

**LAKES OIL N.L.****CUTTINGS DESCRIPTIONS****WELL NAME:** Patrobus No.1**GEOLOGIST:** Ingrid Campbell

<b>Interval (m)</b>	<b>%</b>	<b>Description</b>
000-003	100	UNCONSOLIDATED SAND: clear to white, fine grained, subangular-subrounded, moderately sorted, unconsolidated, dominantly quartz grains, trace shell fragments, excellent visual porosity, no oil fluorescence.
003-006	100	UNCONSOLIDATED SAND: as above
006-009	100	UNCONSOLIDATED SAND: as above
009-012	90	UNCONSOLIDATED SAND: as above
	10	CLAYSTONE: medium brown to orange, very fine grained, unconsolidated, soft, sometimes sticky, trace dark brown-black carbonaceous material, non fissile.
012-015	90	UNCONSOLIDATED SAND: as above
	10	CARBONACEOUS MATERIAL: brown-black, blocky, non-fissile
	Trace	CLAYSTONE: as above
015-018	70	UNCONSOLIDATED SAND: clear to white, very fine-fine grained, subangular-subrounded, moderately sorted, unconsolidated, dominantly quartz grains, trace shell fragments, excellent visual porosity, no fluorescence.
	30	SILTSTONE: light brown to light orange, very fine grained, unconsolidated, friable.
018-021	90	UNCONSOLIDATED SAND: as above
	10	SILTSTONE: grey-light brown, unconsolidated
	Trace	CLAYSTONE: as above
	Trace	CARBONACEOUS MATERIAL: as above
021-024	100	UNCONSOLIDATED SAND: clear to white, fine grained, subangular-subrounded, moderately sorted, unconsolidated, trace claystone matrix, dominantly quartz grains, trace granitic lithics, excellent visual porosity, no fluorescence.
024-027	100	UNCONSOLIDATED SAND: clear to white, fine grained, subangular-subrounded, moderately sorted, unconsolidated, trace claystone matrix, dominantly quartz grains, trace granitic lithics, excellent visual porosity, no fluorescence.
027-030	100	UNCONSOLIDATED SAND: as above
030-033	100	UNCONSOLIDATED SAND: clear to white, medium to coarse grained, subrounded-rounded, well sorted, unconsolidated, dominantly quartz grains, trace carbonaceous material, excellent visual porosity, no fluorescence.

033-036	90	UNCONSOLIDATED SAND: clear to white, medium to coarse grained, subrounded-rounded, well sorted, unconsolidated, dominantly quartz grains, trace ironstone, excellent visual porosity, no fluorescence.
	10	CARBONACEOUS MATERIAL: brown-black, blocky, non-fissile.
036-039	70	UNCONSOLIDATED SAND: as above
	30	SILTSTONE: grey to dark grey, soft to medium hard, fissile.
039-042	80	UNCONSOLIDATED GRAVEL: medium-coarse grained, subangular-angular, poorly sorted, unconsolidated, common subangular-angular quartz, granitic, metamorphic lithics, fine grained volcanic lithics.
	20	UNCONSOLIDATED SAND: medium to coarse grained, subangular-subround, poorly sorted, unconsolidated, mixed grains.
042-045	20	UNCONSOLIDATED GRAVEL: as above
	80	LIMESTONE: white-light grey, fine-very coarse, poorly sorted, fossiliferous limestone, crinoids, bryozoan, shell fragments, very fine matrix, soft.
045-048	10	UNCONSOLIDATED GRAVEL: A/A
	90	LIMESTONE: A/A
048-051	90	LIMESTONE: grey-white, fossiliferous, bryozoa, crinoids, shell fragments, fine-very fine grained matrix, soft.
	10	UNCONSOLIDATED GRAVEL: medium-coarse grained, poorly sorted, subangular-subrounded quartz, granitic, metamorphic, volcanics
051-054	100	LIMESTONE: white, fossiliferous, bryozoa, crinoids, shell fragments, no visible matrix, soft.
054-057	100	LIMESTONE: A/A
057-060	100	LIMESTONE: A/A
060-063	100	LIMESTONE: A/A rare gravel particles (cavings)
063-066	100	LIMESTONE: A/A
066-069	100	LIMESTONE: A/A
069-072	100	LIMESTONE: A/A
072-075	100	LIMESTONE: A/A
075-078	100	LIMESTONE: A/A
078-081	100	LIMESTONE: A/A
081-084	100	LIMESTONE: grey-white, fossiliferous, bryozoa, crinoids, shell fragments, no visible matrix, soft.
084-087	100	LIMESTONE: A/A
087-090	100	LIMESTONE: A/A
090-093	100	LIMESTONE: A/A
093-096	100	LIMESTONE: A/A
096-099	100	LIMESTONE: A/A

099-102	100	LIMESTONE: A/A
102-105	100	LIMESTONE: A/A
105-108	100	LIMESTONE: A/A
108-111	100	LIMESTONE: grey-white, fossiliferous, bryozoa, crinoids, shell fragments, rare carbonaceous material, no visible matrix, soft.
111-114	100	LIMESTONE: A/A
114-117	100	LIMESTONE: A/A
117-120	100	LIMESTONE: A/A
120-123	90	MARLSTONE: light grey-very light green, fine-very fine, glauconitic, slightly sticky.
	10	LIMESTONE: grey-white, calcitic debris, coral fragments, soft
123-126	60	MARLSTONE: light brown-grey brown, very fine-fine grained, trace glauconite, slightly sticky.
	40	LIMESTONE: grey-white, fine-medium grained, moderately sorted, fossiliferous, bryozoa, crinoids, shell fragments, soft.
126-129	50	MARLSTONE: A/A
	50	LIMESTONE: grey-white, fine-medium grained, fossiliferous fragments, bryozoa, crinoids, shelly fragments, soft.
129-132	60	MARLSTONE: light brown-grey brown, very fine-fine grained, trace glauconite, slightly sticky, moderately silty.
	40	LIMESTONE: A/A
132-135	90	LIMESTONE: grey-white, fine grained, moderately sorted, fossiliferous fragments, bryozoa, crinoids, shelly fragments, soft.
	10	MARLSTONE: A/A
135-138	70	LIMESTONE: A/A
	30	MARLSTONE: A/A
138-141	80	LIMESTONE: A/A
	20	MARLSTONE: A/A
141-144	60	LIMESTONE: A/A
	40	MARLSTONE: A/A
144-147	70	LIMESTONE: A/A
	30	MARLSTONE: A/A
147-150	50	LIMESTONE: A/A
	50	MARLSTONE: A/A
150-153	80	MARLSTONE: A/A dispersed in washing process
	20	LIMESTONE: grey-white, fine grained, moderately sorted, fossiliferous fragments, bryozoan, crinoids, gastropods, echinoid spines, shelly fragments.
153-156	80	MARLSTONE: light brown-grey brown, very fine-fine grained, trace glauconite, slightly sticky, moderately silty.

	20	LIMESTONE: grey-white, fine grained, moderately sorted, fossiliferous fragments, bryozoan, crinoids, gastropods, echinoid spines, shelly fragments.
156-159	90	MARLSTONE: A/A
	10	LIMESTONE: A/A
159-162	90	MARLSTONE: light brown-grey brown, very fine grained, trace glauconite, trace carbonaceous material, slightly sticky, moderately silty, soft.
	10	LIMESTONE: A/A
162-165	90	MARLSTONE: light grey-light greenish grey, fine-very fine with abundant fossiliferous fragments, shell fragments, echinoid spines, gastropods, bryozoa, trace pyrite, trace carbonaceous material, common crystalline limestone, poor visual porosity, no fluorescence.
	10	LIMESTONE: A/A
165-168	90	MARLSTONE: light grey-light greenish grey, fine-very fine with abundant fossiliferous fragments, shell fragments, echinoid spines, gastropods, bryozoa, trace pyrite, trace carbonaceous material, rare subangular-subrounded quartz, common crystalline limestone, poor visual porosity, no fluorescence.
	10	LIMESTONE A/A
168-171	90	MARLSTONE: A/A
	10	LIMESTONE: A/A
171-174	90	MARLSTONE: A/A
	10	LIMESTONE: A/A
174-177	90	MARLSTONE: light grey-light greenish grey, fine-very fine with abundant fossiliferous fragments, shell fragments, echinoid spines, gastropods, bryozoa, common pyrite, trace carbonaceous material, rare subangular-subrounded quartz, common crystalline limestone, poor visual porosity, no fluorescence.
	10	LIMESTONE: A/A
177-180	90	MARLSTONE: A/A
	10	LIMESTONE: A/A
180-183	80	MARLSTONE: light grey-light greenish grey, fine-very fine with rare fossiliferous fragments, abundant glauconite, common pyrite, common brown nodules, rare subangular-subrounded quartz, common crystalline limestone, poor visual porosity, no fluorescence.
	10	LIMESTONE: A/A
	10	SILTSTONE: light grey, well sorted, moderately-well rounded fine-very fine grained, unconsolidated-moderately consolidated, poor visual porosity, no fluorescence.
183-186	90	MARLSTONE: greenish grey, well sorted, very fine

		grained, glauconitic, calcareous, minor shell fragments, minor brown nodules, moderately sticky, poor visual porosity, no fluorescence.
	10	SILTSTONE: A/A
186-189	80	MARLSTONE: A/A
	20	SILTSTONE: A/A
189-192	60	MARLSTONE: light grey-dark grey, fine-very fine grained, glauconitic, common pyrite, rare shell fragments, moderately sticky, soft.
	40	SILTSTONE:
192-195	50	MARLSTONE: A/A
	50	SILTSTONE: light grey-medium grey, subangular-subrounded, well sorted, very fine grained, calcitic, sticky, rare shell fragments, poor visual porosity, no fluorescence.
195-198	80	MARLSTONE: very light greenish grey-greenish grey, moderately sorted, subrounded-rounded, fine grained with common fossiliferous material, common bryozoa, rare shell fragments, trace glauconite, matrix supported, silty matrix, trace calcite cement, moderately sticky, moderately dispersive, soft, non-fissile.
	20	SILTSTONE: pale yellow-pale yellowish brown, moderately sorted, subrounded-well rounded, fine-very fine grained, common clear-milky quartz, rare dark lithics, trace pyrite, no visible matrix, poor visual porosity, no fluorescence.
198-201	90	MARLSTONE: A/A
	10	SILTSTONE: A/A
201-204	80	MARLSTONE: A/A
	20	SILTSTONE: light grey-light brown, moderately sorted, subrounded-well rounded, fine-very fine grained, common clear-milky quartz, rare dark lithics, trace pyrite, no visible matrix, calcareous, poor visual porosity, no fluorescence.
204-207	40	MARLSTONE: light grey-green, moderately sorted, subrounded-rounded, fine grained with common fossiliferous material, common bryozoa, rare shell fragments, trace glauconite, matrix supported, silty matrix, trace calcite cement, moderately sticky, moderately dispersive, soft, non-fissile.
	20	SILTSTONE: medium grey-dark grey, moderately sorted, subrounded-well rounded, fine-very fine grained, common clear-milky quartz, rare dark lithics, trace pyrite, no visible matrix, calcareous, poor visual porosity, no fluorescence.
	20	LIMESTONE: white-very light grey, fossiliferous fragments, gastropods, bryozoa, corals, unconsolidated, marly matrix, matrix supported, poor visual porosity, no fluorescence.

207-210	50	MARLSTONE: A/A
	40	SILTSTONE: A/A
	10	LIMESTONE: A/A
210-213	50	MARLSTONE: A/A
	50	SILTSTONE: medium grey-dark grey, moderately sorted, subrounded-well rounded, fine-very fine grained, common clear-milky quartz, rare dark lithics, trace pyrite, occasional shell fragments, no visible matrix, calcareous, poor visual porosity, no fluorescence.
213-216	60	SILTSTONE: light grey-medium grey, subangular-subrounded, moderately sorted, moderately consolidated, common clear-milky quartz, rare dark lithics, rare pyrite, no visible matrix, poor visual porosity, no fluorescence.
	40	MARLSTONE: light grey-green, moderately sorted, subrounded-rounded, fine grained, rare fossiliferous material, rare bryozoa, trace shell fragments, trace glauconite, matrix supported, silty matrix, trace calcite cement, moderately sticky, moderately dispersive, soft, non-fissile.
216-219	60	SILTSTONE: A/A
	40	MARLSTONE: A/A
219-222	70	SILTSTONE: light grey-medium grey, subangular-subrounded, moderately sorted, moderately consolidated, common clear-milky quartz, abundant dark green lithics, rare pyrite, occasional limestone fragments, no visible matrix, poor visual porosity, no fluorescence.
	30	MARLSTONE: A/A
222-225	80	SILTSTONE: A/A
	20	MARLSTONE: A/A
225-228	90	SILTSTONE: light grey-grey, subrounded-rounded, moderately sorted, dominant dark green medium-coarse glauconitic nodules, common pyrite, rare translucent-milky quartz grains, rare shell fragments, strongly calcareous, moderate inferred porosity, no fluorescence.
	10	MARLSTONE: A/A
228-231	100	GREENSAND: dark green-black, medium-coarse, subrounded-rounded, calcareous, very fine milky-white calcareous matrix, moderately consolidated, dark brown-dark red subrounded-rounded limonitic concretions, common pyrite, dull lustre, fair-moderate visual porosity, no fluorescence.