PR - WILLOW CREEK 81(3)A

ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W M	
COMPANY	G.A. NOEL & ASSOCIATES INC.
WELL	DDH 81 - 45
LOCATION	
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
Other Services:	GRN, DIR
Permanent Datum	GROUND LEVEL
Elev.	
Log Measured from	RIG FLOOR 0.3M Above Perm. Datum
Well Depths Measured from	RIG FLOOR
K.B.	
CSG	
G.L.	
	METRIC

Run. No.	ONE		
Date	1 NOV 1981		
First Reading	159.5M		
Last Reading	0		
Footage Logged	159.5		
Depth Reached	160.5		
Depth Driller	166.6		
Casing Roke			
Casing Driller	3.0		
Fluid Type	MUD/WATER		
Liquid Level	0		
Min. Diam.	HQ		
Operating Time	45 MIN		690
Truck No.	132/FU3		

Recorded By HILLIS Witnessed By MARTON

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV
ONE	0	159.5	7					0.5	1000	2.22R	43.85

REMARKS DENSILOG THROUGH HQ RODS

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

Pr- Willow Creek 81(3)A

FILE NO.

LSD
SEC
TWP
RGE
W_____M

COMPANY G.A. NOEL & ASSOCIATES INC.

WELL DDH 81 - 45

LOCATION

FIELD WILLOW CREEK

PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.

Log Measured from RIG FLOOR 0.3M Above Perm. Datum

Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.

METRIC

Run. No.	ONE
Date	1 NOV 1981
First Reading	159.5M
Last Reading	0
Footage Logged	159.5
Depth Reached	161.5
Depth Driller	166.6
Casing Roke	
Casing Driller	3.0
Fluid Type	MUD/WATER
Liquid Level	0
Min. Diam.	HQ
Rm @	
Operating Time	40 MIN
Truck No.	132/FU3
Recorded By	HILLIS
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0CM	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	132/FU3	SPACING	38.1CM
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	125A007	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS. SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	159.5	4	3	100	0	13	3	1000	0	750

REMARKS LOGGED THROUGH HQ RODS

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API 13		API 750
0 130		0 7500 15000

Pa - Willow Creek 81(3)D

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY G.A. NOEL AND ASSOCIATES INC.
WELL DDH 81 - 46
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	4 NOV 1981
First Reading	150M
Last Reading	0
Footage Logged	150
Depth Reached	150.5
Depth Driller	158.5
Casing Roke	11.5
Casing Driller	11.3
Fluid Type	WATER
Liquid Level	0
Min. Diam.	HQ
Rm @	
Operating Time	40 MIN
Truck No.	132/FU3
Recorded By	HILLIS
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0CM	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	132/FU3	SPACING	38.1CM
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	125A007	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	150	4	3	100	0	13	3	1000	0	130

REMARKS LOGGED THROUGH HQ RODS

Re Willow Creek 81/3A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG

CALIPER

FILE NO.

LSD
SEC
TWP
RGE
W M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 46
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: GRN, DIR

Permanent Datum • GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.

METRIC

Run. No.	ONE
Date	4 NOV 1981
First Reading	150M
Last Reading	0
Footage Logged	150M
Depth Reached	158.5
Depth Driller	158.5
Casing Roke	11.5
Casing Driller	11.3
Fluid Type	WATER
Liquid Level	0
Min. Diam.	HQ
Operating Time	40 MIN
Truck No.	132/FU3
Recorded By	HILLIS
Witnessed By	MARTON

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/ MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
ONE	0	150	8					0.5	1000	2.22R	43.85

REMARKS DENSILOG THROUGH HQ RODS

Re - Willow Creek 81(3A)

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG
CALIPER

FILE NO.

LSD

SEC

TWP

RGE

W _____ M

COMPANY G.A. NOEL & ASSOCIATES INC.

WELL DDH 81 - 44

LOCATION

FIELD WILLOW CREEK

PROVINCE BRITISH COLUMBIA

Other Services: GRN, DIR

Permanent Datum GROUND LEVEL Elev.

Log Measured from RIG FLOOR 0.3M Above Perm. Datum

Well Depths Measured from RIG FLOOR

K.B.

CSG

G.L.

METRIC

Run. No.	ONE
Date	29 OCT 1981
First Reading	151M
Last Reading	0
Footage Logged	151
Depth Reached	156.5
Depth Driller	157
Casing Roke	3.5
Casing Driller	3.4
Fluid Type	AIR/WATER
Liquid Level	
Min. Diam.	HQ
Operating Time	40 MIN
Truck No.	132/FU3
Recorded By	HILLIS
Witnessed By	MARTON

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV
ONE	0	151	7					0.5	1000	2.22R	43.85

REMARKS DENSILOG THROUGH HQ RODS

DEPTHS

CALIPER
DIAMETER – CM

5 10 15 20 25

BULK DENSITY
(GRAMS/CC)

Pr - Willow Creek 81(3)A

ROKE SIDEWALL DENSILOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W ______ M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 40
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: GRN

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE		
Date	22 OCT 1981		
First Reading	40M		
Last Reading	0		
Footage Logged	40		
Depth Reached	44		
Depth Driller			
Casing Roke			
Casing Driller			
Fluid Type	WATER/GEL		
Liquid Level	0		
Min. Diam.	HQ		
Operating Time	6 MIN		
Truck No.	132/FU3		

Recorded By HILLIS Witnessed By MARTON

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV
ONE	0	40	7					0.5	1000	2.22R	43.85

REMARKS LOGGED THROUGH HQ RODS

Re. Willow Creek 81(3)D

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

LSD
SEC
TWP
RGE
W______M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 33
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services:
DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	5 OCT 1981
First Reading	290
Last Reading	0
Footage Logged	290
Depth Reached	293
Depth Driller	293
Casing Roke	19.5
Casing Driller	18.3
Fluid Type	WATER/GEL
Liquid Level	0
Min. Diam.	HQ
Rm @	
Operating Time	
Truck No.	106
Recorded By	SERAFINI
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	38.1CM
INSTRUMENT TRUCK NO.	106	TYPE	AmBe
TOOL SERIAL NO.	125A001	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	290	4	3	100	0	12	3	5K	0	120

REMARKS RIG #44 LOGGED THROUGH HQ RODS

Re- Willow Creek 81(3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG

CALIPER

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W	M
COMPANY	G.A. NOEL & ASSOCIATES INC.
WELL	DDH 81 - 33
LOCATION	
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
Other Services:	GRN, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	5 OCT 1981
First Reading	290
Last Reading	0
Footage Logged	290
Depth Reached	293
Depth Driller	293
Casing Roke	19.5
Casing Driller	18.3
Fluid Type	WATER/GEL
Liquid Level	0
Min. Diam.	HQ
Operating Time	
Truck No.	106
Recorded By	SERAFINI
Witnessed By	MARTON

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/ MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
ONE	0	290	7		MOUNTAIN	COAL		.3	1K	2.2R	43.85

REMARKS RIG #44 LOGGED THROUGH HQ RODS

DEPTHS

CALIPER
DIAMETER – CM

BULK DENSITY
(GRAMS/CC)

Re. Willow Creek 81 (3A)

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG

CALIPER

FILE NO.

LSD
SEC
TWP
RGE
W M

COMPANY G.A. NOEL & ASSOCIATES INC.

WELL DDH 81 - 34

LOCATION

FIELD WILLOW CREEK

PROVINCE BRITISH COLUMBIA

Other Services: GRN, DIR

Permanent Datum GROUND LEVEL Elev.

Log Measured from RIG FLOOR 0.3 Above Perm. Datum

Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.

METRIC

Run. No.	ONE	
Date	4 OCT 1981	
First Reading	187	
Last Reading	0	
Footage Logged	187	
Depth Reached	191	
Depth Driller	191	
Casing Roke	6	
Casing Driller	6	
Fluid Type	WATER/GEL	
Liquid Level	77	
Min. Diam.	HQ	
Operating Time		
Truck No.	106	
Recorded By SERAFINI	Witnessed By MARTON	

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
ONE	0	187	7		MOUNTAIN	COAL		.3	5000	1.93	96.93

REMARKS RIG #38 OPEN HOLE

5 10 15

API

DEPTHS

CALIPER
DIAMETER – CM

BULK DENSITY
(GRAMS/CC)

SHIFT 1.93

1000CPS

ZERO

Pr. Willow Creek 81(3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.	
COMPANY	G.A. NOEL & ASSOCIATES INC.
WELL	DDH 81 - 34
LOCATION	
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
LSD	
SEC	
TWP	
RGE	
W M	
Other Services:	DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	4 OCT 1981
First Reading	187
Last Reading	0
Footage Logged	187
Depth Reached	191
Depth Driller	191
Casing Roke	6
Casing Driller	6
Fluid Type	WATER/GEL
Liquid Level	77
Min. Diam.	HQ
Rm @	
Operating Time	
Truck No.	106
Recorded By	SERAFINI
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	38.1CM
INSTRUMENT TRUCK NO.	106	TYPE	AmBe
TOOL SERIAL NO.	125A001	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	77	4	3	100	0	13	3	1K	0	300
ONE	77	187	4	3	100	0	13	3	1K	0	130

REMARKS RIG #38 OPEN HOLE

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES → API 13		NEUTRON INCREASES → API 300 0 3000 6000

Pr-Willow Creek 81(3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W ___ M	
COMPANY	G.A. NOEL & ASSOCIATES INC.
WELL	DDH 81 - 35
LOCATION	
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
Other Services:	GRN, DIR
Permanent Datum	GROUND LEVEL
Elev.	
Log Measured from	RIG FLOOR
Above Perm. Datum	0.3
Well Depths Measured from	RIG FLOOR
K.B.	
CSG	
G.L.	
	METRIC

Run. No.	ONE
Date	7 OCT 1981
First Reading	80
Last Reading	0
Footage Logged	80
Depth Reached	81.5
Depth Driller	83
Casing Roke	4
Casing Driller	4
Fluid Type	WATER/GEL
Liquid Level	0
Min. Diam.	HQ
Operating Time	
Truck No.	106
Recorded By	SERAFINI
Witnessed By	MARTON

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/ MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
ONE			7		MOUNTAIN COAL			.3	1K	2.2R	43.85

REMARKS LOGGED THROUGH HQ RODS

Pr - Willow Creek 81 (3)A

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W ______ M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 35
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR Above Perm. Datum
Well Depths Measured from RIG FLOOR
K.B.
CSG
G.L.
METRIC

Run. No.	ONE		
Date	7 OCT 1981		
First Reading	80		
Last Reading	0		
Footage Logged	80		
Depth Reached	81.5		
Depth Driller	83		
Casing Roke	4		
Casing Driller	4		
Fluid Type	WATER/GEL		
Liquid Level	0		
Min. Diam.	HQ		
Rm @			
Operating Time			
Truck No.	106		690

Recorded By SERAFINI Witnessed By MARTON

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0	LENGTH	
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
HOIST TRUCK NO.		SERIAL NO.	187
INSTRUMENT TRUCK NO.	106	SPACING	38.1CM
TOOL SERIAL NO.	125A001	TYPE	AmBe
		STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	80	4	3	100	0	12	3	1K	0	120

REMARKS RIG #38 LOGGED THROUGH HQ RODS

Re. Willow Creek 81(3)A

ROKE

SIDEWALL DENSILOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	
COMPANY	G.A. NOEL & ASSOCIATES INC.
WELL	DDH 81 - 36
LOCATION	
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
LSD	
SEC	
TWP	
RGE	
W	M
Other Services:	GRN, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	12 OCT 1981
First Reading	350
Last Reading	0
Footage Logged	350
Depth Reached	353
Depth Driller	358
Casing Roke	
Casing Driller	
Fluid Type	WATER/GEL
Liquid Level	35
Min. Diam.	HQ
Operating Time	
Truck No.	106
Recorded By	SERAFINI
Witnessed By	MARTON

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV
ONE	0	350	7		MOUNTAIN	COAL		.3	1K	2.2R	43.85

REMARKS RIG #44 LOGGED THROUGH HQ RODS

DEPTHS

CALIPER
DIAMETER – CM

GAMMA RAY
API

BULK DENSITY
(GRAMS/CC)

Pr. Willow Creek 8(3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 36
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.

METRIC

Run. No.	ONE
Date	12 OCT 1981
First Reading	350
Last Reading	0
Footage Logged	350
Depth Reached	353
Depth Driller	358
Casing Roke	
Casing Driller	
Fluid Type	WATER/GEL
Liquid Level	35M
Min. Diam.	HQ
Rm @	
Operating Time	
Truck No.	106
Recorded By	SERAFINI
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.	SCINTILLATION	DIAMETER	3.18CM
TYPE		DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	38.1CM
INSTRUMENT TRUCK NO.	106	TYPE	AmBe
TOOL SERIAL NO.	125A001	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	350	4	3	100K	0	12	3	5K	0	120

REMARKS RIG #44 LOGGED THROUGH HQ RODS

Re- Willow Creek 81(3)A

ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W	M
COMPANY	G.A. NOEL & ASSOCIATES INC.
WELL	DDH 81 - 37
LOCATION	
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
Other Services:	GRN, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.

METRIC

Run. No.	ONE
Date	12 OCT 1981
First Reading	230
Last Reading	0
Footage Logged	230
Depth Reached	233
Depth Driller	239
Casing Roke	10
Casing Driller	10
Fluid Type	WATER/GEL
Liquid Level	0
Min. Diam.	HQ
Operating Time	
Truck No.	106
Recorded By	SERAFINI
Witnessed By	MARTON

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
ONE	0	230	7		MOUNTAIN	COAL		.3	1K	2.2R	43.85

REMARKS RIG #38 LOGGED THROUGH HQ RODS

PR - Willow Creek 81(3)

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 37
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE		
Date	12 OCT 1981		
First Reading	220		
Last Reading	0		
Footage Logged	220		
Depth Reached	233		
Depth Driller	239		
Casing Roke	10		
Casing Driller	10		
Fluid Type	WATER/GEL		
Liquid Level	0		
Min. Diam.	HQ		
Rm @			
Operating Time			
Truck No.	106	690	

Recorded By SERAFINI Witnessed By MARTON

EQUIPMENT DATA

GAMMA RAY	
RUN NO.	ONE
TOOL MODEL NO.	125
DIAMETER	3.18CM
DETECTOR MODEL NO.	
TYPE	SCINTILLATION
LENGTH	10.16CM
DISTANCE TO N. SOURCE	2.0

GENERAL	
HOIST TRUCK NO.	
INSTRUMENT TRUCK NO.	106
TOOL SERIAL NO.	125A001

NEUTRON	
RUN NO.	ONE
LOG TYPE	NEUTRON/NEUTRON
TOOL MODEL NO.	125
DIAMETER	3.18CM
DETECTOR MODEL NO.	
TYPE	PROPORTIONAL
LENGTH	
SOURCE MODEL NO.	MRC-N-SS-W
SERIAL NO.	187
SPACING	38.1CM
TYPE	AmBe
STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	220	4	3	100	0	12	3	5K	0	120

REMARKS RIG #38 LOGGED THROUGH HQ RODS

R. Willow Creek 8136

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

LSD
SEC
TWP
RGE
W____M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 38
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	22 OCT 1981
First Reading	230
Last Reading	0
Footage Logged	230
Depth Reached	239
Depth Driller	239
Casing Roke	6.5
Casing Driller	6.0
Fluid Type	WATER/GEL
Liquid Level	61.0
Min. Diam.	HQ
Rm. @	
Operating Time	
Truck No.	132/FU3
Recorded By	SERAFINI
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH		TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0M	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	132	SPACING	
INSTRUMENT TRUCK NO.	FU3	TYPE	AmBe
TOOL SERIAL NO.	125A001	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	61	4	3	100	2L	10	3	1K	0	200
ONE	61	230	4	3	100	2L	10	3	1K	0	130

REMARKS RIG #38 LOGGED THROUGH HQ RODS
HOLE CEMENTED 0 - 48.7M

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES → API 10		NEUTRON INCREASES → API 200
0 100		0 2000 4000

Pr. Willow Creek 81(38)

ROKE
OIL ENTERPRISES LTD. CALGARY, ALBERTA
SIDEWALL DENSILOG
CALIPER

FILE NO.
LSD
SEC
TWP
RGE
W ______ M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 38
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA
Other Services: GRN, DIR

Permanent Datum GROUND LEVEL Elev. K.B.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum CSG
Well Depths Measured from RIG FLOOR G.L.
METRIC

Run. No.	ONE
Date	22 OCT 1981
First Reading	230
Last Reading	0
Footage Logged	230
Depth Reached	239
Depth Driller	239
Casing Roke	6.5
Casing Driller	6.0
Fluid Type	WATER/GEL
Liquid Level	61
Min. Diam.	HQ
Operating Time	
Truck No.	132/FU3
Recorded By	SERAFINI
Witnessed By	MARTON

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV
ONE	0	230	7		MOUNTAIN	COAL		.3	1K	2.2R	43.85

REMARKS RIG #38 LOGGED THROUGH HQ RODS
HOLE CEMENTED 0 - 48.7M

CALIPER
DIAMETER –CM
5 10 15

DEPTHS

API

BULK DENSITY
(GRAMS/CC)
1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 2.80

Pr- Willow Creek 81(3b)

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 39
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services:
DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE		
Date	16 OCT 1981		
First Reading	34.5		
Last Reading	0		
Footage Logged	34.5		
Depth Reached	35.5		
Depth Driller	38		
Casing Roke	9.5		
Casing Driller	10.0		
Fluid Type	WATER/GEL		
Liquid Level	0		
Min. Diam.	HQ		
Rm @			
Operating Time			
Truck No.	130		

Recorded By SERAFINI/MURRAY Witnessed By MARTON

690

EQUIPMENT DATA

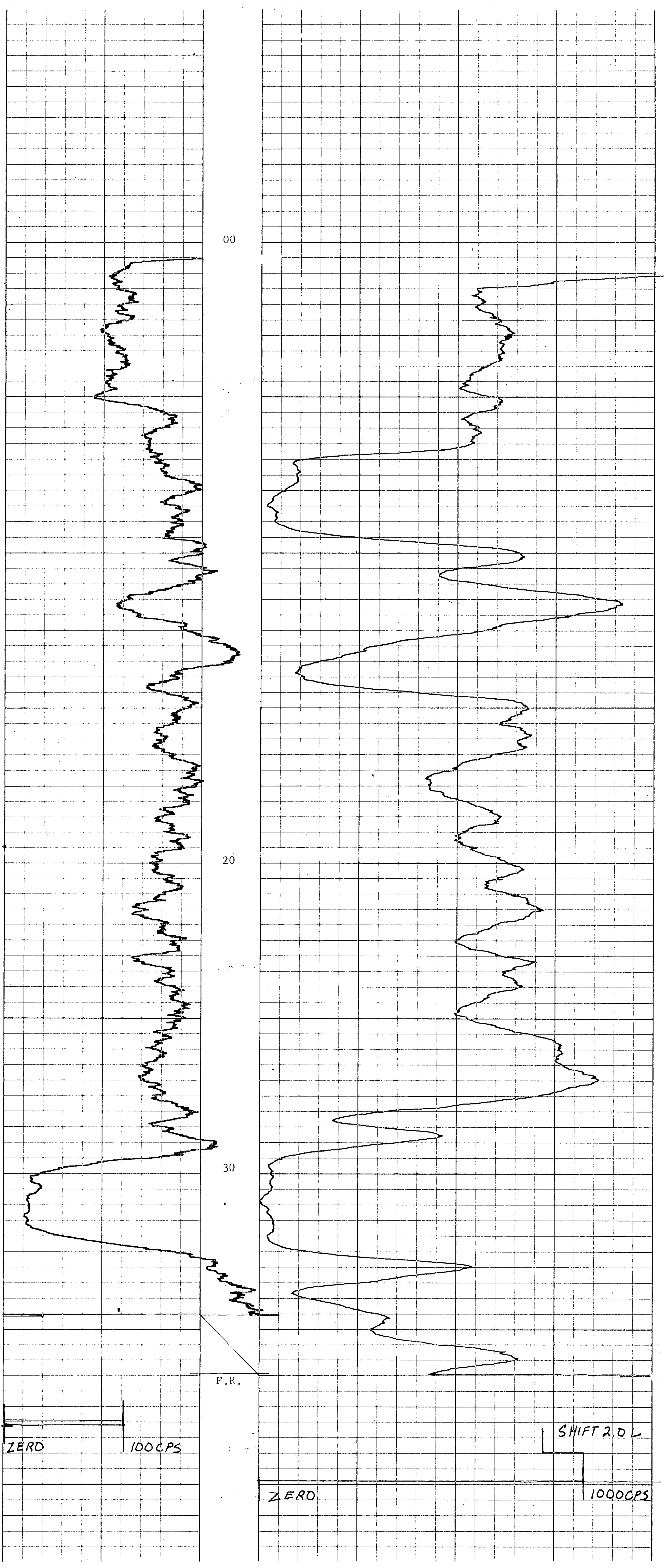
GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	38.1CM
INSTRUMENT TRUCK NO.	130	TYPE	AmBe
TOOL SERIAL NO.	125A001	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	34.5	4	3	100	0	9	3	1K	2L	80

REMARKS RIG #44 LOGGED THROUGH HQ RODS

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API →|9|←		API →|80|←



Re - Willow Creek 81(3b)

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG
CALIPER

FILE NO.

LSD
SEC
TWP
RGE
W _____ M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 39
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: GRN, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.

METRIC

Run. No.	ONE
Date	16 OCT 1981
First Reading	35
Last Reading	0
Footage Logged	35
Depth Reached	36
Depth Driller	38
Casing Roke	9.5
Casing Driller	10.0
Fluid Type	WATER/GEL
Liquid Level	0
Min. Diam.	HQ
Operating Time	
Truck No.	130

Recorded By SERAFINI/MURRAY Witnessed By MARTON

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
ONE	0	35	7		MOUNTAIN COAL			.3	1K	2.2R	43.85

REMARKS RIG #44 LOGGED THROUGH HQ RODS

Re - Willow Creek 81(3)

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W ____ M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 44
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA
Other Services: DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3M Above Perm. Datum
Well Depths Measured from RIG FLOOR
K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	29 OCT 1981
First Reading	151M
Last Reading	0
Footage Logged	151
Depth Reached	151.5
Depth Driller	157
Casing Roke	3.5
Casing Driller	3.4
Fluid Type	AIR/WATER
Liquid Level	
Min. Diam.	HQ
Rm @	
Operating Time	40 MIN
Truck No.	132/FU3
Recorded By	HILLIS
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0CM	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	132/FU3	SPACING	38.1CM
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	125A007	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	151	4	3	100	0	14	3	1000	0	150

REMARKS LOGGED THROUGH HQ RODS

Pr- Willow Creek 81(3A)

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W______M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 27
LOCATION N6800
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	13 SEPT 1981
First Reading	289
Last Reading	0
Footage Logged	289
Depth Reached	291
Depth Driller	297
Casing Roke	9.4
Casing Driller	9.1
Fluid Type	WATER/GEL
Liquid Level	0
Min. Diam.	HQ
Rm @	
Operating Time	
Truck No.	106

Recorded By SERAFINI
Witnessed By MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0M	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	38.1CM
INSTRUMENT TRUCK NO.	106	TYPE	AmBe 3 CURIES
TOOL SERIAL NO.	125A001	STRENGTH	

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	289	4	3	100	0	12	3	1K	0	120

REMARKS RIG #38 LOGGED THROUGH HQ RODS 60°

Re- Willow Creek 81(3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

LSD

SEC

TWP

RGE

W _____ M

COMPANY G.A. NOEL & ASSOCIATES INC.

WELL DDH 81 - 26

LOCATION N6800 E5900

FIELD WILLOW CREEK

PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.

Log Measured from TOP OF RODS 2.6M Above Perm. Datum

Well Depths Measured from RIG FLOOR

K.B.

CSG

G.L.

METRIC

Run. No.	ONE
Date	8 AUG 1981
First Reading	170
Last Reading	0
Footage Logged	170
Depth Reached	171
Depth Driller	178
Casing Roke	1M
Casing Driller	1M
Fluid Type	WATER/GEL
Liquid Level	19
Min. Diam.	HQ
Rm @	
Operating Time	
Truck No.	106

Recorded By SERAFINI

Witnessed By MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0M	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	
INSTRUMENT TRUCK NO.	106	TYPE	AmBe
TOOL SERIAL NO.	125A001	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	170	4	3	100	0	12	3	1000	0	240

REMARKS RIG #38 LOGGED THROUGH HQ RODS 60°HOLE

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES → API →|12|←		NEUTRON INCREASES → API →|240|←

Re-Willow Creek 81 (3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG

CALIPER

FILE NO.

LSD
SEC
TWP
RGE
W___M

COMPANY G.A. NOEL & ASSOCIATES INC.

WELL DDH 81 - 26

LOCATION N6800 E5900

FIELD WILLOW CREEK

PROVINCE BRITISH COLUMBIA

Other Services: GRN, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from TOP OF RODS 2.6M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	8 AUGUST 1981
First Reading	170
Last Reading	0
Footage Logged	170
Depth Reached	171
Depth Driller	178
Casing Roke	1M
Casing Driller	1M
Fluid Type	WATER/GEL
Liquid Level	19
Min. Diam.	HQ
Operating Time	
Truck No.	106

Recorded By SERAFINI
Witnessed By MARTON

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
ONE	0	170	6		MOUNTAIN	COAL		.3	1K	2.2R	43.85

REMARKS LOGGED THROUGH HQ DRILL RODS
RIG #38

CALIPER
DIAMETER – CM

DEPTHS

BULK DENSITY
(GRAMS/CC)

PR- WILLOW CREEK 81(3)A

ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY G.A. NOEL & ASSOCIATES INC.

WELL DDH 81 - 25

LOCATION N4800 E6038

FIELD WILLOW CREEK

PROVINCE BRITISH COLUMBIA

Other Services: GRN, DIR

Permanent Datum GROUND LEVEL Elev.

Log Measured from RIG FLOOR 0.3 Above Perm. Datum

Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE		
Date	13 SEPT 1981		
First Reading	532		
Last Reading	160		
Footage Logged	372		
Depth Reached	534		
Depth Driller	540		
Casing Roke			
Casing Driller	25		
Fluid Type	WATER/GEL		
Liquid Level	0		
Min. Diam.	HQ		
Operating Time			
Truck No.	106		690

Recorded By SERAFINI Witnessed By MARTON

GENERAL				SIDEWALL DENSILOG				GAMMA RAY			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	CPS/DIV	ZERO DIV. L OR R	SENS SETTINGS	T.C. SEC.	API G.R. UNITS PER LOG DIV.	ZERO DIV. L OR R	SENS SETTINGS	T.C. SEC.
ONE	160	532	7	43.85	2.2R	1K	.3		MOUNTAIN COAL		

REMARKS
RIG 44 LOGGED THROUGH HQ RODS 60°

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

Pe- Willow Creek 81(3)b

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 42
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	26 OCT 1981
First Reading	114M
Last Reading	0
Footage Logged	114
Depth Reached	114.7
Depth Driller	120.6
Casing Roke	3.6
Casing Driller	3.4
Fluid Type	AIR/WATER
Liquid Level	
Min. Diam.	HQ
Rm @	
Operating Time	30 MIN
Truck No.	132/FU3
Recorded By	HILLIS
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0M	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	132/FU3	SPACING	38.1CM
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	125A007	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	114	4	3	100	0	13	3	1000	0	170

REMARKS LOGGED THROUGH HQ RODS

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API 13		API 170
0 130		0 1700 3400

Pr - Willow Creek 81(3)a

ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY G.A. NOEL & ASSOCIATES INC.

WELL DDH 81 - 43

LOCATION

FIELD WILLOW CREEK

PROVINCE BRITISH COLUMBIA

Other Services: GRN, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE		
Date	28 OCT 1981		
First Reading	152M		
Last Reading	0		
Footage Logged	152		
Depth Reached	161		
Depth Driller	160.5		
Casing Roke	5.8		
Casing Driller	6.0		
Fluid Type	AIR/WATER		
Liquid Level			
Min. Diam.	HQ		
Operating Time	40 MIN		
Truck No.	132/FU3		690

Recorded By HILLIS
Witnessed By MARTON

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV.
ONE	0	152	7					0.5	1000	2.22R	43.85

REMARKS LOGGED THROUGH HQ RODS
CALIPER READINGS ARE 0.5M BELOW TRUE DEPTH

Re- Willow Creek 81(3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG
CALIPER

FILE NO.
LSD
SEC
TWP
RGE
W___M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 42
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: GRN, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3M Above Perm. Datum
Well Depths Measured from RIG FLOOR
K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	26 OCT 1981
First Reading	114M
Last Reading	0
Footage Logged	114
Depth Reached	120.3
Depth Driller	120.6
Casing Roke	3.6
Casing Driller	3.4
Fluid Type	AIR/WATER
Liquid Level	
Min. Diam.	HQ
Operating Time	30 MIN
Truck No.	132/FU3
Recorded By	HILLIS
Witnessed By	MARTON

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/ MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
ONE	0	114	7					0.5	1000	2.22R	43.85

REMARKS DENSILOG THROUGH HQ RODS
CALIPER READINGS ARE 0.5M BELOW TRUE DEPTH

Pre-Willow Creek 81(3)a

ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY G.A. NOEL & ASSOCIATES INC.

WELL DDH 81 - 41

LOCATION

FIELD WILLOW CREEK

PROVINCE BRITISH COLUMBIA

Other Services: GRN

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE		
Date	25 OCT 1981		
First Reading	142M		
Last Reading	0		
Footage Logged	142		
Depth Reached	145		
Depth Driller	145.3		
Casing Roke	3		
Casing Driller	3		
Fluid Type	AIR/WATER		
Liquid Level			
Min. Diam.	HQ		
Operating Time	40 MIN		
Truck No.	132/FU3		

Recorded By HILLIS Witnessed By MARTON

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV
ONE	0	142	7					0.5	1000	2.22R	43.85

REMARKS LOGGED THROUGH HQ RODS
HOLE BRIDGED AT 133M AFTER RODS REMOVED

Re-Willow Creek 81(3A)

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 41
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA
Other Services: DENS-CAL

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3M Above Perm. Datum
Well Depths Measured from RIG FLOOR
K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	25 OCT 1981
First Reading	142M
Last Reading	0
Footage Logged	142
Depth Reached	145
Depth Driller	145.3
Casing Roke	3
Casing Driller	3
Fluid Type	AIR/WATER
Liquid Level	
Min. Diam.	HQ
Rm @	
Operating Time	40 MIN
Truck No.	132/FU 3
Recorded By	HILLIS
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0M	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.	132/FU3	SPACING	38.1CM
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	125A007	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	142		3	100	0	15	3	1000	0	180

REMARKS LOGGED THROUGH HQ RODS

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API 15		API 180
0 150		0 1800 3600

PR - WILLOW CREEK 81(3)A

ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W ______ M

COMPANY G.A. NOEL & ASSOCIATES INC.

WELL DDH 81 - 40

LOCATION

FIELD WILLOW CREEK

PROVINCE BRITISH COLUMBIA

Other Services: GRN, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.		TWO	
Date		23 OCT 1981	
First Reading		180M	
Last Reading		0	
Footage Logged		180	
Depth Reached		186.6	
Depth Driller		186.9	
Casing Roke			
Casing Driller		6.1	
Fluid Type		WATER/GEL	
Liquid Level		0	
Min. Diam.		HQ	
Operating Time		1 HR	
Truck No.		132/FU3	

690

Recorded By HILLIS Witnessed By MARTON

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV
TWO	180	0	7					0.5	1000	2.22R	43.85

REMARKS LOGGED THROUGH HQ RODS

Re Willow Creek 81(39)

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W ___ M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 40
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.

METRIC

Run. No.	TWO
Date	23 OCT 1981
First Reading	180M
Last Reading	57.5
Footage Logged	122.5
Depth Reached	181.3
Depth Driller	186.9
Casing Roke	
Casing Driller	6.1
Fluid Type	WATER/GEL
Liquid Level	0
Min. Diam.	HQ
Rm @	
Operating Time	40 MIN
Truck No.	132/FU3

Recorded By HILLIS
Witnessed By MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	TWO	RUN NO.	TWO
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0M	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	38.1CM
INSTRUMENT TRUCK NO.	132/FU3	TYPE	AmBe
TOOL SERIAL NO.	125A001	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
TWO	122.5	180	4	3	100	0	12	3	1000	0	130

REMARKS RUN THROUGH HQ RODS. TOOL FAILED AT 57.5M

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

Pre-Willow Creek 81 (3/b)

FILE NO.	
COMPANY	G.A. NOEL & ASSOCIATES INC.
WELL	DDH 81 - 25
LOCATION	N4800 E6038
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
Other Services:	DENS-CAL, DIR

LSD
SEC
TWP
RGE
W____M

Permanent Datum GROUND LEVEL Elev. ____ K.B. ____
Log Measured from RIG FLOOR 0.3 Above Perm. Datum CSG ____
Well Depths Measured from RIG FLOOR G.L. ____

METRIC

Run. No.	ONE		
Date	13 SEPT 1981		
First Reading	532		
Last Reading	160		
Footage Logged	372		
Depth Reached			
Depth Driller	54		
Casing Roke			
Casing Driller	25		
Fluid. Type	WATER/GEL		
Liquid Level	0		
Min. Diam.	HQ		
Rm @			
Operating Time			
Truck No.	106		
Recorded By	SERAFINI	Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0M	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	38.1CM
INSTRUMENT TRUCK NO.	106	TYPE	AmBe 3 CURIES
TOOL SERIAL NO.	125A001	STRENGTH	

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	160	532	4	3	100	0	12	3	1K	0	120

REMARKS RIG #44 LOGGED THROUGH CASING 60°

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API 12		API 120
0 — 120		0 — 1200 — 2400

Pre-Willow Creek 81(3)

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 43
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, DIR

Permanent Datum - GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE		
Date	28 OCT 1981		
First Reading	152		
Last Reading	0		
Footage Logged	152		
Depth Reached	153		
Depth Driller	160.5		
Casing Roke	5.8		
Casing Driller	6.0		
Fluid Type	AIR/WATER		
Liquid Level			
Min. Diam.	HQ		
Rm @			
Operating Time	40 MIN		690
Truck No.	132/FU3		

Recorded By HILLIS
Witnessed By MARTON

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0CM	LENGTH	
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
HOIST TRUCK NO.	132/FU3	SERIAL NO.	187
INSTRUMENT TRUCK NO.		SPACING	38.1CM
TOOL SERIAL NO.	125A007	TYPE	AmBe
		STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	152	4	3	100	0	13	3	1000	0	170

REMARKS LOGGED THROUGH HQ RODS

Re- Willow Creek 81 (3A)

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

LSD
SEC
TWP
RGE
W_____M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 31
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: DIR
DENS-CAL

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	29 SEPT 1981
First Reading	355
Last Reading	0
Footage Logged	355
Depth Reached	356.5
Depth Driller	359.4
Casing Roke	11.5
Casing Driller	12.2
Fluid Type	WATER/GEL
Liquid Level	0
Min. Diam.	HQ
Rm @	
Operating Time	
Truck No.	106
Recorded By	SERAFINI
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	38.1CM
INSTRUMENT TRUCK NO.	106	TYPE	AmBe
TOOL SERIAL NO.	125A001	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	355	4	3	100	0	12	3		0	

REMARKS RIG #44 LOGGED THROUGH HQ RODS

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API ⇥12⇤		API ⇥120⇤
0 120	0	1200 2400

Re- Willow Creek 81(3)

ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	
COMPANY	G.A. NOEL & ASSOCIATES INC.
WELL	DDH 81 - 31
LOCATION	
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
LSD	
SEC	
TWP	
RGE	
W ___ M	

Other Services: DIR GRN

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.

METRIC

Run No.	ONE	
Date	29 SEPT 1981	
First Reading	354	
Last Reading	0	
Footage Logged	354	
Depth Reached	359.5	
Depth Driller	359.5	
Casing Roke	11.5	
Casing Driller	12.2	
Fluid Type	WATER/GEL	
Liquid Level	0	
Min. Diam.	HQ	
Truck No.	106	
Operating Time		
Recorded By	SERAFINI	Witnessed By MARTON

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV
ONE	0	354	7		MOUNTAIN	COAL		.3	1K	2.2R	43.85

REMARKS RIG #44 LOGGED THROUGH HQ RODS

Re- Willow Creek 81(3)A

ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W __ M	
COMPANY	G.A. NOEL & ASSOCIATES INC.
WELL	DDH 81 - 30
LOCATION	N7000
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
Other Services:	GRN, DIR
Permanent Datum	GROUND LEVEL
Elev.	
Log Measured from	RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from	RIG FLOOR
K.B.	
CSG	
G.L.	
	METRIC
Run. No.	ONE
Date	24 SEPT 1981
First Reading	244
Last Reading	0
Footage Logged	244
Depth Reached	252
Depth Driller	252.5
Casing Roke	3
Casing Driller	3.5
Fluid Type	WATER/GEL
Liquid Level	0
Min. Diam.	HQ
Operating Time	
Truck No.	106
Recorded By	SERAFINI
Witnessed By	JONES

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
ONE	0	244	7		MOUNTAIN	COAL		.3	1K	2.2R	43.85

REMARKS RIG 38 LOGGED THROUGH HQ RODS 60°

Re- Willow Creek 81 (3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 30
LOCATION N7000
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIG FLOOR

Other Services: DENS-CAL, DIR
K.B.
CSG
G.L.
METRIC

Run. No. ONE
Date 24 SEPT 1981
First Reading 244
Last Reading 0
Footage Logged 244
Depth Reached 252
Depth Driller 252.5
Casing Roke 3
Casing Driller 3.5
Fluid Type WATER/GEL
Liquid Level 0
Min. Diam. HQ
Rm @
Operating Time
Truck No. 106
Recorded By SERAFINI
Witnessed By JONES

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0M	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	38.1CM
INSTRUMENT TRUCK NO.	106	TYPE	AmBe 3 CURIES
TOOL SERIAL NO.	125A006	STRENGTH	

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	244	4	3	100	0	12	3	1K	0	120

REMARKS RIG #38 LOGGED THROUGH RODS 60°

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API 12		API 120
0 120		0 1200 2400

Pe- Willow Creek 81 (3A)

ROKE

SIDEWALL DENSILOG

CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W___M	
COMPANY	G.A. NOEL & ASSOCIATES INC.
WELL	DDH 81 - 29
LOCATION	N3200
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
Other Services:	GRN, DIR.
Permanent Datum	GROUND LEVEL
Elev.	
Log Measured from	RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from	RIG FLOOR
K.B.	
CSG	
G.L.	
	METRIC
Run. No.	ONE
Date	21 SEPT 1981
First Reading	410
Last Reading	140
Footage Logged	270
Depth Reached	418
Depth Driller	419
Casing Roke	
Casing Driller	24.6
Fluid Type	WATER/GEL
Liquid Level	0
Min. Diam.	HQ
Operating Time	
Truck No.	106
Recorded By	SERAFINI
Witnessed By	JONES

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/DIV
ONE	140	410	7		MOUNTAIN	COAL		.3	1K	2.2R	43.85

REMARKS RIG #44 LOGGED THROUGH RODS 60°

	DEPTHS	CALIPER DIAMETER – CM
5 10	15	
		BULK DENSITY (GRAMS/CC)

Pr. Willow Creek 81(3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W ____ M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 29
LOCATION N3200
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	21 SEPT 1981
First Reading	410
Last Reading	140
Footage Logged	270
Depth Reached	418
Depth Driller	419
Casing Roke	
Casing Driller	24.6
Fluid Type	WATER/GEL
Liquid Level	0
Min. Diam.	HQ
Rm @	
Operating Time	
Truck No.	106
Recorded By	SERAFINI
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	38.1CM
INSTRUMENT TRUCK NO.	106	TYPE	AmBe 3 CURIES
TOOL SERIAL NO.	125A001	STRENGTH	

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV
ONE	140	410	4	3	100	0	12	3	1K	0	120

REMARKS RIG #44 LOGGED THROUGH RODS 60°

Re- Willow Creek 81 (3A)

ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 28
LOCATION N6600
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: GRN, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run No.	ONE	
Date	20 SEPT 1981	
First Reading	283	
Last Reading	0	
Footage Logged	283	
Depth Reached	284	
Depth Driller	292	
Casing Roke	4	
Casing Driller	4	
Fluid Type	WATER/GEL	
Liquid Level	0	
Min. Diam.	HQ	
Operating Time		
Truck No.	106	690
Recorded By	SERAFINI	Witnessed By JONES

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
ONE	0	283	7		MOUNTAIN	COAL		.3	1K	2.2R	43.85

REMARKS RIG 38 LOGGED THROUGH HQ DRILL RODS 60°

DEPTHS

CALIPER
DIAMETER – CM

5 10 15

→| |←

BULK DENSITY
(GRAMS/CC)

1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 2.80

SHIFT 2.2R.

1000 CPS

ZERO

Pre- Willow Creek 81 (3) A

ROKE

GAMMA RAY NEUTRON LOG

[redacted]

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W _____ M	
COMPANY	G.A. NOEL & ASSOCIATES INC.
WELL	DDH 81 - 28
LOCATION	N 6600
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
Other Services:	DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev. _____

Log Measured from RIG FLOOR 0.3 Above Perm. Datum

Well Depths Measured from RIG FLOOR

K.B. _____

CSG _____

G.L. _____

METRIC

Run. No.	ONE		
Date	20 SEPT 1981		
First Reading	283		
Last Reading	0		
Footage Logged	283		
Depth Reached	284		
Depth Driller	292		
Casing Roke	4		
Casing Driller	4		
Fluid Type	WATER/GEL		
Liquid Level	0		
Min. Diam.	HQ		
Rm @			
Operating Time			
Truck No.	106		

Recorded By SERAFINI

Witnessed By JONES

690

EQUIPMENT DATA

NEUTRON	
RUN NO.	ONE
LOG TYPE	NEUTRON/NEUTRON
TOOL MODEL NO.	125
DIAMETER	3.18CM
DETECTOR MODEL NO.	
TYPE	PROPORTIONAL
LENGTH	
SOURCE MODEL NO.	MRC-N-SS-W
SERIAL NO.	187
SPACING	38.1CM
TYPE	AmBe
STRENGTH	3 CURIES

GAMMA RAY	
RUN NO.	ONE
TOOL MODEL NO.	125
DIAMETER	3.18CM
DETECTOR MODEL NO.	
TYPE	SCINTILLATION
LENGTH	10.16CM
DISTANCE TO N. SOURCE	2.0M

GENERAL	
HOIST TRUCK NO.	
INSTRUMENT TRUCK NO.	106
TOOL SERIAL NO.	125A006

LOGGING DATA

GENERAL				GAMMA RAY					NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.		T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV
ONE	0	283	4	3	100	0	12		3	1K	0	120

REMARKS RIG #38 LOGGED THROUGH HQ RODS 60°

PR - WILLOW CREEK 81(3)A

ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W ______ M

COMPANY G.A. NOEL & ASSOCIATES INC.

WELL DDH 81 - 32

LOCATION

FIELD WILLOW CREEK

PROVINCE BRITISH COLUMBIA

Other Services: DIR GRN

Permanent Datum GROUND LEVEL Elev.

Log Measured from RIG FLOOR 0.3 Above Perm. Datum

Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE		
Date	30 SEPT 1981		
First Reading	193		
Last Reading	0		
Footage Logged	193		
Depth Reached	194.5		
Depth Driller	204		
Casing Roke	7		
Casing Driller	7		
Fluid Type	WATER/GEL		
Liquid Level	47		
Min. Diam.	HQ		
Operating Time			
Truck No.	106		

690

Recorded By SERAFINI

Witnessed By MARTON

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	CPS/DIV
ONE	0	193	7		MOUNTAIN COAL			.3	1K	2.2R	43.85

REMARKS RIG #38 LOGGED THROUGH HQ RODS
CALIPER 2M HIGH

Pr- Willow Creek 81(3)a

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	
COMPANY	G.A. NOEL & ASSOCIATES INC.
WELL	DDH 81 - 40
LOCATION	
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
LSD	
SEC	
TWP	
RGE	
W M	
Other Services:	DENS
Permanent Datum	GROUND LEVEL
Elev.	
Log Measured from	RIG FLOOR 0.3M Above Perm. Datum
Well Depths Measured from	RIG FLOOR
K.B.	
CSG	
G.L.	
	METRIC

Run. No.	ONE
Date	22 OCT 1981
First Reading	40M
Last Reading	0
Footage Logged	40
Depth Reached	44
Depth Driller	
Casing Roke	
Casing Driller	
Fluid Type	WATER/GEL
Liquid Level	0
Min. Diam.	HQ
Rm @	
Operating Time	10 MIN
Truck No.	132/FU3
Recorded By	HILLIS
Witnessed By	MARTON

690

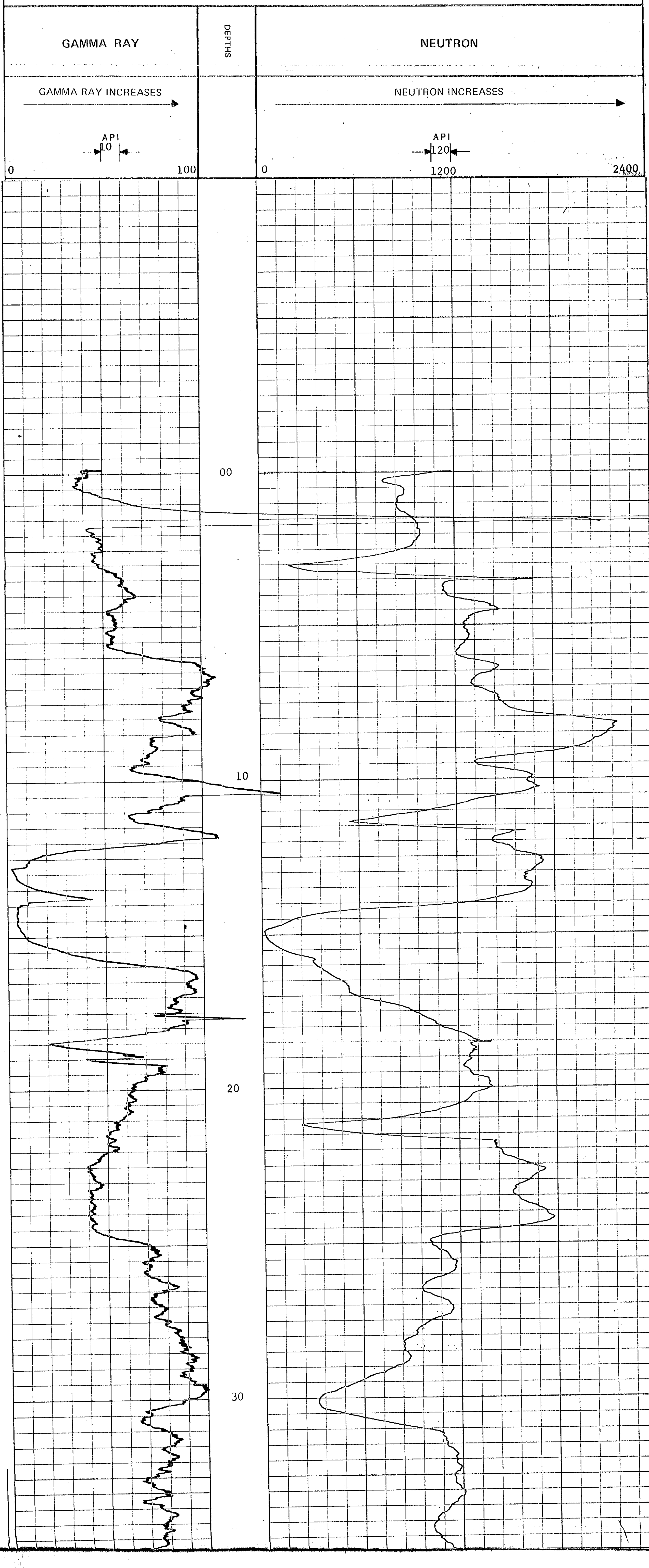
EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0M	LENGTH	
GENERAL		SOURCE MODEL NO.	MRC-N-SS-W
		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	38.1CM
INSTRUMENT TRUCK NO.	132/FU3	TYPE	AmBe
TOOL SERIAL NO.	125A001	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	40	4	3	100	0	10	3	1000	0	120

REMARKS LOGGED THROUGH HQ RODS



Re- Willow Creek 81 (32)

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W	M
COMPANY	G.A. NOEL & ASSOCIATES INC.
WELL	DDH 81 - 32
LOCATION	
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
Other Services:	DIR DENS-CAL
Permanent Datum	GROUND LEVEL
Elev.	
Log Measured from	RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from	
K.B.	
CSG	
G.L.	
	METRIC
Run. No.	ONE
Date	30 SEPT 1981
First Reading	193
Last Reading	0
Footage Logged	193
Depth Reached	194.5
Depth Driller	204
Casing Roke	7
Casing Driller	7
Fluid Type	WATER/GEL
Liquid Level	47
Min. Diam.	HQ
Rm @	
Operating Time	
Truck No.	106
Recorded By	SERAFINI
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	38.1CM
INSTRUMENT TRUCK NO.	106	TYPE	AmBe
TOOL SERIAL NO.	125A001	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	47	4	3	100	0	12	3	5K	0	120
	47	193	4	3	100	0	12	3	10K	0	240

REMARKS RIG #38 LOGGED THROUGH HQ DRILL RODS

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API 12 0 120		API 240 0 2400 4800

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

SIDEWALL DENSILOG
CALIPER

Re- Willow Creek 81(3)a

FILE NO.
LSD
SEC
TWP
RGE
W ____ M

COMPANY GA NOEL & ASSOCIATES INC.
WELL DDH 81 - 18
LOCATION 5816.2N 5817E
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: GRN, CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.

METRIC

Run. No.	ONE	
Date	AUG. 10, 1981.	
First Reading	260	
Last Reading	0	
Footage Logged	260	
Depth Reached	263	
Depth Driller		
Casing Roke	7	
Casing Driller	7	
Fluid Type	WATER/GEL	
Liquid Level	35	
Min. Diam.	HQ	
Operating Time		
Truck No.	106	
Recorded By SERAFINI	Witnessed By MARTON	690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
ONE	0	260	4	MOUNTAIN COAL				0.5	5K	3.14R	109.65

REMARKS RIG #38 OPEN HOLE 60°

	DEPTHS	CALIPER DIAMETER – CM
5 10 15		20
		BULK DENSITY (GRAMS/CC)

Re- Willow Creek 81(3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W M	
COMPANY	GA NOEL & ASSOCIATES INC.
WELL	DDH 81 - 18
LOCATION	5816.2N 5817E
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
Other Services:	DENS, CAL, DIR
Permanent Datum	GROUND LEVEL
Elev.	
Log Measured from	RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from	RIG FLOOR
K.B.	
CSG	
G.L.	
	METRIC
Run. No.	ONE
Date	AUG. 10, 1981.
First Reading	260
Last Reading	0
Footage Logged	260
Depth Reached	263
Depth Driller	
Casing Roke	7
Casing Driller	7
Fluid Type	WATER/GEL
Liquid Level	35
Min. Diam.	HQ
Rm @	
Operating Time	
Truck No.	106
Recorded By	SERAFINI
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18 CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18
TYPE	SCINTILLIATION	DETECTOR MODEL NO.	
LENGTH	10.16 CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0 M	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	347
HOIST TRUCK NO.		SPACING	
INSTRUMENT TRUCK NO.	106	TYPE	AmBe
TOOL SERIAL NO.	125A006	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	35	4	3	100	0	14	3	10K	0	260
	35	260	4	3	100	0	14	3	5K	0	130

REMARKS RIG 38 OPEN HOLE 60°

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API 14		API 26
0 140		0 2600 5200

Pr- Willow Creek 81 (3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W_____M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 20
LOCATION 6000N 5998E
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE			
Date	18 AUG 1981			
First Reading	260			
Last Reading	00			
Footage Logged	260			
Depth Reached	262			
Depth Driller	262			
Casing Roke	7M			
Casing Driller	7M			
Fluid Type	WATER/GEL			
Liquid Level	8M			
Min. Diam.	HQ			
Rm @				
Operating Time				
Truck No.	106			

Recorded By SERAFINI
Witnessed By MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18 CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18 CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16 CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0 M	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	347
HOIST TRUCK NO.		SPACING	
INSTRUMENT TRUCK NO.	106	TYPE	AmBe
TOOL SERIAL NO.	125 A 006	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	8	4	3	100	0	14	3	10K	0	260
	8	260	4	3	100	0	14	3	5K	0	130

REMARKS

PR- WILLOW CREEK 81(3)a

ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W ________ M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 20
LOCATION 6000N 5998E
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: GRN, CAL, DIR

Permanent Datum GROUND LEVEL Elev. ________
Log Measured from . RIG FLOOR 0.3 M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B. ________
CSG ________
G.L. ________
METRIC

Run. No.	ONE		
Date	18 AUG 1981		
First Reading	261		
Last Reading	00		
Footage Logged	261		
Depth Reached	262		
Depth Driller	262		
Casing Roke	7M		
Casing Driller	7M		
Fluid Type	WATER/GEL		
Liquid Level	8M		
Min. Diam.	HQ		
Operating Time			690
Truck No.	106		

Recorded By SERAFINI
Witnessed By MARTON

SIDEWALL DENSILOG				GAMMA RAY				GENERAL			
CPS/DIV	ZERO DIV.L OR R	SENS SETTINGS	T.C. SEC.	API G.R. UNITS PER LOG DIV.	ZERO DIV.L OR R	SENS SETTINGS	T.C. SEC.	SPEED M/MIN	DEPTHS TO	DEPTHS FROM	RUN NO.
109.65	3.14R	5K	.5		MOUNTAIN COAL			4	261	0	ONE

REMARKS

Re- Willow Creek 81 (3)

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.	
COMPANY	G.A. NOEL & ASSOCIATES INC.
WELL	DDH 81 - 21
LOCATION	
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
LSD	
SEC	
TWP	
RGE	
W _ M	
Other Services:	DENS-CAL, DIR
Permanent Datum	GROUND LEVEL
Elev.	
Log Measured from	RIG FLOOR
Above Perm. Datum	
Well Depths Measured from	RIG FLOOR
K.B.	
CSG	
G.L.	
	METRIC

Run. No.	ONE
Date	26 AUG 1981
First Reading	291
Last Reading	0
Footage Logged	291
Depth Reached	291.5
Depth Driller	297
Casing Roke	8.5
Casing Driller	8.5
Fluid Type	WATER/GEL
Liquid Level	0
Min. Diam.	HQ
Rm @	
Operating Time	
Truck No.	FU # 1
Recorded By	FAGERNESS
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18 CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18 CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16 CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0 M	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	126
HOIST TRUCK NO.		SPACING	
INSTRUMENT TRUCK NO.	FU #1	TYPE	AmBe
TOOL SERIAL NO.	125 A 004	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	291	4	3	500	0	12	3	5K	0	120

REMARKS

RIG #38 60° HOLE LOGGED THROUGH HQ RODS

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API 12 0 … 120		API 120 0 … 1200 … 2400

Pr- Willow Creek 81(3)A

ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 21
LOCATION
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: GRN, CAL, DIR
K.B.
CSG
G.L.
METRIC

Permanent Datum ~~GROUND LEVEL~~ Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIG FLOOR

Run. No.	ONE		
Date	26 AUG 1981		
First Reading	291.0		
Last Reading	00		
Footage Logged	291.0		
Depth Reached	291.5		
Depth Driller	297		
Casing Roke	8.5M		
Casing Driller	8.5M		
Fluid Type	WATER/GEL		
Liquid Level	0		
Min. Diam.	HQ		
Operating Time			
Truck No.	FU#1		690

Recorded By FAGERNESS
Witnessed By MARTON

GENERAL				SIDEWALL DENSILOG				GAMMA RAY			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M MIN	CPS/DIV	ZERO DIV. L OR R	SENS SETTINGS	T.C. SEC.	API G.R. UNITS PER LOG DIV.	ZERO DIV. L OR R	SENS SETTINGS	T.C. SEC.
ONE	0	291	5	69.52	2.54R	5K	.5	MOUNTAIN COAL			

REMARKS
RIG #38 60° HOLE DENSITY RAN THROUGH HQ RODS

Fr- Willow Creek 81(3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W______M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 22
LOCATION 4600 N 6060 E
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA
Other Services: DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from DRILL RODS 0.8 Above Perm. Datum
Well Depths Measured from RIG FLOOR
K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	2 SEP 1981
First Reading	500 M
Last Reading	160
Footage Logged	340
Depth Reached	500.4
Depth Driller	498.8
Casing Roke	-
Casing Driller	
Fluid Type	WATER/GEL
Liquid Level	-
Min. Diam.	HQ
Rm @	
Operating Time	
Truck No.	106
Recorded By YOUNG	Witnessed By MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18 CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18 CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16 CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0 M	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	
INSTRUMENT TRUCK NO.	106	TYPE	AmBe
TOOL SERIAL NO.	125 A 001	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	160	500	4	3	100	0	12	.5	5K	0	120

REMARKS GAIN ON GAMMA RAY LOG SET LOW AT CUSTOMERS REQUEST
RIG #38 60° HOLE LOGGED THROUGH HQ RODS
STOPPED LOGGING AT 160 M AS PER CUSTOMERS INSTRUCTIONS

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES API 12 0 120		NEUTRON INCREASES API 120 0 1200 2400

Pe- Willow Creek 81(3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

LSD

SEC

TWP

RGE

W ____ M

COMPANY G.A. NOEL & ASSOCIATES INC.

WELL DDH 81 - 23

LOCATION 6400N 6146E

FIELD WILLOW CREEK

PROVINCE BRITISH COLUMBIA

Other Services: DENS-CAL, DIR

Permanent Datum GROUND LEVEL Elev.

Log Measured from DRILL RODS 3.2 Above Perm. Datum

Well Depths Measured from DRILL RODS

K.B.

CSG

G.L.

METRIC

Run. No.	ONE
Date	31 AUG 1981
First Reading	280
Last Reading	0
Footage Logged	280
Depth Reached	280.8
Depth Driller	280.3
Casing Roke	3.0
Casing Driller	3.0
Fluid Type	WATER/GEL
Liquid Level	0.0
Min. Diam.	HQ
Rm @	
Operating Time	
Truck No.	106
Recorded By	YOUNG
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18 CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18 CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16 CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0 M	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	
INSTRUMENT TRUCK NO.	106	TYPE	AmBe
TOOL SERIAL NO.	125 A 001	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	280	4	3	100	0	12	.5	5K	0	120

REMARKS

RIG #38 60° HOLE LOGGED THROUGH HQ RODS

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		~~NEUTRON INCREASES~~ →
API 12		API 120
0 120		0 1200 2400

PR- WILLOW CREEK 81(3)A

ROKE

SIDEWALL DENSILOG

CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W______M

COMPANY G.A. NOEL & ASSOCIATES INC.
WELL DDH 81 - 23
LOCATION 6400 N 6146 E
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA
Other Services: GRN, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 M Above Perm. Datum
Well Depths Measured from RIG FLOOR
K.B.
CSG
G.L.
METRIC

Run. No.	ONE		
Date	31 AUG 1981		
First Reading	280 .		
Last Reading	0		
Footage Logged	280		
Depth Reached	280.8		
Depth Driller	280.3		
Casing Roke	3.0		
Casing Driller	3.0		
Fluid Type	WATER/GEL		
Liquid Level	0		
Min. Diam.	HQ		
Operating Time			690
Truck No.	106		

Recorded By YOUNG
Witnessed By MARTON

SIDEWALL DENSILOG	CPS/ DIV	51.16
	ZERO DIV.L OR R	3.02R
	SENS SETTINGS	5K
	T.C. SEC.	.5
GAMMA RAY	API G.R. UNITS PER LOG DIV.	
	ZERO DIV.L OR R	COAL
	SENS SETTINGS	MOUNTAIN
	T.C. SEC.	
GENERAL	SPEED M/ MIN	4
	DEPTHS TO	280
	DEPTHS FROM	0
	RUN NO.	ONE

REMARKS RIG #38 60° HOLE DENSITY RAN THROUGH HQ RODS.

Re - Willow Creek 81(3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.	
LSD	
SEC	
TWP	
RGE	
W ___ M	
COMPANY	G.A. NOEL & ASSOCIATES INC.
WELL	DDH 81 - 24
LOCATION	6600 N 5900 E
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
Other Services:	DENS-CAL, DIR
Permanent Datum	GROUND LEVEL
Elev.	
Log Measured from	DRILL RODS 2.6 M Above Perm. Datum
Well Depths Measured from	RIG FLOOR
K.B.	
CSG	
G.L.	
	METRIC

Run. No.	ONE		
Date	4 SEP 1981		
First Reading	238 M		
Last Reading	0		
Footage Logged	238		
Depth Reached	238.7		
Depth Driller	241.5		
Casing Roke	3.0		
Casing Driller	2.7		
Fluid Type	WATER/GEL		
Liquid Level	54.3		
Min. Diam.	HQ		
Rm @			
Truck No.	106		
Operating Time			
Recorded By	YOUNG	Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18 CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18 CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16 CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0 M	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	187
HOIST TRUCK NO.		SPACING	
INSTRUMENT TRUCK NO.	106	TYPE	AmBe
TOOL SERIAL NO.	125 A 001	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	53.5	4	3	100	0	12	3	10K	0	240
	53.5	238	4	3	100	0	12	3	5K	0	120

REMARKS

RIG # 38 60° HOLE

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES → API 12 0 120		NEUTRON INCREASES → API 240 0 2400 4800

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

PR- Willow Creek 81/13A

FILE NO.
LSD
SEC
TWP
RGE
W ____ M

COMPANY GA NOEL & ASSOCIATES INC.
WELL DDH 81 - 13
LOCATION 5202N 5699E
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA
Other Services: CAL, DENS, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 M Above Perm. Datum
Well Depths Measured from RIG FLOOR
K.B.
CSG
G.L.
METRIC

Run. No. ONE
Date JULY 27, 1981.
First Reading 253
Last Reading 0
Footage Logged 253
Depth Reached 253
Depth Driller 254
Casing Roke 5 M
Casing Driller
Fluid Type WATER/GEL
Liquid Level 32 M
Min. Diam. HQ
Rm @
Operating Time 1½ HOURS
Truck No. 106
Recorded By SERAFINI
Witnessed By MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125 A010	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	32 MM	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	32 MM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.5 CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	38.1 CM	LENGTH	10.5 CM
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	347
HOIST TRUCK NO.		SPACING	43 CM
INSTRUMENT TRUCK NO.	106	TYPE	AmBe
TOOL SERIAL NO.		STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	30	4	3	100	0	20	3	10K	0	240
1	30	353	4	3	100	0	20	3	5K	0	120

REMARKS 60° HOLE SCALE CHANGE AT 30 M FROM 5K SENS TO 10K SENS SETTING
RIG 44

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES → API 20 0 200		NEUTRON INCREASES → API 240 0 2400 4800

Pr- Willow Creek 81 (3)A

ROKE

SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W M

COMPANY GA NOEL & ASSOCIATES INC.

WELL DDH 81 - 14

LOCATION 5197N 5226.5E

FIELD WILLOW CREEK

PROVINCE BRITISH COLUMBIA

Other Services: GRN, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE		
Date	JULY 28, 1981		
First Reading	260		
Last Reading	0		
Footage Logged	260		
Depth Reached	261		
Depth Driller	261		
Casing Roke	5		
Casing Driller			
Fluid Type	WATER/GEL		
Liquid Level			
Min. Diam.	HQ		
Operating Time	1½ HOURS		690
Truck No.	106		

Recorded By SERAFINI
Witnessed By MARTON

SIDEWALL DENSILOG				GAMMA RAY				GENERAL			
CPS/DIV	ZERO DIV.L OR R	SENS SETTINGS	T.C. SEC.	API G.R. UNITS PER LOG DIV.	ZERO DIV.L OR R	SENS SETTINGS	T.C. SEC.	SPEED M/MIN	DEPTHS TO	DEPTHS FROM	RUN NO.
109.65	3.14R	5K	0.5		MOUNTAIN COAL			4	260	0	ONE

REMARKS RIG 38 OPEN HOLE

CALIPER
DIAMETER – CM

BULK DENSITY
(GRAMS/CC)

DEPTHS

Re: Willow Creek 81(3)A

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W____M

COMPANY GA NOEL & ASSOCIATES INC.
WELL DDH 81 - 14
LOCATION 5197N 5226.5E
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services:
DENS, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 M • Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE		
Date	JULY 28, 1981.		
First Reading	260		
Last Reading	0		
Footage Logged	260		
Depth Reached	261		
Depth Driller	261		
Casing Roke	4 M		
Casing Driller			
Fluid Type	WATER/GEL		
Liquid Level	31 M		
Min. Diam	HQ		
Rm @			
Operating Time	1½ HOURS		
Truck No.	106		690
Recorded By	SERAFINI	Witnessed By	MARTON

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125 A 010	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	32 MM	TOOL MODEL NO.	
DETECTOR MODEL NO.		DIAMETER	32 MM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.5 CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	38.1 CM	LENGTH	10.5 CM
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	347
HOIST TRUCK NO.		SPACING	43 CM
INSTRUMENT TRUCK NO.	106	TYPE	AmBe
TOOL SERIAL NO.		STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	260	4	3	100	0	20'	3	5K	0	160

REMARKS RIG 38 OPEN HOLE

Re. Willow Creek 81(3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.
LSD
SEC
TWP
RGE
W____M

COMPANY GA NOEL & ASSOCIATES INC.
WELL DDH 81 - 15
LOCATION 4594.5N 5700S
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: CAL, DENS, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from RIGFLOOR

K.B.
CSG
G.L.
METRIC

Run No.	ONE
Date	AUG. 2, 1981
First Reading	340
Last Reading	0
Footage Logged	340
Depth Reached	342
Depth Driller	343.2
Casing Roke	6.0
Casing Driller	6.1
Fluid Type	WATER/GEL
Liquid Level	0
Min. Diam.	HQ
Rm @	
Operating Time	
Truck No.	106

Recorded By SERAFINI
Witnessed By MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125 A010	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	32 MM	TOOL MODEL NO.	125 A010
DETECTOR MODEL NO.		DIAMETER	32 MM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.5 CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	38 CM	LENGTH	10.5 CM
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	347
HOIST TRUCK NO.		SPACING	43 CM
INSTRUMENT TRUCK NO.	106	TYPE	AmBe
TOOL SERIAL NO.		STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	140	4	3	100	0	11	3	5K	0	120
1	140	340	4	3	100	0	20	3	5K	0	120

REMARKS RIG44 OPEN HOLE 60°

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES →		NEUTRON INCREASES →
API 11		API 120
0 110		0 1200 2400

Re. Willow Creek 81(3)A

ROKE
SIDEWALL DENSILOG
CALIPER

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.
LSD
SEC
TWP
RGE
W ______ M

COMPANY GA NOEL & ASSOCIATES INC.
WELL DDH - 81 - 16
LOCATION 5404.5N 5280S
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services: GRN, CAL
DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.

METRIC

Run. No.	ONE
Date	AUG. 2, 1981.
First Reading	290
Last Reading	0
Footage Logged	290
Depth Reached	291
Depth Driller	297.5
Casing Roke	4.5
Casing Driller	
Fluid Type	WATER/GEL
Liquid Level	23.5
Min. Diam.	HQ
Operating Time	
Truck No.	106

Recorded By SERAFINI
Witnessed By MARTON

690

GENERAL				GAMMA RAY				SIDEWALL DENSILOG			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	API G.R. UNITS PER LOG DIV.	T.C. SEC.	SENS SETTINGS	ZERO DIV.L OR R	CPS/ DIV
ONE	0	290	4	MOUNTAIN COAL				0.5	5K	3.14R	109.65

REMARKS RIG 38 OPEN HOLE

DEPTHS

CALIPER
DIAMETER – CM
5 10 15 20

BULK DENSITY
(GRAMS/CC)
1.00 1.10 1.20 1.30 1.40 1.50 1.60 1.70 1.80 1.90 2.00 2.10 2.20 2.30 2.40 2.50 2.60 2.70 2.80

Re. Willow Creek 81(3)A

ROKE

OIL ENTERPRISES LTD. CALGARY, ALBERTA

GAMMA RAY NEUTRON LOG

FILE NO.

LSD
SEC
TWP
RGE
W______M

COMPANY GA NOEL & ASSOCIATES INC.
WELL DDH 81 - 16
LOCATION 5404.5N 5280S
FIELD WILLOW CREEK
PROVINCE BRITISH COLUMBIA

Other Services:
CAL, DENS, DIR

Permanent Datum GROUND LEVEL Elev.
Log Measured from RIG FLOOR 0.3 M Above Perm. Datum
Well Depths Measured from RIG FLOOR

K.B.
CSG
G.L.
METRIC

Run. No.	ONE
Date	AUG. 2, 1981.
First Reading	291
Last Reading	0
Footage Logged	291
Depth Reached	291.5
Depth Driller	297.5
Casing Roke	4.5
Casing Driller	
Fluid Type	WATER/GEL
Liquid Level	23.5
Min. Diam.	HQ
Rm @	
Operating Time	
Truck No	106
Recorded By	SERAFINI
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125 A010	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	32 MM	TOOL MODEL NO.	125 A010
DETECTOR MODEL NO.		DIAMETER	32 MM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.5 CM	TYPE	PROPORTIONAL
DISTANCE TO N SOURCE	38.1 CM	LENGTH	10.5 CM
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	347
HOIST TRUCK NO.		SPACING	43 CM
INSTRUMENT TRUCK NO.	106	TYPE	AmBe
TOOL SERIAL NO.		STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M/MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
1	0	20	4	3	100	0	14	3	10K		240
1	20	291	4	3	100	0	14	3	5K		120

REMARKS RIG 38 OPEN HOLE
SCALE CHANGE AT 20 M to 240 API/DIV.

Scale Change from 120API/DIV to 240 API/DIV

0 1200API 2400

Fluid Level @ 23.5M.

Re. Willow Creek 81(3)A

ROKE

GAMMA RAY NEUTRON LOG

OIL ENTERPRISES LTD. CALGARY, ALBERTA

FILE NO.	
COMPANY	GA NOEL & ASSOCIATES INC.
WELL	DDH 81 - 17
LOCATION	4200N 5770E
FIELD	WILLOW CREEK
PROVINCE	BRITISH COLUMBIA
LSD SEC TWP RGE W M	
Other Services:	DENS, CAL, DIR
Permanent Datum	GROUND LEVEL
Elev.	
Log Measured from	RIG FLOOR 0.3 Above Perm. Datum
Well Depths Measured from	RIG FLOOR
K.B.	
CSG	
G.L.	
	METRIC

Run. No.	ONE
Date	AUG. 7, 1981.
First Reading	330
Last Reading	0
Footage Logged	330
Depth Reached	331
Depth Driller	337
Casing Roke	7
Casing Driller	
Fluid Type	WATER/GEL
Liquid Level	17
Min. Diam.	HQ
Rm @	
Operating Time	
Truck No.	106
Recorded By	SERAFINE
Witnessed By	MARTON

690

EQUIPMENT DATA

GAMMA RAY		NEUTRON	
RUN NO.	ONE	RUN NO.	ONE
TOOL MODEL NO.	125	LOG TYPE	NEUTRON/NEUTRON
DIAMETER	3.18 CM	TOOL MODEL NO.	125
DETECTOR MODEL NO.		DIAMETER	3.18 CM
TYPE	SCINTILLATION	DETECTOR MODEL NO.	
LENGTH	10.16 CM	TYPE	PROPORTIONAL
DISTANCE TO N. SOURCE	2.0 M	LENGTH	
		SOURCE MODEL NO.	MRC-N-SS-W
GENERAL		SERIAL NO.	347
HOIST TRUCK NO.		SPACING	
INSTRUMENT TRUCK NO.		TYPE	AmBe
TOOL SERIAL NO.	125A006	STRENGTH	3 CURIES

LOGGING DATA

GENERAL				GAMMA RAY				NEUTRON			
RUN NO.	DEPTHS FROM	DEPTHS TO	SPEED M /MIN	T.C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API G. R. UNITS PER LOG DIV.	T. C. SEC.	SENS SETTINGS	ZERO DIV. L OR R	API N. UNITS PER LOG DIV.
ONE	0	330	4	3	100	0	14	3	5K	0	130

REMARKS

GAMMA RAY	DEPTHS	NEUTRON
GAMMA RAY INCREASES → API 14 0 140		NEUTRON INCREASES → API 130 0 1300 2300