APPENDIX 4.

SAMPLE DESCRIPTION

PINE LODGE-1

W1034

WELL: PINE LODGE -1 **Date:** 28/7/1990 **Geologist:** V. AKBARI **Page:** 1 **of** 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUOR NAT.	CL
		THE WELL WAS SPUDDED ON 27TH JULY, 1990							
0 - 40	-	NO SAMPLE							
40 - 60	100	LIMESTONE, lt. gry - white - yell - brown, loose in part, med - C rarely pyritic.							
		slightly glauconitic, very fossiliferous, coral, bryozoa							
60 - 90	100	LIMESTONE as above	Tr	Tr					
90 - 100	50	LIMESTONE as above	Tr	Tr					
	50	CLAYSTONE lt. gry - greenish, soft, dispersive, very calcareous							
100 - 110	50	LIMESTONEas above							
	50	SANDSTONE, lt. gry - brownish, med - c. dom. c. poorly sorted SA - Sub - rnd, dom							
		Sub - rnd quartz, pyritic, some pieces of free pyrite abd. dk. gry. calc. cement, mod.							
		hard, no vis. Ø							
110 - 120	70	CLAYSTONE dk. gry, dard brown - black, firm - soft, very carbonaceous							
	20	SANDSTONE as above							
	10	LIMESTONE as above							
120 - 150	90	SANDSTONE, white - lt. gry, translucent, f. med., dom med., poorly sorted, SA - sub -	Tr	Tr					
		rnd, quartz, rare dk. col. lithics, unconsol. no apparent cement, good Ø							

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUC NAT.	CL
	10	CLAYSTONE, dk. gry - black, firm - soft, highly carbonaceous							
150 - 160	60	SANDSTONE as above	Tr	Tr					
	40	CLAYSTONE as above							
160 - 170	70	SANDSTONE as above	Tr	Tr					
	30	CLAYSTONE as above	Tr	Tr					
170 - 180	80	SANDSTONE as above							
	20	CLAYSTONE as above							
180 - 230	100	SANDSTONE, lt. gry - translucent v. f. - f. dom. f. mod. sorted, SA - sub - rnd quartz,	Tr	Tr					
		rarely pyritic, unconsolidated, no apparent cement, good Ø							
230 - 240	90	SAND as above							
	10	CLAYSTONE, dk. gry - black, soft, v. carbonaceous							
240 - 270	100	LOOSE SAND as above							
	5	COAL black, soft							
270 - 300	100	LOOSE SAND as above							

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUO NAT.	CU
310 - 315	100	SAND white - translucent, f. med. dom. med., moderately sorted sub-rnd to rnd quartz,							
		rare pyrite and colored lithics, friable, no apparent cement, very good Ø							
	tr	COAL dark brown - black, mod. firm. rarely silty and pyritic with concoidal fracture							
315 - 320	90	SAND as above							
	10	COAL as above							
320 - 330	80	SAND as above							
	20	COAL as above							
330 - 360	100	SAND as from 310 - 315m							
	tr	COAL							
360 - 370	100	SAND as above							
370 - 400	100	SAND white - translucent, some frosty, f. - c. dom. med. - c. poorly sorted quartz,							
		SA - Sub. rnd., occ. rnd, dom. sub - rnd, rarely pyritic rarely micaceous, tr. dk							
		color, lithics, no apparent matrix, very good porosity							
400 - 410	100	SAND as above							
	tr	COAL dk. brn. black, mod. firm, concoidal lustre							
410 - 425	80	SAND as above							
	20	COAL as above							

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUOR NAT.	CU
425 - 460	100	SAND as above							
460 - 465	80	SAND as above							
	20	CLAYSTONE, dk gry, brownish, very soft and dispersive (mostly washed)							
465 - 490	90	SAND as above							
	10	CLAYSTONE as above							
490 - 500	70	SAND as above							
	30	CLAYSTONE, lt. greenish - gry - some dk. brownish - gry v. silty grading to siltstone							
		soft - firm. dom. soft, the dk. gry claystone are v. dispersive.							
500 - 520	80	CLAYSTONE as above							
	20	SAND as above							
520 - 530	70	CLAYSTONE as above							
	30	SAND as above							

WELL: PINE LODGE -1 **Date:** 31/07/90 **Geologist:** V. AKBARI **Page:** 5 **of** 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUC NAT.	C'
530 - 540	90	SANDSTONE, lt. greyish translucent f.-c, dom. med.-c, poorly sorted SA.-sub-rund. dom							
		sub-rnd quartz, trace mica, No apparent cement, very good porosity							
	10	CLAYSTONE as above							
540 - 545	100	SAND as above							
550	80	SAND as above							
	20	CLAYSTONE as above							
550 - 570	60	CLAYSTONE as above							
	40	SAND as above							
570 - 620	100	SAND, clear - translucent, f.-c, dom. f-med., mod. sorted SA-Sub-rnd qtz, rare color							
		lithics, loose, no apparent cement, very good porosity							
620 - 650	70	SAND as above							
	20	CLAYSTONE as above							
	10	COAL							
655	80	SAND as above							
	20	COAL							
655 - 665	80	SAND as above	Tr					nil	r
	20	COAL as above							

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUO NAT.	C
667 - 670	80	SILTSTONE, dk.-brnish - grey, soft-firm-dom. soft, ferruginous, carbonaceus	Tr						
	20	SAND as above							
670 - 690	100	SAND, white - clear, translucent, f.-c. dom. med-c, SA - sub-rnd quartz, some pyrite	Tr						
		inclusions and free pyrite							
690 - 710	70	SAND lt. gry, translucent, f.-c., dom. med.-c.,A-SA- sub-rnd., dom. sub-rnd., very	Tr						
		pyritic, loose, no apparent matrix, very good porosity							
	30	SILTSTONE, dk.gry, v.f., very pyritic, siliceous cement, firm-hard, dom. hard							
710 - 715	100	SAND lt. brownish-gry, f.-c., dom. med., mod.-poorly sorted, SA-sub-rnd quartz,	Tr						
		micaceous, rarely pyritic, no matrix, v.good porosity							
715 - 750	90	SAND as above	Tr						
	10	SILTSTONE as from 665-670 (may be caving)							
		NOTE: DRILLING BREAK AT 675.5m-678m. CIR. SAMPLES, NO GAS, NO FLUOR, NO BLENDER GAS.	Tr					Nil	N
		CONT. DRILLING							
750 - 755	60	SAND as above	Tr						
	40	SILTSTONE as from - 715-740	Tr						
755 - 760	80	SILTSTONE as above	Tr						
	20	SAND as above	Tr						

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUO NAT.	C
765 - 770	70	SAND as above (764 (-707) TOP PEMBER MUDSTONE)	Tr						
	30	SILTSTONE as above	Tr						
770 - 775	80	CLAYSTONE dark greyish - brown, v. f. silty, grading to siltstone, firm-soft, dom.	Tr						
		soft and dispersive, Carbonaceous							
	20	SAND as above (caving)							
780 - 815	100	CLAYSTONE as above							

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUC NAT.	CU
815 - 830	100	CLAYSTONE dark greyish-brown, v.fine, silty, grading to siltstone, firm-soft, dom.	Tr	Tr					
		soft, carbonaceous, rarely pyritic							
830 - 835	95	CLAYSTONE as above							
	5	SANDSTONE lt.brn.-tan, f.-med., dom. med., well sorted, SA-sub-rnd, dom. sub-rnd.	Tr						
		quartz grains, rarely glauconitic, pyritic, rare colored lithics, calcareous cement,							
		soft-hard, dom.-hard, good intergranular porosity, no vis. porosity							
835 - 840	90	CLAYSTONE as above							
	10	SANDSTONE as above							
840 - 850	95	CLAYSTONE as above							
	5	SANDSTONE as above							
850 - 860	100	CLAYSTONE as above (CIR. SAMPLES AT 853m)							
860 - 865	90	CLAYSTONE as above							
	10	SANDSTONE white-translucent, med-c., dom.c. mod. sortred, angular quartz, rare dk							
		color lithics, well cemented, calc. matrix, hard-firm,good int. granular porosity							
		poor vis. porosity.							
865 - 870	70	CLAYSTONE as from 850 - 860m	Tr						
	30	SANDSTONE as from 860 - 855	Tr						

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUO NAT.
870 - 875	70	SANDSTONE as above	Tr					
	30	CLAYSTONE as above						
875 - 880	80	SANDSTONE as above	Tr					
	20	CLAYSTONE as above						
880 - 910	100	CLAYSTONE dark gry-brownish, v.f., carbonaceous, rarely micro-micaceous, fissile-sub-	Tr					
		fissile, soft-firm, dom. soft, slightly calcareous						
910 - 915	100	CLAYSTONE as above						

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUO NAT.
915 - 970	100	CLAYSTONE dark grey-brownish, very fine, slightly silty, fissile-sub-fissile, dom	Tr	Tr				
		sub-fissile, micromicaceous, carbonaceous, slightly calcareous						
970 - 980	100	CLAYSTONE as above						

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUO NAT.	C
980 - 985	95	CLAYSTONE as from 970 - 980	Tr						
	5	LIMESTONE lt.brn.-tan, v.f., argillaceous, rearly glauconitic, rarely pyritic,							
		soft-mod. firm							
985 - 990	90	CLAYSTONE as above	Tr						
	10	LIMESTONE as above							
990 - 1030	100	CLAYSTONE as above	Tr						
1030 - 1031	80	CLAYSTONE as above TOP PEBBLE POINT FORMATION	Tr						
	20	SAND, lt. brown-tan, translucent, f.-c, dom. f. (f. sands been washed away) poorly							
		sorted, sub-rnd to rnd, dom.rnd., common dk. green-black glauconite nodules; common							
		iron oxide, abd. brownish clay cement (washed out) good inter granular porosity							
1031 - 1033	70	SAND as above	Tr						
	30	CLAYSTONE as above							
1033 - 1035	70	SAND as above	1.4						
	30	CLAYSTONE as above							
1035 - 1038	60	SAND as from 1033 - 1035	1.4		11	PPM			
	40	CLAYSTONE as from 990 - 1030	[illegible]						
1038 - 1040	80	SAND, white - lt. yellowish-brown, translucent, f.-v.c., dom. v.c. mod. sorted, SA-	1.0						

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUO NAT.	C
		sub-rnd, quartz, rare glauconite rare-common iron oxide, friable, no apparent cement,							
		(mostly washed out), excellent intergranular porosity							
	20	CLAYSTONE as above (CAVING)							
1040 - 1045	100	SAND as above	0.8						
1045 - 1060	100	SAND as above	1.0		11	PPM			
1060 - 1065	60	SAND as above	0.5						
	40	CLAYSTONE, lt. brownish-gry, fine, silty, rarely glauconitic, rarely micro-micaceous							
1065 - 1070	80	SAND as above	0.4						
	20	CLAYSTONE as above							
1070 - 1075	60	SAND as above	0.7						
	40	CLAYSTONE as above							
1075 - 1080	90	SAND white-lt yellowish-brn., dom. white, translucent, f.-c.-v.c., dom. c. poorly-mod.	0.4						
		sorted, A-SA-sub-rnd. (most white sands are A-SA) quartz, rare-common pyritic, rarely							
		glauconitic, no apparent matrix (clay matrix may have been washed out) excellent							
		intergranular porosity							
	10	CLAYSTONE as above							
1080 - 1090	100	SAND, white-milky white-translucent, f.-c., dom. c. A-SA, dom. SA, poorly-moderately	0.2						

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUO NAT.	C
		sorted, quartz, rare-common pyritic, becoming more pyritic with depth, trace colo.							
		lithics, some clay matrix (mostly washed out) no vis. Ø, excellent intergranular Ø							
1090 - 1095	90	<u>SAND</u> as above	Tr						
	10	<u>COAL</u>, dk.brown-black, concoidal fracture							
1095 - 1120	100	<u>SAND</u> as above	Tr						
1120 - 1135	80	<u>SAND</u> as above	Tr						
	20	<u>CLAYSTONE</u>, lt. brown, fine, slightly calc. soft. blocky							
1135 - 1140	90	<u>SAND</u>, white, translucent, rarely milky white, f.-c. dom. m-c. poorly-mod. sorted,							
		dom. moderate sorting. A-SA, dom SA Qtz, rare brownish lithics, abd. clay matrix							
		(mostly W/O) no vis. Ø							
	10	<u>COAL</u>, dk brown-black, firm							
1140 - 1150	100	<u>SAND</u>, white, frosty, translucent, f.-c, dom. c. moderately sorted A-SA, dom. SA. Qtz,							
		rare pyritic and moscorite, minor clay matrix, very mature and clearn, excellent							
		porosity							
1150 - 1155	80	<u>SAND</u> as above							
	20	<u>COAL</u>, dk brown-black, firm							
1155 - 1160	70	<u>SAND</u> as above							

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUO NAT.	CU
	30	COAL as above							
1160 - 1180	90	SAND as above							
	10	COAL as above							
1180 - 1190	100	SAND as above							
1190 - 1195	80	SAND as above							
	20	COAL as above							
1195 - 1210	90	SAND as above							
	10	COAL as above							
1210 - 1215	90	SAND as above abd. clay matrix							
	10	COAL as above							
1215 - 1220	Tr	COAL as above							
	20	CLAYSTONE, lt. greyish-brown, silty, micromicaceous, soft							
1220 - 1225	30	CLAYSTONE as above							
	70	SAND as above							
1225 - 1230	60	SANDSTONE, lt. brownish grey, V.F-F, dom. F, well sorted A-SA, dom SA Quartz, rare-							
		common dk color lithics mic., abd. clay matrix hard-firm, no vis. porosity							
	40	CLAYSTONE as above							

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUO NAT.	C
1230 - 1235	60	CLAYSTONE as above, common amber dark yellow-brown f.							
	40	SANDSTONE as above							
1235 - 1240	80	SANDSTONE, white-brownish-tan, VF-F, dom. F, well sorted. SA-A dom SA Quartz, well							
		cemented with silica firm-hard, no vis. Ø							
	20	CLAYSTONE as above							
1240 - 1245	80	SANDSTONE, white-brownish-tan VF-F, dom. F. well sorted, SA-A, dom. SA Quartz, trace	Tr	Tr				Nil	N
		lithics, dolomite cement, firm-hd, dom firm, no vis. Ø							
	20	CLAYSTONE, lt, greyish-brown, V.F, silty, occ. micromicaceous, soft							
1245 - 1250	100	SANDSTONE as above	Tr	Tr				Nil	N
1250 - 1255	80	SANDSTONE as above	Tr	Tr				Nil	N
	20	CLAYSTONE as above							
1255 - 1260	70	SANDSTONE as above	Tr	Tr				Nil	N
	30	SILTSTONE, lt. greyish-brown, V.F, abd. Qtz grains, and common dark color lithics,							
		micromicaceous, firm-hard, dom. firm							
1260 - 1270	80	SANDSTONE as above	Tr	Tr				Nil	N
	15	SILTSTONE as above							
	5	COAL, black, hard,							

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUO NAT.
1270 - 1275	90	SANDSTONE as above	Tr	Tr				Nil
	10	SILTSTONE as above						
1275 - 1280	60	SANDSTONE, white-brownish-tan, VF.-F. dom. F, well sorted SA-A, dom. SA. Qtz, trace	Tr	Tr				Nil
		lithics, common light brown amber giving dull yellowish-brown flour., dolomite cement						
		firm-hard, dom. firm. no vis. porosity						
	30	SILTSTONE as from 1255 - 1260	Tr	Tr				Nil
	10	COAL						
1280 - 1290	55	SANDSTONE as above trace amber						
	40	SILTSTONE as above						
	5	COAL						
1290 - 1295	80	SANDSTONE as above	Tr	Tr				Nil
	20	SILTSTONE as above						
1295 - 1300	80	SANDSTONE as above	Tr	Tr				Nil
	20	SILTSTONE as above						
1300 - 1310	60	SILTSTONE as above	Tr	Tr				Nil
	40	SANDSTONE as above						

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUO NAT.	C
1310 - 1325	60	CLAYSTONE, dk.gry-brownish, v.f. v.soft, sticky, very sandy (most clays washed out in							
		the washed sample)							
1325 - 1330	100	CLAYSTONE as from 1310 - 1325, more sandy	Tr	Tr				Nil	
1330 - 1335	40	CLAYSTONE as above	Tr	Tr				Nil	
	50	SANDSTONE as from 1240 - 1245							
	10	COAL							
1335 - 1345	70	SANDSTONE, white-brownish-tan F.med., dom. med., mod. sorting, A-SA, dom SA Quartz,	Tr	Tr				Nil	N
		rare-common dark color lithics, rare mica, well cemented, with dolomite, firm-hard.							
		dom. firm poor porosity							
	30	CLAYSTONE as above							
1345 - 1350	80	SANDSTONE as above	Tr	Tr				Nil	N
	20	CLAYSTONE as above							
1350 - 1355	80	SANDSTONE, white-yellowish, translucent, F.-C, dom. c. mod.-poorly sorted, SA-SR, dom.	Tr	Tr				Nil	N
		SR Quartz, rare lithics, abd. dk gry clay matrix, (mostly washed out) soft, very poor							
		porosity							
	20	CLAYSTONE as above							

WELL: PINE LODGE -1 **Date:** 04/08/90 **Geologist:** V. AKBARI **Page:** 18 **of** 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLU NAT.
1355 - 1360	40	SANDSTONE as above	Tr	Tr				Nil
		CLAYSTONE as above						

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUO NAT.
1360 - 1365	30	SANDSTONE as from 1350 - 1355	Tr	Tr				Nil
	70	CLAYSTONE, dk. grey, v.f., v.soft, sticky						
1365 - 1370	70	SANDSTONE, white-lt brown-tan, translucent, f.-med., dom med, mod. sorting, SA-SR, dom.	Tr	Tr				Nil
		SR Quartz, rare lithic, sugary texture, well dolomite cemented, firm-hard. dom. hard,						
		poor Ø						
	30	CLAYSTONE as above						
1370 - 1375	60	CLAYSTONE as above	Tr	Tr				Nil
	40	SANDSTONE as above						

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WELL: PINE LODGE -1 **Date:** 06/08/90 **Geologist:** V. AKBARI **Page:** 20 **of** 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUO NAT.	C
1375 - 1380	80	CLAYSTONE, dark grey, V.F., carbonaceous, rarely micromicaceous, very soft and	Tr	Tr					
		dispersive (Easily washes out in sample tray).							
	20	SANDSTONE, white - light brown & tan, translucent, F.-C., dom. c. poorly - mod. sorted,							
		SA-SR, dom. SR Quartz, rare lithics, sugary texture, well dolomite cemented, firm-hd,							
		dom. hard, poor porosity							
1380 - 1385	90	CLAYSTONE, dark grey, v.f., silty, occ. grading to siltstone micromicaceous,	Tr	Tr					
		carbonaceous, sub-fissile-blocky dom. blocky soft-firm dom. soft							
	10	SANDSTONE as above							
1385 - 1395	50	SILTSTONE as above	Tr	Tr					
	50	SANDSTONE as above							
1395 - 1440	70	SANDSTONE as above	Tr	Tr					
	30	CLAYSTONE as above							
1400 - 1410	80	SANDSTONE, off white, very light brown-tan, med-C. dom. C., well sorted, SA-SR Qtz,	Tr	Tr					
		rare pyrite, well dolomite cemented, firm-hard, dom. hard, no vis. porosity							
	20	CLAYSTONE, dk. grey, V.F., carbonaceous. v. soft, dispersive							

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUO NAT.	C
1410 - 1425	60	CLAYSTONE as from 1400 - 1410	Tr	Tr					
	40	SANDSTONE as from 1400 - 1410							
1425 - 1430	70	CLAYSTONE as from 1400 - 1410	Tr	Tr					
	30	SANDSTONE as from 1400 - 1410, rare-common pyrite and light-med green possibly							
		Glauconite (NULLAWARRE GREEN SAND EQUILAVENT ??) NAJABA-IA AT ABOUT 2100							
1430 - 1435	50	SANDSTONE as above	Tr	Tr					
	50	CLAYSTONE as from 1400 1410							
1435 - 1440	70	CLAYSTONE as above	Tr	Tr					
	30	SANDSTONE as above							
1440 - 1445	70	SANDSTONE, off white-lt. brown-tan-translucent, F-med, dom. med, mod. sorted, SA-SR,	Tr	Tr					
		dom. SA Qtz, rare-common pyrite, rare lt-med. green CLAUCONITE? rare mica and altered							
		feldspar, well dolomitic cemented, sugary texture, hard-firm dom. hard and abrasive							
	30	CLAYSTONE, dark grey-brownish, silty, carbonaceous, very soft & dispersive							
1445 - 1450	80	SANDSTONE as from 1440 - 1445m							
	20	CLAYSTONE as from 1440 - 1445m							
1450 - 1460	50	SANDSTONE as above	Tr	Tr					
	50	CLAYSTONE as above	Tr	Tr					

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 08/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 22 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
1460 - 1465	60	CLAYSTONE, dark grey-brownish, v.f, v. silty/sandy,	Tr	Tr					
		carbonaceous very soft, dispersive							
	40	SANDSTONE, white-very light brownish-tan, F-med., dom. med.							
		well sorted, SA-SR Quartz, rare light green lithic common							
		pyrite, well dolomite cemented, v.hard, abrasive. poor porosity							
1465 - 1470	60	SANDSTONE as above		Tr	Tr				
	40	CLAYSTONE as above							
1470 - 1480	70	SANDSTONE as above		Tr	Tr				
	30	CLAYSTONE as above							
1480 - 1485	80	SANDSTONE as above		Tr	Tr				
	20	CLAYSTONE as above							
1485 - 1490	90	SANDSTONE as above common Quartz, white-milky white,	Tr	Tr					
		translucent V.C. SR-R Friable, very varely pyritic							
	10	CLAYSTONE as from 1460 - 1465							
1490 - 1495	90	SANDSTONE, white, yellowish,-tan, colorless-translucent,							
		F-VC dom.c. poorly-mod sorted, dom. moderate sorting A-SR							
		Quartz, (abd. V.C, R-SR Quartz grains) rare light green							
		lithic, rare pyrite, hard, v.hard, sandstone have dolomitic							

WELL: PINE LODGE -1 **DATE:** 08/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 23 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUOR NAT.	CUT
		cement, no vis. porosity							
	10	CLAYSTONE as from 1460 - 1465							
1495-1500	100	SAND and SANDSTONE as bore becoming more pyritic, v. hard							
		(ROP = 1 M/HR)							
1500-1502	100	SANDSTONE as above (SPOT SAMPLE)							
1502-1505	80	SANDSTONE as above							
	20	CLAYSTONE as above							
1505-1510	40	CLAYSTONE as above							
	60	SANDSTONE as above							
1510-1515	90	SANDSTONE as above							
	10	CLAYSTONE as above							
1515-1520	20	CLAYSTONE as above							
	80	SANDSTONE as above							
1520-1525	70	SANDSTONE, white-yellowish, some v.lt brown-tan, F-med. dom.							
		med. mod. sorted, SA-SR Quartz, Abd. V.C. SA-SR Qtz. The							
		sandstones have rare lithic, common-abd. pyrite as matrix							
		and pyrite grains, well dol. cemented, hard-firm. dom.							
		hard, no vis. porosity							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 08/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 24 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
	30	CLAYSTONE as from 14650 - 1465							
1525-1530	80	SANDSTONE as above							
	20	CLAYSTONE as above							
1530-1535	90	SANDSTONE as above							
	10	CLAYSTONE as above							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 DATE: 09/08/90 GEOLOGIST: V. AKBARI PAGE: 25 OF 47			SHOWS						
			GAS					FLUOR	
DEPTH (m)	%	SAMPLE DESCRIPTION	TOTAL	C1	C2	C3	C4	NAT.	CUT
1535-1540	80	SANDSTONE, white, yellowish, colorless- translucent, F-Med. dom.	Tr	Tr				Nil	Nil
		med., mod. sorting, SA-SR, dom. SR Quartz, rare light green							
		lithics, common pyrite, well dolomite cemented, hard. poort-no							
		vis. porosity - Abd loose sand, white-yellowish, C.-VC.dom. C.							
		good sorting. A-SA-SR Quartz grain. No apparent cement.							
	20	CLAYSTONE, dk grey, V.F., Calc., carbonaceous silty-sandy very							
		soft and dispersive							
		NOTE: Made a bit trip at 1541. Had to ream the hole from							
		1227 - 1541m.							
1540-1545	80	CLAYSTONE as above (possible bad sample due to hole not being	Tr	Tr				Nil	Nil
		cleaned after reaming).							
1545-1548	100	CLAYSTONE as above (SPOT SAMPLE)	Tr	Tr				Nil	Nil
1548-1550	70	CLAYSTONE as above	Tr	Tr				Nil	Nil
	30	SANDSTONE as from 1535 - 1540							
1550-1555	80	CLAYSTONE as above	Tr	Tr					
	20	SANDSTONE as above							
1555-1560	70	SANDSTONE, white-brownish-tan occasionally light-med brown,	Tr	Tr					
		F-med, dom med, mod sorting, SA-SR dom SA Quartz, rare-common							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 09/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 26 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
		green lithics, common pyrite, well dol. cemented, hard-v. hard,							
		poor-no vis. porosity							
	30	CLAYSTONE as from 1535 - 1540	Tr	Tr				Nil	Nil
1560-1565	40	CLAYSTONE as above							
	60	SANDSTONE as above	Tr	Tr				Nil	Nil
1565-1575	70	SANDSTONE as above							
	30	CLAYSTONE as above							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 10/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 27 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
1575-1580	100	CLAYSTONE, lt.-med. grey v. fine, argillaceous, soft, sticky,	Tr	Tr				Nil	Nil
		very dispersive, rarely carbonaceous							
1580-1585	90	CLAYSTONE as above	Tr	Tr				Nil	
	10	SANDSTONE, off white-brownish occ. greyish, translucent,							
		F.-med dom. med, mod. sorting, SA-SR, dom. SR Quartz, rare							
		lithics, well dolomitic cemented, poor-no vis. porosity. Abd.							
		loose SAND off white, translucent F-C. dom. c. Qtz,							
		rare-common pyrite							
1585-1590	20	SANDSTONE as above	Tr	Tr				Nil	Nil
	80	CLAYSTONE as above							
1590-1595	60	SANDSTONE as above	Tr	Tr				Nil	Nil
	40	CLAYSTONE as above							
1595-1600	70	CLAYSTONE as above	Tr	Tr				Nil	Nil
	30	SANDSTONE as above							
1600-1605	90	CLAYSTONE, dark grey v.f, abd. V.F. Quartz, grading to	Tr	Tr				Nil	Nil
		SILTSTONE. Carbonaceous blocky-sub-fissile, dom. blocky							
		soft disper-							
	10	SANDSTONE as above							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 10/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 28 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
1605-1615	20	CLAYSTONE as from 1600 - 1605	Tr	Tr				Nil	Nil
	80	SANDSTONE, v. light brown-tan med-c, dom c, well sorted, SA-SR							
		dom SR Quartz, rare dark color and light green lithics abd.							
		white clay, slightly dolomitic matrix, hard poor porosity							
1615-1617	70	SILTSTONE dk grey-brownish, V.F, occ. sandy, very argillaceous	Tr	Tr				Nil	Nil
		carbonaceous, common pyrite, firm-hard, dom. firm							
	30	SANDSTONE as above							
1617-1619	100	CLAYSTONE as from 1605 - 1615							
1619-1620	100	CLAYSTONE as above							
1620-1625	20	SANDSTONE as from 1605 - 1615							
	80	CLAYSTONE as above							
1625-1626	80	CLAYSTONE as above							
	20	SANDSTONE as above							
1626-1627	100	CLAYSTONE as above							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 11/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 29 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
1627-1630	100	CLAYSTONE, dark grey V.F, v.silty grading to SILTSTONE,	Tr	Tr				Nil	Nil
		carbonaceous soft-mod. firm, dom. soft and dispersive							
1630-1635	70	CLAYSTONE as above	Tr	Tr				Nil	Nil
	30	SANDSTONE, white-yellowish-very light-brownish tan, med-VC							
		dom.C, mod. sorting, SA-SR, dom SR Quartz, common pyrite and							
		pyrite cement, v.rare lithics, well cemented, abd. calc. clay							
		matrix, hard, poor-no vis. porosity. Abd. SAND off							
		white-translucent, C-VC. occ. pebbly, SR-rounded Qtz, no							
		apparent cement, excellent porosity							
1635-1680	100	SANDSTONE as above	Tr	Tr				Nil	Nil
1680-1685	60	CLAYSTONE, dark grey, v.f, plastic and dispersive	Tr	Tr				Nil	Nil
	40	SAND, off white, occ. yellowish, translucent, F-med. dom.							
		med, mod. sorting SA-SR dom. SR Qtz, very rare lithics							
		no apparent cement, loose, friable, excellent porosity							
1685-1710	100	SAND as above	Tr	Tr				Nil	Nil

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 12/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 30 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
1710-1715	90	SAND as from the interval from 1680 - 1685	Tr	Tr				Nil	Nil
	10	CLAYSTONE, dk grey, v.f, very soft, dispersive							
1715-1725	100	SANDSTONE, off white, brownish occ. lt-med. brown, dom. off	Tr	Tr				Nil	Nil
		white, F-med, dom. med, mod-well sorting, SA-Sr, dom. SR							
		Quartz, rare dark color lithics, common pyrite, well cemented,							
		calc. clay matrix, hard, poor-no vis. porosity, common SAND,							
		white, translucent, occ. milky, med-c. dom. c. mod. sorting							
		friable, no apparent cement, excellent porosity							
1725-1730	70	SANDSTONE as above	Tr	Tr				Nil	Nil
	30	CLAYSTONE as above							
1730-1735	70	SILTSTONE, med. greyish-brown, v.f, occ. sandy, carbonaceous	Tr	Tr				Nil	Nil
		blocky-sub-fissile, firm-soft, dom. firm calc.							
	30	SANDSTONE as above	Tr	Tr				Nil	Nil
1735-1740	80	SILTSTONE as above							
	20	SANDSTONE as above	Tr	Tr				Nil	Nil
1740-1745	80	SILTSTONE as above							
	20	SANDSTONE as above							
1745-1750	50	SAND, off white, translucent, med-c, dom. med, mod	Tr	Tr				Nil	Nil

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 12/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 31 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS GAS TOTAL	C1	C2	C3	C4	FLUOR NAT.	CUT
		sorting SA-SR dom SR Quartz, very rare lithics, loose, no							
		apparent cement, excellent porosity							
	50	SILSTONE as from 1730 - 1735	Tr	Tr				Nil	Nil
1750-1755	80	SANDSTONE as above							
	20	SILTSTONE as above							
1755-1760	50	SILTSTONE as above	Tr	Tr				Nil	Nil
	50	SANDSTONE as above							
1760-1765	80	SILTSTONE as above. Becoming less silty grading to CLAYSTONE	Tr	Tr				Nil	Nil
	20	SAND as above							
1765-1770	90	SILTY CLAYSTONE as above	Tr	Tr				Nil	Nil
	10	SAND as above							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 13/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 32 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
1770-1785	100	SILTSTONE, dark grey-brownish v.f, occ. sandy commonly	Tr	Tr				Nil	Nil
		carbonaceous, sub-fissile, soft-firm, dom. soft							
1785-1793	100	SILTSTONE as above	Tr	Tr				Nil	Nil
1793-1794	80	SILTSTONE as above	Tr	Tr				Nil	Nil
	20	SANDSTONE, off white-tan F-V.F, dom. F, well sorting SA-SR							
		Quartz, rare lithics, well cemented abd. white silica cement,							
		hard-firm, poor porosity							
1794-1798	100	SILTSTONE as above	Tr	Tr				Nil	Nil
	Tr	COAL, dark grey-black, hard, concoidal fracture							
1798-1800	80	SILTSTONE as above	Tr	Tr				Nil	Nil
	20	SANDSTONE as above							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 14/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 33 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
1800-1805	60	SILTSTONE dk. grey, brownish, occ. sandy, commonly	Tr	Tr				Nil	Nil
		carbonaceous, soft sub-fissile							
	40	SANDSTONE, off white-tan, F-VF, dom. F, well sorting, SA-SR,							
		Quartz, rare lithics, well cemented, abd. white silica cement,							
		hard, no vis. porosity							
1805-1815	70	SILTSTONE as above	Tr	Tr				Nil	Nil
	30	SANDSTONE as above							
1815-1818	50	SANDSTONE, white-v. light brown, dom. white, translucent,	Tr	Tr				Nil	Nil
		F-C, dom. med, mod. sorting, SA-SR, dom. SR Quartz, v. rare							
		lithics well cemented, abd. white silica cement, hard poor,							
		no vis. porosity							
	50	CLAYSTONE, dark grey, silty, carbonaceous soft							
1818-1820	20	CLAYSTONE as above	Tr	Tr				Nil	Nil
	80	SANDSTONE as above							
1820-1825	80	SAND, off white, very light brownish-tan, occ. yellowish,	Tr	Tr				Nil	Nil
		F-VC, dom. med.-C, poor sorting, SA-SR Quartz, very							
		rare pink lithics rare pyrite, trace milky white altered							
		feldspar, no apparent cement, excellent porosity							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 14/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 34 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
	20	CLAYSTONE, light grey, V.F, carbonaceous, v. soft dispersive							
1825-1830	90	SAND as from 1820 - 1825	Tr	Tr				Nil	Nil
	10	CLAYSTONE as above							
1830-1840	100	SAND as above	Tr	Tr				Nil	Nil
1840-1842	70	SANDSTONE, brownish-tan, occ. light brown, VF-F, dom. F,	Tr	Tr				Nil	Nil
		well sorted, SA-SR, dom SR-Quartz, rare lithics, well							
		cemented, abd. clay and silica matrix, hard, poor-no vis. O							
	30	CLAYSTONE, light grey-brownish, V.F, commonly carbonaceous,							
		v. soft, dispersive							
1842-1845	20	CLAYSTONE as above	Tr	Tr				Nil	Nil
	80	SANDSTONE as above							
1845-1847	80	SANDSTONE as above	Tr	Tr				Nil	Nil
	20	CLAYSTONE as above							
1847-1855	50	CLAYSTONE as above	Tr	Tr				Nil	Nil
	50	SANDSTONE as above							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 15/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 35 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
1855-1860	40	SAND, off white, translucent, occ. yellowish, F-C, dom. med,	0.11	22	Tr			Nil	Nil
		poor sorting, SA-SR, dom SR-Quartz, rare lithics, no							
		apparent cement, friable, very good porosity							
	60	CLAYSTONE, dk grey, V.F, argillaceous, occ. silty, grading							
		to SILTSTONE, carbonaceous, soft-firm, dom. soft							
1860-1865	80	CLAYSTONE as above	0.11	19	Tr			Nil	Nil
	20	SANDSTONE as above							
1865-1868	90	SILTSTONE, med.-dark grey, occ. lt. grey-white, V.F, v.	0.09	Tr				Nil	Nil
		argillaceous, very carbonaceous, abd. black COAL material,							
		firm-hard, dom. firm, blocky-sub-fissile							
	10	SANDSTONE as above							
1868-1870	70	SANDSTONE, off-white,-very light brownish-tan, F-med, dom.	0.09	19	Tr			Nil	Nil
		med, good sorting, SA-Sr, dom, SR Quartz, rarely slightly							
		carbonaceous. Well cemented, abd. clay matrix, hard, poor							
		porosity							
	30	SILTSTONE as above							
1870-1872	70	SANDSTONE as from 1868 - 1870	0.09	19				Nil	Nil
		SILTSTONE as from 1865 - 1868							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 15/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 36 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
1872-1875	80	SILTSTONE, med.-dk grey-brownish, occ. light grey, dom. dk.	0.09	18	Tr	Tr		Nil	Nil
		grey, V.F, V. silty, rarely sandy common-abd. carbonaceous							
		material, argillaceous, sub-fissile, firm-hard, dom. firm							
	20	SANDSTONE as above							
1875-1878	90	SILTSTONE as above	0.09	18	Tr	Tr		Nil	Nil
	10	SANDSTONE as above							
1878-1883	90	SILTSTONE as above							
	10	SANDSTONE as above							
1883-1892	90	SILSTONE, med-dk grey,-occ. med.-lt grey, dom. dk grey, V.F,	0.3	45	4	Tr		Nil	Nil
		v. silty, occ. sandy argillaceous, common carbonaceous							
		material, rare-common glauconite, blocky-sub-fissile, dom.							
		sub-fissile, firm-hard							
	10	SANDSTONE as from 1868 - 1870							
1892-1894	70	SILTSTONE as above	0.31	55	3	Tr		Nil	Nil
	30	SANDSTONE lt.grey-greenish, occ. white, med.-C, dom. med,							
		mod. sorting, SA-SR, dom. SR Quartz, rare lithics, com.							
		glauconite, well cemented, abd. silica cement, hard v.							
		poor-no vis. porosity							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 15/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 37 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
	70	SILTSTONE as from 1883 - 1892							
1894-1898	95	SILTSTONE as above	0.1	20	Tr	Tr		Nil	Nil
	5	SANDSTONE as above							
1898-1930	100	SILTSTONE as above	0.35	48	6	Tr		Nil	Nil

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 16/08/90 **GEOLOGIST:** V. AKBARI **PAGE:** 38 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
1930-1940	100	SILTSTONE, med-dk. grey, occ. med-lt. grey, dom. dark grey,	0.07	12	1	Tr		Nil	Nil
		V.F. v. silty, occ. sandy, argillaceous common carbonaceous							
		material rare-common glauconite, blocky-sub-fissile,							
		firm-hard							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 DATE: 17/08/90 GEOLOGIST: V. AKBARI PAGE: 39 OF 47			SHOWS						
			GAS					FLUOR	
DEPTH (m)	%	SAMPLE DESCRIPTION	TOTAL	C1	C2	C3	C4	NAT.	CUT
1930-1946.7	100	SILTSTONE, dk. grey, V.F, v. silty, argillaceous, common-abd.	0.3	48	4	2	Tr	Nil	Nil
		carbonaceous material, rare-common glauconite, firm-hard dom.							
		firm							
		TOP WAARRE FORMATION 1946.7 (-1889.7)							
1946.7-1948	60	SANDSTONE, off white-v. lt. tan, F.-med, occ. c. dom. med,	4.6	780	32	9	7	Nil	Nil
		good sorting, SA-SR. dom. SR Quartz, v. rare lithics well							
		cemented abd. clay, slightly calc. cement, hard, poor-no							
		vis. porosity							
	40	SILTSTONE as above							
1948-1952	70	SANDSTONE as above abd. SAND, clear-translucent, F-C, dom.	1.5	224	20	7	6	Nil	Nil
		med, poorly sorted, SR-R Quartz, no apparent cement good Ø							
1952-1954	50	SANDSTONE as above	1.1	195	8	3	2	Nil	Nil
	50	SILTSTONE as above							
1954-1955	60	SILTSTONE as above	4.05	733	16	7	2	Nil	Nil
	40	SANDSTONE as above							
1955-1957	70	SANDSTONE as above Abd. SAND as from 1948-1952	1.4	219	8	5	2	Nil	Nil
	30	SILTSTONE as above							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 DATE: 18/08/90 GEOLOGIST: V. AKBARI PAGE: 40 OF 47			SHOWS						
			GAS					FLUOR	
DEPTH (m)	%	SAMPLE DESCRIPTION	TOTAL	C1	C2	C3	C4	NAT.	CUT
1957-1958	60	SANDSTONE as from 1946.7 - 1948	1.8	348	13	6	2	Nil	Nil
	40	SILTSTONE as from 1930 - 1967							
1958-1965	80	SANDSTONE as above	3.4	540	19	7	2	Nil	Nil
	20	SILTSTONE as above							
1965-1970	60	SANDSTONE as above	3.89	732	19	4	Tr	Nil	Nil
	40	SILTSTONE as above							
1970-1975		NO SAMPLES	.86	138	6	7	Tr		
1975-1984.14		Conventional Core, 100% recovery (See Core Descr.)							
1984.14-1990	60	SANDSTONE, lt. grey to V. pale brn gry, fri, firm in part,	.5	90	Tr				
		f-med, SA-SR well sorted qtz, rare disp. arg. mtx, rare							
		lithics, tr carb. det. good vis. Ø							
	40	SILTSTONE, med-dk grey, blocky, subfis, v. arg. mod carb.							
		tr mica,							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 DATE: 23/08/90 GEOLOGIST: A. TABASSI PAGE: 41 OF 47			SHOWS						
			GAS					FLUOR	
DEPTH (m)	%	SAMPLE DESCRIPTION	TOTAL	C1	C2	C3	C4	NAT.	CUT
1990-1995	40	SANDSTONE, generally as above, firm-hd in part, tr calc. cmt	6.4	1082	45	11			
		poor-fair vis. Ø							
	60	SILTSTONE as above							
1996-2000	80	SILTSTONE, lt gry, lt brn grey, occ. off-white, firm-hd,	1.0	221	31	Tr			
		blocky in part, mod. arg. in part, tr carb det, tr lt gry							
		lithics, occ. grading into;							
	20	SANDSTONE, off white, v.lt brn gry, fri-firm, vf-f, SA-SR,							
		mod sorted qtz, tr arg mtx, tr calc cmt, tr lithics, V rare							
		pale green lithics (chlorite ?), v. poor vis. Ø							
2000-2005	80	SILTSTONE generally as above, med brn in part, med-dk gry	0.85	147	Tr				
		in part							
	20	SANDSTONE as above							
2005-2010	80	SILTSTONE as above dom. med. gry & med brn gry, tr partially	0.85	150	Tr				
		pyritised carb. det. & flecks,							
	20	SANDSTONE as above							
2010-2015	90	SILTSTONE generally as above, dom. med-dk gry, med brn in part	1.2	221	Tr				
	10	SANDSTONE as above							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 23/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 42 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
2015-2020	95	SILTSTONE as above	1.2	220	Tr				
	5	SANDSTONE as above							
2020-2025	95	SILTSTONE as above, rare dolomite, med brn with tr. med green	0.7	135	Tr				
		lithics							
	5	SANDSTONE as above							
2025-2030	100	SILTSTONE generally as above, dk-v.dk gry, v. rare dk brn	0.8	157	Tr				
		gry, firm-hd, v. hd in part, v. arg, none disp, blocky to							
		subfis, v. rare lt. gry lithics, v. rare f-med grained med							
		green lithics (glauc ?)							
2030-2035	100	SILTSTONE as above	0.8	160	Tr				
2035-2040	50	SILTSTONE as above	.6	112	Tr				
	50	SANDSTONE, clear, off white to v. lt gry, apparently loose							
		to fri, hd in part, med-VC, dom C, A-SR, dom. SR,							
		(angularity of the grains appear to be due to bit action)							
		poorly sorted qtz, and qtz overgrowth, com med-dk gry arg.							
		mtx, tr silica & rare calc & pyr cmt, tr dom med grained,							
		med-dk green lithics (glauc ?), tr. dolomite med brn, hd with							
		tr & med-dk green lithics, v. rare pale green lithics, rare							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 DATE: 23/08/90 GEOLOGIST: A. TABASSI PAGE: 43 OF 47			SHOWS						
			GAS					FLUOR	
DEPTH (m)	%	SAMPLE DESCRIPTION	TOTAL	C1	C2	C3	C4	NAT.	CUT
		pyr nodule, poor to occ. fair vis Ø, no shows, interlam with							
		minor v-f sandstone, lt brn gry, fri , no apparent mtx							
		and/or cmt, fair vis Ø, no shows							
2040-2045	100	SILTSTONE, as above	.8	160	Tr				
2045-2050	70	SILTSTONE as above	.7	135	Tr				
	30	SANDSTONE as above, v.hd in part							
2050-2056.5	100	SILTSTONE as above, becoming v. arg in part & grading in part	1.3	221	6	Tr			
		into Claystone							
2056.5-2059	100	SANDSTONE, clear to off white to v.lt gry, loose to firm,	17.5	3195	112	29			
		med-VC, dom C, SA-SR, poorly sorted qtz and qtz overgrowth,							
		com dk gry arg. mtx,							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 24/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 44 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
		rare-tr calc and/or silica cmt, rare glauc, and/or green							
		lithics, fair-good vis. Ø, no fluo, cut or crush cut, rare							
		mineral fluor							
		Circulated Return @ 2064.2m, good gas show							
		See "Show Evaluation Report"							
2059-2065	70	SANDSTONE, lt-med gry, fri-firm, vf-f, occ med, SA-Sr, fairly	2	367	20	8			
		sorted qtz, tr-com off white to light gry arg. mtx. tr-com							
		pale green & pale brn lithics, rare partially altered feld,							
		rare carb det, rare calcite crystals rare med brn dol,							
		poor-fair vis Ø, no fluor, cut or crush cut, tr mineral							
		fluor, interlam with							
	10	SANDSTONE, med-c as per 2056.5-2059.0, tr mineral fluor							
	10	SILTSTONE as above							
	10	CLAYSTONE, off white, lt gry to lt brn gry, soft-firm, disp,							
		v. silty, rarely carb.							
		Circulated Return @ 2064.2m							
		Minor gas Show, See "Show Evaluation Report" .							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 24/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 45 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
2065-2070	60	SILTSTONE as above	.6	110	Tr				
	20	SANDSTONE, dom med-c as per 2056.5-2059.0							
	10	SANDSTONE, dom vf-f as per 2059.0-2065.0							
	10	CLAYSTONE as above							
2070-2075	50	SILTSTONE as above	1.5	246	Tr				
	40	CLAYSTONE as above, dom med gry & med brn gry							
	10	SANDSTONE dom vf-f as per 2059.0-2065.0							
2075-2080	80	SANDSTONE, clear-v.lt gry, fri-firm, hd in part, med-c, occ.	3.6	566	25	Tr			
		VC SA-SR, fair-poorly sorted qtz, translucent to frosty, to							
		occ com white-lt gry arg mtx, tr-com mod weak calc cmt, rare							
		lithics, rare pyr, rare dol. fair vis. Ø, no fluor, tr mineral							
		fluor							
	20	SILTSTONE as above							
2080-2085	100	SILTSTONE, generally as above, dk-v.dk gry, firm to hd, dom	1.1	170	7	Tr			
		firm, v. arg, slightly disp in part, blocky, occ subfis,							
		slightly carb. v. rare lithics							
2085-2090	100	SILTSTONE, as above with tr. of calcite bank, frostly to	1.5	254	5	Tr			
		v.lt gry firm with mineral fluor.							

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DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
2090-2095	100	SILTSTONE as above	0.7	127	5	Tr			
	tr	SANDSTONE, lt.gry, fri-firm, vf-f, SA-SR, well sorted qtz, tr							
		off white arg. mtx, com weak calcite cmt, rare-tr multi-col							
		lithics including light-dk green, fair-poor vis Ø, no fluor							
2095-2102.5	100	SILTSTONE as above							
2102.5-2105	60	CLAYSTONE, lt-med green gry, lt-med blue gry, lt-med brn gry	0.6	112	Tr				
		in part, occ off white to pale gry in part, soft-firm, disp in	0.4	79	Tr				
		blocky in part, slightly silty in part, reare f partially							
		altered feld, rarely carb. rare vf mica interbd/interlam with;							
	40	SANDSTONE, lt-med green gry, lt-med brn gry, mottled in part,							
		fri-firm, rarely hd in part, vf-f silty in part, v. occ med in							
		part, SA-SR poorly sorted qtz and abundent volcanogenic							
		lithics, green gry, brn, red v. rare pink, tr partially altered							
		feld, tr-com chloritic and minor Kaolinitic arg mtx, tr f.							
		carb. det, poor-v. poor vis Ø , no fluor, cut or crush cut							
2105-2110	60	CLAYSTONE as above, tr coally particle	0.5	99	Tr				
	40	SANDSTONE as above							

GAS AND FUEL EXPLORATION N.L.

WELL: PINE LODGE -1 **DATE:** 26/08/90 **GEOLOGIST:** A. TABASSI **PAGE:** 47 OF 47

DEPTH (m)	%	SAMPLE DESCRIPTION	SHOWS						
			GAS					FLUOR	
			TOTAL	C1	C2	C3	C4	NAT.	CUT
2110-2115	50	CLAYSTONE as above, in part v.silty and grading into siltstone	0.7	136	Tr				
	50	SANDSTONE as above							
2115-2120	50	CLAYSTONE as above, in part grading into siltstone, tr black	0.6	110	Tr				
		coal							
	50	SANDSTONE as above							
2120-2125	60	CLAYSTONE as above, grading into Siltstone in part	0.7	131	Tr				
	40	SANDSTONE as above							
2125-2130	70	CLAYSTONE as above, grading into Siltstone in part	0.4	57	-				
	30	SANDSTONE as above with com. weal calcite cmt in part							
2130-2135	60	CLAYSTONE/SILTSTONE, generally as above becoming dom. lt-med	0.3	55	-				
		green gry, lt-med gry & brn gry							
	40	SANDSTONE as above							
2135-2140	70	CLAYSTONE as above, dom lt-med green gry, lt-med brn gry	1.5	260	Tr				
	30	SANDSTONE as above							
2140-2145	70	CLAYSTONE as above							
	30	SANDSTONE as above							
2145-2149.6	60	CLAYSTONE as above, v.silty in part T.D. of 2149.6m							
	40	SANDSTONE as above @ 9.20 AM, 27-08/90							