



System  
Group  
Formation

0 ROP(min/m) 100

CORES

LITHOLOGY

SHOWS

0 H2S(ppm) 10.00  
0 CO2(%) 10.00  
0 GAS(Units) 100

**HUNTERSTON-1  
GEOLOGIST LITHOLOG  
(1:500)**

SPUD DATE: 8 JUNE 2002

DRILL OUT CEMENT/FM WITH WATER/POLYMER MUD FROM 332 TO 338.5m; CONDUCTED L.O.T, EMW=22 ppg

CB-1 DB1214 3.78"  
3/07/02

4 1/2

336.0m

4/07/02  
WOB: 0-0.5  
SPM: 700  
PP: 300  
GPM: 27

MW: 8.35  
Vis: 46  
PV/YP: 5/10  
pH: 8.5  
WL: -  
Cl: 120

BG: 0-0.5 u

366m - 374.5m: Massive Dolerite Sill

Dolerite: 100%, grayish black to greenish black on wet sample, light to medium grey on dry sampl, very hard, dense, massive, common phaneretic texture, common ferromagnesians and sodic plagioclase, trace phenocrysts of pyroxene, 0.5 mm thick vertical silica+calcite vein noted from 338.1m to 338.5m.

Dolerite: 100%, dominantly dark greenish gray to greenish black on wet sample, becoming dark gray on dry sample, generally as above with predominant phaneretic groundmass, common sodic plagioclase and ferromags, trace dark green to light green chloritic/sericitic minerals and microveins, massive, dense, nil visual porosity.

Dolerite: 100%, as above, phaneritic groundmass, hard, dense, massive with vertical micro-veins of qtz+calcite+sericite from 357-362.5m.

362 - 416m: Dolerite Sill With Silica Veins and Chlorite/Epidote Alteration

Dolerite: 100%, as above with abundant vertical silica veins from 1mm to 3 mm thick from 357 to 362m, silicified groundmass, rare calcite, nil visual porosity.

BG=0

Dolerite: 100%, generally as above, massive phaneritic groundmass with 0.5 to 1 mm thick vertical veins of quartz+chlorite+epidote; silicified groundmass in parts.

5/07/02

WOB: 0.5-1.0  
SPM: 690  
PP: 260  
RPM: 2300  
GPM: 27

400

Gas Pk @ 408m: 5 u

Swb Gas: 8u ABG @410m

6/07/02

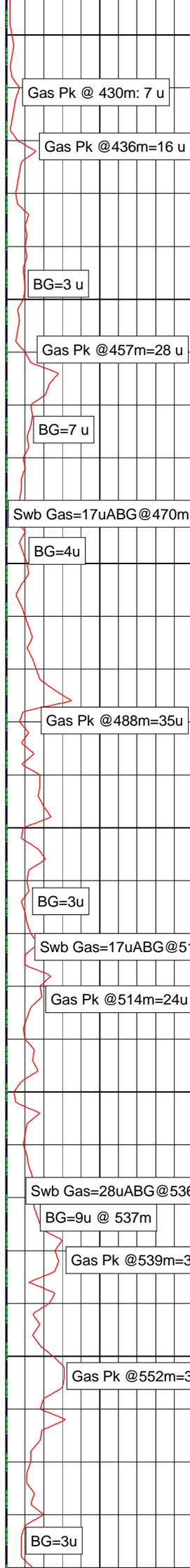
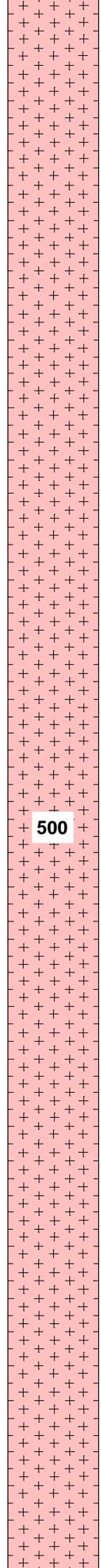
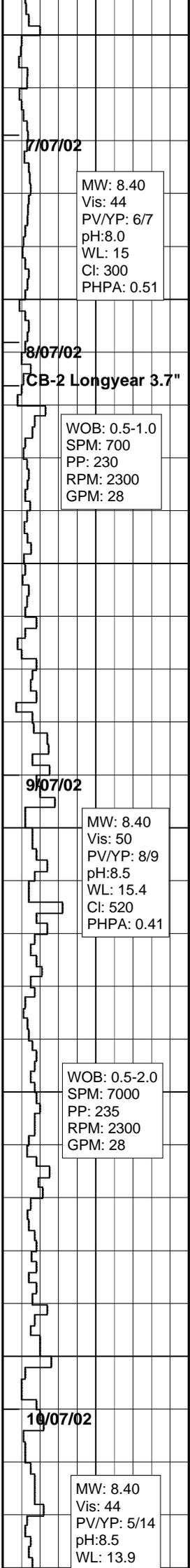
MW: 8.40  
Vis: 48  
PV/YP: 7/13  
pH: 9.0  
WL: 15  
Cl: 120

BG=2 u

416 - 449m: Massive Dolerite with Trace Quartz/Chlorite Veins

Dolerite: 100%, greenish black to dark gray, hard, massive, dense, traces of silica veins with chlorite and epidote, phaneritic groundmass,

common sodic plagioclase and ferromagnesians, rare calcite, nil visual porosity.



Change to PHPA Mud System @ 435m
Diorite: 100%, generally as above, intense zone of silica alteration and coarser groundmass noted from 448.7 to 449.1m, trace quartz+chlorite and epidote veins, hard, massive, nil visual porosity.
449 - 510m: Massive Dolerite Sill with Traces of Quartz/Chlorite Veins
Dolerite: 100%, greenish black, very hard, massive, dense, traces of quartz and chlorite veins with rare epidote, microfractures in parts, nil visual porosity in groundmass.
510 - 570m: Massive Dolerite Sill
Dolerite: 100%, greenish black, very hard, massive, dense, traces of quartz and chlorite veins with rare epidote at 483m, microfractures in parts, nil visual porosity in groundmass.
Dolerite: 100%, grey to black, medium grained even texture. very hard, minor quartz and calcite veinlets, becoming more frequent sub horizontal fractures., some minor limonite staining of fractures, spacing to 10 centimetres becoming to 2 centimetres. chlorite infill of small vertical fractures.
small rubble zone with dominant horizontal fractures 544-560.5 mbc some movement of calcite veinlets after drilling, rods becoming tight in hole.

Cl: 350  
PHPA: 0.82

570m - 782m: Aphanitic Dolerite with Rare Quartz Veins

BG=8u

Dolerite: 100%, dark gray to greenish black, very hard, massive, dense, groundmass becoming aphanitic, rare quartz veins in parts, nil visual porosity, rare microfractures.

BG=10u

Gas Pk @591m=28u

600

BG=6u

Swb Gas=23uABG@615m

small fracture zone at 618.9m some slickensides

Dolerite: 100%, dark greenish gray to greenish black, very hard, massive, dense, groundmass aphanitic texture, rare quartz veins in parts, 2 mm quartz+chlorite vens from 632-636m, nil visual porosity, rare microfractures.

BG=6 u

Swb Gas =31uABG@650m

minor quartz - chlorite fracture veinlets  
randomly spaced fractures

Gas Pk @660.2m=34u

Gas Peak @663.2=26u

Swb Gas =21uABG@668m

Dolerite: 100%, dark greenish gray to greenish black, very hard, massive, dense, groundmass with dominant aphanitic texture, rare quartz veins in parts, nil visual porosity, rare microfractures.

Gas Pk @683m=25u

BG=4u

700

Diorite: 100%, dark greenish gray to greenish black, very hard, massive, dense, groundmass with dominant aphanitic texture, rare quartz veins and microfractures in parts, nil visual porosity, background gas is very low while drilling this basal dolerite.

Gas Pk @707m=24u

BG=1u

MW: 8.40  
Vis: 44  
PV/YP: 14/12  
pH:8.0  
WL: 7.8  
Cl: 220  
PHPA: 0.68

11/07/02

WOB: 0.5-2.0  
SPM: 7000  
PP: 235  
RPM: 2300  
GPM: 27

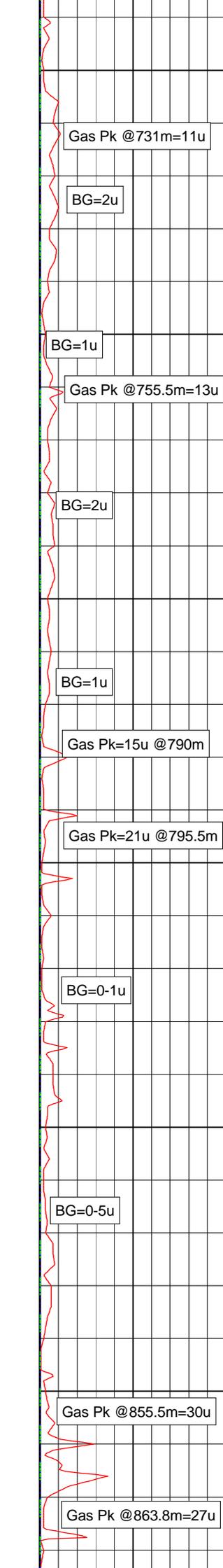
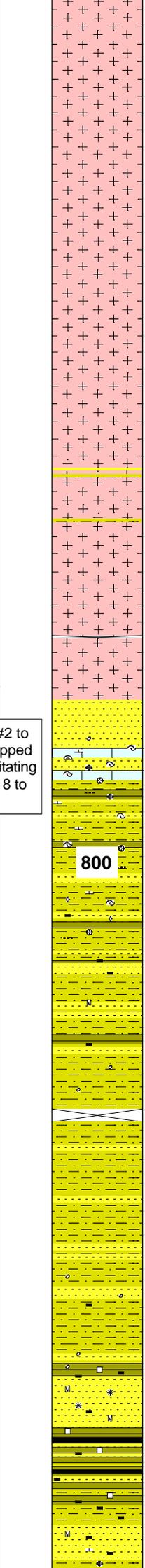
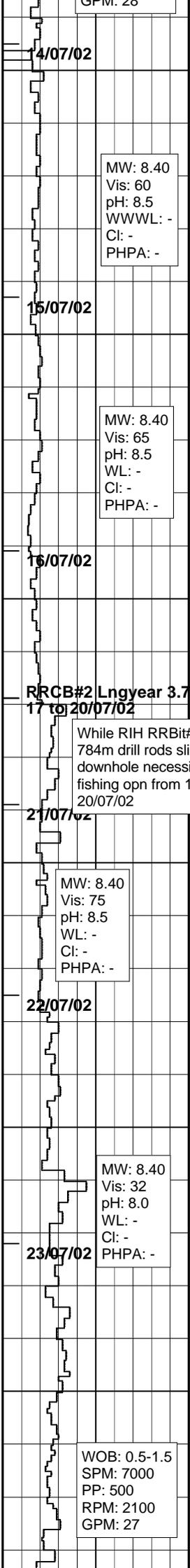
12/07/02

MW: 8.40  
Vis: 63  
PV/YP: -  
pH:8.5  
WL: -  
Cl: -  
PHPA: -

13/07/02

WOB: 0.5-1.5  
SPM: 7000  
PP: 235  
RPM: 2100  
GPM: 28

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Diorite: 100%, predominantly dark to medium gray unaltered matrix, occasionally dark greenish gray to greenish black on quartz and chlorite veins, very hard, massive, dense groundmass with dominant aphanitic texture, rare quartz veins and microfractures in parts, nil visual porosity, background gas is generally very low while drilling this basal dolerite.

Diorite: 100%, predominantly dark to medium gray unaltered matrix, occasionally dark greenish gray to greenish black on rare quartz and chlorite veins, very hard, massive, dense groundmass with dominant aphanitic texture, rare quartz veins and microfractures in parts, nil visual porosity, background gas is generally very low (1-2 units) while drilling this basal dolerite.

782 - 784.5m: Basal Dolerite With Aphanitic Texture

Dolerite: 100%, dark brownish gray to to medium gray, dominant aphanitic matrix, rare phenocrysts of dark green ferromagnesians, textural and colour change noted to start from 783m possibly near basal intrusive contact.

784.5 - 796: Massive Fine Grained and Fossiliferous Sandstone With Minor Laminations of Siltstone and Shale and Striger of Limestone. SANDSTONE: 80-100%, very light gray to white, occasionally light greenish gray to pinkish gray, very fine to fine grained, sub-angular to sub-rounded, moderately sorted, strong siliceous cement, calcareous cement in parts, hard, indurated, common fossil fragments, traces of burrows on silty and shaley laminations, traces of calcite veins, rare pyrite, rare angular to sub-rounded clasts of siltstone and shale, poor porosity to tight, no show. SILTSTONE: 10%, dark gray to black, sub-fissile, weak to moderately calcareous, calcareous veins, trace disseminated to nodular pyrite, locally grading to Shale and very fine grained Sandstone laminations, abundant fossil fragments. SHALE: trace-10%, black to very dark gray, fissile, massive, grades to Siltstone

796 - 812m: Siltstone Interbedded With Mudstone/ and Carbonaceous Shale and Streaks of Sandstone.

SILTSTONE: 60-80% medium gray to dark gray, hard, indurated, sub-fissile to massive, sandy in parts, common fossil fragments of brachiopods and brozoans, grades to Mudstone, calcareous in parts, sub-conchoidal fracture. SANDSTONE: 10-20%, as above, generally very fine to fine grained, poor porosity to tight, no show. SHALE: trace-10%, black to dark gray, hard, fissile, carbonaceous matrix.

812 - 848.6m Siltstone, massive and variably carbonaceous interbedded with grey Sandstone, bioturbated beds and wispy laminae

SILTSTONE 90% fine grey black to black, generally massively bedded conchoidal fractures minor carbonaceous banding SANDSTONE 10% grey to pale grey fine grained, wispy lamellar bioturbations, generally 0.25 - 0.30m thickness, spaced 1-5m apart

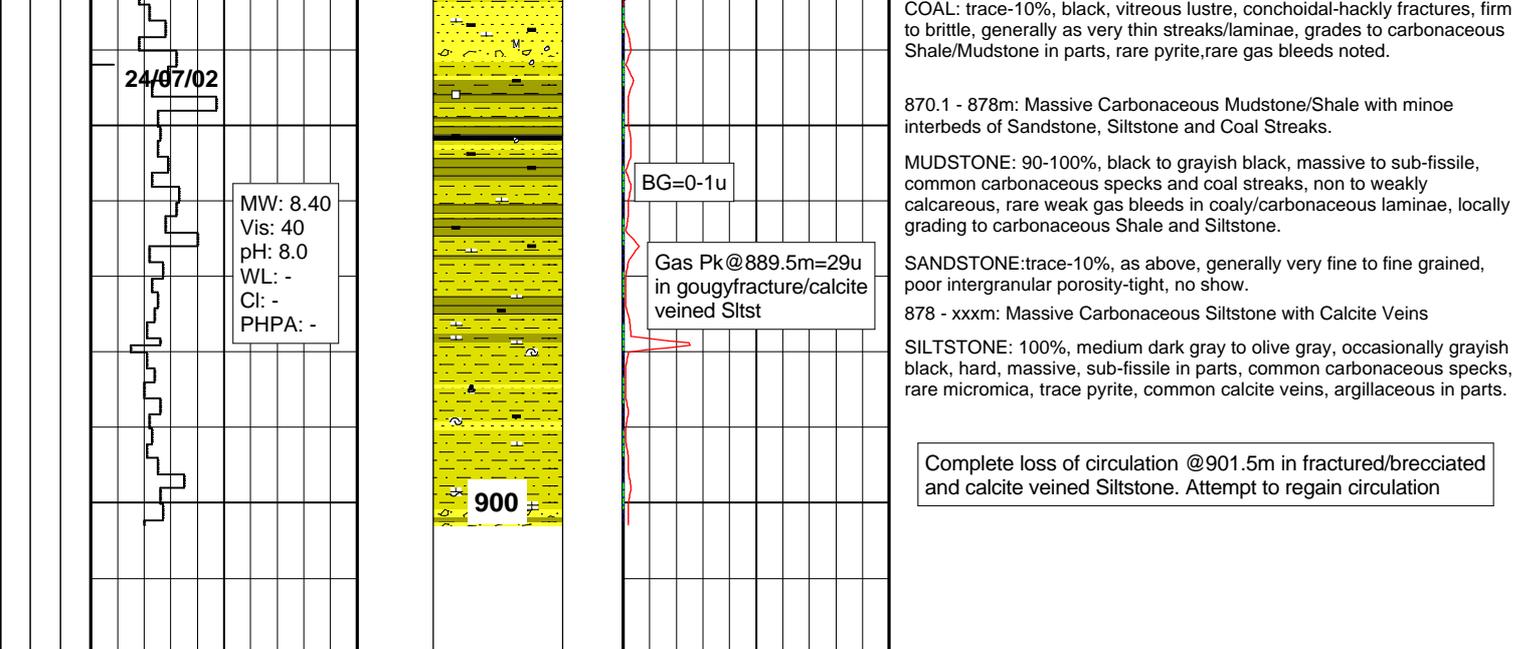
847 - 848.6m: Carbonaceous Shale grading to Mudstone with minor Streaks/Laminations of Fine Grained Sandstone.

Carbonaceous Shale/Mudstone: black to very dark gray, firm to hard, sub-fissile, common streak/bands of coal/carbonaceous matrix, rare clasts of Snadstone and Siltstone, weak to non-calcareous matrix, rare very weak gas bleeds in carbonaceous laminae.

848.6 - 870.1m: Massive Fine Grained Sandstone With Minor Interbeds of Carbonaceous Mudstone(Top Faulkner Group) SANDSTONE: 70-100%, light gray to very light gray, occasionally clear to translucent, dominantly fine to very fine grained, rare medium grained in parts, strong silica cement, calcareous cement in parts, hard, trace to common muscovite and biotite, rare lithics, rare pyrite, trace carbonaceous microlaminations and specks, poor intergranular porosity, no show.

MUDSTONE: 10-30%, black to very dark gray, hard to brittle in parts, common carbonaceous matrix, locally grading to streaks of coal/carbonaceous Shale, trace pyrite, non to weakly calcareous matrix.

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System	Group	Formation	ROP(min/m)	CORES	LITHOLOGY	SHOWS	GAS(Units)	CO2(%)	H2S(ppm)
			0				0	0	0
			0				0	0	0
			0				0	0	0
LITHO/ CHRONO STRAT									
<b>LITHOLOGY DESCRIPTIONS</b>									





LITHO/ CHRONO STRAT						LITHOLOGY DESCRIPTIONS