------|---|---|--|--|-------|-------------|--------------------------|
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| | | | | | | SURVEYS | | | | | | HOLE SIZE | TOTAL DEPTH | HOLE | . NO. | |
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| rom | To | Length | %Rec | a dia 2015 mark Marka | | LITHOLOGY | | | | ALTERA | TION | MINERA | LIZATION | F | V/FILF | VFt |
| 47' | 457' | 10* | 100% | Sandstone: Bedding 80° diameter, sa | As above. 447'-450. andstone f | White to very 1: 6'; 90 ⁰ 450.6'-45 ragments at 454.2' | lght maroon 7'. A few • | n in colo rounded, | ur. 3 mm | - very minor banding. - green & whi fractures & b 450.6'. | hematite te clay on pedded at | - Tar fractu 452.3'-453.6 - Tar beddin 447.8', 451. 453.36', 4 455.6', 456. | re filling (5 ^C '. g impregnation 3', 451.8', 54.4', 455.1', 9'. |) | | .3 |
| 57' | 467' | 10' | 100% | Sandstone: increase in | As above. grain siz | Bedding fairly r e in strongly hema | regular at itized sect | 85 ⁰ . 51 tions. | ight | - weak hemati out except st 459.1'3', 4 460.4', 461.4 - minor hemat - minor bedde fill green cl out except 46 prominent bed | te through rong @ 59.8'- '6'. ite mottles d & fr. ay through- 43 ded. | - Tar beddin @ 457', 457. 462.1 all su | g impregnation 3'5', 461.8' bstantial. | 6 | | 5 |
| 67' | ·477 · | 10' | 100% | <u>Sandstone</u> : irregular or concentric h | As above. 770 467' bedding th | Light maroon in -474' with much cr en regular to 477' | colour. E oss cuttir on 80°. | Bedding ra ng & some | ather | - weak hemati - minor small "mottles" thr - green & whi on fractures. | te banding hematite oughout. te clay | - Tar bedding (80 [°]) @ 471. 471.5'-472.2 473.6'8', 4 - All substan - Tar fractum 471.5'-472.2 473.8'. | g impregnation 2', 471.3', ', 472.8', 475.5'. ntial! re filling ', 472.7'- | 0 | | 5 |
| 77' | 487* | 10' | 100% | Sandstone: green, sandy mg. sandst diameter sar | As above. / mudstone tone band, ndstone fr | Bedding regular beds @ 485.3', 48 strongly hematize agment at 486.7'. | on 85 ⁰ .] 6', 486.5' d, above). | l inch wid (with 3 l inch | le, inch | - ditto | | - Tar bedding @ 477.4', 47 | g impregnation 7.9', 478.7'. | 8 | | 1 |
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| DAT | TE START | ED | | DATE COMPL | ETED | | | | | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO. | ada dan A |
| <u> </u> | | | <u> </u> | · · · · · | | SURVEYS | | | | | | | BQ | 1007' | 0.0 |).H. 7 | '8-1 |
| D om | | Length | RE %Rec | | | LITHOLOGY | a des ser a su Ser a su a su a | er al da La companya | | ALT | ERATIO | N | MINERA | LIZATION | STR | V/FI | 17.E F,/F |
| 1 7† | 497' 10' 100% Sandstone: As above. Light to medium maroon in colour, 1 wide, 90° mudstone bed (dark green) at 496.3'. Angular un formity between cross bedded sandstones shows as mg. san stone fragments at 491.8' (2 mm wide). Bedding fairly reg 80°-85° but several cross bedded & concentric banded secti- over narrow width. | | | | | | l inch uncon- and- egular tions | - weak her out rather altered ba 493' (1") 494.5'7 | natite t strong ands 491 , 493.9' , 495'- | hrough- er '-492', (1"), 495.6'. | - Tar bedding @ 483.1'-488 489.3', 490.5 495.9' all 80 | g impregnation .3', 488.9', 5', 494.7', 5°-90°. | S | | | | |
| 7 • | 507' 10' 100% Sandstone: Fine- to medium-grained, medium to dark maroon, competent, moderately dense rock, somewhat porous in appears in mg. bands. Bedding regular on 80°-85°. Muddy sandstor bed 1" wide at 500.5', 502'; sandy mudstone, dark green, well bedded (85°) at 506.3'. 1 cm diameter sandstone fragment at 502.3'. | | | | | | on, earance stone well t at | - numerous tions show strong hem ation. - mudstone altered to (sericite? - very sof light gree not chlori | s l' lon ving mod matite a s may b o talc). t, shin en in co te. | g sec- erate- lter- e y, lour - | -Tar fracture 502.8'. | e fill at | | | | | |
| | 517' | 10' | 100* | Sandstone: 85°, Seve (70°). | As above ral narrow | only mainly fg.; fine- to medium-gra | bedding r ained band | egular (s through | on 80 ⁰ ghout | - numerous strong hem sections t 2-3 mm dia scattered probably o stone clas - green cl tures. - & serici | modera atite a hrougho meter h througho utline ts. ay on f te - ta | te- ltered ut also ematite out - sand- rac- lc | - Tar bedding § 507.6', 510 (substantial) (& 10° fractu 514.4'. | g impregnation 0.4', 511' , 512.5' ure 512.2-513' | 5 | | - 4 |



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| | | ••••• | | | | SURVEYS | | | | | | | | TOTAL DEFTA | D.(| 2 NU. 2.H. 7 | 8-1 |
| 0 | EPTH | 00 | RE | | | • • • • • • • • • | | | - <u>1</u> | | | .l | <u></u> BQ | 1007 | ISTE | 1127112 | EF 1. |
| | 1 10 | Lengin | %Rec | | | LITHOLOGY | | | a si bi si j | ALTE | ERATIO | N | MINERA | LIZATION | F | V/FILF | VEL La |
| 517' | -5271 | 10' | 100% | Sandstone: mudstone bu but numero The slight than the f section. | As above ed (90°) a us narrow i ly coarser g, and a | . Bedding 70 ⁰ -80 ⁰ . t 517.8', 518.3' (3 mg fg. bands grained bands appea re preferentially ta | een g. lon. cous h this | - ditt - several "mottles" - mudstone altered to | to hematit through s appar serici | te Nout. Tently te (?). | - Fracture f. 517.4'8', (5 [°]). - bedding imj at 517.4', 5 525', 525.4' | ill tar at 524.3'-527' pregnated tar 18.6', 523.7', 526.5'. | | | .3 | | |
| 527' | 5371 | 10' | 100% | Sandstone: Note that 1 70°. Alter tend to be green mudst and 535'-53 | As per 1a nematite ba mating f more stror cone band a 35.1'. | ast 10' section. Be anding cross cuts (c g. and mg fc ngly hematized than it 534.8' with muddy | edding rec overprints J. beds. fg. bed y sandstor | gular 75 5) beddi Mg. b 1s. 1 c 1e 534.6 | -85 ⁰ ng at eds m wide '9' | - weak hem throughout - strongly section 52 - mudstone weakly to | hematite b hemati 7.8'-52 altere sericit | eanding zed 9.5'. d e. | - Tar impregn (80°-85° fine grained) 533. | nated bedding ⊖- to medium- 7'. | | | .3 |
| 537' | 547' | 10' | 1003 | Sandstone: oon bands, coarse grai 540', 540.5 wide at 538 | As above also fg. ned sandst ', 542.6', .7'. | 10'. Light maroon alternating mg. one & quartz clasts 545.9'. Muddy gre | alternati - fg. b at 537', en sandst | ng dark pands. 537.4' one bed | mar- Medium- , 539', - 1" | - weakly a moderate-s tized band - green cla on fracture - a few her "mottles" | lternat trongly s. ay (±se e. matite through | ing hema- ricite? out. | - Tar impregn (75 [°]) at 539. 545.9'-546.1' | ated bcdding 1'3', 539.6' | | | |
| 547' | 557' | 10' | 100% | <u>Sandstone:</u> few moderat 555.6'-555. (80 ⁰) at 60 | As above ely-strong 9'. Hemat -70°. | 10'. Mainly light ly hematized bands. ite banding frequen | maroon in Green m tly overp | colour uddy sau rints be | with a ndstone edding | - ditta |) | | - Tar impregn (85 ⁰) 555.1' 556.5', 557'. | ated bedding & .2', 556', | | | 0 |
| 571 | 567' | 10' | 100% | <u>Sandstone:</u> 566.5'7' | As above. containing | Muddy sandstone a minor true mudston | t 566.2' e. | (l") and | l at | - hematite erate throu - sericite? in mudstone | - light Ighout. ? after ?. | t mod- | <u>no tar</u> | | | | /10 |



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| LOC | ATION | | | CO-OR | DINATES | | | | | | | $(a_{1,1},a_{2,1},a_{$ | 10 | | 19 |
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| | | | <u> </u> | | SURVETS | | | | | | BQ | 1007' | D. | D.H. ' | 78-1 |
| From | EPTH To | COR Length | E VoRec | | LITHOLOGY | | | Διτε | 24710 | N | MINERA | | STI | 10270 | IRE GAR |
| 567' | 577' | 10' | 100% | Sandstone: As above. light maroon in color bed at 569.3', 575.1' | Mainly fg. Bed nr. 'i inch wide mu | ding 75 ⁰ -8 ddy (green | 35 ⁰ . Mainly n) sandstone | - weak to m hematite ba 575'-576.8' strong. - white cla 568.1', 570 - minor gre bedding occ throughout. - sericite sandstone. | oderat nding , mode y in v .7'. en cla asiona in mud | te except erate - rugs ay on 1 dy | - tar impreg at 575.3' (8 | nated bedding 5° mg.) | | | 1/10 |
| 577 * | 587' | 10' | 100% | Sandstone: As above disseminated clay not 577.8', 582.7', 586.2 | 10'. Bedding 80 ⁰ - ed throughout. Gro '4', 586.7'8'. | 75 ⁰ . Minc een, muddy | or quantity of sandstone at | - weak hema - sericite clay. | tite b (?) in | anding. green | - <u>no tar</u> | | | | 1/10 |
| 587' | 597' | 10' | 100% | Sandstone: As above. hematized over 1 cm a 596.9'-597'. Bedding | Green mudstone, t 589.4'; green mud 70°-80°. | 2" wide & ddy sandst | strongly one at 594.3', | - weak hema out except ; strong 587. - sericite stone. | tite t modera 1'-589 (?) in | hrough- te - .3'. mud- | - <u>no tar</u> | | | | .4 |
| 597' | 607' | 10' | 100% | Sandstone: As above. grained sandstone. M 80°-85° variable 70°- | Numerous 4"-1" w ainly light marcon 80°. Green muddy a | ide beds o in colour sandstone | f fine-medium . Bedding at 597'1'. | - moderate- tite @ 501. 603.3'-603. - minor gree occasional 1 - sericite | strong 3-602. 9'. en cla beddin in mud | hema- 4', y on g plane stone. | - tar impregn (80°) at 598 | nated bedding .8'. | | | .3 |
| | | | | | | | | | mulu | | | | | | |



| P | | | | | | | | | | | | | n an tha an t Tha an tha an t | | 1 . | | |
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| | TE START | ED | | DATE COMPLE | TED | SUBVEVE | | | | 1 | 1 | | HOLE SIZE | TOTAL DEPTH | | - | |
| | | | | | | - JURVETS | | | | | | | BO | I DOTAL DEPTR | 0 | |). /8⊶1 |
| From | To | Lenoth | RE %RCC | | | LITHOLOGY | | | | 1 | •••••••••••••••••••••••••••••••••••••• | | <u>Va</u> | 1007 | L Ist | RUST | |
| Contraction of the | 1 | | 1 | | | LITHOLOGY | | | | ALTE | RATION | | MINERA | LIZATION | F | V/FI | F./FI LO |
| 607' | 617' | 10' | 1009 | Sandstone: 1" wide cro maroon to w thin fg. at 613'-613 gray colour orange-maro | Transit pss cutti hite in bands an .5'. Se . 615.6 on in co | ional zone. 607'-60 ng bed at 609.1'. B colour. 609.8'-617' d some cg. quartz a ction 609.8'-612.3', '-617' dark maroon; p lour. Bedding 80° - | - grey cold to oxidatio - weak hema out except 615.9'-616 - green cla planes cons throughout | ouration on - MnC atite th intense .2' & 61 ay on be spicuous section | due 2 or ? rough- 7'. dding | - tar impreg at 615.4' & | nated bedding | | | .2 | | | |
| 617' | 627' | 10' | 100% | Sandstone: porous gene: sections. to irregula: Section 624 colour. | Mainly r rally, qu Green & c green c '-625' me | mg., dark grey maroon in colour. Somewhat - quite porous in intensely hematite comented green mottling 617.4'9', 624'-625.5' due clay content. Bedding regular on 85°. medium- to coarse-grained, gray-green in fr - ti | | | | | ervasive hout ex 617'-61 , 621'- en clay? 617.4'. y disser 9'. | hema- cept 7.4', - 622', on nina- | <u>no tar</u> | | | | .4 |
| 627' | 637' | 10' | 100% | <u>Sandstone</u> : throughout, on 85°. Son 630'-630.5'. 634.7'-635.5 | Similar with min e coarse Clay r | to above 10'. Mg. or light grey patche -grained, rounded cl ich sections 627.6 | , dark gre s. Beddin asts of sa 8', 631.5' | y-maroon g regulan ndstone a 8', | r at | - moderate- tite in dis but commonl sections. - gray-gree sections con inated clay | strong l continua y pervas n colour ntain di & seric | nema- bus sive - ced .ssem- ite. | no visibl | <u>e tar</u> | | | .2 |
| 637' | 647' | 10' | 100% | Sandstone: green in col "mottling". Rock is well appearance. | Predomin our with Hematite sorted, | antly fine- to medium occasional light ora e banding 644'-645'. moderately dense & s | n-grained, ange bands Bedding 1 slightly po | medium g and regular 8 Drous in | 95 ⁰ . | - weak hema lnations thy - green cold lay content | tite dis roughout our due t. | sem- to | <u>no visibl</u> | e tar | | | .2 |







| | | DRILL LOG | | | | | | | | | | | | | | | | |
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| LO | CATION | | | | CO-01 | RDINATES | | | ***** | 1 | | | <u> </u> | ATION | | •••••• | | |
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| (| DEPTH | CO | RE | | | | | | | | | l | BQ | 1007' | | | /8-1 7557 | |
| From | 1 10 | Length | 1%Re | <u>}</u> | | LITHOLOGY | | | | ALTI | ERATIO | N | MINERA | LIZATION | 51 | IV/ei | IRE EVEN | GREPHY |
| 647' | 657' | 10' | 100 | Sandstone: colour exce and 656.6'- colouration (subangular coarse-grad | As above =pt 651.7- -657' ligh 1. Bedding c) 654.6', ined. | . Predominantly m. 652.9', 655.7'-656. t orange. Clay con g 80°. Coarse grai 655'-656'. Sectio | n Sen; h Lum- | - moderata maroon sec - green c] throughout | e hemat: ctions. lay ± se t. | lte in ericite | - suspect mi of dissemina tial tar?! | nor fg. blo ted intersti- | bs | | .2 | | | |
| 657' | 567' | 10' | 100 | Sandstone: colour. Be at 658'-659 subrounded, | Mainly m. dding regu ', 660.6'- white san | -g., light orange- ilar on 80°. Mottle 661.8', 663.9'-665 dstone clasts at 6 | light orar ed maroon- .7'. Coar 57'4', 6 | nge-green gray sec se-grain 68.1'. | i in tions ed, | - moderate rix materi sections. - weak gre matrix cla throughout - white cl tures. | e hemati al in m een & wh wys (±se ay on f | te mat- maroon ite ricite) rac- | - <u>no tar vi</u> | sible | | | .2 | |
| 667 ' | 677' | 10' | 1009 | Sandstone: in colour, regular at | Mainly m. well sorte 85 ⁰ . Mott | -g. variable to f d, quite dense & co led dark grey secti | roon | - weak dis hematite t - Moderate 669.7'-670 676.5'. - minor wh clay throug | seminat hrougho fractu .1' (5 ⁰ ite mat: ghout. | ed ut. re fill), 676' rix | - <u>no tar vi</u> | <u>sible</u> | | | .2 | | | |
| 677' | 687' | 10' | 100% | Sandstone: 684.4', 686. Rest of sect | Mg. var: .7'. Light tion dark o | iable to fg. Lig t green, clay enric gray maroon in colo | ht marcon hed section ur. | 677'~679 on 680'~(| 9.5', 582'. | - moderate seminated maroon sect introduced fractures a 684.3'9' porous - sericite | -strong hematite tion. hematite by 5 ⁰ -1 at 677', 685.4' with cl | dis- ⇒ in ⇒ alt ⁿ 10 ⁰ , 681', -686.6' .ay. | <u>no tar vi</u> | <u>sible</u> | | | .2 | |



| | | | - | | | DRILL | LOG | • • | | a da ser en | | | | | SHE | ET N | 10. |
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| | CATION | 50 | | 0.17F | CO-OF | DINATES | | | | | | | | | 1 | 3 | 19 |
| | UL DIANI | | | DATE COMPLE | TED | SURVEYS | | | | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO | k |
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| | | | | 1 | | | | | | | RATIO | N | MINERA | LIZATION | F | V/FI | F/FI Log |
| 687' | 697' | 10' | 100 | Sandstone: fg. mater grey-marcor to light or Mg. orang clay. It i | Mg. 68 rial. Lig h 688.1'4 range begin ge sandstor s somewhat | 7'-691' then closel ht maroon orange co 4', 688.9'-689.5', nning 693.5'. Bedd ne contains 10-20% c friable and looks | y interbed louration 690.2'-69 ing regula fg. whit porous. | ded m (except L') grad ar on 85 ce disse | g. and dark dational | - moderate tite in ma - intense 30° fractu | e-strong aroon se hematit are @ 69 | hema- ctions. e along 0'3'. | - Tar fractu 691.9'-695.8 | re fill from '; 696.8'. | | | 1 |
| 697' | 707' | 10' | 100 | Sandstone: bedded mg light maroo 701.5'-705. & 697.2'4 Angular fra 706.5'. | Fg. 697 . bands. n-orange 6 4'. Rest ' are clay gment (6 m | "-698', 699'-705.4 Rest of section mou 997'-698', 699.6'-70 of section is grey enriched. Bedding m diameter) orange | ' with mir re mg. D1.5'. Li maroon. g regular fg. san | or thin Coloura ght gre Green s on 80°. dstone | ly tion:- en from ection at | - hematite strong 698 - sericite sections. | modera .4'-699 in cla | te- .5' y rich | - Tar fractu 697'-697.8'. | ce fill from | | | .1 |
| 707* | 717' | 10' | 1001 | Sandstone: from 707'-7 thin mg. green section tite rich section | Mainly m. 12', 716'- bedding. on 716'-71 egments 70 | -g. with minor fc 717'. Rest of sect Bedding regular on 7'. Section is cre 7'-707.3', 710.5'-7 | g. thinly tion fg. 85°. Cla cam white 712'. | bedded with m y enric except | bands inor hed hema- | - moderate tite in ma sections. - sericite sections. | -strong roon gro in clay | hema- ∍y | - <u>no visibl</u> | e tar | | | 0 |
| 717• | 7271 | 10' | 1001 | Sandstone: grained 726 Maroon, hema Bedding regu | Fine-to m .6'. Green atite rich llar at 80 | edium-grained becom n, clay enriched se o ^{sections} 719'-720' | ing disti ction 717 , 723.4'- | nctly me '-723.1 724.6'. | edium- | - ditta - weak grea on bedding | ol en clay through | noted out. | - <u>no visibl</u> | <u>e tar</u> | | | 2/10 |
| 727 • | 737' | 10* | 100% | Sandstone: enriched. I 1-2 mm. ligh section is m diameter cla | Mg. thro Distinctive at orange 1 medium - da nats at 734 | Dughout except 735. = light orange (bro brown (FeO ₂ ?) bands ark green-maroon. 1.9'+735.7'. | 6'-737' f wn) sands 727'-731 Several ro | g. and tone wit .6'. Re Dunded 4 | i clay th est of mm | - hematite pervasive : sections. - sericite tions. - moderate white matri orange sect | moderat in maroo in gree amounts x clay tion. | ely n n sec- of in | - Tar fractur 731.8'-732.3' 732.6' (15 [°]) | e fill (15 ⁰) , 732.2'- | | | 2/10 |





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| From | To | Length | %Rec | 1 | | LITHOLOGY | | | | | | | 1 | 1 2007 | STI | TUSTI | URE L | |
| | | | | | | | | · | | ALTE | ERATIO | N | MINERA | LIZATION | F | V/FI | F/FI | Le |
| 737' | 747' | 10' | 1001 | Sandstone: sandstone at 738.2'- gray-marcon mottling. | Mg. wi 741'-741.5 739.4', 742 n with segm Bedding re | th occasional cg. ; except, fg., g 2.3'-745.1'. Mg. ments of light oran gular 80°. | rounded f reen, clay sections ge or ligh | ragment rich se are med t orange | s of ections ium e | - ditt - green cl - weak to inated in (+sericite | ay perv strong section ?) | asive. dissem- | - <u>no visib</u> | <u>le tar</u> | | | .2 | |
| 747' | 757• | 10' | 100% | Sandstone: clasts of g light marco competent. section. | Mg. thr juartz & f. on to light Gray marc | oughout with occas: -g. sandstone 750'- orange in colour. On mottling 747'-74 | ional subr -753'. Co Generall 48' & mino; | ounded c mmonly v y well g r throug | Cg. /ery Sorted, Jhout | - ditt ~ matrix w erate quan throughout - green cla disseminate | o hite cla tities ay, bedd ed 753.2 | ay mod- led 2'8'. | -Tar fracture (15 ⁹ -20 ⁹) at - minor very inated blebs -hroughout. | filling 751.7'-752.4' fg. dissem- suspected | • | | .4 | |
| 757' | 767' | 10' | 100% | <u>Sandstone</u> : 766'-766.7' Massively b | As above. • Round, edded exce | Green clay rich s cg. clasts occasi pt thinly bedded in | sections 7 onal throu green sec | 58.9'-76 Ighout. Stions 8 | 0°. | - fg. her "mottles" (- white mat throughout | matite througho trix cla section | put Ny | | | | | 0 | |
| 767' | 777' | 10' | 100% | Sandstone: grained grac 768.7', 771 clay enrich Bedding 80 767', 771.6 | Commonly 1 ded bedding .1'-772.1' ed sections -85°. Mino ', 774'-77 | ng. with small sc J. Light marcon in 774.1'-775.1', gr 768.8'-770', 772. Dr rounded, cg. c ''. Medium- to coa | ale fine- colour ex ay marcon. 6'-773.1', lasts of s rse-graine | to medi ccept: Green 775'-7 andstone d 776.5 | um- 767'- ish, s 75.4' e at w '-777'. | - fine- to ed hematite spicuous th moderate white clay | medium- e mottle roughou fg. m through | grain- s con- t atrix out | | | | | 1/10 | |
| 777• | 787 • | 10* | 100% | Sandstone: Cg. 776.5' except 778.7 section 779. Gradational | Commonly m -779.6', 7 7'-779.6' m 6'-780'. changes be | 1g fg. throug 86.7'-787'. Light edium grey maroon. Commonly massively tween m.+g. & cg. | ghout exce orange ma Green, c bedded 80 sections | pt mg. roon in lay rich -85. | colour- | ditto green cla n fracture | y [±] seri s. | cite | | | | · · · · · · · · · · · · · · · · · · · | .4 | |



| | | • | | | | N | ORTH | | T | EAST | | EIPI | ATION | SHE | ET N | <u>10.</u> |
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| | | | | | SURVEYS | 4 | | | | | | HOLE SIZE | TOTAL DEPTH | HOL | .E NO |). |
| D | | CO | RE | | | | | - - | | L | 1 | BQ | 1007' | | 0.14.7 | 8-1 |
| | | Irrendin | 1%R0 | c | LITHOLOGY | | | i stri stri s | ALTE | ERATIO | N | MINERA | LIZATION | ST | RUSTI Tures | |
| 787' | 797' | 10' | 10 | Sandstone: Commo except 788'-789', clay rich section massive on 85°. | nly mg fg., lig 791.5'-794' grey maro s at 789'-790.4', 794' | ht maroon on in cold , 796.4' | in colc our. Gr 797'. E | our ceenish Bedding | - hematit 787'-788' - intense of sandsto ture at 79 795.4'-796 - matrix v bedded gre throughout | e "mott: hemati: one on f 94' (40° 5' (10°) white cl een clay | les" rac-), ~vuggy .ay, | - specimen t 787.5' | aken 787'- | | | 6 |
| 17, | 807' | 10' | 100 | Sandstone: Predom quartz, subrounded 800', 802.4', 802. except medium grey Greenish clay enri Bedding regular ma | minantly mg. with 1 c 1 clasts occasional fro 6', 806.6'. Light mar 7 maroon 797.5', 799.5' ched sections at 798.3 assive on 85°. | m + red a m 797'-79 con-orang -800.4', '-799.2', | nd/or w 7.5', 7 me in co 803.6'- 800.5' | hite 99.5'- lour 804.6'. -806'. | - minor f. mottling t - matrix w green clay | -g. hem hrougho hite, b | atite ut edded | | | | | o |
| 73 | 817' | 10' | 100 | Sandstone: Predom sorted, moderately friable on fractur sections 807.3', 8 (mottled). Green subrounded quartz, Bedding massive 85 | inantly mg., light o dense but rather poro es (due to matrix clay 07.7'9', 810'-811', clay enrichment 808'-8 clasts at 807.8'9', | range in us in app). Mediuu 812.6'-81 09', 811' 808.7', | colour, earance m gray-r 4', 815 -812.2' 810.8'. | well & marcon '-817' . Cg. | - intense of clast a on fractur - green be matrix cla | hematiz t 807.5 e at 81 dded & y | ation ' and l'. white | | | | | .2 |
| 7' | 827' | 10' | 1009 | Sandstone: Mg., light orange mottl 826.4' light orang 821'7'. Massive clast & minor medin | light gray maroon thro ing & patches except 8: e-maroon. Green clay e ly bedded 85°. Occasio um- to coarse-grained o | bughout w 17'-818.2 enrichmeni onal cg graded bec | ith minc ', 825.5 t 817.4' . subrou lding. | or 5' 7', inded | - moderate- seminated (tite mottl: - weak bedd - white mat so abundant | -strong & mg. Ing. led grea crix cla c there. | dis- hema- en clay ay not | | | | | 1/10 |
| | | | | | | | | | | | | | | | | |





| <u></u> | | | | | • | DRILL | LOG | | | | | | | | DUCE | | |
|---------|----------|--------|-------|--|---|---|--|--|-------------------------------------|--|---|--|-----------|-------------|------|--------|--------|
| | • | | | | | | N | ORTH | | 1 | EAST | | ELEV | ATION | SHEE | | ŕ. |
| LOC | CATION | | | | CO-07 | DINATES | | | | | | | | | 16 | | 19 |
| DA | TE START | ED | | DATE COMPLE | TED | | | | [| 1 | T | 1 | HOLE SIZE | TOTAL DEPTH | ROL | F NA | 1 |
| · . | | | | | | SURVEYS | | | | | | | BO | 10071 | D.1 | D.H.78 | 3-1 |
| | DEPTH | 00 | RE | the degree | | 1.171101.00% | . | | | | J | -L | | 1 | STF | NUSTU | RE Las |
| | 1 10 | Lengin | 76Rec | l | - | LITHULUGY | | | | ALTI | ERATIO | N | MINERA | LIZATION | F | V/Ft | F/FI L |
| 827' | 837' | 10' | 1009 | Sandstone: interbedded dark grey-m green orang ≤ 8mm diame sandstone c | Mg. 82 mg. bay aroon in a e due to a ter, subra lasts. Ma | 7'-830.4'. Rather nds of variable wid colour except 827.9 clay enrichment. C bunded-subangular, derately well sort | cg. the lth. Commo '-830.4', Cg. frage white-blue red. Bedd: | reafter y only med coloured ments are e quartz ing 85°. | with ium to d light e & | minor heing. intense of vugs, iclasts at | ematite hemati: Fracture 832.6' | mottl- zation and -833'. | | | | | 3/10 |
| 837' | 847' | 10' | 100% | Sandstone: grained bed subrounded, 839', 839.5 fine- to med colour with | Poorly so s with mir .5-2 inch ', 839.8', lium-grain patches c | orted section of me for graded bedding. diameter (quartz? 843', 846'. Gree med 840.5'-842.9'. f grey marcon. Be | coarse- pangular ection ige in -85°. | - ditt - sericite clay. - intense around cla | co 2? with hematiz st at 8 | green ation 39.8'. | - specimen ta | aken 844.8' - | | | 0 | | |
| 847' | 857' | 10' | 100% | Sandstone: mainly light angular to s bedding on 8 854.7'-857' | Poorly so t orange s subrounded 35°. Gree | rted section of me andstone. Clasts quartz & orange m n, clay enriched so | dium- to c ≤8 mm dia g. sands ections 84 | coarse-gr imeter, a stone. M 18.3'9' | ained re Massive | - ditt - intense trolled he 849.7'-850 porous. | o fractur matite .8' - v | e con- alt ⁿ ery | | | | | 6@85 |
| 8571 | 867' | 10' | 100% | Sandstone: sandstone 85 clasts at 86 quartz). Li Green clay e | Commonly 7'-857.9' 1' (fg. ght orange nriched se | Cg. (mg. matrix , 864.8'-866', 861' grey quartz), 861. e with l' bands of ections 857'-858', | <pre>k) with in -863'. 2 5', 864.4 grey maro 865.5'-86</pre> | terbedde "subrou '(white on colou 6.6'. | d m.~g. nded ration. | - variable throughout - weak to m matrix cla -sericite v clay. | hemati noderat Y. with gro | te 2 white 2en | | | | | /10 |
| 867' | 877' | 10' | 100% | Sandstone: orange-marco into predomi ately well so rounded quar | Predominar n in colou nantly c orted, com tz clast a | ntly mg. with som ar from 867' to 872 g., medium gray-ma upetent but porous at 872.5'. | e cg. c .4' gradin roon sand appearance | lasts and ng to 87 stone. 1 e. 2" st | l light 2.9' Moder- 1b- | -hematite t throughout - intense h infilling a -matrix whi erate throu - green cla 872'4' | veak-mod nematite at 874.1 té clay nghout ay enric | lerate 2 vug 2 & .6 2 mod- 2 hment | | | | | L/10 |







印 DRILL LOG SHEET NO. NORTH EAST ELEVATION LOCATION CO-ORDINATES DATE STARTED 19 17 DATE COMPLETED HOLE SIZE TOTAL DEPTH SURVEYS HOLE NO. 0.0.H.78-1 DEPTH CORE BQ 1007' From STRUSTURE JOUPPER To Length %Rec LITHOLOGY ALTERATION MINERALIZATION F V/FI F/FI Los Sandstone: Predominantly c.-g. with poorly defined gradational - hematite throughout. zones of m.-g. material. Most of larger clasts are 4" - 2" - white matrix clay 877' 887' 10' 100% diameter, angular to subangular grey & white quartz. C.-g. more prominent in c.-g. segments mainly dark grey-maroon in colour while m.-g. sections 3/10 than m.-g. sections. are light orange-marcon in colour. Poorly sorted. Massive very minor green clay bedding 80⁰-85⁰. on fractures. Sandstone: As above. Large 2" diameter, rounded quartz grey-887' 8971 ditto 10' 100% white clast, at 893.3'. Clasts more subrounded in this section specimen taken 893.4'-- hematite replacing 893.8'. sandstone fragments at 893.6'. 2/1d - green clay enriched section 892.6'-.7'. Sandstone: As above. Very poorly sorted. Quartz clasts subditto angular-subrounded. 3" - 4" round quartz clast, at 801.7'. - white clay in c.-g. 897' 907' 10' 100% Fine- to medium-grained section at 898.4'-899.6', 902'-903.9'. sections prominent. C.-g. sections of ten quite porous in appearance but competent. 1/10 - green clay enrichment Bedding gradational on 80°. 902.8'-903.5'. Sandstone: Predominantly medium- to coarse-grained grain size 9071 hematite disseminated 917' throughout with narrow graded beds of c.-g. material. Uniform-10' 100% throughout - moderate. ly medium maroon colour throughout. No clasts larger than - weak f.-g. white mat-Smm diameter ~ most subrounded. 1/10 rix clay. - no green clay, Sandstone: Predominantly medium- to fine-grained with medium-- hematite disseminated to coarse-grained narrow beds throughout. M.-g. at 925' grad-9171 10' 100% ational to c.-g. beginning 926'. No clasts > 6 mm diameter throughout. 927' - weak matrix clay. most subrounded. Moderately well sorted. Light to medium - sericite with green marcon in colour except green-marcon in clay enriched section 918.5'-919.5'. Bedding & cross cutting beds 70° & 80°. clay.



| | | I CO-ORDINATES | | | | ORTH | | | EAST | | ELEV | ATION | | | | |
|------|-----------|----------------|--------|---|---|---|--|---|--|--|--|---|---------------------------|-----|---------|----------|
| LOC | ATION | | | co- | ORDINATES | | | | | | | | | 18 | 3 | 19 |
| DAT | TE START | ED | | DATE COMPLETED | | | T | | | T | | HOLE SIZE | TOTAL DEPTH | ROL | 7 NO. | . |
| | | | | | SURVEYS | | | | | | | BQ | 1007' | D.1 | 0.11.78 | -1 |
| D | EPTH | L col | CE Par | | LITHOLOGY | | higa i h | | AL 77 | | | | | STF | NOTU: | RE Gtsp |
| | 1-10- | 1 Congin | /onec | [| LITHOLOGY | | | | ALI | ERATION | | MINERA | LIZATION | F | V/Fili | F/FI LO |
| 927' | 937' | 10' | 100% | Sandstone: Predomi fine- to medium-gra Generally poorly so Clasts mainly subar > 10 mm. Bedding & out. | nantly cg. with po ined material (parti orted through graded gular-subrounded qua 5 -90 . Medium maro | oorly defin cularly 9 sections a artzose. M oon coloura | ned zone 34'-935. are pres No clast ation th | s of 5'). ent. s rough- | - hematite - blood re banding 93 - green cl - matrix c only in c. | e through ed hemati 32.2'-933 Lay 934'- clay prom g. sect | out. te .8'. 935.5' inent ions. | | | | | 1/10 |
| 937' | 947' ' | 10' | 100% | Sandstone: Cg. 9 945.3', 946.2'7', Contacts are sharpl grey maroon. Mediu | 37'-939.8'. Mg. 9 rest is fg. with y gradational on 90° m- to fine-grained s | - hematite throughout - minor gr section 94 | e dissemi ceen clay 10.9'-943 | nated in .1'. | | | | | 0 | | | |
|)47' | 957' | 10' | 100% | Sandstone: Fg. 9 952.3'-957', rest i gradational - poorl Medium brown mudsto light orange marcon grey marcon in colo | 47'5', 949.9'-951. s well sorted mg. y defined. No clast ne bed (90°) 956.2'- , medium- & coarse- ur. Bedding on 85°. | 7'. Predc Contacts >5 mm di .3'. Fg grained se | minantl are rat ameter. . sections r | y cg. her ons nedium | - hematite - sericite - clay mat in medium- grained se | e as abov e in muds crix mode & coars ections. | e. tone rate e- | | | | | 1 |
| 157' | 967' | 10' | 100% | Sandstone: Predomi colour except light 960.6'-961.5' (grad wide bed of medium 967'. Fg. section mainly subangular g | nantly cg., medium maroon 957.5'-958.4 ational cg.) 963'- red brown mudstone) ns contain much green wartz. Bedding 85°. | -dark grey '. Predom 963.6' (in 964.7'-965 n & brown | -maroon inantly cluding .5', 966 clay. (| in fg. 2" 5.7'- Clasts | - strong h maroon sec - green & fractures. | ematite tions white cl | in ay on s | cg. sections contacts vections commonly shonal. | ons well sort with fg. | | | 3/10 |
| 67' | 977' | 10' | 100% | Sandstone: Medium- throughout, except and green-red-brown content. Medium- to well sorted, fairly coarse contacts shat wide quartz vein at | to coarse-grained, n 967'7', 971.1'8' in colour due to hid coarse-grained sect dense, porous but co cply gradational. Be 374.6' (30°) | medium gre , 975.8'-9 gh green & tions poor ompetent. edding 85 ⁰ | y-maroor 77' fc brown c to mode Fine-gr . Vuggy |) J.(-mg.) zlay erately cained/ / 3 mm | - moderate seminated - weak mat - green (s & brown (F noted sect | hematite throughou rix white ericite? e rich) ions. | e dis- ut. e clay clay in | Specimen ta 77'. | ken 976.3'- | | | 5/10 |



(7)

From

977

98**7'**

9971

LOCATION

DEPTH

DATE STARTED

To

987'

9971

1007'

END

APPENDIX 2

Geological Logs kDH 78-2









| <u></u> | | | KEA | NE PERMITS | DRILL | LUG no | LE #2 | v | ertical Hole | | | SHEE | TN | 0. |
|---------|-------------------|--------|------|--|---|--|---|---|---|---|--|----------|------|--------|
| · · · · | an an tha an A | | | | | NORT | H | | EAST | ELEV | ATION | · | | |
| _L00/ | ATION | | | CO-ORDINATES DATE COMPLETED October 29, 1978 SURVEYS | | (1,2,2,2,2,3,3,3,3,3,3,3,3,3,3,3,3,3,3,3, | | | | 1 | • | 12 | | |
| DAT | E STARTI | ED | _ | DATE COMPLETED SURVEYS | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO | • | | |
| Octobe | er 27, 19 | 78 | 0 | October 29, 1978 | | | | NQ | 677' | D . | D.H.71 | 8-2 | | |
| 08 | EPTH | COR | ε | | | | | | | STR | 10071 | ISE Gter | | |
| From | <u> To</u> | Length | %Rcc | | LITHOLOGY | | | ALTI | ERATION | MINERA | LIZATION | F | V/51 | F/FI L |
| 0 | 210' | 210' | 0 | Overburden: Uncons marcon sand. A few bedrock interface. | olidated white, crea 5'-10' diameter bou | am and orange ilders near th | to light e o/b - | - zones o hematite | f disseminate | d - Tar in su quantities ly 100'. | ıbstantial at approximate | 3- | | |
| 210' | 217' | 6.7' | 96% | Sandstone: Fg., dense & competent c sandstone - prefere at 85°-90°. 1" ban Some hematite & tar | white in colour, wel verall with narrow z ntially tar impregna d of light green-whi impregnation in bro | l sorted, mod cones of more ited. Bedding te mudstone a oken core 210' | erately porous regular t 215.7'. -210.5'. | - minor di hematite i at 211.6'. | isseminated in 1" wide bar | - fracture d 211.4',215. - Tar impre 213',213.3' 214.5',214. 215.4',215. | fill tar at 2',216'. gnated bedding 8', 214.2', 9',215',215.2' 7',216.3'. | 1 | | 6/10 |
| 217' | 227' | 10' | 100% | Sandstone: As abov | e. | | | - zone of inated hem .8'. | minor dissem natite 223.3' | fracture f 222' (5',10 ous. - bedding i 223.6', 225 225.7', 226 (75') | ill tar 218'-) subcontinu- mpregnated tar .4', 225.5', .6', 226.7'9 | | | 1. |
| 227' | 237' | 10' | 100% | <u>Sandstone</u> : As abov | e. | | | - irregula taining mi ated hemat tinuous th | ar zones con- nor dissemin- lite - subcon- nroughout. | - bedding i tar at 228. 232.2'. - minor dig tar through | mpregnated wit 7', 229.4', seminated fg out. | .h | | 2/10 |
| 237' | 247' | 10' | 100% | Sandstone: As abov Narrow clay bed (90 | e. (Only light grey) at 238.1'.) | -maroon in co | Lour. | - dissemir throughout -possible mudstone b - fg. di hematite " throughout | nated hematite sericite with ped. sseminated mottles" | e - fracture 239'-240'. | fill tar (10 ⁹) | | | 2/10 |



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| | | | | | CO-ORDINATES E COMPLETED SURVEYS | | | EAST | | ELEV | ATION | | _ | • | | | |
| | ATION | | | l | <u> </u> | RDINATES | | | tan an a | | | | | | 2 | : • • | 12 |
| DA | IL START | ED | | DATE COMPLET | ED | AUDURNO | | | | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO. | |
| 0 | FDTY | 1 00 | | | | SURVEYS | | | | | | | NO | 677' | D. | D.H. 78- | -2 |
| From | To | Length | %Rec | a e Serve († 19 19 se | | LITHOLOGY | | | | AITE | PATION | 1.1.1.1.1.1 | | | STI | USTUR | EGIP |
| 247' | 257' | 10' | 100% | Sandstone: above. Bed | Fg.,] ding 85 | light grey maroon ir except 248'-249' 7(| 0-75 t.c | otherwi .a. | se as | - weak diss atite throu conspicuous medium-grai "mottles". - minor hem | eminate ghout a fine- ned hem atite b | d hem- lso to atite anding | | | F | <u>V/Fi</u> [F/ | /10 |
| 257' | 267' | 10' | 100% | Sandstone: antly mg. rounded mot | As above with int tles (gra | except 264.7'-267' erbedded fg. mate ins?) 260'-264'. B | , dark ma rial. Wh edding 85 | roon pre ite mc | edomin- J. sub- | - as above - minor gre fractures. - intense p atization 2 also strong 263.1'. | en clay ervasiv 64.7'-20 at 261 | on ≥ hem- 57', .5', | | | | 3, | /10 |
| 267' | 277' | 10' | 100% | Sandstone: strongly hem bedded fine- except 269'- clasts at 26 270.9', 267. | As above matized, and med 270' cro 5' & .8' | except 267'-267.4' dark marcon in colo ium-grained sandsto ss bedding. A few 0.6'. Much thinly J | , 268'-27 ur & alter ne. Bedd cg. sub bedded gre | 2.6', 27 rnating Ing 80 counded een clay | 6.6' thinly regular quartz 270.3 | - strong to atite in not -sericite (: chlorite) wi | intense ted sect in part ith gree | e hem- tions. en clay | - fracture f 272.5'-273'. | 111 <u>tar</u> (10 ⁰) | | 2/ | /10 |
| 277' | 287' | 10' | 100% | Sandstone: hematite ban | Fg., c: ding 277 | ream in colour with '-278.5', 280.6'-284 | much thi 4'. | 1, cross | -cutting | - moderate atite in cr bands. - minor whi fractures. | to weak coss cut te clay | hem- ting on | - hair line ; tar 284.2', ; 285.5', 286.7 | racture fill 284.6'-285.3', '' (5 ⁰) | | 4/ | '10 |
| 287' | 297' | 10' | 100% | Sandstone: zones contai regular but | Fg., ci ning diss 287'-289' | ream coloured with i seminated hematite. ' much cross bedding | irregular Bedding g on 70°. | light g commonl | rey y 80 ⁰ | - weak hema seminated z banding, di 293.6'-295' | tite in cones al scontin | dis- so (uous 2 | -substantial <u>tar</u> 290.4'-29 294.3', 295'- | fracture fill 1.7', 293.7'- 296'. | | 4/ | '10 |



DRILL LOG

SHEET NO.

| a state s | | | | | | N | ORTH | | T | EAST | | ELEV | ATION | GILLE | | <u>ŕ</u> |
|-----------|-------------|--------|------|---|---|--|--|---|---|---|---|--|--|-------|---------------------------------------|----------|
| LOO | ATION | | | C | O-ORDINATES | | ÷ | | | | | | | 3 | .•., | 12 |
| DA | TE START | ED | | DATE COMPLETED | | | <u> </u> | 1 | | T | 1 | HOLE SIZE | TOTAL DEDTU | HOLE | | 1 |
| | | 14 C | | A state of the state of the state | SURVEYS | | | | | a di se | | 1000 | INTAC DEFTA | 9.0 | с но. 5.н. 7 | 8-2 |
| D | EPTH | ¢¢ | RE | | | | L | 1 | | L | • | <u></u> | 6// | ICTD | | RET |
| From | To | Length | %Rec | [| LITHOLOGY | | | | ALTE | ERATIO | N | MINERA | LIZATION | F | V/51 | E/EI IC |
| 297' | 307' | 10' | 100% | Sandstone: F and not porous f Mudstone bed (90 increased clay | g., cream coloured, well n appearance. Bedding) 0.1" wide at 302.8' (light green) content. | sorted, regular a in zone o | competer t 80 ⁰ -89 f genera | nt dense 5°. ally | - zones o inated he 299'. - narrow some cros 307', wid | f weak matite hematit s cutti ely spa | dissem- 297'- e bands ng 301'- ced. | - fracture f substantial 297.6', 298. 300.5'-301.1 303'-304', a ture. | <pre>iill tar in quantities: 5', 299'-299.: ', 302.4'8' ill 10 frac-</pre> | 5 | | 1 |
| 307' | , 317' | 10' | 100% | Sandstone: Fc grained & more p grained clay cla throughout - ver tite is moderate & cross bedding. | light marcon in colour orous in appearance 314. sts at 307.6', 316.8'. y close spaced 310.5'-31 pervasive. Hematite ep Bedding apparently 75⁶ | r. Sligh .5'-316.5 Hematite 14.5', the whibits cr -85 | tly coar '. Coar banding ereafter ross cut | :ser :se- ! : hema- :ting | - hematit - some wh sandstone 316.8'. | e as no ite cla matrix | ted y in at | - minor frac at 313.8', 3 | ture fill tar 16.6'. | | | 2/10 |
| 317' | 327' | 10' | 100% | Sandstone: Fg 75 -85 . Some c as close spaced, disseminated qua | . medium maroon in colou lay (light green) beddir subcontinuous bands and ntities. | ur. Beddi ng 326.4' l pervasiw | lng vari 6'. H 7e in mc | able Iematite Iderate | - hematite | e as no | ted | | | | | 2/10 |
| 327' | 337' | 10' | 100% | Sandstone: As a & fine- to mediu uous thinly bedd clast at 326' su ation. 4" subrou ation halo 332.6 hematite banding | bove. Medium to dark ma m-grained interbeds. Di ed light green clay 327' rrounded by intense bloc nded fg. sandstone cla '. Bedding regular on f | aroon in c lsseminate '-329', 1' od red hen ast with h 35° but of | :olour. :d & dis ' diamet natite a nematite pscured | Fine contin- er clay lter- alter- by | - hematite also stron 327'-335' - hematite clearly cr ding thron - concents 335'-336'. | e as no ngly per e bandir rosscut: ughout. ric alt | ted; rvasive ng s bed- ⁿ bands | | | | · · · · · · · · · · · · · · · · · · · | 1/10 |
| | | | | | | | | | | | | | | | | |



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DRILL LOG

| - I | | | | | | DITEL | LUG | TU | | | | | | SHE | <u>ET N</u> | 0. |
|------|----------|--------|------|--|--|--|---|---|--|---|--|--|--|-----|-------------|---------|
| LO | DATION | | | | CO-C | POINATEO | NON | <u>(n</u> | | LAST | | ELEV | ATION | | - | |
| DA | TE START | ED | | DATE COMPLE | TED | RUINATES | | | | · · · · · · · · · · · · · · · · · · · | | | | 4 | ļ į | 12 |
| | | | | | | SURVEYS | | | in the second | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO | , |
| (| RTAR | CO | RE | 1 | | | | | ALTERATION MINERALIZATION F V/FI F/1 | /8-2 | | | | | | |
| From | T o | Length | %Rec | 1 | | LITHOLOGY ALTERATION MINERALIZATION F V/FI | JAE GRAM | | | | | | | | | |
| | | | | | a de la composición de la comp | | **** | | ALIC | LATIO | N | MINERA | LIZATION | F | V/FI | F/FI Lo |
| 337* | 347' | 10' | 100% | Sandstone: overall wit 338.4' (1" at 338'. | As per th fine- wide), 3 | 327'-337'. Bedding a to medium-grained in 45'. A 5" diameter a | regular on 8 terbeds at 3 subrounded c | 0 ⁰ . Fg. 36.9'-337.2 lay clast | - hematit throughou close spa which para cut beddin - intense coarser on | e moder t in ve ced ban allel & ng. hemati rained ; | ate ry ds cross te in | - fracture f 339.5' (5 [°]). | 111 <u>tar</u> at | | | 1/1d |
| 347' | 357 * | 9.8' | 98% | <u>Sandstone</u> : cream colou: Bedding reg | Fg. me red zones ular on § | edium to dark maroon at 347'-348', 348.2 55°. | in colour wi ?'5', 351.6 | th more 5'-352.4'. | - virtuall strong hem | y perval natite i | more asive In mar- agh | - fracture f. 347.9'-348.1 348.9'. 351.1 | ill tar (5 [°] ,10 ', 348.3', 3' 355 7' | d, | | |
| | | | | Reduce from | NQ to BÇ |) at 351.2'. | | | composed o spaced ban - concentr bands 347. | of close nds. ic hema 2'-348' | ely tite | - bedded tar | at 356.4'. | | | 5/10 |
| 357• | 367' | 10' | 100% | <u>Sandstone</u> : beds at 362. Lenticular c regular on 8 | As per 3 .3', 362. | 47'-357'. Fine- to r 7', 366.6'-367'; all y clasts at 363.1', 3 | medium-grain strongly he 366', 366.1' | ed inter- matized. • Bedding | - as above - intense hematite a | pervasi t 362.7 | ve '. | - fracture fi 358.9', 360.5 362'. (5 [°]) - thinly bedd 358.9', 360.3 361.3', 366.9 | 11 <u>tar</u> at ', <u>361.3'-</u> ed tar (85 ⁰) ', 360.6', '(substantial) | | | 3/10 |
| 367* | 377' | 10' | 100% | Sandstone: ly bedded fi tend to be 1 Coarse-grain grained sect | Fg., m ne- to m ight mare ed clay : ion. | edium maroon in colou edium-grained bands. oon in colour. Beddi fragment at 375.5' in | ar, with num Finer graine Ing regular (in fine- to me | erous thin- ed sections on 80°-85°. edium- | - strong pr atite in fi um-grained - intense f at 367', 37 372.4'. | ervasive Ine- to section nematiza 71.2', 3 | e hem- medi- ns. ation 371.7', | - fracture fi at 369.4', 37 - tar impregn 367.8' (75 [°]). | ll tar (10 ⁰) 0.9'. ated bedding | | | 10 |
| | | | | | | | | | | | | | | | | |



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| - Q7 | ····· | | | | - | DRILL LOG SHEET NO. NORTH EAST ELEVATION SURVEYS 5 12 BO 677' 0.0.H.78-2 LITHOLOGY ALTERATION MINERALIZATION | | | | | | | | | | | |
|----------|-------------------|--------|-------|---|--|--|---|--|---|---|--|--|---------------|-------------|-----|-------|----------|
| | | | | | NORTH EAST ELEVATION CO-ORDINATES 5 COMPLETED SURVEYS LITHOLOGY ALTERATION | T | | | | | | | | | | | |
| LOC | ATION | | | | CO-OR | DINATES | | | | | | | a di tana ara | | 5 | | 12 |
| DAT | E STARTI | 50 | | DATE COMPLETED |) | GUDVEVC | | | | | | | HOLE SIZE | TOTAL DEPTH | HOI | E NO |), |
| _ | | | | | | | | | | | | | BO | 677' |) o | D.H.7 | 8-2 |
| D Erom | EPTH | CO. | RE | | | LITHOLOGY | | | | A1 71 | | | | | ST | RUST | URE GARA |
| F 1 Q 11 | 1 10 | rengia | 76Hec | I | | LITHOLOGY | - | | | | LRAIIO | N | MINERA | LIZATION | F | V/51 | F/FI L |
| 377' | 387' | 10' | 100% | Sandstone: F. maroon section diameter at 38 mudstone band | g. med ns. Bed 30.1'. at 384. | lium marcon through ding regular at 85 Clay rich section .1'3'. | out with . Clay with a O. | narrow 1 fragment 1" light | light t, %" t green | - close sp bands subd throughou moderate 1 - strong p atization 384.3'-38 | paced h continue t conta nematite pervasiv 382.7'- 5.1'. | ematite Dus in weak- e. ve hem- -384', | | | | | 2/10 |
| 387' | [,] 397' | 10' | 100% | Sandstone: F. tions of mediu of fine- to me 70 beds.0.1" sharp contacts grained strong | -g. lig m grey edium-gr wide be with f jly hema | tht maroon in colou maroon (e.g. 387.2 ained material. B d of light green m g. material belo ntized material abc | ir with ocd !'9'). [ledding 85 udstone w ww, fine- ove. | casional Minor th With m ith irre to mediu | l sec- nin beds ninor egular m- | - weak dis atite thro continuous ly close s 387'-391'. - minor be clay occas 396.2'. | sseminat oughout but mo spaced h edded gr sional 3 | ted hem- Dis- oderate- oands teen 389'- | | | | | 1/10 |
| 397' | 407' | 10' | 100% | Sandstone: As medium-grained 85° regular. at 404.1'. Oc conspicuous at | above. l materi Mudston casiona 406.9' | 3" bands of inte al at 401.1', 402. e band, 0.2" wide, l minor bedded gre | rbedded f 1', 403.2 medium g en clay t | ine- & f '. Bedd reen in hroughou | ine- to ing 80- colour it but | - hematite out dissen ular secti spaced bar - Mg. he 399.8'-400 - minor li on fractur | e weak t ninated. ons of nding matite).8'. ght gre es. | chrough- . Irreg- close mottles een clay | | | | | 3/10 |
| 407' | 417' | 10' | 100% | Sandstone: F. to medium-grai Hematite bands | -g., li ned mat are cl | ght maroon with a erial. Bedding qu ose to widely spac | few narrow ite regula ed through | ✓ beds o ir on 85 nout. | e fine- | - hematite vasive in ium-graine - bands cr ding & oth bands. -minor thi green clay throughout | e modera fine- t d secti coss cut mer hema nly bed occasi | ate per- co med- ons. bed- tite ded onal | | | | | 0 |







| | | | يستحصيك | | DRILL | LOG | | | | | | | | SHE | ET N | 0. |
|------|----------|--------|---------|--|---|--|-----------------------------|----------------------------|--|---|--|------|-------|-------|------------|------|
| 100 | ATION | | | | | <u> </u> | ORTH | | 1 | EAST | | ELEV | ATION | | | T |
| DA | TE START | ED | | CO-ORDINATES DATE COMPLETED SURVEYS LITHOLOGY | <u> </u> | | | | | | | e | | 12 | | |
| | | | | TE COMPLETED SURVEYS | | | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO | • | | |
| | EPTH | l co | RE | DATE COMPLETED SURVEYS | | 1 | L | | | BQ | 677' | 5. | D.H.7 | 3-2 | | |
| From | То | Length | %Rec | DATE COMPLETED SURVEYS | | | ALTE | RATION | 1 | MINERA | LIZATION | F | | E/E L | | |
| 417' | 427' | 10' | 100% | Sandstone: As above, at 423.1'. | l¼" wide medium o | green, cl | ay rich | band | - ditto - hematite sent 417.5' | banding -419.6 | g ab- '. | | | | **** ***** | 0 |
| 427' | 437' | 10' | 100% | Sandstone: As above. 432.3'-433.3'. Also | Greenish-white, o 0.1" sandy mudstone | clay enri e bed (85 | cheđ sec) at 43 | tion 4.8'. | - ditto | | | | | | | 0 |
| 437' | 447' | 10' | 100% | Sandstone: As above. section 440.5'-440.8' | Greenish-light ma | aroon, cla | ıy enric | hed | - ditto - hematite 442'-443', 447'. - moderate- vasive hema 441', 441.5 | "mottle also 44 strong tite 43 '-442.3 | es" 16.5'- per- 18'3' | | | | | 1/10 |
| 447' | 457' | 10' | 100% | Sandstone: As above. Bedding regular at 85 | o Cross bedding 70 ^C . | over 85 | 'at 455 | .6'9'. | - ditto - thinly be clay genera conspicuous | dded gr lly mor | een e | | | | | 1/10 |
| 457' | 467' | 10' | 100% | Sandstone: Fg., li zones of medium maroo regular 85°. Very mi material. | ght maroon throughc n, closely spaced h nor interbedded fin | out with a mematite f me- to med | few ir: ands. ium-gra | regular Bedding ined | - hematite seminated t - 1"-2" wid closely spa bands occas out. - occasiona clay in min bedding. | weakly hroughc e secti ced hem ional t ional t l light or amou | dis- ut. ons of atite hrough- green nts on | | | | | 2/10 |







| <u></u> | | | | • | | DRILL | LOG | | | | | | | | eure | | ~ |
|---------|----------|--------------|------------|---|--|---|--|----------------------------------|-------------------------------|---|---|--|--|--|------------|-------|-----------|
| | • | ÷. | | | • . | | N | IORTH | | T | EAST | | ELEV | ATION | anco | | <u>U.</u> |
| LOO | ATION | | | | CO-OR | DINATES | | | | | | • | 1 | | : 7 | | 12 |
| DA. | TE START | ED | | DATE COMPLET | TED | CUDVEVE | | | 1.1.1 | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO | |
| | | | | an george standet Friedrichten | | 20HYCTS | | 1.00 | | | | | BQ | 677' | D. | D.H.7 | 8-2 |
| From | To | CO Length | RE WRCC | | | LITHOLOGY | | letter. | | ALTE | RATIO | N | MINERA | | STI | | IRE GATPH |
| 467' | 477' | 10' | 100% | Sandstone: present. | As above | 10' section. Gene | erally les | s hemat | ite | - As above | • | | | | | | 2/10 |
| 477' | 487' | 10' | 100% | <u>Sandstone:</u> 484.9'-485. | As above. 3'. | Greenish, thinly | , pedded c | lay con: | picuous | - As above - hematite 481', 482' - some crc hematite b | e mottle -484'. ess cutt ands. | s 480' | | | | | 1/10 |
| 487' | 497' | 10' | 100% | Sandstone: at 489', 489 Lenticular v 85° t.c.a. | As above. 9.8'-490.1 white clay | Greenish, thinly ', 491.6'-492.3', fragments at 489. | bedded ci 495.3'-49(7'. Beddi | lay cons 5', 496. ing regu | picuous 2'-497'. lar at | - commonly seminated a few 1"-2 of moderat closely sp - green be | weakly hematit "wide e hemat aced ba dded cl | dis- e with zones ite in nds. ay. | | | | | 1/10 |
| 497' | 507 ' | 10' | 100% | Sandstone: ous at 499.7 grained band | As above. 7'-500', 50 1 at 506.9 | Greenish-white c D1.6'-502', 504.3' is moderately her | lay enrich 6'. Fir matized. | ment co ne- to m | nspicu- edium- | - generall tite alt ⁿ subdued. - green cl ded throug occasional | y weak - bandi ay thin hout in occurr | hema- ng very ly bed- minor ences | - substantia] nated bedding 505.6', 505.7 506.6', 506.8 | L <u>tar</u> impreg- y at 504.1', 7', 506', 3'. | | | 2/10 |
| 507' | 517' | 10* | 100% | <u>Sandstone:</u> -509', 511.2 (1" wide - 8 509', 509.8' | As above. ?'4'; als 15 ⁰). 1/8' , 510.2', | Greenish-marcon (o medium green san ' - 1/2" white, f 516.6', 516.9'. | clay enric ndy-mudsto -g. sandst | hment a ne at 5 one cla | t 508.6' 12.7' sts at | -moderate in closely 508'-510.2 1" diam "mottles" 514'-515'. | hematiz spaced ' eter he 507'-50 | ation bands matite B', | | | | | 4/10 |





ر بدر المعالمة تقاصد



 \bigcirc DRILL LOG SHEET NO. NORTH EAST ELEVATION LOCATION CO-ORDINATES 9 12 DATE STARTED DATE COMPLETED HOLE SIZE TOTAL DEPTH · SURVEYS HOLE NO. D.D.H. 78-2 DEPTH CORE BQ 677' From To STRUCTURE Stepher Length %Rec LITHOLOGY ALTERATION MINERALIZATION F V/FI F/F Log Sandstone: As above. Narrow m.-g. beds - graded well sorted at 565.4', 565.6', 566.8'. Green mudstone & sandy mudstone - As above. 557' 567 beds (90°) 561.1'-.4', 561.8'-562.1'. Minor cut & fill frac-10' 100% ture at 561.1'. Green clay, c.-g. subangular fragments at 564.5', 565.1', 565.7'. Cross bedding on 70° at 565.8'. 2/10 Bedding regular 85°. Sandstone: As last 10' section. Bedding variable 70°-85°. Medium green muddy sandstone beds at 569'-.7', 571'-.2', - As above. 567' 577' 10' 576.4'. Angular c.-g. green-white clay fragments 570.1', 570.9 100% - concentric cross cut-571', 571.8', 574'-.3', 576.1', 576.7'. ting hematite banding 1/1d 567'-569', 574.8'-575.2' - intense hematite 575.3' (1" wide). Sandstone: F.-g. medium maroon in colour with numerous fineto medium-grained very narrow interbeds throughout. M.-g. - disseminated & banded 577' 5871 sections: 579'-.2', 582' (1"), 582.9' (2"), 584'-.5' (1"), 10' 100% hematite subcontinuous 585.5' (1"), 586.5'-587.1'. C.-g. section 586'-.2'. Green throughout. \$/10 muddy sandstone at 577'-.2', 579.2'-.4', 580.4'-.8', 582.1' - intensely hematized, (.02"). C.-g. clay fragment at 584.4'. Bedding regular 85°. vuggy porous sections 582' (1"), 582.9'-583.1', 585.4'-.6', 585.9'-586.1', 586.5'-587.1'. - green & white matrix clay weak in medium- to coarse-grained sections Sandstone: F.-g. light marcon with several narrow fine- to 587' 597' 10' medium-grained interbeds. Green muddy sandstone beds at 587.4' 100% - banded hematite 587.7" (2"), 588.4' (2"), 595.2'. Somewhat porous in appearance 590'-588.2'. 596'. C.-g. angular clay fragments at 589.7', 590.1', 591.4-.6' weak-moderate pervasive 593', 594.1'. Bedding 85°-90° regular. 2/10





| <u>U</u> | | | | | • | DRILL | LOG | | | | | | | | overs | 1 |
|----------|----------|--------|------|---|---|---|---|--|---|---|--|--|-------------------------|-------------|-----------------|-------------|
| 1 | | | | | 1 | | N | ORTH | | 1 | EAST | | FLEV | ATION | SHEET | <u>NO.</u> |
| LOC | ATION | | | | CO-05 | DINATES | | | na ngan | 1 | | | | | 10 | 12 |
| דאס | E STARTE | D | | DATE COMPLET | ED | | | 1 | 1 | | <u>г</u> | | | - | | |
| | | - | Τ | | | SURVEYS | | | | | | | HOLE SIZE | IUTAL DEPTH | NOLE N D.D.H | 10. 78-2 |
| D | EPTH | COR | E | | | | | -l | L | | L | | BŐ | 6// | STRUT | 11126 |
| From | To | Length | %Rcc | | • | LITHOLOGY | | | | ALTE | RATION | 2 | MINERA | LIZATION | F V/ | FIF/FI LCO |
| 597' | 607' | 10' | 100 | Sandstone: marcon in s 599', 602'- grained int tions at 60 to coarse-g 603.1'3', porous in a | LITHOLOGY andstone: Fg. light maroon in colour except light green- aroon in sections of disseminated clay enrichment: 597.1'- 99', 602'3', 605'-607'. Numerous narrow fine- to medium- rained interbeds throughout. Mg. well sorted, graded sec- ions at 603.6'-604', 606'-606.4'. Angular-lenticular fine- to coarse-grained clay fragments at 597.5', 598.3', 602.8', 03.1'3', 605'5', 606.3'. Bedding regular 85°-90° rather prous in appearance. andstone: As per last 10' section. Porous in appearance. reen clay enriched sections at 610'2', 615.4'. Green- range mud & iron ([±] hematite) rich sections 615.8'-616', 16.9'-617.3'. Graded bedding fg. to mg. over narrow ntervals. | - weakly tite. - intense hematite 602.2' (2 602.7' (3 - weak di matrix wh throughou | banded h pervasi 598.1' ("), 601. "), 603. sseminat ite clay t. | ema- ve 1"), 1'5', 6'(3") ed | | | | 2/10 | | | | |
| 607' | 617' | 10' | 1001 | Sandstone: Green clay orange mud 616.9'-617. intervals. | As per 1 enriched & iron ([‡] 3'. Grad | ast 10' section. E sections at 610'2 hematite) rich sec led bedding fg. to | Porous in 2', 615.4 9tions 615 9 mg. ov | appeara '. <u>Gree</u> 5.8'-616 /er narr | nce, n- , ow | - close sp banding. - intense: sections (608.9'-60 613', 613 614.3', 61 615.8'-61 - weak mat | paced her ly hemat: 608'6' 9.7', 61: .5'-614' 14.7'-61: 7'. trix cla | natite ized 2.9'- 5.2, | | | | 2/10 |
| 617' | 627' | 10' | 100% | Sandstone: interbeds (l" white to green maroo & several na lenticular o Bedding reg | Fg., w very narr light ma n clay en arrow gre clay frag ular 85. | with numerous fine- ow). Medium to dar roon bands. Section richment also 617'- en mudstone beds 62 ments 618.4', 619', | to medium k maroon on 621.1'- 617.3', 6 24'-627'. 623.4', | 4- grain with set .8' show 17.8', (Cg. a 626.1'- | ed veral vs light 523.4', angular .4'. | hematite close space strong-i vasive hematinuous the except 624 tinuous. note ora stain with sandstone 624'3', | e banding ced. intense p matite su hroughout 4'-627' d ange iron h hematiz & clay 626'. | y per- libcon- con- l sed | - specimen t 624.3'. | aken 624' - | | 2/10 |



| | • | | | | | | | | NORTH | | 1 | PACT | | | | anc | <u> </u> | .0. |
|------|----------|--------|------|---|---|---|--|--|--|--|---|---|--|------------------------------|----------------------|-----|----------|--------|
| LOO | ATION | | | CO-ORDINATES DATE COMPLETED SURVEYS | | - | EASI | | ELEV | ATION | | | | | | | | |
| DA | TE START | ED | | CO-ORDINATES DATE COMPLETED SURVEYS | - <u></u> | | | - | | | 1 | L | 12 | | | | | |
| | | 1. A | | DATE COMPLETED SURVEYS | 1.2.5 | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NC | k | | | | | |
| D | EPTH | Tcc |)RE | E SURVEYS | | | | | BQ | 677' | D. | D.H.7 | 8-2 | | | | | |
| From | To | Lengit | %Rec | SURVEYS E Vorec LITHOLOGY | | | | | | | ST | RUST | USE law | | | | | |
| | | | | | | | | | | | ALT | ERATIO | V | MINERA | LIZATION | F | V/51 | F/FILL |
| 627' | 637' | 10' | 100% | Sandstone: interbeds end grained with sections 11 sections 620 ments on be regular 85 | Fg. w Kcept 62 h fg. ; ht marco 3.1'3', lding pla | ith several 1 7'-628', 634 Interbeds al on to white , 633.4'6', anes, occasio | narrow 1 .1'-636 so dark in colou . Fg. onal thr | fine- to .8' fine- maroon i ur. Gree lenticu coughout. | medium-o to medi n colour n clay e lar clay Beddir | grained lum- . Fg. enriched frag- 9 | - closely tite band - subcont intense h 628.4', 6 - weak ma | spaced ing thro inuous s ematite 33'-636. trix cla | hema- ughout trong- 627'- 6'. ys. | | | | | 2/10 |
| 637' | 647' | 10' | 100% | Sandstone: also discont fill 642.8'- & intensivel section 645. Bedding regu | As above inuous i 643.3', y hemati 6'-647'. lar 85 [°] . | . Green cla rregular bed 644.6'-645.5 zed 642.8'-6 Light maro | ay enric ls, seam 5'. Pre 547'. F 500n in c | thed sect s, fragme dominant ine- to r olour 63 | ion 637' ents & f Ly dark nedium-g 7'-642.8 | 4' racture maroon rained '. | - hematite to 641.1' - moderate hematite 6 then inter & blood re | e banding e pervas 541.1'-64 sive man ed to 64 | g 637' ive 12.8' :oon | - specimen (643.1'. | aken 642.8'- | | | l/ft |
| 647' | 657' | 10' | 100% | Sandstone: grained inte grained. Gr clay enriched 652.9'-653.3 fracture fil: except green subangular fi fg. sandsto | Predomin rvals an een & red section ', 653.9 L & in in 654'-65: cagments one with | antly mg. d 647'~650' d clây enric ns 647.6' (m '-654.7'. C rregular seau 5'. Bedding 651', 652.3 hematite mo | with gr. mainly hment fr g.), (lay is) ms. Dan regular ' (1"), ttles). | aded fine fine- to rom 647'- 650'3', bedded, d rk marcon r 75°. C 653.8', | e- to ve; very fin 655'. (650.9'- issemina in colo :-g. and 656.8' (| ry fine- Green -651.5', ated bur, gular- (2" | - hematite intense th - green cl sericite? | <u>pervasi</u> roughout ay carri | ve es | specimens ta 657', 648'-6 | ken 656.2'- 48.5' | | | |
| 5571 | 667' | 10' | 100% | Sandstone & 1 667'. Sands diameter angu sandstone, an (?chlorite?se hematized 650 porous in app | <u>Bx</u> : F(tone brea ilar clas ad cg. pricite?) 3.3'5', pearance. | g. 657'-657. ccia 657.7'- sts of gray of subangular of rich sandy 657.7'-658 Bedding 80 | 7', 660 660' con green fi quartz c matrix. ' Mg 0° t.c.a | '-661.8'. nsists of ine- to m clasts in . Matrix g. sectio | Mg. ½" - 14 edium-gr green c and fra n hemati | 661.85 2" cained lay igments zed & | -strong pe tite as no 660.2'-667 - green al bx sericit | rvasive ted, als '. teration e? sauss | hema- o of aurite? | - specimen t 659.7'. | aken 659' - | | | 1 |



| | | | | | DRILL L CO-ORDINATES TE COMPLETED SURVEYS LITHOLOGY andstone: Predominantly mg. with a few als, particularly 676.1'-677'. Green clay 68.1', 669.6'-670.1', 662.3',666.1'-667'. aroon in colour 668'-672', 663.6'-664.8', range or green. Cg. sandatone clasts at | 1.00 | 100711 | | 1 | - | | | SHEE. | <u>r no</u> | <u>).</u> |
|----------|-------------|-----------------------------------|---------|---|--|--|--|-------------------|--|---------------------------|-----------|--|-------|-------------|-----------|
| LOCA | TION | n na se Star Star Star Star | | CO-ORDIN DATE COMPLETED | OPDINATES | <u>r</u> | IORTH | | EAST | | ELEV | ATION | 12 | |] ; |
| DAT | E START | ED | | CO-ORDI DATE COMPLETED Sandstone: Predominant vals, particularly 676. 668.1', 669.6'-670.1', marcon in colour 668'-e orange or green. Cg. | | | ГГ | | | | HOLE SIZE | TOTAL DEPTH | HOLE | NO. | 1_ |
| | | | | CO-OD DATE COMPLETED | SURVEYS | | | | | | во | 677' | 0.0 | .H78- | -2 |
| DE om | PTH To | COF | RE %Rec | | LITHOLOGY | | | | ALTERATION | | MINERA | 11747101 | STRU | | <u>RE</u> |
| | | | | | | | **** | - | ALIENATION | | MINERA | LIZATION | ┉┼╒╴╎ | V/51 P | F/F |
| 7* | 677' END | 10' | 100% | vals, particularly 668.1', 669.6'-670 maroon in colour 60 orange or green. | 676.1'-677'. Green .1', 662.3',666.1'-6 68'-672', 663.6'-664 Cg. sandatone clas | clay enri 67'. Main 8.8', other sts at 658. | chment at ly dark g wise ligh 4', 664.9 | 667'- rey t | nematite pervasiv strong in dark marc sections. minor banding green alt serici | te? | | | | | •• |
| | | | | | | | | | talc? | n Alt Maria (Maria) | | | | | |
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APPENDIX 3

Geological Logs kDH 78-3





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|------|-----------|------------|------|---|--|---|--|---|--|---|--|---|------|------------|-----------|
| | ATION | | | | | | N | JRTH | | EAST | ELEV | ATION | (· | - | 1 - |
| | CATION | | | | CO-01 | RDINATES | | | | <u>.</u> | | | 1 | • | 17 |
| | UL START | EU | | DATE COMPLETE | D | | | | | | HOLE SIZE | TOTAL DEPTH | HOL | : | |
| Nove | mber 3, 1 | 978 | 1 | November 8, 197 | 8 | SURVETS | | | | | BO | 0571 | D.C |).H. 7 | , 78-3 |
| | DEPTH | COI | RE | | | | | ~~~ | | | | 957 | ISTR | 0.570 | |
| From | To | Length | %Rec | l ₁ | | LITHOLOGY | | | ALT | ERATION | MINERA | LIZATION | F | V/FI | E/E1 |
| 0 | 203' | NQ 203' | 0% | Overburden: sand & small in large bou NQ. From 17 fg. white at 203.5'. | Unconse boulder lder of 7'-203' sandstor | olidated, white to r rs of sandstone. M white fg. sandsto a series of '4' to : ne, in part pervasiv | maroon, f V casing to one. Drill 3' diameter Vely hemati | -g. aeolian > 177' - stic - ahead to 21 - boulders of zed. Bedroc | - pervas ks tization l' ders. k | ive weak hema in some boul | tar inter mately 100' - fracture boulder 18 197'. | sected approxi in o/b fill tar in 5' also 187'- | | | ? |
| 203' | 207 ' | 3.5' | 88% | Sandstone: Well sorted. throughout. | Thinly Bedding | light marcon in cold and closely banded a regular 85-90 t. | our, compet hematite c.a. | ent, dense alteration | - closely tite band medium co | y spaced hema- ling-weak to oncentration. | | | | | 2/1 |
| 207' | 217' | 9.4' | 94% | Sandstone: A | above 214.2'- | 2. Major feature - 218.9'. Bedding 85 | o ^{total tar} | impregnatio | n - as abou bedding f at 203.4 | re with cross racture on O ^C • | - 17 tar im ding occurr 209.1', 214 tinuous tota 214.2'-217' - fracture | pregnated bed- ences 207'- ', 214.1', con al impregnatio fill tar 209.5 | | | |
| | | | | Reduce at 211 | ' from | NQ to BQ. Core los | s at 211'. | | | | 210' (5 [°]), 210,6'-211,2 (85 [°]). | 210.1' (90 [°]), 2 (5 [°]), 213.1' | | | |
| 217' | 227* | 10' | 100% | <u>Sandstone</u> : A 218.9' total | s above tar imp | . Very light marco regnated. Bedding | n in colou 85 ⁰ . | r except 217 | very su banding. | bdued hematit | e - pervasive, impregnation | , complete tar 1 217'-218.9' | | | |
| | | | | | | | | | minor gre at 226.7' | en bedded cla -227' | y - subcontinu spaced bands nated sandst 222'-223', 2 - minor impr rest of sect | ous closely s of tar impred cone 219'-221' 224'-226' regnations in tion. | 3 | | 2/1 |
| | | | | | | | | | | | | | | | |



| <u>()</u> / | | | | | DRILL | LOG | | | | | | love | e-91 (| |
|-------------|----------|--------|---------|---|---|--------------------------------------|------------------------|-----------------|---|--|--|-----------|--------------|-------------|
| LOC | ATION | • | | | M | N | ORTH | | EAST | ELEV | ATION | SHE | <u> </u> | <u>''</u> - |
| DAT | TE START | ED | | DATE COMPLETED | RUINATES | <u> </u> | <u> </u> | | | | | 2 | | 1 |
| | FOTU | 1 00 | | | SURVEYS | | | | | HOLE SIZE | TOTAL DEPTH | HOL D. | E NO | D. 78- |
| From | To | Length | ME %Rec | | LITHOLOGY | | | | ALTERATION | MINERA | 357 | STI | RUST | <u> </u> |
| 227 . | 237' | 10 | 100 | Sandstonet As about | - 101 | | | | | I MINERA | LIZATION | ᠆ᠮ᠆ | 1 <u>v/5</u> | F/F |
| | | | | complete tar impreg | e 10° section. Maj nation of sandstone | or feature 228'-233'. | is perv Beddin | asive g 85°. | - as above except wea pervasive hematite 23 - 237'. | <pre>k - fracture 5.8 (10⁰),233'. 234.2'4' 236'. -tar impreg 228'-229', complete, a 237.1'.</pre> | fill tar 228' -234' (10 [°]), (10 [°]), 235'- mated bedding 233' pervasive llso 236.7'- | | | |
| 237' | 247 | 10' | 1009 | Sandstone: As above 239'-242' light to m 85°. | e. White to light m medium maroon in col | maroon in c Lour. Bedd | olour exa ing regu | cept lar | - pervasive weak hema- tite 239'-242'. - subdued widely space hematite banding else- where. | - tar impre 237'2', 2 244.5', 244 - subcontin tion 245'-2 247'. | gnated bedding 44'1', 244.3 .7'. uous impregna- 46', 246.2'- | | | 2/1 |
| 247' | 257* | 9.8' | 98% | Sandstone: Fg., w complete tar impregn Bedding regular 85 | hite in colour. Ma ation of sandstone | ijor feature 247'-252.5 | e; pervas ', 254'-2 | ive, 55'. | - <u>no</u> hematite alterati | or - total tar 247'-252.5' - subcontim 252.2'-253. - minor else - fracture 247'-248', 254' (15 [°]), | <pre>impregnation , 254'-255' uous impregnat; 6', 255.2'7' awhere fill tar (10⁰) 251' (50⁰), 256.6' (5⁶).</pre> | on | | 2/0 |
| 57' | 267' | 10' | 100% | <u>Sandstone</u> : As above | 10' section. Bedd | ing 80 ⁰ -85 ⁰ | regular | • | - weak pervasive hema- tite 258'6', 266.6'- 266.9'. - very minor subdued hematite banding. | - fracture f 257', 258' .8', 263.8'- | fill tar (5 [°]) (20 [°]), 262.6'- -265'. | | | 2/1 |





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| 0/ | TE STARTE | ED | ÷ | DATE COMPLE | TED | SURVEYS | | | | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO | -J |
| | CD711 | T | | an an Said | | | | | an a | | | | BQ | 957' | D. | 9.H.7 | 8-3 |
| From | To | Length | NE %Rec | | | LITHOLOGY | | | | A1 70 | | • | | | STI | USTI | IAE Strop |
| | | the signal | 1 | | •••••••••••••••••••••••••••••••••••••• | | | | | | RATIO | | MINERA | LIZATION | F | V/FI | F/FI Lee |
| 267' | 277 • | 10' | 1005 | Sandstone: maroon in o 275.7'-277 | As above colour. M .9'. | 10' section. Bedd ajor feature comple | ling 80 [°] -8 ete tar im _l | 5 ⁰ . Lig pregnati | ht on | - weak per tite 267.2 270.3', 27 276'. - thinly b green clay ionally 27 | vasive '8', '0.9'-27 bedded m noted c 0.5'-27 | hema- 268.8'- 2', inor occas- 5'. | - tar impred ding 268.9' tinuous perv 277.9' with trol. - fracture f 271.3', 272. | nation of bed 269.7'. Convasive 275.7'- fracture con- fill tar 270.5 4'. | L | | 2/10 |
| 277' | 287' | 10' | 1001 | Sandstone: light marco ionally mir | Fg., m on. Weak nor throug | edium maroon in col green clay enrichme hout the section. | our except nt 279.3'- | - 278'-2 6' & o | 80' ccas- | - pervasiv hematite i maroon sec - sericite | e weak-m n light- tions. ? with c | nedium -medium :lay? | - complete t 277'-277.9', - fracture f (90 [°]), 281'- | ar impregnati 284.8'-285.1 111 tar 279' 281.7' (5°).2 | on • | | 3/10 |
| 287' | 297' | 10' | 100\$ | Sandstone: maroon muds medium-grai at 288.9'-2 295', 295.6 section 290 | Fg., m stone band ined well 289.2', 29 5'. Fine- 0.8'-292'. | edium to dark maroo s showing cut & fil sorted, graded mate 3.4' (1"-90 ⁰), 293. to medium-grained, Bedding regular 8 | n throughd 1 contacts rial - str 9'-294.1', strongly 5'-90'. | out. Gro with f ongly he 294.2' hematize | een and ine- to ematized 3', ed | - strong t vasive hem 289.2', 29 293.9'4' otherwise pervasive. - closely banding. | o intens atite 28 0.8'-292 , 296.7' weak to spaced h | 5e per- 38.2'- 2', -297', medium hematite | | | | | 1/10 |
| 297* | 307' | 10' | 100% | Sandstone: grained mat 85°. | Fg. wi cerial. W | th numeroug narrow nite to light maroo | beds of fi n in colou | ne- to m r. Bedd | nedium- ling | - pervasiv ate hemati 302.2'-303 306'. - weak clo hematite b | e weak-m te 297 ', 304.2 sely spa anding. | noder- 2', ''6', ced | | | | | 2/10 |







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DRILL LOG

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| | | | | | | SURVEYS | | and the second | | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO | |
| | FOTH | 1 60 | | T | | | | | | | | 1.20 | во | 957' |)). | D.H.7 | 18-3 |
| From | Te | Length | 10/ RAC | | and a star | LITHOLOGY | in the state | | | | | | - <u></u> | | ISTI | NUSTI | 125 1. |
| | 1 | T | 1/0110 | h | | LIINULUUI | | | na fili ta da se | ALTI | ERATIO | N | MINERA | LIZATION | F | V/FI | E/EI I |
| 307' | 317' | 10' | 100% | Sandstone: to medium-c 80°-90°. | Fg., 1 grained in | ight maroon in colo terbeds occasional | ur. Very throughou | narrow t. Bedd | fine- ling | - closely tite bands - some cro - Concentr 315.5'-316 | spaced throug oss cutt ic band 5', 316. | hema- hout ing ing 2'-317' | - fracture f 316.7'-317'. - specimen t 316.5'. | fill tar (5 ⁰) Taken 316'- | | | 2/10 |
| 317' | 327' | 10' | 100% | <u>Sandstone</u> : | As above | 10'. | | | | - ditt - concentr banding 32 | o ic hema 4.9'-32 | tite 7'. | - tar impreg 325.3'6'. | nated bedding | | | 2/10 |
| 327' | 337' | 10' | 100% | Sandstone: closely spa cutting & c on 80 -85. | Fg., m ced hemat rosscuttin | edium marcon throug ite banding which fo ng concentric to bec | nout with orms para. dding. Bo | charact llel to, edding r | eristic cross- egular | - closely bands also disseminat - concentr 328.3'-329 333.4'. | spaced weak-me ed hema ic band .2', 33 | hematit oderate tite. ing L'- | a | | • | • | 2/10 |
| 337' | 347 ' | 10' | 100% | Sandstone: cular mediu 340.4', 342 | Fg. As n- to coar .2', 342.7 | above 10' section. se-grained clay cla '', 344.6', 345', 34 | Bedding sts bedde 5.9'. | g 85 ⁰ . 2d at 34 | Lenti- O', | - as above - concentr ting hemat 339'-347'. | ic & cro ite band | osscut- ling | | | | • | 2/10 |
| 347 1 | 357* | 10' | 100% | Sandstone: throughout | Fg. As Bedding | aboye. Occasional 75-85. | minor gre | en bedd | ed clay | - as above - hematite distinct 3 - concentri 356.5'. | banding 52'-357' lc at 35 | less 5.3'- | | | | | 2/10 |
| 357' | 367 ' | 10' | 100% | <u>Sandstone</u> : Minor green | Fg. As clay enri | above though light chment 361'5'. B | maroon in edding 85 | o o | | - as above - hematite distinct. A moderate pe tions. | banding few we rvasive | less ak - sec- | | | | | 1/10 |



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| 100 | | | | | • | | | N | ORTH | | - | EAST | | ELEV | ATION | | | T |
| LUU | ATION | | | | CO-OF | DINATES | | | | | | | | | | . | 5 | 17 |
| UAI | C START | -D | | DATE COMPLET | TED | euny | | | | | | | 1 | HOLE SIZE | TOTAL DEPTH | L HOI | E NO | |
| | | | | n ta kana sa | | SURV | 215 | • | | | | - | | | | 5. | 0.H.7 | • /8-3 |
| DI | EPTH | CO | 36 | | | ••••• | | | | | | | | BŐ | 957' | | | |
| From | | Length | %Rec | | - | LITHOL | OGY | | | | ALTE | RATIO | N | MINERA | LIZATION | | Turel | Strong |
| 367' | 377' | 10' | 100% | Sandstone: thick at 37 Bedding 85 | Fg. As 0.4' also | above 10' minor gre | section. en clay e | Sandy m nrichment | uđstone 369.21 | bed .1" 4'. | - hematite ent but in - hematite conspicuou | e bandin distine "mott s 372'- | ng pres- ct. Les" -377'. | - fracture 1 370'4', 3 | Eill tar (0 [°]) 70.7'. | | 1 | 2/10 |
| 377' | 387' | 10' | 100% | <u>Sandstone</u> : in colour. | Fg. A Sandy mu | s above 10 dstone ban | ' section a 0.3" (9 | . Light r 0°) 384.1 | naroon | to white | - as above - hematite 383'. - moderate hematite 3 | mottle ly perv 85.2'-3 | es 377'- vasive 386.1'. | | | | | 2/10 |
| 387' | 397' | 10' | 100% | Sandstone: occasional Bedding reg | Fg. wi throughou ular 85 - | th narrow : t. Light 90°. | fine- to n to medium | medium-gra maroon in | nined ba | ands r. | - weak to vasive thr - hematite distinct. | moderat oughout bandir | e per- ng in- | | | • | | 3/10 |
| 397' | 407' | 10' | 100% | Sandstone: out. Mediu Cg. suban appearance | Fg. al m marcon gular cla throughou | ternating f in colour y fragments t. | fine- to r throughout at 402.8 | medium-gra t. Beddir 8'. Somew | ined th ng regul what por | hrough- lar 85 ⁰ . rous in | - moderate throughout intense he 398', 399. 401.8', 40 - weak mat semination medium-gra | pervas occasi matizat 6', 400 6.6'. rix cla in fin ined be | ive onal ion: 0.5', y dis- he- to ds. | | | | | 3/10 |
| 407 ' | 417' | 10' | 100% | Sandstone: out. As ab section, pr | Fg. al ove. Mind ominent 4 | ternating f or bedded c 13.1'7'. | fine- to m preen clay | nedium-gra y occasion | ined that thro | hrough bughout | - as above | | | | | | | 3/10 |











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| LOCA | ATION | | | | 00-000000 | | N | IORTH | | | EAST | 1 | ELEV | ATION | { | • | | |
| DAT | E START | Ð | | DATE COMPLETE | D CO-ORDINA | 125 | | 1 | 1 | | | | | | | 7 | | 17 |
| | | | | | | SURVEYS | | | | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO |). 78-3 | · · . |
| DE | ЕРТН | CO | RE | | ····· | | | 1 | L | | | | BQ | 957 | . ST | RUST | 10-3 | T |
| /013 | 1 10 | Length | 1%Rec | · · · · · · · · · · · · · · · · · · · | L17 | HOLOGY | | | | ALTE | RATION | 1 | MINERA | LIZATION | F | VIE | F/F | |
| 167' | 477' | 10' | 100% | Sandstone: 473', 475.5' Bedding 85 infilled wit | As above 10'. -477' otherwi except 474.5' h white clay | Medium marox se white to 1: -476', 70°-75' 468.9'. | on fg. 4 ight marco . Fractu | 67'-469' n in col re (mudc | , 470'- our. rack?) | - pervasiv hematizati maroon sec - banding - concentr 476'-477'. | e modera on in m tions 471'-47: ic band: | ate edium 3'. Lng | | | - | | 2/1 | 0 |
| 77' | 487 ' | 10' | 100% | Sandstone: 1 occasional the white, sandy 75 ⁰ -85 ⁰ . | Fg. with nam hroughout. Li mudstone bed | crow fine- to ght to medium (90°) at 485. | medium-gra n maroon th .4'. Bedd: | ained in hroughou ing varia | terbeds t. ኣ" able | - pervasiv erate hema - minor in tite bandi | e weak t tizatior distinct ng. | to mod- 1. : hema- | - tar impred 11 bands 44 10 bands 48 also 483.7' | ynated bedding 7.8'-479.5', 1.3'-482.5', | | | 2/1 | , e |
| 87' | 497' | 10' | 100% | <u>Sandstone</u> : P | As above 10' <u>s</u> | ection. Ligh | nt maroon i | in colour | r. | - ditto - some sub- banding - 492'-493'. | dued hem concentr | atite ic at | | | • | | 1/1 | d |
| ¥7' | 507' | 10' | 100% | Sandstone: F interbeds. I clast at 497. Bedding 80 -9 | Fg. with a f Light marcon i 5'. Green cl 90°. | ew fine- to m n colour thro ay lenticular | nedium-grai oughout. C fragment | ined narn 2g. hen at 503.3 | row natized 3'. | - pervasiv in thin clo bands. - concentr: 497.7'-498 | e weak h osely sp ic bandi .3',506' | ematite aced ng ~507'. | - narrow tar bed at 497.1 | impregnated | | | 0 | |
| 7. | 517' | 10' | 100% | <u>Sandstone</u> : A | As above 10' s | ection. Bedd | ing 85°. | | | - ditto - strong he 519.4'. | o ematite | at | | | | | 0 | + |





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| | TE START | | | co- | ORDINATES | | | | 4401 | | ELEV | ATION | | | 1. | |
| | IC JIANI | EU | | DATE COMPLETED | | | | | r | · · · · · · · · · · · · · · · · · · · | - | | | | | 7 |
| | | | | P | SURVEYS | | | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO | h | |
| From | To | | DRE | | 1 1 | | | | I | l | BQ | 957' | D. | D.H. ' | 78-3 | |
| | 1 | T | Tranec | | LITHOLOGY | | | ALTE | RATION | 1 | MINERA | LIZATION | STF | NU STI | <u>Tec</u> | SITTAR |
| 517' | 527' | 10' | 1001 | Sandstone: Predom 517.8' with numero marcon in colour. Bedding 75 ⁰ -85 ⁰ . | inantly fine- to mediu us interbeds of fg. Minor green clay enri | m-grained starting material. Very ligh chment at 521.4',523 | it her .7' - s at | weak sem matite h strong h 519.4'. | nicontin panding. pematite | uous alt ⁿ | - minor bed with tar at | ding impregnat 526.1'. | ed | V/51 | 5/F1 3/10 | |
| 527 ' | 537' | 10' | 100% | <u>Sandstone</u> : As abo 529.9', 530.7', 53 Fracture (mudcrack: 80 -85°. | ve. Minor green clay D.9' (1"). Mg. bed P) fill green clay 536 | enrichment at 527' at 534.1' (1"). .9'. Bedding regula: | 2', - w tit clo | veak per te throu selý sp | vasive l ghout as aced bar | nema- s nds, | - specimen t 534.6'. | aken 534'- | | | 2/10 | |
| 537' | 547' | 10' | 100% | Sandstone: As abov 540.5' (1"), 542' (mudstone bed 538.6' Bedding 75°-85°, v section. | <pre>/e. More mg. bands a 1"), 544.2' (3"). Set (1"). Green clay end /ery light marcon in co</pre> | at 538'3', 539.5'- ricite rich sandy richment 545'3'. Dlour throughout | .7' - a -"s cla: - s of r | s above ericite Y. trong he mg. ba | " with g ematizat ands. | reen ion | | | | | 2/10 | |
| 547' | 557' | 10' | 100% | <u>Sandstone</u> : As abov -550.8', 553.8'-554 clay enrichment 547 551.4' (2" - 90°). out. | e. More mg. section .1', 556.3 (1"), 556.8 '-547.8', 554.1'. Gre Bedding 75°-80°. Ver | ns at 548'-549', 549. 3' (1"). Minor green 9en sandy mudstone 9 light maroon throu | 9' - pe tite band gh - mi clay out. | ervasive e in clo ds; rath inor bed y occasi | e weak h osely sp ner indi ided grea onal th | ema~ aced stinct en rough- | | | | | 2/10 | |
| 557' | 567' | 10' | 100% | Sandstone: As above clay enrichment 561 stone band at 563.9 beds 566'-567'. Bed | e but greater fg. co .8'-562', 565.4' (1") ' (¼", 90'). More m dding 85°. | mponent. Minor gree also green sandy mud g. with fg. inter- | n - in of 1 | ditto ntense h L" mg. | ematizat bed 56] | ion 1.7'. | - tar impregr l" band at 56 | ated bedding 4.9'. | | 2 | /10 | |
| | | | | | | | | | | | | | | | | |



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ويويد العريدية

| | | | | | | | VORTH | | <u> </u> | EAST | | ELEV | ATION | | |
|-----------|-------|------|---|---|--|---|--|--|--|---|-----------------------------------|------------------------------|------------------------|------------|--------------|
| LOCATION | | | | CO-OR | DINATES | | | | | | | | | 9 | |
| DATE STAR | TED | | DATE COMPLI | ETED | | | | <u> </u> | | T | 1 | HOLE SIZE | TOTAL DEDTU | | |
| DEPTH | | RF | | | SURVEYS | | | | | | | BQ | 957' | 0.0 D.D | NO. 1178- |
| From Tc | Lengt | %Rec | | | LITHOLOGY | | | | | FRATIO | N | 1111000.1 | • • • | STRU | istur |
| 567' 577' | 10' | 1009 | Sandstone 567.7', 5 Bedding 7! | : As above. 75'-577'. M 5 ⁰ -85 ⁰ . | Medium maroon m Ioderate green cla | ore mg. y enrichme | sections ent 569.4 | 567'- '-569.8' | - pervasiv tite excep strong in - sericite sections. | ve weak pt moder mg. s e? in c] | hema- ate- sections ayly | | | F | 1/F1 F |
| 577' 587' | 10' | 100% | Sandstone: interbedde section 58 | Predomina d narrow f. 0.1'-582.3' | ntly mg., medium -g. bands. Fg. , also green sandy | m maroon i green cla y mudstone | n colour y enriche 578.9' | with ed (2"). | - pervasiv strong hem sections. - sericite - matrix c sections. | ve moder matite i e in cla clay in | ate- n mg. y? mg. | - fracture f 577'-577.6' | fill tar at (5) | | |
| 587' 597' | 10' | 100% | Sandstone: Minor gree 596.9' (2" Bedding re .9'. Medi rather por | Predomina n clay enri) green sam gular 80°. um marcon ti ous in appea | ntly mg. with in chment 589.8' (1") dy mudstone with Medium- to coarse nroughout. Mg. arance. | nterbedded), 592.3'- ??? irregu =-grained sections o | fg. ba .7', 593' ular cont section 5 well sort | ands. '2'; cacts. 598.6'- ced, | - As above | | | - specimen t | aken 492.3' | 5". | 3 |
| 597' 607' | 10' | 100% | Sandstone: occasional mudstone 59 clasts at (| As above : throughout. 98.3'9' al 506.1'. | lO' section. Mino Maroon-green he lso 603' (1"), 604 | or green c ematized mu 1.3'-604.8 | lay enric Idstone & '. Green | chment sandy clay | - as above | • | | - tar impreg 4 bands 600. | nated bedding 1'4'. | | |
| 507' 617' | 10' | 100% | Sandstone: marcon muds colour thre | As above. stone & sand bughout. Be | Numerous 1"-3" w ly mudstone throug adding regular 85 | ride beds c hout. Mec | of green- lium maro | dark on in | - moderate vasive hema throughout above & be beds. | -strong atizatic - inter low muda | per- on ise itone | | | | 4 |


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DRILL LOG

| CATION | 1990 - Barrison Barrison, 1990 - Barrison Barrison, 1990 - Barrison Barrison, 1990 - Barrison, 1990 - Barrison, | | | | | (N | INDTU | | | | | | | | | · · · | |
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| TE START | ED | | DATE COMPLE | TED | DINATES | | T | 1 | | | • • • • • • • • • • • • • • • • • • • | | | | 10 | 17 | |
| | | | | | SURVEYS | | 1.19 | | | E E | 1 | HOLE SIZE | TOTAL DEPTH | HOI | .E N | D. | |
| DEPTH | l cc | DRE | 1 | | | • • • | | | | | 1 · · · | во | 957' | ່ ວ | . о. н. | 78-3 | |
| To | Length | %Rec | | | LITHOLOGY | | | N _{a M} ara | | | | | | IST | RUST | 115 6 1. | - |
| | | P | | | | | | | ALTE | ERATIO | N | MINERA | LIZATION | F | TV/F | F/Fil 1 | 4e |
| 627 • | 10' | 1001 | grained wit 619.1'6', enrichment (60°-70°). | Mg. 61 h green-m 621.1' (625.5'7 | 7.4'-619.1' otherwi aroon sandy mudston 1"), 621.4'9', 62 '. Bedding 85 [°] -90 [°] | se fine- e beds at 3.8'-624. , except (| to mediu 617.1'- L'. Gre 521.9'-6 | m- .4', en clay 23.2' | - weak to vasive hem except int immediate1 mudstone b - sericite | moderate atizatic ense in y adjace eds. with c] | e per- on & ent Lay? | | | | | 3/10 | |
| 637' | 10'. | 100% | Sandstone: (siltstone?) 635.3'. Fin on 85°-90°. | Predomina) beds at ne- to med | antly fg., with sa 627.3'-628.3', 631. lium-grained 635.3'- | andy mudst 9'-633.7' 637'. Be | one • Mg dding r | . 633.7 ¤gular | - moderate throughout intense her mg. secti - hematite 630.2'. | pervasi except matizati lons. mottlin | ve strong on in g 630'- | - bedding imj tar 633.7'4 | pregnated with B'. | 1 | | 4/10 | |
| 647' | 10' | 100% | Sandstone: colour excer 637.9'-638.3 90°. Cut a | Predomina ot <u>mg. 6</u> ', 638.8' green cla | ntly fine- to mediu 42.9'-647' & 637'-6 -639' sandy green m y infill at 639.3'. | m~grained 37.7' dar udstone b | marcon k marcor eds. Be | in 1 anđ edding | - strong to tization in tions & oth to moderate |) intens 1 mg. Merwise 9 pervas | e hema- sec- weak ive. | - (tar impreg pected 642.9' hematite.) | nation sus- -647' pervasi | ve | | 3/10 | 1 |
| 657' | .10' | 100% | Sandstone: mg. & stro sections are 10' section substantial regular 85 ⁰ . | Predomina ngly hema very fri well sort green cla | ntly fg. to very tized 648.3'7', 6 able due to intense ed with gradational / enrichment (bedded | fg. thro 51.8'-652 hematizat contacts 1) 649'-65 | Dughout 2'. M. ion. W Moder 51.3'. B | except -g. hole ate - edding | - intense h mg. secti - sericite - Mg. sec porous in a | ematite ons. with cla tions ra ppearanc | in ay? ather ce. | | | | | 3/10 | and the second se |
| 667' | 101 | 100% | Sandstone: to medium-gra except light Bedding regul | Predominar ained mate green wit lar 80 -90 | htly fg. with very rial 660.8'-663'. h moderate clay end | / narrow h Light gre cichment 6 | eds of y through 63.4' | fine- ghout h | weak diss nematite th | eminated roughout | | - fracture fi 564.2'. | 11 tar 663.9'- | | | 3/10 | |
| |)EPTH To 627' 637' 637' 647' 657' 667' | JEPTH CC To Length 627' 10' 637' 10' 647' 10' 647' 10' 657' 10' 657' 10' 657' 10' | CORRE To Longth 70 Longth 627' 10' 637' 10' 637' 10' 647' 10' 647' 10' 657' 10' 100% 657' 10' 100% 657' 10' 100% 657' 10' | DATE COMPLEDATE COMPLEToLength $\frac{9}{6Rec}$ 627'10'100%Sandstone: grained with 619.1'6', enrichment (60°-70°).637'10'100%Sandstone: (siltstone? G35.3'. Fin on 85°-90°.647'10'100%Sandstone: colour except 637.9'-638.3 90°. Cut & 90°. Cut &657'10'100%Sandstone: colour except 637.9'-638.3 90°. Cut & sections are 10' section substantial regular 85°.667'10'100%Sandstone: to medium-gri except light Bedding regular | DATE COMPLETED DEPTH CORE To Length %Rec 627' 10' 10' 100% Sandstone: Mg. 61 grained with green-m 619.1'6', 621.1' (enrichment 625.5'7 (60'-70'). 637' 10' 10' 100% Sandstone: Predomina (siltstone?) beds at 637.9' 10' 10' 100% Sandstone: Predomina colour except mg. 6 637.9'-638.3', 638.8' 90'. Cut & green cla 657' 10' 100% Sandstone: Predominat mg. & strongly hema sections are very friat 10' section well sorte substantial green clay regular 85'. 667' 10' 100% Sandstone: Predominat to medium-grained mate except light green wit Bedding regular 80'-90 <td>DATE COMPLETED SURVEYS DEPTH CORE LITHOLOGY To Length %ARC LITHOLOGY 627' 10' 100s Sandstone: Mg. 617.4'-619.1' otherwill grained with green-maroon sandy mudston 619.1'6', 621.1' (1"), 621.4'9', 62 enrichment 625.5'7'. Bedding 85'-90' (60'-70'). 637' 10' 100s Sandstone: Predominantly fg., with satistation?) beds at 627.3'-628.3', 631. 635.3'. Fine- to medium-grained 635.3'. on 85'-90'. 647' 10' 100s Sandstone: Predominantly fine- to mediu colour except mg. 642.9'-647' & 637'-66 637.9'-638.3', 638.8'-639' sandy green m.90'. Cut & green clay infill at 639.3'. 647' 10' 100s Sandstone: Predominantly fg. to very mg. & strongly hematized 648.3'7', 6 sections are very friable due to intense 10' section well sorted with gradational substantial green clay enrichment (bedded regular 85'. 667' 10' 100s Sandstone: Predominantly fg. with very for medium-grained material 660.8'-663'. except light green with moderate clay enrichment (bedded regular 85'.</td> <td>DATE COMPLETED SURVEYS DEPTH CORE LITHOLOGY 627' 10' 100s Sandstone: Mg. 617.4'-619.1' otherwise fine- grained with green-marcon sandy mudstone beds at 619.1'6', 621.1' (1'', 621.4'-9', 623.8'-624.2 enrichment 625.5'7'. Bedding 85'-90', except 6 (60'-70'). 637' 10' 100s Sandstone: Predominantly fg., with sandy mudst (siltstone?) beds at 627.3'-628.3', 631.9'-633.7' 635.3'. Fine- to medium-grained 635.3'-637'. Be on 85'-90'. 647' 10' 100s Sandstone: Predominantly fine- to medium-grained colour except mg. 642.9'-647' & 637'-637.7' dar 637.9'-638.3', 638.8'-639' sandy green mudstone b 90''. Cut & green clay infill at 639.3'. 657' 10' 100s Sandstone: Predominantly fg. to very fg. throw mg. & strongly hematized 648.3'7', 651.8'-637.5' substantial green clay infill at 639.3'. 667' 10' 100s Sandstone: Predominantly fg. to very fg. throw mg. & strongly hematized 648.3'7', 651.8'-652.3' substantial green clay enrichment (bedded) 649'-65 regular 85'. 667' 10' 100s Sandstone: Predominantly fg. with very narrow hematized to medium-grained material 660.8'-663'. Light gree except light green with moderate clay enrichment 6 Bedding regular 80''-90''.</td> <td>DATE COMPLETED SURVEYS DEPTH CORE LITHOLOGY 627' 10' 100s Sandstone: Mg. 617.4'-619.1' otherwise fine- to mediu grained with green-marcon sandy mudatone beds at 617.1'- 619.1'6', 621.1' (1"), 621.4'9', 623.8'-624.1'. Green enrichment 625.5'7'. Bedding 85°-90°, except 621.9'-6 (60°-70°). 637' 10' 100s Sandstone: Predominantly fg., with sandy mudatone (siltstone?) beds at 627.3'-628.3', 631.9'-633.7'. Mg 635.3'. gine- to medium-grained 635.3'-637'. Bedding re on 85°-90°. 647' 10' 100s Sandstone: Predominantly fine- to medium-grained marcon colour except mg. 642.9'-647' s 637'-637.7' dark marcor 637.9'-638.3', 638.8'-639' sandy green mudatone beds. Be 90°. Cut & green clay infill at 639.3'. 657' 10' 100s Sandstone: Predominantly fg. to very fg. throughout mg. 6 strongly hematized 648.3'7', 651.8'-652.2'. M. sections are very friable due to intense hematization. W 10' section well sorted with gradational contacts. Moder substantial green clay enrichment (bedded) 649'-651.3'. B regular 85°. 667' 10' 100s Sandstone: Predominantly fg. with very narrow beds of to medium-grained material 660.8'-663'. Light grey throw except light green with moderate clay enrichment 663.4'3 Bedding regular 80°-90°.</td> <td>DATE COMPLETED SURVEYS SEPTH CORE LITHOLOGY To Length %,Rec LITHOLOGY 627' 10' Sandstone: Mg. 617.4'-619.1' otherwise fine- to medium- grained with green-marcon sandy mudstone beds at 617.1'4', 619.1'6', 621.1' (1"), 621.4'9', 623.8'-624.1'. Green clay enrichment 625.5'7'. Bedding 85'-90', except 621.9'-623.2' 637' 10' 100* Sandstone: Predominantly fg., with sandy mudstone (siltstone?) beds at 627.3'-628.3', 631.9'-633.7'. Mg. 633.7' 635.3'. Fine- to medium-grained 635.3'-637'. Bedding regular on 85'-90'. 647' 10' 100* Sandstone: Predominantly fine- to medium-grained marcon in colour except mg. 642.9'-647' & 637'-637.7' dark marcon and 637.9'-63.3', 638.0'-639' sandy green mudstone beds. Bedding 90°. Cut & green clay infill at 639.3'. 657' 10' 100* Sandstone: Predominantly fg. to very fg. throughout except sections are very friable due to intense hematization. Whole 10' section well sorted with gradational contacts. Moderate - substantial green clay enrichment (bedded) 649'-651.3'. Bedding règular 85'. 667' 10' 100* Sandstone: Predominantly fg. with very narrow beds of fine- to medium-grained material 60.8'-63'. Light grey throughout except light green with moderate clay enrichment 663.4'9'. 667' 10' 100* Sandstone: Predominantly fg. with very narrow beds of fine- règular 80'-90'. <td>DATE COMPLETED SURVEYS JEPTH CORE LITHOLOGY ALTI 627' 10' 1000 Sandstone: Mg. 617.4'-619.1' otherwise fine- to medium- grained with green-marcon sandy mudstone beds at 617.1'4', enrichment 625.5'7'. Bedding 85°-90°, except 621.9'-624.1'. Green clay except int (60°-70°). - weak to vasive here except int (60°-70°). 637' 10' 1008 Sandstone: Predominantly fg., with sandy mudstone (siltstone?) beds at 627.3'-638.3', 631.9'-633.7'. Mg. 633.7' 635.3'. gine- to medium-grained 635.3'-637'. Bedding regular on 85°-90°. - moderate throughout and stone beds at 63'.3'-637''. Bedding regular on 85°-90°. 647' 10' 1008 Sandstone: Predominantly fine- to medium-grained marcon in colour except mg. 642.9'-647' s 637'-637'.7' dark marcon and f3.9'-638'.3', 638.6'-639' sandy green mudstone beds. Bedding 90'. Cut & green clay infill at 639.3'. - strong to tization if tions & cut to moderate 657' 10' 1008 Sandstone: Predominantly fg. to very fg. throughout except mg. secti to moderate - intense he matized 648.3'7', 651.8'-652.2''. Mg. mg. secti to moderate 657' 10' 1008 Sandstone: Predominantly fg. to very fg. throughout except mg. secti to medium-grained matized 648.3'7', 651.8'-652.2''. Mg. sections are very friable due to intense hematization. Whole sections are very friable due to intense hematization. Whole sections are very friable due to intense hoderate - substantial green clay enrichment (bedded) 649'-651.3'. Bedding vocus i</td><td>Interview Date completed SURVEYS Image: Straight of the straigh</td><td>DATE COMPLETES SURVEYS 12P7H CORE LITHOLOGY ALTERATION 627' 10' Sandstone: Mg. 617.4'-619.1' otherwise fine- to medium- grained with green-marcon sandy mudstone beds at 617.1'4', enrichment 625.5'7'. Bedding 85°-90°, except 621.9'-623.2' - weak to moderate per- vasive hometization except index of 25.5'7'. Bedding 85°-90°, except 621.9'-623.2' 637' 10' 100* Sandstone: Predominantly fg., with sandy mudstone (siltstone?) beds at 627.3'-628.3', 631.9'-633.7'. Mg. 633.7' - moderate pervasive intense hematization in mg. sections. - hematite mottling 630- 630.2'. 647' 10' 100* Sandstone: Predominantly fine- to medium-grained marcon in 523.9'-638.3', 630.8'-639' sandy green mudstone beds. 90'. Cut & green clay infill at 639.3'. - strong to intense hematization in mg. sections. - hematite mottling 630- 630.2'. 647' 10' 100* Sandstone: Predominantly fine- to medium-grained marcon in 532.9'-638.3', 630.8'-639' sandy green mudstone beds. Bedding 90'. Cut & green clay infill at 639.3'. - strong to intense hematite tions & otherwise weak to moderate pervasive. 657' 10' 100* Sandstone: Predominantly fg. to very fg. throughout except sections are very friable due to intense hematite. - sections. - sections. - sections rather weak disseminated to moderate pervasive. 657' 10' 100* Sandstone: Predominantly</td><td>Difference Difference SURVEYS HOLE SIZE 12EPTH CORE LITHOLOGY ALTERATION MINERA 627' 10' 100 Sandstone: Mg. 617.4'-619.1' otherwise fine- to medium- fined with green-marcon sandy mudatone beds at 617.1'-61', Green elay complement for the sandstone: Predominantly fg., with sandy mudatone (60'-70'). - weak to modorate per- vasive hematization (60'-70'). - weak to modorate per- vasive hematization (60'-70'). 637' 10' 100* Sandstone: Predominantly fg., with sandy mudatone (53.3'). pine- to medium-grained 635.3'-637.'. Mg. 633.7' throughout except strong on 85°-90°. - moderate pervasive - moderate pervasive - moderate pervasive - moderate pervasive - sections hematite motiling 630' 630.2'. 647' 10' 100* Sandstone: Predominantly fine- to medium-grained marcon in collour except in-g. 642.9'-647' & 637'-637.7' dark marcon and 90''. Cut & green clay infill at 639.3'. - strong to intense hematites in mg. sections hematite motiling 630' 630.2'. 657' 10' 100* Sandstone: Predominantly fg. to very fg. throughout except - substantiag green clay infill at 639.3'. - intense hematite in mg. sections escitors at every friable due to intense hematite in mg. sections to moderate pervasive (tar impre- perced 642.9' N-G. sections at here substantiag green clay enrichment (bedded) 649'-651.3'. Bedding 'Ng. sections at here process in appearance. 657' 10' 100* Sandstone: Pr</td><td>SURVEYS NOLE SIZE TOTAL DEPTH 120711 LOAPLETED SURVEYS NOLE SIZE TOTAL DEPTH 120711 Longh 7/58et LITHOLOGY ALTERATION MINERALIZATION 627' 10' LONS Sandstone: M.G.E. SIZE TOTAL DEPTH 627' 10' LONS Sandstone: M.G.E. SIZE Value NUNERALIZATION 627' 10' LONS Sandstone: F.G.S.S.T 7.'. modulates et al. Size - weak to modurate pervasive except intense in a immediately adjacent mudatone bads. - service with elayr 637' 10' LONS Sandstone: Predominantly fg., sill, 9'-633, 7' M.G.E. Size - bedding imprognated with elayr 637' 10' LONS Sandstone: Predominantly fgg. N. VII Sandy mudatone - moderate pervasive throughout except extrong the cission in mg. sections: - assettions: - assettions: - assettion subscription in ag. sections: - assettions: - assettions: - assettion subscription subscription in ag. sections: - assettions: - assettion subscription subscription subscription subscription subscription in ag. sections: - assettions: - assettion subscription subscription subscription subscription in ag. sections: - assettion subscriptis sections and pervasive - (ter impregnation subscripo</td><td>Summer DATE COMPLETED SURVEYS POLE STE TOTAL DEPTH HOLE STE TOTAL DEPTH TOTAL DEPT</td><td>Summer Durit COMPLETED SURVEYS MOLE SIZE TOTAL DEPTH NOLE SIZE 101 Loop Sandstone: Mq. 617.4'-619.1' otherwise fine- to medium- grained with m-q. 617.4'-619.1' otherwise fine- to medium- grained with m-q. 617.4'-619.1' otherwise fine- to medium- grained with m-q. 617.4'-619.1' otherwise fine- to medium- encychaent 625.5'-7''. Bedding 85'-90', except 621.9'-632.2' ALTERATION MINERALIZATION Fine- transfer for the second second</td><td>Introduct DNR. COMPLETED SURVEYS HOLE SIZE TOTAL DEFTH NOLE SIZE TOTAL DEFTH NOLE NO. 127 Lenghh %/mei LITHOLOGY ALTERATION MINERALIZATION STRUTURE Tom 627 10° 100 Sandstone: Mg. 617.41-619.11 'otherwise bids at 0.11-4', waive headstaintain -waive headstaintain STRUTURE Tom 637 10° 100 Sandstone: Predominantly fg., with sandy mudstone -waive headstaintain -waive headstain -waiv</td></td> | DATE COMPLETED SURVEYS DEPTH CORE LITHOLOGY To Length %ARC LITHOLOGY 627' 10' 100s Sandstone: Mg. 617.4'-619.1' otherwill grained with green-maroon sandy mudston 619.1'6', 621.1' (1"), 621.4'9', 62 enrichment 625.5'7'. Bedding 85'-90' (60'-70'). 637' 10' 100s Sandstone: Predominantly fg., with satistation?) beds at 627.3'-628.3', 631. 635.3'. Fine- to medium-grained 635.3'. on 85'-90'. 647' 10' 100s Sandstone: Predominantly fine- to mediu colour except mg. 642.9'-647' & 637'-66 637.9'-638.3', 638.8'-639' sandy green m.90'. Cut & green clay infill at 639.3'. 647' 10' 100s Sandstone: Predominantly fg. to very mg. & strongly hematized 648.3'7', 6 sections are very friable due to intense 10' section well sorted with gradational substantial green clay enrichment (bedded regular 85'. 667' 10' 100s Sandstone: Predominantly fg. with very for medium-grained material 660.8'-663'. except light green with moderate clay enrichment (bedded regular 85'. | DATE COMPLETED SURVEYS DEPTH CORE LITHOLOGY 627' 10' 100s Sandstone: Mg. 617.4'-619.1' otherwise fine- grained with green-marcon sandy mudstone beds at 619.1'6', 621.1' (1'', 621.4'-9', 623.8'-624.2 enrichment 625.5'7'. Bedding 85'-90', except 6 (60'-70'). 637' 10' 100s Sandstone: Predominantly fg., with sandy mudst (siltstone?) beds at 627.3'-628.3', 631.9'-633.7' 635.3'. 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Light grey throw except light green with moderate clay enrichment 663.4'3 Bedding regular 80°-90°. | DATE COMPLETED SURVEYS SEPTH CORE LITHOLOGY To Length %,Rec LITHOLOGY 627' 10' Sandstone: Mg. 617.4'-619.1' otherwise fine- to medium- grained with green-marcon sandy mudstone beds at 617.1'4', 619.1'6', 621.1' (1"), 621.4'9', 623.8'-624.1'. Green clay enrichment 625.5'7'. Bedding 85'-90', except 621.9'-623.2' 637' 10' 100* Sandstone: Predominantly fg., with sandy mudstone (siltstone?) beds at 627.3'-628.3', 631.9'-633.7'. Mg. 633.7' 635.3'. Fine- to medium-grained 635.3'-637'. Bedding regular on 85'-90'. 647' 10' 100* Sandstone: Predominantly fine- to medium-grained marcon in colour except mg. 642.9'-647' & 637'-637.7' dark marcon and 637.9'-63.3', 638.0'-639' sandy green mudstone beds. Bedding 90°. Cut & green clay infill at 639.3'. 657' 10' 100* Sandstone: Predominantly fg. to very fg. throughout except sections are very friable due to intense hematization. Whole 10' section well sorted with gradational contacts. Moderate - substantial green clay enrichment (bedded) 649'-651.3'. Bedding règular 85'. 667' 10' 100* Sandstone: Predominantly fg. with very narrow beds of fine- to medium-grained material 60.8'-63'. Light grey throughout except light green with moderate clay enrichment 663.4'9'. 667' 10' 100* Sandstone: Predominantly fg. with very narrow beds of fine- règular 80'-90'. <td>DATE COMPLETED SURVEYS JEPTH CORE LITHOLOGY ALTI 627' 10' 1000 Sandstone: Mg. 617.4'-619.1' otherwise fine- to medium- grained with green-marcon sandy mudstone beds at 617.1'4', enrichment 625.5'7'. Bedding 85°-90°, except 621.9'-624.1'. Green clay except int (60°-70°). - weak to vasive here except int (60°-70°). 637' 10' 1008 Sandstone: Predominantly fg., with sandy mudstone (siltstone?) beds at 627.3'-638.3', 631.9'-633.7'. Mg. 633.7' 635.3'. gine- to medium-grained 635.3'-637'. 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Bedding vocus i</td> <td>Interview Date completed SURVEYS Image: Straight of the straigh</td> <td>DATE COMPLETES SURVEYS 12P7H CORE LITHOLOGY ALTERATION 627' 10' Sandstone: Mg. 617.4'-619.1' otherwise fine- to medium- grained with green-marcon sandy mudstone beds at 617.1'4', enrichment 625.5'7'. Bedding 85°-90°, except 621.9'-623.2' - weak to moderate per- vasive hometization except index of 25.5'7'. Bedding 85°-90°, except 621.9'-623.2' 637' 10' 100* Sandstone: Predominantly fg., with sandy mudstone (siltstone?) beds at 627.3'-628.3', 631.9'-633.7'. Mg. 633.7' - moderate pervasive intense hematization in mg. sections. - hematite mottling 630- 630.2'. 647' 10' 100* Sandstone: Predominantly fine- to medium-grained marcon in 523.9'-638.3', 630.8'-639' sandy green mudstone beds. 90'. 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Cut & green clay infill at 639.3'. - strong to intense hematite tions & otherwise weak to moderate pervasive. 657' 10' 100* Sandstone: Predominantly fg. to very fg. throughout except sections are very friable due to intense hematite. - sections. - sections. - sections rather weak disseminated to moderate pervasive. 657' 10' 100* Sandstone: Predominantly</td> <td>Difference Difference SURVEYS HOLE SIZE 12EPTH CORE LITHOLOGY ALTERATION MINERA 627' 10' 100 Sandstone: Mg. 617.4'-619.1' otherwise fine- to medium- fined with green-marcon sandy mudatone beds at 617.1'-61', Green elay complement for the sandstone: Predominantly fg., with sandy mudatone (60'-70'). - weak to modorate per- vasive hematization (60'-70'). - weak to modorate per- vasive hematization (60'-70'). 637' 10' 100* Sandstone: Predominantly fg., with sandy mudatone (53.3'). pine- to medium-grained 635.3'-637.'. Mg. 633.7' throughout except strong on 85°-90°. - moderate pervasive - moderate pervasive - moderate pervasive - moderate pervasive - sections hematite motiling 630' 630.2'. 647' 10' 100* Sandstone: Predominantly fine- to medium-grained marcon in collour except in-g. 642.9'-647' & 637'-637.7' dark marcon and 90''. Cut & green clay infill at 639.3'. - strong to intense hematites in mg. sections hematite motiling 630' 630.2'. 657' 10' 100* Sandstone: Predominantly fg. to very fg. throughout except - substantiag green clay infill at 639.3'. - intense hematite in mg. sections escitors at every friable due to intense hematite in mg. sections to moderate pervasive (tar impre- perced 642.9' N-G. sections at here substantiag green clay enrichment (bedded) 649'-651.3'. Bedding 'Ng. sections at here process in appearance. 657' 10' 100* Sandstone: Pr</td> <td>SURVEYS NOLE SIZE TOTAL DEPTH 120711 LOAPLETED SURVEYS NOLE SIZE TOTAL DEPTH 120711 Longh 7/58et LITHOLOGY ALTERATION MINERALIZATION 627' 10' LONS Sandstone: M.G.E. SIZE TOTAL DEPTH 627' 10' LONS Sandstone: M.G.E. SIZE Value NUNERALIZATION 627' 10' LONS Sandstone: F.G.S.S.T 7.'. modulates et al. Size - weak to modurate pervasive except intense in a immediately adjacent mudatone bads. - service with elayr 637' 10' LONS Sandstone: Predominantly fg., sill, 9'-633, 7' M.G.E. Size - bedding imprognated with elayr 637' 10' LONS Sandstone: Predominantly fgg. N. VII Sandy mudatone - moderate pervasive throughout except extrong the cission in mg. sections: - assettions: - assettions: - assettion subscription in ag. sections: - assettions: - assettions: - assettion subscription subscription in ag. sections: - assettions: - assettion subscription subscription subscription subscription subscription in ag. sections: - assettions: - assettion subscription subscription subscription subscription in ag. sections: - assettion subscriptis sections and pervasive - (ter impregnation subscripo</td> <td>Summer DATE COMPLETED SURVEYS POLE STE TOTAL DEPTH HOLE STE TOTAL DEPTH TOTAL DEPT</td> <td>Summer Durit COMPLETED SURVEYS MOLE SIZE TOTAL DEPTH NOLE SIZE 101 Loop Sandstone: Mq. 617.4'-619.1' otherwise fine- to medium- grained with m-q. 617.4'-619.1' otherwise fine- to medium- grained with m-q. 617.4'-619.1' otherwise fine- to medium- grained with m-q. 617.4'-619.1' otherwise fine- to medium- encychaent 625.5'-7''. Bedding 85'-90', except 621.9'-632.2' ALTERATION MINERALIZATION Fine- transfer for the second second</td> <td>Introduct DNR. COMPLETED SURVEYS HOLE SIZE TOTAL DEFTH NOLE SIZE TOTAL DEFTH NOLE NO. 127 Lenghh %/mei LITHOLOGY ALTERATION MINERALIZATION STRUTURE Tom 627 10° 100 Sandstone: Mg. 617.41-619.11 'otherwise bids at 0.11-4', waive headstaintain -waive headstaintain STRUTURE Tom 637 10° 100 Sandstone: Predominantly fg., with sandy mudstone -waive headstaintain -waive headstain -waiv</td> | DATE COMPLETED SURVEYS JEPTH CORE LITHOLOGY ALTI 627' 10' 1000 Sandstone: Mg. 617.4'-619.1' otherwise fine- to medium- grained with green-marcon sandy mudstone beds at 617.1'4', enrichment 625.5'7'. Bedding 85°-90°, except 621.9'-624.1'. Green clay except int (60°-70°). - weak to vasive here except int (60°-70°). 637' 10' 1008 Sandstone: Predominantly fg., with sandy mudstone (siltstone?) beds at 627.3'-638.3', 631.9'-633.7'. Mg. 633.7' 635.3'. gine- to medium-grained 635.3'-637'. Bedding regular on 85°-90°. - moderate throughout and stone beds at 63'.3'-637''. Bedding regular on 85°-90°. 647' 10' 1008 Sandstone: Predominantly fine- to medium-grained marcon in colour except mg. 642.9'-647' s 637'-637'.7' dark marcon and f3.9'-638'.3', 638.6'-639' sandy green mudstone beds. Bedding 90'. Cut & green clay infill at 639.3'. - strong to tization if tions & cut to moderate 657' 10' 1008 Sandstone: Predominantly fg. to very fg. throughout except mg. secti to moderate - intense he matized 648.3'7', 651.8'-652.2''. Mg. mg. secti to moderate 657' 10' 1008 Sandstone: Predominantly fg. to very fg. throughout except mg. secti to medium-grained matized 648.3'7', 651.8'-652.2''. Mg. sections are very friable due to intense hematization. Whole sections are very friable due to intense hematization. Whole sections are very friable due to intense hoderate - substantial green clay enrichment (bedded) 649'-651.3'. Bedding vocus i | Interview Date completed SURVEYS Image: Straight of the straigh | DATE COMPLETES SURVEYS 12P7H CORE LITHOLOGY ALTERATION 627' 10' Sandstone: Mg. 617.4'-619.1' otherwise fine- to medium- grained with green-marcon sandy mudstone beds at 617.1'4', enrichment 625.5'7'. Bedding 85°-90°, except 621.9'-623.2' - weak to moderate per- vasive hometization except index of 25.5'7'. Bedding 85°-90°, except 621.9'-623.2' 637' 10' 100* Sandstone: Predominantly fg., with sandy mudstone (siltstone?) beds at 627.3'-628.3', 631.9'-633.7'. Mg. 633.7' - moderate pervasive intense hematization in mg. sections. - hematite mottling 630- 630.2'. 647' 10' 100* Sandstone: Predominantly fine- to medium-grained marcon in 523.9'-638.3', 630.8'-639' sandy green mudstone beds. 90'. Cut & green clay infill at 639.3'. - strong to intense hematization in mg. sections. - hematite mottling 630- 630.2'. 647' 10' 100* Sandstone: Predominantly fine- to medium-grained marcon in 532.9'-638.3', 630.8'-639' sandy green mudstone beds. Bedding 90'. Cut & green clay infill at 639.3'. - strong to intense hematite tions & otherwise weak to moderate pervasive. 657' 10' 100* Sandstone: Predominantly fg. to very fg. throughout except sections are very friable due to intense hematite. - sections. - sections. - sections rather weak disseminated to moderate pervasive. 657' 10' 100* Sandstone: Predominantly | Difference Difference SURVEYS HOLE SIZE 12EPTH CORE LITHOLOGY ALTERATION MINERA 627' 10' 100 Sandstone: Mg. 617.4'-619.1' otherwise fine- to medium- fined with green-marcon sandy mudatone beds at 617.1'-61', Green elay complement for the sandstone: Predominantly fg., with sandy mudatone (60'-70'). - weak to modorate per- vasive hematization (60'-70'). - weak to modorate per- vasive hematization (60'-70'). 637' 10' 100* Sandstone: Predominantly fg., with sandy mudatone (53.3'). pine- to medium-grained 635.3'-637.'. 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Bedding 'Ng. sections at here process in appearance. 657' 10' 100* Sandstone: Pr | SURVEYS NOLE SIZE TOTAL DEPTH 120711 LOAPLETED SURVEYS NOLE SIZE TOTAL DEPTH 120711 Longh 7/58et LITHOLOGY ALTERATION MINERALIZATION 627' 10' LONS Sandstone: M.G.E. SIZE TOTAL DEPTH 627' 10' LONS Sandstone: M.G.E. SIZE Value NUNERALIZATION 627' 10' LONS Sandstone: F.G.S.S.T 7.'. modulates et al. Size - weak to modurate pervasive except intense in a immediately adjacent mudatone bads. - service with elayr 637' 10' LONS Sandstone: Predominantly fg., sill, 9'-633, 7' M.G.E. Size - bedding imprognated with elayr 637' 10' LONS Sandstone: Predominantly fgg. N. VII Sandy mudatone - moderate pervasive throughout except extrong the cission in mg. sections: - assettions: - assettions: - assettion subscription in ag. sections: - assettions: - assettions: - assettion subscription subscription in ag. sections: - assettions: - assettion subscription subscription subscription subscription subscription in ag. sections: - assettions: - assettion subscription subscription subscription subscription in ag. sections: - assettion subscriptis sections and pervasive - (ter impregnation subscripo | Summer DATE COMPLETED SURVEYS POLE STE TOTAL DEPTH HOLE STE TOTAL DEPTH TOTAL DEPT | Summer Durit COMPLETED SURVEYS MOLE SIZE TOTAL DEPTH NOLE SIZE 101 Loop Sandstone: Mq. 617.4'-619.1' otherwise fine- to medium- grained with m-q. 617.4'-619.1' otherwise fine- to medium- grained with m-q. 617.4'-619.1' otherwise fine- to medium- grained with m-q. 617.4'-619.1' otherwise fine- to medium- encychaent 625.5'-7''. Bedding 85'-90', except 621.9'-632.2' ALTERATION MINERALIZATION Fine- transfer for the second | Introduct DNR. COMPLETED SURVEYS HOLE SIZE TOTAL DEFTH NOLE SIZE TOTAL DEFTH NOLE NO. 127 Lenghh %/mei LITHOLOGY ALTERATION MINERALIZATION STRUTURE Tom 627 10° 100 Sandstone: Mg. 617.41-619.11 'otherwise bids at 0.11-4', waive headstaintain -waive headstaintain STRUTURE Tom 637 10° 100 Sandstone: Predominantly fg., with sandy mudstone -waive headstaintain -waive headstain -waiv |





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| LOO | ATION | 5 D | | DATE CONSIS | <u>co-o</u> | RDINATES | | | | | | <u>CLEV</u> | ATION | 1 | 1 | 17 |
| | IC STAN | | | DATE COMPLE | TED | SURVEYS | (1,2,3,3,3) | | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO | |
| D | ЕРТН | | aF | | | | | | | | | BQ | 957' | ٥. | D.H.7 | 8-3 |
| From | To | Length | %Rec | | | LITHOLOGY | | | ALTI | ERATIO | N | MINERA | 11747108 | STI | NUSTI | E HIPPH |
| 667' | 6771 | 10' | 100% | Sandstone: fine- to me maroon in c regular 85 | Fg. me dium-grai olour. (. Green | edium maroon in colc Ined material up to Cg. quartz clast a clay enrichment (mi | ur with g 6" long r t 671.3'. nor) 670. | raded zones of ather medium Bedding 9'-671.6'. | - moderate mg. zone weak disse vasive. | e hemati s othe minated | te in rwise per- | | | F | V/FI | F/FI Leg |
| 677' | 687' | 10' | 100% | Sandstone: colour thro | Fine- to ughout, w | medium-grained, me rell sorted. Beddin | dium gray g 85°-90° | maroon in | - ditt | o | | | | | | 2/10 |
| 687' | 6971 | 10' | 100% | Sandstone: 692.1'-693. enrichment in colour e | Mg. we 1'. Cros 688.4'-68 xcept lig | ell sorted throughou is bedding on 67-75 19.9', 693.2'-694'. ht green in clayly | t. Beddin . Modera Medium-da sections. | ng 85 ⁰ except ate bedded clay ark grey maroor | - moderate hematite e clayly sec - intense -690.5', 6 693.1'. | pervas xcept w tions. hematite 91094-69 | ive eak in e 690.1' 92.1', | | | • | | 2/10 |
| 697* | 707! | 10' | 100% | Sandstone: with weak to with discont alt ⁿ forming ments at 698 | Fine- to moderat tinuous g g alterna 3.9'. | medium-grained 697 e green clay enrichr reen clay enrichmen ting irregular zones | '-698.6', ment. M & maroon 3. Cg. | 701.4'-703.5' g. elsewhere gray hematite quartz frag- | - pervasiv except mode in mg. se | e weak l arate in ections | nematite rregular | - specimen t 704'. | aken 703.5'- | | | 2/10 |
| 707' | 717.' | 10' | 100% | Sandstone: medium-grain except dense ment 707.2'- oon in colou | Predomin ned beds , light 710', 71 nr. Beddi | antly mg. well sor up to 6" wide. Rath green in colour with 4.8'-715.5', 716'-71 ing 85°. | ted with mer porous moderate 6.6'. Me | a few fine- to in appearance clay enrich- dium gray mar- | - pervasive intense in - sericite | e modera mg. g with cl | ite to Sections .ay? | | | | • | 3/10 |
| 717' | 727' | 10' | 100% | Sandstone: bands of m adional. Gr 727'. | Pine- to g. materi een, mode | medium-grained thro lal. Well sorted th erate clay enrichmen | ughout wi roughout, t 718.4'- | th a few 2"-3" contacts grad 720', 726.5'- | - irregular tense (m hematite pe - hematite - 724', 726 | weak t g. sect rvasive mottlin '-727'. | o in- ions) g 721.8' | | | | | 3/10 |



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DRILL LOG

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| LOC | ATION | | | | | NORTH | | | EAST | | ELEV | ATION | 1 | - حم | |
| DA | TE START | ED | | DATE COMPLETED | RUINATES | | | | a di Santa | | | | 12 | | 1 1 |
| | | | | DATE COMPLETED | SURVEYS | | | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO | |
| | COTU | 1 00 | | | | | | | | | во | 957' | D.1 |).H.78 | 3-3 |
| From | | L conth | NE Dat | | LITHOLOOY | | | | | L | · | 1 331 | ISTR | USTI | ISF L. |
| | 1 | T | 1 | [| LIINULUGI | | | ALTE | RATIO | V | MINERA | LIZATION | F | V/FI | E/FI |
| 727' | . 737 | 10' | 1001 | Sandstone: Mg., 732.1' fg. light throughout. Beddin | medium gray maroon in brown. Several thinly g 85-90°. | colour except / bedded fg. | 730.6'- beds | - pervasi hematite tions exc irregular - hematit mg. sec | ve mode in mg ept int 727'-7 e mottl tions. | rate • sec- ense 28'. ing in | | | | | 3/10 |
| 737• | 747' | 10' | 100% | Sandstone: Variabl tact mg.) 739.8'- green clay enrichmen section is <u>mg.</u> , mw ately well sorted. | e grain size. Fg. 7 743.8'; very light mar nt 739.8'-740.2', 737' ottled medium gray mar Bedding 85°. | 37'-737.9' (7 oon in colour -737.9'. Res oon in colour | 0 ⁰ con- except t of , moder- | <pre>- moderat hematite tions. - weak pe: tite in f - sericite clay?</pre> | e to in in mg rvasive g. sec e with c | tense . sec~ hema- ctions. green | | | | | 2/10 |
| 747 ' | 757' | 10' | 100% | Sandstone: Fine-to our <u>except</u> 752.1'6 gray maroon in colou erate clay enrichmer | o medium-grained light 3', 754.5'-755.3', 756 ir. Massively bedded f it 751.6'-752.1'. | marron-grey 5 .1'-757' mg. 30 ⁰ -85 [°] . Gree | in col- medium en mod- | - dite - minor gu clay throu sections. | to ceen bec lghout f | lded ∙−g∙ | | | | | 4/10 |
| 757' | 767! | 10' | 100% | Sandstone: Variable Section 759.8'-761.8 763.8' contains mode tion is mg., moder colour. Cg. angul | Fg. to very fg. ' is a light brown sam rate green clay enrich ately well sorted, mot ar clast at 757.1'. | 759.8'-763.6 ndy mudstone. ument. Rest c tled grey mar | 762.8 - f sec- oon in | - moderate hematite i tions. - weak hem ination el - hematite coarse-gra mottling i tions. | e - stro n mg. watite d sewhere medium ined in n mg. | ng sec- issem- - to tense sec- | | | | | 3/10 |







| <u>.</u> | | **** | | | | DRILL | LOG | an a | a a se | | Survey. | | | | SHEET | NO. | |
|--------------|---------|--------|------|---|---|---|---|--|--------------------------|---|---|------------------------------------|---|--------------|-------|--------|-------------|
| LOC | ATION | | | | C0-0F | DINATES | <u>N</u> | IORTH | | | EAST | | ELEV | ATION | 13 | 1 | 17 |
| DAT | E START | ED | | DATE COMPLET | TED | SURVEYS | | a stal | | | | T | HOLE SIZE | TOTAL DEPTH | HOLE | NO. | |
| | FOTH | | | | | | | | | | | | вQ | 957 ' | 0.0.1 | 1.78-3 | 11 a.) 3 |
| From | To | Length | %Rec | | | LITHOLOGY | | | | ALT | ERATIO | N | MINERA | LIZATION | STRU | TURE | GRAP |
| 767' **** | 777' | 10' | 100% | <u>Sandstone:</u> light maroo Bedding 85 ⁰ | Mg., m n-green w | ottled medium gray ith minor clay enr | -maroon ex ichment 77 | cept f 3.9'-775 | -g., 5.1'. | - medium contain m vasive he - intense tling thr sections. | maroon a moderate matite. hematit oughout | sections per- te mot- mg. | | | | 2/1 | 10 |
| 777 ' | 787 ' | 10' | 100% | Sandstone: maroon sands with minor i | Variable stone. F interbeddo | but predominantly g. light maroon ed mg. material. | <u>mg.</u> mot in colour Bedding | tled gre 780.9'-7 85°. | 97- 186 ' | - Dit | to | | | | | 3/1 | 10 |
| 787 ' | 797' | 10' | 100% | <u>Sandstone:</u> 795.9'-796.9 ment. Cg. | As above 9' - fg . sandsto | (mg. mottled); . light green gray ne fragments, round | except 789 with mino ded at 790 | '-790.7' r clay e .8'9'. | , nrich- | - moderat hematite hematite mg. sec | e pervas also int mottling tions. | sive cense g in | | | | 2/1 | 10 |
| '97 ' | 807' | 10' | 100% | Sandstone: maroon. Sub 801'6'. C Bedding mass | As above; ostantial Contacts s sive 85°. | e except 798.1'-80 green & brown clay sharply gradationa | l.8' fg. y enrichmen l. Facies | light g nt, 798. well so | ray- 1'6', rted. | - dit | to | | | | | 2/1 | LO |
| 07' | 817' | 10' | 100% | Sandstone: 815', 816' enrichment. 815'. Beddi | As above; 5', fg. Cg., Ing regula | except 808.1'-810 light grey green subrounded sandsto ar 80°-85°. | 0', 811.1' with minor one clasts | 2', 81 green at 811. | 3.9'- clay 8', | - dit - mottlin | to g subdue | đ | андаран (Палана) и орударан алдараран Алдаран (Палана) Алдаран (Палана) Алдаран (Палана) | | | 3/10 | .0 |
| 17' | 827' | 10' | 100% | Sandstone: fg., light enrichment. 823'. Beddi | As above; to mediu A few c. ng 90°. | except 817.5'9' m gray maroon with -g. subangular-sub Well sorted, grada | ', 821'4' n moderate prounded cl ational cor | , 823.9 green c asts 81 itacts. | '-824.6' lay 8.2', | - moderat hematite j mg. sec | e to int pervasiv tions. | ense re in | | | | 2/10 | .0 |
| | | | | | | | | ri gun ike Tana ike Tana jawa | | | | | | | | | |

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| LO | CATION | | | | CO+08 | DINATER | | | | CADI | | ELEV | ATION | | |
| DA | TE START | ED | | DATE COMPLE | TED | JINAILO | | I I I | | T | 7 | | antara di secondaria. Antara di secondaria | | |
| | | | | | | SURVEYS | | | | | | HOLE SIZE | TOTAL DEPTH | HOL | E NO. |
| | DEPTH | CO | RE | | l | | L | | _ | | | BQ | 957' | 0. | D.H./0-3 |
| From | To | Length | %Rec | | | LITHOLOGY | | | ALT | ERATIO | N | MINERA | LIZATION | STI | RUSTURE GRAPH |
| 827' | 837' | 10' | 100% | Sandstone: section 83 medium-dar gradationa 829.1'. | Mg. to 4'-835.1') k maroon in 1 contacts | fg. 827'-832.9' 832.9'-837'. Lig cg. section. j '' subangular f | becoming ht grey ma Bedding ma g, sandsto | mg. (cg. uroon except assive 85°; one clast at | - weak to vasive he out. - intense 833', 833 section. | o modera ematite e hemati 3.1' & i | te n cg. | | | | 0 |
| 837' | 847' | 10' | 100% | Sandstone: colour with occasional maroon in c Bedding reg | Fg. 841 1 some gree narrow c colour 840. yular 85° t | .1'-842.1, 846.5'- n clay enrichment. g. bands except c. 2'-841.1', 845.4'- .c.a. | -847', lig Elsewhe -g., medi .9', 846. | ht maroon in re mg. with um to dark 2'5'. | - strong hematite sections | pervasi in cg | ve , | - specimen 846.5' | taken 846'- | | 3/10 |
| 847' | 857' | 10* | 100% | Basement Re 847'-850.4' ment (appro has a very tized and c contact at granular ro clast? with bedding on | golith: C Contact ximately 4 siliceous contains c. 850.6' to ck, contin interstit 85°. Very | g. sandstone, 1i at 850.4' with c. 5 t.c.a irregu matrix, is pervasi -g. rounded clasts mg., siliceous a uous to 857'. Irr ial hematite at 85 hard rock - slow | ght orang -g. regol lar sharp vely-inte of quart nd strong egular 1" 6.7'. Su drilling. | e in colour ith of base-). Regolith nsively hema- z. Gradations ly hematized quartz vein? ggestion of Bit life 90'. | - intensi hematizat 857'. - dissemi clay or cl matrix al - intensi coarse-gr. "mottling | ve perva ion 850 nated f hlorite t ⁿ . ve media ained ha | asive .4'- g. (?) um- to ematite | - fracture 851.5'-852. - specimen stone 849.9 - specimen 850.6'-851' | fill tar 9' (10') of cg. sand '-850.6', of regolith(?) , 856'8'. | | 5/10 |
| 857' | 867' | 10' | 100% | Regolith: maroon in c our 862.5'- stitial hem are pegmati (4", 90°), 865.7' (4") throughout. | Predominan olour 857' 867'. Whi atite - ma te dykelet: 862.1', 86 . Suggest: | tly mg. granular -862.5' gradationa te quartzose bands y be clastic inter 5 - found at 860.3 1.3' (1"), 862.4' on of bedding on | (clastic l to dark contain (beds but r ' (¼", 90' (1"), 864 85°. Sili | 2) rock, dark grey in col- cg. inter- more probably 0), 861.4' 7'-865', Iceous matrix | - moderate disseminato to coarse tite mott becoming w ate 862.5 - minor f. ated chloo ding(?) th | e-strong ted & me grained ling 857 weak to '-867'. g. dis rite on hroughou | g,fg. edium- l hema- "-8625 moder- ssemin- bed- it. | - specimen 863'. | taken 862.3'- | | 7/10 |

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| LOC | ATION | | | C | O-ORDINATES | | | | | | | ELCV | ATTON . | | - | · ' |
| DA1 | TE START | ED | · . | DATE COMPLETED | | | T | 1 | | | <u></u> | | | | 5 | 17 |
| · · · | | | | | SURVEYS | | | | | | the second | HOLE SIZE | TOTAL DEPTH | HOL | 5 NO | le |
| D | Ертн | co | RE | | | | I | L | | | | BQ | 957' | 0. | D.H. 7 | /8-3 |
| rom | | Length | %Rec | | LITHOLOGY | | | | ALTE | RATIO | N | MINEDA | 1747101 | STI | NUSTO | |
| 3671 | 877' | 10' | 100% | Regolith: Preda matrix material. coarse-grained h bands throughout minor mg. musc 873', 874.5' (2" | minantly mg. clastic Dark grey-maroon in c mematite mottles & disco Cg. granite to peg covite at 870.5'9' (70). Bedding (?) 85°. | textured colour. M pontinuous, matite,dy), 871'- | rock wit edium- t indisti kelets c .2', 872 | th fg. to nct arrying 2.9'- | - hematite indistinct throughout whole or p pathizatio - dissemin chlorite or & adjacent | e mottl bandi , <u>may</u> art be n due ated f n bedd to dyl | es & ng be in felds- to dykes g. ing (?) kes. | - blue-gree chlorite? 8 - specimen 870.7'. | n bedded 76.5'-877'. taken 870'- | | | 1 |
| 77' | 887' | 10' | 100% | Regolith: Highl tured rock; grey chlorite (?) thi along these close 884.5'-885.1' wi Cg. granite dy closely spaced pa | y altered fine- to medi -maroon in colour. Gen mly banded after 881.5' ely spaced bands. Cg th intensely altered con kes throughout section. artings (70°) throughout | um-grained eral incre - rather . granite ntacts. A Distinct t clastics | d granul. sase in f soft & dyke (76 A few name foliat: | ar tex- clay & friable 0) at rrow ion - | - thinly be hematite & cg. hemat decreasing section. - fg. dis clay intens - clay alte in granite | edded i pervas tite mo to bot ssemina se thro ered fe dykes. | Intense sive ottling tom of ited oughout. Idspars | - specimen 884.8'. | taken 884.2'- | • | | 5 |
| 37. | 897' | 10' | 100% | Regolith: Fg. 887.9'-890'; dark along closely spa (4"), 890.9' (4") 895' (2"). Folia | clastic rock except med green-gray in colour. ced foliation. Cg. c , 891.7' (4"), 892.9', tion 70°-75°. Highly a | lium- to c Rock is granite dy 893.1' (1 ultered th | Oarse-gr soft & f kes at 8 "), 893. roughout | cained Triable 389.3' 9'(1") | - thin chlo on foliatio - much fg ated clay a spar (?) th - weak diss fg. hemat | prite b n. J. diss fter f rougho eminat ite. | ands emin- eld- ut. ed | - specimen t 887.3'. | aken 887'~ | | | 5 |
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| | | | | | | SURVEYS | | | | | | | HOLE SIZE | TOTAL DEPTH | но | E NO | |
| D | EPTH | co | RE | | | [| 1 | | | | | | ЪQ | 957' | D | D.H. 1 | /8-3 |
| rom | То | Length | %Rec | | a a la companya da company | LITHOLOGY | | | | ALTE | ERATION | | MINCOAL | | 51 | RUSTI | IRE G |
| 97' | 907' | 10' | 100% | Regolith: ing much di tite bearing of red brown (2"). Dark sively chlor by dyke of c a 2" diamete ent in clast | Fg. cla sseminate g orthocl cg. g green-br citized 1 cg. red r inclus cic sectio | stic rock, dark gr d clay, chlorite a ase?), 897'-903.8' ranite at 898.6', own, mg., feldsr n sections 903.8'- brown granite 904 ion of chlorite. on on 80 - altere | reen in co & hematite '. Cut by 898.9', 8 9athized (-904', 905 1'-905.9' Distinct d bedding | lour, co (in par narrow 99' (¼") ?) and in .9'-907' which con foliation ? | ntain- t hema- dykes , 890.8 nten- . Cut ntains n appar- | - feldspa - intense contact a dykes. - hematit. ated blob & moderat. saussaurat feldspars dykes. | thizatio ly chlor rea to g e, disse s of chl ely inte tization in gran | n? itized ranite min- orite nse of lte | - specimen 905.3'7'. | of granite | | V/FI | 15 |
|)7' | 917' | 10' | 100% | Regolith: D cutting a dy granite at 9 ated biotite spathized an texture. Gr crystals in green minera section on 8 | ark green ke of med 07.8' (2' noted in d highly anite com siliceous t thought 0 ⁰ . | h-brown, mg. hig lium red brown, ch) § 910.9'-915.1' h granite. Clasti chloritized resul uposed of anhedral matrix - contains to be chlorite. | hly altere lorite bea . Minor f c is appar ting in sc orange-br s mg. bl Foliation | ed clasti aring c g. dis cently fe ft crumb own feld obs of d in clas | c rock g. semin- ld- ling spar ark tic | - feldspat clastics. - intensiv tion of cl ent to gra - hematite thoclase & chlorite b ite. | thization ve chlori lastic ad unite. > bearing > possibl plobs in | i in tiza- jac- or- e gran- | - specimen (913.7'-914' |)f granite | | | 10 |
| 71 | 927' | 10' | 100% | Regolith(?): ing 1% very f a fg. class Cg. granite 922.8' (2"), subadjacent t granite gneis quartz & felc | Fg., Fg. bio tic but m dykes a 923.3'. dykes. s at 923 spar aug | dark grey, dense, tite showing sligh ore probably a f t 917.3'8', 920' Narrow quartz-ser Rock is sharply .7'-927'. Gneiss en with biotite sc | siliceous nt alignme -g. granit 2', 920 cicite sel gradation contains o chistocity | rock co nt. Pos e. Cut) .9', 921 vages ad al to c. Drange-bu | ntain- sibly by .8', jacent- -g. cown | - weak chl out - clay & s. disseminat ture fill (?) | orite th aussauri ion & fr in clast | rough te ac- ics | - specimen a - also augen 924.6'-925.4 | t 921.2'8' gneiss at '. | | | 7 |
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| LOCATION CO-ORDINATES IT DATE STATED DATE COMPLETED SURVEYS INCLESSING INCLESSING 17 DEPTH CORE LITHOLOGY ALTERATION MULE SIZE TOTAL DEPTH NOLE NO. 927' 937' 10' Cornitic Augen Gneiss: Fine- to medium-grained augen gneiss. - quartz-sericite(?)- - fg. pyrite with bio- 57.0 D.D.H. 7' 927' 937' 10' Looge Gneiss: Fine- to medium-grained disseminated aussaurite (?) fracture - fg. pyrite with bio- - ent od Sykes. - specimen of granite dykes - specimen of granite dykes. 927' 937' 10' Looge Gneiss: Fine- to medium-grained dark grey granite gneiss - guartz-sericite(?)- - fg. pyrite with bio- must seening poorly developed mg. "augen" 937'-938.1'. | | • | | | | UNILL | | TU | | - | | · · · · · · · · · · · · · · · · · · · | ang tang tang tang tang tang tang tang t | SHE | ETN | 10. |
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| OLEPTH CORE HOLE Size TOTAL DEPTH HOLE NO. From To Langth %ARe LITHOLOGY ALTERATION BQ 957' D.D.H. 76 927' 937' 10' Longth %ARe LITHOLOGY ALTERATION MINERALIZATION F WR() 927' 937' 10' Longth %ARe Caraitic Augen Gneiss: Fine- to medium-grained augen gneiss. grained granite dykes at 931'9', 934.8'-935.3'. - quartz-sericite(?)- saussaarts (?) fracture fill as noted. - minor disseminated bloot red chematite - intense alternation of foldspare to clay adjac- ent to dykes. - fg. pyrite with bio- tite on schistocity adjac- ent to dykes. - geneinen of granite dyke 930.9'-931.4'. 137' 947' 10' Long fractures in filled ath medium orange brown granite dyke at 930.3'. - chlorite and clay medium orange brown granite dyke at 930.3''. - specimen taken 946.4'- 947'. - specimen taken 946.4'- 947'. 137' 947' 10' 100' Augen Gneiss: Min a profusion of quartz-sericite vanlets along fractures is schistocity. - specimen taken 946.4'- 947'. - specimen taken 946.4'- 947'. 47'' 957'' 10' Ioo Augen Gneiss: Light orange brown, medium- to coarse- grained ad fractures is filled with clay facricite a clay schestocity. </th <th>DAT</th> <th>TE START</th> <th>ED</th> <th></th> <th>DATE COMPLETED</th> <th></th> <th></th> <th></th> <th>·</th> <th></th> <th></th> <th></th> <th></th> <th>1</th> <th>7,</th> <th>1</th> | DAT | TE START | ED | | DATE COMPLETED | | | | · | | | | | 1 | 7, | 1 |
| DEPTH CORE DQ 957' D.D.M. * from To Longh %/Ret LITHOLOGY ALTERATION MINERALIZATION STRUTON 927' 937' 10' 10' Granitic Augen Gneiss: Fine- to medium-grained augen gneiss, dark grey-green in colour; fine- to medium-grained disseminated guartz & sericite (?) - quartz-sericite(?)- saussaurite (?) - fg. pyrite with bio- tite on schistocity adjac- ent to dykes. - fg. pyrite with bio- tite on schistocity adjac- ent to dykes. 927' 937' 10' 10' Augen Gneiss: Fine- to medium-grained dark grey granite gneiss containing poorly developed mg. "augen" 937'-938,1'. Cut by medium orange brom granite dykes at 930.3' (2''), 938.8'-935.3'. - chorite and clay prominent on schistocity - specimen taken 946.4'- 97'. 947' 10' 100' 940' (1''), 940.8' (1'), 943.4' (1''), 943.4' (1''), 943.8' (1''), 943.4'' - chorite and clay prominent on schistocity - specimen taken 946.4'- 97'. 947' 10' 100''' Augen Gneiss: Light orange brown, medium- to coarse- grained weinlets along fractures a schistocity. - strong chlorite on schistocity. - specimen taken 953.1'7' 47'' 957'' 10''' 100'''' Augen Gneiss: Light orange brown, medium- to coarse- grained weinlets along fractures a schistocity. </td <td></td> <td></td> <td>1</td> <td></td> <td></td> <td>SURVEYS</td> <td></td> <td></td> <td></td> <td>en de la composition de la composition La composition de la c</td> <td></td> <td>HOLE SIZE</td> <td>TOTAL DEPTH</td> <td>HOL</td> <td>.E .NC</td> <td>D.</td> | | | 1 | | | SURVEYS | | | | en de la composition de la composition La composition de la c | | HOLE SIZE | TOTAL DEPTH | HOL | .E .NC | D. |
| Prime To Longht Value LITHOLOGY ALTERATION MINERALIZATION F WARL 927' 937' 10' 100' Granitic Augen Gneiss: Fine- to medium-grained disseminated disseminated garatra & sericite (?) 932'-933'. Cut by medium-to coarse-grained grained granite dykes at 931'9', 934.8'-935.3'. - quartz-sericite(?) - saussaurite (?) fracture fill as moted. - fg. pyrite with bio-tice on to the stocity djac-ent to dykes. - fg. pyrite with bio-tice on to the stocity djac-ent to dykes. 937' 947' 10' 100' Augen Gneiss: Fine- to medium-grained dark grey granite gneiss containing poorly developed mg. "augen" 937'-938,1'. Cut by medium orange brown granite dykes at 930.3' (27), 93.8'.9'.938.4'.0''', 933.8'.9'.9''. - chorite and clay proteinent on schistocity of antice dykes. - specimen taken 946.4'- 937' 947' 10' 100' Augen Gneiss: Light orange brown, medium- to coarse-grained veinlets along fractures & schistocity. - stong chlorite on chistocity of antice stocity of antice stocity. - specimen taken 946.4'- 947' 10' 100' Augen Gneiss: Light orange brown, medium- to coarse-grained veinlets along fractures & schistocity. - stong chlorite on chistocity. - specimen taken 953.1'7' 947' 10' 100' Augen Gneiss: Light orange brown, medium- to coarse-grained augen gneiss. Cut by cg. granite & pegnatite dykes at 950.1' - stong ch | DI | EPTH | CO | RE | | | <u></u> | | | | | BQ | 957' | <u>></u> | .D.H. | 78-3 |
| 927' 937' 10' 100' | -100 | To | Length | %Rec | | LITHOLOGY | | | ALTE | RATION | | MINERA | LIZATION | ST | RUST | USE |
| 937' 947' 10' <td< th=""><th>927'</th><th>937'</th><th>10'</th><th>100%</th><th>dark grey-green ir biotite on schisto quartz & sericite grained granite dy</th><th>HES: Fine- to media oclour; fine- to media ocity. Numerous frac (?) 932'-933'. Cut kes at 931'9', 934</th><th>um-grained aug edium-grained ctures infille by medium- to 4.8'-935.3'.</th><th>gen gneiss, disseminated d with coarse-</th><th>- quartz-s saussaurit fill as not - minor di blood red h - intense a feldspar to ent to dyke</th><th>ericite(? e (?) fra ted. sseminate hematite alternati o clay ad es.</th><th>)- cture đ on of jac-</th><th>- fg. pyri tite on schi ent to dykes - specimen o 930.9'-931.4</th><th>te with bio- stocity adjac f granite dyk '.</th><th>8</th><th></th><th>5</th></td<> | 927' | 937' | 10' | 100% | dark grey-green ir biotite on schisto quartz & sericite grained granite dy | HES: Fine- to media oclour; fine- to media ocity. Numerous frac (?) 932'-933'. Cut kes at 931'9', 934 | um-grained aug edium-grained ctures infille by medium- to 4.8'-935.3'. | gen gneiss, disseminated d with coarse- | - quartz-s saussaurit fill as not - minor di blood red h - intense a feldspar to ent to dyke | ericite(? e (?) fra ted. sseminate hematite alternati o clay ad es. |)- cture đ on of jac- | - fg. pyri tite on schi ent to dykes - specimen o 930.9'-931.4 | te with bio- stocity adjac f granite dyk '. | 8 | | 5 |
| Augen Gneiss: Light orange brown, medium- to coarse-grained augen gneiss. Cut by cg. granite & pegmatite dykes at 950.1' (2"), 951', 952'-952.6', 953.1'3', 956.6' (1"). Strongly fractured and fractures infilled with clay ±sericite & quartz at 951.8'-952.1', 953.7'-954.2', 955'2', 955.3'-956.1', 956.8'-957'. | 37' | 947' | 10' | 100% | Augen Gneiss: Fin containing poorly medium orange brow 940' (1"), 940.8' 946.6' (2"). Very zones throughout g veinlets along frac | e- to medium-grained developed mg. "aug n granite dykes at 9 (1"), 943.4' (1"), 9 soft and friable in neiss, with a profus ctures & schistocity | d dark grey gr gen" 937'-938, 938.3' (2"), 9 945.4' (1"), 9 9 1 intensively of 10 of quartz- | anite gneiss l'. Cut by 38.8'-939.5', 46' (2"), chloritized -sericite | - chlorite prominent c throughout - quartz-se infilled fr schistocity | and clay on schiste gneiss. ericite-cl actures a | bcity S Lay and | - specimen t 947'. | aken 946.4'- | | | 2 |
| | 471 | 957' END | 10' | 100% | Augen Gneiss: Ligh augen gneiss. Cut (2"), 951', 952'-99 fractured and fract at 951.8'-952.1', 9 956.8'-957'. | ht orange brown, med by cg. granite & j 52.6', 953.1'3', 9 tures infilled with o 953.7'-954.2', 955'- | ium- to coarse pegmatite dyke 56.6' (1"). s clay ±sericite .2', 955.3'-95 | e-grained es at 950.1' Strongly a & quartz 56.1', | - strong ch schistocity - clay-seri fracture fi | lorite or cite ⁺ quar ll zones. | tz | - specimen ta | aken 953.1'7 | | | 10 |
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Atomic Energy Commission de contrôle Control Board de l'énergie atomique

OPERATIONS DIRECTORATE Safequards & Nuclear Materials Branch

Our file

22-B-62 Notre référence

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DEPUTY MINERALS JAN 2 2 1979

BP Minerals Limited Suite 1401 25 Adelaide Street East Toronto, Ontario M5C 1Y2

Attention: R.D. Moss Exploration Manager

Dear Sir:

With reference to your letter of January 2, 1979 please be advised that Surface Exploration Permits MX 1/71(c) - Newfoundland, MX 1/71(d) - Northwest Territories, and MX 1/71(e) - Ontario, have been revised to bring the properties listed under these permits up to date. Enclosed herewith are the originals and copies of Revisions 1.

This will also acknowledge and thank you for forwarding duplicate copies of the report of work carried out during 1978 under Surface Exploration Permit MX 1/71(a) - Alberta. Your prompt attention to this reporting requirement is greatly appreciated.

Yours sincerely,

January 8, 1979

M. I. Blackman

Mrs. N.S. Blackman Licensing Officer

NSB:rp Encs.

Geological Survey of Canada cc:

Ontario Ministry of Natural Resources (MX 1/71(e)) Dept. of Mines & Energy, Newfoundland (MX 1/71(c)) Alberta Energy & Natural Resources (MX 1/71(a) - Reports) Dept. of Indian & Northern Affairs (MX 1/71(d))

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P.O. Box 1046 C.P. 1046 Ottawa, Canada K1P 5S9 K1P 5S9

Ottawa, Canada

QUARTZ MINERAL EXPLORATION PERMIT No. 229

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