PEP 105
OTWAY BASIN

HENKE NO. 1

WELL COMPLETION REPORT

TEXT & APPENDICES

BY

B.L. RAYNER
FEBRUARY
1988

BEACH PETROLEUM N.L.

(Incorporated in South Australia)

W962

HENKE NO. 1.

WELL COMPLETION REPORT

by

B.L. RAYNER

For : Beach Petroleum N.L.
685 Burke Road,
CAMBERWELL.....3124
VICTORIA.

February 1988.

CONTENTS

	Page Number
SUMMARY	
1. INTRODUCTION	1
2. WELL HISTORY	2
2.1 Location	2
2.2 General Data	2
2.3 Drilling Data	5
2.3.1 Drilling Contractor	5
2.3.2 Drilling Rig	5
2.3.3 Casing and Cementing Details	5
2.3.4 Drilling Fluid	6
2.3.5 Water Supply	8
2.4 Formation Sampling and Testing	8
2.4.1 Cuttings	8
2.4.2 Cores	8
2.4.3 Tests	9
2.5 Logging and Surveys	10
2.5.1 Mud Logging	10
2.5.2 Wireline Logging	10
2.5.3 Deviation Surveys	11
2.5.4 Velocity Survey	12
3. RESULTS OF DRILLING	13
3.1 Stratigraphy	13
3.2 Lithological Descriptions	13
3.2.1 Heytesbury Group	13
3.2.2 Wangerrip Group	13
3.2.3 Sherbrook Group	18
3.3 Hydrocarbon Indications	19
3.3.1 Mud Gas Readings	19
3.3.2 Sample Fluorescence	19

Page Number

4. GEOLOGY 20

4.1 Structure 20

4.1.1 Seismic 20

4.2 Porosity and Water Saturation 20

4.3 Maturation and Source Rock Analysis 24

4.3.1 Maturation/Organic Type 24

4.3.2 Total Organic Carbon 26

4.4 Relevance to Occurrence of Hydrocarbons 26

ENCLOSURES

1. Composite Well Log.
2. Exlog Mud Log.
3. Schlumberger Wireline Logs.

Log	Run No.	Scale
BHC-GR	1	1:200
BHC-GR	1	1:500
DLL-MSFL-GR	1	1:200
DOO-MSFL-GR	1	1:500
LDL-CNL-GR	1	1:200 & 1:500
CST	1	1:200
Check Shot Survey	1	1:200
Cyberlook	1	1:200
Seismic Calibration Log		
Geogram		

APPENDIX - 6

APPENDIX 6

Maturation and Source Rock Analysis

K.K. No.	Depth (m)	$\bar{R}_v$max	Range	N	Description Including Exinite Fluorescence
x7004	1250 Core	0.46	0.33-0.55	27	Rare ?phytoplankton, greenish yellow and yellow to orange, rare cutinite, orange. (Siltstone>claystone. Dom common, V>I>E. Vitrinite common, inertinite spare, exinite rare. Diffuse humic organic matter present. Rare sclerotinite. Pyrite abundant.)
x7005	1327.5 Core	0.56	0.44-0.60	7	Rare ?phytoplankton, greenish yellow, rare liptodetrinite, orange to dull orange. (Carbonaceous shale and sandstone. Dom common, I>V>E. Inertinite common, vitrinite and exinite rare. Diffuse humic organic matter possibly related to bituminite, major. Very fine particles of humic organic matter probably represent chemically/biochemically altered ?vitrinite. Pyrite abundant.)
	$\bar{R}_I$	0.90	0.64-1.44	25	
x7006	1365 Core	0.43	0.30-0.64	28	Sparse sporinite, orange to dull orange, sparse ?phytoplankton, greenish yellow and yellow to orange, rare to sparse cutinite, orange, rare resinite, yellow, rare Botryococcus-related telalginite, bright yellow. (Siltstone. Dom abundant, V>I>E. Vitrinite and inertinite abundant, exinite common. Diffuse humic organic matter abundant. Abundant micrinite in some vitrinite. Pyrite common.)
x7007	1382 Core	0.47	0.37-0.60	27	Sparse sporinite, orange to dull orange, sparse ?phytoplankton, orange to dull orange, rare resinite, yellow, rare cutinite, orange. (Siltstone. Dom abundant, I>V>E. Inertinite and vitrinite abundant, exinite sparse. Diffuse humic organic matter abundant. Rare sclerotinite. Pyrite sparse.)

VITRINITE REFLECTANCE WORKSHEET

WELL NAME: Henke-1 SAMPLE NO: X7007 DEPTH: 1382m TYPE: Core

FGV = First Generation Vitrinite I = Inertinite

Ro %	No. Read	Pop Rnge	Pop Type	Ro %	NO. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	NO. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type
.10				.46	5			.82				1.18				1.54				1.90			
.11				.47	2			.83				1.19				1.55				1.91			
.12				.48	2			.84				1.20				1.56				1.92			
.13				.49	2			.85				1.21				1.57				1.93			
.14				.50				.86				1.22				1.58				1.94			
.15				.51	1	FGV		.87				1.23				1.59				1.95			
.16				.52	1			.88				1.24				1.60				1.96			
.17				.53	1			.89				1.25				1.61				1.97			
.18				.54				.90				1.26				1.62				1.98			
.19				.55				.91				1.27				1.63				1.99			
.20				.56	1			.92				1.28				1.64				2.00			
.21				.57	1			.93				1.29				1.65							
.22				.58				.94				1.30				1.66							
.23				.59				.95				1.31				1.67							
.24				.60	1			.96				1.32				1.68							
.25				.61				.97				1.33				1.69							
.26				.62				.98				1.34				1.70							
.27				.63				.99				1.35				1.71							
.28				.64				1.00				1.36				1.72							
.29				.65				1.01				1.37				1.73							
.30				.66				1.02				1.38				1.74							
.31				.67				1.03				1.39				1.75							
.32				.68				1.04				1.40				1.76							
.33				.69				1.05				1.41				1.77							
.34				.70				1.06				1.42				1.78							
.35				.71				1.07				1.43				1.79							
.36				.72				1.08				1.44				1.80							
.37	1			.73				1.09				1.45				1.81							
.38				.74				1.10				1.46				1.82							
.39				.75				1.11				1.47				1.83							
.40	2			.76				1.12				1.48				1.84							
.41				.77				1.13				1.49				1.85							
.42	1			.78				1.14				1.50				1.86							
.43	2			.79				1.15				1.51				1.87							
.44	2			.80				1.16				1.52				1.88							
.45	2			.81				1.17				1.53				1.89							

Organic matter Comp. (%)

Exinite	Alginite
0.2	0

Vitrinite	Inertinite
2.5	3.0

Kelraville Konsultants Pty Ltd.

VITRINITE REFLECTANCE WORKSHEET

WELL NAME: Henke-1 SAMPLE NO: X7006 DEPTH: 1365 m TYPE: Core

FGV = First Generation Vitrinite I = Inertinite

Ro %	No. Read	Pop Rnge	Pop Type	Ro %	NO. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	NO. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type
.10				.46				.82				1.18				1.54				1.90			
.11				.47	2			.83				1.19				1.55				1.91			
.12				.48	1			.84				1.20				1.56				1.92			
.13				.49				.85				1.21				1.57				1.93			
.14				.50	1			.86				1.22				1.58				1.94			
.15				.51				.87				1.23				1.59				1.95			
.16				.52				.88				1.24				1.60				1.96			
.17				.53	2			.89				1.25				1.61				1.97			
.18				.54				.90				1.26				1.62				1.98			
.19				.55				.91				1.27				1.63				1.99			
.20				.56				.92				1.28				1.64				2.00			
.21				.57		FGV		.93				1.29				1.65							
.22				.58				.94				1.30				1.66							
.23				.59				.95				1.31				1.67							
.24				.60				.96				1.32				1.68							
.25				.61				.97				1.33				1.69							
.26				.62				.98				1.34				1.70							
.27				.63				.99				1.35				1.71							
.28				.64	1			1.00				1.36				1.72							
.29				.65				1.01				1.37				1.73							
.30	1			.66				1.02				1.38				1.74							
.31				.67				1.03				1.39				1.75							
.32				.68				1.04				1.40				1.76							
.33				.69				1.05				1.41				1.77							
.34				.70				1.06				1.42				1.78							
.35				.71				1.07				1.43				1.79							
.36	1			.72				1.08				1.44				1.80							
.37	2			.73				1.09				1.45				1.81							
.38	2			.74				1.10				1.46				1.82							
.39	7			.75				1.11				1.47				1.83							
.40	1			.76				1.12				1.48				1.84							
.41	4			.77				1.13				1.49				1.85							
.42	2			.78				1.14				1.50				1.86							
.43	1			.79				1.15				1.51				1.87							
.44	3			.80				1.16				1.52				1.88							
.45	2			.81				1.17				1.53				1.89							

Organic matter Comp.(%)

Exinite	Alginite
0.6	<0.1

Vitrinite	Inertinite
3.5	2.0

Kelraville Konsultants Pty Ltd.

VITRINITE REFLECTANCE WORKSHEET

WELL NAME: Henke-1 SAMPLE NO. X7005 DEPTH: 1327.5m TYPE: Cove

FGV = First Generation Vitrinite I = Inertinite

Ro %	No. Read	Pop Rnge	Pop Type	Ro %	NO. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	NO. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type
.10				.46				.82				1.18	1			1.54				1.90			
.11				.47				.83				1.19				1.55				1.91			
.12				.48				.84				1.20	1			1.56				1.92			
.13				.49				.85				1.21				1.57				1.93			
.14				.50				.86				1.22				1.58				1.94			
.15				.51	2			.87				1.23				1.59				1.95			
.16				.52				.88	1			1.24				1.60				1.96			
.17				.53	1			.89				1.25				1.61				1.97			
.18				.54				.90	1			1.26				1.62				1.98			
.19				.55				.91				1.27				1.63				1.99			
.20				.56				.92				1.28				1.64				2.00			
.21				.57		PGV		.93				1.29				1.65							
.22				.58	2			.94	1			1.30	1			1.66							
.23				.59				.95				1.31				1.67							
.24				.60	3			.96				1.32				1.68							
.25				.61				.97				1.33				1.69							
.26				.62				.98				1.34				1.70							
.27				.63				.99				1.35				1.71							
.28				.64	1			1.00	1			1.36				1.72							
.29				.65				1.01				1.37				1.73							
.30				.66	1			1.02				1.38				1.74							
.31				.67				1.03				1.39				1.75							
.32				.68	2			1.04				1.40				1.76							
.33				.69				1.05				1.41				1.77							
.34				.70	2			1.06				1.42				1.78							
.35				.71				1.07				1.43				1.79							
.36				.72	1			1.08	2			1.44	2			1.80							
.37				.73		INERT	NITE	1.09				1.45				1.81							
.38				.74	5			1.10				1.46				1.82							
.39				.75				1.11				1.47				1.83							
.40				.76	1			1.12				1.48				1.84							
.41				.77				1.13				1.49				1.85							
.42				.78				1.14				1.50				1.86							
.43				.79				1.15				1.51				1.87							
.44	1			.80	1			1.16				1.52				1.88							
.45				.81				1.17				1.53				1.89							

Organic matter Comp.(%)

Exinite	Alginite
<0.1	0

Vitrinite	Inertinite
<0.1	0.6

Keiraville Konsultants Pty Ltd.

WELL NAME Henke-1 SAMPLE NO. X7004 DEPTH 1250m TYPE Core

FGV = First Generation Vitrinite I = Inertinite

Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type	Ro %	No. Read	Pop Rnge	Pop Type
.10				.46				.82				1.18				1.54				1.90			
.11				.47	2			.83				1.19				1.55				1.91			
.12				.48	1			.84				1.20				1.56				1.92			
.13				.49	1			.85				1.21				1.57				1.93			
.14				.50	2			.86				1.22				1.58				1.94			
.15				.51	1			.87				1.23				1.59				1.95			
.16				.52	1			.88				1.24				1.60				1.96			
.17				.53	1			.89				1.25				1.61				1.97			
.18				.54	1			.90				1.26				1.62				1.98			
.19				.55	2			.91				1.27				1.63				1.99			
.20				.56				.92				1.28				1.64				2.00			
.21				.57				.93				1.29				1.65							
.22				.58				.94				1.30				1.66							
.23				.59				.95				1.31				1.67							
.24				.60				.96				1.32				1.68							
.25				.61				.97				1.33				1.69							
.26				.62				.98				1.34				1.70							
.27				.63				.99				1.35				1.71							
.28				.64				1.00				1.36				1.72							
.29				.65				1.01				1.37				1.73							
.30				.66				1.02				1.38				1.74							
.31				.67				1.03				1.39				1.75							
.32				.68				1.04				1.40				1.76							
.33	1			.69				1.05				1.41				1.77							
.34				.70				1.06				1.42				1.78							
.35				.71				1.07				1.43				1.79							
.36				.72				1.08				1.44				1.80							
.37				.73				1.09				1.45				1.81							
.38	2			.74				1.10				1.46				1.82							
.39	1			.75				1.11				1.47				1.83							
.40	1	FGV		.76				1.12				1.48				1.84							
.41	1			.77				1.13				1.49				1.85							
.42	2			.78				1.14				1.50				1.86							
.43	3			.79				1.15				1.51				1.87							
.44	1			.80				1.16				1.52				1.88							
.45				.81				1.17				1.53				1.89							

Organic matter Comp.(%)

Exinite	Alginite
<0.1	0

Vitrinite	Inertinite
1.0	0.3

Kelraville Konsultants Pty Ltd.

HENKE NO. 1

KK No.	Depth (m)	TOC
x7004	1250	0.92%
x7005	1327.5	4.18%
x7006	1365	5.62%
x7007	1382	3.93%