

Client: Keltic Petrochemicals Inc.	Project No. 102F01
Date drilled: 13 April 2005	Borehole No. 05-1 a&b

Elevation: Well A = 75.279m, Well B = 75.184m *Page 1 of 8*

	Depth (m) Lithology Description		Sample			
Box		Lithology Description	Number	Interval (m)	Value (ppm)	
na	0 – 2.29	Overburden: Compact, fine to medium olive-brown sand and gravel till with cobbles. Split-spoon refusal at 0.3m below surface.				
1	2.29 – 4.83	Medium-to dark-grey fine-to medium-grained greywacke with vertical fractures throughout. Core broken at 2.29m to 2.74m, very broken with Fe-staining at 3.05m to 3.48m and at 3.66 to 5.01m (approx. 25mm pieces).				
2	4.83 – 6.13	Medium-to dark-grey fine-to medium-grained greywacke with one continuous vertical fracture (but otherwise competent).				
	6.13 – 7.77	Dark-grey to black argillite, beds (ave. 7.5cm thick) dipping at 70°. Fractures at about 90° to bedding, dipping 87°.				
3	7.77 – 8.23	Medium-to dark grey fine-to medium-grained greywacke and interbedded with and grading to dark-grey to black argillite, as above. Very fractured from 8.23m to 8.79m.				
	8.23 – 8.79	Dark-brown, medium-grained, soft quartz arenite with apparent 1°Ø (cement solution feature?)				
	8.79 – 9.76	Medium-to dark-grey fine-to medium-grained greywacke.				
4	9.76 – 12.45	Medium-to dark-grey fine-to medium-grained greywacke, as above. Fractures (45°) with Fe-staining at 11.84m to 12.45m (15cm pieces).				
5	12.45 – 12.75	Dark-brown, medium-grained quartz arenite as above, but well indurated and with less-well pronounced apparent 1°Ø.				
	12.75 – 15.50	Medium-to dark-grey fine-to medium-grained greywacke.				
6	15.50 – 17.68	Medium-to dark-grey fine-to medium-grained greywacke, as above. Fractures at 45° with Fe-staining at 16.46m (5cm pieces), vertical fracture with heavy Fe-staining from to 17.22m 17.68m.				

Piezometre construction:

Well A: Hole depth = 17.68m. Schedule 40, .020 slot, 50 mm PVC screen 14.63m to 17.68m, schedule 40 casing above screen, casing stickup = 0.55m above ground surface. No. 2 silica sand 14.02m to 17.68m, bentonite 14.00m to 14.02m, No. 2 silica sand and native soil above bentonite. Locked steel protector over casing at surface. Develop well using Waterra Hydrolift to remove 1,000L of water.

Well A: Hole depth = 8.54m. Schedule 40, .020 slot, 50 mm PVC screen 5.49m to 8.54m, schedule 40 casing above screen, casing stickup = 0.52m above ground surface. No. 2 silica sand 4.88m to 8.54m, bentonite 3.90m to 4.88m, No. 2 silica sand and native soil above bentonite. Locked steel protector over casing at surface. Develop well using Waterra Hydrolift to remove 828L of water.

Coi	rth-water ncepts inc.
Box	Depth (m)

Client: Keltic Petrochemicals Inc.	Project No. 102F01
Date drilled: 06 April 2005	Borehole No. 05-2 a&b

Elevation: Top of Well A = 56.908m, Well B = 56.960m Page 2 of 8

			Sample		
Box	Depth (m)	Lithology Description	Number	Interval (m)	Value (ppm)
na	0 – 17.45	Overburden: Compact, fine to medium olive-brown sand with gravel and boulder till, some clay. Split-spoon refusal every attempt, auger refusal on boulders at 4.73m. Advance with core barrel to 17.45m. Recover 0.86m of very compact till at bottom of core interval.			
1-3	17.45 – 24.31	Dark grey to black argillite with pyrite/arsenopyrite. Bedding 80°.			

Piezometre construction:

Well A: Hole depth = 24.31m. Schedule 40, .020 slot, 50 mm PVC screen 21.26m to 24.31m, schedule 40 casing above screen, casing stickup = 0.44m above ground surface. No. 2 silica sand 20.65m to 24.31m, bentonite 19.65m to 20.65m, No. 2 silica sand and native soil above bentonite. Locked steel protector over casing at surface. Develop well using Waterra Hydrolift to remove 1,449 L of water.

Well B: Hole depth = 11.59m. Schedule 40, .020 slot, 50 mm PVC screen 8.54m to 11.59m, schedule 40 casing above screen, casing stickup = 0.50m above ground surface. No. 2 silica sand 7.93m to 11.59m, bentonite 6.93m to 7.93m, No. 2 silica sand and native soil above bentonite. Locked steel protector over casing at surface. Develop well using Waterra Hydrolift to remove 1,536L of water.



Client: Keltic Petrochemicals Inc.	Project No. 102F01
Date drilled: 08 April 2005	Borehole No. 05-3 a&b

Elevation: Top of Well A = 38.162m, Well B = 38.209m Page 3 of 8

			Sample		
Box	Depth (m)	Lithology Description	Number	Interval (m)	Value (ppm)
na	0-2.44	Overburden: Compact, fine to medium olive-brown sand and gravel till with many boulders. Split-spoon refusal at surface. Overburden thickness at Well $A = 2.44m$, Well $B = 1.55m$.			
	2.44 – 2.90	Weathered bedrock. No recovery – casing run over interval.			
1	2.90 – 5.98	Medium-grey, very fine to fine-grained greywacke, beds dipping at 85-88°. Water bearing (apparent) fractures at 3.35m, 3.46m, 3.89m, 4.37m, 4.45m, 4.78m, 5.18m (all dipping approx. 37°).			
2	5.98 – 8.92	Medium-grey, very-fine to fine-grained greywacke, as above, with water bearing (apparent) fractures at 6.17m, 7.09m, 7.62m, 7.93m, 8.46m, 8.84m and 8.92m. Core block at 8.23m.			
3	8.92 - 11.76	Medium-grey, very-fine to fine-grained greywacke, as above, with 2+ cm thick quartz vein from 8.92m to 9.91m and 5mm to 10 mm thick bedding-parallel (?) quartz veins at 10.21m and 10.37m. Minor mineralization (pyrite, copper mineral?) associated with bedding-parallel quartz. Core blocky from 8.92m to 9.81m, with core fragments averaging 75mm in size.			
4	11.76 – 14.71	Medium-grey, fine-grained greywacke, as above, without fractures.			
5	14.71 – 16.87	Medium-grey, fine-grained greywacke, as above, without fractures.			
6	16.87 – 17.38	Medium-grey, fine-grained greywacke, as above, heavily fractured (25mm to 50mm core pieces) with quarts fracture infill.			

Piezometre construction:

Well A: Hole depth = 17.38m. Schedule 40, .020 slot, 50 mm PVC screen 14.33m to 17.38m, schedule 40 casing above screen, casing stickup = 0.72m above ground surface. No. 2 silica sand 13.72m to 17.38m, bentonite 12.70m to 13.72m, No. 2 silica sand and native soil above bentonite. Locked steel protector over casing at surface. Develop well using Waterra Hydrolift to remove 1,207L of water.

Well B: Hole depth = 8.23m. Schedule 40, .020 slot, 50 mm PVC screen 5.18m to 8.23m, schedule 40 casing above screen, casing stickup = 0.72m above ground surface. No. 2 silica sand 4.57m to 8.23m, bentonite 3.50m to 4.57m, No. 2 silica sand and native soil above bentonite. Locked steel protector over casing at surface. Develop well using Waterra Hydrolift to remove 1,173L of water.



Client: Keltic Petrochemicals Inc.Project No. 102F01Date drilled: 11 April 2005Borehole No. 05-4 a&b

Elevation: Top of Well A = 35.657m, Well B = 35.718m Page 4 of 8

				Sample	
Box	Depth (m)	Lithology Description	Number	Interval (m)	Value (ppm)
na	0 - 0.46	Roots and black swamp muck.			
	0.46 - 1.22	Black swamp muck, then split spoon refusal.			
	1.22 – 5.49	Compact medium-dark grey-brown fine sand with silt till with cobbles. Auger refusal at 5.49m.			
	5.49 – 5.79	Weathered bedrock – no recovery, casing run over interval.			
1	5.79 – 8.74	Medium-grey fine-to medium-grained greywacke, with fractures at approx. 45° every 0.30m to 0.46m.			
2	8.74 – 11.59	Medium-grey fine-to medium-grained greywacke, beds dip at 85°. Bedding plane separation at 8.84m to 9.15m, with 18mm thick bedding-parallel quarts vein from 11.13m to 11.59m. Heavily fractured at approx. 10.98m.			
3	11.59 – 14.33	Dark-grey fine-to medium-grained greywacke, beds dipping 85°. Fractures at approx. 45° approx. every 0.46m to 0.61m.			
4	14.33 – 17.07	Dark-grey fine-to medium-grained greywacke, as above. Fractures at 15.85m, 16.01m and 16.69m to 17.07m (50mm to 150mm core fragments).			
5	17.07 – 18.90	Dark-grey fine-to medium-grained greywacke as above. Water bearing(?) fracture at 18.29m.			

Piezometre construction:

Well A: Hole depth = 19.21m. Schedule 40, .020 slot, 50 mm PVC screen 16.16m to 19.21m, schedule 40 casing above screen, casing stickup = 0.47m above ground surface. No. 2 silica sand 15.55m to 19.21m, bentonite 14.60m to 15.55m, No. 2 silica sand and native soil above bentonite. Locked steel protector over casing at surface. Develop well using Waterra Hydrolift to remove 1,035L of water.

Well B: Hole depth = 10.08m. Schedule 40, .020 slot, 50 mm PVC screen 7.03m to 10.08m, schedule 40 casing above screen, casing stickup = 0.55m above ground surface. No. 2 silica sand 6.42m to 10.08m, bentonite 5.40m to 6.42m, No. 2 silica sand and native soil above bentonite. Locked steel protector over casing at surface. Develop well using Waterra Hydrolift to remove 844L of water.

	-	Borehole/Monitoring Well I	Record			
<u>e</u>	3-W	Client: Keltic Petrochemicals Inc.	Project N	o. 102F01		
ea	rth-water	Date drilled: 14, 15 April 2005	Borehole No. 05-		5 a&b	
	ncepts inc.	Location: A=607274E /5002552N, B=607267E/5002530N	Datum: Nad 83 UTM Page 5 of 8			
www.v	vaterwatch.com	<i>Elevation:</i> Well A = 35.413m, Well B = 33.818m				
				Sample		
Box	Depth (m)	Lithology Description	Number	Interval (m)	Value (ppm)	
na	0 – 3.05	Overburden: Compact, fine to medium olive-brown sand and gravel till with cobbles and boulders. Split-spoon refusal at surface.				
1 -5	3.05 – 17.68	Medium-grey, medium-to fine-grained greywacke, grading to argillite in a thin zone around 12.5m. Bed dipping 68°, mechanical breaks along bedding planes. Core generally very competent, three breaks at 45° (no staining) in box 4.				
Piezometre construction:		Well A: Hole depth = 17.68m. Schedule 40, .020 slot, 50 mm PVC so schedule 40 casing above screen, casing stickup = 0.55m above grou 14.02m to 17.68m, bentonite 14.00m to 14.02m, No. 2 silica sand an Locked steel protector over casing at surface. Develop well using Wa 1,035L of water.	nd surface. I d native soil	No. 2 silica above bent	sand tonite.	
		Well A: Hole depth = 8.54m. Schedule 40, .020 slot, 50 mm PVC scr 40 casing above screen, casing stickup = 0.52m above ground surface 8.54m, bentonite 3.90m to 4.88m, No. 2 silica sand and native soil at	e. No. 2 silic	a sand 4.88	3m to	

protector over casing at surface. Develop well using Waterra Hydrolift to remove 862L of water.

e-w C
earth-water
Concepts inc.
www.waterwatch.com

Client: Keltic Petrochemicals Inc.	Project No. 102F01
Date drilled: 16 April 2005	Borehole No. 05-6 a&b

				Sample	
Box	Depth (m)	Lithology Description	Number	Interval (m)	Value (ppm)
na	0 – 5.49	Overburden: Compact, fine to medium olive-brown sand and gravel till with cobbles and boulders. Split-spoon refusal at surface.			
1	5.49 – 8.16	Light-grey, fine-grained greywacke. Fracture (85°, Fe-staining) at 6.40m and 7.62m.			
2	8.16 – 10.90	Light-grey, fine-grained greywacke, as above, but very broken (soft, schistose) from 8.46m to 8.77m. Harder but broken (7cm to 22 cm pieces) from 8.77m to 10.90m.			
3	10.90 – 13.69	Light-grey, v. fine-grained schistose-greywacke – solid 10.90m to 11.20m with a thin (cm) argillaceous bed at 26°. Near vertical fracture (cleavage?) with Fe-staining, very broken from 11.89m to 12.50m (2-3cm thick mud – rock flour? in fracture at 12.50m).			
	12.50 – 13.69	Light-grey, very fine-grained greywacke, non-fractured.			
4	13.68 – 14.02	Light-grey, very fine-grained greywacke, as above.			
	14.02 – 16.08	Light-to medium-grey, medium-grained greywacke interbedded (0.5cm beds) with fine-grained greywacke and greywacke/argillite. Fractured (5 cm pieces) at 15.78m.			
5	16.08 – 16.46	Interbedded (0.5 cm) light-to medium-grey, medium-grained and fine-grained greywacke and greywacke/argillite, as above. Fractured (10 cm pieces).			
	16.46 – 17.38	Light-to medium-grey, fine-grained, very schistosic (soapy-looking) greywacke, grading downward to medium-to coarse-grained, non-schistosic greywacke. Sub-horizontal quartz 10 to 13 cm thick near top of section. Arsenopyrite crystals (1cm) present throughout.			
	17.38 – 18.17	Medium-to dark-grey schistosic argillite.			
	18.17 – 18.83	Medium-grey, medium-grained greywacke, Competent.			
6	18.83 – 20.35	Medium-grey, medium-grained greywacke, as above.			
	20.35 – 20.73	Deformed medium-to dark-grey argillite 5cm thick, grading down to medium-grey, fine-grained greywacke.			

(a-w)	Borehole/Monitoring Well Record		
e-w	Client: Keltic Petrochemicals Inc.	Project No. 102F01	
earth-water	Date drilled: 16 April 2005	Borehole No. 05-6 a&b	
Concepts inc.	<i>Location:</i> 607021E / 5002264N ± 3m	Datum: Nad 83 UTM	
www.waterwatch.com	<i>Elevation:</i> Well A = 17.429m, Well B = 17.253m	Page 7 of 8	
Piezometre construction:	Well A: Hole depth = 20.73m. Schedule 40, .020 slot, 50 mm PVC screen 17.68m to 20.73m, schedule 40 casing above screen, casing stickup = 0.60m above ground surface. No. 2 silica sand 17.07m to 20.73m, bentonite 16.50m to 17.07m, No. 2 silica sand and native soil above bentonite. Locked steel protector over casing at surface. Develop well using Waterra Hydrolift to remove 780L of water. (Note: bentonite dropped inside well while extracting drill casing during construction, water murky throughout development).		
	Well A: Hole depth = 7.01m. Schedule 40, .020 slot, 50 mm PVC screen 3.96m to 7.01m, schedule 40 casing above screen, casing stickup = 0.46m above ground surface. No. 2 silica sand 3.35m to 7.01m, bentonite 3.00m to 3.35m, No. 2 silica sand and native soil above bentonite. Locked steel protector over casing at surface. Develop well using Waterra Hydrolift to remove 186L of water (well went dry twice during development, water murky throughout development).		

Coi	rth-water ncepts inc.
Box	Depth (m)

Client: Keltic Petrochemicals Inc.	Project No. 102F01
Date drilled: 17, 18 April 2005	Borehole No. 05-7 a&b

Elevation: Well A = 10.032m, Well B = 9.778m Page 8 of 8

	Depth (m)	Lithology Description	Sample		
Box			Number	Interval (m)	Value (ppm)
na	0 – 5.59	Overburden: Compact, fine to medium olive-brown sand and gravel till with cobbles. Bedrock at 4.57m at Well A, at 3.96 at Well B.			
1	4.57 – 6.40	Medium-grey, fine-grained greywacke, competent.			
	6.40 – 7.32	Medium-to dark-grey argillite, vertical cleavage apparent, competent.			
2	7.32 – 7.75	Medium-to dark-grey argillite, as above.			
	7.75 – 10.06	Light-to medium-grey, medium-grained greywacke, cleavage 86° with associated small crenulation folds and thin quartz. Competent.			
3-6	10.06 – 20.73	Light-to medium-grey, medium-grained greywacke, as above.			

Piezometre construction:

Well A: Hole depth = 20.73m. Schedule 40, .020 slot, 50 mm PVC screen 17.68m to 20.73m, schedule 40 casing above screen, casing stickup = 0.66m above ground surface. No. 2 silica sand 17.07m to 20.73m, bentonite 16.50m to 17.07m, No. 2 silica sand and native soil above bentonite. Locked steel protector over casing at surface. Develop well using Waterra Hydrolift to remove 138L of water (well went dry, recovered only enough in 4 hours to allow sampling).

Well B: Hole depth = 11.59m. Schedule 40, .020 slot, 50 mm PVC screen 8.54m to 11.59m, schedule 40 casing above screen, casing stickup = 0.54m above ground surface. No. 2 silica sand 7.93m to 11.59m, bentonite 6.93m to 7.93m, No. 2 silica sand and native soil above bentonite. Locked steel protector over casing at surface. Develop well using Waterra Hydrolift to remove 855L of water.