Open File Envelope No. 1243

SML 355

LAKE FROME AREA

PROGRESS REPORTS FOR THE PERIOD 20/11/69 TO 19/11/70

Submitted by

Petromin NL
1970

Enquiries: Customer Services
Ground Floor
101 Grenfell Street, Adelaide 5000

Telephone: (08) 8463 3000
Facsimile: (08) 8204 1880

PRIMARY INDUSTRIES AND RESOURCES SA

CONTENTS ENVELOPE 1243

TENEMENT: S.M.L. 355 - Lake Frome.

TENEMENT HOLDER: Petromin N.L.

REPORT:	Progress Report Period Ending 28th Feb. 1970.	Pgs. 3-5
PLANS:	Locality Map.	Pg. 6
	Gamma Ray Logs Well Nos. 355-1 To 8.	1243(I)-1 To 1243(I)-8
	Well Logs Hole Nos. 355-1 To 8.	Pgs. 7-30
	Core Drilling Log Hole No. 1A.	Pgs. 31-37
REPORT:	Progress Report Period Ending 20th May 1970.	Pgs. 38-40
PLANS:	Gamma Ray Logs Well Nos. 355-9 To 43.	1243(I)-9 To 1243(I)-42
	Well Logs Hole Nos. 355-1A, 9 To 41 & 43.	Pgs. 41-87
REPORT:	Progress Report Period Ending 20th Aug. 1970.	Pgs. 88-90
PLANS:	Gamma Ray Logs Well Nos. 355-44 To 50 & 61 To 64.	1243(II)-1 To 1243(II)-11
	Well Logs Hole Nos. 355-44 To 47, 49 To 50, 61 To 64.	Pgs. 91-103
	Location Of Drill Holes.	1243(II)-12

ENV 1243.

27th February, 1970.

SPECIAL MINING LEASE NO.355

PROGRESS REPORT FOR THREE MONTHS - PERIOD ENDING 28TH FEB'70

SUMMARY:

Activity on SML.355 during the Period has included geological reconnaissance mapping, surveying and leveling of bore holes and the drilling of eight (8) non-coring bore holes.

Anomalous radio-activity of greater than ten (10) times background was detected in three of the holes drilled.

INTRODUCTION:

Special Mining Lease Number 355 covers an area of approximately 440 square miles on the western side of Lake Frome in South Australia.

Operations on the Lease are primarily directed towards evaluating the potential of the area for deposits of radio-active ores and the location of such deposits.

EXPLORATION:

Exploratory drilling for sedimentary uranium and other radio-active materials was undertaken during the Period under review. A total of 4,281' of drilling and 4,243' of gamma-ray logging was carried out.

Copies of the lithologic and gamma-ray logs of the eight (8) holes drilled in the period, accompany this Report. The lighological logs are of cuttings and/or core recovered and were compiled by a contract well-site geologist. The gamma-ray logs were obtained using a slim hole probe run inside the drill rods by a contract geophysicist.

A plan showing localities of holes drilled on SML.355 to date is attached to this Report.

RESULTS:

High radio-activity was detected in 355-1 with a peak at 388' and off scale (greater than 2,400 A.P.I. units) at 450'. In 355-2 a 2,400 A.P.I. response was located at 475' and a similar response recorded at 510' in 355-3.

Radio-activity diminished in 355-4 although the lower zone was still present and gave a response of 1,400 A.P.I. units at 520'.

...../2

The lower peak was absent in 355-5 but the hole may not have been deep enough.

Hole 355-6 showed two zones of weaker activity (600 A.P.I. at 364' and 900 A.P.I. at 476'). Holes 355-7 and 355-8 revealed extensions of the highly radio-active zones but at reduced levels.

SUB-SURFACE GEOLOGY:

The sediments are similar to those drilled on 186 and elsewhere. Rotary drill cuttings revealed an illsorted section of gravels, sandy clays, silts and sands to a depth of 400'-420'. Red brown is the dominant colour although grey silts and sands are more abundant on 186 and 355, than elsewhere. These sediments are considered to be Tertiary.

The grey, dark grey clays with gypsum and carbonaceous bands are probable Cretaceous with some reworking of the upper section.

Well defined aquifers are not present although hole 355-1 was considered by the driller to have a good water supply.

CONCLUSION:

Drilling has revealed an extension of the radio-active zones from SML.186.

The Tertiary section, particularly the lower part, is more sandy in the 186,355 area than is usual for the general area.

Cored holes adjacent to 355-1, 2, 3 and 4 are proposed.

R.W. HAYNES,
Exploration Manager

PETROMIN NO LIABILITY
261 George Street,
Sydney.

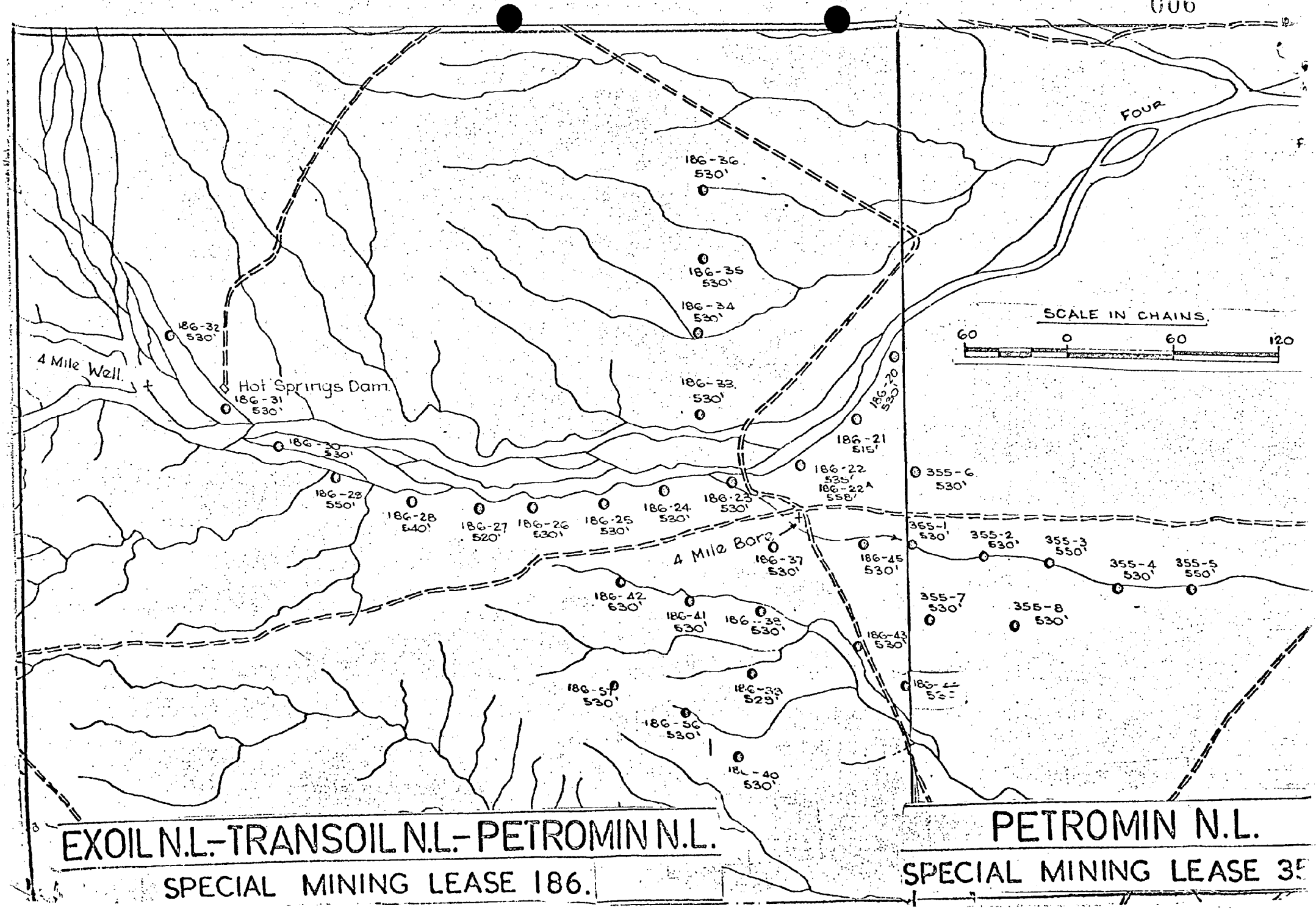
CONTRACTORS FOR THE PROJECT ARE:

Geological:	Minoil Services
Geophysical:	Down Under Well Services
Drilling:	H.C. Thompson & Co.

GAMMA-RAY LOGS OF THE FOLLOWING BORE HOLES ACCOMPANY THIS REPORT

Special Mining Lease No. 355-1
355-2
355-3
355-4
355-5
355-6
355-7
355-8

.....



EXOIL N.L.-TRANSOIL N.L.-PETROMIN N.L.

SPECIAL MINING LEASE 186.

PETROMIN N.L.

SPECIAL MINING LEASE 3

ENV 1243.

EXOIL — PETROMIN

H.C. Thompson

007

WELL LOG

Well Sight Geologist D.B. CLARK

Well No. 355-1

INTERVAL	LITHOLOGY	%	DESCRIPTION
0-30	Sand	100	Brown-white sand. Quartz, subangular-subrounded
			from medium-fine to coarse sand size.
30 - 50	Clay	40	Red-brown silty, sandy clay.
	Sand	30	Quartz subangular sand, subangular quartz,
	Gravel Silt	20 10	quartzite and gneiss fragments of gravel size.
50 - 60	Sand	40	Quartz grit and sand, fine red-brown silt
	Grit	40	Quartz, quartzite and granitic fragments of
	Gravel Silt	10 10	gravel size.
60 - 65	Gravel	30	Quartzite, granite and quartz fragments
	Clay	70	generally subrounded of gravel size,
			red-brown and light grey clay.
65 - 85	Sand	55	Quartz sand, granitic and quartz grit and
	Grit Gravel	25 15	gravel generally subangular, fine reddish silt
	Silt	5	
85 - 95	Clay	75	Dark red silty sandy clay, some light brown
	Sand	15	clay.
	Silt	10	

EXOIL — PETROMIN H.C. Thompson

WELL LOG 008

Well Sight Geologist D.B. CLARK Well No. 355-1

INTERVAL	LITHOLOGY	%	DESCRIPTION
95 - 120	Sand	60	Quartz and quartz-feldspar sand and grit.
	Grit	20	Granite, gneiss and quartz subangular
	Gravel	20	fragments of gravel size.
120 - 130	Gravel	40	Large gravel sized quartzite and gneissic
	Sand	40	fragments generally subrounded.
	Gravel	20	Quartz sand and grit, minor quartz-feldspar
			fragments.
130 - 180	Sand	85	Red grained well sorted quartz sand, minor
	Silt	15	mica. Fine red silt.
180 - 220	Sand	75	Fine to coarse quartz sand, some quartz grit,
	Grit Silt	10 15	fine red silt.
220 - 255	Sand	50	Fine to very fine quartz sand, some silty
	Clay Silt	20 30	red clay. Fine red silt.
255 - 285	Sand	50	Red grained quartz (minor feldspar) sand.
	Clay Silt	25 25	Red and light brown silty clay. Fine red silt.
285 - 290	Sand	100	Clean quartz and quartzite fragment sand.
			generally subrounded, medium to coarse grained.

EXOIL — PETROMIN

H.C. Thompson

009

WELL LOG

Well Sight Geologist D.B. CLARK

Well No. 355-1

INTERVAL	LITHOLOGY	%	DESCRIPTION
290-305	Sand	60	Quartz and quartz-feldspar sand and coarse
	Grit Silt	30 10	grit. Fine red silt.
305-320	Clay	40	Red-brown and some light grey clay, quartz
	Sand Grit	20 25	and quartz-feldspar sand and grit, fine red silt.
	Silt	15	
320-325	Sand	80	Medium to fine quartz. (minor feldspar) sand
	Silt	20	Light brown fine silt.
325-395	Sand	40	Quartz, feldspar and quartzite rock fragments
	Clay	40	subangular to subrounded from medium to fine
	Silt	20	to coarse grained sand with light grey and
			brown clay, fine light brown silt.
395-425	Clay	75	Light grey clay, minor white and darker grey clay.
	Gravel	10	Quartz, subangular and quartzite gravel and
	Grit	15	grit.
425-440	Sand	60	Light brown silty sand, medium fine, light
	Clay	20	grey and white clay.
	Silt	20	

EXOIL — PETROMIN H.C. Thompson

WELL LOG 010

Well Sight Geologist D.B. CLARK Well No. 355-1

INTERVAL	LITHOLOGY	%	DESCRIPTION
440-445	Clay	100	Light grey and white clay.
445-465	Clay	70	Light grey and white clay with medium to
	Sand	30	coarse quartz (minor feldspar) sand
465-485	Clay	85	Light grey and white clay, some dark grey
	Sand	15	clay, quartz coarse to medium sand.
			Minor gypsum crystals.
485-530	Clay	95	Dark grey to black clay with light grey and
	Sand & Silt	5	white clay. Minor gypsum crystals, minor
			quartz sand and brown silt.

ENV 1243.

EXOIL — PETROMIN Drillers H.,C. Thompson & Co.

WELL LOG

Well Sight Geologist J. Westhoff, Minoil Services 011 Well No. 355-2

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-90'	clay	15	Coarse sand to gravel sized fragments
	sand	30	of quartz, feldspar, gneiss, schist
	grit	40	and quartzite, with some grey
	gravel	15	and yellow silty clay in places
90'-125'	clay	25	As above but with more
	sand	40	silty clay, coloured red, grey
	grit & gravel	35	and yellow.
125'-180'	sand	70	Angular to subrounded
	grit	25	quartzic sand and grit, mainly
	clay	5	quartzic, but with some orthoclase,
			muscovite and other rock fragments, as above.
			Small amounts of clay, mainly
			coloured grey.
180'-320'	clay	20	As above, but now with more
	sand	60	silty clay, coloured grey, red brown
	grit	20	and yellow. Grey clay content increases
			with depth.

EXOIL — PETROMIN Drillers H.C. Thompson & Co.

WELL LOG

Well Sight Geologist J. Westhoff, Minoil Services 012 Well No. 355-2

INTERVAL	LITHOLOGY	%	DESCRIPTION
320'-375'	sand	70	As above, now with some chips
	grit	20	of fine white sandstone.
	clay	10	
375'-435'	clay	30	Predominantly medium grained
	sand	65	quartzic sand and grey clay,
	sandstone	3	with chips of white fine
	gypsum	2	sandstone and gypsum.
435'-500'	clay	65	As above, but with more
	sand	30	dark grey clay.
	sandstone	3	
	gypsum	2	
500'-530'			No samples.
			End of hole.

ENV 1243

EXOIL — PETROMIN Drillers H.C. Thompson & Co.

WELL LOG

013

Well Sight Geologist J. Westhoff, Minoil Services Well No. 355-3

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-70'	gravel	20	Predominantly quartzic subangular
	grit	15	to subrounded coarse sand to
	sand	50	gravel, with red-brown and
	silt	15	grey clayey silt.
70'-95'	gravel	15	As above, but with more of
	grit	10	the silt, now clayier than
	sand	40	before.
	silt	35	
95'-105'	sand	80	Subangular to subrounded coarse
	gravel & grit	20	grained sand to grit, consisting
			predominantly of quartz and
			quartzite with some muscovite and feldspar.
105'-130'	silt	40	Red to brown clayey silt,
	sand	40	with sand to gravel as above.
	grit & gravel	10 10	
130'-155'	silt	60	As above but with more

EXOIL — PETROMIN Drillers H.C. Thompson & Co.

WELL LOG

Well Sight Geologist J. Westhoff, Minoil Services 01 Well No. 355-3

INTERVAL	LITHOLOGY	%	DESCRIPTION
	sand	30	red-brown silt
	grit	10	
155'-210'	sand	55	Subangular to subrounded
	grit	30	medium grained sand to gravel
	gravel	10	predominantly quartzic, with
	silt	5	some muscovite. Some brown
			silt in places.
210'-335'	silt	20	Sand to gravel as above, with
	sand	65	grey and brown slightly clayey
	grit	10	silt.
	gravel	5	
335'-400'	clay	20	Sand and grit as above, with
	sand	70	silty clay coloured mostly
	grit	10	light grey, with some coloured purple.
400'-495'	clay	80	Predominantly light to dark grey
	sand	15	clay, with some coloured red and yellow
	grit	5	

EXOIL — PETROMIN Drillers H.C. Thompson & Co.

WELL LOG

Well Sight Geologist J. Westhoff, Minoil Services 015 Well No. 355-3

INTERVAL	LITHOLOGY	%	DESCRIPTION
			Subangular to subrounded grit
			and sand, consisting mainly of
			quartz, with a little feldspar and
			muscovite.
495'-525'	sand	80	As above, but now much sand
	clay	15	and little clay.
	grit	5	
525'-550'	clay	90	Clay and sand as above
	sand	10	Some white chalky clay below 540'
			End of Hole

EHV 1243.

EXOIL — PETROMIN Drillers H. C. Thompson & Co.

WELL LOG

Well Sight Geologist J. Westhoff, Minoil Services 615 Well No. 355-4

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-80'	Gravel	40	Subangular to subrounded and
	grit	30	broken fragments of quartz, quartzite,
	sand	30	schist and gneiss, sized from coarse
			sand to gravel.
80'-110'	silt	50	Red-brown silt, clayey in places,
	sand	20	intermixed with fine sand consisting
	grit	10	of quartz and muscovite and
	gravel	20	coarse sand to gravel as above
110'-130'	silt	40	As above, but with less silt,
	sand	20	now coloured both red-brown
	grit	10	and grey.
	gravel	30	
130'-140'	silt	60	As above, but with more clayey
	sand	20	silt.
	grit	10	
	gravel	10	

EXOIL — PETROMIN Drillers H.C. Thompson & Co.

WELL LOG

Well Sight Geologist J. Westhoff, Minoil Services 01 Well No. 355-4

INTERVAL	LITHOLOGY	%	DESCRIPTION
140'-150'	silt	50	Red-brown silt with fine
	sand	50	to coarse grained sand,
			predominantly of quartz.
150'-190'	silt	80	Predominantly red-brown silt,
	sand	10	with sand to gravel as
	grit	5	before.
	gravel	5	
190'-225'	sand	50	Subangular to subrounded
	grit	45	coarse sand and gravel
	gravel	5	sized fragments of quartz and quartzite.
			with a little feldspar, schist
			and gneiss.
225'-295'	clay	5	Intermixed silt and fine sand, red-brown
	silt	50	in colour, with a little clay in places,
	sand	20	and coarse sand to gravel as
	grit	20	above.
	gravel	5	

EXOIL — PETROMIN Drillers H.C.Thompson & Co.

WELL LOG

Well Sight Geologist J. Westhoff, Minoil Services

Well No. 355-4

INTERVAL	LITHOLOGY	%	DESCRIPTION
295'-350'	silt	80	Intermixed silt and fine sand, now
	sand	15	both brown and grey in colour, with
	grit & gravel	5	coarse sand, grit and gravel as before
350'-395'	silt	25	As above, but with more
	sand	60	medium to coarse sand, mainly
	grit	10	quartzic, with a little feldspar.
	gravel	5	
395'-440'	clay	85	Greenish - grey silty clay, with
	sand	15	fine to medium grained quartzic sand
440'-530'	clay	90	Clay now coloured mainly light to
	sand	5	dark grey. Numerous chips and flakes
	gypsum	5	of gypsum in places.
			End of Hole

ENV 1243.

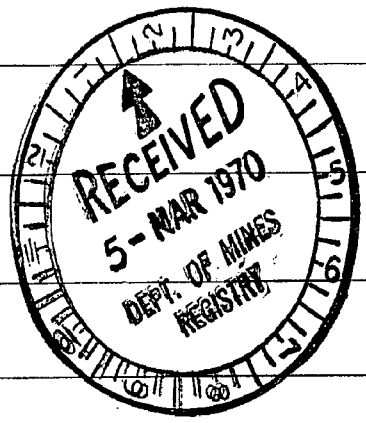
EXOIL — PETROMIN Drillers H.C. Thompson & Co.

WELL LOG

019

Well Sight Geologist J. Westhoff, Minoil Services Well No. 355-5

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-20'	sand	30	Coarse sand and grit sized fragments of
	grit	70	quartz, feldspar, muscovite, schist,
			quartzite and gneiss.
20'-65'	silt	20	Brown silt, clayey in places, with
	sand	20	subangular to subrounded gravel,
	grit	35	grit and sand as above
	gravel	25	
65'-80'	silt	40	As above, but with more silt
	sand	40	and fine to medium grained sand
	grit & gravel	20	
80'-90'	sand	35	Subangular to subrounded
	grit	60	medium grained sand to gravel
	gravel	5	as above.
90'-95'	silt	30	As above, but now with
	sand	20	brown silt.
	grit	45	
	gravel	5	



EXOIL — PETROMIN Drillers H. C. Thompson & Co.

WELL LOG

Well Sight Geologist J. Westhoff, Minoil Services 020 Well No. 355-5

INTERVAL	LITHOLOGY	%	DESCRIPTION
95'-115'	clay	1	Fine sand to grit sized grains of
	silt	30	quartz, with lesser amounts of feldspar,
	sand	65	muscovite and quartzite. Red-brown
	grit	4	silt and occasional grey silty clay
			patches.
115'-320'	clay	10	Red-brown and light grey silty
	sand	30	clay, with sand to gravel
	grit	50	as above.
	gravel	10	
320'-335'	silt	10	Light brown silt with sand and
	sand	50	grit as above.
	grit	40	
335'-435'	silt	5	As above, but silt now coloured
	sand	60	mainly light grey, and slightly
	grit	35	clayey in places.

EXOIL — PETROMIN Drillers H. C. Thompson & Co.

021

WELL LOG

Well Sight Geologist J. Westhoff, Minoil Services Well No. 355-5

INTERVAL	LITHOLOGY	%	DESCRIPTION
435'-455'	clay	85	Light greenish grey silty clay
	sand & grit	5	with a little subangular to subrounded
	siltstone	10	quartzic sand and grit, and chips
			of white hard siltstone.
455'-500'	clay	80	Clay now less silty and darker
	sand	15	in places. Sand and siltstone
	siltstone	5	as above. Gypsum flakes below 480'
500'-550'	clay	90	Light to dark grey clay, and some
	sand	10	white chalky clay. Sand as above.

EHV 1243.

EXOIL — PETROMIN Drillers H. C. Thompson

WELL LOG

022

Well Sight Geologist J. Westhoff, Minoil Services

Well No. 355-6

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-25'	sand	60	Subangular to subrounded
	grit	30	and broken medium
	gravel	10	grained sand to gravel sized
			fragments of quartz, feldspar,
			muscovite, quartzite and gneiss.
25'-35'	clay	30	As above, now with red-brown
	sand	40	and grey silty clay
	grit	20	
	gravel	10	
35'-45'	silt	60	Red-brown and grey silt with
	sand	30	fine to coarse sand of quartz,
	grit	5	with a little muscovite and
	gravel	5	feldspar and grit and
			gravel as above.
45'-60'	silt	20	As above, but with less silt
	sand	60	
	grit	20	

EXOIL — PETROMIN Drillers H. C. Thompson & Co.

WELL LOG

Well Sight Geologist J. Westhoff, Minoil Services 023 Well No. 355-6

INTERVAL	LITHOLOGY	%	DESCRIPTION
60'-65'	silt	60	Red-brown and grey clayey silt
	sand	30	with sand to gravel as above
	grit & gravel	10	
65'-70'	sand	70	Medium to coarse sand consisting
	grit	25	mainly of quartz with a little
	gravel	5	feldspar and muscovite and
			subangular to subrounded grit
			and gravel sized fragments of
			quartzite, gneiss and quartz.
70'-80'	silt	70	Clayey silt, mostly red-brown
	sand	15	but some grey, with sand to
	grit & gravel	5	gravel as above.
80'-70'	sand	55	Sand to gravel as above
	grit	30	
	gravel	15	

EXOIL — PETROMIN Drillers H. C. Thompson & Co.

WELL LOG

Well Sight Geologist J. Westhoff, Minoil Services

024 Well No. 355-6

INTERVAL	LITHOLOGY	%	DESCRIPTION
90'-95'	silt	80	Red to red-brown silt with some
	sand	15	grey patches. Sand and grit consists
			mainly of quartz with a little muscovite.
95'-130'	sand	80	Subangular to subrounded medium to
	grit	20	coarse sand and grit, consisting
			predominantly of quartz.
130'-135'	gravel	70	Gravel, grit and sand, predominantly
	grit	20	quartzic.
	sand	10	
135'-190'	silt	20	Sand and grit as before, with
	sand	50	brown and grey clayey silt.
	grit	30	
190'-360'	silt	30	Brown to red-brown silt
	sand	60	with sand, mainly fine to
	grit	10	medium grained and grit, as above.

EXOIL — PETROMIN Drillers H. C.Thompson & Co.

WELL LOG

Well Sight Geologist J. Westhoff, Minoil Services

025 Well No. 355-6

INTERVAL	LITHOLOGY	%	DESCRIPTION
360'-425	clay	80	Silty clay, coloured predominantly
	sand	15	grey with some purple and sand
	grit	5	and grit consisting mainly of quartz
			with some feldspar.
425'-530'	clay	95	Light to dark grey ~~xxy~~ clay with a
	sand	5	little coloured purple and yellow.
			Fine to coarse quartzic sand.
			End of hole

ENV 1243.

EXOIL — PETROMIN Drillers H.C. Thompson

WELL LOG 026 Well No. 355-7

Wellsite Geologist J. Westhoff, Minoil Services

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-20'	silt	10	Red silt with coarse sand and
	sand	30	grit consisting of quartz, quartzite,
	grit	60	schist, gneiss etc.
20'-30'	silt	30	White, grey and brown clayey
	sand	20	silt with coarse sand to
	grit	40	gravel as above.
	gravel	10	
30'-70'	silt	70	Red brown silt mixed with
	sand	30	fine to coarse sand consisting of
			quartz & a little muscovite.
70'-110'	silt	15	Silt as above, now with much
	sand	45	coarse sand and grit, consisting of
	grit	40	subangular to subrounded fragments
			of quartz, quartzite, sandstone,
			schist, gneiss etc.

Wellsite ~~Geol~~ Geologist
J. Westhoff, Minoil Services

EXOIL — PETROMIN Drillers H.C. Thompson

WELL LOG 027 Well No. 355-7

INTERVAL	LITHOLOGY	%	DESCRIPTION
110'-190'	silt	70	Predominantly red brown silt, with
	sand	20	some grey patches, and clayey in
	grit & gravel	10	places, with fine sand to gravel
			as before.
190'-195'	sand	70	Coarse sand and grit consisting mainly
	grit	30	of quartz with some muscovite,
			~~fixed~~ feldspar and rock fragments
195'-265'	clay	70	Grey and red brown silty clay with
	sand	30	fine to coarse sand consisting mainly
			of quartz, with a little feldspar and
			muscovite.
265'-375'	sand	60	Silty clay as above, with some more
	grit	20	coarse sand and grit, mainly of
	clay	20	quartz.
375'-395'	clay	75	Clay now less silty and darker
	sand	25	grey, with fine to coarse sand as above.

Wellsite Geologist

J. Westhoff, Minoil Services

EXOIL — PETROMIN Drillers H.C. Thompson & Co.

WELL LOG Well No. 355-7

026

INTERVAL	LITHOLOGY	%	DESCRIPTION
395'-425'	clay	80	Clay coloured dark grey and
	sand	10	stained purple and yellow in places
	gypsum	10	Medium to coarse quartzic sand
			and much gypsum
425'-530'	clay	95	Now only traces of gypsum
	sand	5	and less sand.
			END OF HOLE

EMV 1243.

Wellsite Geologist
J. Westhoff, Minoil Services

EXOIL — PETROMIN Drillers H. C. Thompson

WELL LOG

029

Well No. 355-8

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-25'	gravel	30	Angular to subrounded coarse sand to
	grit	50	gravel sized fragments of quartz,
	sand	20	feldspar, quartzite, schist, gneiss etc.
25'-45'	silt	20	As above, but with red brown
	sand	20	and grey clayey silt
	grit	40	
	gravel	20	
45'-290'	silt	20	Red-brown and grey silt, clayey in
	sand	50	places with subangular to subrounded
	grit	30	predominantly quartzic medium sand to grit.
290'-365'	sand	70	As above, but with less silt
	grit	25	
	silt	5	
365'400'	sand	100	Medium grained sand mainly of
			quartz with a little feldspar

EXOIL — PETROMIN Drillers H.C. Thompson & Co.

WELL LOG

Well Sight Geologist J. Westhoff, Minoil Services

C30 Well No. 355-8

INTERVAL	LITHOLOGY	%	DESCRIPTION
400'-420'	sand	40	Medium to coarse quartzic sand with
	clay	60	dark grey clay
420'-530'	clay	90	Clay coloured mainly dark grey
	sand	10	with fine to coarse sand of
			quartz with a little feldspar
			and muscovite
			End of Hole

MINOIL SERVICES
CORE DRILLING

031

GEOLOGIST T. M. Steel CLIENT Petromin N.L.

DRILLER Lex Davison (W.L.Sides) WELL No. 355-1A

LOG CORE DRILLING

DATE LOGGED 5/3/70 TOTAL DEPTH

FORM RE

INTERVAL	RECOVERY FOOTAGE	%	Scint. c.p.m.	DESCRIPTION
355'-357'	1'10"	91.7	48	Very sandy and silty clay sand is fine to coarse angular to subrounded quartz -some feldspar and rare mica -greengrey with some yellow brown and redbrown mottling
357'-360'	2'6"	83.3	48	Silty and slightly sandy clay with small pockets black carbonaceous clay below 359'4"
360'-364'6"	4'6"	100	50	Sandy and gravelly stiff clay sand and gravel are fine to coarse subangular to subrounded quartz- greengrey with some redbrown and yellow mottling black carbonaceous seams at 360'-360'2", 362'2"-362'3", 363'-363'2" and 364'3"-364'6"
364'6"-370'	5'6"	100	60	Black slightly silty and fine sandy carbonaceous clay becoming grey and less carbonaceous below 366'-small patches yellow clay and rare ver fine pyrite grains.
370'-375'	5'	100	48-52	Grey very slightly sandy and silty clay-some small yellow clay pockets 375'-376'
375'-380'	5'	100	48-52	Black carbonaceous clay - slightly silty 376'-377' black silty carbonaceous clay 377-378' black carbonaceous clay with small yellow clay pockets 378'-379' dark grey to black slightly silty and fine sandy carbonaceous clay. 379'-380' light greysiltyand slightly sandy (very fine quartz grains) clay rare yellow mottling.

MINOIL SERVICES
CORE DRILLING

GEOLOGIST T. M. Steel CLIENT Petromin N.L.

DRILLER Lex Davison (W.L.Sides) WELL No. 355-1A

LOG CORE DRILLING

DATE LOGGED 5/3/70 TOTAL DEPTH

FORM RF

INTERVAL	RECOVERY FOOTAGE	%	Scint c.p.m.	DESCRIPTION
380'-382'6"	2'6"	100	40-44	380'-380'1" large red quartzite cobble at 2" 380'1"-382'6"- light grey and dark grey mottled slightly silty clay some pale yellow clay pockets at 381'.
382'6"-385'	2'6"	100	40-44	382'6"-384'6" grey slightly silty stiff clay pockets to 2" of yellow clay and patches gyp- seous clay, particularly between 383'6" and 384'6" 384'6"-385' dark grey carbon- aceous clay with rare yellow clay and white gypseous clay pockets to 385'.
385'-390'	5'	100	40-44	385'-388'6" dark grey carbon- aceous clay with mattered gypseous clay pockets and finely idsseminated pyrite 388'6"-390' dark grey carbon- aceous clay with some yellow- brown silty and fine sandy clay pockets and pockets gypseous clay from 388'9"- 389'3"
390'-392'	1'6"	75		390'-390'6" dark grey carbon- aceous slightly silty clay wit yellow brown and redbrown mottling. 390'6"-390'9" as above with pockets of 1" of gypseous clay 390'9"-39 grey yellow brown and redbrown mottled slightly siltyclay - rare medium to coarse well rounded quartz gra ns.

MINOIL SERVICES
CORE DRILLING

GEOLOGIST T. M. Steel CLIENT Petromin N.L.

DRILLER W. L. Sides Lex Davison WELL No. 355-1A

LOG CORE DRILLING

DATE LOGGED 5/3/70 TOTAL DEPTH

FORM RF

INTERVAL	RECOVERY FOOTAGE	%	Scint c.p.m.	DESCRIPTION
				404'6"-408' light grey silty and very fine sandy clay- some yellow fine banding with liminite staining. Thin interbedded seams where sand content slightly higher than average.
408'-413'	5'	100	60(408'-409') 50(409'-410') 44-48 remainder	408'-411'9" light grey slightly silty and very fine sandy clay with some yellow -brown and marer redbrown mottling. 411'9"-412'8" Brown & yellow brown slightly silty very stii clay with some grey clay seams and pockets. 412'-413' light grey silty and clayey very fine quartz sand.
413'-418'	5'	100	48-52	413'-414'6" light grey silty and very fine sandy clay with rare quartz gravel and cobbles (one quartzite cobble ½" diam at 413'8", 414'6"- 418' light and dark grey silt and slightly clayey very fine quartz sand and rare cobbles (one cobble to 1½" diam at 414'9") Thin bands slightly more clayey at 416'8" to 416'10" and 417'9" to 417'11"
418'-423'	5'	100	160(418'-418'9") 80(418'9"-419'5") 60 (419'5"-419'10")	418'-418'1" light and dark grey mottled silty very stiff clay. 418'1"-418'3" yellowbrown silty clay becoming mottled

MINOIL SERVICES
CORE DRILLING

GEOLOGIST T. M. Steel CLIENT Petromin N.L.

DRILLER Lex Davison (W.L.Sides) WELL No. 355-1A

LOG CORE DRILLING

DATE LOGGED 5/3/70 TOTAL DEPTH

FORM RF

INTERVAL	RECOVERY FOOTAGE	%		DESCRIPTION
392'-397'	5'	100	40-44	39 -393'6" grey yellow brown and redbrown mottled silty clay - rare medium to coarse well rounded quartz grains 393'6"-394' grey redbrown and rarer yellowbrown mottled silty stiff clay redbrown sections ferruginous 394'-394'11" light and dark grey slightly silty clay with rare yellow mottling 394'11"-397' grey redbrown and yellow brown mottled slightly silty stiff clay rare well rounded quartz grains to 1/8" diam.
397'-402'	5'	100	44-46	397'-401' light grey slightly silty clay with some redbrown and yellowbrown mottling 401'-402' light grey slightly silty and sandy clay - sand is very fine quartz estimated approx. 5%.
402'-402'6"	6"	100	46	Light grey slightly silty and fine sandy clay with pockets ar their seams of clayey very fine quartz sand.
402'6"-408'	5'6"	100	46-48	402'6"-404' grey slightly silty clay with some yellow mottling and small pockets red very fine sandy clay. 404'-404'4" light grey and redbrown mottled silty clay some very fine sand 404'4" -404'6" Red brown very stiff clay .

MINOIL SERVICES
CORE DRILLING

GEOLOGIST T. M. Steel CLIENT Petromin N.L.

DRILLER Lex Davison (W.L. Sides) WELL No. 355-1A

LOG CORE DRILLING

DATE LOGGED 5/3/70 TOTAL DEPTH

FORM RF

INTERVAL	RECOVERY FOOTAGE	%	Scint. C.P.M.	DESCRIPTION
			50(419'10" -423')	with grey silty clay to 418'5"
				418'5"-419'2" light grey silty and very fine slightly sandy clay - some yellow brown mottling.
				419'2"-419'8" Pale yellowbrown silty and slightly sandy (very fine quartz) clay -some grey mottling.
				419'8"-423' light and dark grey coarsely mottled slightly silty clay -rare redbrown silty and fine sandy clay pockets.
423'-428'	5'	100	44-48	423'-426'6" light grey slightly silty very stiff clay with small mattered pockets (¼" diam) of white (ppssibly gypseous) clay and rare redbrown and yellow brown mottling.
				426'6"-428' dark grey to black carbonaceous stiff clay with rare yellowbrown (liminitic) silty clay pockets to 1" long.
428'-433'	5'	100	44-48	428'-428'8"" light and dark grey mottled silty clay small pockets sandy dlay (yellow) 428'8"-428'10" yellow brown and grey mottled silty and fine sandy clay
				428'10"-433' dark grey to black carbonaceous stiff clay -rare redbrown (ferruginous) clayey pockets.

MINOIL SERVICES
CORE DRILLING

GEOLOGIST T. M. Steel CLIENT Petromin N.L.

DRILLER Lex Davison (W.L. Sides) WELL No. 355-1A

LOG CORE DRILLING

DATE LOGGED 5/3/70 TOTAL DEPTH

FORM RF

INTERVAL	RECOVERY FOOTAGE	%		DESCRIPTION
433'-436'	3'	100	44-48	Dark grey to black carbonaceous slightly silty and fine sandy stiff clay particularly carbonaceous zone between 435' and 435'3"
436'-438'	2'	100	45-48	Dark grey silty and very fine sandy clay with small pockets of carbonaceous (frequently slightly pyritic) clay -rare redbrown and yellow mottling and small pockets (1/8" diameter white (?gypseous) clay - clay is high plasticity with bright sheen on fracture faces.
438'-444'	6'	100	66-72 50-60	438'-440'6" grey yellow brown mottled silty and slightly sandy (fine to coarse subangular quartz) stiff clay some carbonaceous pockets and gypseous seams. 440'6" dark grey carbonaceous silty and slightly sandy (very fine to fine) clay.
444'-452'	8'	100	120 (444'-445'6") 75 (445'6"-446') 60*-66* (446'-446'6") 82 (446'6"-446'8") 58-70 (446'8"-452')	444'-445'9" dark grey carbonaceous slightly silty and fine sandy stiff clay. 445'9"-447' Yellow brown silty stiff clay interbedded with dark grey silty carbonaceous clay in bands to 3" thick. 447'-452' dark grey silty and slightly sandy clay - sand is very fine to coarse subangular clear quartz grains -rare redbrown and yellow mottling.

MINOIL SERVICES
CORE DRILLING

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

DRILLER Lex Davison (W.L. Sides)

WELL No. 355-1A

LOG CORE DRILLING

DATE LOGGED 5/3/70

TOTAL DEPTH

FORM RF

INTERVAL	RECOVERY FOOTAGE	%	DESCRIPTION	
452'-455'	3'	100	46-50	452'-455' dark grey silty and slightly sandy clay - sand is very fine to coarse subangular clear quartz grains rare redbrown and yellow mottling.
455'-458'	3'	100	56-60	455'-456'6" dark grey slightly silty and stiff clay with pockets of gypsum at 455'6" and 456'3" rare coarse wellrounded quartz gravel to ¼" diameter-rare small carbonaceous clay pockets to 1". 456'6" light grey and dark grey with rarer yellow brown mottled silty and sandy clay sand is fine to medium quartz prominent gypsum pockets at 457'6" and 457'11".
458'-460'	1'7"	79	50-56	458'-458'1" grey and redbrown mottled clay with large pocket (estimated 50% of sample) of gypsum. 458'1"-459'2" grey and yellow brown mottled slightly silty clay with rare gypsum grains. 459'2"-459'3" grey silty clay with pocket of yellow limonitic clay and white gypseous clay. 459'3"-459'7" light and dark grey coarsely mottled silty and very fine sandy clay with some yellow mottling and small pockets carbonaceous clay (black) rare very fine pyrite grains.
	Average core recovery	97.7%		

ENV 1243

038

20th May, 1970.

SPECIAL MINING LEASE NO.355

PROGRESS REPORT FOR THREE MONTHS - PERIOD ENDING 20TH MAY, 1970

SUMMARY:

Activity on SML.355 during the Period has included geological reconnaissance mapping, surveying and leveling of bore holes and the drilling of thirty five (35) non-coring bore holes and one cored hole.

Anomalous radio-activity of greater than ten (10) times background was detected in four (4) of the holes drilled.

INTRODUCTION:

Special Mining Lease No.355 covers an area of approximately 440 square miles on the north-western edge of Lake Frome in South Australia.

Operations on the Lease are primarily directed towards evaluating the potential of the area for deposits of radio-active ores and the location of such deposits.

EXPLORATION:

Exploratory drilling for sedimentary uranium and other radio-active materials was undertaken during the Period under review. A total of 19,070' of drilling and 18,951' of gamma-ray logging was carried out.

Copies of the lithologic and gamma-ray logs of the thirty six (36) holes drilled in the period accompany this Report. The lithological logs are of cuttings and/or core recovered and were compiled by a contract well-site geologist. The gamma-ray logs were obtained using a slim hole probe run inside the drill rods by a contract geophysicist and/or a employee of Petromin N.L.

A plan showing localities of holes drilled on SML.355 to date is attached to this Report.

DRILLING RESULTS:

Four (4) of the rotary holes showed significant radio-activity.

Hole	Depths	Radio-activity in API units
355-12	460'	800
355-12	470'	800
355-14	493'	2400
355-17	495'	1300
355-19	520'	1800

Radioactivity in the remainder of the holes drilled during the Period was at a very low level.

..../2

ASSAY RESULTS:

Assay results from core in hole 355-1A gave values of 2.4 lbs U_3O_8/short ton between 418'-419' and 6.2 lbs U_3O_8/short ton between 444'-444'6" and 3.8 lbs U_3O_8/short ton between 444'6"-445'. The interval 448'6"-449'6" assayed 1.8 lbs U_3O_8/short ton. Remaining assays from 355.1A were below economic significance.

The uranium in hole 355-1A is located immediately above the two lower zones of gamma-ray activity. There was no uranium of consequence in the higher radio-active zones as determined by gamma-ray logging and there was no uranium detected in the zone above the top gamma-ray anomaly.

SUBSURFACE GEOLOGY:

The sediments are similar to those previously reported. The rotary drill cuttings are mixed in the drilling fluid but represent an ill-sorted section of gravels, sands, clays and silts from surface to about 400'. Red brown is still the dominant colour although with a greater percentage of greys and greenish greys. These sediments are considered to be Tertiary and derived from the ranges.

The grey, dark grey clays and silts with gypsum and some sand lenses are probable Cretaceous.

CONCLUSION:

Uranium was identified throughout the cored section in hole 355-1A and three (3) zones were shown to contain values of potentially economic significance.

Significant radio-activity has been recorded in nine (9) holes on the lease. The north-south line of holes has not revealed any major zones of radio-activity comparable with the 4 mile creek area.

R.W. HAYNES,
EXPLORATION MANAGER

PETROMIN NO LIABILITY
261 George Street
SYDNEY

CONTRACTORS FOR THE PROJECT ARE:

Geological:	Minoil Services
Geophysical:	Down Under Well Services
Drilling:	H.C. Thompson & Co.

GAMMA-RAY LOGS OF THE FOLLOWING BORE HOLES ACCOMPANY THIS REPORT:

Special Mining Lease No. 355-1A
355- 9
355-10
355-11
355-12
355-13
355-14
355-15
355-16
355-17
355-18
355-19
355-20
355-21
355-22
355-23
355-24
355-25
355-26
355-27
355-28
355-29
355-30
355-31
355-32
355-33
355-34
355-35
355-36
355-37
355-38
355-39
355-40
355-41
355-42
355-43

EMV 1243 041

MINOIL SERVICES
WELL LOG

GEOLOGIST T. M. Steel

CLIENT PETROMIN N.L.

DRILLER L. Davison (W.L. Sides)

WELL No. 355-1A

WELL LOG

DATE LOGGED 4/3/70

TOTAL DEPTH

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-35	No sample		
35'-40'	gravel	60	Redbrown slightly clayey angular to
	sand	20	subrounded quartz and quartzite fine
	clay	20	sand grading to coarse gravel to ¼"-
			rare mica
40'-50'	gravel	95	Redbrown slightly clayey and silty fine
	silt & clay	5	to coarse angular to subrounded (rare
			rounded) polymict gravel - mainly
			clear quartz and quartzite, but some
			slate and schist to ¼" diam.
50'-55'	clay	40	Grey and redbrown mottled clayey fine to
	sand	30	coarse angular to subrounded quartz
	gravel	30	and quartzite sand and gravel to 1/8"
			- rare fine mica flakes.
55'-60'	clay	40	Similar to 50-55, but gravel coarser
	sand	30	grained to ¾"
	gravel	30	
60'-95'	gravel	50	Redbrown (some grey mottling) clayey fine
	sand	25	to coarse angular to subrounded quartz
	clay	25	and quartzite sand and gravel to 1/8"
			- rare mica.
95'-120'	gravel	60	Redbrown clayey and sandy angular to
	sand	20	subrounded quartz and quartzite gravel
	clay	20	to ½" - rare mica
120'-130'	gravel	80	Redbrown slightly clayey and sandy fine
	sand	10	to very coarse quartz and quartzite grave
	clay	10	to 1" - angular to subrounded - rare mica
130'-140'	gravel	60	Yellowbrown to redbrown sandy and clayey
	sand	20	fine to medium angular to subrounded
	clay	20	quartz and quartzite gravel.
140'-150'	sand	50	Yellow brown clayey and gravelly medium
	gravel	25	to very coarse angular to subangular
	clay	25	quartz and quartzite sand
150'-165'	clay	50	Redbrown and yellow brown mottled gravell
	sand	30	and sandy clay - sand and gravel is fine
	gravel	20	to coarse angular quartz grains - rare
			quartzite fragments and fine mica flakes.

41A

MINOIL SERVICES
WELL LOG

GEOLOGIST T. M. Steel

CLIENT PETROMIN N.L.

DRILLER L. Davison (W. L. Sides)

WELL No. 355-1A

WELL LOG

DATE LOGGED 4/3/70

TOTAL DEPTH

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
165'-180'	clay	40	Similar to above, but with slightly less
	sand	30	clay and more medium to coarse gravel
	gravel	30	
180'-350'	sand	50	Yellow brown clayey fine to very coarse
	gravel	30	angular to subangular quartz and quartzite
	clay	20	sand grading to medium gravel.
			Section from 180'-350' is almost
			identical, with only very minor
			changes in clay content or grain size.

WELL LOG

MINOIL SERVICES

042

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

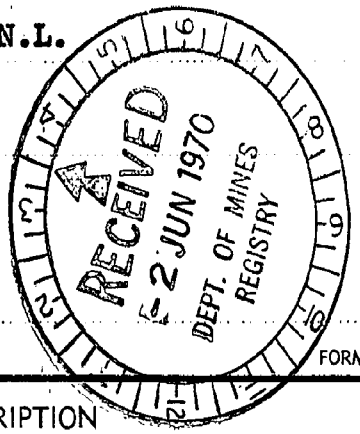
DRILLER W. Gelok

WELL No. 355-9

~~WELL LOG~~

DATE LOGGED 23/3/70

TOTAL DEPTH 530'



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-20'	sand	60	Light grey - brown sandy gravel of
	gravel	40	quartz, quartzite, muscovite etc. with
			gravel to rare 1 cm and sand fine to
			coarse subrounded to rounded
20'-40'	sand	60	As above - slightly silty sand
	silt	10	
	gravel	30	
40'-50'	sand	50	As above - some clayey nature
	silt	20	
	gravel	20	
	clay	10	
50'-100'	silt	60	Light grey light brown sandy silt
	sand	30	
	gravel	10	
100'-125'	silt	60	Very sandy light grey - brown silt -
	sand	40	quartz fine to coarse
125'-145'	sad	80	Light brown quartz/quartzite sand and
	silt	10	gravel from fine sand to fine gravel-
	gravel	10	angular to subrounded
145'-155'	silt	50	Very sandy brown silt with small patches
	sadd	40	of black material. Sand fine to
	clay	10	medium quartz, muscovite etc.
155'-180'	silt	20	Silt as above but increases in sand to
	sand	60	coarse, also fine to medium rare gravel
	gravel	20	pockets.
180'	gravel	30	Quartz/quartzite sandy gravel which
	silt	10	grades gradually into a silty sand.
	sand	60	
245'	silt	40	fine to rare coarse quartz sand and
	sand	60	brown silt. Very micaceous
245'-260'	sand	80	Quartz/quartzite sand, angular to
	gravel	20	subrounded - up to 4 mm diam.
260'-275'	gravel	90	Quartz/quartzite gravel - well sorted,
	sand	10	mainly 4-5 mm. Rare 1 mm. angular to
			subrounded.

WELL LOG

MINOIL SERVICES

043

GEOLOGIST B. Rebuli CLIENT Petromin N.L.

DRILLER W. Gelok WELL No. 355-9

WELL LOG

DATE LOGGED 23/3/70 TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
275'-395'	sand	70	Brown sand of quartz/quartzite - fine sand
	gravel	20	to medium quartz. Occasional gravelly
	silt	10	pockets of up to 50% gravel and pockets
			of sandy silty material - sand, grading
			from fine to medium.
395'-400'	gravel	90	Polymictic, mainly quartz/quartzite
	sand	10	gravel - angular to subrounded -rare
			1 cm diam. Some gypseous clay
400'-510'	sand	90	Light brown fine to coarse grained
	silt	10	quartz - 10% gypseous clay which
			grades with depth.
	clay	20	Light grey sand - fine to medium
	silt	10	grained with a dark grey sity clay.
	sand	70	
510'-530'	clay	50	Dark grey - black silty clay and
	sand	40	quartz/quartzite, feldspar, muscovite,
	silt	10	etc. Sand to coarse grained also
			occasional yellow clay and white
			gypseous clay.

WELL LOG

MINOIL SERVICES

EHV/243044

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

DRILLER W. Gelok

WELL No. 355-10

~~WELL LOG~~

DATE LOGGED 24/3/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-65'	gravel	60	Sandy gravel - light brown to light
	sand	40	grey of quartz, quartzite, with minor
			feldspar, muscovite etc. fine sand to
			medium gravel - angular to subrounded
65'-75'	sand	40	Brown silty sandy clay with some light
	gravel	30	grey clay pockets. Poor sorting - size
	clay/silt	30	of quartz etc. is from clay to rare
			coarse gravel.
75'-80'	gravel	60	Very coarse polymictic gravel subrounded
	silt	20	to rounded - rare fine medium gravel
	sand	20	brown very sandy silt fine to coarse
			Gravel probably is a small lens
			mainly ½"-1" diam.
80'-90'	sand	40	As 65-75 interval
	gavel	30	
	clay/silt	30	
90'-95'	sand	30	As above - small lens of very coarse
	gravel	30	gravel - up to ½" diam.
	clay/silt	40	
95'-120'			As above - small lenses of coarse
			gravel up to ¼"
120'-125'	silt	40	Brown very sandy silt with small pockets
	sand	50	of fine to coarse rare gravel of
	gravel	10	subrunded to rounded quartz/quartzite.
125'-210'	silt	30	Sandy silt as above but with fine to
	sand	30	coarse gravel up to 1 cm diam. Material
	gravel	40	becomes siltier & sandier with depth
			but still occasional gravel lenses
210'-255'	sand	100	Fine to coarse quartz, quartzite, sand
			with minor feldspar and muscovite
			- angular to subrounded gets coarser with
	sand	80	depth and grades into a gravel up to
	gravel	20	rare 5 mm diam. grains
255'-310'	sand	60	As above but with more silt and clay
	gravel	20	
	clay/silt	20	

WELL LOG

045

MINOIL SERVICES

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

DRILLER W. Gelok

WELL No. 355-10

~~WELL LOG~~

DATE LOGGED 24/3/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
310'-325'	sand	60	Quartz/quartzite sand. Fine sand to
	gravel	30	rare medium gravel. Some clayey nature.
	silt/clay	10	
325'-370'	silt	30	Brown very sandy silt with fine to
	clay	10	coarse quartz/quartzite gravel. Angular
	sand	40	to rounded.
	gravel	20	
370'-430'	sand	80	Quartz/quartzite sand with some silt
	gravel	10	and fine gravel Brown grades to light
	silt	10	grey and grainsize grades to coarse
			gravel (rare) and more clay i.e. becomes
	clay	30	very poorly sorted
	sand	40	
	gravel	30	
430'-530'	clay	80	Dark grey clay with pockets of black,
	sand/silt	20	red and yellow sandy clays.

WELL LOG

MINOIL SERVICES

EMV 1243

046

GEOLOGIST B. Rebuli

DRILLER W. Gelok

WELL LOG

DATE LOGGED 30/3/70

CLIENT Petromin N.L.

WELL No. 355-11

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-65'	gravel	70	Quartz/quartzite sandy gravel with
	sand	20	gravel up to 1.5 cm. Sand fine to
	silt	10	coarse angular to subrounded. Small
			variations in percentages with depth.
65'-75'	sand	50	Brown silty sand with gravel to rare
	silt	20	coarse grained. Angular to subrounded
	gravel	30	
75'-110'	silt	80	Brown sandy silt - sand fine to rare
	sand	20	medium quartz/quartzite
110'-115'	sand	20	Sandy gravel layer to medium to rare
	gravel	80	coarse quartz/quartzite gravel.
115'-125'	silt	80	Brown sandy silt as above
	sand	20	
125'-140'	gravel	60	Quartz/quartzite sandy gravel silt size
	sand	30	to medium gravel to rare coarse gravel.
	silt	10	
140'-170'	silt	80	Brown sandy silt as above
	sand	20	
170'-185'	silt	40	Brown sandy silt as above and also a
	sand	50	quartz/quartzite sandy gravel. Fine to
	gravel	10	coarse sand to medium gravel
185'-240'	silt	80	Brown sandy silt as above with quartz/
	sand	20	quartzite up to rare coarse grained.
240'-275'	silt	20	Brown sandy silt to medium grained
	sand	60	quartz/quartzite with a sandy gravel of
	gravel	20	fine sand to medium gravel - angular to
			subrounded.
275'-290'	silt	70	Brown sandy silt and quartz/quartzite
	sand	30	sand to coarse gravel.
290'-395'	silt	30	Some brown sandy silt but mostly a quartz/
	sand	60	quartzite sand - fine to coarse sand and
	gravel	10	gravel from fine to rare medium grained.
395'-410'	silt	50	Light grey sandy silt - sand is fine to
	sand	40	coarse and sandy lenses to coarse grained.
	clay	10	

WELL LOG

46A

MINOIL SERVICES

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

DRILLER W. Gelok

WELL No. 355-11

~~WELL LOG~~

DATE LOGGED 30/3/70

TOTAL DEPTH

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
410'-530'	clay	80	Light grey - green silty (slightly
	silt	20	sandy) clay and some white gypseous
			clay. The grey-green clay grades to
			light grey, and silt and sand content
			increases with depth.

WELL LOG

MINOIL SERVICES

ENV 1243

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

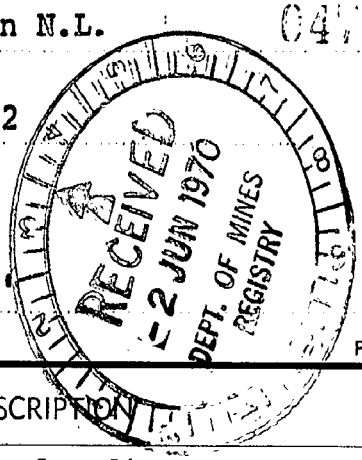
DRILLER P. Lademan

WELL No. 355-12

~~WELL LOG~~

DATE LOGGED 30/3/70

TOTAL DEPTH 530'



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-40'	sand	90	Quartz/quartzite sand - fine to coarse
	gravel	10	with rare fine gravel - angular to
			subrounded
40'-45'	sand	30	Quartz/quartzite gravel and sand -
	gravel	70	from fine sand to medium grained gravel.
45'-75'	sand	80	Quartz/quartzite sand as above with
	gravel	20	more gravel to medium size.
75'-80'	sand	20	Mainly a well sorted gravel of fine to
	gravel	80	medium size with some rare medium to
			coarse sand.
80'-110'	silt	30	Brown sandy silt and sandy gravel. Poor
	sand	30	sorting as size is from fine sand to
	gravel	40	coarse gravel.
110'-135'	sand	80	Sand as per 45-75' interval
	gravel	10	
	silt	10	
135'-210'	sand	70	Sand as above but with some sandy silt
	gravel	10	
	silt	20	
210'-235'	silt	50	Brown sandy silt and some fine to coarse
	sand	40	quartz sand and fine gravel
	gravel	10	
235'-275'	sand	70	As per 135'-210' interval.
	silt	20	
	gravel	10	
275'-290'	sand	100	Fine to medium grained quartz/quartzite sa
			rare coarse grained (well sorted)
290'-300'	silt	10	Coarser sand than above with tup to rare
	sand	70	medium grained gravel.
	gravel	20	
300'-325'	sand	100	Fine to medium grained sand as per 275'-
			290' interval. Some gypseous clay
325'-370'	silt	10	As per 290-300' interval.
	sand	70	
	gravel	20	

WELL LOG

MINOIL SERVICES

045

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

DRILLER P. Lademan

WELL No. 355-12

~~WELL LOG~~

DATE LOGGED 30/3/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
370'-405'	clay	30	A green silty clay and a quartz/quartzite
	silt	10	sand and gravel - probably occurs in
	sand	50	thin layers.
	gravel	10	
405'-440'	clay	80	Green silty clay with white gypseous
	silt	20	clay, grades into a light grey clay
440'-530'	clay	80	Light grey silty clay,with depth
	silt	20	there occurs also a dark grey - black
			clay in increasing %.
			530' light grey clay 50%
			dark grey black clay 50%
			Also some minor yellow silty and fine
			sandy clay pockets.

WELL LOG

MINOIL SERVICES

EHV 243

049

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

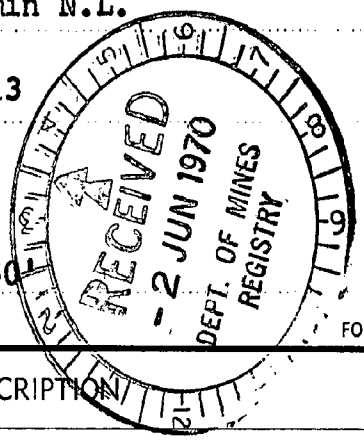
DRILLER W. Gelok

WELL No. 355-13

~~WELL LOG~~

DATE LOGGED 30/3/70

TOTAL DEPTH 530'



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-25'	sand	40	Quartz/quartzite sandy gravel ranging
	gravel	60	from fine to rare coarse gravel.
25'-35'	gravel	90	Quartz/quartzite gravel up to 2mm
	sand	10	in diam. Angular to subrounded
35'-85'	sand	50	Brown silty sand with gravel to rare
	silt	20	coarse grained. Angular to subrounded
	gravel	30	
85'-210'	silt	80	Brown sandy silt - sand fine to rare
	sand	20	medium of quartz. Occasional pockets of
			very gravelly material.
210'-225'	silt	20	Brown sandy silt to medium grained quartz/
	sand	60	quartzite with a sandy gravel of fine
	gravel	20	sand to medium gravel - angular to sub-
			rounded
225'-245'	silt	70	Brown sandy silt and quartz/quartzite sand
	sand	30	to coarse grained.
245'-360'	silt	20	Some brown sandy silt but mostly a
	sand	70	quartz/quartzite sand - fine to coarse
	gravel	10	grained sand and gravel to rare medium
			grained.
360'-430'	clay	80	Light grey - green silty (slightly sandy)
	silt	20	clay with some white gypseous clay. The
			grey-green clay grades to a light grey
			clay with depth.
430'-530'	clay	70	Light grey silty clay and white gypseous
	Silt	20	clay with quartz sand ranging from
	sand	10	medium grained to coarse.

WELL LOG

MINOIL SERVICES

EMV 1243

650

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

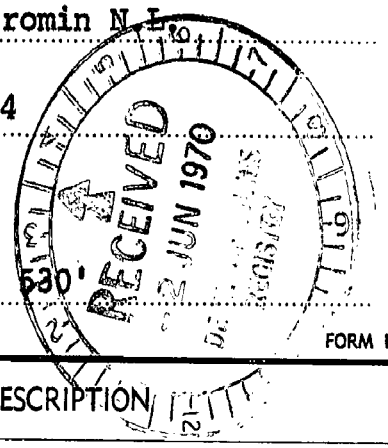
DRILLER P. Ladmman (H.C.Thompson)

WELL No. 355-14

~~WELL LOG~~

DATE LOGGED 2/4/70

TOTAL DEPTH 530'



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-20'	sand	60	Quartz/quartzite sandy gravel. Fine sand
	gravel	40	to coarse gravel. Angular to subrounded
20'-25'	sand	100	Well sorted quartz sand - fine to
			coarse sand
25'-35'	sand	50	Tendency with depth to coarse grained
	gravel	50	material. Medium grained quartz sand
			to medium gravel.
35'-50'	gravel	100	Quartz/quartzite gravel medium to coarse
			up to 2 cm diam. Angular to subrounded
50'-155'	sand	100	Quartz/quaetzite sand - fine grained
			at 50' to coarse grained sand to coarse
			grained gravel at 155' (100% gravel)
			Size increase with depth - good sorting
155'-165'	silt	30	Brown sandy silt - fine to medium quartz/
	gravel	60	quartzite. Also a rare fine to coarse
	sand	10	gravel - angular to subrounded
165'-200'	silt	60	Brown sandy silt - fine to medium quartz/
	sand	40	quartzite. Also a coarse grained sand
			grading to rare fine gravel.
200'-240'	sand	80	Mainly a quartz/quartzite sand fine to
	gravel	10	coarse with small lenses of silt and
	silt	10	gravel
240'-266'	silt	50	Brown sandy silt - fine to medium quartz
	sand	50	/quartzite. Also a medium to coarse
			sand grades to a sand with depth.
260'-280'	sand	100	Fine to coarse quartz/quartzite sand
			Good sorting in individual 5' intervals.
280'-290'	sand	20	Sandy gravel to coarse grained.
	gravel	80	
290'-455'			As per 260'-280' interval. Gets finer
			grained with depth.
455'-485'	clay	50	Light grey green silty clay with some
	silt	20	dark grey clay. Also quaetz/quartzite
	sand	30	sand from fine to coarse

WELL LOG

MINOIL SERVICES

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-14 C51

~~WELL LOG~~

DATE LOGGED 2/4/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
85'-530'	clay	70	Dark grey (60%) and light grey -
	silt	20	green silty clays (40%) with some
	sand	10	fine to medium sand. also some
			yellow and red fine sandy silt pockets

WELL LOG

MINOIL SERVICES

EAV 1243

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

052

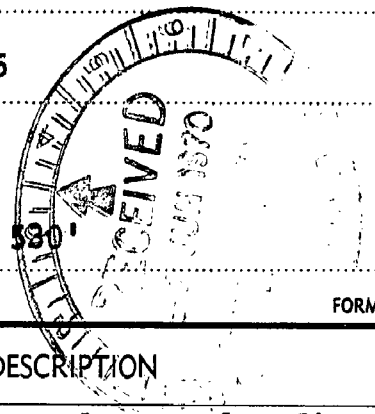
DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-15

WELL LOG

DATE LOGGED 2/4/70

TOTAL DEPTH 330'



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-35'	gravel	60	Quartz/quartzite sandy gravel - fine
	sand	40	sand to coarse gravel (poorly sorted)
			angular to subrounded
35'-45'	silt	50	Light grey sandy silt - fine to coarse
	gravel	10	sand. Also a gravelly sand of quartz/
	sand	40	quartzite from fine sand to medium
			gravel.
45'-55'	silt	70	Brown sandy silt - fine to medium
	sand	30	grained quartz/quartzite
55'-60'	sand	20	Sandy gravel to rare coarse gravel-
	gravel	80	quartz/quartzite
60'-85'	silt	70	as per 45'-55'
	sand	30	
85'-105'	silt	70	Light grey and some yellow fine sandy
	sand	30	silt with small sandy gravel lenses -
			medium sand to fine gravel
105'-115'	sand	20	Sandy gravel - rare medium sand to medium
	gravel	80	gravel of quartz/quartzite - well sorted
			angular to subrounded
115'-215'	silt	80	Brown sandy silt - quartz/quartzite
	sand	20	grains fine to rare medium. Gets sandier
			with depth - lenses of sand & gravel
			occur with brown sandy silt with depth.
215'-250'	sand	80	Quartz/quartzite sand ranging from fine
	silt	20	to coarse with lenses of brown sandy silt.
250'-255'	gravel	80	Fine to rare coarse gravel and some
	silt	20	brown sandy silt
255'-290'	sand	70	As per 215-250 interval but siltier
	silt	30	
290'-305'	gravel	60	Brown sandy silt and quartz/quartzite
	sand	20	sandy gravel from coarse sand to medium
	silt	20	gravel
305'-320'	sand	90	Fine to rare coarse grained quartz/
	silt	10	quartzite sand - well sorted.
320'-335'	silt	60	Brown sandy silt and some light grey very
	sand	40	sandy silt - fine sand to rare medium

WELL LOG

MINOIL SERVICES

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-15

~~WELL LOG~~

DATE LOGGED 2/4/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
335'-390'	sand	90	As per 305'-320' - well sorted to coarse
	silt	10	grained sand. Occasional brown and grey
			sandy silt lenses.
390'-460'	clay	20	Brown sandy silt with light grey clayey
	sand	20	pockets. Also sand to coarse grained
	silt	60	
460'-530'	clay	70	Light grey - green and dark grey clay -
	silt	30	dark clay increasing with depth. Also
			gypsum and yellow silty clay

WELL LOG

MINOIL SERVICES

EMV 1243

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.I.

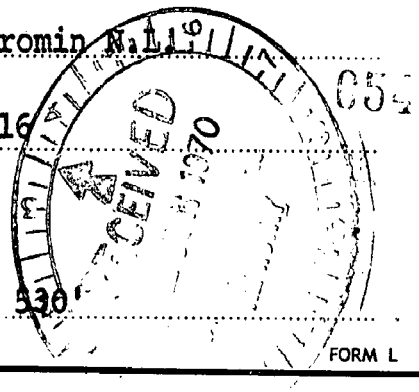
DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-16

~~WELL LOG~~

DATE LOGGED 3/4/70

TOTAL DEPTH 530'



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-75'	gravel	80	Mainly a fine to rare coarse gravel of
	sand	20	quartz/quartzite - angular to subrounded
			with some well worted 5' intervals
			Sand is very fine to coarse
75'-140'	silt	40	Brown sandy silt and a quartz/quartzite
	sand	10	gravel - mainly coarse - probably gravel
	gravel	50	layers in silt. Also some light grey
			sandy silt, gets siltier and less
			gravelly with depth. Also some yellow
			fine sandy silt pockets.
140'-170'	silt	30	Brown, light grey and some yellow sandy
	sand	60	silt. Also a fine to coarse sand and
	gravel	10	some fine to rare medium gravel.
			Sand gets coarser with depth and grades
			to gravel to medium grained.
170'-195'	silt	60	Brown sandy silt and fine to coarse sand
	sand	30	and fine to rare medium gravel.
	gravel	10	
195'-215'	gravel	80	Light grey sandy silt - only minor.
	sand	10	
	silt	10	~~Mainly a quartz/quartzite, feldspar~~
			~~gravel to 2 cm diam - angular to~~
			~~subrounded~~
215'-260'	silt	80	Brown sandy silt from fine to coarse
	sand	20	quartz, grains with black limonitic
			pockets in silt.
260'-375'	sand	70	Quartz/quartzite fine to coarse sand with
	silt	10	fine gravel - some brown sandy silt
	gravel	20	which increases with depth.
375'-405'	silt	60	Light grey sandy silt slightly clayey
	clay	20	with some fine sandy yellow and red silt
	sand	20	mottling
405'-420'	sand	80	Brown fine to coarse sand with brown silt
	silt	20	and some grey-green clay
420'-530'	silt	30	Light grey-green silty clay with black
	clay	70	clay content increasing with depth.
			530'-50% black-dark grey , 50% light grey
			green clay, some yellow silty clay and
			white gypseous clay

EMV 1243

WELL LOG
MINOIL SERVICES

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

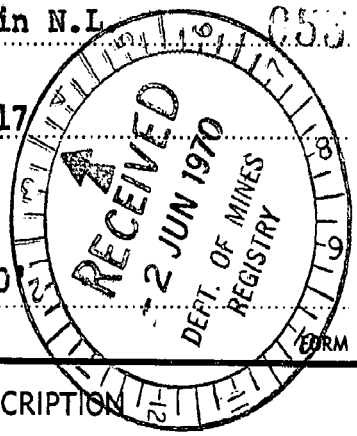
DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-17

~~WELL LOG~~

DATE LOGGED 3/4/70

TOTAL DEPTH 530'



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-30'	sand	30	Pale brown clayey and silty very fine sand
	gravel	30	grading to coarse gravel - mainly angular
	silt	20	to subrounded quartz and quartzite
	clay	20	
30'-40'	gravel	60	Grey slightly clayey fine sand grading to
	sand	30	very coarse polymict gravel - mainly
	clay	10	subrounded quartz and quartzite
40-45'	sand	40	Brown slightly silty clayey very fine to
	clay	40	very coarse angular to subrounded sand -
	gravel	10	some fine to medium gravel - thin lenses
	silt	10	of sandy clay
45'-50'	sand	50	Buff silty and clayey very fine to coarse
	clay	30	grained angular to subrounded quartz sand
	silt	20	
50'-65'	sand	40	Brown slightly silty clayey very fine to
	clay	40	very coarse angular to subrounded quartz
	gravel	10	sand - rare fine gravel and thin lenses
	silt	10	of sandy clay
65'-75'	clay	60	Redbrown slightly silty fine to very
	sand	30	coarse sandy moderately stiff clay
	silt	10	
75'-155'	sand	50	Redbrown clayey very fine to medium
	clay	40	(rare coarse) grained quartz sand -
	silt	10	some pockets grey sandy clay
155'-180'	gravel	40	Light brown very clayey fine sand grading
	sand	30	to coarse gravel - generally angular
	clay	30	
180'-215'	sand	40	Light brown very clayey fine sand grading
	gravel	30	to coarse grained gravel generally angular
	clay	30	quartz.
215'-295'	sand	50	Redbrown, yellow brown and grey mottled
	clay	40	clayey very fine to medium (rare coarse)
	silt	10	grained quartz sand - micaceous - some
			pockets slightly gravelly clay
295'-440'	sand	40	Light brown very clayey fine sand grading
	gravel	30	to coarse grained gravel - generally
	clay	30	angular quartz.

55 A

WELL LOG
MINOIL SERVICES

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-17

~~WELL LOG~~

DATE LOGGED 3/4/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
440'-470'	sand	60	Light brown clayey very fine to coarse
	clay	30	grained angular to subrounded quartz
	gravel	10	sand and rare fine gravel.
470'-480'	gravel	60	Brown clayey and fine sandy very fine to
	sand	20	very coarse grained subrounded to well
	clay	20	rounded polymict gravel to 1½" diam.
			mainly quartz and quartzite.
480'-490'	gravel	30	Brown clayey fine grained sand grading
	sand	30	to coarse grained gravel to ¾" diam.
	clay	40	mainly subrounded quartz and quartzite
490'-530'	clay	80	Grey slightly silty and very fine sandy
	sand	10	stiff clay with some redbrown and rarer
	silt	10	yellow mottling.

WELL LOG

MINOIL SERVICES

ENV 1243

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

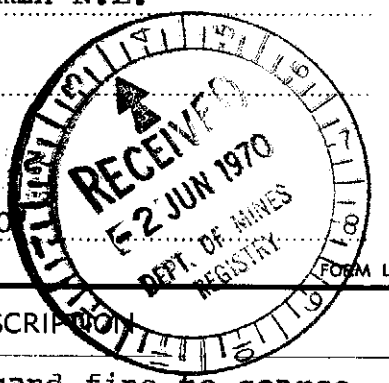
DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-18

~~WELL LOG~~

DATE LOGGED 5/4/70

TOTAL DEPTH 530



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-20'	sand	60	sandy silt with sand fine to coarse
	silt	30	and some gravel size grains to rare
	gravel	10	medium quartz, quartzite mainly with some feldspar, muscovite etc. Angular to subrounded
20'-50'	sand	20	Quartz/quartzite sandy gravel with
	gravel	80	varying degrees of sorting from mainly fine gravel to coarse sand and coarse gravel. Angular to sub ounded
50'-100'	gravel	40	Brown and light grey very sandy silt
	silt	40	with occasional yellow sandy silt. Also
	sand	20	lenses of sandy gravel from fine sand to coarse gravel up to 1.5 cm
100'-110'	sand	20	Sandy gravel as above
	gravel	80	
110'-155'	silt	70	Brown sandy silt mainly with occasional
	sand	30	light grey sandy silt. Sand is fine to rare coarse grained.
155'-235'	silt	50	Brown silt as above but also with sand -
	sand	50	occurs as lenses and is fine to coarse sand to rare fine grained gravel. Some very sandy or silty intervals.
235'-245'	silt	30	Brown sandy silt with sandy gravel lenses
	sand	40	- gravel is from fine to coarse (max
	gravel	30	2 cm) angular to subrounded quartz/ quartzite etc.
245'-300'	silt	10	Mainly a quartz/quartzite sand (also
	sand	70	feldspar etc.) and gravel with sizes
	gravel	20	from fine sand to fine gravel - rare medium gravel. Size variations with intervals but between the above limits. Sorting ranges from good to fair. Also some white gypseous material.
300'-335'	silt	20	Sandy gravel as above but mostly
	sand	10	medium gravel with rare fine and coarse
	gravel	70	- well sorted. Some sandy silt (brown)

well log

56A

MINOIL SERVICES

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-18

~~WELL LOG~~

DATE LOGGED 5/4/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
335'-445'	silt	20	As per 245'-300' but with some brown
	sand	60	sandy silt and light grey sandy silt.
	gravel	20	Gets silter and less sandy and gravelly
			with depth.
445'-530'	clay	70	Light grey and dark grey silty clay -
	silt	30	also red and yellow silty clay pockets.
			At 445' there are some sandy lenses to
			coarse grained sand but these disappear
			with depth. Occasional ~~gyp~~ gypseous
			clay pockets at 445' grade to 30%
			gypseous clay at 530' - also pockets
			of gypsum flakes.

EHV 1243

WELL LOG
MINOIL SERVICES

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-19

~~WELL LOG~~

DATE LOGGED 6/4/70

TOTAL DEPTH 530'

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-20'	gravel	90	Polymictic gravel - mainly quartz/
	sand	10	quartzite angular to subrounded - fine
			to coarse grained
20'-65'	sand	80	Fine to coarse grained sand and brown
	silt	20	sandy silt. Occasional fine and coarse
			gravel lenses and white gypseous clay
			pockets.
65'-80'	silt	70	Light grey very sandy silt - sand is
	sand	30	fine to coarse quartz sand, occasional
			white gypseous clay pockets
80'-95'	silt	80	Brown sandy silt - sand is fine to rare
	sand	20	medium, and some light grey sandy silt
			with fine to coarse quartz. Occasional
			white gypseous clay pockets.
95'-100'	gravel	100	Polymictic gravel - quartz/quartzite,
			feldspar etc. Angular to subrounded -
			minor sand
100'-145'	silt	80	As per 80'-95' interval
	sand	20	
145'-160'	sand	70	Quartz/quartzite, feldspar etc. sand
	silt	20	from fine to coarse grained sand to fine
	gravel	10	gravel Also brown sandy silt
160'-200'	silt	80	As per 100'-145' interval
	sand	20	
200'-380'	sand	30	Polymictic gravel from fine to rare coarse
	silt	30	and a brown sandy silt. Also pockets of
	gravel	40	a light grey sandy silt. Gravel grades to
			fine grained at depth - higher % of silt
			380' - 60%of gravel, 30% sand, 10% gravel.
380'-440'	sand	90	Polymitic sand of quartz, quaetzite felds
	silt	10	par etc. fine to coarse. Some brown silt
440'-455'	sand	30	Some quartz/quartzite sand but introduction
	silt	30	of light grey and dark grey silty clays
	clay	40	and red brown fine sandy silt

WELL LOG

57A

MINOIL SERVICES

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-19

~~WELL LOG~~

DATE LOGGED 6/4/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
455'-530'	clay	60	Light grey and dark grey slightly
	silt	20	silty clay with pockets of red-brown
	sand/gypsum	20	fine sandy silt. , and white
			gypseous clay. Also about 15% of
			gypsum (in crystal form) and some
			quartz sand from fine to coarse
			Gypsum is only 5% at 530' and dark
			grey - black clay is > light grey clay.

WELL LOG

EHV 1243

MINOIL SERVICES

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

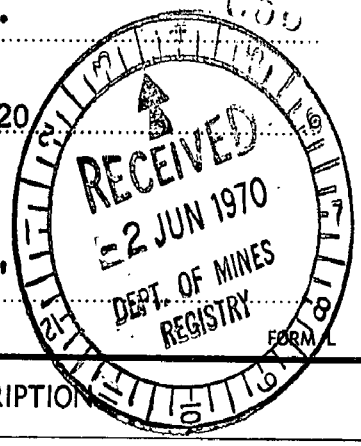
DRILLER W. Gelok (H.C.Thompson)

WELL No. 355/20

WELL LOG

DATE LOGGED 2/4/70

TOTAL DEPTH 530'



INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-35'			No samples
35'-50'	gravel	30	Buff clayey very fine to coarse subangular
	sand	40	to rounded mainly quartz sand and
	clay	30	medium to coarse subrounded quartz and
			quartzite gravel
0'-110'	sand	50	Light brown very clayey fine to coarse
	clay	40	subangular to rounded quartz sand -
	gravel	10	rare very coarse sand to fine gravel
110'-145'	sand	50	Light brown clayey very fine subangular
	gravel	20	sand grading to fine (rare medium to
	clay	30	coarse) gravel - mainly quartz
45'-185'	sand	50	Redbrown silty and clayey very fine to
	clay	30	medium quartz sand - rare pockets light
	silt	20	grey fine sand - slightly micaceous.
35'-320'	sand	40	Light brown silty and clayey very fine
	gravel	20	sand grading to medium (rare coarse)
	clay	20	gravel - mainly subangular to subrounded
	silt	20	quartz and quartzite.
20'-350'	sand	80	Fawn slightly clayey very fine to medium
	clay	10	grained quartz sand - rarer coarse grain
	gravel	10	ed sand to fine gravel - mainly angular
			to subrounded quartz.
350'-385'	sand	80	Light brown slightly clayey and silty
	clay	10	very fine to fine grained quartz sand
	silt	10	(rare medium grains)
385'-405'	sand	60	Fawn slightly clayey very fine grained
	gravel	30	sand grading to medium fine grained
	clay	10	gravel - mainly angular to subrounded
			quartz.
405'-480'	clay	70	Light grey silty and very fine sandy
	silt	10	hard dry clay
	sand	20	
'0'-485'	clay	40	Light grey slightly silty and very fine
	silt	10	sandy stiff clay with layers of clayey
	sand	30	very fine sand grading to medium gravel
	gravel	20	

WELL LOG

58A

MINOIL SERVICES

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

DRILLER W. Gelok (H.C.Thompson)

WELL No. 355-20

WELL LOG

DATE LOGGED 2/4/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
485'-530'	clay	70	Light and dark grey silty and very fine
	silt	15	sandy stiff clay - some pockets black
	sand	15	carbonaceous clay

WELL LOG

MINOIL SERVICES

EHV1243 C59

GEOLOGIST T.M. Steel

CLIENT Petromin N.L.

DRILLER W. Gelok (H.C.Thompson)

WELL No. 355-21

WELL LOG

DATE LOGGED 2/4/70

TOTAL DEPTH

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-30'	sand	40	Buff clayey and silty fine grained sand
	gravel	20	grading to medium (rare coarse) grained
	clay	20	gravel - mainly subangular to subrounded
	silt	20	quartz and rarer quartzite
30'-75'	sand	50	Brown slightly silty clayey very fine to
	clay	30	medium grained sand - some fine to medium
	silt	10	gravel - rare pockets of grey fine sand
	gravel	10	
75'-185'	sand	40	Brown slightly silty clayey very fine
	gravel	30	sand grading to medium gravel - mainly
	clay	25	subangular quartz.
	silt	5	
185'-215'	sand	40	Redbrown very clayey fine grained sand
	gravel	20	grading to medium grained gravel
	clay	40	
215'-265'	sand	50	Redbrown slightly silty clayey very fine
	clay	40	to medium grained sand - rare coarse sand
	silt	10	grading to fine gravel
	gravel	10	
265'-290'	sand	50	Redbrown, light grey and fawn mottled
	clay	40	slightly silty clayey very fine to fine
	silt	10	grained quartz sand - rare medium to
			coarse quartz sand - slightly micaceous
290'-300'	sand	40	Brown slightly clayey fine grained sand
	gravel	40	grading to medium (rare coarse) grained
	clay	20	quartz gravel - mainly subangular to
			subrounded
300-325'	sand	50	Redbrown light grey and fawn mottled
	clay	40	slightly silty clayey very fine to
	silt	10	medium grained quartz sand - rare medium
			to coarse quartz sand - slightly micaceous
325'-455'	sand	60	Brown clayey fine to coarse grained
	gravel	20	quartz sand and fine to rare medium
	clay	20	grained gravel - thin lenses stiff clay.

59A

WELL LOG
MINOIL SERVICES

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

DRILLER W. Gelok (H.C.Thompson)

WELL No. 355-21

~~WELL LOG~~

DATE LOGGED 2/4/70

TOTAL DEPTH

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
455'-460'	clay	40	Brown very clayey fine sand grading to
	sand	50	fine gravel - lenses stiff brown clay
	gravel	10	
460'-515'	clay	80	Light and dark grey mottled slightly
	sand	10	silty and very fine sandy stiff clay
	clay	10	
515'-530'			Samples missing - driller reports clay as for 465-515'.

ENV 1243

WELL LOG

MINOIL SERVICES

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

DRILLER W. Gelok (H.C.Thompson)

WELL No. 355-22

~~WELL LOG~~

DATE LOGGED 5/4/70

TOTAL DEPTH

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-35'	sand	40	Buff slightly clayey and silty very fine
	gravel	30	sand grading to very coarse gravel -
	clay	10	mainly subangular to well rounded quartz
	silt	20	and quartzite.
35'-50'	sand	60	Light brown slightly clayey and silty
	gravel	20	fine sand grading to fine gravel - mainly
	clay	10	angular to subangular quartz.
	silt	10	
50'-100'	sand	50	Yellow brown slightly silty clayey very
	clay	40	fine to medium (rare coarse) grained
	silt	10	quartz sand - slightly micaceous -
			some pockets grey slightly sandy clay
100'-115'	clay	50	Brown slightly silty fine sandy clay
	sand	30	some coarse grained quartz sand and fine
	gravel	10	grained gravel
	silt	10	
115'-130'	sand	50	Brown and redbrown slightly silty clayey
	clay	40	very fine to medium grained sand - pockets
	silt	10	grey sandy clay
130'-140'	sand	40	Redbrown clayey very fine to coarse
	clay	40	grained quartz sand with some fine to
	gravel	20	coarse subrounded quartz and quartzite
			gravel
140'-305'	clay	50	Redbrown yellow brown and rare grey
	sand	40	mottled slightly silty very fine to medium
	silt	10	sandy clay - small pockets grey stiff clay
			- slightly micaceous
305'-355'	sand	50	Yellow brown and grey slightly silty very
	clay	40	clayey fine to medium (rare coarse) grained
	silt	10	quartz sand
355'-365'	sand	70	Buff slightly clayey and silty fine to
	gravel	10	very coarse grained angular to subrounded
	clay	10	quartz sand - rare fine gravel
	silt	10	

60A

WELL LOG
MINOIL SERVICES

GEOLOGIST T. M. Steel CLIENT Petromin N.L.

DRILLER W. Gelok (H.C.Thompson) WELL No. 355-22

~~WELL LOG~~

DATE LOGGED 5/4/70 TOTAL DEPTH

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
365'-430'	sand	60	Buff and grey mottled clayey and silty
	clay	20	very fine to fine (rare medium to coarse)
	silt	20	grained quartz sand - slightly micaceous
			- some pockets grey sandy clay.
430'-450'	clay	60	Grey and yellow brown mottled silty and
	sand	30	sandy moderately stiff clay - some
	silt	10	pockets grey clay
450'-530'	clay	85	Grey slightly sandy stiff clay - sand is
	sand	15	very fine to fine grained quartz - some
			yellow mottling and pockets of yellow
			brown sandy clay.

WELLLOG

EHV 1243

MINOIL SERVICES

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

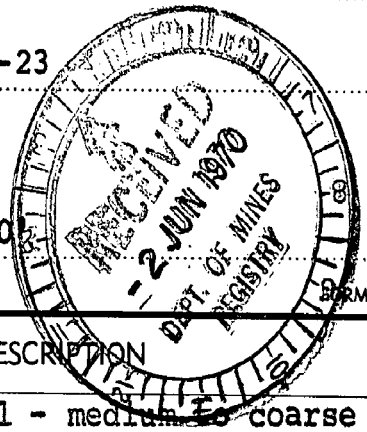
DRILLER W. Gelok (H.C.Thompson)

WELL No. 355-23

~~WELL LOG~~

DATE LOGGED 7/4/70

TOTAL DEPTH 550'



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-10'	Gravel	70	Polymictic gravel - medium to coarse
	sand	10	grained mainly quartz/quartzite. Also
	silt	20	brown sandy silt.
10'-150'	silt	20	Brown silty sand - fine to coarse
	sand	70	grained with fine gravel. Occasional
	gravel	10	coarse gravel lenses and small very
			sandy (fine to coarse) light grey silt
			lenses.
150'-265'	silt	50	As above but now brown sandy silt with
	sand	40	some coarse gravel lenses and some
	gravel	10	light grey very sandy to coarse grained
			silt.
265'-290'	sand	90	Fine to coarse quartz/quartzite sand and
	silt	10	some silt - brown . some gypseous clay
290'-305'	silt	50	Brown very sandy silt and some light
	sand	40	grey sandy silt. Also medium to coarse
	gravel	10	quartz/quartzite gravel - angular to
			subrounded
305'-315'	sand	90	Brown quartz/quartzite sand - reasonably
	silt	10	sorted ranging from fine to coarse sand
			- no gravel
315'-340'	silt	60	Brown very sandy silt - fine to rare coarse
	sand	40	sand in silt - as per 290'-305' and
			150'-265' occasional light grey sandy clay
340'-440'	sand	60	Mainly a fine to coarse quartz/quartzite
	gravel	20	sand and fine to medium gravel - angular
	silt	20	to subrounded. Also some light grey very
			sandy (to rare coarse grained) silt.
			Sorting is poor
440'-515'	silt	10	Light grey-green slightly silty clay. Also
	clay	90	5% white gypseous clay and at 485'-490'
			some gypsum crystals.
515'-550'	silt	20	Light grey and grey-green silty clays
	clay	80	and dark grey clay. Also small pockets
			of yellow fine sandy silt (minor) and
			2 or 3% white gypseous clay.

WELL LOG

MINOIL SERVICES

EHV 1243

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

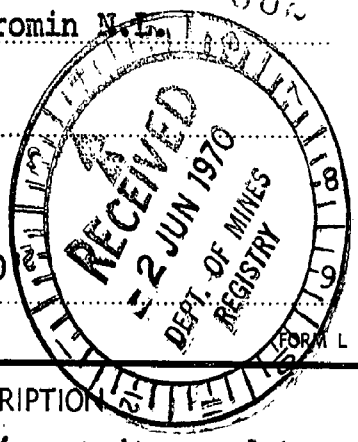
DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-24

~~WELL LOG~~

DATE LOGGED 7/4/70

TOTAL DEPTH 550



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-35'	gravel	40	Fine grained quartz/quartzite sand to coars
	sand	60	gravel - very poorly sorted - angular
			to subrounded
35'-50'	gravel	100	Mainly quartz/quartzite gravel from medium
			to coarse (Max. 3cm diam)
50'-75'	clay	10	Brown slightly clayey and fine to coarse
	silt	60	sandy silt
	sand	30	
75'-80'	clay	10	Brown silty clay and coarse gravel lens
	silt	30	- from 1 cm to 3 cm diam.
	gravel	60	
80'-185'	clay	10	As per 50-75' interval with depth gets
	silt	70	less sandy and grades to fine to rare
	sand	20	medium sandy.
			Also pockets of light grey sandy silt.
185'-200'	clay	10	Brown sandy silt as above and also a
	silt	50	quartz/quartzite fine to coarse sand to
	sand/gravel	40	fine to rare medium gravel.
200'-295'	clay	10	As per 80'-185' interval - occasional
	silt	70	gypseous clay pockets - gets less silty
	sand	20	and clayey with depth and more sandy.
295'-380'	sand	90	Fine to coarse quartz/quartzite sand with
	silt	10	rare fine grained gravels - occasional
			gypseous clay.
380'-460'	clay	90	Light grey to grey-green slightly silty
	silt	10	clay.
460'-550'	clay	90	Light grey and grey-green slightly silty
	silt	10	clay and dark grey to black clay -
			(increasing % with depth. Also white
			gypseous chy 2-3% and yellow fine sandy
			silt pockets.

EHV 1243

WELL LOG

MINOIL SERVICES

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

DRILLER W. Gelok (H.C.Thompson & Co)

WELL No. 355-25

~~WELL LOG~~

DATE LOGGED 9/4/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-45'	gravel	40	Buff clayey very silty fine to very coarse
	sand	30	grained sand and gravel 0 mainly
	clay	10	subangular to subrounded quartz and
	silt	20	quartzite.
45'-115'	sand	40	Redbrown yellow brown and grey mottled
	clay	40	silty and very clayey fine to medium
	silt	20	quartz sand - rare very coarse sand to
			fine gravel
115'-140'	clay	50	Redbrown silty and very sandy moderately
	sand	40	stiff clay - sand is very fine to fine
	silt	10	(rare medium-coarse) grained quartz-
			rare pockets grey clayey fine sand
140'-145'	sand	60	Brown silty and clayey very fine to
	clay	20	medium (rare coarse) grained quartz sand
	silt	20	- grains frequently ironstained - slightly
			micaceous
145'-155'	clay	50	Brown silty and very sandy clay - sand is
	sand	40	fine to medium quartz - slightly micaceous
	silt	10	
155'-185'	sand	40	Mainly brown silty and very clayey fine
	gravel	10	sand grading to medium gravel - mainly
	clay	40	subrounded quartz and rarer quartzite
	silt	10	
185'-200'	clay,	50	Brown slightly silty sandy moderately
	sand	40	stiff clay - sand is very fine to coarse
	silt	10	grained quartz.
200'-210'	sand	60	Light brown silty and very clayey very
	clay	30	fine to medium (rare coarse to very
	silt	10	coarse) grained quartz sand
210'-240'	sand	50	Light brown silty and very clayey very
	clay	30	fine grained sand grading to fine gravel
	silt	10	- rare pockets grey slightly sandy clay
	gravel	10	
240'-255'	sand	40	Brown silty and clayey fine grained sand

WELL LOG

MINOIL SERVICES

63A

GEOLOGIST T. M. Steel CLIENT Petromin N.L.

DRILLER W. Gelok (H.C.Thompson) WELL No. 355-25

~~WELL LOG~~

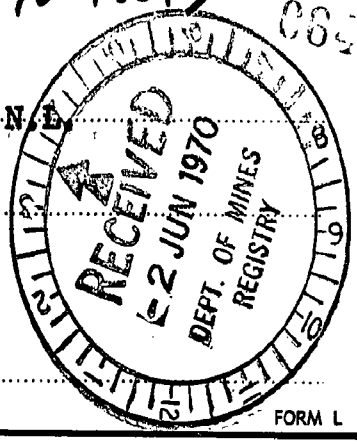
DATE LOGGED 9/4/70 TOTAL DEPTH

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
	gravel	30	Brown silty and clayey fine grained
	clay	10	sand grading to medium grained gravel
	silt	20	- mainly subangular quartz and rarer quartzite
255'-310'	clay	50	Light brown silty and sandy stiff clay
	sand	30	- sand is very fine to medium quartz-
	silt	20	slightly micaceous
310'-335'	clay	50	As above, but with pockets light grey
	sand	30	clayey and silty very fine sand
	silt	20	
335'-395'	sand	50	Mainly light grey silty and very clayey
	clay	40	very fine to fine grained quartz sand -
	silt	10	rare medium to coarse quartz grains
			- some redbrown more clayey pockets and thin lenses grey slightly sandy clay
395'-405'	sand	70	Pale brown slightly silty and clayey
	clay	20	fine to coarse (rare very coarse)
	silt	10	grained quartz sand - micaceous -
			becoming slightly more clayey with depth
05'-475'	clay	90	Light grey dark grey and redbrown
	sand/silt	10	mottled slightly silty and very fine sandy stiff clay, becoming more dominantly grey in color with depth
475'-530'	clay	90	Dark grey slightly sandy stiff clay -
	sand	10	some pockets black carbonaceous clay and rare light grey mottling - some very fine to medium quartz sand and rare small pockets gypsum

EMV 1243

WELL LOG
MINOIL SERVICES



GEOLOGIST T. M. Steel CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson & Co) WELL No. 355-26

~~WELL LOG~~

DATE LOGGED 9/4/70 TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-55'	gravel	40	Buff silty and clay fine to coarse sand
	sand	30	and medium to very coarse gravel-
	clay	10	mainly subangular to rounded quartz and
	silt	20	rarer quartzite
55'-65'	sand	40	Light brown silty and fine gravelly
	clay	40	clayey sand - sand is fine to coarse
	gravel	10	grained quartz
	silt	10	
65'-130'	clay	60	Brown sandy and gravelly stiff clay
	sand	30	sand is fine to very coarse quartz
	gravel	10	- some pockets redbrown and grey very
			sandy clay
130'-255'	clay	60	Pale brown very silty and fine sandy
	sand	20	moderately stiff clay - rare pockets
	silt	20	grey clayey fine sand - finely micaceous
255'-265'	sand	70	Brown slightly silty clayey very fine
	clay	20	to coarse subangular to subrounded
	silt	10	quartz sand - grains frequently iron
			-stained
265'-280'	sand	90	Buff slightly silty and clayey very fine
	silt	5	to medium grained subrounded quartz
	clay	5	sand - slightly micaceous
280'-330'	sand	80	As above, but with some angular to
	gravel	10	subrounded fine to coarse quartz and
	silt	5	quartzite gravel - some lenses of
	clay	5	redbrown sandy clay
330'-390'	clay	60	Light grey sandy moderately stiff clay
	sand	30	- sand is very fine to medium grained
	silt	10	subrounded quartz - some silt - pockets
			gypseous clay - very finely micaceous
390'-425'	clay	90	Greengrey slightly silty and very fine
	silt	5	sandy stiff clay
	clay	5	
425'-530'	clay	90	Dark grey and grey mottled slightly silt
	silt	5	and very fine sandy stiff clay - carbon
	sand	5	aceous in part - rare small pockets of
			gypseous clay and gypsum

EMV 1243

WELL LOG
MINOIL SERVICES

GEOLOGIST T. M. Steel CLIENT Petromin N.L.

DRILLER W. Gelok & R. Thompson (H.C. Thompson) WELL No. 355-27

~~WELL LOG~~

DATE LOGGED 12/4/70 TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-45'	gravel	40	Buff slightly silty clayey very fine
	sand	30	grained sand grading to very coarse
	clay	25	grained gravel to 1½" diam - mainly
	silt	5	subrounded quartz and rarer quartzite
45'-110'	sand	40	Pale redbrown silty and clayey very fine
	silt	30	to fine (rarer medium to coarse) grained
	clay	30	quartz sand - some small pockets grey
			sandy clay
110'-130'	sand	50	Light brown slightly silty clayey very
	clay	40	fine to coarse grained quartz sand -
	silt	10	sand mainly subrounded quartz
130'-155'	clay	50	Light brown slightly silty sandy moderately
	sand	40	stiff clay - sand is fine to coarse
	silt	10	grained subrounded quartz
155'-170'	clay	50	Light brown fine to coarse sandy and
	sand	30	gravelly moderately stiff clay - sand
	gravel	20	and gravel are subangular to rounded
			quartz and rarer quartzite
170'-205'	sand	60	Light brown slightly clayey fine sand
	gravel	30	grading to fine gravel - mainly sub-
	clay	10	angular quartz
205'-225'	sand	50	Similar to above, but clay content
	gravel	20	increased to 30%
	clay	30	
225'-245'	clay	40	Light brown and yellow brown mottled
	sand	30	silty and very fine sandy moderately stiff
	silt	30	clay - rare coarse well rounded quartz
			sand
245'-255'	clay	50	Light brown silty and sandy clay - sand is
	sand	20	very fine to medium subrounded quartz-
	silt	30	some pockets light grey sandy clay
255'-275'	sand	40	Light brown clayey very fine sand
	gravel	30	grading to medium gravel - mainly
	clay	30	subangular to subrounded quartz

WELL LOG

MINOIL SERVICES

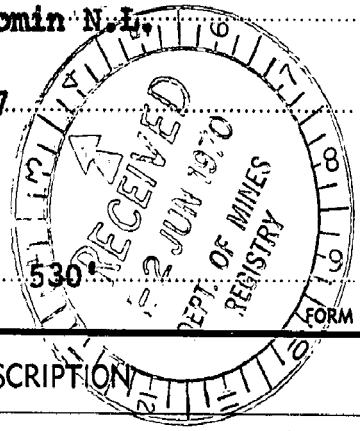
066

GEOLOGIST T. M. Steel CLIENT Petromin N.L.

DRILLER W. Gelok & R. Thompson (H.C.Thompson) WELL No. 355-27

WELL LOG

DATE LOGGED 12/4/70 TOTAL DEPTH 530'



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
275'-285'	sand	30	Similar to above but clay content
	gravel	20	increased to 50%
	clay	50	
285'-305'	clay	40	Light brown and grey mottled silty and
	silt	30	very fine sandy moderately stiff clay
	sand	30	
305'-325'	sand	50	Brown slightly clayey and silty very
	gravel	30	fine sand grading to coarse gravel
	clay	10	
	silt	10	
325'-335'	clay	50	Light grey, greengrey and yellow brown
	sand	30	mottled silty and fine sandy stiff clay
	silt	20	- rare gypseous pockets
335'-350'	clay	50	Yellow brown and grey mottled silty
	sand	20	sandy and gravelly clay - sand and gravel
	gravel	20	are fine to coarse grained angular to
	silt	10	subrounded quartz
350'-370'	sand	60	Light brown and grey mottled silty and
	clay	30	clayey very fine to medium grained mainly
	silt	10	quartz sand - lenses stiff grey clay
370'-425'	clay	80	Light grey and greengrey mottled slightly
	sand	10	silty and very fine sandy stiff clay
	silt	10	- rare gypseous pockets
425'-530'	clay	90	Dark grey to black slightly silty and
	silt	5	very fine sandy stiff clay - carbonaceous
	sand	5	in part

WELL LOG

MINOIL SERVICES

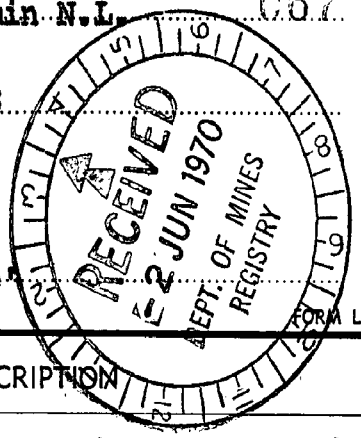
ENV 1243

GEOLOGIST T.M. Steel CLIENT Petromin N.L. 062

DRILLER P. Lademan (H.C.Thompson & Co) WELL No. 355-28

WELL LOG

DATE LOGGED 11/4/70 TOTAL DEPTH 530'



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-15'	sand	40	Buff silty and clayey fine sand grading
	gravel	20	to coarse gravel - mainly subangular
	clay	10	quartz and quartzite
	silt	20	
15'-45'	gravel	40	Light grey clayey fine sand grading to
	sand	30	very coarse gravel to 2" diam. mainly
	clay	30	subrounded quartz and quartzite
45'-60'	clay	50	Light grey and light brown mottled
	sand	30	silty and fine sandy clay - pockets
	silt	20	offwhite silty clay
60'-185'	clay	60	Light brown silty and sandy stiff clay
	sand	30	sand is very fine to fine (rare medium)
	silt	10	grained quartz
185'-200'	sand	50	Light brown silty and clayey very fine
	clay	40	to medium (rare coarse) grained quartz
	silt	10	sand - mainly subangular to subrounded
200'-215'	clay	70	Brown silty and very fine to fine sandy
	sand	20	stiff clay
	silt	10	
215'-320'	silt	40	Light brown clayey and very fine sandy
	sand	30	silt - rare medium grained quartz sand
	clay	30	slightly micaceous - tending to become
			slightly more sandy with depth
320'-340'	sand	60	Light brown slightly silty clayey very
	clay	30	fine to coarse grained subangular to
	silt	10	subrounded quartz sand
340'-355'	clay	50	Light grey slightly silty very fine sandy
	sand	40	moderately stiff clay - rare medium to
	silt	10	coarse grained sand
355'-380'	clay	80	Light grey and light yellow brown mottled
	sand	10	slightly silty and very fine sandy stiff
	silt	10	clay
380'-425'	clay	90	Light grey and greengrey mottled stiff
	sand	10	clay -some veryfine to fine grained quartz
			sand

WELL LOG
MINOIL SERVICES

GEOLOGIST T.M. Steel CLIENT Petromin N.L. 068

DRILLER P. Lademan (H.C.Thompson & Co) WELL No. 355-28

WELL LOG

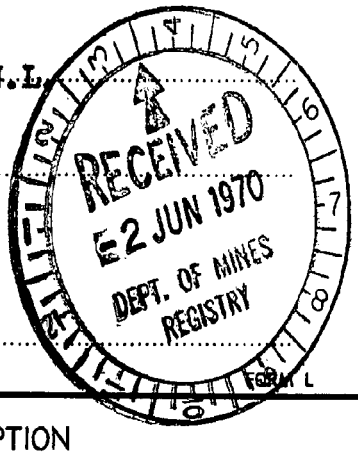
DATE LOGGED 11/8/70 TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
425'-530'	clay	90	Dark grey and black slightly silty and
	sand	5	very fine sandy stiff clay - carbonaceous
	silt	5	in part

EMV 1243

WELL LOG
MINOIL SERVICES



GEOLOGIST T. M. Steel CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson & Co) WELL No. 355-29

~~WELL LOG~~

DATE LOGGED 14/4/70 TOTAL DEPTH 530'

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-10'	clay	40	Light brown sandy and very silty clay
	silt	40	sand is very fine to coarse subangular
	sand	20	quartz
10'-35'	gravel	50	Light grey slightly silty very fine
	sand	40	sand grading to coarse grained gravel
	silt	10	mainly angular to subrounded quartz and rarer quartzite
35'-55'	gravel	30	Light grey silty and clayey fine sand
	sand	30	grading to coarse gravel - mainly
	clay	30	subangular to subrounded quartz and
	silt	10	quartzite - rare thin lenses stiff clay
55'-100'	clay	40	Light brown and grey mottled very silty
	silt	30	and fine to medium sandy clay -slightly
	sand	30	micaceous
100'-120'	gravel	40	Brown very clayey fine sand grading to
	sand	20	medium gravel - mainly angular to
	clay	40	subrounded quartz
120'-130'	clay	50	Brown and rarer grey mottled silty and
	sand	30	fine sandy clay
	silt	20	
130'-345'	clay	50	Light brown and grey mottled silty clay
	silt	40	some fine to medium subrounded quartz
	sand	10	sand - slightly micaceous
345'-440'	clay	90	Light grey and yellow brown mottled very
	silt	5	stiff clay - rare silt and very fine
	sand	5	quartz sand
440'-530'	clay	80	Dark grey to black slightly silty and
	silt	10	very fine sandy stiff cby - carbonaceous
	sand	10	in part - rare pockets gypsum

EMV 1243

WELL LOG

MINOIL SERVICES

GEOLOGIST B. Rebuli CLIENT Petromin N.L.

DRILLER W. McKenna (Thompson) WELL No. 355-30

~~WELL LOG~~

DATE LOGGED 15/4/70 TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-5'	gravel	90	Mainly a polymictic gravel of fine
	sand	10	to coarse grain size (i.e. 2 mm to 3 cm)
			subrounded grains
5'-45'	sand	70	Fine to coarse polymictic sand - mainly
	gravel	30	quartz/quartzites and a fineto rare
			coarse gravel - subrounded Small pockets
			of gypseous material.
45'-60'	clay	10	Poorly sorted interval ranging from
	silt	20	brown clayey and sandy silt to quartz
	sand	50	/quartzite etc. sand to fine gravel.
	gravel	20	Some white gypseous clay and some small
			pockets of light grey - white silty
			clay.
60'-95'	clay	10	Brown fine sandy and clayey silt with
	silt	50	occasional medium grained and rare coarse
	sand	40	grains of quartz/quartzite. Also some
			fine to coarse sandy levels
95'-125'	clay	10	As per 45'-60' interval only less gravel
	silt	20	and is very fine to fine grained.
	sand	60	Some narrow more gravelly levels
	gravel	10	
125'-130'	clay	10	As per 60'-95' interval
	silt	50	
	sand	40	
130'-140'	sand	70	Polymictic gravelly sand - subrounded.
	gravel	30	Fine to coarse sand to fine to medium
			gravel.
140'-265'	clay	20	Brown clayey and slightly sandy (fine)
	silt	70	silt. Sand also to rare medium grained
	sand	10	quartz/quartzite Also small pockets of whi
			te gypseous clay - % increases with depth.
265'-290'	clay	10	Brown and light grey clayey and sandy
	silt	30	(fine) silt with small grey very clayey
	sand	50	pockets. Also fine to coarse quartz/
	gravel	10	quartzite sand and very fine to fine
			gravel. 5-10% gypseous clay increases
			with depth.

WELL LOG

MINOIL SERVICES

GEOLOGIST B. Rebuli CLIENT Petromin N.L.

DRILLER W. McKenna (Thompson) WELL No. 355-30 071

WELL LOG

DATE LOGGED 15/4/70 TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
290'-300'	clay	10	Brown clayey and fine sandy silt as
	silt	20	above but with a high gypseous
	gypseous silt	50	siltstone content - also some
	sand	20	quartz/quartzite fine to coarse sand
300'-365'	sand	20	Brown and light grey silty clay and
	silt	50	some quartz/quartzite fine to coarse
	clay	30	sand
365'-450'	clay	90	Slightly silty light grey - green clay
	silt	10	with occasional small pockets of white
			gypseous clay. With depth get a black
			silty clay and red and yellow silty
			clay pockets.
450'-530'	clay	90	Clay as above but black clay is 90%
	silt	10	and grey green clay is 10%

ENV 1243

WELL LOG
MINOIL SERVICES

GEOLOGIST B. Rebuli CLIENT Petromin N.L.

DRILLER W. McKenna (Thompson) WELL No. 355-31

~~WELL LOG~~

DATE LOGGED 17/4/70 TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-60'	silt	10	Light grey and brown sandy gravel of
	sand	50	quartz quartzite mainly. Fine to coarse
	gravel	40	sand to fine to coarse gravel - poorly
			worted. Also some brown sandy silt and
			gypseous clay. Gravel less coarse with
			depth and sorting is better.
60'-65'	silt	40	Light grey brown very sandy and gravelly
	sand	40	silt with quartz/quartzite grains from
	gravel	20	fine sand to fine gravel.
65'-80'	clay	10	Brown silty and sandy clay and a sandy
	silt	10	gravel - size from fine sand to fine
	sand	60	gravel.
	gravel	20	
80'-120'	clay	20	Brown clayey and fine sandy silt with
	silt	50	occasional medium quartz grains. Gets
	sand	30	coarser grained with depth.
120'-160'	silt	70	Very fine to fine with rare medium sandy
	sand	30	silt - brown high gypseous silt clay
			content.
160'-170'	sand	20	Coarse sand to fine gravel to rare
	gravel	80	medium (8 mm) gravel - is well sorted.
			Subrounded quartz/quartzite mainly.
170'-230'	clay	10	Brown very fine to fine sandy and clayey
	silt	60	silt.
	sand	30	
230'-240'	silt	40	Brown fine sandy silt and white gypseous
	sand	20	clay with some fine to coarse sand
	gypseous clay	40	
240'-260'	silt	20	Mainly a fine to coarse quartz/quartzite
	sand	60	sand with rare fine gravel. Varying
	gypseous clay	20	fine sandy brown silt and white gypseous
			clay.

WELL LOG

MINOIL SERVICES

GEOLOGIST B. Rebuli CLIENT Petromin N.L.

DRILLER W. McKenna (Thompson) WELL No. 355-31 073

WELL LOG

DATE LOGGED 17/4/70 TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
260'-275'	silt	70	Brown fine sandy silt - small % of
	sand	30	gypseous clay
275'-280'	gravel	100	Polymictic gravel with some white gypseous clay - very fine to medium gravel
280'-290'	sand	90	Polymictic mainly quartz/quartzite
	gravel	10	sand from fine to coarse sand to very fine gravel. Well sorted mainly .5 to 1 mm diameter.
290'-330'	clay	20	Brown fine sandy silt with pockets of
	silt	60	light grey silty clay and white gypseous
	sand	20	clay. Occasional yellow silty clay and lenses of fine to coarse quartz sand.
330'-340'	sand	20	Clean quartz/quartzite sandy gravel from
	gravel	80	coarse sand to fine gravel maximum size is .5 cm. Reasonably sorted.
340'-360'	sand	80	As above but sandier and less gravelly
	gravel	20	
360'-425'	clay	70	Light grey silty clay with pockets of
	silt	30	white gypseous clay and yellow and red silty clay
425'-530'	clay	80	Light grey clay etc. as above but
	silt	20	appearance of dark grey black silty clay which increases in % with depth.
			530' dark grey 60%
			Light grey 40%

EHV 1243

WELL LOG

MINOIL SERVICES

GEOLOGIST J. B. Westhoff

CLIENT Petromin N.L.

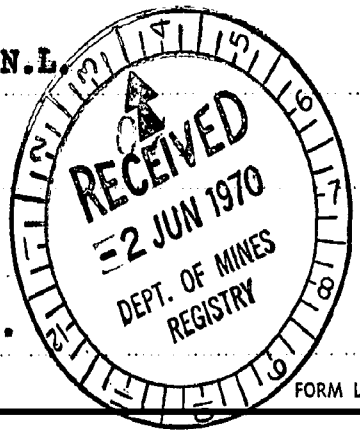
DRILLER R. McKenna

WELL No. 355-32

WELL LOG

DATE LOGGED 24/4/70

TOTAL DEPTH 530'.



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-15'	clay	5	Red-brown fine to coarse quartzic sand,
	sand	80	with occasional patches of grey silty
	gravel	15	clay. Subrounded gravel sized
			fragments of quartz, gneiss, quartzite,
			schist and feldspar.
15'-35'	sand	30	Red-brown and light grey silty sand
	gravel	70	with gravel as above.
35'-170'	clay	5	Fine to coarse quartzic sand mixed with
	silt	10	clay and silt coloured mainly red-brown
	sand	75	but with some light grey patches.
	gravel	10	Gravel as before.
170'-200'	sand	85	As before, but sand now less clayey
	silt	8	and silty and with very few grey patches.
	clay	2	
	gravel	5	
200'-225'	sand	85	Red-brown silty sand with occasional
	silt	10	patches of medium dark grey sandy and
	clay	5	silty clay.
225'-300'	clay	5	As above, but with more coarse sand
	silt	5	and gravel as before.
	sand	65	
	gravel	25	
300'-345'	clay	40	Greenish grey clay mixed with fine to
	sand	40	coarse sand of quartz and feldspar
	gravel	20	and gravel as above.
345'-435'	clay	85	As above, but with more clay now
	sand	10	stained red and yellow in places.
	gravel	5	
435'-530'	clay	85	As above, but with dark grey to black
	sand	10	clay appearing, increasing from 5% to
	gravel	5	80% of total clay content with depth
			Gypsum flakes abundant in places.

WELL LOG ENV 1243

MINOIL SERVICES

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

DRILLER W. McKenna (Thompson)

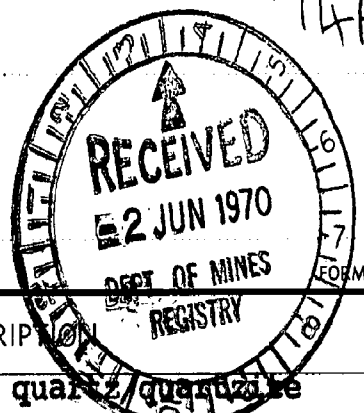
WELL No. 355-33

74A

~~WELL LOG~~

DATE LOGGED 19/4/70

TOTAL DEPTH 530'



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-35'	gravel	60	Polymictic - mainly quartz/quartzite
	sand	40	- sandy gravel ranging from fine sand through to rare coarse gravel. Some levels better sorted than others. Small %age gypseous clay.
35'-55'	clay	20	Brown clayey silt - slightly sandy
	silt	70	(very fine to fine) High white gypseous
	sand	10	clay content.
55'-60'	gravel	60	Mainly a quartz/quartzite sandy and
	sand	30	slightly silty gravel - gravel to medium
	silt	10	grained subrounded to rounded
60'-80'	clay	20	Brown clayey silt and white gypseous
	silt	60	clay as per 35'-55' interval with sand
	sand	20	from very fine to rare medium
80'-85'	sand	30	Polymictic sandy and slightly silty
	gravel	60	gravel - occasional gypseous clay
	silt	10	
85'-160'	clay	20	As per 60'-80' interval - sand is from
	silt	60	very fine through to rare coarse gravel
	sand	20	
160'-170'	clay	10	Clayey silt and gypsum as above with
	silt	40	fine to coarse gravel - occurs as a lens
	sand	10	
	gravel	40	
170'-210'	clay	10	As per 85'-160' interval. but less clayey
	silt	60	in character
	sand	30	
210'-215'	gravel	80	Polymictic sandy gravel - very fine to
	sand	20	medium gravel
215'-230'	clay	10	Light grey and brown sandy very fine to
	silt	60	coarse and slightly clayey silt. Pockets
	sand	30	of light grey silty clay
230'-245'	silt	60	Light grey and brown sandy silt - sand
	sand	40	is fine to coarse with rare very fine gravel.

WELL LOG

MINOIL SERVICES

075

GEOLOGIST B. Rebuli CLIENT Petromin N.L.

DRILLER W. McKenna (Thompson) WELL No. 355-33

~~WELL LOG~~

DATE LOGGED 19/4/70 TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
245'-260'	clay	10	As per 170/210' interval
	silt	70	
	sand	20	
260'-310'	clay	20	Light grey sandy and clayey silt -
	silt	60	very fine to rare medium quartz grains of
	sand	20	sand Pockets of red and yellow fine
			sandy silt.
310'-330'	clay	80	Light grey green silty clay - as
	silt	20	inclusions or mottling
330'-365'	clay	80	Light grey green silty clay as above
	silt	20	but with small pockets of red and yellow
			fine sandy silt
365'-530'	clay	80	Light grey clay as above with yellow
	silt	20	and red pockets but appearance of
			dark grey - black slightly silty clay
			which increases with depth. Also high
			gypseous clay content.

WELL LOG

EHV 1243

MINOIL SERVICES

GEOLOGIST J. B. Westhoff

CLIENT Petromin [illegible] 076

DRILLER R. McKenna

WELL No. 355-3[illegible]

~~WELL LOG~~

DATE LOGGED 24/4/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-45'	sand	70	Medium to coarse sand and gravel,
	gravel	30	mainly subrounded and consisting
			predominantly of quartz, with some
			feldspar, gneiss, quartzite, muscovite
			and schist.
45'-50'	clay	5	As above, but with a little light grey
	sand	65	clay
	gravel	30	
50'-60'	sand	90	Sand and gravel as before
	gravel	10	
60'-95'	clay	20	Red-brown fine to coarse quartzic
	sand	70	sand silty and clayey in part, with
	gravel	10	light grey clay patches and gravel as
			before.
95'-110'	clay	5	Predominantly subrounded gravel as
	sand	35	before, with much coarse quartzic sand
	gravel	60	and a little fine silty sand and clay
			as above.
110'-125'	clay	15	White to dark grey silty and sandy clay
	sand	70	with red brown silty sand and gravel
	gravel	15	as before.
125'-135'	sand	65	Medium to coarse sand and gravel consis-
	gravel	35	ting mainly of quartz but also with
			subrounded fragments of quartzite,
			gneiss and schist.
135'-210'	clay	20	Coarse sand and gravel as above with grey
	sand	70	silty clay and red brown silty and clayey
	gravel	10	sand
210'-220'	sand	70	Medium to coarse sand and gravel as
	gravel	30	before
220'-250'	clay	5	As above but with small amounts of grey
	sand	75	silty clay and with brown fine to medium
	gravel	20	grained silty sand.

WELL LOG

MINOIL SERVICES

GEOLOGIST J. B. Westhoff CLIENT Petromin N.L.

DRILLER R. McKenna WELL No. 355-34

"WELL" LOG

DATE LOGGED 24/4/70 TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
250'-270'	sand	80	Coarse sand and gravel as before
	gravel	20	
270'-295'	clay	5	Coarse sand and gravel as above with
	sand	85	light brown fine to medium grained
	gravel	10	silty sand and light grey silty clay
			patches.
295'-305'	clay	50	Clay now more abundant, and no gravel
	sand	50	Fine to coarse quartzic sand coloured grey.
305'-335'	clay	70	Clay now less silty and coloured light
	sand	30	grey to medium dark greenish grey with
			much purple and a little red and yellow
			staining. Sand as above
335'-400'	clay	90	Clay coloured light greenish grey to
	sand	10	dark grey, with staining as before.
			Dark grey content increases steadily
			with depth.
400'-530'	clay	95	Clay colours as above, but mainly dark
	sand	5	grey to black and carbonaceous in places.
			Traces of gypsum found below 420'.

WELL LOG

MINOIL SERVICES EHV 1243

GEOLOGIST J. B. Westhoff

CLIENT Petromin N.L.

DRILLER R. McKenna

WELL No. 335-35

WELL LOG

DATE LOGGED 24.4.70

TOTAL DEPTH 530'.

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-20'	clay	20	Light grey sandy and silty clay with predominantly subrounded coarse sand and gravel consisting of quartz, feldspar, gneiss, granite and quartzite. Traces of selenite present.
	sand	50	
	gravel	30	
20'-30'	clay	30	As above, but with more grey silty clay
	sand	50	
	gravel	20	
30'-185'	clay	40	Sandy and silty clay now coloured from light grey to dark greenish grey. Red and brown fine to coarse quartzic sand is clayey and silty in part. Gravel consists mainly of quartzite and calcareous sandstone fragments.
	sand	50	
	gravel	10	
185'-205'	clay	45	As above, but with clay and sand lighter in colour
	sand	50	
	gravel	5	
205'-260'	clay	30	As above but sand more prevalent coarser in general and coloured light brown to brown grey.
	sand	65	
	gravel	5	
260'-290'	clay	35	Clay and sand coloured greenish to brownish grey. Clay content increases with depth.
	sand	60	
	gravel	5	
290'-340'	clay	60	Clay now much less silty and coloured light grey to medium dark greenish grey with much red and purple staining, and mixed with fine to coarse sand. Predominantly quartzic.
	sand	40	
340'-480'	clay	90	As above, but with more clay now generally darker in colour. Occasional traces of gypsum
	sand	10	
480'-530'	clay	80	As above but with more quartzic sand mainly medium grained.
	sand	20	

WELL LOG

MINOIL SERVICES

075

GEOLOGIST J. B. Westhoff CLIENT Petromin N.L.

DRILLER P. Lademan (B.C. Thompson) WELL No. 355-36

~~WELL LOG~~

DATE LOGGED 24/4/70 TOTAL DEPTH

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-35'	clay	5	Medium to coarse grained red quartzic
	sand	60	sand with predominantly subrounded
	gravel	35	gravel sized fragments of granite,
			gneiss, schist, quartz and gypsum.
			Occasional light grey clay nodules
			well indurated in places
35'-50'	clay	5	As above, but now with more gypsum
	sand	60	flakes.
	gravel	15	
	gypsum	20	
50'-70'	clay	5	Red brown fine to coarse clayey sand
	clayey sand	70	with occasional grey clay nodules.
	gravel	20	Gravel now mainly quartzite, but with
	gypsum	5	gneiss, schist etc. as before.
			Gypsum flakes less abundant.
70'-110'	clay	30	As above, but with more clay, now
	sand (clayey)	65	silty and coloured darker grey.
	gravel	5	Gravel less abundant, and only traces of
			gypsum found.

WELL LOG

MINOIL SERVICES

EHV/1243

030

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

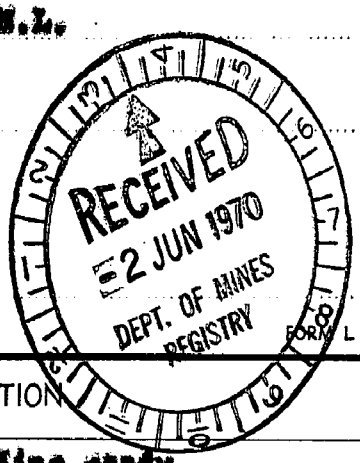
DRILLER P. Lademan (R.C.Thompson)

WELL No. 355-36

~~WELL LOG~~

DATE LOGGED 5/5/70

TOTAL DEPTH 530'



INTERVAL	LITHOLOGY	%	DESCRIPTION
110'-220'	clay	70	Brown silty and very fine sandy
	sand	20	stiff clay with some pockets fine sand.
	silt	10	
220'-235'	sand	50	Light brown silty and veryclayey
	clay	40	fine to medium grained subrounded
	silt	10	quartz sand
235'-285'	clay	60	Light brown and grey mottled silty
	sand	30	and sandy stiff clay - sand is very fine
	silt	10	to medium grained quartz.
285'-340'	clay	90	Light grey slightly silty and very
	silt & sand	10	fine sandy stiff clay - rare redbrown
			ironstained pockets
340'-530'	clay	90	Dark grey to black slightly silty
	silt & sand	10	and very fine sandy stiff carbonaceous
			clay - rare gypsum pockets.

WELL LOG EHV 1243

MINOIL SERVICES

GEOLOGIST T. M. Steel CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson) WELL No. 355-37

~~WELL LOG~~

DATE LOGGED 6/5/70 TOTAL DEPTH 530

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-35'	sand	40	Light brown silty and clayey fine
	gravel	30	grained sand grading to fine)rare
	clay	20	medium) grained gravel-mainly angular
	silt	10	to subangular quartz
35'-70'	clay	50	Brown and light grey mottled silty
	sand	40	and sandy stiff clay - sand is very
	silt	10	fine to medium grained quartz
70'-250'	clay	60	Brown and grey mottled silty and fine
	sand	30	sandy stiff clay - thin lenses and
	silt	10	pockets clayey fine to medium sand
250'-355'	clay	80	Light grey silty and very fine
	silt	10	sandy stiff clay
	sand	10	
355'-375'	clay	80	Light redbrown silty and very fine
	silt	10	sandy stiff clay withthin lenses of
	sand	10	light grey stiff clay
375'-530'	clay	90	Dark grey to black silty and very
	sand & silt	10	fine sandy stiff carbonaceous clay-
			thin pockets crystalline gypsum

EHV 1243

WELL LOG

MINOIL SERVICES

GEOLOGIST T.M. Steel

CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-38

~~WELL LOG~~

DATE LOGGED 6/5/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-20'	sand	50	Light brown silty and clayey fine sand
	gravel	20	grading to medium gravel - mainly angular
	clay	20	to subrounded quartz.
	silt	10	
20'-50'	sand	40	Brown slightly silty and clayey fine sand
	gravel	40	grading to coarse gravel mainly
	clay	10	subangular to subrounded
	silt	10	
50'-170'	clay	70	Brown and grey coarsely mottled and
	sand	20	banded silty and sandy stiff clay -
	silt	10	sand is mainly fine to medium grained
			quartz
170'-180'	sand	40	Light brown silty and very clayey fine
	clay	40	to coarse grained mainly subrounded
	silt	20	quartz sand
180'-320'	clay	70	Brown and grey mottled silty and
	sand	20	sandy clay-sand is fine to medium
	silt	10	grained quartz-common pockets clayey
			sand
320'-340'	clay	90	Light grey slightly silty and very fine
	sand & silt	10	sandy stiff clay
340'-390'			Light and dark grey mottled very stiff
			clay with pockets of black carbonaceous
			clay and pockets redbrown ironstained
			sandy clay
390'-530'			Dark grey to black silty and very
			fine sandy stiff carbonaceous clay

EMV 1243

WELL LOG

MINOIL SERVICES

035

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

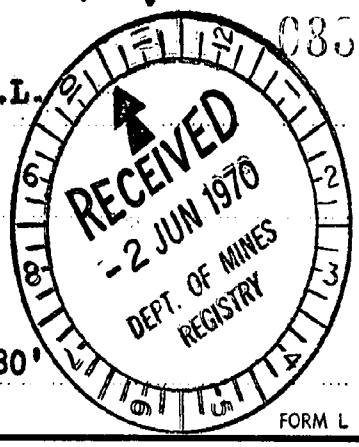
DRILLER P. Lademan (R.C.Thompson)

WELL No. 355-39

WELL LOG

DATE LOGGED 8/5/70

TOTAL DEPTH 530'



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-60'	sand	40	Buff to light brown silty and clayey
	gravel	30	fine sand grading to medium gravel -
	silt	15	mainly subangular quartz
	clay	15	
60'-100'	clay	60	Light brown and grey mottled silty and
	sand	20	very fine to medium grained sandy stiff
	silt	20	clay
100'-180'	clay	70	Brown silty and very fine sandy stiff
	silt	20	clay slightly micaceous-rare thin
	sand	10	lenses of light grey clay
180'-220'	clay	60	Brown and light grey mottled very fine
	sand	30	to medium sandy stiff clay - some silt
	silt	10	
220'-275'	clay	60	Offwhite and very light grey very silty
	silt	30	clay - rare fine to medium grained quartz
	sand	10	sand
275'-320'	clay	80	Light grey slightly silty and very fine
	sand	10	sandy stiff clay
	silt	10	
320'-530'	clay	90	Dark grey and black slightly silty and
	silt & sand	10	very fine sandy stiff carbonaceous clay

WELL LOG

ENV 1243

MINOIL SERVICES

GEOLOGIST T.M. Steel

CLIENT Petromin N.L.

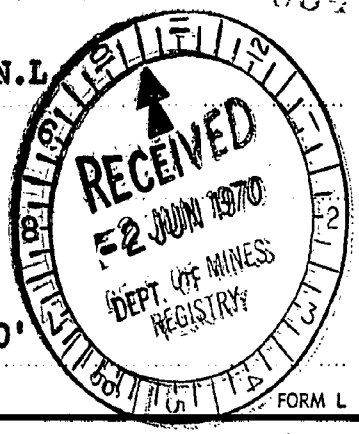
DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-40

~~WELL LOG~~

DATE LOGGED 9/5/70

TOTAL DEPTH 530'



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-25'	sand	40	Light brown silty and clayey fine
	gravel	20	grained sand grading to medium gravel
	clay	20	mainly subangular to subrounded quartz
	silt	20	and quartzite.
25'-50'	sand	40	Light brown clayey fine sand grading
	gravel	30	to coarse gravel - mainly subangular to
	clay	30	rounded quartz
50'-80'	clay	60	Light brown and grey mottled silty and
	sand	30	fine sandy clay
	silt	10	
80'-110'	clay	60	Mainly light grey and buff mottled silty
	sand	20	and very fine to medium sandy clay
	silt	20	
110'-140'	clay	60	Brown silty and very fine to medium
	sand	30	sandy stiff clay - thin lenses of
	silt	10	stiff grey clay - slightly micaceous
140'-150'	sand	50	Clayey fine grained sand grading to
	gravel	30	coarse gravel - mainly wellrounded
	clay	20	quartz and quartzite
150'-160'	clay	60	Brown silty and very fine sandy
	sand	30	moderately stiff clay - some light grey
	silt	10	mottling
160'-185'	sand	70	Light grey clayey very fine to medium
	clay	30	grained subrounded quartz sand -
			becoming slightly more clayey from 180'.
185'-215'	clay	80	Light grey slightly silty and very fine
	sand	10	sandy stiff clay - common yellow brown
	silt	10	mottling.
215'-225'	clay	80	Light grey slightly silty and very fine
	sand	10	sandy stiff clay
	silt	10	
225'-230'	sand	80	Light grey silty and clayey very fine to
	silt	10	medium grained subrounded quartz sand
	clay	10	

WELL LOG
MINOIL SERVICES

085

GEOLOGIST T. M. Steel CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson) WELL No. 355-40

~~WELL LOG~~

DATE LOGGED 9/5/70 TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
230'-245'	clay	90	Light grey very stiff clay - rare
	silt & sand	10	silt and very fine quartz sand
245'-290'	clay	90	As above, with some redbrown mottling and
	silt & sand	10	ferruginous cementing
290'-320'	clay	95	Grey very stiff clay with some yellow
	silt	5	and redbrown mottling-very rare silt
320'-370'	clay	90	Dark grey to black slightly silty and very
	silt & sand	10	fine sandy stiff carbonaceous clay
370'-385'	sand	50	Light grey slightly clayey silty very fine
	silt	40	grained quartz sand - common dark minerals
	clay	10	
385'-395'	sand	50	Pale yellow very fine grained quartz sand
	clay	50	interbedded with light grey fine sandy
			clay
395'-415'	clay	80	Dark grey to black carbonaceous clay with
	sand	20	some pockets fine to medium grained sand
415'-455'	sand	50	Light and dark grey mottled stiff clay in-
	clay	50	terbedded with fine to medium grained sand
455'-530'	clay	90	Light and dark grey and black mottled
	sand	10	stiff clay - carbonaceous in part-
			some fine grained quartz sand

ENV 1243

WELL LOG

MINOIL SERVICES

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

DRILLER P. Lademan (H.C Thompson)

WELL No. 355-41

~~WELL LOG~~

DATE LOGGED 9/5/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-35'	sand	40	Light brown slightly silty and clayey
	gravel	40	fine sand grading to medium grained
	silt	10	gravel - mainly subangular to rounded
	clay	10	quartz and rarer quartzite
35'-50'	clay	60	Brown and grey mottled fine to medium
	sand	40	sandy clay - thin pockets light grey
			stiff clay
50'-65'	sand	50	Brown slightly silty very clayey fine to
	clay	40	medium grained subrounded quartz sand
	silt	10	
65'-80'	sand	40	Brown clayey fine grained sand grading to
	gravel	20	fine grained gravel - mainly subangular
	clay	40	to subrounded
80'-215'	clay	60	Brown and grey mottled silty and
	sand	20	sandy (fine to medium grained) moderately
	silt	20	stiff clay - slightly micaceous
215'-275'	clay	80	Light grey slightly silty very fine sandy
	sand	15	stiff clay - rare redbrown mottling
	silt	5	
275'-350'	clay	80	Light grey and redbrown mottled slightly
	sand	10	silty and fine sandy stiff clay
	silt	10	
350'-530'	clay	90	Light grey very stiff clay - rare silt &
	sand & silt	10	fine grained quartz sand

WELL LOG EHV 1243

MINOIL SERVICES

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

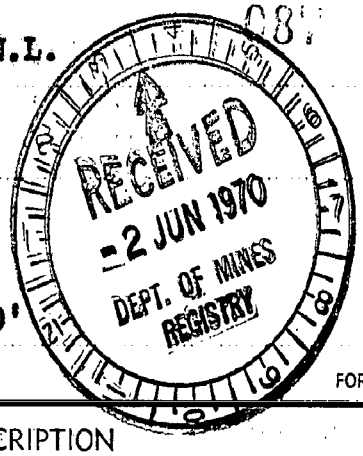
DRILLER P. Lademan (R.C.Thompson)

WELL No. 355-43

WELL LOG

DATE LOGGED 12/5/70

TOTAL DEPTH 530'



FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-40'	sand	30	Light brown clayey fine to coarse
	gravel	40	grained angular to subrounded quartz sand
	clay	30	and gravel
40'-75'	clay	60	Redbrown silty and sandy moderately stiff
	sand	20	clay - sand is fine to medium grained sub-
	silt	20	rounded quartz - becoming brown with
			depth and with rare grey mottling.
75'-95'	sand	40	Fawn clayey fine to coarse subrounded
	gravel	40	quartz sand and fine to medium grained
	clay	20	gravel
95'-185'	clay	60	Light brown and grey mottled silty and
	silt	20	sandy clay - sand is fine to medium
	sand	20	grained - thin lenses stiff grey clay
185'-200'	clay	70	Light grey slightly silty sandy stiff clay
	sand	20	- sand is fine to medium grained quartz.
	silt	10	
200'-230'	clay	80	Mainly redbrown slightly silty and fine
	sand	10	sandy stiff clay with some grey mottling
	silt	10	
230'-260'	clay	90	Grey and deep redbrown mottled and
	sand/silt	10	banded slightly silty and fine sandy
			stiff clay.
260'-530'	clay	90	Slightly silty and very fine sandy stiff
	sand/silt	10	clay - color varies from redbrown and
			grey mottled to 300 ft thin grey to 450 ft
			thin dark grey to black (carbonaceous)
			to 530 ft.

20 August 1970

SPECIAL MINING LEASE NO 355

PROGRESS REPORT FOR THREE MONTHS -

PERIOD ENDING 20 AUGUST, 1970

SUMMARY:

Activity on SML 355 during the period has included geological reconnaissance mapping, surveying and levelling of bore holes and the drilling of twelve (12) non-coring bore holes.

Anomalous radio-activity of greater than three (3) times background was detected in four (4) of the holes drilled.

INTRODUCTION:

Special Mining Lease No 355 covers an area of approximately 440 square miles on the north-western edge of Lake Frome in South Australia.

Operations on the Lease are primarily directed towards evaluating the potential of the area for deposits of radio-active ores and the location of such deposits.

EXPLORATION:

Exploratory drilling for sedimentary uranium and other radio-active materials was undertaken during the period under review. A total of 6,357 feet of drilling and 6,342 feet of gamma-ray logging was carried out.

Copies of the lithological and gamma-ray logs of the twelve (12) holes drilled in the period accompany this Report. The lithological logs are of cuttings and/or core recovered and were compiled by a contract well-site geologist. The gamma-ray logs were obtained using a slim hole probe run inside the drill rods.

A plan showing localities of holes drilled on SML 355 to date is attached to this Report.

DRILLING RESULTS:

Four (4) of the rotary holes showing significant radio-activity are located near the eastern boundary of SML 412 and form a part of the uranium deposit located on that Lease.

.../2

Hole	Depths	Radio-activity in API units
355-61	460'	1000
355-62	395',428',480'	900, 1100, 1000
355-63	396',432',495'	600, 600, 700
355-64	485'	900

Radioactivity in the remainder of the holes drilled during the period was at a comparatively low level.

ASSAY RESULTS:

No core holes were drilled in the period so no assay data is available from holes drilled in the period under review. As reported in the progress report, assay results from core in hole 355-1A gave values of 2.4 lbs U_3O_8/short ton between 418'-419' and 6.2 lbs U_3O_8/short ton between 444'-444'6" and 3.8 lbs U_3O_8/short ton between 444'6"-445'. The interval 448'6"-449'6" assayed 1.8 lbs U_3O_8/short ton. Remaining assays from 355.1A were below economic significance.

The uranium in hole 355-1A is located immediately above the two lower zones of gamma-ray activity. There was no uranium of consequence in the higher radio-active zones as determined by gamma-ray logging and there was no uranium detected in the zone above the top gamma-ray anomaly.

SUB-SURFACE GEOLOGY:

The sediments are similar to those previously reported. The rotary drill cuttings are mixed in the drilling fluid but represent an ill-sorted section of gravels, sands, clays and silts from surface to about 400'. Red brown is still the dominant colour although with a greater percentage of greys and greenish greys. These sediments are considered to be Tertiary and derived from the ranges.

The grey, dark grey clays and silts with gypsum and some sand lenses are probable Cretaceous.

CONCLUSION:

Uranium was identified throughout the cored section in hole 355-1A and three (3) zones were shown to contain values of potentially economic significance.

Significant radio-activity has now been recorded in thirteen (13) holes on the lease. The north-south line of holes has not revealed any major zones of radio-activity comparable with the 4 mile creek area.

R.W. HAYNES
EXPLORATION MANAGER

GAMMA-RAY LOGS OF THE FOLLOWING BORE HOLES ACCOMPANY THIS REPORT:

Special Mining Lease No 355-44
355-45
355-46
355-47
355-48
355-49
355-50
355-51
355-61
355-62
355-63
355-64

} Localities not shown

near Mulga Ck Dam & well

WELL LOG

MINOIL SERVICES

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

091

DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-44

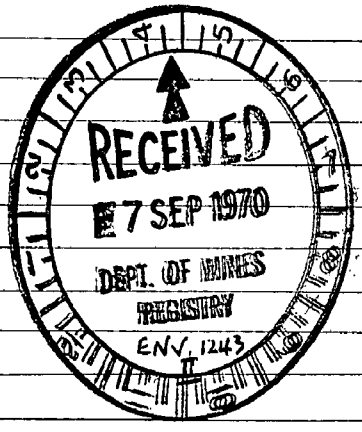
~~WELL LOG~~

DATE LOGGED 14/5/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-20'	sand	40	Light brown silty and clayey fine to
	clay	30	very coarse grained subangular to
	gravel	10	rounded quartz sand and fine gravel
	silt	20	
20'-65'	sand	40	Light brown clayey fine to very coarse
	gravel	30	grained angular to subrounded quartz
	clay	30	sand and gravel
65'-95'	sand	40	Brown silty and very clayey fine to
	clay	40	medium (rare coarse) grained subrounded
	silt	20	quartz sand
95'-250'	clay	50	Brown and grey mottled silty and
	silt	30	fine sandy clay - slightly micaceous
	sand	20	- rare pockets clayey fine sand
250'-315'	clay	70	Redbrown and grey mottled silty and
	silt	20	very fine sandy stiff clay - slightly
	sand	10	micaceous
315'-400'	clay	80	Mainly light grey slightly silty and very
	sand	10	fine sandy stiff clay - some redbrown
	silt	10	and yellow mottling - rare thin lenses
			clayey fine sand
400'-530'	clay	90	Dark grey slightly silty and fine
	silt & sand	10	sandy stiff clay - bands of black
			carbonaceous clay and pockets of
			crystalline gypsum and offwhite
			gypseous clay.



WELL LOG

MINOIL SERVICES

GEOLOGIST T. M. Steel CLIENT Petromin N.L. 692

DRILLER P. Lademan (H.C.Thompson) WELL No. 355-45

~~WELL LOG~~

DATE LOGGED 14/5/70 TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-20'	sand	50	Light brown slightly silty clayey fine
	gravel	10	to coarse grained angular to subrounded
	clay	30	quartz sand and fine gravel
	silt	10	
20'-65'	gravel	30	Brown slightly silty clayey fine to
	sand	40	very coarse grained angular to sub-
	clay	20	rounded quartz sand and gravel
	silt	10	
65'-90'	clay	60	Brown and grey mottled slightly silty
	sand	30	sandy clay - sand is fine to coarse
	silt	10	mainly subrounded quartz.
90'-100'	sand	40	Brown clayey fine to very coarse grained
	gravel	30	subangular to subrounded quartz sand
	clay	30	and gravel
100'-110'	clay	50	Yellow brown and grey mottled silty and
	silt	30	fine sandy moderately stiff clay -
	sand	20	slightly micaceous
110'-120'	sand	70	Pale brown slightly silty clayey
	clay	20	fine to coarse grained angular to
	silt	10	subrounded quartz sand
120'-145'	clay	50	Yellow brown silty and fine sandy
	silt	30	clay - some grey mottling - slightly
	sand	20	micaceous
145'-175'	sand	80	Yellow brown clayey fine to very
	clay	15	coarse grained angular to subrounded
	gravel	5	quartz sand - rare fine gravel
175'-215'	clay	70	Pale brown silty and very fine sandy
	silt	20	clay - slightly micaceous
	sand	10	
215'-230'	gravel	30	Brown clayey fine to coarse grained
	sand	50	subangular to rounded quartz sand
	clay	20	and gravel
230'-335'	clay	70	Redbrown and grey mottled silty and fine
	sand	10	sandy stiff clay - becoming dominantly
	silt	20	light grey below 250 ft.

WELL LOG

MINOIL SERVICES

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-45 093

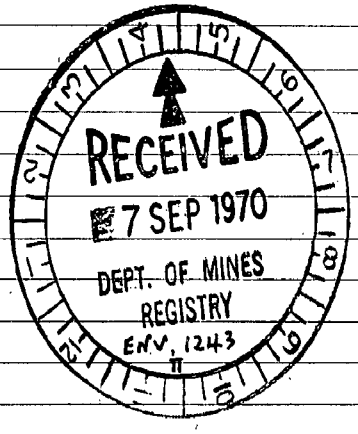
~~WELL LOG~~

DATE LOGGED 14/5/70

TOTAL DEPTH

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
335'-410'	clay	80	Grey slightly silty and fine sandy
	sand	10	stiff clay - some redbrown and yellow
	silt	10	mottling.
410'-530'	clay	90	Dark grey to black slightly silty and
	sand & silt	10	fine sandy stiff carbonaceous clay -
			pockets crystalline gypsum.



WELL LOG

MINOIL SERVICES

GEOLOGIST T. M. Steel CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson) WELL No. 355-46 034

~~WELL LOG~~

DATE LOGGED 16/5/70 TOTAL DEPTH

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-20'	sand	30	Fawn silty and clayey fine to coarse
	gravel	20	grained sand and fine to medium gravel -
	clay	30	mainly subangular to subrounded quartz
	silt	20	
20'-45'	gravel	50	Light brown clayey fine to very coarse
	sand	30	angular to subrounded quartz and rarer
	clay	20	quartzite sand and gravel.
45'-80'	clay	50	Redbrown silty and fine to medium
	sand	30	sandy clay - sand mainly subrounded quartz
	silt	20	
80'-110'	clay	70	Redbrown and grey silty and slightly
	silt	20	sandy stiff clay - sand is fine to
	sand	10	medium grained quartz.
110'-125'	clay	60	Yellow brown and grey mottled slightly
	silt	30	sandy silty stiff clay - slightly
	sand	10	micaceous
125'-135'	sand	50	Light brown silty and clayey fine to
	silt	20	medium (rare coarse) grained subrounded
	clay	30	quartz sand
135'-150'	clay	60	Redbrown silty and fine sandy moderately
	sand	20	stiff clay
	silt	20	
150'-170'	sand	50	Yellow brown silty and clayey fine to
	clay	30	coarse grained subangular to subrounded q
	silt	10	rtz sand and fine to medium gravel
	gravel	10	
170'-215'	clay	50	Yellow brown silty and fine sandy
	silt	30	moderately stiff clay - slightly
	sand	20	micaceous
215'-290'	clay	70	Mainly light grey with redbrown and yellow
	sand	10	brown mottled silty and fine sandy
	silt	20	stiff clay
290'-335'	clay	80	Grey slightly silty and fine sandy stiff
	sand	10	clay - some deep redbrown mottling
	silt	10	

WELL LOG

MINOIL SERVICES

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-46

035

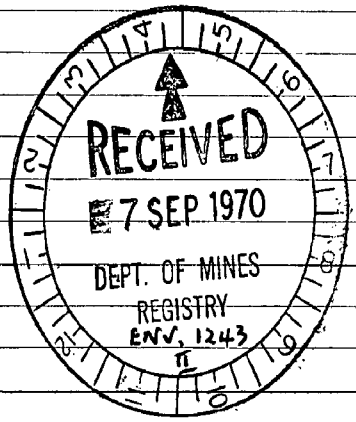
WELL LOG

DATE LOGGED 16/5/70

TOTAL DEPTH

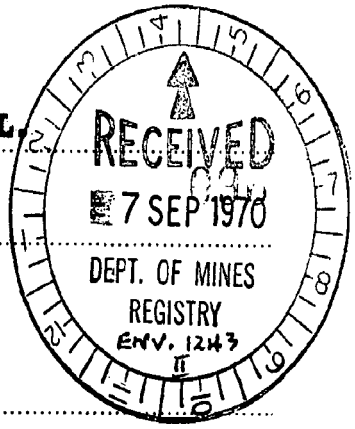
FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
335'-530'	clay	90	Dark grey to black slightly silty and fine sandy stiff carbonaceous clay with rare pockets crystalline gypsum - small pocket very fine grained sand between 520' and 525'
	sand & silt	10	



WELL LOG

MINOIL SERVICES



GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-47

~~WELL LOG~~

DATE LOGGED 16/5/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'20	sand	40	Fawn silty and clayey very fine to
	clay	30	medium (rare coarse) grained subrounded
	silt	30	quartz sand
20'-35'	gravel	60	Light brown slightly clayey fine to
	sand	30	very coarse grained angular to
	clay	10	subrounded quartz and quartzite
			sand and gravel
35'-80'	clay	60	Redbrown very sandy clay - sand is
	sand	40	fine to coarse grained subrounded quartz
80'-95'	gravel	40	Light brown clayey fine to coarse
	sand	30	grained angular to subrounded quartz and
	clay	30	rarer quartzite - thin lenses light
			grey clay
95'-150'	clay	60	Yellow brown very fine sandy and
	silt	30	silty moderately stiff clay - slightly
	sand	10	micaceous
150'-170'	sand	60	Yellow brown clayey fine to coarse
	gravel	20	grained subrounded quartz sand and
	clay	20	coarse well rounded gravel to 1"
			diameter.
170'-200'	clay	60	Yellowbrown fine to coarse sandy moderate
	sand	40	stiff clay - sand is subrounded quartz.
200'-290'	clay	80	Redbrown and grey mottled sandy stiff
	sand	20	clay with lenses of clayey sand -
			sand is mainly fine to medium grained
			subrounded quartz.
290'-320'	clay	80	Mainly light grey and redbrown mottled
	sand	10	slightly silty and fine sandy stiff clay
	silt	10	
320'-360'	clay	90	Deep redbrown and dark grey mottled
	sand & silt	10	very stiff clay - rare sand and silt
360'-	clay	90	Dark grey to black slightly silty and
	sand & silt	10	fine sandy stiff carbonaceous clay -
			rare pockets crystalline gypsum.

WELL LOG

MINOIL SERVICES

097

GEOLOGIST T. M. Steel

CLIENT Petromin N.L.

DRILLER P. Lademan (H.C.Thompson)

WELL No. 355-49

WELL LOG

DATE LOGGED 19/5/70

TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-20'	sand	30	Fawn silty and clayey fine to coarse
	gravel	30	grained subangular to rounded quartz
	silt	20	sand and gravel
	clay	20	
20'-50'	clay	50	Redbrown silty and fine to coarse sandy
	sand	30	clay - sand is mainly subangular to
	silt	20	subrounded quartz
50'-55'	gravel	70	Brown slightly clayey fine to very
	sand	20	coarse subrounded to rounded quartz
	clay	10	and quartzite gravel and rarer sand
55'-90'	clay	60	Pale yellow brown silty and fine to
	sand	20	medium sandy stiff clay - slightly
	silt	20	micaceous
90'-130'	sand	30	Pale yellow brown clayey and very
	gravel	20	silty fine to coarse grained mainly
	silt	30	subangular to rounded quartz and
	clay	20	quartzite sand and gravel
130'-155'	sand	30	Similar to above, but with less gravel
	gravel	10	and more clay
	silt	20	
	clay	40	
155'-185'	clay	60	Yellow brown and grey mottled slightly
	silt	30	sandy and very silty stiff clay - sand
	sand	10	is very fine to fine grained - slightly micaceous
185'-200'	sand	70	Yellow brown clayey fine to very
	clay	20,	coarse grained subrounded quartz sand -
	gravel	10	some fine grained gravel.
200'-250'	clay	60	Mainly redbrown and grey mottled silty
	sand	20	and very fine to fine sandy stiff clay -
	silt	20	slightly micaceous
250'-260'	sand	60	Yellowbrown very clayey fine to medium
	clay	40	(rare coarse) grained subrounded quartz sand.

WELL LOG

MINOIL SERVICES

GEOLOGIST T. M. Steel CLIENT Petromin N.L. 636

DRILLER P. Lademan (H.C.Thompson) WELL No. 355-49

WELL LOG

DATE LOGGED 19/5/70 TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
260'-270'	sand	50	Similar to above but more clayey and
	clay	50	sand slightly more coarse grained
270'-310'	clay	60	Redbrown and grey mottled silty and
	silt	20	fine to medium sandy clay - slightly
	sand	20	micaceous
310'-340'	clay	80	Mainly light grey slightly silty and
	silt	10	very fine sandy stiff clay - rare
	sand	10	redbrown and yellow brown mottling
340'-380'	clay	80	Dark grey slightly silty and very fine
	silt	10	sandy stiff clay - rare pockets very
	sand	10	fine grained quartz sand - rare redbrown and yellow mottling
380'-530'	clay	90	Dark grey to black stiff carbonaceous
	silt & sand	10	clay with pockets gypsum - rare silt and fine to medium grained quartz sand

WELL LOG

MINOIL SERVICES

GEOLOGIST B. Rebuli

CLIENT Petromin N.L.

DRILLER P. Lademan (Thompson)

WELL No. 355-50

~~WELL LOG~~

DATE LOGGED 24/5/70

TOTAL DEPTH

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-80'	silt	20	Light brown silty sand and gravel -
	sand	60	from fine sand to very fine to rare
	gravel	20	fine gravel of quartz/quartzite mainly with feldspar and muscovite.
80'-135'	silt	10	Light brown silty and fine to coarse
	sand	40	sandy gravel - gravel is very fine
	gravel	50	to coarse - subrounded
135'-150'	sand	90	Fine to coarse quartz/quartzite sand and
	gravel	10	very fine gravel
150'-245'	silt	50	Brown fine to coarse sandy (quartz, quart-
	sand	40	zite, muscovite) and very fine gravelly
	gravel	10	silt - consolidated. Becomes finer grained with depth.
245'-340'	sand	70	Fine to coarse sand and very fine gravel -
	gravel	30	quartz/quartzite; well rounded from 245'-260', then subrounded becomes siltie. with depth.
340'-380'	clay	60	Light grey very silty stiff clay with
	silt	40	red clay mottling, and 5% gypseous clay - grades to
380'-400'	clay	60	Grey - dark grey very silty clay with
	silt	40	yellow and red fine sandy silt and 10-20% white gypseous clay ; - grades to
400'-530'	clay	60	Dark grey - black carbonaceous and grey
	silt	40	very silty stiff clay with yellow and red fine sandy silt pockets and 5-10% white gypseous clay.

WELL LOG

MINOIL SERVICES

GEOLOGIST B. Rebuli CLIENT Petromin N.L.

DRILLER T. Bellinger (Thompson) WELL No. 355-61

WELL LOG

DATE LOGGED 22/5/70 TOTAL DEPTH

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-20'	sand	40	Fine to coarse quartz/quartzite sand
	gravel	60	and very fine to rare medium gravel
20'-95'	sand	30	Brown fine to medium sandy silt with small
	silt	70	pockets of black material (Fe oxide)
			and white gypseous clay
95'-110'	sand	80	Fine to coarse quartz/quartzite sand and
	gravel	20	very fine to fine gravel
110'-125'	sand	70	Brown fine to medium sandy silt - rare
	silt	30	coarse sand
125'-140'	sand	60	As per 95-110' interval - subrounded to
	gravel	40	rounded
140'-170'	sand	40	Fine to medium brown sandy silt - some
	silt	60	white gypseous clay
170'-185'	sand	20	Very fine to medium gravel - quartz/
	gravel	80	quartzite - and medium to coarse sand.
185'-200'	sand	20	Brown and grey fine to rare medium
	silt	60	sandy silt
200'-325'	sand	70	Fine to coarse sand and very fine to fine
	gravel	30	gravel. Small variations
325'-395'	sand	90	As above but only very fine gravel -
	gravel	10	light brown
395'-430'	clay	40	Light gry and dark grey very silty clays
	silt	50	with dark grey - black clay (carbonaceous)
	sand	10	content increasing with depth. Also red
			and yellow fine sandy and silty clays.
			5% gypseous clay
430'-530'	clay	70	Black carbonaceous clay content increases
	silt	30	to 70% at 530' - otherwise as above
			(also 5-10% gypseous clay and crystals)

WELL LOG

MINOIL SERVICES

GEOLOGIST B. Rebuli CLIENT Petromin N.L. 101

DRILLER R. Thompson WELL No. 355-62

~~WELL LOG~~

DATE LOGGED 24/5/70 TOTAL DEPTH 530'

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-50'	sand	30	Fine sand to coarse gravel of quartz/
	gravel	70	quartzite mainly - some mica, feldspar
			- subrounded. Some intervals show
			reasonable sorting
50'-95'	silt	60	Brown fine to coarse sandy silt -
	sand	40	quartz/quartzite. Rare very fine
			gravel. Occasional small pockets
			of black material.
95'-230'	silt	10	Light grey - brown silty quartz/quartzite
	sand	70	sand and gravel - fine sand to very fine
	gravel	20	gravel . Sorting is poor.
230'-250'	silt	70	Light brown fine to medium sandy silt -
	sand	30	quartz/quartzite, muscovite. Grades to
			fine sandy in places
250'-370'	silt	30	Light grey-brown silty fine to coarse
	sand	70	sand and very fine gravel - well sorted in
	gravel	10	places
370'-410'	silt	30	Mainly light grey, some brown sandy silt ar
	sand	40	some very fine to fine gravel - quartz/
	gravel	30	quartzite
410'-485'	cla y	40	Light grey, dark grey and green silty
	silt	40	clays with pockets of yellow and red
	sand	20	silt. Also 10% white gypseous silt.
			Small sandy (fine to coarse) lenses.
485'-530'	clay	70	Dark grey - black carbonaceous (60%) and
	silt	30	grey (30%) silty clays with pockets
			of red and yellow silt and white gypseous
			clay

WELLLOG

MINOIL SERVICES

GEOLOGIST B. Rebuli CLIENT Petromin N.L.

DRILLER R. Thompson WELL No. 355-63

~~WELL-LOG~~

DATE LOGGED 23/5/70 TOTAL DEPTH

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-30'	sand	40	Light brown slightly silty fine to
	gravel	60	coarse sand and very fine to
			coarse gravel - rounded -
			quartz/quartzite.
30'-90'	silt	70	Brown fine sandy silt - occasional
	sand	30	black mineral concentrations (½"-1")
90'-110'	sand	40	As per 0'-30' interval
	gravel	60	
110'-185'	silt	80	Red brown slightly clayey and fine
	clay	10	sandy silt with occasional lenses of
	sand	10	fine to medium sand
185'-200'	sand	70	Red-brown silty sand - fine to coarse
	silt	30	grained - quartz/quartzite
200'-230'	sand	40	Fine to coarse quartz/quartzite sand
	gravel	60	and very fine to coarse gravel. Small
			% of white gypseous clay
230'-350'	sand	80	Fine to rare coarse quartz/quartzite
	silt	20	sand, and silt. In places silt %is
			up to 40 and consolidated
350'-390'	sand	60	Light grey clayey silt and pockets of
	silt	30	yellow fine sandy silt, and fine to
	clay	10	coarse unconsolidated sand of quartz/
			quartzite - also high mica content
			and gypseous.
390'-420'	sand	60	As above but with 10% black carbonaceous
	silt	20	clay
	clay	20	
420'-450'	clay	20	Red-brown silty clay and black
	silt	30	carbonaceous clay (20%) - with white
			gypseous clay and crystals and small
			amount of yellow silt. Grades to
			higher black clay content.
450'-530'	clay	70	Black carbonaceous clay (70%) and grey
	silt	30	- dark grey silty clay - with 5-10%
			white gypseous clay and some yellow
			and red silt.

WELL LOG

MINOIL SERVICES

GEOLOGIST B. Rebuli CLIENT Petromin N.L.

DRILLER R. McKenna WELL No. 355-64

WELL LOG

DATE LOGGED 23/5/70 TOTAL DEPTH

FORM L

INTERVAL	LITHOLOGY	%	DESCRIPTION
0'-15'	sand	70	Fine to coarse quartz/quartzite sand
	gravel	30	and very fine gravel
15'-25'	sand	30	Medium to coarse sand and very fine to
	gravel	70	very coarse gravel - angular to subrounded
25'-50'	sand	70	As per 0-15 interval with occasional
	gravel	30	medium to coarse gravel
50'-80'	gravel	100	Very fine to medium quartz/quartzite
			(some feldspar) gravel - angular
80'-115'	clay	60	Light grey and brown silty clay and
	sand/silt	40	lenses of fine to coarse sand and
			very fine gravel
115'-160'	silt	70	Fine to rare medium sandy red - brown
	sand	30	silt - pockets of black material and
			gypseous sections.
160'-330'	silt	40	Red-brown slightly clayey silt and
	sand	60	fine to coarse quartz sand with
			occasional very fine grained gravel,
			lenses
330'-350'	silt	40	Light grey and some red silty clay with
	clay	20	fineto medium sand - occasional coarse
	sand	40	sand
350'-395'	sand	80	Very fine to coarse quartz/quartzite sand
	silt	20	and silt
395'-530'	clay	60	Red and grey silty clay with some white
	silt	30	gypseous clay and small lenses of
	sand	10	coarse sand to very fine gravel. Clay
			content gets greater with depth and
			dark grey - black fraction increases
			to 60%.

PETROMIN N.L. 1243(II)-1

Gamma Ray Log

LOCATION: SOUTH AUSTRALIA — YADGLIN DAM — 355-44 — N.T.S.

AREA YADGLIN DAM.

WELL 355-44

STATE SOUTH AUSTRALIA.

ELEVATION
D.F.
K.B.
G.L.

	Run No. 1	Run No. 2
Date	12 MAY 70	
First Reading	528	
Last Reading	0	
Footage Logged	528	
Depth – Driller	530	
Depth – Logger	530	
Casing – Driller		
Casing – Logger		
Casing – Size		
Bit Size	4 3/4"	
Logged by	G. DAVIES.	
Witnessed by	P. LADEMAN.	

MUD	Run No. 1	Run No. 2
Nature		
Density		
Viscosity	@ °F	@ °F
Resistivity	@ °F	@ °F
Res. @ BHT	@ °F	@ °F
pH		
Circ. Temp.		
B.H. Temp.		
Tool Type	G.10.C.	
Tool Diam.	1"	
Cable Speed	15 PER MIN.	
Time Constant	5 SECS.	

REMARKS: DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THROUGH DRILL STEM.

PETROMIN N. L. 1243(II)-2

Gamma Ray Log

AREA YADGLIN DAM

WELL 355 45

STATE SOUTH AUSTRALIA

LOCATION:

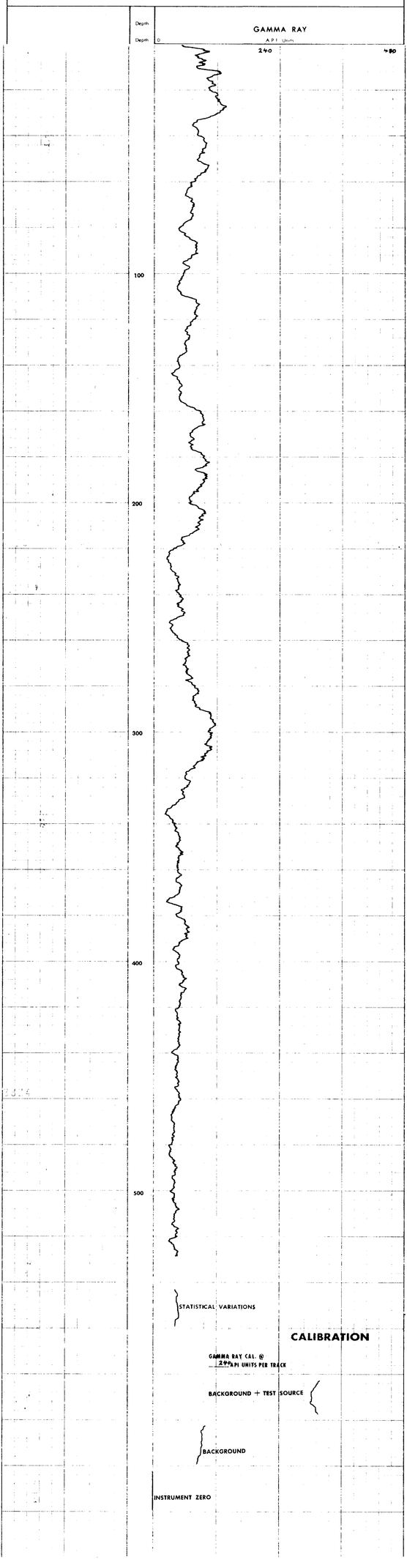
ELEVATION:
D.F.
K.B.
G.L.

SOUTH AUSTRALIA | YADGLIN DAM | 355 45 | PETROMIN N.L.

	Run No. 1	Run No. 2
Date	14 MAY 70	
First Reading	528'	
Last Reading	9'	
Footage Logged	528'	
Depth – Driller	530'	
Depth – Logger	530'	
Casing – Driller		
Casing – Logger		
Casing – Size		
Bit Size	4 3/4"	
Logged by	G. DAVIES.	
Witnessed by	P. LADERMAN.	

MUD	Run No. 1	Run No. 2
Nature		
Density		
Viscosity	@ °F	@ °F
Resistivity	@ °F	@ °F
Res. @ BHT	@ °F	@ °F
pH		
Circ. Temp.		
B.H. Temp.		
Tool Type	G. 10. C.	
Tool Diam.	1"	
Cable Speed	15' PER MIN.	
Time Constant	5 SECS.	

REMARKS DEPTH DATUM IS GROUND LEVEL
LOG RECORDED THROUGH DRILL STEM.



PETROMIN N. L. 1243(A)-3

Gamma Ray Log

AREA YADGLIN DAM

WELL 355 46

STATE SOUTH AUSTRALIA

LOCATION

ELEVATION

DF

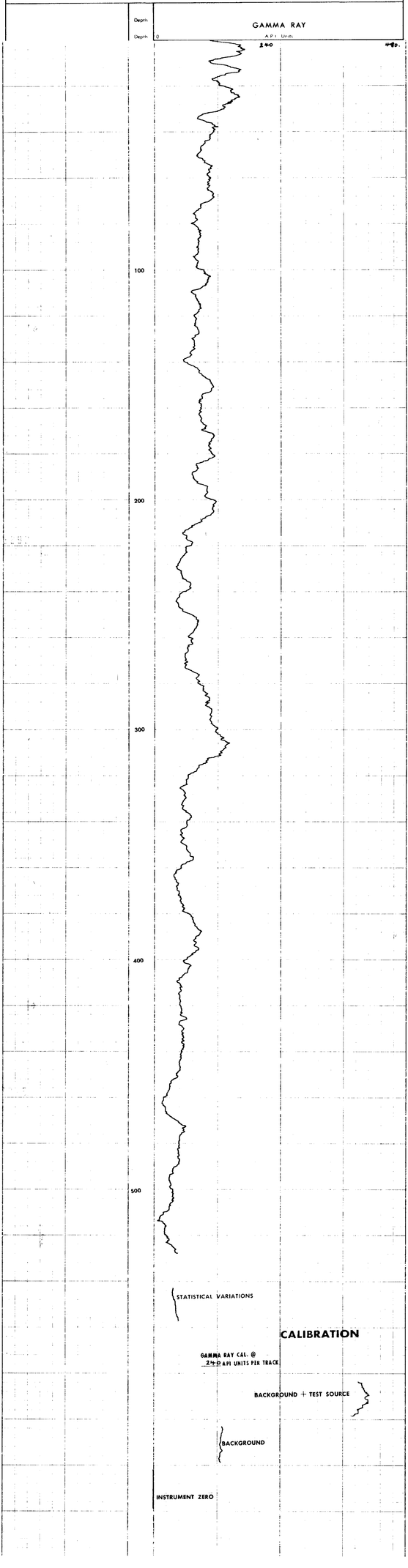
KB

GL

WELL 355 46 YADGLIN DAM SOUTH AUSTRALIA PETROMIN N.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	14 MAY. 70		Nature	---	
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	530'		pH		
Casing – Driller			Circ. Temp		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G.10 C	
Bit Size	4 3/4		Tool Diam.	1	
Logged by	G. DAVIES		Cable Speed	15' PER MIN.	
Witnessed by	P. LADERMAN.		Time Constant	5. SECS.	

REMARKS DEPTH DATUM IS GROUND LEVEL
LOG RECORDED THROUGH DRILL STEM



PETROMIN N. L. 1243(II)-4

Gamma Ray Log

PETROMIN N.L.
WELL 355.47
LOCATION YADGLIN DAM.
STATE SOUTH AUSTRALIA

LOCATION
ELEVATION
D.F.
K.B.
G.L.

AREA YADGLIN DAM.
WELL 355.47
STATE SOUTH AUSTRALIA

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	15 MAY 70		Nature	UNI-CAL	
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	530		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G.10.C	
Bit Size	4 3/4"		Tool Diam.	1"	
			Cable Speed	15' PER MIN.	
Logged by	G. DAVIES		Time Constant	5. SECS.	
Witnessed by	P. LEDERMAN				

REMARKS DEPTH DATUM IS GROUND LEVEL
LOG RECORDED THROUGH DRILL STEM.

Depth
Depth

GAMMA RAY
0 A.P.I. Units 200

100
200
300
400
500

STATISTICAL VARIATIONS

CALIBRATION

GAMMA RAY CAL. @ 200 API UNITS PER TRACE

BACKGROUND + TEST SOURCE

BACKGROUND

INSTRUMENT ZERO

PETROMIN N.L. 1243(II)-5

Gamma Ray Log

WELL	355 · 48
LOCATION	YADGLIN DAM
STATE	SOUTH AUSTRALIA

PETROMIN N.L.

AREA YADGLIN DAM

WELL 355 · 48

STATE SOUTH AUSTRALIA

LOCATION

ELEVATION:

D.F.

K.B.

G.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	17. MAY. 70.		Nature	UNI. CAL.	
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	530'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G. 10. C.	
Bit Size	4 3/4"		Tool Diam.	1"	
			Cable Speed	15' PER MIN.	
Logged by	G. DAVIES.		Time Constant	5. SECS.	
Witnessed by	P. LEDERMAN				

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THROUGH DRILL STEM

PETROMIN N. L.

1243(II)-6

Gamma Ray Log

AREA YADGLIN DAM.

WELL 355-49.

STATE SOUTH AUSTRALIA.

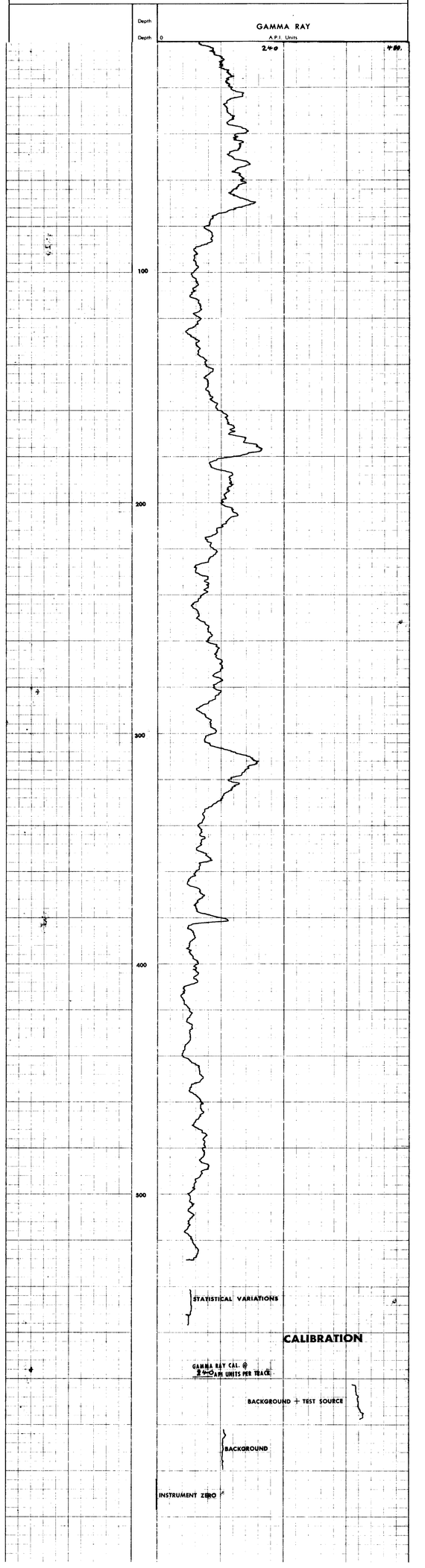
LOCATION:

ELEVATION:
D.F.
K.B.
G.L.

STATE SOUTH AUSTRALIA
LOCALITY YADGLIN DAM
WELL 355-49
PETROMIN N.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	18 MAY 70.		Nature	UNI GEL.	
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	530'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G. 10 C	
Bit Size	4 3/4"		Tool Diam.	1"	
			Cable Speed	15 PER MIN.	
Logged by	G. DAVIES.		Time Constant	5 SECS.	
Witnessed by	P. LEDEMAN.				

REMARKS DEPTH DATUM IS GROUND LEVEL
LOG RECORDED THROUGH DRILL STEM



PETROMIN N.L.

1243(II)-7

Gamma Ray Log

WELL	355.50
LOCATION	Parabarana Bore
STATE	South Australia
PETROMIN N.L.	

AREA Parabarana Bore.

WELL 355.50

STATE South Australia.

LOCATION

ELEVATION:
D.F.
K.B.
G.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	20 MAY 70.		Nature	—	
First Reading	527'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	527'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	529'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G 10 C	
Bit Size	4¾"		Tool Diam.	1"	
			Cable Speed	15' per Min	
Logged by	P. TOY.		Time Constant	5 Sec.	
Witnessed by	P. LADEMAN				

REMARKS Depth Datum is Ground Level
Log Recorded through Drill Stem.

PETROMIN N. L. 1243(II)-8

Gamma Ray Log

AREA 4 Mile Creek
WELL 355-61
STATE South Australia

LOCATION
ELEVATION
D.F.
K.B.
G.L.

WELL 355-61 LOCATION 4 Mile Creek STATE South Australia PETROMIN N.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	20 May 70		Nature	S-per Gel	
First Reading	527'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	527'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	529		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	Gr 10 C	
Bit Size	9⅞"		Tool Diam.	1"	
			Cable Speed	15 per Min	
Logged by	P TOY		Time Constant	5 Sec	
Witnessed by	T BALINGER				

REMARKS Depth Datum is Ground Level
Log Recorded through Drill Stem

Depth
Depth

GAMMA RAY
API Units
0
600
1200

100
200
300
400
500

STATISTICAL VARIATIONS

CALIBRATION

GAMMA RAY CAL. @
340 API UNITS PER TRACK

BACKGROUND + TEST SOURCE

BACKGROUND

INSTRUMENT ZERO

PETROMIN N.L. 1243(#) 9

Gamma Ray Log

AREA 4 Mile Creek

WELL 355.62

STATE South Australia.

LOCATION

ELEVATION:
D.F.
K.B.
G.L.

WELL 355.62. LOCATION 4 Mile Creek STATE South Australia PETROMIN N.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	21 MAY 70		Nature	Super Col	
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	530'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G10C	
Bit Size	4¾"		Tool Diam.	1"	
			Cable Speed	15' per Min	
Logged by	P. TOY		Time Constant	5 Sec.	
Witnessed by	R. THOMPSON				

REMARKS Depth Datum is Ground Level
Log Recorded through Drill Stem.

PETROMIN N. L.

1243(II)-10

Gamma Ray Log

AREA: 4 Mile Creek

WELL: 355 63

STATE: South Australia

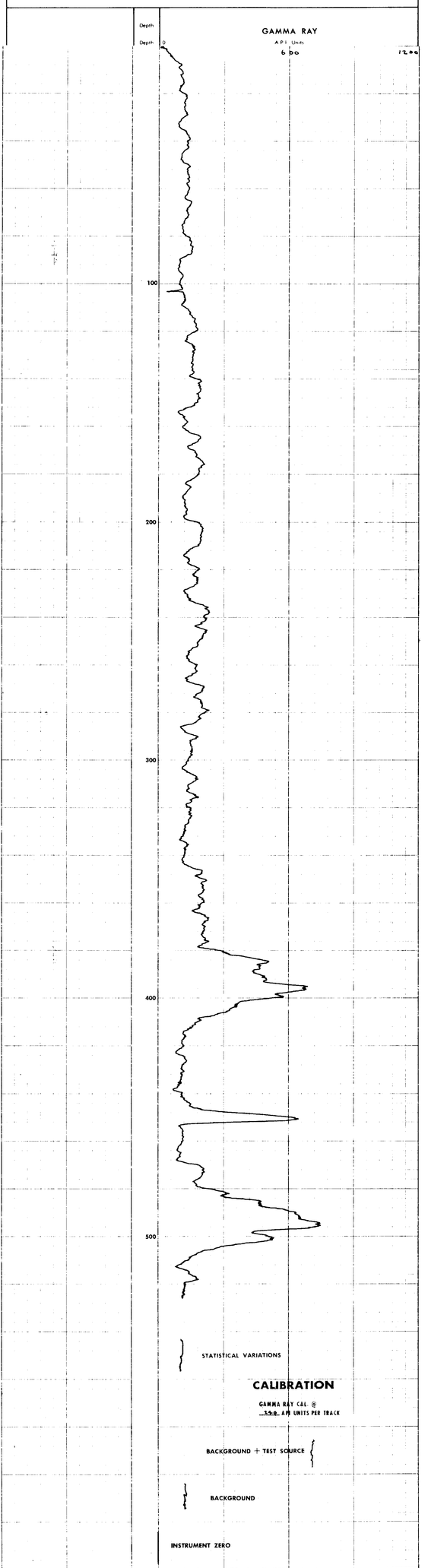
LOCATION:

ELEVATION:
D.F.
K.B.
G.L.

WELL: 355 63
LOCATION: 4 Mile Creek
STATE: South Australia
PETROMIN N.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	22 MAY 70		Nature		
First Reading	526'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	526'		Resistivity	@ °F	@ °F
Depth – Driller	528'		Res. @ BHT	@ °F	@ °F
Depth – Logger	528'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	GTOC	
Bit Size	9⅞"		Tool Diam.	1"	
			Cable Speed	15 per Min	
Logged by	D. Tor.		Time Constant	5 Sec.	
Witnessed by	R. THOMPSON				

REMARKS: Depth Datum as Ground Level
Log Recorded through Drill Stem.



PETROMIN N. L.

1243(II)-11

Gamma Ray Log

AREA: 4 Mile Creek

WELL: 355-64

STATE: South Australia

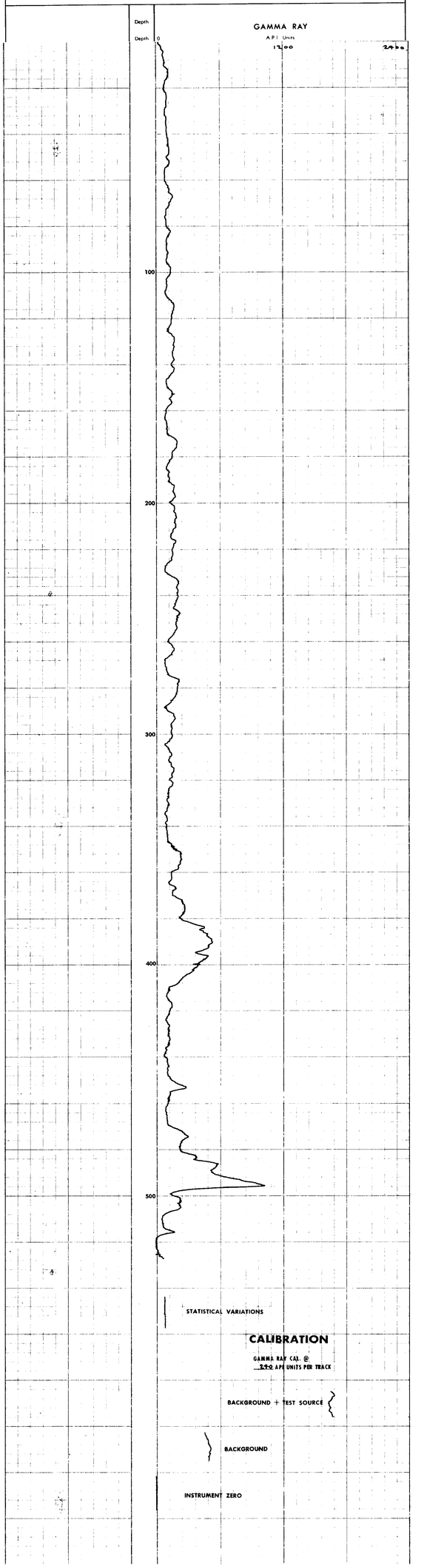
LOCATION

ELEVATION
D.F.
K.B.
G.L.

WELL: 355-64
LOCATION: 4 Mile Creek
STATE: South Australia
PETROMIN N.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	22 MAY 70		Nature	Super Cal	
First Reading	527'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	527'		Resistivity	@ °F	@ °F
Depth – Driller	529'		Res. @ BHT	@ °F	@ °F
Depth – Logger	529'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G.I.O.C.	
Bit Size	9 7/8"		Tool Diam.	1"	
			Cable Speed	15 per Min	
Logged by	D. TOY.		Time Constant	3 Sec.	
Witnessed by	R. THOMPSON				

REMARKS: Depth Datum is Ground Level
Log Recorded through Drill Stem.



1243(II)-12 Vol 1

Env 1243 Vol I

PETROMIN N.L.

SPECIAL MINING LEASE 355.

PLAN SHOWING

LOCATION OF DRILL HOLES

LAKE FROME AREA	URANIUM PROJECT	GEOLOGIST T. Steel
DATE JULY 1970	SOUTH AUSTRALIA	MINOIL SERVICES ADELAIDE

1243(II)-12

P. 355-1

ENV 1243. (I)-1

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray Log

COMPANY Petromin N.L.
AREA Four mile Creek
WELL 355-1
STATE South Australia

LOCATION
ELEVATION
D.F.
K.B.
G.L.

COMPANY Petromin N.L
WELL 355-1
LOCATION 4 mile Creek
STATE South Australia

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	7 Jan 1970		Nature	Aquagel	
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – driller	531'		Res. @ BHT	@ °F	@ °F
Depth – logger	529'		pH		
Casing – driller			Circ. Temp		
Casing – logger			B.H. Temp.		
Casing – Size			Tool Type	G 10 C	
Bit Size	4 3/4		Tool Size	1" DIAM	
			Time Const	5 Secs	
Logged by	G. WHELAN		Cable Speed	12'/min	
Witnessed by	L. Read				

REMARKS Depth Datum in ground Level
Log Recorded thru drill stem.

Depth | GAMMA RAY
A.P.I. Units
0 — 200 — 2400

6901 noo.

EHW 1243 (T) -2

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray Log

COMPANY: Petromin N.L.
AREA: 4 Mile Creek
WELL: 355 - 1A
STATE: South Australia

LOCATION:
ELEVATIONS: D.F. K.B. G.L.

RECEIVED 6 JUN 1970 DEPT. OF MINES ADELAIDE

COMPANY: Petromin N.L.
WELL:
LOCATION: 4 Mile Creek
STATE: South Australia

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	10 March 70		Nature	Aquagel	
First Reading	474'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	474'		Resistivity	@ °F	@ °F
Depth – driller	477'		Res. @ BHT	@ °F	@ °F
Depth – logger	476'		pH		
Casing – driller	-		Circ. Temp.		
Casing – logger	-		B.H. Temp.		
Casing – Size	-		Tool Type	GIOC	
Bit Size	4¾"		Tool Diam.	1"	
			Time Const.	5 Sec.	
Logged by	P. TOY.		Cable Speed	10' / Min.	
Witnessed by	G. DAVIES				

REMARKS: Depth Datum is Ground Level
Log Recorded thru Drill Stem.

8990

Depth
Depth 0

GAMMA RAY
A.P.I. Units
1200 2400

0
100
200
300
400

7990

7990

STATISTICAL VARIATIONS

CALIBRATION

GAMMA RAY CAL. 62
420 API UNITS PER TRACK

BACKGROUND + TEST SOURCE

BACKGROUND

INSTRUMENT ZERO

ENV 1243 (1)-3

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray Log

COMPANY Petromin N.L
AREA 4 mile Creek
WELL 355-2
STATE South Australia

LOCATION
ELEVATIONS K.B. D.F. G.L.

RECEIVED 5 MAR 1970 DEPT. OF MINES REGISTRY Adelaide

COMPANY Petromin N.L
WELL 355-2
LOCATION 4 mile Creek
STATE South Australia

	Run No. 1	Run No. 2	MUD	Run No. 2			
Date	10 Jan 1970		Nature	Aquagel			
First Reading	526'		Density				
Last Reading	0'		Viscosity	@ °F		@ °F	
Footage Logged	526'		Resistivity	@ °F		@ °F	
Depth – driller	528'		Res. @ BHT	@ °F		@ °F	
Depth – logger	528'		pH				
Casing – driller			Circ. Temp.				
Casing – logger			B.H. Temp.				
Casing – Size			Tool Type	GIOC			
Bit Size	9⅝"		Tool Size	1"			
			Time Constant	5" Secs			
Logged by	G. Whalen		Cable Speed	12 / min			
Witnessed by	L. Read						

REMARKS Depth Datum is Ground level
Log Recorded thru drill stem.

37

Depth

GAMMA RAY
A.P.I. Units
1200 2400

0
100
200
300
400
500

88

17

CALIBRATION

GAMMA RAY CAL. (2)
1200 — API UNITS PER TRACK

STATISTICAL VARIATIONS
2400 API

BACKGROUND + TEST SOURCE

BACKGROUND

INSTRUMENT ZERO

ENV 1243 (1)

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray Log

COMPANY Petromin N.L.
AREA 4 mile Creek
WELL 355-3
STATE South Australia

RECEIVED 5th MAR 1971 DEPT. OF MINES SOUTH AUSTRALIA

LOCATION
ELEVATION
D.F.
K.B.
G.L.

COMPANY Petromin N.L.
WELL 355-3
LOCATION 4 mile Creek
STATE South Australia

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	11 Jan 1970		Nature	Agrogel	
First Reading	541'		Density		
Last Reading	0		Viscosity	@ °F	@ °F
Footage Logged	541'		Resistivity	@ °F	@ °F
Depth – driller	550'		Res. # BHT	@ °F	@ °F
Depth – logger	543'		pH		
Casing – driller			Circ. Temp		
Casing – logger			Bht. Temp.		
Casing – Size			Tool Type	Glac	
Bit Size	7⅞"		Tool Size	1"	
			Time Constant	5 Secs	
Logged by	G WHELAN		Cable Speed	12/min	
Witnessed by	R Thomson				

REMARKS Depth Datum is ground level
Log recorded Cable Drill Floor

Depth
Depth

GAMMA RAY
A.P.I. Units
0 /200 400

0
100
200
300
400
500

INSTRUMENT CHECKS
BACKGROUND + TEST SOURCE
BACKGROUND
INSTRUMENT ZERO

EMV 1243 (I)-5

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray Log

COMPANY	Petromin N.L.
LOCATION	4 mile Creek
WELL	355-4.
STATE	South Australia

COMPANY Petromin N.L.

AREA 4 mile creek.

WELL 355-4

STATE South Australia

LOCATION

ELEVATION:

D.F.

K.B.

G.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	12 Jan 70		Nature	Aquagel	
First Reading	526'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	526'		Resistivity	@ °F	@ °F
Depth – driller	530'		Res. @ BHT	@ °F	@ °F
Depth – logger	528'		pH		
Casing – driller			Circ. Temp		
Casing – logger			B.H. Temp.		
Casing – Size			Tool Type	G 10C	
Bit Size	4 3/4"		Tool Size	1"	
			Time Constant	5 secs	
Logged by	G. WHELAN		Cable Speed.	12'/min.	
Witnessed by	R. Thompson.				

REMARKS Depth Datum is ground level
Log Recorded thro drill stem

ENV 1243-(I)-6

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray Log

COMPANY Petromin N.L.
AREA 4 mile Creek
WELL 355-5
STATE South Australia

LOCATION
ELEVATION
K.B.
D.F.
G.L.

COMPANY Petromin N.L.
WELL 355-5
LOCATION 4 mile Creek
STATE South Australia

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	13 Jan 1970		Nature		
First Reading	542'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	542'		Resistivity	@ °F	@ °F
Depth – driller	540'		Res. @ BHT	@ °F	@ °F
Depth – logger	544'		pH		
Casing – driller			Circ. Temp		
Casing – logger			B.H. Temp.		
Casing – Size			Tool Type	G 10C.	
Bit Size	4¾"		Tool Size	1"	
			Time Constant	5 Secs	
Logged by	G. Whelan		Cable Speed	12'/min	
Witnessed by	J. Westhoff				

REMARKS Depth Datum is ground level
Log Recorded thru drill stem

Depth	GAMMA RAY A.P.I. Units
Depth	0 — 60 — 120

ENU 1243 (I)

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray Log

COMPANY Petromin N.L

AREA 4 mile Creek

WELL 355-6

STATE South Australia

LOCATION

ELEVATION:
D.F.
K.B.
G.L.

STATE | LOCATION 4 mile Creek | WELL 355-6 | COMPANY Petromin N.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	14 Jan 1970		Nature		
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – driller	530'		Res. @ BHT	@ °F	@ °F
Depth – logger	530'		pH		
Casing – driller			Circ. Temp		
Casing – logger			B.H. Temp.		
Casing – Size			Tool Type	G. 10. C	
Bit Size	4¾'		Tool Size	1"	
			Time Constant	5 Secs.	
Logged by	G. Whelan		Cable Speed	12' – min	
Witnessed by	J. Westhoff				

REMARKS Depth Datum is ground level
Log recorded thru drill stem.

Depth | GAMMA RAY A.P.I. Units 0 – 600 – 1200

ENV 1243. (F)

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray Log

COMPANY	Petromin N.L
AREA	4 mile Creek
WELL	355-7
STATE	South Australia
LOCATION	
ELEVATION: D.F.	
K.B.	
G.L.	

COMPANY Petromin N.L
WELL 355-7
LOCATION 4 mile Creek
STATE South Australia

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	23 Jan 1970		Nature		
First Reading	526'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	526'		Resistivity	@ °F	@ °F
Depth – driller	530'		Res. @ BHT	@ °F	@ °F
Depth – logger	528'		pH		
Casing – driller			Circ. Temp		
Casing – logger			B.H. Temp.		
Casing – Size			Tool Type	G 10C	
Bit Size	4 3/4"		Tool Size	1"	
			Time Constant	5 Secs	
Logged by	G. WHELAN		Cable Speed	12'/min	
Witnessed by	J. Westhoff				

REMARKS Depth Datum is ground level
Log recorded thru drill stem.

Depth | GAMMA RAY A.P.I. Units 0 600 1200

ENV 1243. (I) — 9

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray Log

COMPANY Petromin NL
FIELD 4 mile Creek
WELL 355-8
STATE South Australia

LOCATION
ELEVATION
D.F.
K.B.
G.L.

COMPANY Petromin NL
WELL 355-8
LOCATION 4 mile Creek
STATE South Australia

	Run No. 1	Run No. 2
Date	25 Jan	
First Reading	525'	
Last Reading	0	
Footage Logged	525'	
Depth – driller	530'	
Depth – logger	527'	
Casing – driller		
Casing – logger		
Casing – Size		
Bit Size	4 3/4"	
Logged by	G. Whelan	
Witnessed by	D. Welcheff.	

MUD	Run No. 1	Run No. 2
Nature		
Density		
Viscosity	@ °F	@ °F
Resistivity	@ °F	@ °F
Res. @ BHT	@ °F	@ °F
pH		
Circ. Temp		
B.H. Temp.		
Tool Type	Gloc	
Tool Size	1"	
Time Constant	5 Secs	
Cable Speed	12 f/min	

REMARKS Depth Datum is ground level
Log Recorded Thru drill Stem

Depth
Depth

GAMMA RAY
A.P.I. Units
0 600 1200

0
100
200
300
400
500

CALIBRATION
STATISTICAL VARIATION
1200 API
BACKGROUND + TEST SOURCE
BACKGROUND
INSTRUMENT ZERO

1243(I)-9a

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray Log

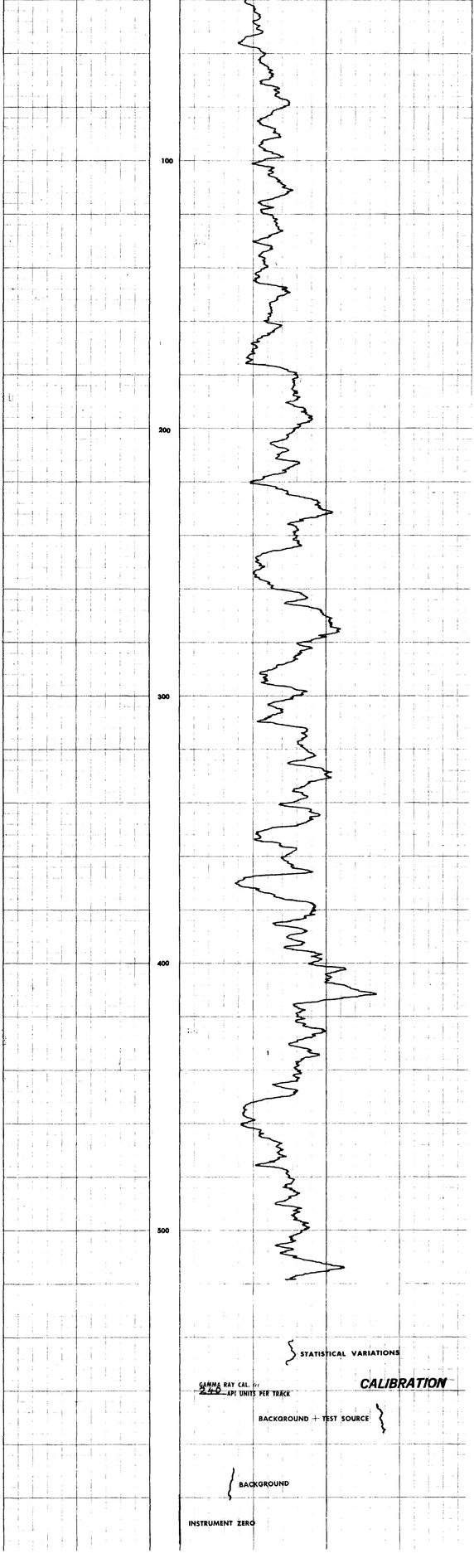
COMPANY PETROMIN. N.L.
AREA 4 MILE CREEK.
WELL 355.9
STATE SOUTH AUSTRALIA

LOCATION
ELEVATION
D.F.
K.B.
G.L.

COMPANY PETROMIN. N.L.
WELL 355.9
LOCATION 4 MILE CREEK.
STATE SOUTH AUSTRALIA

	Run No. 1	Run No. 2	MUD	Run No.	Run No. 2
Date	23. MARCH 70.		Nature	SUPER COL	
First Reading	518'		Density		
Last Reading	0'		Viscosity	x °F	x °F
Footage Logged	518'		Resistivity	x °F	x °F
Depth — driller	520'		Res. @ BHT	x °F	x °F
Depth — logger	520'		pH		
Casing — driller			Circ. Temp		
Casing — logger			B.H. Temp.		
Casing — Size			TOOL TYPE	G.10.S.	
Bit Size	4¾"		" DIA.	1"	
Logged by	G. DAVIES.		CABLE SPEED	15 PER MIN	
Witnessed by	L. READ.		TIME CONST.	5 SECS.	

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THRU DRILL STEM.



EHV 1243 (1) - 10

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray

COMPANY PETROMIN. N.L.
AREA 4 MILE CREEK.
WELL 355-10
STATE

LOCATION
ELEVATION
D.F.
K.B.
G.L.

STATE SOUTH AUSTRALIA
LOCATION 4 MILE CREEK.
WELL 355-10
COMPANY PETROMIN. N.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	24 MARCH. 70.		Nature	BENTONITE.	
First Reading	518'		Density		
Last Reading	0'		Viscosity	" °F	" °F
Footage Logged	518'		Resistivity	" °F	" °F
Depth – driller	320'		Res. @ BHT	" °F	" °F
Depth – logger	320'		pH		
Casing – driller			Circ. Temp		
Casing – logger			B.H. Temp		
Casing – Size			TOOL TYPE.	G. IO. C.	
Bit Size	4 3/4"		" DIA.	1"	
			CABLE SPEED	15' PER MIN.	
Logged by	G. DAVIES		TIME CONST.	5 SECS.	
Witnessed by	L. READ				

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THRU DRILL STEM.

GAMMA RAY
A.P.I. Units

Depth | 240. | 480.

0
100
200
300
400
500

STATISTICAL VARIATIONS

GAMMA RAY CAL. for 240 API UNITS PER TRACK

BACKGROUND + TEST SOURCE

BACKGROUND

CALIBRATION

INSTRUMENT ZERO

ENV 1243 (E) -10a

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray -

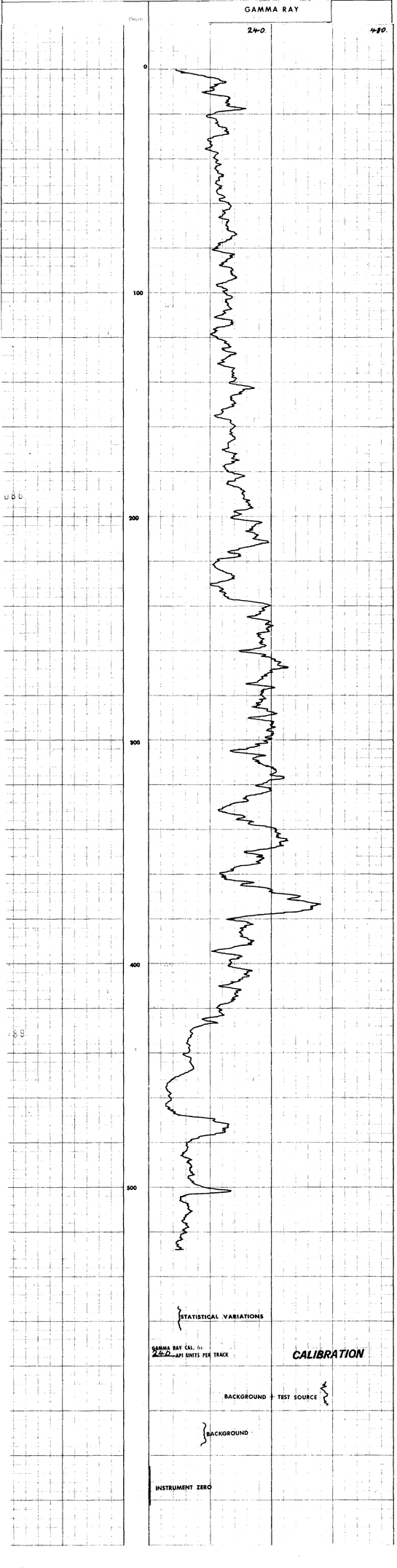
COMPANY PETROMIN. N.L.
AREA 4. MILE CREEK.
WELL 355-11
STATE SOUTH AUSTRALIA

LOCATION
ELEVATION
K.B.
D.F.
G.L.

COMPANY PETROMIN. N.L.
WELL 355. 11
LOCATION 4. MILE CREEK.
STATE SOUTH AUSTRALIA

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	24 MARCH. 70.		Nature	BENTONITE.	
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – driller	530'		Res. – BHT pH	@ °F	@ °F
Depth – logger	530'		Circ. Temp		
Casing – driller			Bht. Temp		
Casing – logger			TOOL TYPE	G.10.C.	
Casing – Size			DIA.	1"	
Bit Size	4 3/4"		CABLE SPEED	15 PER MIN.	
Logged by	G. DAVIES.		TIME CONST.	5 SECS.	
Witnessed by	L. READ.				

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THRU DRILL STEM.



ENV 1263 (I)

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray -

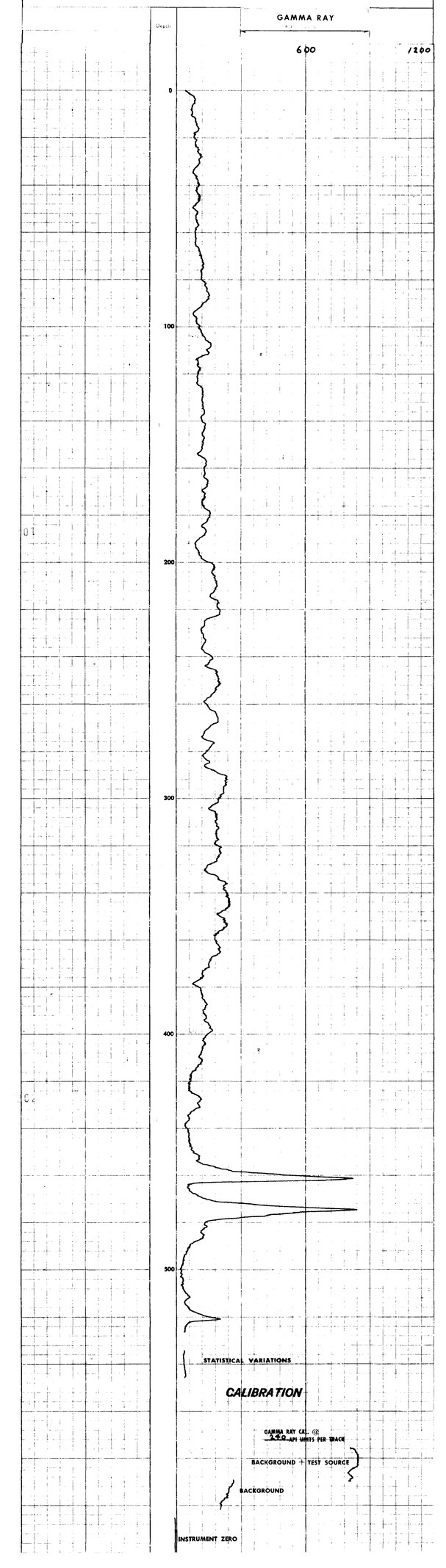
COMPANY: Petromin N.L.
AREA: 4 Mile Creek.
WELL: 355-12.
STATE: South Australia.

LOCATION
ELEVATION: ' '
D.F.:
K.B.:
G.L.:

COMPANY: Petromin N.L.
WELL: 355-12
LOCATION: 4 Mile Creek
STATE: South Australia

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	25 March 70		Nature	Bentonite	
First Reading	526'		Density		
Last Reading	0'		Viscosity	" °F	" °F
Footage Logged	526'		Resistivity	" °F	" °F
Depth – driller	530'		Res. @ BHT	' °F	' °F
Depth – logger	528'		pH		
Casing – driller			Circ. Temp.		
Casing – logger			B.H. Temp.		
Casing – Size			Tool Type	GIOC.	
Bit Size	4 3/4"		Tool Diam.	1"	
			Time Const.	5 Sec.	
Logged by	P.TOY.		Cable Speed	12"/Min.	
Witnessed by	L. READ.				

REMARKS: Depth Datum is Ground Level.
Log Recorded thru Drill Stem.



ENV 1243 (I) R

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray -

COMPANY: Petromin N.L.
AREA: 4 Mile Creek.
WELL: 355-13.
STATE: South Australia.

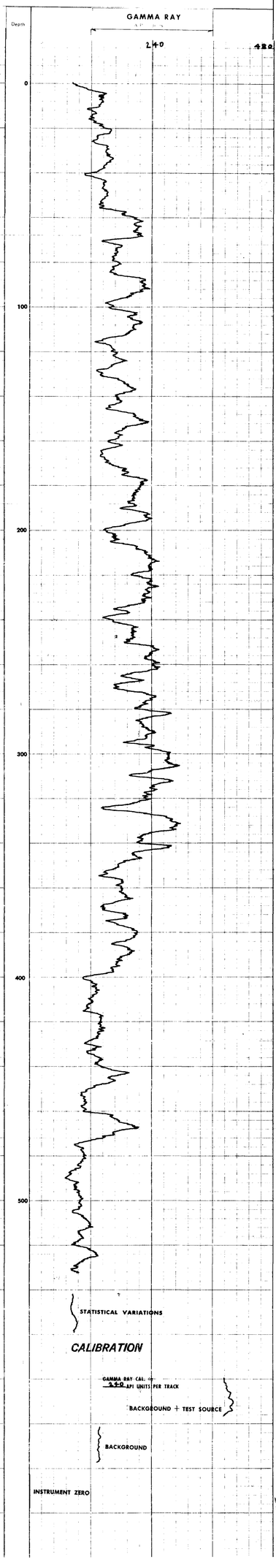
LOCATION:
ELEVATION: D.F. K.B. G.L.

RECEIVED

COMPANY: Petromin N.L.
WELL: 355-13
LOCATION: 4 Mile Creek.
STATE: South Australia.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	27 March 70		Nature	Vulclay.	
First Reading	532'		Density		
Last Reading	0'		Viscosity	" °F	" °F
Footage Logged	532'		Resistivity	" °F	" °F
Depth – driller	535'		Res. @ BHT	" °F	" °F
Depth – logger	534		pH		
Casing – driller			Circ. Temp.		
Casing – logger			B.H. Temp.		
Casing – Size			Tool Type	G loc.	
Bit Size	4¾"		Tool Diam.	1"	
			Time Const.	5 Sec.	
Logged by	P. Toy.		Cable Speed	12' / Sec.	
Witnessed by	L. Read.				

REMARKS: Depth Datum is Ground Level
Log Recorded thru Drill Stem.



ENV 1243 (I) 13

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray -

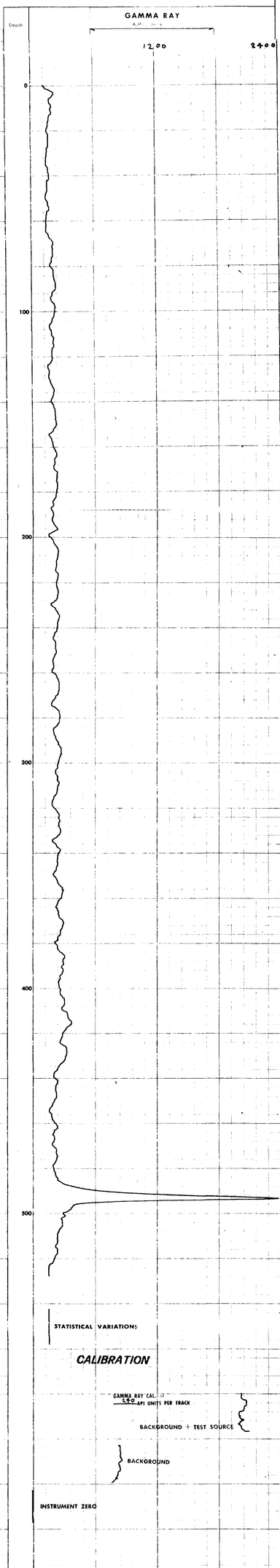
COMPANY: Petromin N.L.
AREA: 4 Mile Creek.
WELL: 355-14.
STATE: South Australia.

LOCATION:
ELEVATION: K.B. / D.F. / G.L.

Petromin N.L. 355-14 4 Mile Creek South Australia.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	29 March 70		Nature	Super Col	
First Reading	528'		Density		
Last Reading	0'		Viscosity		
Footage Logged	528'		Resistivity		
Depth – Driller	530'		Res. – BHT		
Depth – Logger	530'		pH		
Casing – Driller			Fluid Loss		
Casing – Logger			BH. Temp.		
Casing – Size			Tool Type	G-10C	
Bit Size	4¾"		Tool Diam.	1"	
			Time Const.	.5 Sec.	
Logged by	P. TOY.		Cable Speed	12' / Min.	
Witnessed by	L. READ.				

REMARKS: Depth Datum is Ground Level
Log Recorded thru Drill Stem.



ENV 1243 (1) - 14

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray -

COMPANY: Petromin N.L.
AREA: 4 Mile Creek
WELL: 355-15
STATE: South Australia.

LOCATION
ELEVATION
D.F.
K.B.
G.L.

COMPANY: Petromin N.L.
WELL: 355-15
FIELD: 4 Mile Creek
STATE: South Australia.

	Run No. 1	Run No. 2	Mud	Run No. 1	Run No. 2
Date	30 March 70		Nature	Volclay.	
First Reading	525'		Density		
Last Reading	0'		Viscosity	" °F	" °F
Footage Logged	525'		Resistivity	" °F	" °F
Depth – driller	530'		Res. @ BHT	" °F	" °F
Depth – logger	527'		pH		
Casing – driller			Circ. Temp.		
Casing – logger			B.H. Temp.		
Casing – Size			Tool Type	G10C.	
Bit Size	4 7/8"		Tool Diam.	1"	
			Time Const.	5 Sec	
Logged by	B. TOY.		Cable Speed	12'/Min.	
Witnessed by	L. READ.				

REMARKS: Depth Datum is Ground Level
Log Recorded thru Drill Stem.

GAMMA RAY
A.P.I. units

Depth

600 1200

0
100
200
300
400
500

STATISTICAL VARIATIONS

CALIBRATION

GAMMA RAY CAL. 67
500 API UNITS PER TRACK

BACKGROUND + TEST SOURCE

BACKGROUND

INSTRUMENT ZERO

ENV 1243-(I)-15

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray Log

PETROMIN. N.L.
4 Mile Creek.
355-16.

STATE SOUTH AUSTRALIA.

PETROMIN. N.L. 355-16. 4 Mile Creek. SOUTH AUSTRALIA.

	Run No. 1	Run No. 2		Run No. 1	Run No. 2
Date	31 March 70		Type Fluid	Volclay.	
	528'		Density		
	0'		Viscosity	F	F
Footage Logged	528'		Resistivity	F	F
Depth – driller	530'		Res. @ BHT	F	F
Depth – logger	530'		pH		
Casing – driller			Circ. Temp.		
Casing – logger			B.H. Temp.		
Casing – Size			TOOL TYPE	G. 10. C.	
Bit Size	4¾"		" DIA.	1"	
			CABLE SPEED.	15' PER MIN.	
Logged by	L. READ.		TIME CONST.	5 SECS.	
Witnessed by	A. RAYMENT				

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THRU DRILL STEM.

PETROMIN N. L. ENV 1243 (I)-16

Gamma Ray Log

AREA 4. MILE CREEK.
WELL 355-17
STATE SOUTH AUSTRALIA

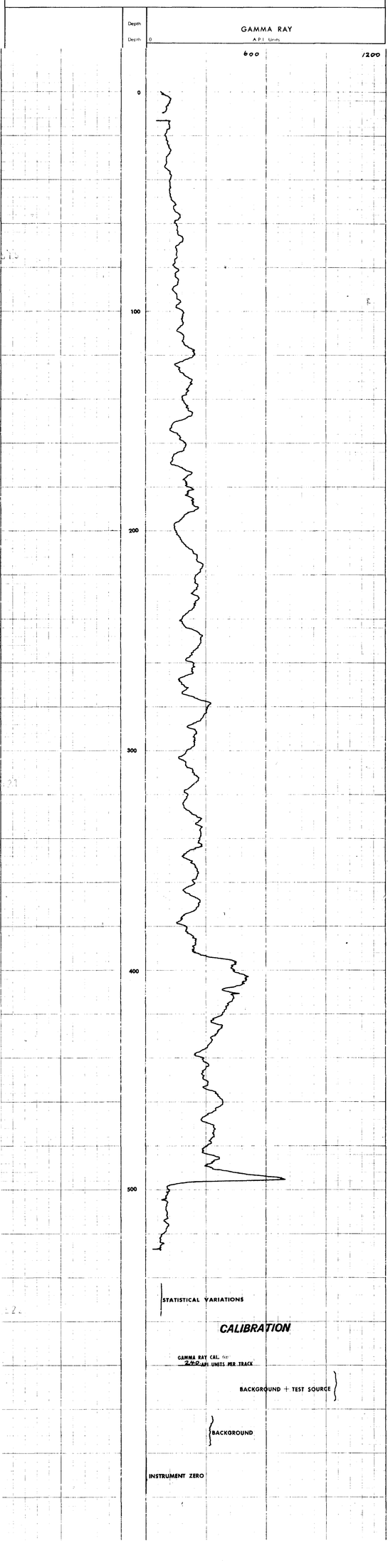
LOCATION
ELEVATION
D.F.
K.B.
G.L.

PETROMIN N.L.
WELL 355-17
LOCATION 4 MILE CREEK.
STATE SOUTH AUSTRALIA

	Run No. 1	Run No. 2
Date	2. APRIL. 70.	
First Reading	528'	
Last Reading	0'	
Footage Logged	528'	
Depth – Driller	530'	
Depth – Logger	530'	
Casing – Driller		
Casing – Logger		
Casing – Size		
Bit Size	4 3/4"	
Logged by	G. DAVIES.	
Witnessed by	P. TOY.	

MUD	Run No. 1	Run No. 2
Nature	VOLCLAY	
Density		
Viscosity	@ °F	@ °F
Resistivity	@ °F	@ °F
Res. @ BHT	@ °F	@ °F
pH		
Circ. Temp.		
B.H. Temp.		
Tool Type	G. I O. C.	
Tool Diam.	1"	
Cable Speed	15' PER MIN.	
Time Constant	5 SECS.	

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THRU DRILL STEM.
KICK AT 14' LEVEL DUE TO PROBE FOULING MUD IN DRILL STEM.



PETROMIN N.L. EHV 1243(I)

Gamma Ray Log

WELL	355·18
LOCATION	4 MILE CREEK
STATE	SOUTH AUSTRALIA

PETROMIN N.L.

AREA 4 MILE CREEK

WELL 355·18

STATE SOUTH AUSTRALIA

LOCATION

ELEVATION
D.F.
K.B.
G.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	4. APRIL. 70		Nature	S·COL + VOL CLAY.	
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	530'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G. 10.C.	
Bit Size	4 3/4"		Tool Diam.	1"	
			Cable Speed	15' PER MIN.	
Logged by	G. DAVIES.		Time Constant	5. SECS.	
Witnessed by	P. TOY.				

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THROUGH DRILL STEM.

PETROMIN N.L. ENV 1243(I)-18

Gamma Ray Log

WELL 355.19
LOCATION 4. MILE CREEK.
STATE SOUTH AUSTRALIA.
PETROMIN N.L.

AREA 4. MILE CREEK.
WELL 355.19.
STATE SOUTH AUSTRALIA.

LOCATION
ELEVATION
D.F.
K.B.
G.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	5. APRIL. 70.		Nature	S.COL-VOLCLAY.	
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	530'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G. 10. C.	
Bit Size	4 3/4"		Tool Diam.	1"	
			Cable Speed	15.' PER MIN.	
Logged by	G. DAVIES.		Time Constant	5. SECS.	
Witnessed by	P. TOY.				

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THROUGH DRILL STEM.

EMV 1243 (I) = 19

DOWN UNDER WELL SERVICES Pty. Ltd.

Gamma Ray

COMPANY Petromin N.L.
AREA 4 Mile Creek
WELL 355-20
STATE South Australia.

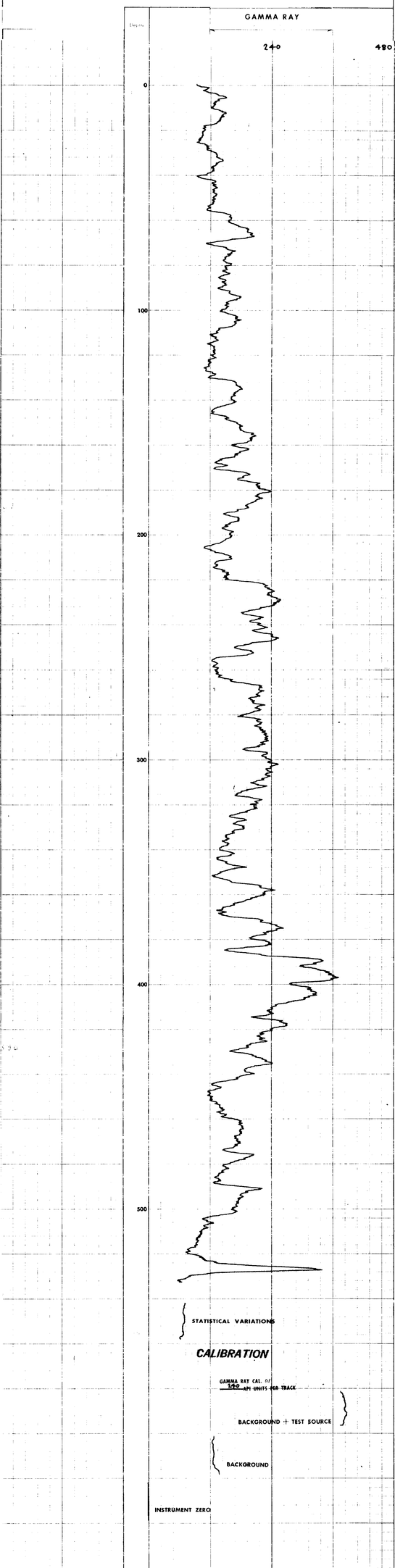
LOCATION
ELEVATION D.F.
K.B.
G.L.

RECEIVED 2 JUN 1970 DEPT. OF MINES SOUTH AUSTRALIA

Petromin N.L. 355-20 4 Mile Creek South Australia

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	30 March 70.		Nature	Velclay	
First Reading	533'		Density		
Last Reading	0'		Viscosity	" F	" F
Footage Logged	533'		Resistivity	" F	" F
Depth – driller	533'		Res. – BHT	" F	" F
Depth – logger	535'		pH		
Casing – driller			Circ. Temp		
Casing – logger			B.H. Temp		
Casing – Size			Tool Type	G 10 C	
Bit Size	4 7/8"		Tool Diam.	1"	
			Time Const	5 Sec.	
Logged by	P. Tor.		Cable Speed	12' / Min.	
Witnessed by	L. Remp.				

REMARKS Depth Datum is Ground Level.
Log Recorded thro' Drill Stem.



PETROMIN N.L. EHV 1243(I)+20

Gamma Ray Log

AREA 4. MILE CREEK.

WELL 355 · 21.

STATE SOUTH AUSTRALIA.

LOCATION

ELEVATION
D.F.
K.B.
G.L.

PETROMIN N.L. | WELL 355 21. | LOCATION 4. MILE CREEK. | STATE SOUTH AUSTRALIA.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	1. APRIL 70.		Nature	SUPER COL.	
First Reading	534'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	534'		Resistivity	@ °F	@ °F
Depth - Driller	536'		Res. @ BHT	@ °F	@ °F
Depth - Logger	536'		pH		
Casing - Driller			Circ. Temp.		
Casing - Logger			B.H. Temp.		
Casing - Size			Tool Type	G. 10.C.	
Bit Size	4 3/4"		Tool Diam.	1"	
			Cable Speed	15' PER MIN.	
Logged by	G. DAVIES.		Time Constant	5 SECS.	
Witnessed by	P. TOY.				

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THRU DRILL STEM.

PETROMIN N. L.

ENV 1243 (D-2)

Gamma Ray Log

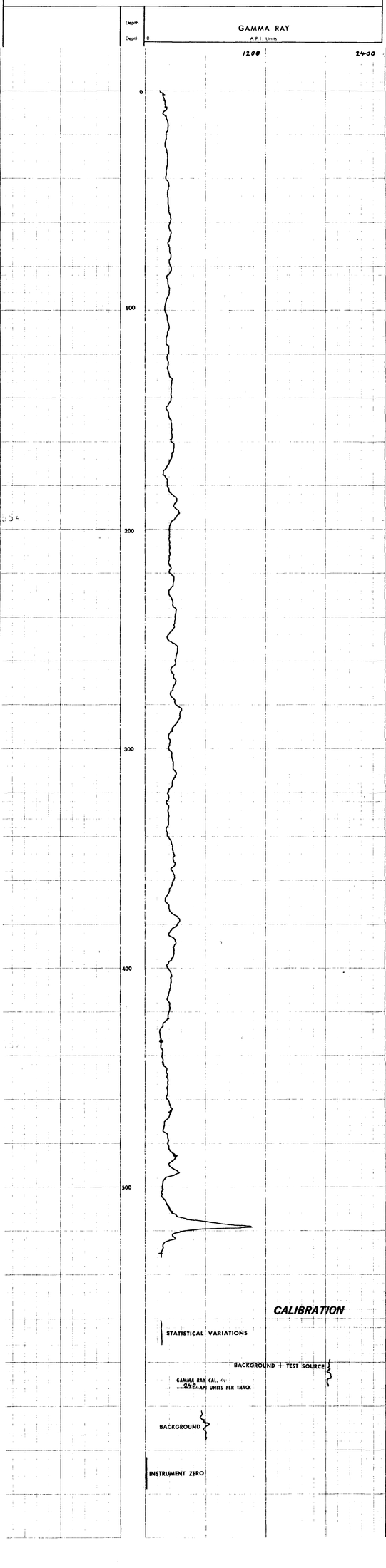
WELL 355-22 PETROMIN N.L.
LOCATION 4 MILE CREEK
STATE SOUTH AUSTRALIA

LOCATION
ELEVATION
D.F.
K.B.
G.L.

AREA 4 MILE CREEK
WELL 355-22
STATE SOUTH AUSTRALIA

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	4 APRIL 70		Nature	VOLCLAY	
First Reading	532'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	532'		Resistivity	@ °F	@ °F
Depth – Driller	534'		Res. @ BHT	@ °F	@ °F
Depth – Logger	534'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G. I.O.C.	
Bit Size	4 3/4"		Tool Diam.	1"	
			Cable Speed	15 PER MIN.	
Logged by	G. DAVIES.		Time Constant	5. SECS.	
Witnessed by	P. TOY.				

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THROUGH DRILL STEM.



PETROMIN N. L.

EHV 1243(I)

Gamma Ray Log

AREA 4. MILE CREEK.

WELL 355. 23.

STATE SOUTH AUSTRALIA.

LOCATION:

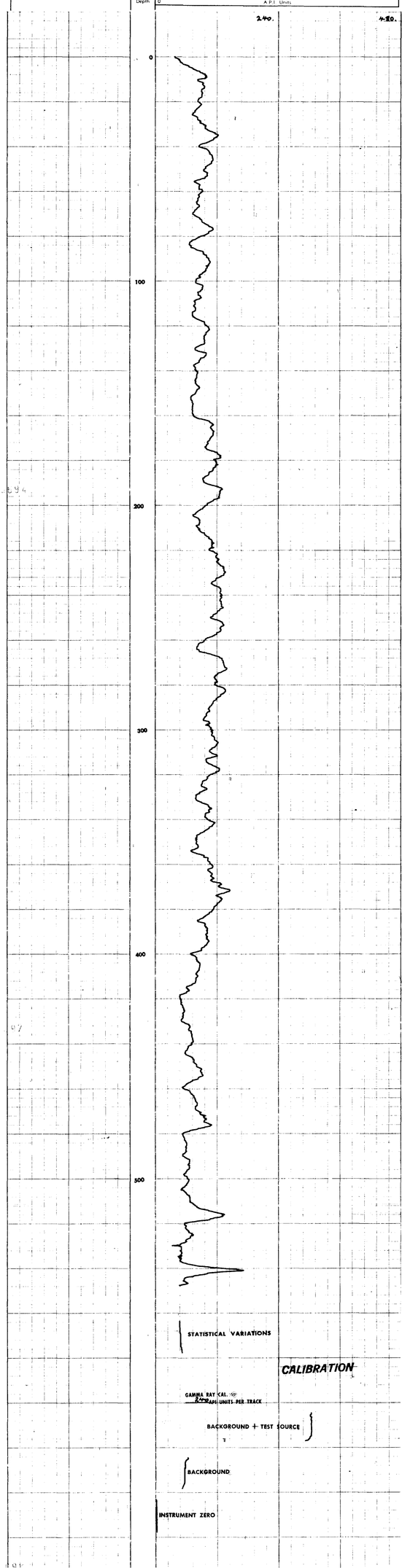
ELEVATION:
D.F.
K.B.
G.L.

RECEIVED

PETROMIN N.L.
WELL 355. 23.
LOCATION 4. MILE CREEK.
STATE SOUTH AUSTRALIA.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	7. APRIL. 70		Nature	VOLCLAY.	
First Reading	548'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	548'		Resistivity	@ °F	@ °F
Depth – Driller	550'		Res. @ BHT	@ °F	@ °F
Depth – Logger	550.		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type		
Bit Size	4-3/4"		Tool Diam.		
			Cable Speed		
Logged by	G. DAVIES.		Time Constant		
Witnessed by	P. TOY				

REMARKS DEPTH DATUM IS GROUND LEVEL
LOG RECORDED THROUGH DRILL STEM.



PETROMIN N. L. ENV/1243(D)-2

Gamma Ray Log

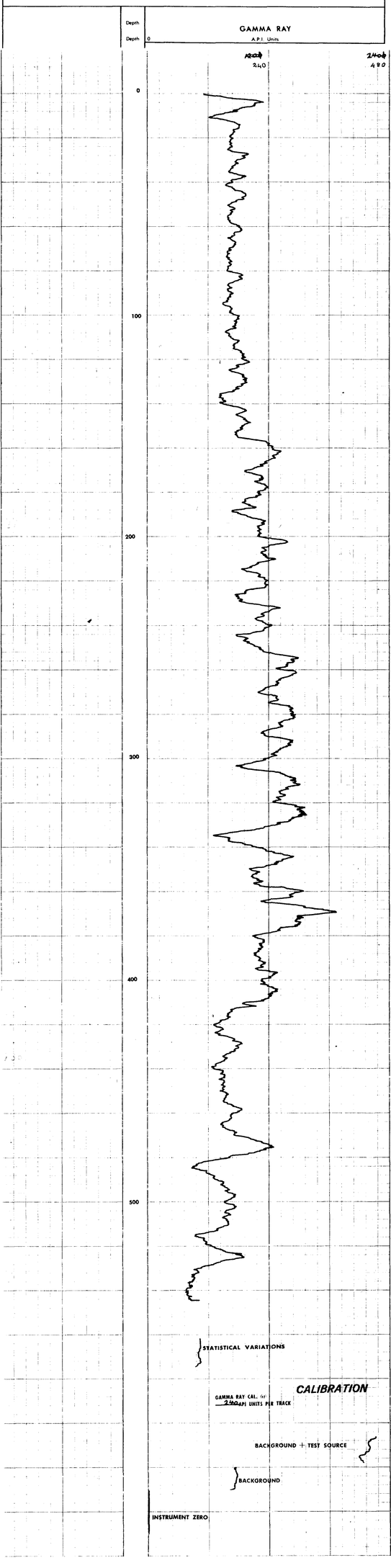
AREA 4 MILE CREEK
WELL 355·24
STATE SOUTH AUSTRALIA

LOCATION: RECEIVED 2 JAN 1970 DEPARTMENT OF MINES
ELEVATION
D.F.
K.B.
G.L.

WELL 355·24 LOCATION 4 MILE CREEK STATE SOUTH AUSTRALIA PETROMIN N.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	6 APRIL 70		Nature	VOLCLAY	
First Reading	544'		Density		
Last Reading	0		Viscosity	@ °F	@ °F
Footage Logged	544'		Resistivity	@ °F	@ °F
Depth – Driller	550		Res. @ BHT	@ °F	@ °F
Depth – Logger	546		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G·10·C	
Bit Size	4 3/4"		Tool Diam.	1"	
			Cable Speed	15 PER MIN.	
Logged by	G. DAVIES.		Time Constant	5 SECS.	
Witnessed by	P. TOY.				

REMARKS: DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THROUGH DRILL STEM



EHV 1243 (1) -24

PETROMIN N. L.

Gamma Ray Log

AREA 4. MILE CREEK

WELL 355 - 25

STATE SOUTH AUSTRALIA

LOCATION

ELEVATION

D.F.

K.B.

G.L.

PETROMIN N.L.

WELL 355 - 25

LOCATION 4. MILE CREEK

STATE SOUTH AUSTRALIA

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	8 APRIL 70		Nature	BENTONITE.	
First Reading	532'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	532'		Resistivity	@ °F	@ °F
Depth – Driller	535'		Res. @ BHT	@ °F	@ °F
Depth – Logger	534'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G.I.D.C.	
Bit Size	4 3/4"		Tool Diam.	1"	
			Cable Speed	15' PER MIN.	
Logged by	G. DAVIES.		Time Constant	5 SECS	
Witnessed by	P. IDY				

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THROUGH DRILL STEM.

Depth

Depth

GAMMA RAY

0 A.P.I. Units 240 480

0

100

200

300

400

500

STATISTICAL VARIATIONS

CALIBRATION

BACKGROUND + TEST SOURCE

BACKGROUND

INSTRUMENT ZERO

GAMMA RAY CAL. on 240 A.P.I. UNITS PER TRACK

ENV 1243 (I)-28

PETROMIN N. L.

Gamma Ray Log

AREA 4 MILE CREEK.

WELL 355-26.

STATE SOUTH AUSTRALIA.

LOCATION

ELEVATION

D.F.

K.B.

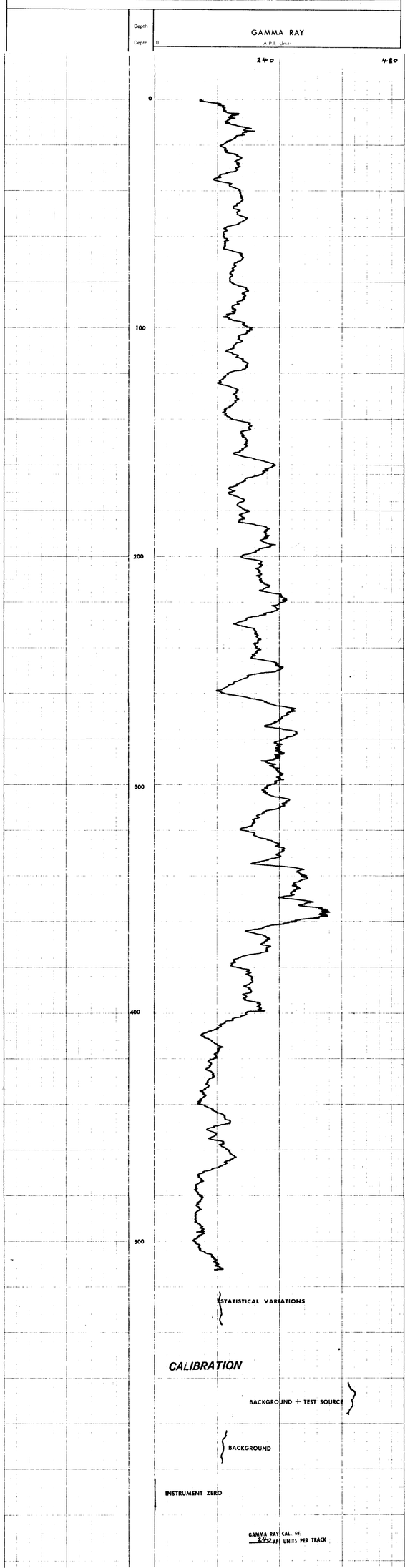
G.L.

PETROMIN N.L.
WELL 355-26
LOCATION 4 MILE CREEK.
STATE SOUTH AUSTRALIA.

	Run No. 1	Run No. 2
Date	8. APRIL 70	
First Reading	513'	
Last Reading	0'	
Footage Logged	513'	
Depth – Driller	550'	
Depth – Logger	515'	
Casing – Driller		
Casing – Logger		
Casing – Size		
Bit Size	4 3/4"	
Logged by	G. DAVIES.	
Witnessed by	P. TOY	

MUD	Run No. 1	Run No. 2
Nature	SUPER CAL	
Density		
Viscosity	@ °F	@ °F
Resistivity	@ °F	@ °F
Res. @ BHT	@ °F	@ °F
pH		
Circ. Temp.		
B.H. Temp.		
Tool Type	G. 10. C	
Tool Diam.	1"	
Cable Speed	15' PER MIN.	
Time Constant	5 SECS.	

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THROUGH DRILL STEM.
THICK MUD LAYER 265 - 266.
TEXTURE OF MUD TOO HEAVY FOR LOGGING BEYOND 513'



PETROMIN N.L. ENV 12B(I)-26

Gamma Ray Log

AREA 4. Mile Creek.

WELL 355·27

STATE South Australia

LOCATION

ELEVATION:
D.F.
K.B.
G.L.

WELL 355·27
LOCATION 4 Mile Creek
STATE South Australia
PETROMIN N.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	12 April 70.		Nature	NAT. BENTONITE	
First Reading	520'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	520		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	522'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G10C	
Bit Size	4 3/4"		Tool Diam.	1"	
			Cable Speed	15' per min.	
Logged by	G. DAVIES.		Time Constant	5 Sec.	
Witnessed by	R. THOMPSON.				

REMARKS Depth Datum is Ground Level
Log Recorded thru Drill Stem.

Depth	GAMMA RAY
Depth	0 A.P.I. Units

PETROMIN N.L. 1243(I)-27

Gamma Ray Log

AREA 4. MILE CREEK.

WELL 355. 28.

STATE SOUTH AUSTRALIA

LOCATION

ELEVATION D.F. K.B. G.L.

WELL 355. 28
LOCATION 4. MILE CREEK.
STATE SOUTH AUSTRALIA.
PETROMIN N.L.

	Run No. 1	Run No. 2
Date	11 APRIL. 70	
First Reading	518'	
Last Reading	0'	
Footage Logged	518'	
Depth – Driller	530'	
Depth – Logger	520'	
Casing – Driller		
Casing – Logger		
Casing – Size		
Bit Size	4 3/4"	
Logged by	G. DAVIES.	
Witnessed by	P. TOY.	

MUD	Run No. 1	Run No. 2
Nature	SUPER COL.	
Density		
Viscosity	@ °F	@ °F
Resistivity	@ °F	@ °F
Res. @ BHT	@ °F	@ °F
pH		
Circ. Temp.		
B.H. Temp.		
Tool Type	G. 10. C.	
Tool Diam.	1"	
Cable Speed	15' PER MIN.	
Time Constant	5. SECS.	

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THROUGH DRILL STEM.

Depth	GAMMA RAY
Depth	0 A.P.I. Units

EHV/248 (I)-28

PETROMIN N.L.

Gamma Ray Log

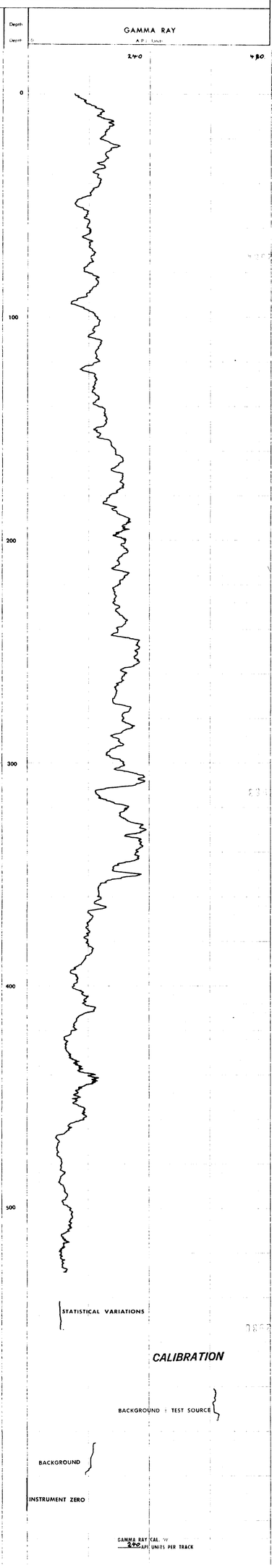
355 29
4 Mile Creek
South Australia

AREA 4 MILE CREEK
WELL 355 29
STATE SOUTH AUSTRALIA

ELEVATION: DF ____ KB ____ GL ____

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	13 APRIL 70		Nature	BENTONITE.	
First Reading	528		Density		
Last Reading	0		Viscosity	@ °F	@ °F
Footage Logged	528		Resistivity	@ °F	@ °F
Depth – Driller	530		Res. @ BHT	@ °F	@ °F
Depth – Logger	530		pH		
Casing – Driller			Circ. Temp		
Casing – Logger			B.H. Temp		
Casing – Size			Fluid Type	G. 10. C	
Bit Size	4 3/4		Fluid Diam	4	
			Cable Speed	15 PER MIN.	
Logged by	G. DAVIES.		Time Constant	5 SECS.	
Witnessed by	P. IDY				

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THROUGH DRILL STEM.



PETROMIN N.L. EMV 1243(I)-29

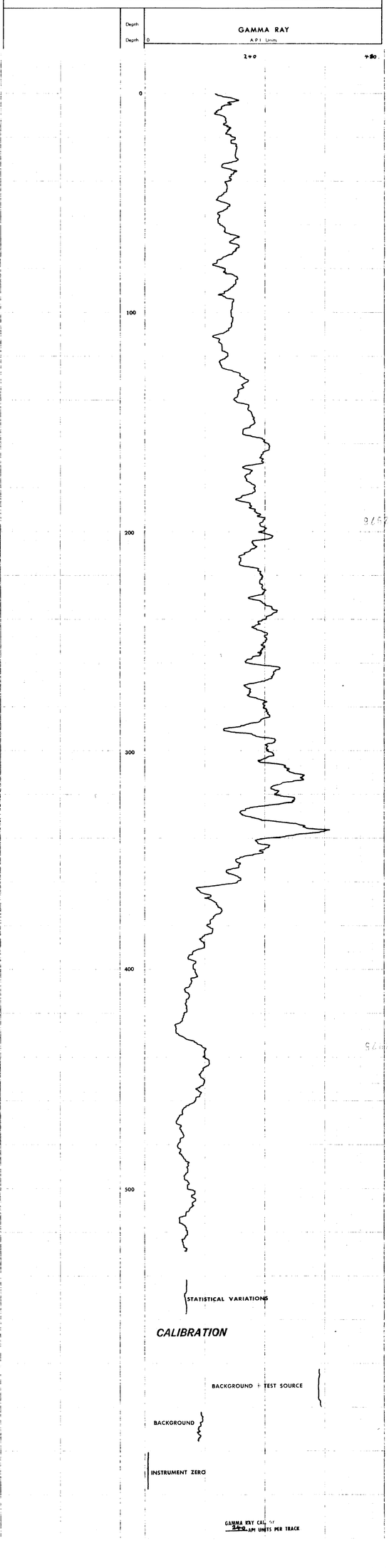
Gamma Ray Log

South Australia
4. Mile Creek
355 30

AREA 4. MILE CREEK.
WELL 355 30
STATE SOUTH AUSTRALIA.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	15. APRIL. 70.		Nature	BENTONITE.	
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth - Driller	530'		Res. @ BHT	@ °F	@ °F
Depth - Logger	530'		pH		
Casing - Driller			Circ. Temp.		
Casing - Logger			B.H. Temp.		
Casing - Size			Tool Type	G.10.C.	
Bit Size	4 3/4"		Tool Diam.	1¾"	
			Cable Speed	15' PER MIN	
Logged by	G. DAVIES.		Time Constant	5 SECS	
Witnessed by	P. LEADERMAN.				

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THROUGH DRILL STEM.



PETROMIN N.L. EHV 1243(I)-30

Gamma Ray Log

AREA 4. MILE CREEK

WELL 355 31

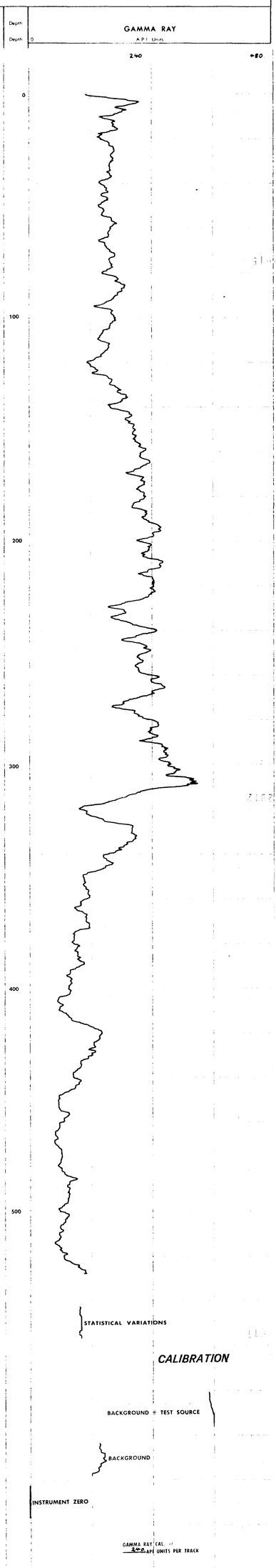
STATE SOUTH AUSTRALIA

RECEIVED -2 JUN 1970 DEPT. OF MINES SOUTH AUSTRALIA

SOUTH AUSTRALIA 355 31 4. MILE CREEK

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	16 APRIL 70		Nature	BENTONITE	
First Reading	528		Density		
Last Reading	0		Viscosity	@ °F	@ °F
Footage Logged	528		Resistivity	@ °F	@ °F
Depth - Driller	530		Res. @ BHT	@ °F	@ °F
Depth - Logger	530		pH		
Casing - Driller			Fluid Loss		
Casing - Logger			Tool Type	G. 10. C	
Casing - Size			Tool Diam.	1	
Bit Size	4 3/4		Cable Speed	15 PER MIN	
Logged by	G. DAVIES		Time Constant	2 SECS.	
Witnessed by	R. McKENNA				

REMARKS DEPTH DATUM IS GROUND LEVEL
LOG RECORDED THROUGH DRILL STEM



PETROMIN N.L. ENV 12143 (I)-31

Gamma Ray Log

AREA 4. MILE CREEK.

WELL 355 · 32.

LOCATION

ELEVATION:

STATE SOUTH AUSTRALIA.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	17. APRIL. 70.		Nature	BENTONITE	
First Reading	527'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	527'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res @ BHT	@ °F	@ °F
Depth – Logger	529'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp		
Casing – Size			Tool Type	G. 10. C	
Bit Size	4 3/4"		Tool Diam.	1"	
			Cable Speed	15' PER MIN.	
Logged by	G. DAVIES.		Time Constant	5 SECS	
Witnessed by	R. MKENNA.				

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THROUGH DRILL STEM.

WELL 355 · 32
4. MILE CREEK
SOUTH AUSTRALIA
PETROMIN N.L.

PETROMIN N.L. ENV 1243 (D-32)

Gamma Ray Log

RECEIVED - 2 JUN 1970 DEPT. OF MINES REGISTRY

AREA 4 MILE CREEK.

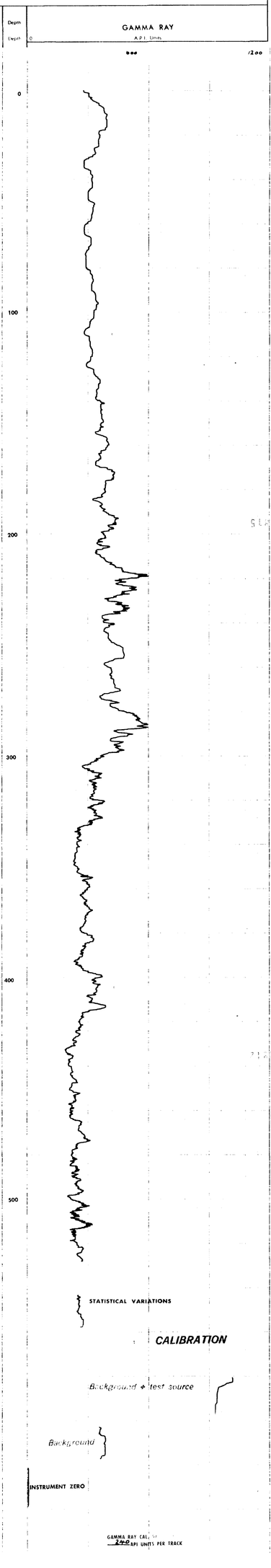
WELL 355 33

STATE SOUTH AUSTRALIA.

355 33 4 MILE CREEK SOUTH AUSTRALIA

	Run No. 1	Run No. 2		Run No. 1	Run No. 2
Date	18 APRIL 70		MUD — Nature	SUPER COL.	
First Reading	528'		Density		
Last Reading	0		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth - Driller	530'		Res. @ BHT	@ °F	@ °F
Depth - Logger	530'		pH		
Casing - Driller			Circ. Temp		
Casing - Logger			B.H. Temp		
Casing - Size			Tool Type	G. I.O.C.	
Bit Size	4¾"		Tool Diam.	1"	
			Cable Speed	15 PER MIN	
Logged by	G. DAVIES.		Time Constant	5 SECS.	
Witnessed by	R. McKENNA.				

REMARKS. DEPTH DATUM IS GROUND LEVEL
LOG RECORDED THROUGH DRILL STEM.



PETROMIN N. L. EHV 1243 (I) 35

Gamma Ray Log

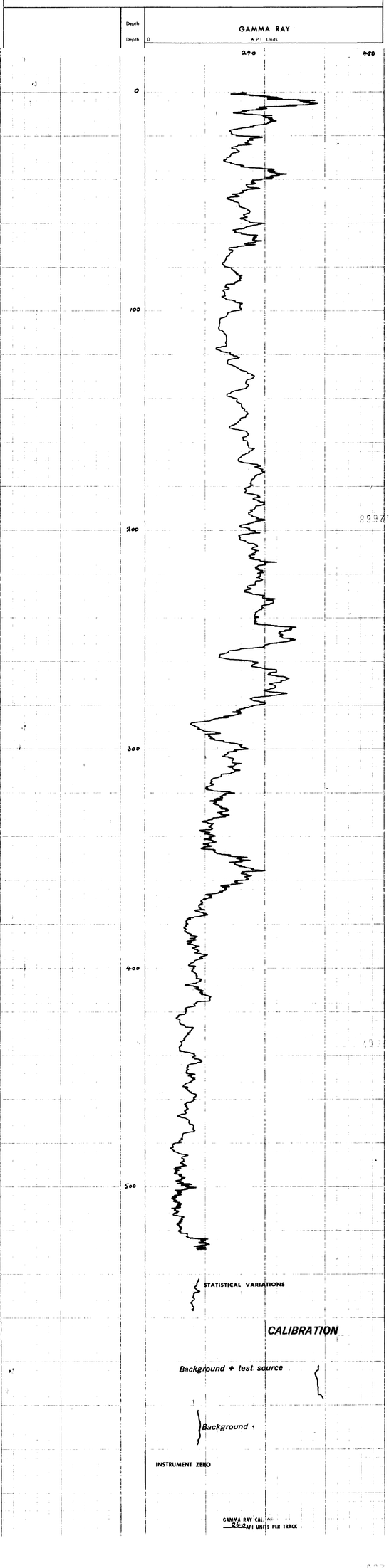
AREA 4 MILE CREEK.
WELL 355 : 34
STATE SOUTH AUSTRALIA.

LOCATION: 2 JUN 19
ELEVATION:
D.F.
K.B.
G.L.

WELL 355 : 34
LOCATION 4 MILE CREEK
STATE SOUTH AUSTRALIA.
PETROMIN N.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	19 APRIL 70		Nature		
First Reading	528'		Density		
Last Reading	0		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	530'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G. 10. C	
Bit Size	4 3/4"		Tool Diam.	1"	
			Cable Speed	15' PER MIN.	
Logged by	G. DAVIES.		Time Constant	5. SECS.	
Witnessed by	R. McKENNA.				

REMARKS DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THROUGH DRILL STEM.



PETROMIN N.L. EHV/1243(I)-34

Gamma Ray Log

AREA 4 MILE CREEK.

WELL 355 35.

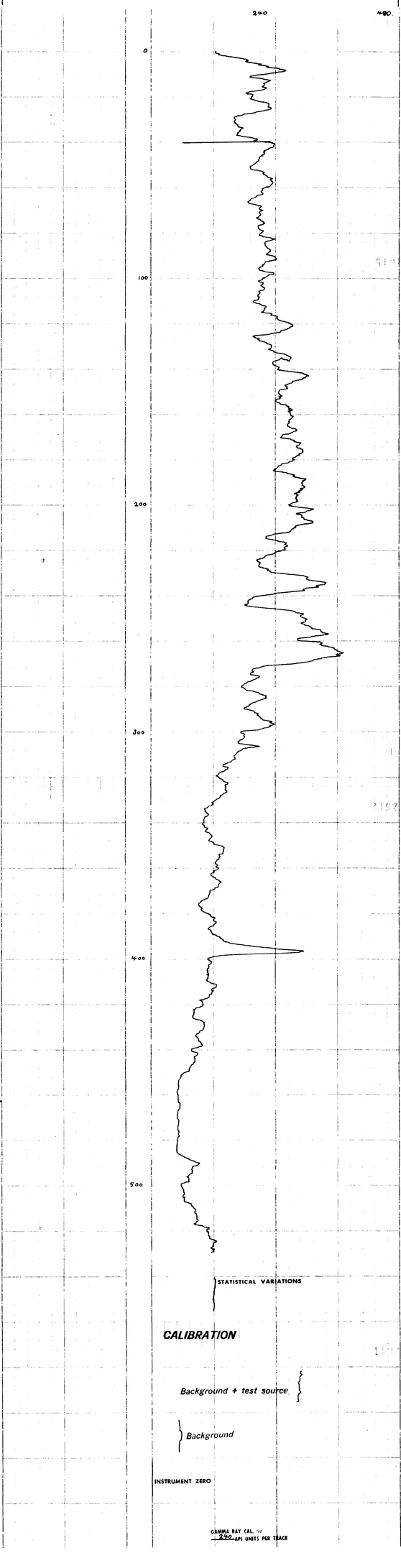
STATE SOUTH AUSTRALIA.

RECEIVED 2 JUN 1970

WELL 355 35. 4 MILE CREEK. SOUTH AUSTRALIA

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	20 APRIL 70.		Nature	NAT. BENTONITE.	
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	530'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G. 10 C	
Bit Size	4 3/4"		Tool Diam.	1"	
			Cable Speed	15' PER MIN.	
Logged by	G. DAVIES.		Time Constant	5 SECS.	
Witnessed by	R. M°KENNA.				

REMARKS. DEPTH DATUM IS GROUND LEVEL.
LOG RECORDED THROUGH DRILL STEM.
LINE ON LOG GRABBY DUE TO ERROR AT 40'
BETWEEN 120' – 160' PAPER CAME OFF PAPER DRUM
TRYING TO STRAIGHTEN SAME, ENDED IN ERRATIC PEN MOVEMENT.



PETROMIN N.L. EHV 1243(I)-35

Gamma Ray Log

WELL 355 36 · LOCATION Yadlin Dam. · STATE South Australia. · PETROMIN N.L.

AREA Yadlin Dam.

WELL 355. 36.

STATE South Australia.

LOCATION

ELEVATION

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	4 MAY 70		Nature	[illegible]	
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	530'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G10C	
Bit Size	4¾"		Tool Diam.	1"	
			Cable Speed	15' per Min.	
Logged by	P. TOY.		Time Constant	5 Sec.	
Witnessed by	P. LADEMAN				

REMARKS Depth Datum is Ground Level
Log Recorded through Drill Stem.

PETROMIN N. L. ENV 1243(I)-36

Gamma Ray Log

RECEIVED
2 JUL 1970
DEPARTMENT OF MINES
REGISTRY
ADELAIDE

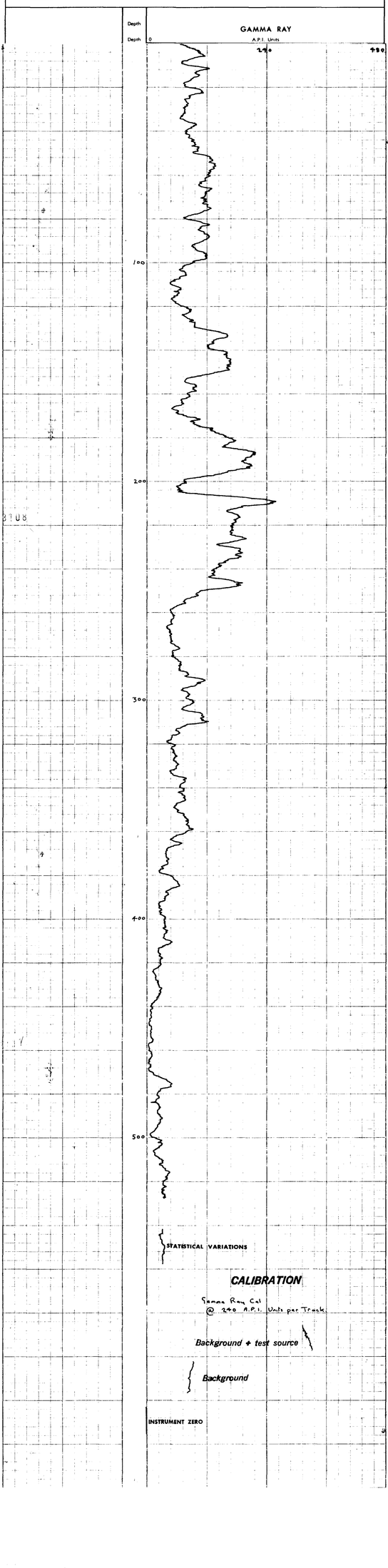
AREA Yadlin Dam.
WELL 355 37
STATE South Australia.

WELL 355 37
LOCATION Yadlin Dam.
STATE South Australia
PETROMIN N.L.

	Run No. 1	Run No. 2
Date	5 MAY 70	
First Reading	528'	
Last Reading	0'	
Footage Logged	529'	
Depth – Driller	530'	
Depth – Logger	530'	
Casing – Driller		
Casing – Logger		
Casing – Size		
Bit Size	4 3/4"	
Logged by	P. TOY.	
Witnessed by	P. LADEMAN.	

MUD	Run No. 1	Run No. 2
Nature	NAT BENTONITE	
Density		
Viscosity	@ °F	@ °F
Resistivity	@ °F	@ °F
Res. @ BHT	@ °F	@ °F
pH		
Circ. Temp.		
B.H. Temp.		
Tool Type	GIOC	
Tool Diam.	1"	
Cable Speed	15 per Min	
Time Constant	5 Sec	

REMARKS Depth Datum is Ground Level
Log Recorded through Drill Stem



PETROMIN N.L. EHN 1243(I)-37

Gamma Ray Log

RECEIVED
2 JUN 1970
DEPT. OF MINES
ADELAIDE

AREA Yadlin Dam
WELL 355.38
STATE South Australia

LOCATION
ELEVATION
DF
KB
GL

WELL 355.38
LOCATION Yadlin Dam
STATE South Australia
PETROMIN N.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	6 MAY 70		Nature	NAT BENTONITE	
First Reading	528'		Density		
Last Reading	0		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	530'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	GIOC	
Bit Size	9⅞"		Tool Diam.	1"	
			Cable Speed	15' per Min.	
Logged by	P TOY		Time Constant	5 Sec.	
Witnessed by	P LAPEMAN				

REMARKS Depth Datum is Ground Level
Log Recorded through Drill Stem.

Depth
Depth

GAMMA RAY
API Units
0
240
480

100
200
300
400
500

STATISTICAL VARIATIONS

CALIBRATION

GAMMA RAY CAL. @
240 API UNITS PER TRACK

BACKGROUND + TEST SOURCE

BACKGROUND

INSTRUMENT ZERO

PETROMIN N. L.

ENV 1243(I)-38

Gamma Ray Log

AREA: Yadlin Dam

WELL: 355 39.

STATE: South Australia.

LOCATION:

ELEVATION:
D.F.
K.B.
G.L.

WELL: 355 39.
LOCATION: Yadlin Dam
STATE: S.A.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	7 MAY 70		Nature	Super Cal	
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	530'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type		
Bit Size	4 7/8"		Tool Diam.	1"	
			Cable Speed	15' per Min.	
Logged by	P.TOY.		Time Constant	5 Sec.	
Witnessed by	PLADEMAN				

REMARKS: Depth Datum is Ground Level
Log Recorded through Drill Stem.

Depth
Depth 0

GAMMA RAY
A.P.I. Units
240

100
200
3256
300
400
528
500

STATISTICAL VARIATIONS

CALIBRATION

GAMMA RAY CAL. @
200 API UNITS PER TRACK

BACKGROUND + TEST SOURCE

BACKGROUND

INSTRUMENT ZERO

BMV 1243 (D-39)

PETROMIN N.L.

Gamma Ray Log

AREA: Yadlin Dam

WELL: 355.40

STATE: South Australia

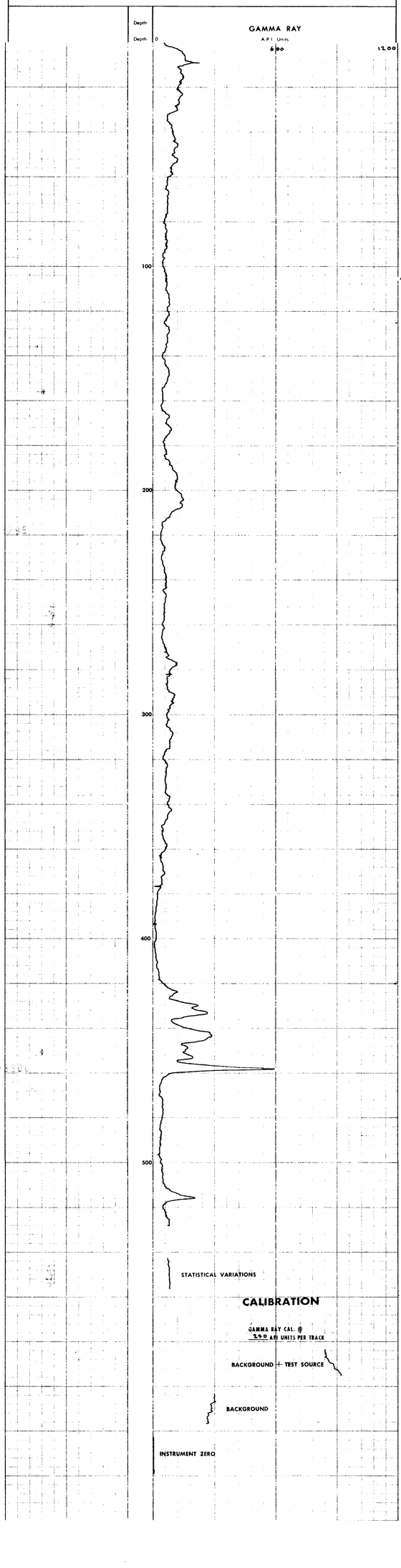
LOCATION:

ELEVATION:
D.F.
K.B.
G.L.

PETROMIN N.L.
WELL: 355.40
LOCATION: Yadlin Dam
STATE: South Australia

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	8 MAY 70		Nature	Super Col.	
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	530'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	GIOC.	
Bit Size	7⅞"		Tool Diam.	1"	
			Cable Speed	15' per Min.	
Logged by	P. TOY.		Time Constant	5 Sec	
Witnessed by	P. LAPEMAN				

REMARKS: Depth Datum is Ground Level
Log Recorded through Drill Stem.



PETROMIN N. L. EHV 1243(I)-46

Gamma Ray Log

AREA: Yadla Dam
WELL: 355.41
STATE: South Australia

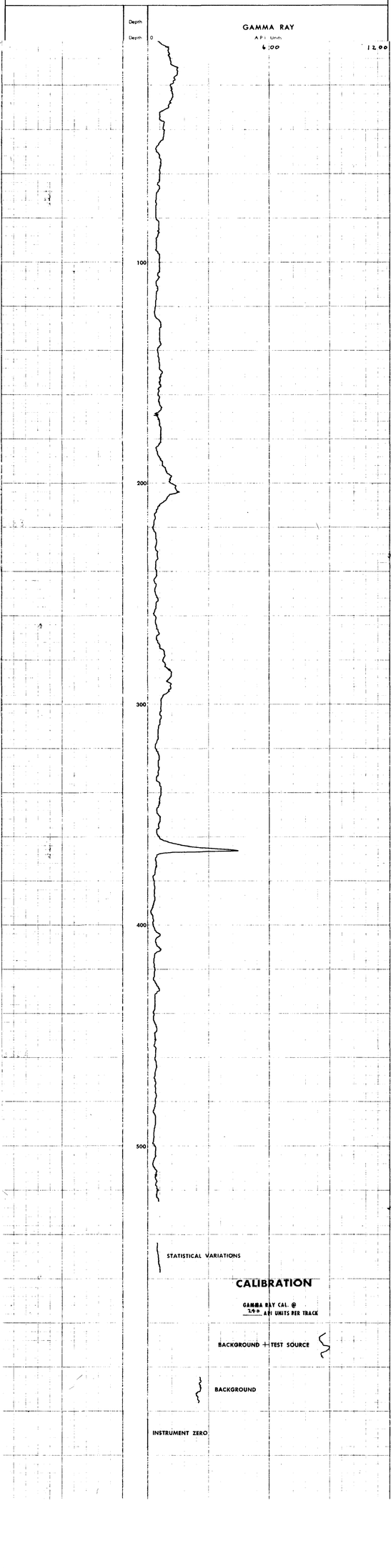
LOCATION:
ELEVATION:
D.F.
K.B.
G.L.

WELL: 355.41 PETROMIN N.L.
LOCATION: Yadla Dam
STATE: South Australia

	Run No. 1	Run No. 2
Date	9 MAY 70	
First Reading	525'	
Last Reading	0	
Footage Logged	525'	
Depth – Driller	528'	
Depth – Logger	527'	
Casing – Driller		
Casing – Logger		
Casing – Size		
Bit Size	4¾"	
Logged by	P. TOY	
Witnessed by	P. LADEDAN	

MUD	Run No. 1	Run No. 2
Nature	Super Cal.	
Density		
Viscosity	@ °F	@ °F
Resistivity	@ °F	@ °F
Res. @ BHT	@ °F	@ °F
pH		
Circ. Temp.		
B.H. Temp.		
Tool Type	G10C	
Tool Diam.	1"	
Cable Speed	15 per Min	
Time Constant	5 Sec.	

REMARKS: Depth Datum is Ground Level
Log Recorded through Drill Stem.



PETROMIN N. L. ENV 1243 (I)-41

Gamma Ray Log

AREA Yadlin Dam

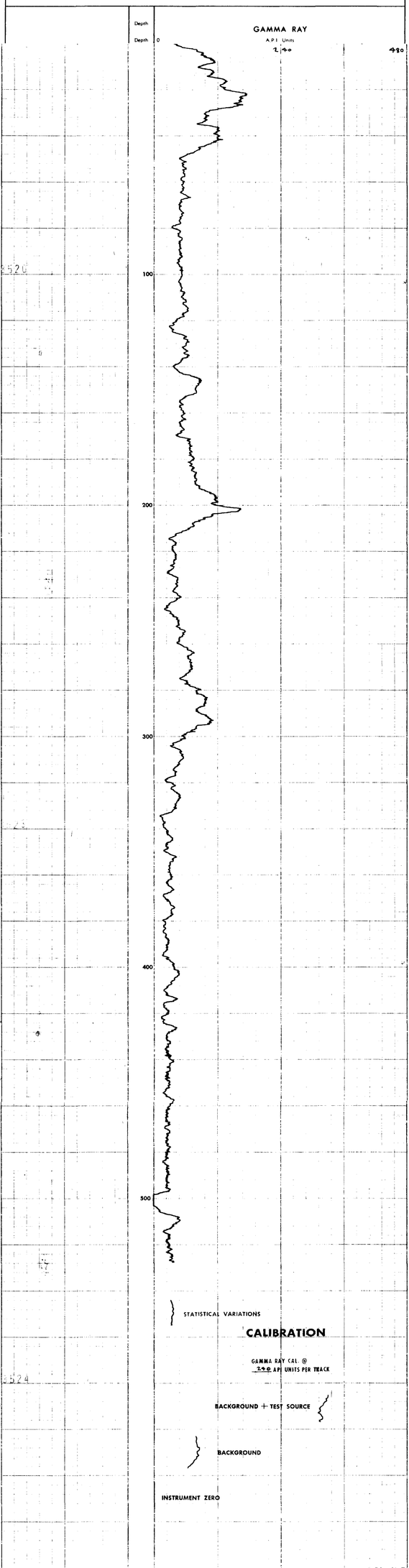
WELL 355.42

STATE South Australia

WELL 355.42
LOCATION Yadlin Dam
STATE South Australia
PETROMIN N.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	11 MAY 70		Nature	—	
First Reading	528'		Density		
Last Reading	0		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	530'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	G10S	
Bit Size	9⅞"		Tool Diam.	1"	
			Cable Speed	15 per Min	
Logged by	P TOY		Time Constant	5 Sec.	
Witnessed by	P. LAPEMAN.				

REMARKS Depth Datum is Ground Level
Log Recorded through Drill Stem.



PETROMIN N. L.

ENV 1243(I)-42

Gamma Ray Log

RECEIVED 2 JUN 1970 DEPT. OF MINES REGISTRY

AREA Yadgla Dam

WELL 355 43

STATE South Australia

WELL 355 43 LOCATION Yadgla Dam STATE South Australia PETROMIN N.L.

	Run No. 1	Run No. 2	MUD	Run No. 1	Run No. 2
Date	11 MAY 1970		Nature	—	
First Reading	528'		Density		
Last Reading	0'		Viscosity	@ °F	@ °F
Footage Logged	528'		Resistivity	@ °F	@ °F
Depth – Driller	530'		Res. @ BHT	@ °F	@ °F
Depth – Logger	530'		pH		
Casing – Driller			Circ. Temp.		
Casing – Logger			B.H. Temp.		
Casing – Size			Tool Type	GIOC	
Bit Size	4¾"		Tool Diam.	1"	
			Cable Speed	15 per Min	
Logged by	P TOY		Time Constant		
Witnessed by	P LADEMAN				

REMARKS Depth Datum is Ground Level
Log Recorded through Drill Stem.