

OPEN FILE REPORT 93-006

FIGURE 4. DETAILED PLOT OF NOVA SCOTIA DEPARTMENT OF NATURAL RESOURCES DIAMOND-DRILL HOLE 84-1, KEMPT HEAD, SYDNEY BASIN, VICTORIA COUNTY, NOVA SCOTIA.

R. C. BOEHRER
MINERAL RESOURCES DIVISION

NOVA SCOTIA DEPARTMENT OF NATURAL RESOURCES

HONOURABLE JOHN G. LEEFF, MINISTER

Halifax, Nova Scotia
1993

DRILLHOLE: KH 84-1 BY: NOVA SCOTIA DEPARTMENT OF MINES AND ENERGY
LOCATION: KEMPT HEAD, VICTORIA COUNTY NTS: 11K02

ELEVATION: 46 04 33 LONGITUDE: 60 38 33
INCLINATION: VERTICAL

TOTAL DEPTH: 943.2 m DATE DRILLED: May through October 1984

DRILLED BY: NSDNR; E. Standing, J. Hayes and G. MacLeod

CASING: TEMPORARY DIAMOND-DRILL CASING WAS REMOVED, APPROXIMATELY 600 FEET OF NQ AND 500 FEET OF BQ RODS WERE LOST IN HOLE. THE ENTIRE OPEN HOLE CEMENTED FROM 460 M TO SURFACE

CORE SIZE: HQ 9.0-141.2 m, NQ 141.2-438.2 m, BQ 438.2-943.2 m

DRILL FLUID: SEAWATER TO 430 m, NaCl BRINE TO 594 m, NaCl-KCl BRINE TO 943.2 m

DEVIATION SURVEY: TROPARI TESTS AT: 216 m, AZIMUTH 294 DEGREES AND INCLINATION OF 88 DEGREES, 823 m, AZIMUTH 178 DEGREES AND INCLINATION OF 87 DEGREES

0.0 to 9.0: OVERBURDEN: NOT CORED. Morien Group sandstone and clay, not recovered.
NOTE: ALL LOG DEPTHS ARE IN METRES

9.0 to 31.0: SANDSTONE: sandstone, light grey, medium to coarse grained, top 3 m fractured with kaolinitic weathering, 1-2 cm log conglomerate, pebbly sandstone to sandstone fining up cycles, bedding estimated at 85 degrees CA

31.0 to 39.2: SANDSTONE: sandstone, light grey, medium to coarse grained, top 5 m fractured with kaolinitic weathering, high angle fractures, scattered interbeds of 1-2 cm log conglomerate with coaly fragments, pebbly micaceous and quartz-feldspar sandstone, 2-4 m thick fining up channel cycles, locally abundant pyrite-marcosite, bedding estimated at 85 degrees CA

39.2 to 48.3: SANDSTONE: sandstone, light grey, medium to very coarse grained, high angle fractures, scattered interbeds of 1-2 cm log conglomerate with coaly fragments, pebbly micaceous and quartz-feldspar sandstone, 2-4 m thick fining up channel cycles, locally abundant pyrite-marcosite, bedding estimated at 85 degrees CA

48.3 to 48.5: SILTSTONE: siltstone and mudstone, grey-green, soft and poorly indurated.

48.5 to 53.8: SANDSTONE: sandstone, light grey, medium to very coarse grained, high angle fractures, scattered interbeds of 5 cm max. log conglomerate with coaly fragments, pebbly micaceous and quartz-feldspar sandstone, 2-4 m thick fining up channel cycles, locally abundant pyrite-marcosite, bedding estimated at 85 degrees CA

53.8 to 54.1: SILTSTONE: siltstone and mudstone, grey-green, soft and poorly indurated.

54.1 to 63.2: SANDSTONE: sandstone, light grey, medium to very coarse grained, high angle fractures, scattered interbeds of 5 cm max. log conglomerate with coaly fragments, pebbly micaceous and quartz-feldspar sandstone, 2-4 m thick fining up channel cycles, locally abundant pyrite-marcosite, bedding estimated at 85 degrees CA

63.2 to 63.8: SILTSTONE: siltstone and mudstone, grey-green, soft and poorly indurated.

63.8 to 78.3: CONGLOMERATE: conglomerate and sandstone, light grey, medium to coarse grained, interbeds of 7 cm max. (12 cm typical) conglomerate, well rounded pink and white granitoids, with coaly fragments in lower part, pebbly micaceous and quartz-feldspar sandstone, fining up channel cycles, locally abundant pyrite-marcosite, bedding estimated at 85 degrees CA

78.3 to 79.6: SANDSTONE: sandstone, white to light grey, medium grained, clean quartzose, fractured to subnodular. BASE OF THE SOUTH SEA FORMATION (MERIDEN GROUP)

79.6 to 92.1: SILTSTONE: siltstone, mudstone, red with minor grey-green mottling, minor pink to orange calcareous dolomite nodules near base, lower 2 m has abundant green mottling and the basal contact is sharp, irregular and pyritic.

92.1 to 97.9: LIMESTONE: limestone, light cream to pale white, subnodule bedding, locally porous calcitic and intracrystalline stylolites, dense hard crystalline limestone with pink to orange dolomite vertical fractures in lower part, 97.2-97.3 is mottled algal limestone and 97.3-97.6 is dark nodular to shaly, grey silt near base.

97.9 to 99.25: SILTSTONE: siltstone to silty mud, light grey-green, locally shaly at base, grey silty shale microbreccia.

99.25 to 104.7: SILTSTONE: siltstone and mudstone, red with grey-green mottling, local high angle fractures and brecciation (e.g. lower 1 m), with minor grey shaly mudstone interbeds.

104.7 to 105.9: SILTSTONE: siltstone, mudstone, grey, calcareous, breccia, with angular limestone fragments, solution breccia after dolomite.

105.9 to 112.9: LIMESTONE: limestone, light grey brown to pale white, weathering, fractured nodular bedding, green silt in fractures, mottled calcarenite due to solution recrystallization, 111.1-112.1 a grey silt and limestone fragment breccia, 112.1-112.9 a irregular laminated limestone.

112.9 to 125.6: SILTSTONE: siltstone, mudstone, red with rare grey-green mottling and limestone fragments, alternating fragmental to solid zone, soft and poorly consolidated.

125.6 to 129.2: LIMESTONE: limestone, light grey, silty, rounded broken core recovered, poor recovery, mottled algal limestone in lower part.

129.2 to 129.3: SILTSTONE: siltstone, mudstone, grey.

129.3 to 132.4: SILTSTONE: siltstone, mudstone, red, breccia, fragmental and poorly consolidated.

132.4 to 134.3: SILTSTONE: siltstone, mudstone, grey, limestone fragments.

134.3 to 135.9: LIMESTONE: limestone, light grey brown, broken rounded core recovered, poor recovery, lost core at top.

135.9 to 140.8: SILTSTONE: siltstone, mudstone, red with minor green mottling, breccia, fragmental, soft and poorly consolidated.

140.8 to 141.2: LIMESTONE: limestone, black, broken rounded core recovered, poor recovery, lost core.

141.2 to 142.5: SILTSTONE: siltstone, mudstone, red with minor green mottling, breccia, fragmental, soft and poorly consolidated, lost core.

142.5 to 144.0: GYPSUM: gypsum and grey mudstone, lost core.

144.0 to 159.6: LIMESTONE: limestone to dolomitic limestone, medium to dark grey, HERBERT RIVER-DUMFRIES LESTONE, finely bioclastic, finely crystalline, with shaly to coarse nodular texture, thin grey mud interbeds, mottled algal limestone at base, brecciated and in part calcitic to fragmental and disrupted core, core recovery is poor, dips 80-85 degrees CA.

159.6 to 177.4: SILTSTONE: siltstone, mudstone, red with minor green mottling, limestone breccia, fragmental, soft and poorly consolidated, little coarse nodular.

177.4 to 180.4: GYPSUM: gypsum, medium brown, distorted vein texture, minor relic anhydrite and irregular nodular texture.

180.4 to 181.6: SILTSTONE: siltstone, mudstone, grey-green with minor red mottling, scattered gypsum bands.

181.6 to 183.2: SILTSTONE: siltstone, mudstone, red with minor green mottling, 50 cm of gypsiferous section in middle, irregular lamination 80 degrees CA.

183.2 to 183.6: SILTSTONE: siltstone, mudstone, grey-green.

183.6 to 185.0: GYPSUM: gypsum, light brown, massive with ramifying vein texture typical of the hydration process, minor relic anhydrite at basal transition.

185.0 to 187.5: ANHYDRITE: anhydrite with minor gypsum at contact transitions, light brown, massive mosaic with halite solution pits.

187.5 to 189.9: GYPSUM: gypsum, light brown, subnodular to massive mosaic, with scattered 1-2 cm halite veinlets, minor relic anhydrite at upper transition.

189.9 to 190.3: LIMESTONE: limestone, light grey brown, transitional up into nodular gypsum.

190.3 to 192.0: GYPSUM: gypsum, light brown, subnodular to massive mosaic, minor carbonate at upper transition.

192.0 to 195.5: ANHYDRITE: anhydrite with minor gypsum at contact transitions including 30 cm of gypsum at base, light brown, massive mosaic.

195.5 to 199.6: SILTSTONE: siltstone, mudstone, red with minor green mottling, 20 cm of grey section at the top, scattered gypsum nodules, irregular lamination 80 degrees CA.

199.6 to 201.1: ANHYDRITE: anhydrite with 30-50 cm of gypsum at contact transitions, light blue grey, massive mosaic.

201.1 to 202.0: LIMESTONE: limestone, light grey brown, transitional up into nodular gypsum in fragmental blue-grey fragmental hydration, lower 40 cm is medium to dark grey shaly limestone with coarse nodular texture.

202.0 to 202.6: GYPSUM: gypsum, light brown, subnodular to massive mosaic.

202.6 to 203.3: SILTSTONE: siltstone, mudstone, grey-green, dips 60-65 degrees CA.

203.3 to 206.9: GYPSUM: gypsum, medium grey, 30-50 cm at base with inclusions and interstitial grey limestone and red siltstone.

206.9 to 207.7: SILTSTONE: siltstone, mudstone, grey-green with minor red.

207.7 to 219.3: ANHYDRITE: anhydrite, medium blue-grey with 30-50 cm of gypsum at contact transitions including interstitial grey limestone, coarse nodular mosaic to massive mosaic, minor selenite-halite filled fractures, dips 40-50 degrees CA.

219.3 to 220.1: LIMESTONE: limestone, light grey brown, transitional up into nodular gypsum, base is transitional to gypsum, top 30 cm is fractured with gypsum, middle 25 cm is mottled algal with 5 cm of dark shale at top, bottom 15 cm is light grey micritic limestone.

220.1 to 223.6: GYPSUM: gypsum, medium grey with contact transitions including interstitial grey limestone, coarse nodular mosaic to massive mosaic.

223.6 to 224.8: LIMESTONE: limestone, light grey brown, transitional up into nodular gypsum, base is transitional to gypsum, bottom 60 cm is light grey to yellow brown dolostone, vague dips 70-75 degrees CA.

224.8 to 225.5: GYPSUM: gypsum, medium grey with contact transitions including interstitial grey limestone, coarse nodular mosaic to massive mosaic.

225.5 to 227.2: SILTSTONE: siltstone, mudstone, red and grey-green with minor gypsum nodules, dips 30 degrees CA.

227.2 to 231.6: ANHYDRITE: anhydrite, medium blue-grey with 30-50 cm of gypsum at contact transitions including interstitial grey limestone, coarse nodular mosaic to massive mosaic, minor selenite-halite filled fractures.

231.6 to 232.2: LIMESTONE: limestone, dolomitic, light grey brown, transitional up into nodular gypsum, base is transitional to gypsum, top and base are micritic limestone, middle is coarse nodular, algal mottled and dark shaly.

232.2 to 236.7: GYPSUM: gypsum, medium grey, sheared with fracture hydration, coarse nodular mosaic to massive mosaic.

236.7 to 240.3: ANHYDRITE: anhydrite, medium blue-grey with 90 cm of gypsum at basal contact transition including interstitial grey limestone, coarse nodular mosaic to massive mosaic, minor selenite-halite filled fractures.

240.3 to 241.7: LIMESTONE: limestone, light grey brown, transitional up into nodular gypsum, base is a zone of lost core, top is micritic limestone, 240.3-240.9 is coarse nodular and hollow anhydrite, 241.1-241.7 is medium to dark grey silty, only 50% core recovered in the interval 241.2-241.7.

241.7 to 243.5: LOST CORE: no core recovered in this interval.

243.5 to 244.2: GYPSUM: gypsum, medium grey, coarse nodular mosaic to massive mosaic.

244.2 to 245.7: SILTSTONE: siltstone, mudstone, grey-green, fractured with minor gypsum and dolomite, laminated 80 degrees CA.

245.7 to 247.8: SILTSTONE: siltstone, mudstone, red, fractured.

247.8 to 249.3: SILTSTONE: siltstone, mudstone, grey green, fractured, minor gypsum.

249.3 to 252.5: ANHYDRITE: anhydrite, medium blue-grey with gypsum at top and basal contacts, interbedded gypsum and anhydrite near base, coarse nodular mosaic to massive mosaic, minor selenite-halite filled fractures.

252.5 to 252.8: DOLOSTONE: dolostone, light brown, irregular lamination 80 degrees CA.

252.8 to 253.3: ANHYDRITE: anhydrite, medium blue-grey with gypsum at top, middle and basal contacts, interbedded gypsum and anhydrite, coarse nodular mosaic to massive mosaic, minor red selenite fractures, lost core near base.

253.3 to 261.7: LIMESTONE: limestone, light to medium grey brown, brecciated, shaly to bioclastic locally, base is a zone of lost core.

261.7 to 262.7: LOST CORE: no core recovered in this interval.

262.7 to 269.4: GYPSUM: gypsum, medium grey, coarse nodular mosaic to massive mosaic, minor anhydrite near base and laminated stromatolitic limestone fragments near top of section.

269.4 to 270.0: LIMESTONE: limestone, light to medium grey brown, top 40 cm is micritic gradational, basal 25 cm is light brown dolostone and dark shaly, top is gradational to gypsum and base is sharp, dips 80 degrees CA.

270.0 to 271.2: GYPSUM: gypsum, medium grey, sheared at steep faulted base.

271.2 to 272.6: LIMESTONE: limestone, light to medium grey brown, top is silty, lower part is mottled algal and nodular, core is fractured.

272.6 to 275.0: ANHYDRITE: anhydrite, medium blue-grey with gypsum at top and basal contacts, coarse nodular mosaic to massive mosaic, minor fractures.

275.0 to 291.5: SILTSTONE: siltstone and mudstone breccia, red with minor grey green, fractured, collapse residual breccia no veins or slicks, minor gypsum breccia at basal 3 m.

291.5 to 293.7: ANHYDRITE: anhydrite, medium blue-grey with minor red mud, coarse nodular mosaic to massive mosaic.

293.7 to 301.0: SILTSTONE: siltstone and mudstone, red with minor anhydrite nodules.

301.0 to 306.8: SILTSTONE: siltstone and mudstone, red with minor grey in middle, trace halite, lamination 80 degrees CA.

306.8 to 306.3: GYPSUM: gypsum and silt grey.

306.3 to 307.2: SILTSTONE: siltstone, grey, with microbreccia at base.

307.2 to 358.2: ANHYDRITE: anhydrite, medium blue-grey with minor trace halite, massive mosaic to nodular mosaic, locally hydrated to gypsum along fractures and in bands, rare coarse selenite as veins, basal 3 m is a hydration transition above a thick carbonate unit.

358.2 to 363.2: DOLOSTONE: dolostone with limestone at base, light to medium brown to grey brown, coarse nodular texture with wispy stringers, banded 80 degrees CA, sparsely bioclastic, crinoidal, limestone is sparsely oolitic, crinoidal and mottled algal at base, dips 80 degrees CA.

363.2 to 364.0: SILTSTONE: siltstone, red with minor grey mottling, minor fracture veinlets.

364.0 to 365.8: SILTSTONE: siltstone, grey, minor fracture veinlets.

365.8 to 367.0: GYPSUM: gypsum and silt grey.

367.0 to 405.8: ANHYDRITE: anhydrite, medium blue-grey with minor halite inclusions, massive mosaic to nodular mosaic, locally hydrated to gypsum along fractures and in bands, rare coarse selenite as veins, basal 40 cm is a hydration dolostone transition above a carbonate unit.

405.8 to 407.2: DOLOSTONE: dolostone, medium yellow brown to grey brown, sparsely bioclastic, crinoidal, sparse oolitic fragments, transitional to grey silt at base, dips 80 degrees CA.

407.2 to 409.5: SILTSTONE: siltstone, grey, with interbedded nodular anhydrite in middle.

409.5 to 413.6: SILTSTONE: siltstone, red with minor grey mottling.

413.6 to 414.5: SILTSTONE: siltstone, grey, dips 80 degrees CA.

414.5 to 426.2: ANHYDRITE: anhydrite, medium blue-grey with minor halite, massive mosaic to nodular mosaic, hydrated to gypsum in 2-3 m thick bands, rare coarse selenite as veins, basal 2.6 m is a hydration transition above a siltstone unit.

426.2 to 429.6: SILTSTONE: siltstone, grey, dolomitic and interbedded with gypsum at top, dips 80 degrees CA.

429.6 to 429.6: ANHYDRITE: anhydrite, medium grey with minor grey mud, vague chevron-wisborne texture, massive mosaic.

429.6 to 431.2: SILTSTONE: siltstone, red with minor halite.

431.2 to 440.9: HALITE: halite, medium to dark grey to brown grey and orange, with abundant grey siltstone-mudstone inclusions, banded 80 degrees CA, minor red silt at top, core is underzoned at top due to dissolution in under saturated drill brine.

440.9 to 441.8: SILTSTONE: siltstone, red with minor fibrous halite.

441.8 to 457.8: HALITE: halite, medium to dark grey to brown grey and orange, with abundant grey siltstone-mudstone inclusions (15-20%), no apparent disruption of deformation of silt, basal 3 m has 10-25% silt and abundant coarse halite porphyroblasts and the lower 1 m is anhydritic.

457.8 to 466.1: ANHYDRITE: anhydrite, medium grey, massive to massive mosaic, with minor dolostone mosaic at base, vague banding and lamination 80 degrees CA.

466.1 to 466.5: DOLOSTONE: dolostone, medium yellow brown, dips 80 degrees CA.

466.5 to 466.5: ANHYDRITE: anhydrite, medium grey, massive to massive mosaic, with minor dolostone mosaic at base, vague banding and lamination 80 degrees CA.

466.5 to 467.1: DOLOSTONE: dolostone, medium to light brown, massive bihermal shelly facies, porous, mottled algal, scattered interstitial-cavity fill anhydrite, dips 80 degrees CA.

467.1 to 490.7: LIMESTONE: limestone, dolomitic, light to medium brown, algal-clotted MILLER TYPE, minor thin bands of dark shaly limestone with Botrydium bryozoa and crinoids, calcitic and fragmental near the base, dips 80 degrees CA.

490.7 to 491.6: LIMESTONE: limestone, dark grey, shaly, finely bioclastic with Botrydium bryozoa and crinoids, lumpy and fragmental.

491.6 to 492.5: LIMESTONE: limestone, very silty, pale grey brown, irregular lamination dips 80 degrees CA.

492.5 to 495.8: SILTSTONE: siltstone, green grey at top and basal 1 m, with dark grey shale interbedded in the middle, with light brown dolomitic interbeds typical of the basal 8' Suez, dips 80 degrees CA.

495.8 to 498.4: SILTSTONE: siltstone, red with minor grey at base, few fractures and halite veinlets, dips 25-30 degrees CA.

498.4 to 499.3: HALITE: halite, light grey to pale orange, with abundant 1 cm interbeds of grey anhydrite and grey siltstone-mudstone, core is underzoned due to dissolution, dips 85 degrees CA.

499.3 to 500.7: SILTSTONE: siltstone, red, transitional to silt at top and base.

500.7 to 511.5: HALITE: halite, medium to dark grey, banded, with increasing grey siltstone-mudstone inclusions upwards, trace bright red potash salt (sylvite), thin red halite silt at 506.3, sparse anhydritic laminae in silt in lower 4 m, and rare potash in basal 30 cm, dips 85 degrees CA.

511.5 to 512.2: SILTSTONE: siltstone, red, soft.

512.2 to 553.4: HALITE: halite, light grey to pale orange, impure with abundant interbeds and interstitial inclusions of grey siltstone-mudstone, thin bands of red siltstone 0.5-1.0 m thick, scattered inclusions of red salt/sylvite, dips 80 degrees CA.

553.4 to 570.6: HALITE: halite, medium to light grey, impure with interbeds and interstitial inclusions of grey siltstone-mudstone, thin bands of red siltstone 0.5-1.0 m thick (553.4-555.9, 557.2-557.8, 564.4-567.7, 569.8-570.6), scattered inclusions of red salt, dips 80 degrees CA.

570.6 to 578.0: HALITE: halite, medium to dark grey to brown grey, with abundant (30-40%) grey siltstone-mudstone inclusions, banded, traces of bright red halite.

578.0 to 579.4: SILTSTONE: siltstone to mudstone, grey to red at contacts.

579.4 to 580.8: HALITE: halite, medium to dark grey to brown grey, with abundant grey siltstone-mudstone inclusions, banded, traces of bright red halite.

580.8 to 581.9: SILTSTONE: siltstone to mudstone, grey to red at contacts.

581.9 to 586.4: HALITE: halite, medium to dark grey to brown grey, with abundant grey siltstone-mudstone inclusions, red mud at 585.0-585.5, banded, traces of bright red halite.

586.4 to 591.6: SILTSTONE: siltstone to mudstone, grey to red, abundant halite as veins, bands and inclusions.

591.6 to 592.4: HALITE: halite, medium to dark grey to brown grey, with abundant grey siltstone-mudstone inclusions.

592.4 to 593.6: HALITE: halite and carnallite-sylvite potash zone, variably dissolved appears to increase downward due to increasing content of soluble potash, 1.4 m of 3.2% K2O.

593.6 to 595.2: HALITE: halite with trace bright red salt and rare sylvite.

595.2 to 603.8: HALITE: halite and siltstone, 40-70% halite.

603.8 to 607.8: SILTSTONE: siltstone to mudstone, grey to red with orange halite.

607.8 to 627.9: HALITE: halite, medium to dark grey to brown grey, variably dissolved appears to increase downward due to increasing content of soluble potash, 1.4 m of 3.2% K2O.

627.9 to 687.0: HALITE: halite, pale brown grey, silty, banded, with abundant interbeds of green siltstone, typically with orange halite crystals and veins, grey and minor red siltstone at 627.9-628.9, 633.0-633.3, 638.5-639.4, 640.1-640.6, 645.5-645.8, 646.2-646.4, 647.4-647.9, 649.9-649.9, 652.2-652.4, 653.4-653.7, 661.2-662.7, 665.6-666.2, 668.0-668.5, 673.0-674.1, 676.6-677.2, 679.0-679.5, 683.0-684.0, 686.7-687.0.

687.0 to 690.0: HALITE: halite, pale grey, banded, minor green siltstone.

690.0 to 690.5: SILTSTONE: siltstone, grey with orange halite euhedra.

690.5 to 700.5: HALITE: halite, pale brown grey, banded, minor green siltstone, rare orange halite veins, few large halite crystals.

700.5 to 707.2: HALITE: halite, clean clear, pale grey, with rare anhydrite inclusions and thin halitic anhydrite interbeds at 703.7-704.1, 706.0-706.5, vague banding at 80 degrees CA.

707.2 to 709.5: HALITE: halite, pale brown grey, banded, trace sylvite.

709.5 to 709.5: SILTSTONE: siltstone, grey with orange halite vein.

709.5 to 714.2: HALITE: halite, pale brown grey, banded, silty.

714.2 to 715.5: SILTSTONE: siltstone, grey with halite, traces of sylvite, minor orange halite veins.

715.5 to 719.9: HALITE: halite, pale brown grey, banded, silty with traces of sylvite.

719.9 to 721.3: SILTSTONE: siltstone, grey with halite transition at top and red colour at base, dips 75-80 degrees CA.

721.3 to 726.9: HALITE: halite, pale brown grey, banded.

726.9 to 727.2: SILTSTONE: siltstone and halite mixture, pale brown grey, with green siltstone bands, traces of sylvite.

727.2 to 728.7: HALITE: halite, pale brown grey, banded.

728.7 to 729.8: HALITE: halite, pale brown grey to clear.

729.8 to 730.5: ANHYDRITE: anhydrite, brown grey, with thin interbedded halite, dips 80 degrees CA.

730.5 to 734.5: HALITE: halite, brown grey to clear, banded, minor thin anhydrite.

734.5 to 736.0: ANHYDRITE: anhydrite, brown grey, with thin halite at 734.7-735.8, dips 80 degrees CA.

736.0 to 741.2: HALITE: halite, brown grey to clear, with minor thin anhydrite.

741.2 to 746.3: HALITE: halite and low grade carnallite 5.0% K2O at 741.2-743.2, equivalent to 7.6% sylvite and 7.9% carnallite, brown grey to clear halite with minor carnallite, highly dissolved, upper contact is a gradation.

746.3 to 749.2: HALITE: halite, pale brown to clear with trace to minor carnallite, upper contact is a gradation.

749.2 to 751.2: HALITE: halite, pale brown with traces of carnallite near contact is a gradation.

751.2 to 752.1: MUDSTONE: mudstone and siltstone, grey.

752.1 to 773.4: HALITE: halite with rare anhydrite, pale brown to clear and pure (approx. 95%), anhydrite at 756.6-756.8, lower contact is a gradation with anhydrite, top is sharp with grey mud.

773.4 to 777.5: ANHYDRITE: anhydrite, medium blue grey, massive to nodular mosaic, halitic, interbedded at top and sharp base with halite, dips 85 degrees CA.

777.5 to 803.1: HALITE: halite with rare anhydrite, clean, clear and pure (approx. 95%), core is slightly underzoned due to under saturation of the drill brine, lower contact is a gradation with anhydrite.

803.1 to 803.8: ANHYDRITE: anhydrite, medium blue grey, massive mosaic, halitic.

803.8 to 805.2: HALITE: halite with abundant anhydrite towards the gradational base.

805.2 to 808.9: ANHYDRITE: anhydrite, medium blue grey, massive mosaic, halitic.

808.9 to 828.9: HALITE: halite with rare anhydrite, clean, clear and pure (approx. 95%), core is slightly underzoned due to under saturation of the drill brine, lower contact is a gradation with anhydrite.

828.9 to 890.2: ANHYDRITE: anhydrite, medium blue grey, massive to massive mosaic, local thin siltstone, very coarse grained pure halite, 1-2 cm thick at 850.2, 892.45, 892.8, 893.25, 894.0, 894.25, 894.9, then every 2m or so to 898m, and then every 1.5 m to the bottom.

890.2 to 943.2: ANHYDRITE: anhydrite, core cut but not retrieved due to broken drill rods and wire line during retrieval, lost gear in hole includes in part: 600 Feet HQ rods, 500 Feet BQ rods, 1 BQ core barrel assembly on 2 BQ overshots, and 2000 Feet of wireline cable.