

SCANNED

SOUTH AUSTRALIA
DEPARTMENT OF MINES AND ENERGY



OPEN FILE ENVELOPE NO. 5807

PPL 24

COOPER BASIN

KIDMAN 4

TEST REPORTS

Submitted by

Delhi Petroleum Pty Ltd

1985

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ENVELOPE 5807

TENEMENT: PPL 24; Cooper Basin

TENEMENT HOLDER: Santos Ltd (operator), Cooper Basin Unit

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TRANSPARENCIES: (Held in Document Storage Centre)

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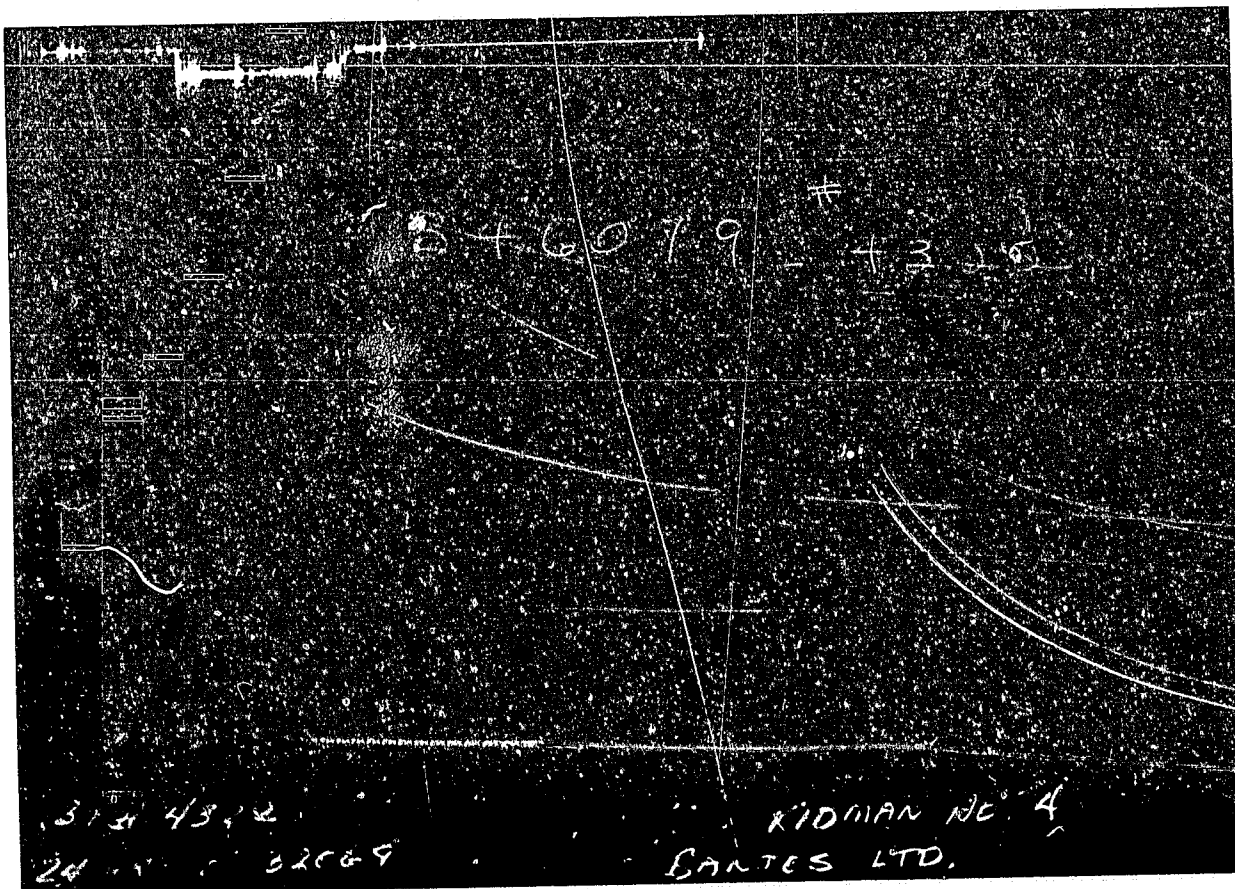


TICKET NO. 34607900
22-FEB-85
MOOMBA

FORMATION TESTING SERVICE REPORT

LEASE NAME		WELL NO.		TEST NO.		TESTED INTERVAL		LEASE OWNER/COMPANY NAME	
KIDMAN		4		1				DELHI/SANTOS	
LEGAL LOCATION SEC. - TWP. - RNG.		SEE REMARKS		FIELD AREA		COOPER BASIN		COUNTY SOUTH AUSTRALIA STATE AUSTRALIA	
								NM	

0000



GAUGE NO: 4322 DEPTH: _____ BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	FAILED TO REACH BOTTOM					

00003

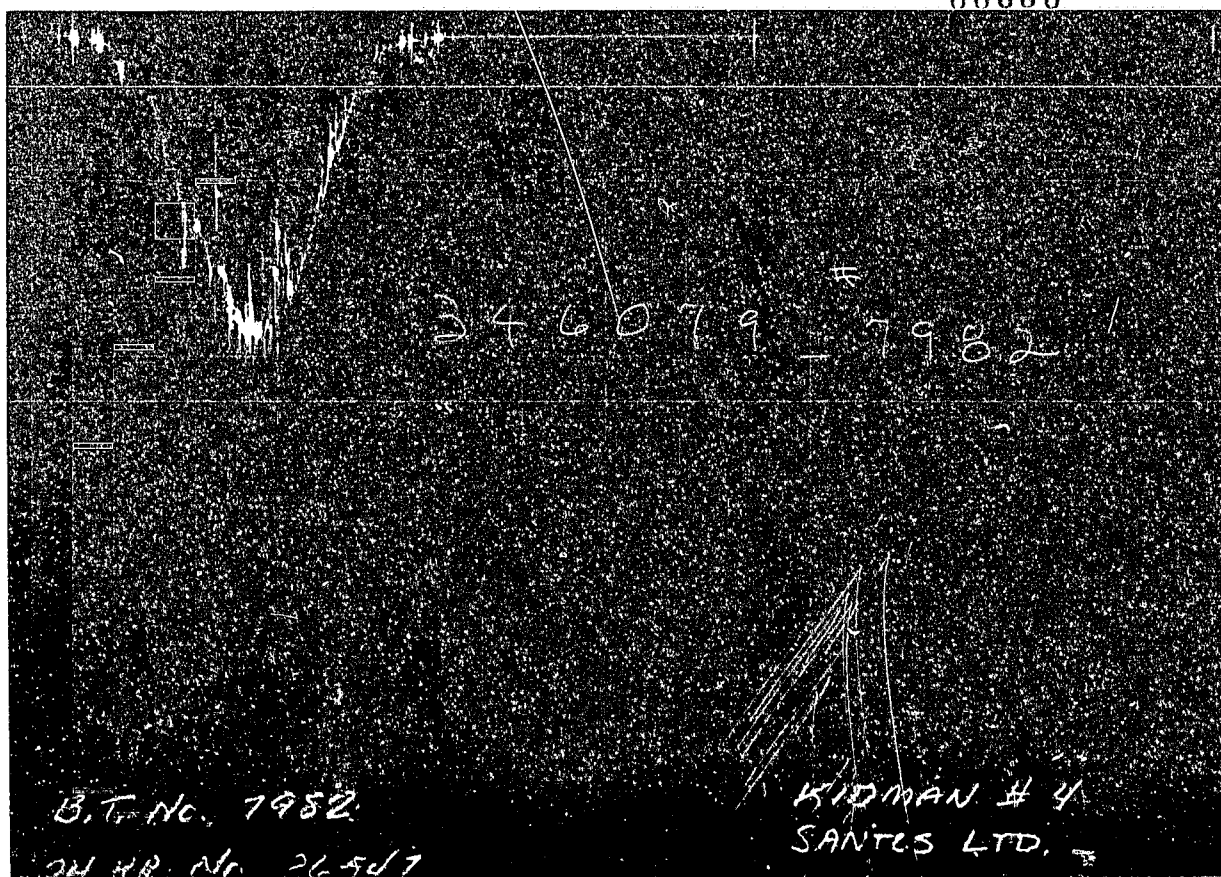


GAUGE NO: 521 DEPTH: _____ BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	FAILED TO REACH BOTTOM					

00006

012

GAUGE NO: 7982 DEPTH: _____ BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	FAILED TO REACH BOTTOM					

00007

EQUIPMENT & HOLE DATA			TICKET NUMBER: 34607900		
FORMATION TESTED: <u>TOOLACHEE</u>			DATE: <u>1-7-85</u> TEST NO: <u>1</u>		
NET PAY (ft): _____			TYPE DST: <u>OPEN HOLE</u>		
GROSS TESTED FOOTAGE: _____			HALLIBURTON CAMP: _____		
ALL DEPTHS MEASURED FROM: <u>R. KELLY BUSHING</u>			MOOMBA _____		
CASING PERFS. (ft): _____			TESTER: <u>RON BAKER</u>		
HOLE OR CASING SIZE (in): <u>8.500</u>			<u>BILL WILTSHIRE</u>		
ELEVATION (ft): <u>241</u>			WITNESS: <u>?</u>		
TOTAL DEPTH (ft): <u>6805.0</u>			DRILLING CONTRACTOR: _____		
PACKER DEPTH(S) (ft): _____			<u>ATCO - RPM</u>		
FINAL SURFACE CHOKE (in): _____					
BOTTOM HOLE CHOKE (in): <u>0.750</u>					
MUD WEIGHT (lb/gal): <u>9.70</u>					
MUD VISCOSITY (sec): <u>10</u>					
ESTIMATED HOLE TEMP. (°F): <u>120</u>					
ACTUAL HOLE TEMP. (°F): _____ @ _____ ft					
FLUID PROPERTIES FOR RECOVERED MUD & WATER					
SOURCE	RESISTIVITY	CHLORIDES			
_____	_____ @ _____ °F	_____ ppm	Pstg AT SURFACE: _____		
_____	_____ @ _____ °F	_____ ppm	cu. ft. OF GAS: _____		
_____	_____ @ _____ °F	_____ ppm	cc OF OIL: _____		
_____	_____ @ _____ °F	_____ ppm	cc OF WATER: _____		
_____	_____ @ _____ °F	_____ ppm	cc OF MUD: _____		
_____	_____ @ _____ °F	_____ ppm	TOTAL LIQUID cc: _____		
HYDROCARBON PROPERTIES			CUSHION DATA		
OIL GRAVITY (°API): _____ @ _____ °F			TYPE <u>✓</u> AMOUNT WEIGHT		
GAS/OIL RATIO (cu. ft. per bbl): _____			_____		
GAS GRAVITY: _____			_____		
RECOVERED: MEASURED FROM TESTER VALVE					
REMARKS: UNABLE TO GET TO BOTTOM. HIT TIGHT SPOT @ 3811'. ATTEMPTING TO TEST FROM 6739.7' - 6805'. LEGAL LOCATION: LAT. 28 DEGREES 15 MINUTES 1.6 SECONDS S AND LONG. 140 DEGREES 49 MINUTES 19.6 SECONDS E THIS TEST WAS CONDUCTED IN JANUARY.					

00008

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00003

190

TICKET NO. 34607900

		O.D.	I.D.	LENGTH	DEPTH
1		DRILL PIPE.....	4.500	3.826	
4		FLEX WEIGHT.....	4.500	2.764	182.8
5		CROSSOVER.....	6.750	2.875	2.4
3		DRILL COLLARS.....	6.750	2.875	370.4
51		PUMP OUT REVERSING SUB.....	6.000	3.000	1.0
3		DRILL COLLARS.....	6.750	2.875	31.0
50		IMPACT REVERSING SUB.....	6.000	3.000	1.0
3		DRILL COLLARS.....	6.750	2.875	31.0
5		CROSSOVER.....	5.750	2.000	1.0
80		AP RUNNING CASE.....	5.000	2.250	4.1
5		CROSSOVER.....	5.000	2.250	1.0
12		DUAL CIP VALVE.....	5.000	0.870	4.9
97		SAMPLE CHAMBER.....	5.000	3.060	4.9
33		DRAIN VALVE.....	5.000	2.200	0.9
60		HYDROSPRING TESTER.....	5.000	0.750	5.3
80		AP RUNNING CASE.....	5.000	2.250	4.1
15		JAR.....	5.100	1.750	5.0
16		VR SAFETY JOINT.....	5.000	1.000	2.8
70		OPEN HOLE PACKER.....	5.000	1.530	5.9
19		ANCHOR PIPE SAFETY JOINT.....	5.000	1.500	4.3
5		CROSSOVER.....	6.000	2.250	1.0
3		DRILL COLLARS.....	6.750	2.875	30.9
5		CROSSOVER.....	6.000	2.250	1.0
20		FLUSH JOINT ANCHOR.....	5.000	2.370	23.0
81		BLANKED-OFF RUNNING CASE.....	5.000		4.1
TOTAL DEPTH					6805.0
EQUIPMENT DATA					

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00010

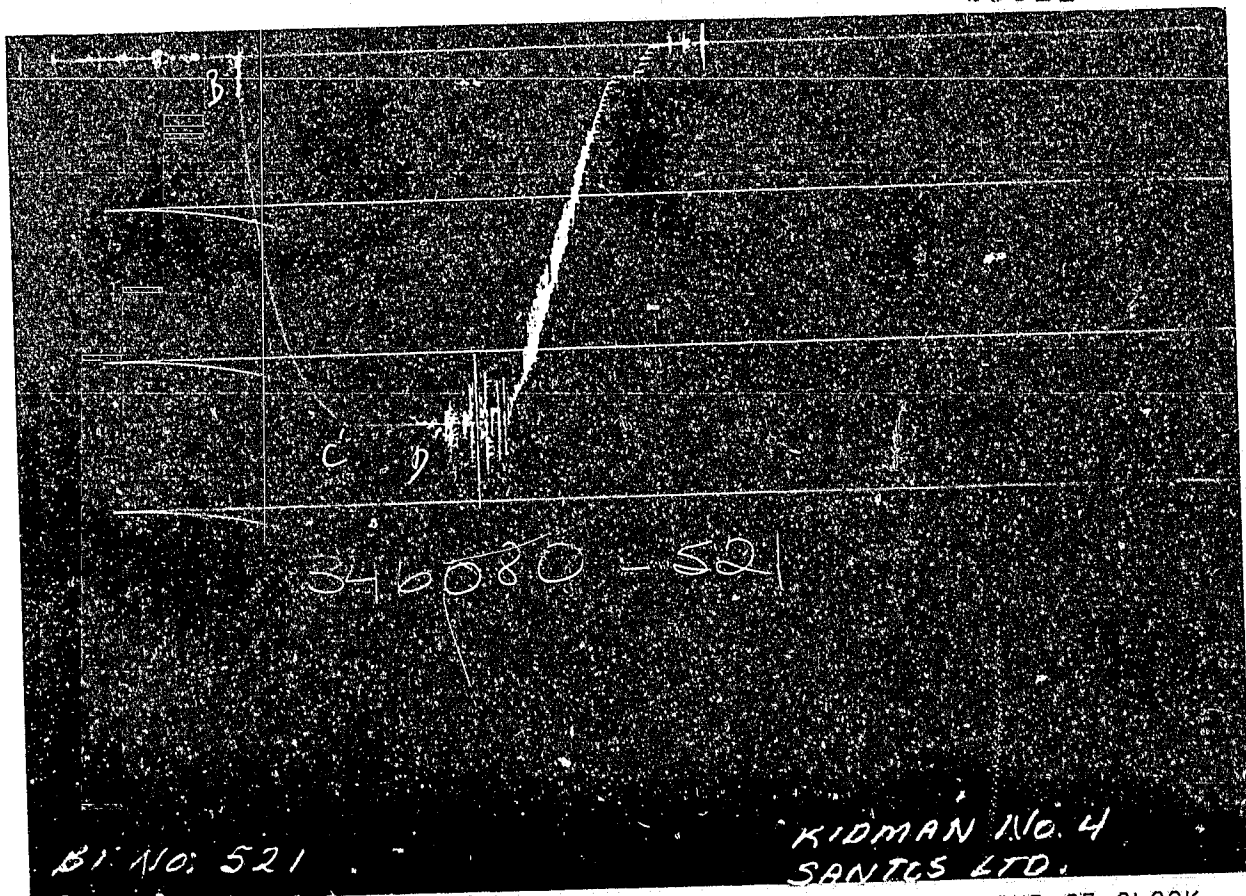


TICKET NO. 34608000
27-FEB-85
MOOMBA

FORMATION TESTING SERVICE REPORT

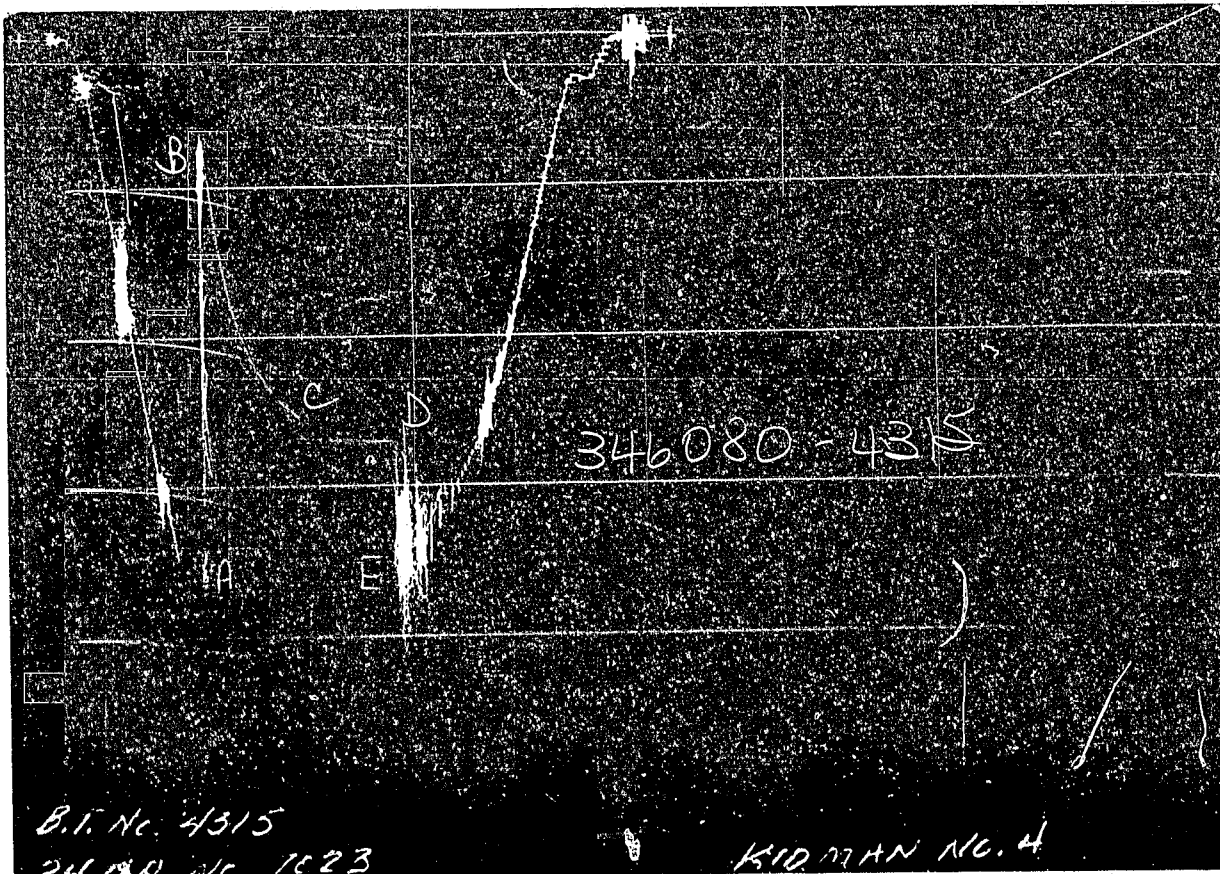
KIDMAN		4	1-8	6740.1 - 6805.1	DELHI/SANTOS	
LEASE NAME		WELL NO.	TEST NO.	TESTED INTERVAL	LEASE OWNER/COMPANY NAME	
LEGAL LOCATION SEC. - TWP. - RANG.	SEE REMARKS			FIELD AREA	COUNTRY	STATE
					SOUTH AUSTRALIA	AUSTRALIA
						PV

00011



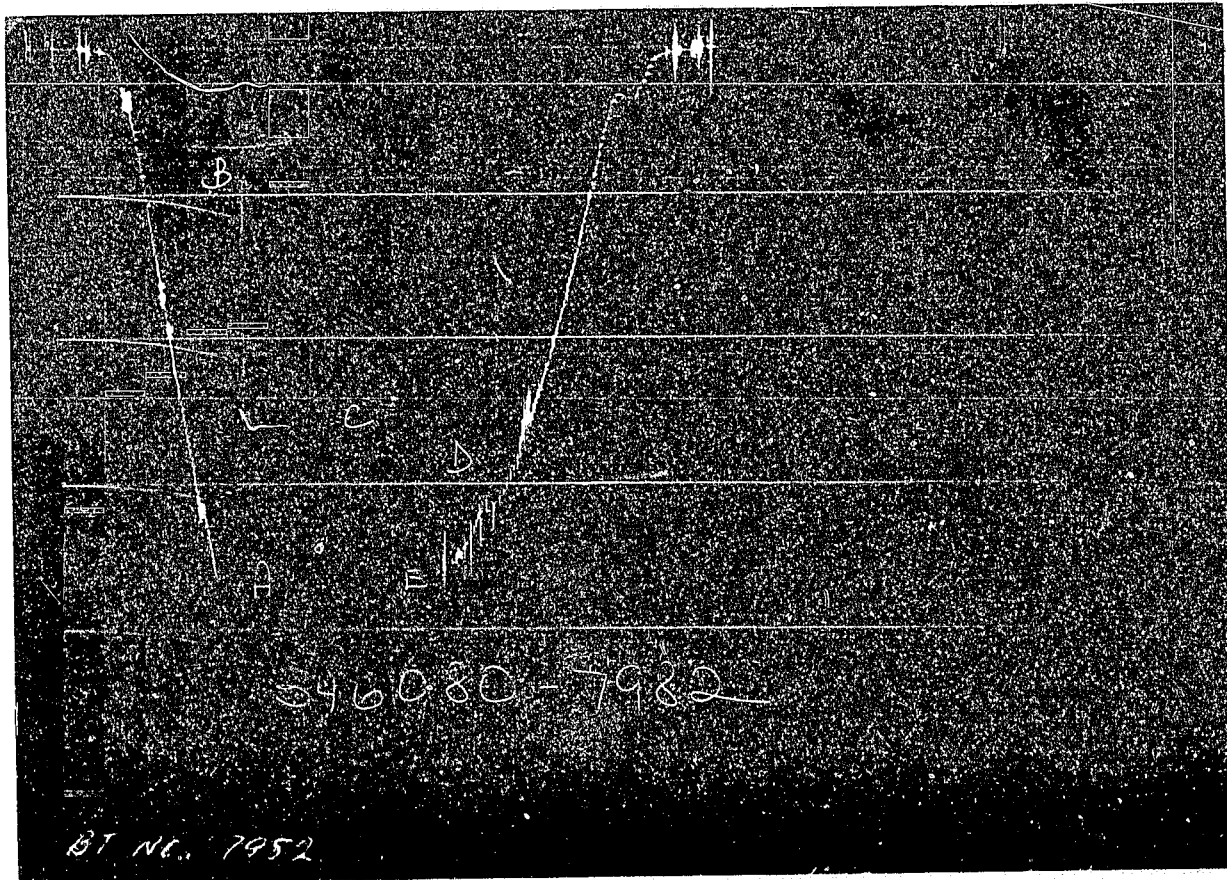
GAUGE NO: 521 DEPTH: 6703.4 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC					
B	INITIAL FIRST FLOW		361.7			
C	FINAL FIRST FLOW	2466	2461.6	120.0	119.9	F
C	INITIAL FIRST CLOSED-IN	2466	2461.6			
D	FINAL FIRST CLOSED-IN		2471.9	120.0	120.1	C
E	FINAL HYDROSTATIC					



GAUGE NO: 4315 DEPTH: 6723.7 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	3423	3424.6			
B	INITIAL FIRST FLOW	684	668.0			
C	FINAL FIRST FLOW	2527	2530.2	120.0	119.9	F
C	INITIAL FIRST CLOSED-IN	2527	2530.2			
D	FINAL FIRST CLOSED-IN	2687	2698.1	120.0	120.1	C
E	FINAL HYDROSTATIC		3436.6			



GAUGE NO: 7982 DEPTH: 6802.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	3430	3568.1			
B	INITIAL FIRST FLOW	856	865.5	120.0	119.9	F
C	FINAL FIRST FLOW	2403	2634.2			
C	INITIAL FIRST CLOSED-IN	2403	2634.2	120.0	120.1	C
D	FINAL FIRST CLOSED-IN	2693	2808.4			
E	FINAL HYDROSTATIC	3430	3575.7			

00014

EQUIPMENT & HOLE DATA			TICKET NUMBER: 34608000		
FORMATION TESTED: TOOLACHEE			DATE: 1-7-85 TEST NO: 1-A		
NET PAY (ft):			TYPE DST: OPEN HOLE		
GROSS TESTED FOOTAGE: 65.3			HALLIBURTON CAMP:		
ALL DEPTHS MEASURED FROM: R.K.B.			MOOMBA		
CASING PERFS. (ft):			TESTER: RON BAKER		
HOLE OR CASING SIZE (in): 8.500			BILL WILTSHIRE		
ELEVATION (ft): 241			WITNESS: ??		
TOTAL DEPTH (ft): 6805.0			DRILLING CONTRACTOR:		
PACKER DEPTH(S) (ft): 6740			ATCO - RPM		
FINAL SURFACE CHOKE (in): 0.500					
BOTTOM HOLE CHOKE (in): 0.750					
MUD WEIGHT (lb/gal): 9.70					
MUD VISCOSITY (sec): 40					
ESTIMATED HOLE TEMP. (°F):					
ACTUAL HOLE TEMP. (°F): 249 @ 6801.2 ft					
FLUID PROPERTIES FOR RECOVERED MUD & WATER			SAMPLER DATA		
SOURCE	RESISTIVITY	CHLORIDES	Pslg AT SURFACE:		
	°F	ppm	cu.ft. OF GAS:		
	°F	ppm	cc OF OIL:		
	°F	ppm	cc OF WATER:		
	°F	ppm	cc OF MUD:		
	°F	ppm	TOTAL LIQUID cc:		
	°F	ppm			
	°F	ppm			
HYDROCARBON PROPERTIES			CUSHION DATA		
OIL GRAVITY (°API): °F			TYPE AMOUNT WEIGHT		
GAS/OIL RATIO (cu.ft. per bbl):					
GAS GRAVITY:					
RECOVERED:					
6000 FEET OF 8.4 PPG SALTWATER					
REMARKS:					
LEGAL LOCATION: LAT. 28 DEGREES - 15' - 1.6" SOUTH					
LONG. 140 DEGREES - 49' - 19.6" EAST					
THIS TEST WAS CONDUCTED IN JANUARY					

MEASURED FROM
TESTER VALVE

40015

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00016

TICKET NO: 34608000
CLOCK NO: 32067 HOUR: 24



GAUGE NO: 521
DEPTH: 6703.4

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW					
B 1	0.0	361.7			
2	10.0	891.4	529.7		
3	20.0	1270.1	378.7		
4	30.0	1549.3	279.2		
5	40.0	1759.8	210.5		
6	50.0	1926.7	166.9		
7	60.0	2060.1	133.4		
8	70.0	2158.7	98.6		
9	80.0	2245.9	87.2		
10	90.0	2315.6	69.7		
11	100.0	2373.5	57.9		
12	110.0	2420.3	46.7		
C 13	119.9	2461.6	41.3		
FIRST CLOSED-IN					
C 1	0.0	2461.6			
D 2	120.1	2471.9	10.4	60.0	0.301

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$

REMARKS:

889

00017

TICKET NO: 34608000
CLOCK NO: 7023 HOUR: 24



GAUGE NO: 4315
DEPTH: 6723.7

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$	REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW											
B	1	0.0	668.0								
	2	10.0	1005.9	337.9							
	3	20.0	1392.2	386.2							
	4	30.0	1653.4	261.3							
	5	40.0	1867.4	213.9							
	6	50.0	2020.0	152.6							
	7	60.0	2142.4	122.4							
	8	70.0	2235.2	92.8							
	9	80.0	2321.6	86.4							
	10	90.0	2387.8	66.2							
	11	100.0	2445.9	58.1							
	12	110.0	2490.1	44.2							
C	13	119.9	2530.2	40.2							
FIRST CLOSED-IN											
C	1	0.0	2530.2								
	2	8.0	2673.3	143.0	7.5	1.206					
	3	16.0	2680.3	150.1	14.1	0.929					
	4	24.0	2684.0	153.8	20.0	0.779					
	5	32.0	2686.6	156.3	25.3	0.676					
	6	40.0	2688.3	158.1	30.0	0.602					
	7	48.0	2690.1	159.8	34.3	0.544					
	8	56.0	2691.7	161.4	38.2	0.497					
	9	64.0	2693.4	163.2	41.7	0.458					
	10	72.0	2694.2	164.0	45.0	0.426					
	11	80.0	2695.0	164.8	48.0	0.398					
	12	88.0	2695.0	164.8	50.7	0.373					
	13	96.0	2695.8	165.6	53.3	0.352					
	14	104.0	2696.8	166.6	55.7	0.333					
	15	112.0	2697.3	167.0	57.9	0.316					
D	16	120.1	2698.1	167.8	60.0	0.301					

REMARKS:

680

00018

TICKET NO: 34608000

CLOCK NO: 26547 HOUR: 24



GAUGE NO: 7982

DEPTH: 6802.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$	REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW											
B	1	0.0	865.5								
	2	10.0	1091.2	225.7							
	3	20.0	1431.8	340.7							
	4	30.0	1710.2	278.3							
	5	40.0	1924.7	214.5							
	6	50.0	2099.2	174.5							
	7	60.0	2230.1	131.0							
	8	70.0	2325.5	95.4							
	9	80.0	2412.7	87.3							
	10	90.0	2482.5	69.7							
	11	100.0	2542.9	60.5							
	12	110.0	2591.3	48.4							
C	13	119.9	2634.2	42.9							
FIRST CLOSED-IN											
C	1	0.0	2634.2								
	2	8.0	2783.6	149.3	7.5	1.204					
	3	16.0	2790.1	155.9	14.1	0.929					
	4	24.0	2793.8	159.5	20.0	0.778					
	5	32.0	2796.4	162.2	25.3	0.676					
	6	40.0	2798.7	164.5	30.0	0.601					
	7	48.0	2800.0	165.8	34.3	0.544					
	8	56.0	2801.6	167.4	38.2	0.497					
	9	64.0	2803.8	169.6	41.7	0.458					
	10	72.0	2804.3	170.1	45.0	0.426					
	11	80.0	2805.1	170.9	48.0	0.398					
	12	88.0	2806.1	171.9	50.8	0.373					
	13	96.0	2806.9	172.7	53.3	0.352					
	14	104.0	2807.6	173.4	55.7	0.333					
	15	112.0	2808.2	174.0	57.9	0.316					
D	16	120.1	2808.4	174.2	60.0	0.301					

REMARKS:

		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.500	3.826	6096.7	
4		FLEX PIPE.....	4.500	2.764	182.8	
5		CROSSOVER.....	6.750	2.875	2.4	
3		DRILL COLLARS.....	6.750	2.875	370.4	
5		CROSSOVER.....	6.000	3.000	1.0	
3		DRILL COLLARS.....	6.750	2.875	31.0	
50		IMPACT REVERSING SUB.....	6.000	3.000	1.0	6670.0
3		DRILL COLLARS.....	6.750	2.875	31.0	
5		CROSSOVER.....	5.750	2.000	1.0	
80		AP RUNNING CASE.....	5.000	2.250	4.1	6703.4
5		CROSSOVER.....	5.000	2.250	1.0	
12		DUAL CIP VALVE.....	5.000	0.870	4.9	
97		SAMPLE CHAMBER.....	5.000	3.060	4.9	6714.0
33		DRAIN VALVE.....	5.000	2.200	0.9	
60		HYDROSPRING TESTER.....	5.000	0.750	5.3	6722.4
80		AP RUNNING CASE.....	5.000	2.250	4.1	6723.7
15		JAR.....	5.000	1.750	5.0	
16		VR SAFETY JOINT.....	5.000	1.000	2.8	
70		OPEN HOLE PACKER.....	7.750	1.530	5.9	6739.7
19		ANCHOR PIPE SAFETY JOINT.....	5.000	1.500	4.3	
5		CROSSOVER.....	6.000	2.250	1.0	
3		DRILL COLLARS.....	6.750	2.875	30.9	
5		CROSSOVER.....	6.000	2.250	1.0	
20		FLUSH JOINT ANCHOR.....	5.000	2.370	23.0	
81		BLANKED-OFF RUNNING CASE.....	5.000		4.1	6802.0
TOTAL DEPTH					6805.0	
EQUIPMENT DATA						

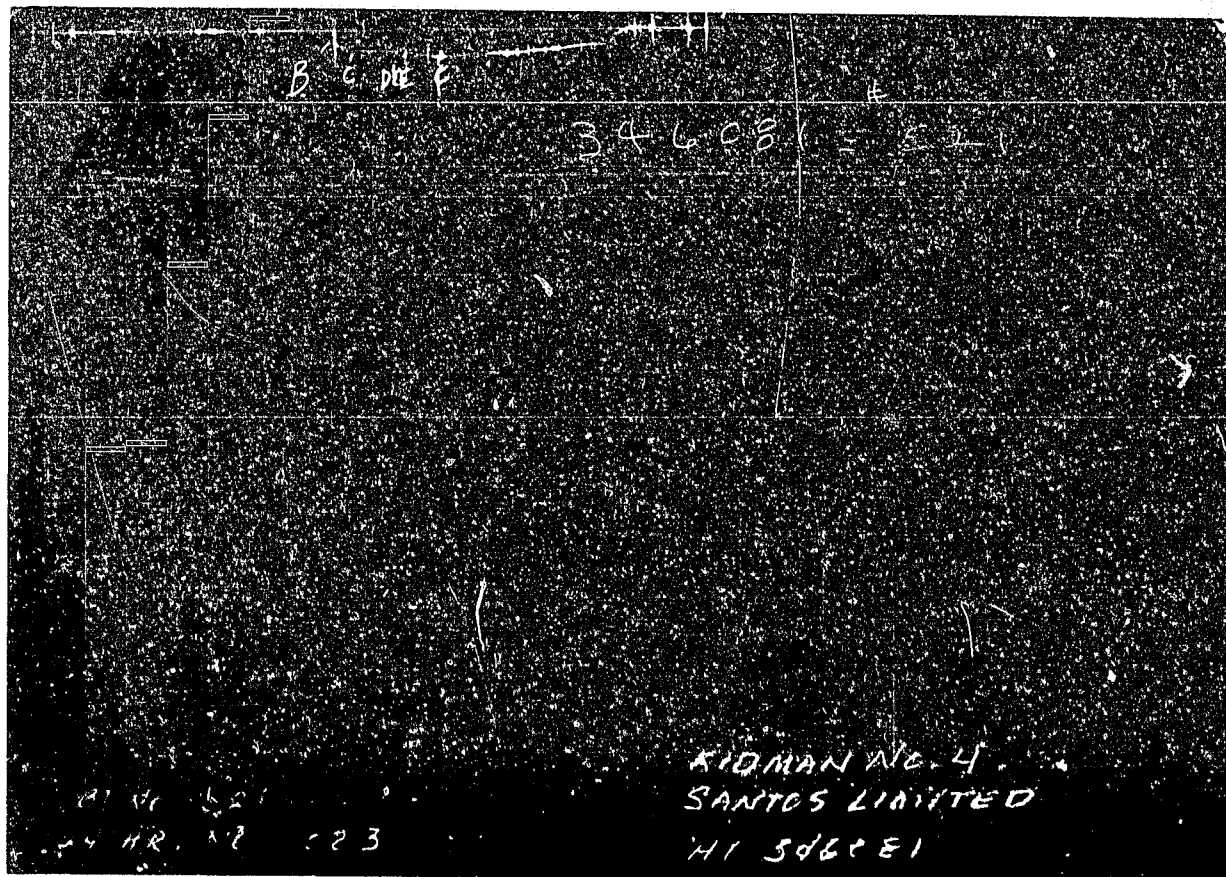
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TICKET NO. 34608100
27-FEB-85
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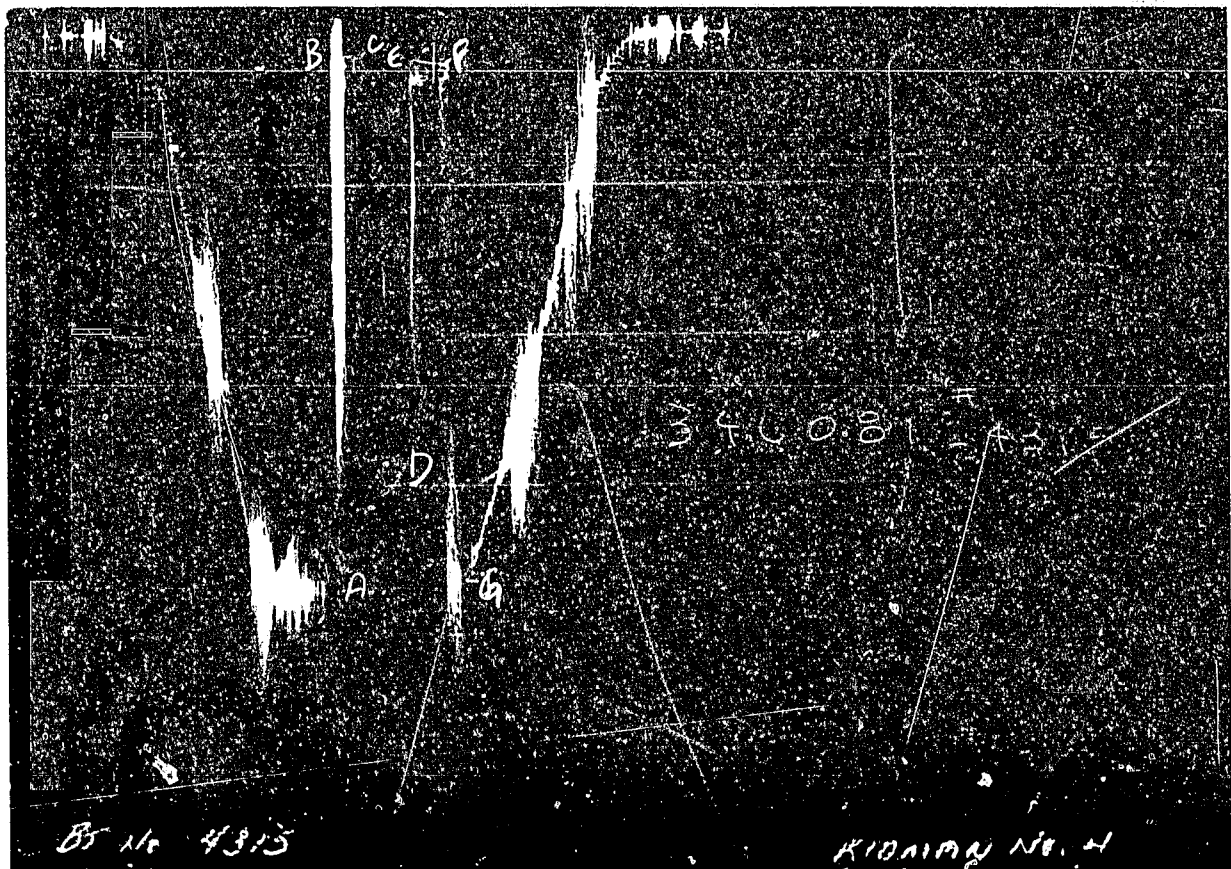
FORMATION TESTING SERVICE REPORT

LEASE NAME	KIDMAN	WELL NO.	4	TEST NO.	2	TESTED INTERVAL	7130.1 - 7174.1	LEASE OWNER/COMPANY NAME	DELHI/SRINTOS
LEGAL LOCATION SEC. - TWP. - RNG.	SEE REMARKS	FIELD AREA	COOPER BASIN	COUNTY	SOUTH AUSTRALIA	STATE	AUSTRALIA	NM	



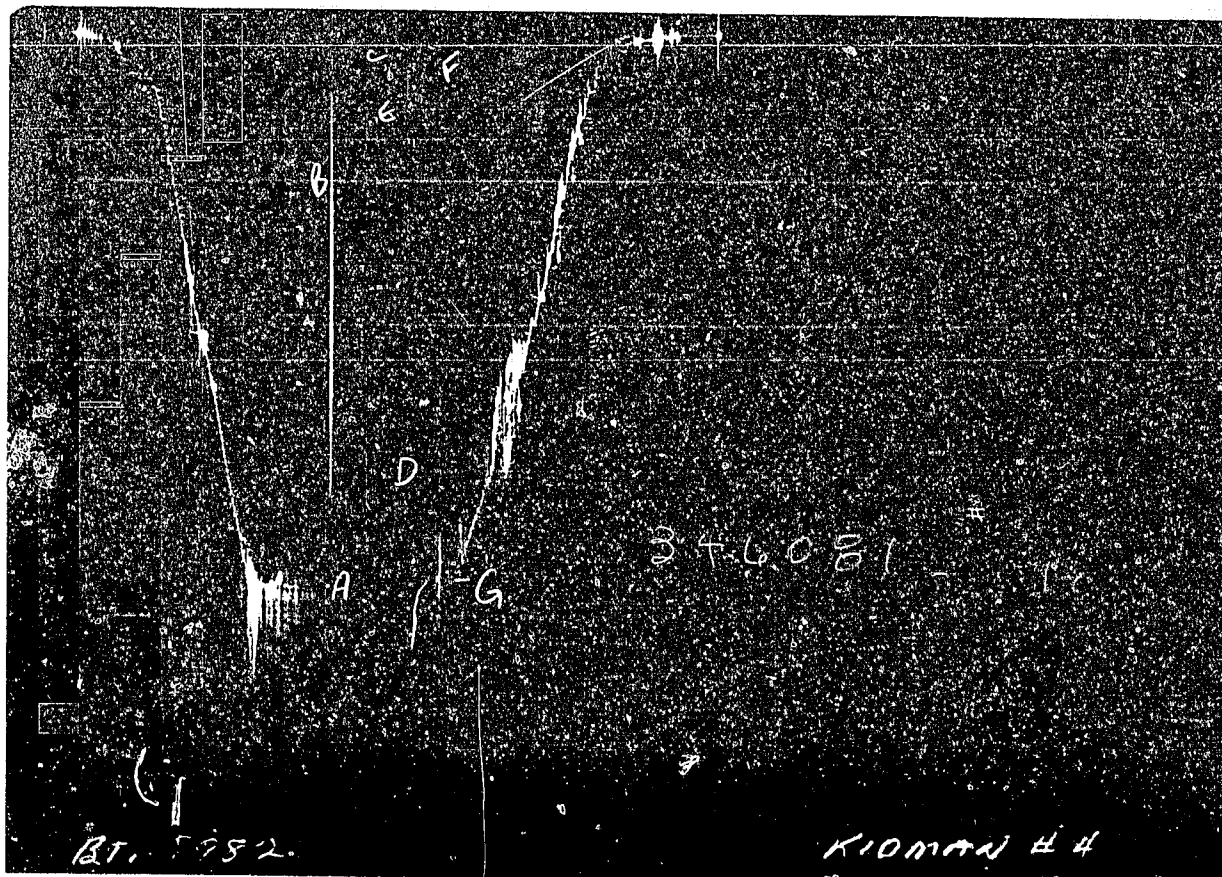
GAUGE NO: 521 DEPTH: 7093.3 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC					
B	INITIAL FIRST FLOW		95.8			
C	FINAL FIRST FLOW		137.1	32.3		F
C	INITIAL FIRST CLOSED-IN		137.1			
D	FINAL FIRST CLOSED-IN		145.8	58.8		C
E	INITIAL SECOND FLOW		135.1			
F	FINAL SECOND FLOW	185	179.7	39.8		F
G	FINAL HYDROSTATIC					



GAUGE NO: 4315 DEPTH: 7113.6 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	3627	3629.4			
B	INITIAL FIRST FLOW	175	198.4			
C	FINAL FIRST FLOW		153.4		32.3	F
C	INITIAL FIRST CLOSED-IN		153.4			
D	FINAL FIRST CLOSED-IN		2671.0		58.8	C
E	INITIAL SECOND FLOW		182.4			
F	FINAL SECOND FLOW	197	201.9		39.8	F
G	FINAL HYDROSTATIC	3634	3632.6			



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GAUGE NO: 7982 DEPTH: 7171.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	3675	3790.1			
B	INITIAL FIRST FLOW	310	1088.0			
C	FINAL FIRST FLOW		304.1		32.3	F
C	INITIAL FIRST CLOSED-IN		304.1			
D	FINAL FIRST CLOSED-IN		2786.8		58.8	C
F	INITIAL SECOND FLOW		512.2			
F	FINAL SECOND FLOW	293	287.8		39.8	F
G	FINAL HYDROSTATIC	3589	3763.0			

00024

EQUIPMENT & HOLE DATA			TICKET NUMBER: 34608100	
FORMATION TESTED: EPSILON			DATE: 1-11-85 TEST NO: 2	
NET PAY (ft):			TYPE DST: OPEN HOLE	
GROSS TESTED FOOTAGE: 44.4			HALLIBURTON CAMP: MOOMBA	
ALL DEPTHS MEASURED FROM: R.KELLY BUSHING			TESTER: RON BAKER COLIN HURON	
CASING PERFS. (ft):			WITNESS: MR. LEE	
HOLE OR CASING SIZE (in): 8.500			DRILLING CONTRACTOR: ATCO-APM	
ELEVATION (ft): 241				
TOTAL DEPTH (ft): 7174.0				
PACKER DEPTH(S) (ft): 7130				
FINAL SURFACE CHOKE (in): 0.500				
BOTTOM HOLE CHOKE (in): 0.750				
MUD WEIGHT (lb/gal): 9.70				
MUD VISCOSITY (sec): 41				
ESTIMATED HOLE TEMP. (°F):				
ACTUAL HOLE TEMP. (°F): 250 @ 7170.7 ft				
FLUID PROPERTIES FOR RECOVERED MUD & WATER			SAMPLER DATA	
SOURCE	RESISTIVITY	CHLORIDES	Pstg AT SURFACE:	
	@ °F	ppm	cu.ft. OF GAS:	
	@ °F	ppm	cc OF OIL:	
	@ °F	ppm	cc OF WATER:	
	@ °F	ppm	cc OF MUD:	
	@ °F	ppm	TOTAL LIQUID cc:	
	@ °F	ppm		
HYDROCARBON PROPERTIES			CUSHION DATA	
OIL GRAVITY (°API): @ °F			TYPE AMOUNT WEIGHT	
GAS/OIL RATIO (cu.ft. per bbl):				
GAS GRAVITY:				
RECOVERED: 422.7 - 11.7 RAT HOLE MUD				
REMARKS: LEGAL LOCATION: LAT. 28 DEGREES 15 MINUTES 1.6 SECONDS S AND LONG. 140 DEGREES 49 MINUTES 19.6 SECONDS E. THIS TEST WAS CONDUCTED IN JANUARY. THE CHARTS INDICATE PARTIAL PLUGGING OF ANCHOR PERFORATIONS DURING THE EARLY AND LATE PORTION OF THE FLOW PERIOD. THE TOOLS APPARENTLY PLUGGED DURING THE MIDDLE PORTION OF THE TEST. A CLOSED IN PRESSURE WAS READ FOR THE TIME THE TOOLS WERE PLUGGED.				

MEASURED FROM
TESTER VALVE

00025

TYPE & SIZE MEASURING DEVICE: CERAMIC CHOKE NIPPLE					TICKET NO: 34608100
TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
1 11-00					
1020					STARTED B.T. # 521.
1027					STARTED B.T. # 4315.
1030					STARTED B.T. # 7982.
1045					PICKED UP THE TOOLS.
1140					TOOLS IN THE HOLE.
1450					HIT TIGHT SPOT IN THE HOLE AT
					7156 FEET. WORKED PIPE.
1510					HEAD ON - RIGGED UP SURFACE
					EQUIPMENT - STILL UNABLE TO GET
					BELOW 7156 FEET.
1622					SET PACKER WITH 25,000# OF
					WEIGHT.
1626	.5	0			HYDROSPRING OPENED - MODERATE
					BLOW.
1628	"	"			CHASED TOOL TO THE BOTTOM.
1630	"	"			MODERATE BLOW.
1635	"	"			MODERATE BLOW.
1640	.5	0			MODERATE BLOW.
1645	.5	0			WEAK BLOW.
1650	"	"			"
1652	"	"			MODERATE BLOW.
1700	"	"			"
1730	"	"			VERY WEAK BLOW.
1741		0			CLOSED .5" CHOKE - HAD A WEAK
					BLOW.
1750	.5	0			OPENED .5" CHOKE - HAD A WEAK
					BLOW.
1824					ATTEMPTED TO CLOSE HYDROSPRING.
1829					CLOSED WELL IN AT CHOKE MANI-
					FOLD.
1836					ATTEMPTED TO CLOSE DUAL CIP
					VALVE. UNABLE TO GET
					NECESSARY TURNS AT TOOL.
1839					OPENED BYPASS.
1855					UNSLATED THE PACKER - STARTED
					OUT OF THE HOLE - PULLING

00027

TICKET NO: 34608100		GAUGE NO: 521
CLOCK NO: 7023 HOUR: 24		DEPTH: 7093.3

REF	MINUTES	PRESSURE	ΔP	$\frac{1 \times \Delta t}{1 + \Delta t}$	$\log \frac{1 + \Delta t}{\Delta t}$	REF	MINUTES	PRESSURE	ΔP	$\frac{1 \times \Delta t}{1 + \Delta t}$	$\log \frac{1 + \Delta t}{\Delta t}$
FIRST FLOW											
B	1	0.0	95.8								
	2	5.0	99.0	3.2							
	3	10.0	107.7	8.6							
	4	15.0	122.7	15.0							
	5	20.0	127.8	5.1							
	6	25.0	136.1	8.3							
	7	30.0	143.5	7.3							
C	8	32.3	137.1	-6.4							
FIRST CLOSED-IN											
C	1	0.0	137.1								
D	2	58.8	145.8	8.8	20.8	0.190					
SECOND FLOW											
E	1	0.0	135.1								
	2	5.0	131.8	-3.4							
	3	10.0	132.7	1.0							
	4	15.0	157.5	24.8							
	5	20.0	163.9	6.4							
	6	25.0	168.5	4.6							
	7	30.0	172.2	3.7							
	8	35.0	176.5	4.3							
F	9	39.8	179.7	3.2							

REMARKS:

TICKET NO: 34608100

CLOCK NO: 26547 HOUR: 24



GAUGE NO: 4315

DEPTH: 7113.6

REF	MINUTES	PRESSURE	ΔP	$\frac{1 \times \Delta t}{1 + \Delta t}$	$\log \frac{1 + \Delta t}{\Delta t}$	REF	MINUTES	PRESSURE	ΔP	$\frac{1 \times \Delta t}{1 + \Delta t}$	$\log \frac{1 + \Delta t}{\Delta t}$
FIRST FLOW											
B	1	0.0	198.4								
	2	5.0	146.4	-52.0							
	3	10.0	159.5	13.1							
	4	15.0	137.6	-21.9							
	5	20.0	150.2	12.6							
	6	24.9	162.6	12.3							
	7	30.0	155.2	-7.4							
C	8	32.3	153.4	-1.8							
FIRST CLOSED-IN											
C	1	0.0	153.4								
	2	4.0	207.2	53.8	3.8 0.958						
	3	8.0	281.5	128.2	6.4 0.703						
	4	12.0	357.6	204.2	8.8 0.566						
	5	16.0	507.0	353.6	10.7 0.480						
	6	20.0	742.1	588.6	12.3 0.418						
	7	24.0	1119.2	965.8	13.8 0.370						
	8	28.0	1596.8	1443.4	15.0 0.333						
	9	32.0	1961.6	1808.2	16.1 0.303						
	10	36.0	2196.3	2042.6	17.0 0.278						
	11	40.0	2347.2	2193.8	17.9 0.257						
	12	44.0	2450.4	2297.0	18.6 0.239						
	13	48.0	2530.7	2377.3	19.3 0.223						
	14	52.0	2590.6	2437.1	19.9 0.210						
D	15	56.0	2640.9	2487.4	20.5 0.198						
	16	58.8	2671.0	2517.6	20.8 0.190						
SECOND FLOW											
E	1	0.0	182.4								
	2	5.0	174.1	-8.3							
	3	10.0	177.4	3.4							
	4	15.0	185.1	7.7							
	5	20.0	189.1	4.0							
	6	25.0	193.6	4.5							
	7	30.0	196.3	2.7							
	8	35.0	198.7	2.4							
F	9	39.8	201.9	3.2							

REMARKS:

00029

TICKET NO: 34608100

CLOCK NO: 32067 HOUR: 24



GAUGE NO: 7982

DEPTH: 7171.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$	REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
FIRST FLOW											
B	1	0.0	1086.0								
	2	5.0	660.2	-427.8							
	3	10.0	677.5	17.3							
	4	15.0	415.1	-262.3							
	5	20.0	394.1	-21.1							
	6	25.0	298.4	-95.7							
	7	30.0	289.5	-8.9							
C	8	32.3	304.1	14.6							
FIRST CLOSED-IN											
C	1	0.0	304.1								
	2	4.0	397.0	92.9	3.6	0.957					
	3	8.0	513.2	209.0	6.4	0.700					
	4	12.0	687.3	383.2	8.7	0.567					
	5	16.0	966.9	662.8	10.7	0.479					
	6	20.0	1384.8	1080.7	12.4	0.417					
	7	24.0	1797.5	1493.4	13.7	0.371					
	8	28.0	2089.9	1785.8	15.0	0.333					
	9	32.0	2292.7	1988.6	16.1	0.303					
	10	36.0	2427.6	2123.5	17.0	0.278					
	11	40.0	2527.8	2223.7	17.9	0.257					
	12	44.0	2608.2	2304.1	18.6	0.239					
	13	48.0	2667.6	2363.5	19.3	0.223					
	14	52.0	2719.7	2415.6	19.9	0.210					
	15	56.0	2763.0	2458.9	20.5	0.198					
D	16	58.8	2786.8	2482.7	20.8	0.190					
SECOND FLOW											
E	1	0.0	512.2								
	2	5.0	347.2	-165.0							
	3	10.0	319.1	-28.1							
	4	15.0	311.5	-7.6							
	5	20.0	303.5	-8.1							
	6	25.0	300.7	-2.8							
	7	30.0	300.8	0.2							
	8	35.0	299.8	-1.0							
F	9	39.8	287.8	-12.0							

REMARKS:

00030

TICKET NO. 34608100

		O.D.	I.D.	LENGTH	DEPTH	
1		DRILL PIPE.....	4.500	3.826	6363.3	
4		FLEX WEIGHT.....	4.500	2.764	182.8	
5		CROSSOVER.....	6.750	2.875	2.4	
3		DRILL COLLARS.....	6.750	2.875	401.4	
51		PUMP OUT REVERSING SUB.....	6.750	3.000	1.0	7028.0
3		DRILL COLLARS.....	6.750	2.875	31.0	
50		IMPACT REVERSING SUB.....	6.000	3.000	1.0	7060.0
3		DRILL COLLARS.....	6.750	2.875	31.0	
5		CROSSOVER.....	5.750	2.000	1.0	
80		AP RUNNING CASE.....	5.000	2.250	4.1	7093.3
5		CROSSOVER.....	5.000	2.200	1.0	
12		DUAL CIP VALVE.....	5.000	0.870	4.9	
97		SAMPLE CHAMBER.....	5.000	3.060	4.1	
33		DRAIN VALVE.....	5.000	2.200	0.9	
60		HYDROSPRING TESTER.....	5.000	0.750	5.3	7111.9
80		AP RUNNING CASE.....	5.000	2.250	4.1	7113.6
15		JAR.....	5.000	1.750	5.0	
16		VR SAFETY JOINT.....	5.000	1.000	2.8	
70		OPEN HOLE PACKER.....	5.000	1.530	5.9	7129.6
19		ANCHOR PIPE SAFETY JOINT.....	5.000	1.500	4.3	
20		FLUSH JOINT ANCHOR.....	5.000	2.370	35.0	
81		BLANKED-OFF RUNNING CASE.....	5.000		4.1	7171.0
TOTAL DEPTH					7174.0	
EQUIPMENT DATA						

DELHI PETROLEUM PTY LTD

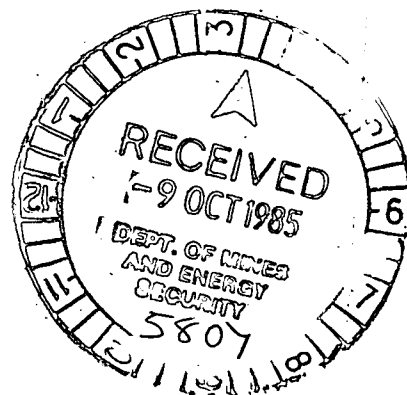
VELOCITY SURVEY - TIME/DEPTH CALIBRATION

KIDMAN 4

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SA 1 Team
B.F. Oke
File

SANTOS
VAMGAS
SAOG
SADME



By: B.F. Oke
Geophysicist

Sept., 1985

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4. DATUM STATIC DETERMINATION
5. WELLSHOOT OPERATIONS
6. TIME/DEPTH CALIBRATION
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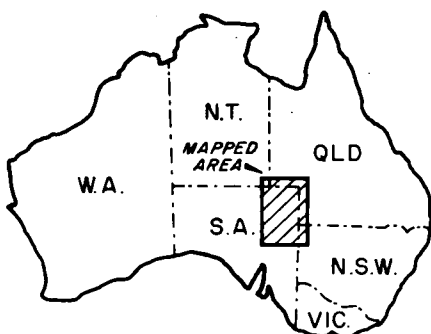
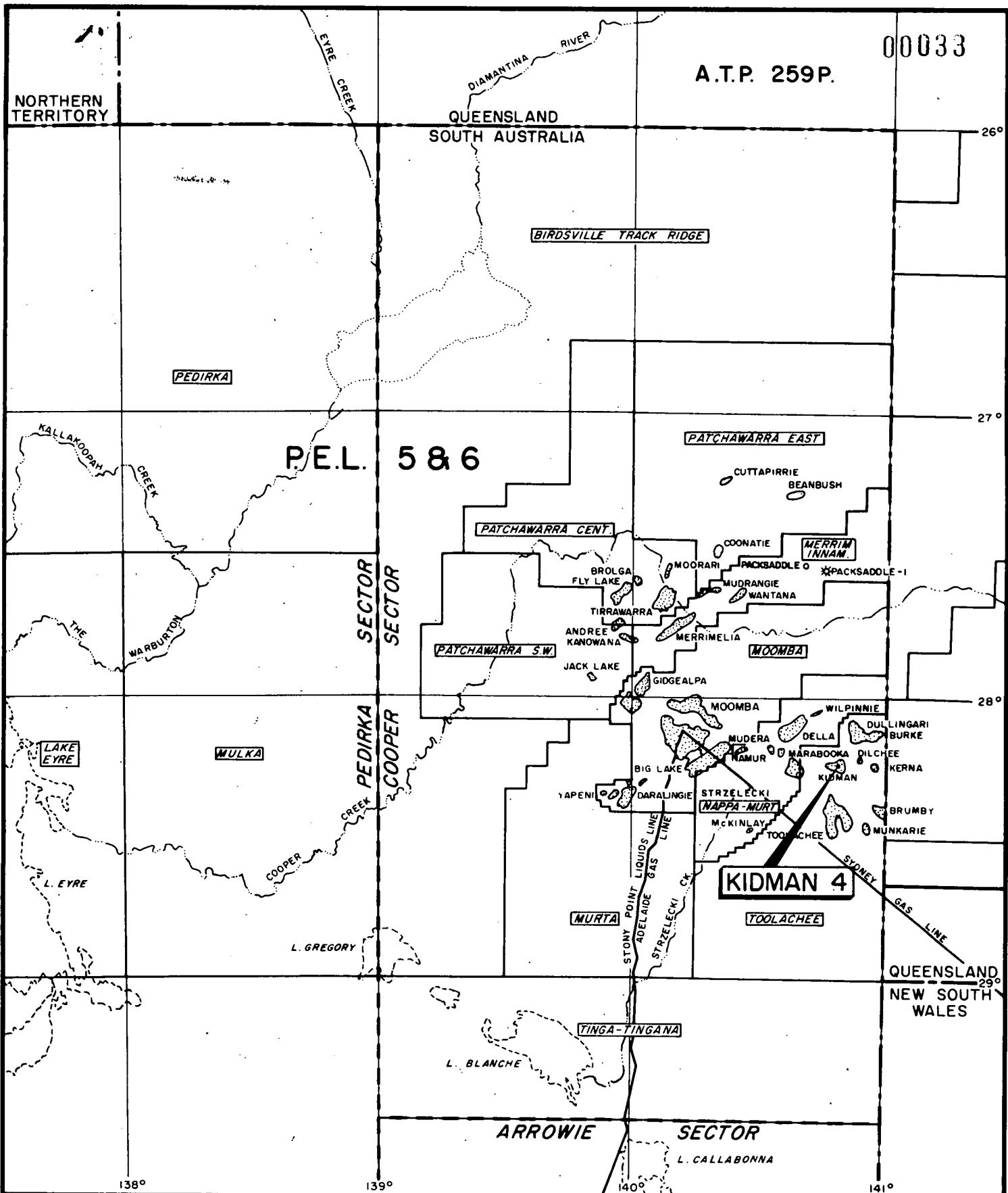
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DELHI PETROLEUM PTY. LTD.

LOCATION MAP

KIDMAN 4

P.P.L. 24 SOUTH AUSTRALIA

SCALE 1 2000000
KILOMETRES 20 0 20 40 60 80 100 120 KILOMETRES



Author : P. RYLES

Date : November 1984

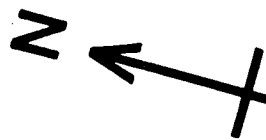
Drafted : P. HERD

Dwg. No. : 84XG - 4388

File : SH - 34

Fig. I

00034



SP 890

1 O

WELL HEAD

22.0

MUD TANKS

88.0

A

MUD PIT

B

15.0

19.0

C

82-LLD

D

FLARE PIT

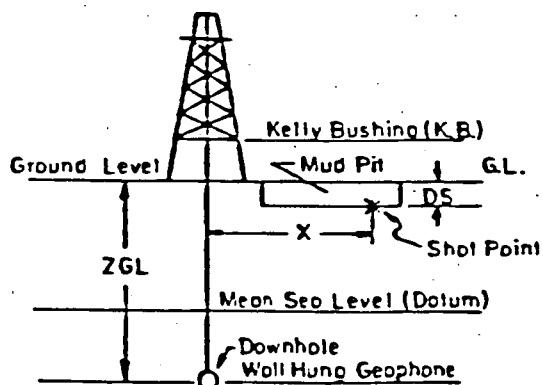
O 2

(C.T.B.)

● SHOT POINT

○ REFERENCE GEOPHONE

ALL LENGTHS AND DEPTHS IN METRES



$$T = T_0 \cos \left[\tan^{-1} \left(\frac{X}{ZGL - DS} \right) \right]$$

T_0 = Time from Shot Point to downhole geophone. (record time)

T = Time for vertical ray path from shot point level at well-head to downhole geophone level.

SHOT POINT	A	B	C	D
Depth Relative to G.L. of K.B.	1.2	1.2	1.2	3.0
Horizontal Distance from K.B.	22.0	37.0	56.0	88.0

DELHI PETROLEUM PTY. LTD.

LOCATION DIAGRAM **KIDMAN 4** WELL VELOCITY SURVEY

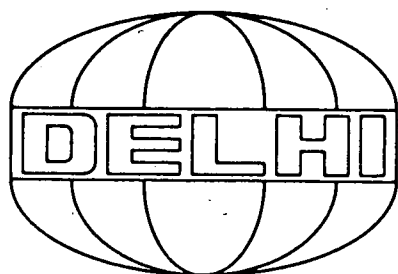
DATE: 22/01/85

DRAFTED: BFO

DWG. No.

FIGURE 2

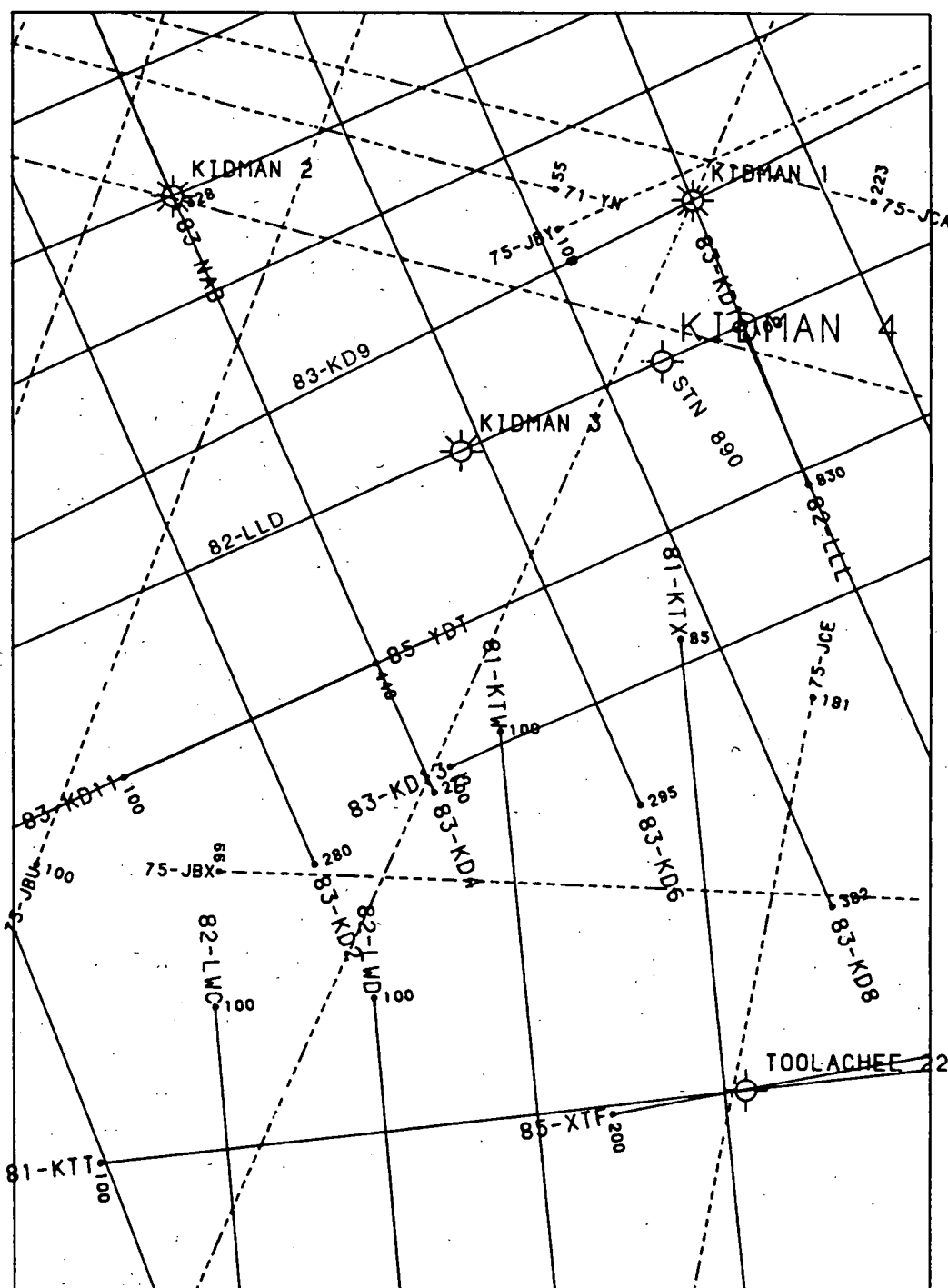
0.0035



KIDMAN 4

1 : 50000

28 13 40S



28 18 40S

140 46 30E

140 50 30E

VELOCITY SURVEY-TIME/DEPTH CALIBRATION

KIDMAN 4

1.0 SUMMARY

The Kidman 4 well velocity survey was carried out to check the datum static at the wellsite, evaluate formation top prognoses and to calibrate the sonic log.

Various synthetic seismograms were produced using the calibrated sonic log to compare with the real seismic data at the wellsite.

2.0 INTRODUCTION

A well velocity survey was conducted by Delhi Petroleum Pty Ltd at the Kidman 4 wellsite on Tuesday 22nd of January, 1985.

Velocity Data Pty Ltd of Brisbane were the recording contractors, providing the recording equipment and down-hole tool used in the survey.

Note that it was not possible to log to TD (7968 ft) as 574 ft of collars and drill pipe were left down the hole. Hence the "effective TD" of 7250 ft.

Twenty three good quality records were obtained at nineteen different levels using ANZOMEX boosters detonated in the mud pit as the energy source. The down-hole tool was a wall-locking vertical motion geophone device.

Check shots at datum (241 ft*) were taken to confirm the static correction used in the processing of line 82-LLD at station 890, the well location.

A Time/Depth curve was computed by fitting the integrated sonic time curve to the check-shot data by the least squares method.

* Note: All depths are below KB unless otherwise specified.

3.0 KIDMAN 4 DEPTH PROGNOSSES

The location of Kidman 4 was based on interpreted final sections of the 1982 Diamond Bog-T00 and 1983 Unit-T00 Seismic Surveys. Prognoses of formation tops were based on two-way seismic times picked from line 82-LLD station 890 and average velocity information from the nearby wells Kidman 1 and 3.

All three formation tops were deeper than prognosed.

TABLE 1

COMPARISON OF WELLTOP AND PROGNOSSED DEPTHS

DEPTH (feet below MSL)

Horizon	C	P	V
Prognosis	4090	6175	7035
Well Top	4143	6197	7117 *
Difference	-53	-22	-82

C : Top Cadna-Owie Formation * Extrapolated driller's depth
P : Top Toolachee Formation
V : Top Patchawarra Formation

4.0 DATUM STATIC DETERMINATION

Four shots at datum were taken at four different shot locations (Figure 3) with the down-hole tool locked in casing at mean sea level, 241 ft below KB. Ground level was surveyed at 221 ft above mean sea level. The last datum shot was recorded at the end of the survey. The datum static calculation is shown in Table 2. Note that all shot times had to be corrected to the same shot depth for true comparison.

The mean vertical one-way time after geometrical offset correction was 41 ms (Enclosure 1). A shot depth correction of 4 msec was added due to the production shots being 10 ft below the ground level of the seismic line. A LVL velocity of 2310 ft/sec was used in the correction calculation. The seismic and velocity survey statics are compared in Table 3.

TABLE 2

DATUM STATIC DETERMINATION

SHOT No	SHOT LOC	SHOT DEPTH ft	SHOT OFFSET ft	ARRIVAL TIME ms	SHOT -DATUM STATIC ms	SURFACE -DATUM STATIC ms
1	A	4	72	47	43	47
2	B	4	121	49	41*	45
3	C	4	184	55	40*	44
24	D	10	289	70	41	45
				average	41	45

* Corrected to 10 ft shot depth

TABLE 3

COMPARISON OF SEISMIC AND VELOCITY SURVEY STATIC

	SEISMIC LINE 82-LLD 890	VELOCITY SURVEY	DIFFERENCE
GROUND ELEVATION (ft)	220	221	1
DATUM STATIC (ms) (ONE WAY TIME)	48	45	3
INTERVAL VELOCITY GROUND LEVEL TO DATUM (ft/s)	4583	4911	-328

5.0 WELLSHOOT OPERATIONS

Shots were taken at nineteen levels down the hole. Nine levels were chosen to coincide with formation tops picked from electric logs by the wellsite geologist. Several intermediate shots were taken to ensure that subsurface sampling did not exceed 500 feet.

The hole condition was generally good, allowing the tool to couple satisfactorily thus keeping noise levels to a minimum. Record quality was good to very good.

The explosive type used was ANZOMEX boosters. Various charge sizes (A, D, 2D, 3D) were used according to the depth below the surface (Enclosure 1). These provided adequate energy returns.

6.0 TIME/DEPTH CALIBRATION

The digital sonic (SLS) was integrated, summed and plotted against depth to produce an uncalibrated sonic T/Z curve.

The checkshot times were corrected for geometric offset and surface-to-datum static. The uncalibrated sonic T/Z curve was initially tied to the C horizon to allow sonic interval velocity calculation. The sonic T/Z curve was then bulk shifted in time so as to provide the least square error between the checkshots and the sonic values below the C horizon. Inclusion of checkshots above the C horizon leads to a bias in the least-squares error due to the large negative drift which occur above this level.

Drift corrections were then calculated by fitting two linear functions to the check-sonic drift values. The two linear functions were calculated by the least-squares method.

The calibrated sonic T/Z curve was corrected for drift with the values derived from the drift curve.

Table 4 lists the travel time and drift values at the successive stages of the process as well as the final rms errors in time of the checkshots curve. A rms error in equivalent depth is calculated using the interval velocities shown in Enclosure 1. A "worst case" error in depth interpretation from the T/Z curve was computed.

TABLE 4

CHECK SHOT - SONIC TIME DIFFERENCES

DEPTH		TRAVEL-TIME to DATUM			CHECK - SONIC		
Below KB ft	Below MSL ft	Check-Shot ms	Tied Sonic ms	Drift Corr. Sonic ms	Tied Sonic ms	Drift Corr. Sonic ms	Depth Diff. ft
1300	1059	154	177	148	-23	6	44
1800	1559	228	245	226	-17	2	13
2300	2059	304	309	310	-5	-6	-45
2800	2559	363	367	368	-4	-5	-42
3300	3059	424	428	426	-4	-2	-17
3800	3559	483	484	485	-1	-2	-9
*4383	4142	549	549	549	0	0	0
4616	4375	576	572	580	4	-4	-42
4812	4571	592	588	595	4	-3	-34
5000	4759	610	603	615	7	-5	-62
5586	5345	651	648	651	3	0	0
5696	5455	661	657	661	4	0	0
5963	5722	680	677	679	3	1	14
6438	6197	714	712	711	2	3	37
6850	6609	752	745	752	7	0	0
7038	6797	766	759	766	7	0	0
7190	6949	778	770	779	8	-1	-16
RMS Values		Above tie point			12.1	4.3	32
		Below tie point			5.1	2.4	28
		Total sonic			8.3	3.2	30

* Note - All figures derived using the C Horizon as the tie point.

TABLE 5

SURVEY RESULTS

KIDMAN 4

Line 82-LLD Stn 890

DEPTH (feet below MSL)

Horizon	C	P	V
Prognosis	4090	6175	7035
Well top	4143	6197	7117 *
Difference	-53	-22	-82

* Extrapolated driller's depth.

TWO-WAY TIME (ms)

Horizon	C	P	V
Prognosis	1099	1424	1575
Well top	1098	1428	Not Logged
Difference	1	-4	-

AVERAGE VELOCITY (ft/s)

Horizon	C	P	V
Prognosis	7443	8673	8933
Well top	7546	8679	-
Difference	-103	-6	-

7.0 RESULTS

The seismic and velocity survey statics differ by 3 ms one way time.

After calibration, the checkshots had a rms depth error of 30 ft and a rms time error of 3 ms. Table 5 indicates the results against prognoses.

Depths to formation tops picked from well log data varied from those prognosed by 82 ft deeper at the V horizon to 22 ft deeper at the P horizon.

The seismic section differs from the wellshoot data by only 1 ms at the C horizon and - 4 ms at the P horizon. The fact that the C horizon pick was so close even with a static error of +6 ms TWT probably indicates a small downward phase shift of the seismic data which has, coincidentally, largely compensated for the static error.

Prognosed average velocity to the C horizon was too low by about 100 ft/s, resulting in a shallow formation top prognosis, but was only 6 ft/s in error to the P horizon.

A good to very good character correlation exists between the DIGICON seismic section (Aug 1983) and the reverse polarity synthetic seismogram (Figure 4). Note that DIGICON claims the section to be normal polarity.

82 - LLD

FIGURE 4

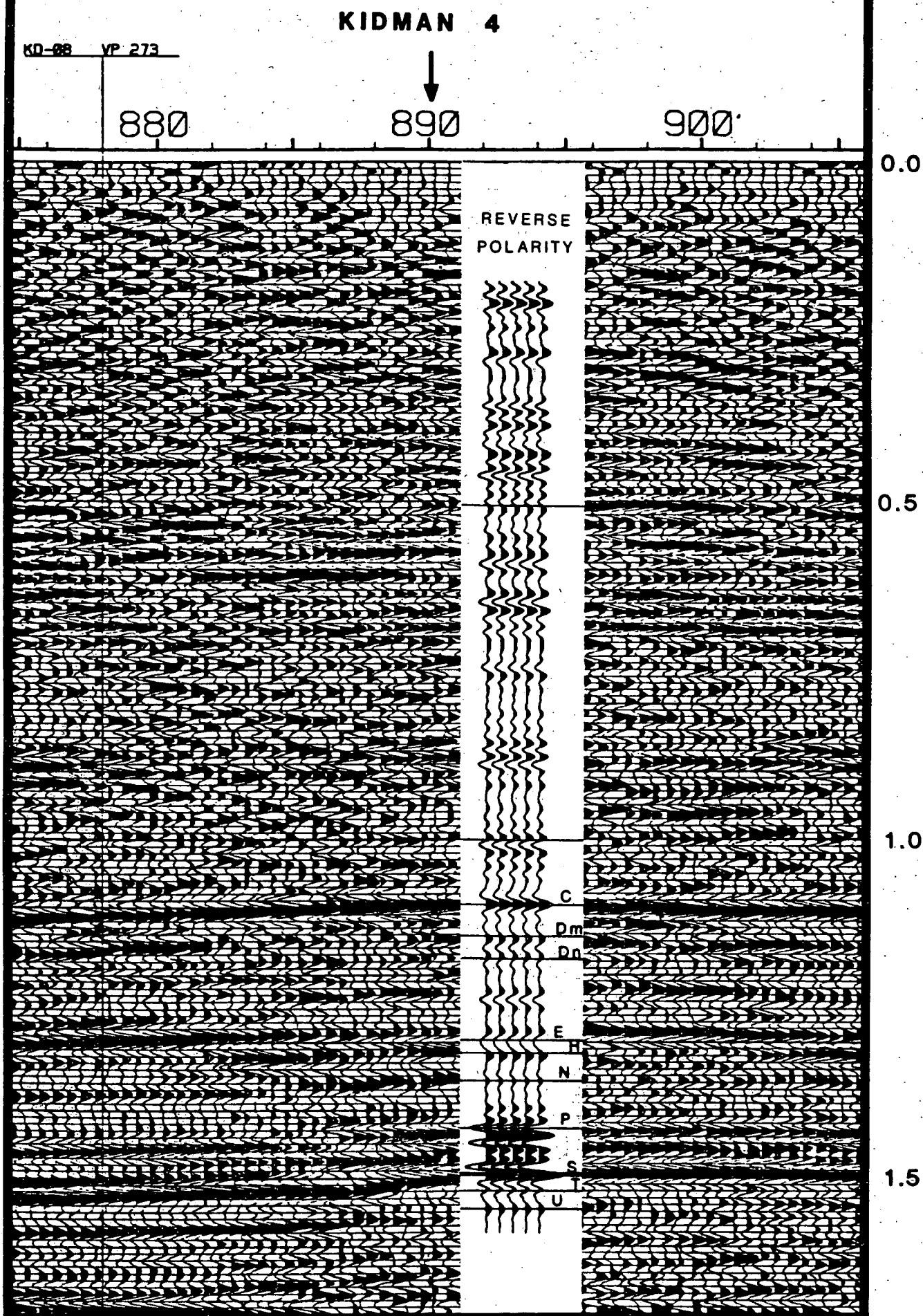


TABLE 6

SURVEY DATA

Personnel Present

Wellsite Geologist
Observer - Well shoot
Shooter

C. Martin Delhi Petroleum Pty Ltd
T. Beale Velocity Data Pty Ltd
I. McKay Velocity Data Pty Ltd

Recording Parameters

Energy Source
Shot Offset and Depth
(B.G.L.)

Explosive - ANZOMEX BOOSTERS
Location A : 72 feet, 4 feet
Location B : 121 feet, 4 feet
Location C : 184 feet, 4 feet
Location D : 289 feet, 10 feet

Production Shooting:
Datum Shooting :

Location D
Locations A, B, C, D

Equipment

Recorder
Reference Geophone
Downhole Geophone

VDLS 11/10
Mark L1 7.5 Hz
Geospace WLS-1050 Wall-locking type

Elements

6 HSI 4.5 Hz 215 ohm,
high temperature (300 F) detectors
connected in series parallel.
Frequency response: 8-300 Hz within 3db

Pre-amplifier - 48 db fixed gain
Frequency response: 5-200 Hz within 3db

Monitor Traces

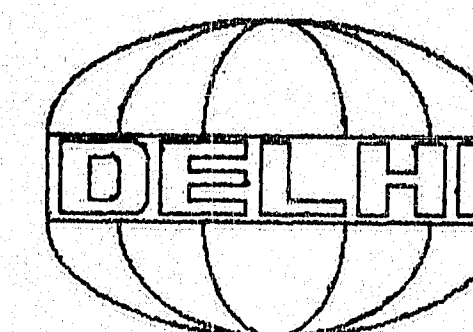
- 1 Instrument time break
- 2-4 Analogue down-hole geophone signal - low, medium and high gain
- 5 Digital down-hole geophone signal IFP gain
- 6 Confirmation time break geophone signal

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KIDMAN 4

22-01-85

SHOT RECORD TABLE



DATUM SHOTS (DATUM=MSL)

Z (KB) = 241 FT Z (GL) = 221 FT

SHOT NUMBER	LOCAL TIME	SHOT LOCATION	AMP. GAIN	CHARGE SIZE	CHARGE DEPTH FT	OFFSET (FT)	ARRIVAL TIME MS	SHOT TO DATUM STATIC (MS)	SURFACE TO SHOT CORR. (MS)	SURFACE TO DATUM STATIC (MS)	REMARKS
1	19.29	A	30	1XA	4	72	47	45	2	47	*** NOTE - SHOT TO
2	19.32	B	30	1XA	4	121	49	43	2	45	DATUM STATIC IS USED
3	19.35	C	30	1XA	4	184	55	42	2	44	IN CORRECTING THE
24	22.39	D	30	1XD	10	289	70	41	4	45	RECORD TIMES ***

THE SHOT TO DATUM STATIC USED IS 41 MSEC.

THE SURFACE VELOCITY IS 2310 FT/SEC.

SURVEY SHOTS

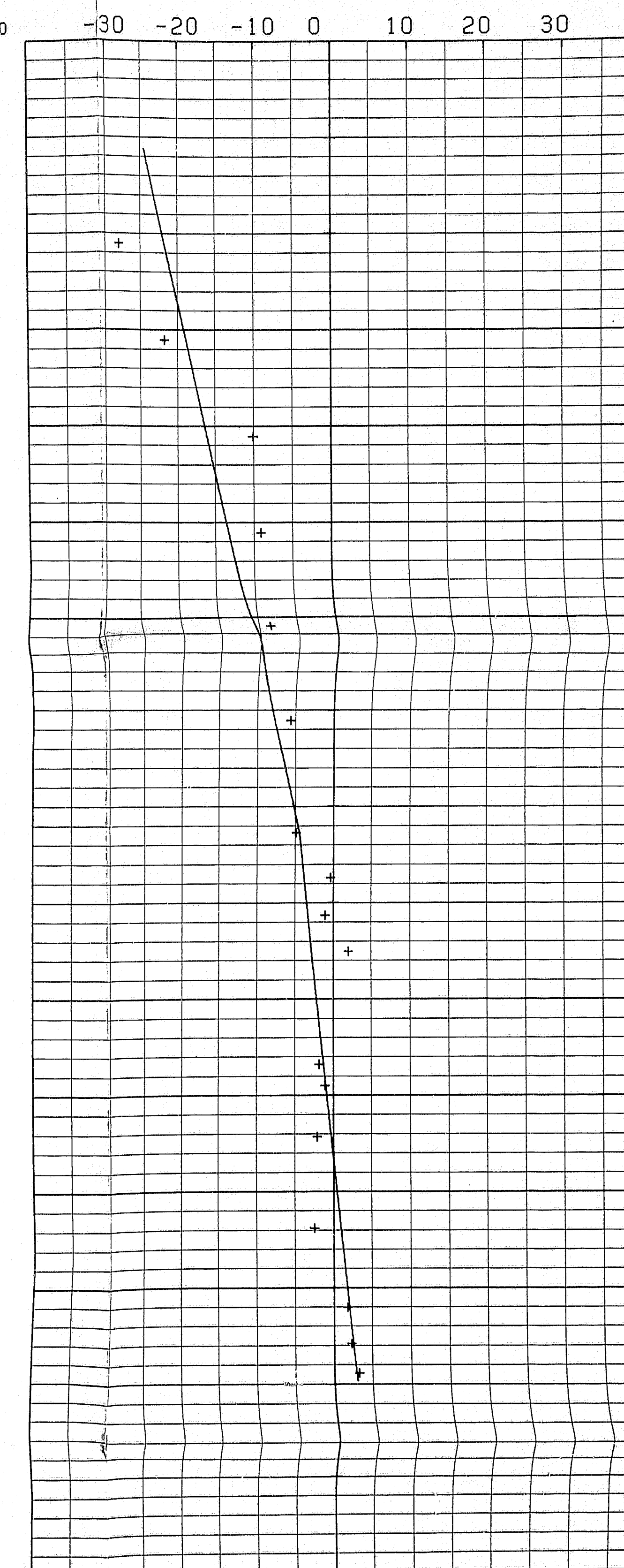
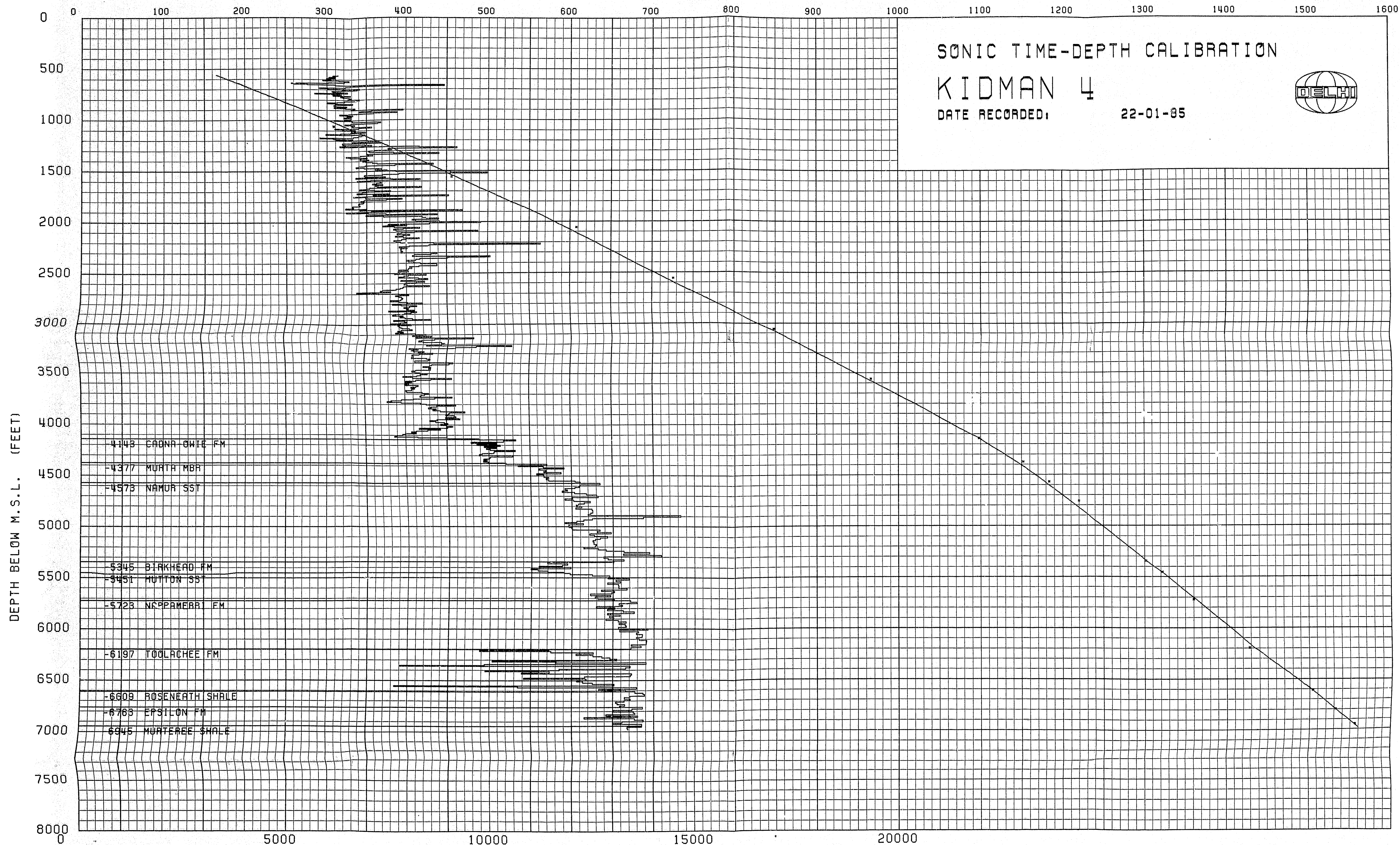
SHOT NUMBER	LOCAL TIME	CHARGE SIZE	AMP. GAIN	OFFSET (FT)	CHARGE DEPTH	KB DEPTH	RECORD TIME	MSL DEPTH	CORR. TIME	INTERVAL VELOCITY	RMS VELOCITY	REMARKS
23	22.33	1XD	40	289	10	785	140	544	90	6044	6044	NOTE : (XXXX) REFERS TO
22	22.27	1XD	35	289	10	1300	200	1059	154	8047	6947	TRUE KB DEPTH.
21	22.12	2XD	35	289	10	1800	273	1559	228	6757	6886	
20	22.02	2XD	35	289	10	2300	348	2059	304	6579	6810	** NOTE EFFECTIVE T.D. -
19	21.56	2XD	40	289	10	2800	406	2559	363	8475	7107	UNABLE TO LOG TO T.D. AS
18	21.42	2XD	40	289	10	3300	467	3059	424	8197	7274	BOTTOM HOLE ASSEMBLY
17	21.36	2XD	30	289	10	3800	526	3559	483	8475	7431	LEFT DOWN HOLE ***
4	19.57	2XD	40	289	10	4383	591	4142	549	8833	7613	TOP CADNA-OWIE FM
16	21.27	2XD	35	289	10	4383	591	4142	549	8833	7613	
15	21.04	2XD	35	289	10	4616	618	4375	576	8630	7664	TOP MURTA MBR
14	20.59	3XD	40	289	10	4812	634	4571	592	12250	7823	TOP NAMUR SST MBR
13	20.56	3XD	30	289	10	5000	652	4759	610	10444	7913	IN NAMUR SST MBR
12	20.45	3XD	40	289	10	5586	693	5345	651	14293	8458	TOP BIRKHEAD FM
11	20.42	3XD	40	289	10	5696	703	5455	661	11000	8502	HUTTON SST (5692)
10	20.38	3XD	45	289	10	5963	722	5722	680	14053	8706	TOP NAPPAMERRI FM
9	20.33	3XD	45	289	10	6438	756	6197	714	13971	9026	TOP TOOLACHEE FM
8	20.25	3XD	45	289	10	6850	794	6609	752	10842	9127	TOP ROSENEATH SHALE
7	20.21	3XD	45	289	10	7038	808	6797	766	13429	9223	IN EPSILON FM
6	20.17	3XD	45	289	10	7190	820	6949	778	12667	9286	MURTEREE SHALE (7186)
5	20.13	3XD	45	289	10	7250	823	7009	781	20000	9351	EFFECTIVE T.D.

ENCLOSURE 1
20-AUG-1985

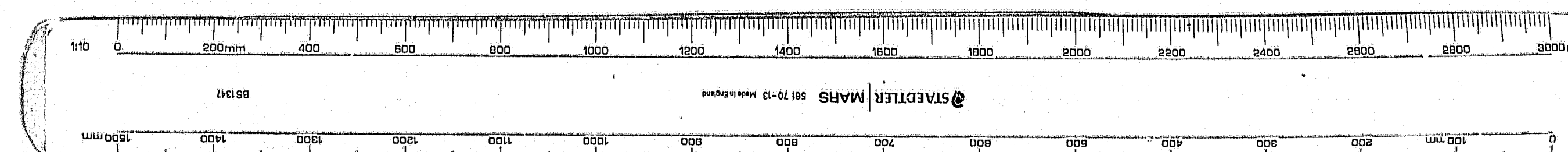
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TWO-WAY TIME (MSEC)

CHECKSHOT - SONIC
TIME DIFFERENCE. (MSEC)



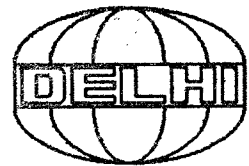
SONIC INTERVAL VELOCITY (FT/SEC)



5807-2

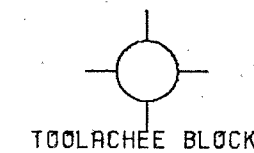
ENCLOSURE 2
20-AUG-1985

5807-3

KIDMAN 4
SYNTHETIC SEISMOGRAM

ENCLOSURE 3

20-AUG-85



INTERVAL VELOCITY (FT/SEC)

REFLECTIVITY⁶ PRIMARIES ONLY⁶PRIMARIES ONLY⁵PRIMARIES ONLY⁵PRIMARIES ONLY⁵PRIMARIES ONLY⁵PRIMARIES ONLY⁴

INT GR

INT IMPEDENCE

5000 9000 13000 17000

20 175 180 529

PHASE SHIFT

0

0

90

180 (RP)

270

0

VEL (INT)	VEL (RW)	VEL (RMS)
9957	7553	7553
11529	7657	7657
12452	7761	7761
11778	8210	8210
12952	8310	8310
13352	8410	8410
11771	8510	8510
13391	8610	8610
13481	8710	8710
	8810	8810
	8910	8910
	9010	9010
	9110	9110
	9210	9210

DEPTH (SL)	TIME
4143	1097
4377	1144
4573	1178
5305	1302
5951	1362
5723	1493
6197	1503
6809	1526
6963	1553
6945	

FORMATION TOP
KB (FT) = 241
CADNA-OWIE FM
MURTA MBR
NAMUR SST
BIRKHEAD FM
HUTTON SST
NAPPAMERRI FM
TOOLACHEE FM
ROSENEATH SHALE
EPSTON FM
MURTEREE SHALE

REFLECTIVITY COMPUTED USING :

1. VELOCITY
2. VELOCITY AND DENSITY
3. VELOCITY AND CORRECTED DENSITY
4. SAME AS (1) WITH DRIFT APPLIED
5. SAME AS (2) WITH DRIFT APPLIED
6. SAME AS (3) WITH DRIFT APPLIED

BANDPASS WAVELET

NO. OF FILTER POINTS 39
LOW CUT FREQUENCY 10
HIGH CUT FREQUENCY 55
PHASE SHIFT 0
ZERO PHASE
NORMAL POLARITY

