APPENDIX-4

NALANGIL-1

SAMPLE DESCRIPTION

W1035

GAS AND FUEL EXPLORATION N.L.

WELL: NALANGIL NO#1 **DATE:** 04/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 1 **OF** 14

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUOR NAT.	CUT
		SPUDDED @ 0200 HRS.							
		4-8-1990							
		K.B. = 146m							
		K.B. to G.L. = 3.05m.							
		16" Conductor set @ 6.00m.							
Surf-21	100	CLAYSTONE, light yellow brn., med. pinkish red, light reddish							
		brn. in part, soft sticky, rarely disp, mod. silty, abundant							
		multi-col. vf-f sand grains/lithics commonly reddish, vf mica							
		(the claystone appears to be the product of decomposed basalt)							
21-26	50	CLAYSTONE as above							
	50	CLAYSTONE light to med. grey, soft, sticky, rare-mod. silty,							
		mod calcareous, rarely becomes marly, trace foram, trace fine							
		quartzose sand v. lithic							
26-30	100	CLAYSTONE, med.-dk gry, med-dk green gry, speckled, v. soft							
		sticky rarely disp., com. silty, v. silty in part, tr. v.f.							
		loose sand, tr.-com. f. multi-col. lithics (possibly cavings)							
30-35	100	CLAYSTONE, as above, slightly calc, tr. fossil frag, becoming							
		more sandy and silty with depth.							

WELL: NALANGIL NO#1 **DATE:** 04/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 2 **OF** 14

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUOR NAT.	CUT
35-40	100	CLAYSTONE as above							
40-45	100	CLAYSTONE generally as above, com. forams, bryazoa and other							
		fossil frag, rare chlorite and/or glauconite pellets, com.							
		lithics with minor							
	Tr	SANDSTONE, lt. gry, lt. green gry in part, lt brn gry in part,							
		generally loose, occ. firm-friable, vf-f, sa-sr, mod-well							
		sorted qtz and lithic frag, com med. gry, rarely lt green gry							
		clay. mtx, slightly-mod calc, rare pyrite & mica, poor-none							
		vis. ø							
45-50	100	CLAYSTONE as above							
	Tr	SANDSTONE as above, loose, trace coal frag.							
50-55	90	CLAYSTONE as above							
	10	SANDSTONE as above (Note: Sandstone had abundant disp. clay.							
		mtx which was mashed away).							
55-60	95	CLAYSTONE as above							
	5	SANDSTONE as above							
60-65	95	CLAYSTONE as above, rarely firm in part							
	5	SANDSTONE as above, generally loose, v. rarely firm in part							

GAS AND FUEL EXPLORATION N.L.

WELL: NALANGIL NO#1 **DATE:** 04/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 3 **OF** 14

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUOR NAT.	CUT
65-68.78	95	CLAYSTONE as above, becoming dom. med. brn. gry, v.silty &							
		disp, fossiliferous as above							
	5	SANDSTONE as above, dom. lt-med brn gry, loose, vf-f, sa-sr							
		well sorted qtz, abundant disp. med brn gry clay. mtx,							
		com-abundant lithics of different shade of yellow and/or							
		orange, slightly calc. tr. fossil frag, rare amber (?)							
		Drilled to 68.78m (9.30 am 04/08/90)							
		Set Casing Shoe @ 64.24m							
		Drilled out of casing shoe							
		Drilled new formation to 73m							
		Formation Integrity Test @ 73m (3.00 am 06/08/90)							
68.78-75	100	CLAYSTONE as above							
	Tr	SANDSTONE as above							
75-80	85	CLAYSTONE generally as above, med brn gry, med gry, soft,							
		occ firm, disp, rarely sticky, silty in part, rare lithic,							
		interbedded/interlam with;							

GAS AND FUEL EXPLORATION N.L.

WELL: NALANGIL NO#1 **DATE:** 06/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 4 **OF** 14

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
	15	SANDSTONE, lt-med brn gry, loose, occ friable, vf-f, occ							
		grading to silt size, sa-sr, dom sr, well sorted qtz, abundent							
		med brn gry disp argillaceous mtx, v. slightly calc. tr f.							
		lithics, rare f. mica tr forams and other fossil frag,							
		poor-no vis Ø.							
80- 85	90	CLAYSTONE as above							
	10	SANDSTONE as above							
85- 90	90	CLAYSTONE as above							
	10	SANDSTONE as above							
90- 95	90	CLAYSTONE as above							
	10	SANDSTONE as above							
95-100	95	CLAYSTONE as above							
	5	SANDSTONE as above, occ lt green gry in part							
100-105	100	CLAYSTONE as above, dom lt-med green gry, rare glauc/chlorite							
	Tr	SANDSTONE as above							
105-110	100	CLAYSTONE as above, dom med brn gry, extremely silty							
	Tr	SANDSTONE as above							
110-115	100	CLAYSTONE as above							

GAS AND FUEL EXPLORATION N.L.

WELL: NALANGIL NO#1 **DATE:** 06/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 5 **OF** 14

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUOR NAT.	CUT
	Tr	SANDSTONE as above							
115-120	100	CLAYSTONE, as above med brn gry, lt-med green gry in part,							
		mod calc, tr glauc/chlorite, rare coarse clear to lt brn sr							
		qtz sand grains, rare pyrite.							
	Tr	SANDSTONE as above							
120-125	100	CLAYSTONE as above, dom med brn gry, rare c qtz sand grains							
	Tr	SANDSTONE as above, rarely firm in part, rare cal cmt no ø							
125-130	100	CLAYSTONE as above							
	Tr	SANDSTONE as above							
130-135	100	CLAYSTONE as above, med brn gry, med gry, lt green gry in							
		part, tr c sand grains, rare glauconite							
	Tr	SANDSTONE as above, rare glauconite							
135-140	90	CLAYSTONE as above, com. glauconite pellets							
	10	SANDSTONE, med brn gry, lt brn gry loose, friable to firm,							
		hard in part, vf-f, sa-sr, well sorted qtz, com disp med gry							
		and med brn gry arg. mtx, tr med strong cal cmt in part, tr							
		glauconite, rare f partially altered feld (?), tr lithics, v.							
		rare mica & pyrite, no vis. ø							

GAS AND FUEL EXPLORATION N.L.

WELL: NALANGIL NO#1 **DATE:** 06/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 6 **OF** 14

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
140-145	95	CLAYSTONE as above, becoming more silty, dom med brn gry							
	5	SANDSTONE as above							
145-150	95	CLAYSTONE as above tr. glauconite pellets							
	5	SANDSTONE as above							
150-155	100	CLAYSTONE as above, com. glauconite pellets							
	Tr	SANDSTONE as above							
155-160	100	CLAYSTONE as above, com. glauconite pellets							
	Tr	SANDSTONE as above							
160-165	95	CLAYSTONE as above, tr glauconite pellets							
	5	SANDSTONE as above							
165-170	100	CLAYSTONE as above, tr glauconite pellets							
	Tr	SANDSTONE as above							
170-175	100	CLAYSTONE as above							
	Tr	SANDSTONE as above							
175-180	95	CLAYSTONE as above, tr glauconite							
	5	SANDSTONE as above							
180-186	100	CLAYSTONE as above, tr glauc.							
	Tr	SANDSTONE as above							

GAS AND FUEL EXPLORATION N.L.

WELL: NALANGIL NO#1 **DATE:** 06/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 7 **OF** 14

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
186-190	90	CLAYSTONE, med-dk brn gry, rare med green gry in part, soft							
		sticky in part, disp in part, mod silty, slightly							
		glauconitic, v. slightly calcareous and carbonaceous, com							
		forams & other fossil grag, interbd. with							
	10	SANDSTONE, lt brn, lt-med brn gry, lt green gry in part,							
		loose in part, friable to hard in part, vf-f and occ. med,							
		sa-sr, mod sorted qtz & lithics, com med brn arg. mtx, v.							
		disp, tr-com cal cmt, rare strong pyrite cmt, tr glauconite,							
		tr pyr nodules pyritised fossil frag, tr C-VC SR-R qtz							
		overgrowth, poor-no vis. Ø							
190-195	100	CLAYSTONE as above							
	Tr	SANDSTONE as above							
195-200	95	CLAYSTONE as above becoming extremely silty in part							
	5	SANDSTONE as above							
200-205	80	CLAYSTONE as above grading into:-							
	15	SILTSTONE, med-dk brn, soft-firm, v. arg, disp in part							
	5	SANDSTONE as above							
205-210	80	CLAYSTONE as above							

GAS AND FUEL EXPLORATION N.L.

WELL: NALANGIL NO#1 **DATE:** 06/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 8 **OF** 14

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
	20	SILTSTONE as above							
	Tr	SANDSTONE as above							
210-215	80	CLAYSTONE as above							
	15	SILTSTONE as above							
	5	SANDSTONE as above							
215-220	70	CLAYSTONE as above							
	20	SILTSTONE as above							
	10	SANDSTONE as above							
220-225	70	CLAYSTONE as above							
	20	SILTSTONE as above							
	10	SANDSTONE as above with com. loose c-vc rounded qtz sand							
		grains and qtz overgrowth.							
225-230	70	CLAYSTONE as above							
	20	SILTSTONE as above							
	10	SANDSTONE as above							
230-235	60	CLAYSTONE as above							
	20	SILTSTONE as above							
	20	SANDSTONE, clear to off white lt-med brn, loose to occ.							

GAS AND FUEL EXPLORATION N.L.

WELL: NALANGIL NO#1 **DATE:** 06/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 9 **OF** 14

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
		friable c-vc, rarely med, sa-sr, occ ang, rarely rounded,							
		mod sorted qtz com disp. arg mtx (all washed away), rare							
		pyr. cmt, slightly calc rare calc cmt, rare glauconite, rare							
		c lithics, good vis Ø							
235-240	40	SANDSTONE as above							
	20	SILTSTONE as above							
	40	CLAYSTONE as above							
240-245	60	SANDSTONE as above							
	20	SILTSTONE as above							
	20	CLAYSTONE as above							
245-250	75	SANDSTONE as above, dom c-vc, dom sr-r							
	10	SILTSTONE as above							
	15	CLAYSTONE as above							
250-255	70	SANDSTONE as above, interbedded with minor;							
	5	SANDSTONE med brn gry, firm-friable, f. occ vf, sa-sr, well							
		sorted qtz, tr-com med brn arg mtx, tr glauc., tr lithics,							
		rare v. weak calc cmt, tr pyr. cmt poor vis. Ø							
	10	SILTSTONE as above							

GAS AND FUEL EXPLORATION N.L.

WELL: NALANGIL NO#1 **DATE:** 06/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 10 OF 14

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
	15	CLAYSTONE as above							
255-260	15	SANDSTONE as above interbedded with							
	5	SANDSTONE fine as above							
	10	SILTSTONE as above							
	70	CLAYSTONE as above, becoming med brn gry, occ med green gry							
260-265	5	SANDSTONE as above							
	5	SANDSTONE as above, fine, rarely off-white to v.lt gry							
	10	SILTSTONE as above							
	80	CLAYSTONE as above, dom. dk brn gry							
265-270	80	CLAYSTONE, as above, v. disp in part							
	15	SILTSTONE as above							
	Tr	SANDSTONE as above, f-c, dom med,							
	Tr	SANDSTONE fine as above, becoming firm-hd in part							
	5	COAL, v. dk brn-black, firm, brittle, dull in part, arg in							
		part subfis in part, no fluor, cut or crush cut							
270-275	80	CLAYSTONE as above							
	15	SILTSTONE as above							
	Tr	SANDSTONE as above, f-c, dom med							

GAS AND FUEL EXPLORATION N.L.

WELL: NALANGIL NO#1 **DATE:** 06/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 11 OF 14

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
	Tr	SANDSTONE fine as above, firm							
	5	COAL as above							
275-280	80	CLAYSTONE as above							
	20	SILTSTONE as above							
	Tr	SANDSTONE as above							
	Tr	SANDSTONE fine as above							
	Tr	COAL as above							
280-285	85	CLAYSTONE, generally as above, dom med gry med brn gry, rare							
		lt. green grey,							
	15	SILTSTONE as above							
285-290	90	CLAYSTONE, generally as above, v. disp, tr-com f-med sand							
		grains							
	10	SILSTONE as above							
290-295	100	CLAYSTONE, off white-v lt. gry, pale green gry in part,							
		soft, sticky, disp in part, mod silty, tr-com lithics,							
295-300	100	CLAYSTONE as above							
300-305	95	CLAYSTONE as above in part grading to;							
	5	SILTSTONE, med gry, med green gry, firm, soft in part, med							

GAS AND FUEL EXPLORATION N.L.

WELL: NALANGIL NO#1 **DATE:** 06/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 12 **OF** 14

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
		arg. in part, tr multi-col lithics, rare f carb flecks,							
		rare fine mica							
305-310	90	CLAYSTONE as above dom med gry, med green gry, med brn gry							
		in part grading into;							
	10	SILTSTONE as above							
310-315	90	CLAYSTONE as above, tr partially altered feld (?), tr							
		volcanolithics							
	10	SILTSTONE as above							
315-320	75	CLAYSTONE as above							
	25	SILTSTONE as above							
	Tr	SANDSTONE, lt-med gry, lt green gry, off white in part,							
		firm, friable in part, fine, sa-sr, well sorted qtz and							
		volcanolithics, tr biotite, tr altered feld (?), tr							
		kaolinitic clay mtx, tr weak cal cmt, v rare chloritic mtx							
		in part, no vis Ø							
320-325	50	CLAYSTONE as above, v. disp,							
	20	SILTSTONE as above							
	30	SANDSTONE as above, dom loose, mtx disp & washed away							

GAS AND FUEL EXPLORATION N.L.

WELL: NALANGIL NO#1 **DATE:** 06/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 13 OF 14

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
325-330	70	CLAYSTONE as above							
	30	SILTSTONE as above							
	Tr	SANDSTONE as above							
330-335	60	CLAYSTONE as above							
	30	SILTSTONE as above							
	10	SANDSTONE as above							
335-340	60	CLAYSTONE as above							
	30	SILTSTONE as above							
	10	SANDSTONE as above							

GAS AND FUEL EXPLORATION N.L.

WELL: NALANGIL NO#1 **DATE:** 07/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 14 **OF** 14

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
340-345	70	CLAYSTONE as above, in part v. hd, mod calc, tr coally							
		particles							
	30	SILTSTONE as above, hd in part, cam strong cal cmt							
	Tr	SANDSTONE as above							
345-350	70	CLAYSTONE as above, v. hd in part, strong cal cmt in part							
	30	SILTSTONE as above							
350-355	70	CLAYSTONE as above, v. slightly calc.							
	30	SILTSTONE as above							
355-360	60	CLAYSTONE as above, v. hd in part, strong cal cmt in part							
	30	SILTSTONE as above, hd in part, strong cal cmt in part							
	10	SANDSTONE as above							
360-363	50	CLAYSTONE as above							
	30	SILTSTONE as above							
	20	SANDSTONE as above, dom loose							