Baker Atlas

BAKER HUGHES

TRUE VERTICAL DEPTH
MULTIPOLE ARRAY ACOUSTILOG

NEB/ONE

FILE NO:	
API NO:	
Ver. 3.87	
UWI: 300K296030123303	
COMPANY	PARAMOUNT RESOURCES LTD.
WELL	PARAMOUNT ET AL LIARD K-29A
FIELD	LIARD
PROVINCE	NORTH WEST TERRITORIES
LOCATION:	LIC #: 1125
OTHER SERVICES	HDIL-GR-CAL, ZDL-CN-GR-CAL, EI-CBIL-GR, XMAC-GR-CAL, CVL

PERMANENT DATUM	G.L.	ELEVATION	409.6 M	ELEVATIONS:
LOG MEASURED FROM	K.B.	6.8 M	ABOVE P.D.	KB 416.4 M
DRILL MEAS. FROM	KELLY BUSHING			DF
				GL 409.6 M

DATE	21-Sep-2005		TVD	
RUN / TRIP	1	1	1	1
SERVICE ORDER	203168		203168	
DEPTH DRILLER	2566.0 M		2465.17 M	
DEPTH LOGGER	2551.9 M		2455.2 M	
BOTTOM LOGGED INTERVAL	2535.9 M		2443.5 M	
TOP LOGGED INTERVAL	1853.0 M		1840.0 M	
CASING DRILLER	244.5 MM	@1853-59 M	244.5 MM	@
CASING LOGGER	1853-60 M			
BIT SIZE	216.0 MM		216.0 MM	
TYPE OF FLUID IN HOLE	INVERT			
DENSITY / VISCOSITY	1245.0 G/L	65.0 S		
PH / FLUID LOSS	N/A	N/A		
SOURCE OF SAMPLE	FLOWLINE			
RM AT MEAS. TEMP.	N/A	@N/A		@
RMF AT MEAS. TEMP.	N/A	@N/A		@
RMC AT MEAS. TEMP.	N/A	@N/A		@
SOURCE OF RMF / RMC	MEASURED	MEASURED		
RM AT BHT	N/A	@N/A		@
TIME SINCE CIRCULATION	6.25 HRS			
MAX. RECORDED TEMP.	113.9 DEGC			
EQUIP. NO. / LOCATION	HL 6558	G. PRAIRIE		
RECORDED BY	TIM FISHER			
WITNESSED BY	KEN GLOVER			

REMARKS

RUN 1 TRIP 1 :

TIME STOPPED CIRCULATING: 19:00, 22-SEP-2005
MAXIMUM DEVIATION: 52.4 DEGREES AT 2566.0 M

DELTA T PRESENTED ON 100-500 USEC/M SCALE
X-DIPOLE AND FULL WAVE MONOPOLE DATA RECORDED FROM TD-CSG

CUT WINDOW IN CASING FROM 1853.0 - 1859.0 M
TIED INTO SCHLUMBERGER INDUCTION LOG RECORDED 14-MAR-1999 AT A DEPTH OF 1800-1850 M
DID REPEAT BELOW CASING SHOE TO HELP KEEP TOOLS FROM GETTING TO HOT
REMOVED 10 IN INDUCTION CURVE BECAUSE SOMEWHAT ERRATIC
XMAC HAS DIFFERENT TD BECAUSE DELTA-T TAKEN FROM FIRST RUN IN HOLE WITH XMAC AND THE HOLE WAS CLEANED IN BETWEEN THE TWO RUNS WITH THE XMAC ALLOWING FOR A GREATER TD ON THE SECOND RUN

CREW: N. MCDERMID, L. KAUPP
RIG: AKITA 58

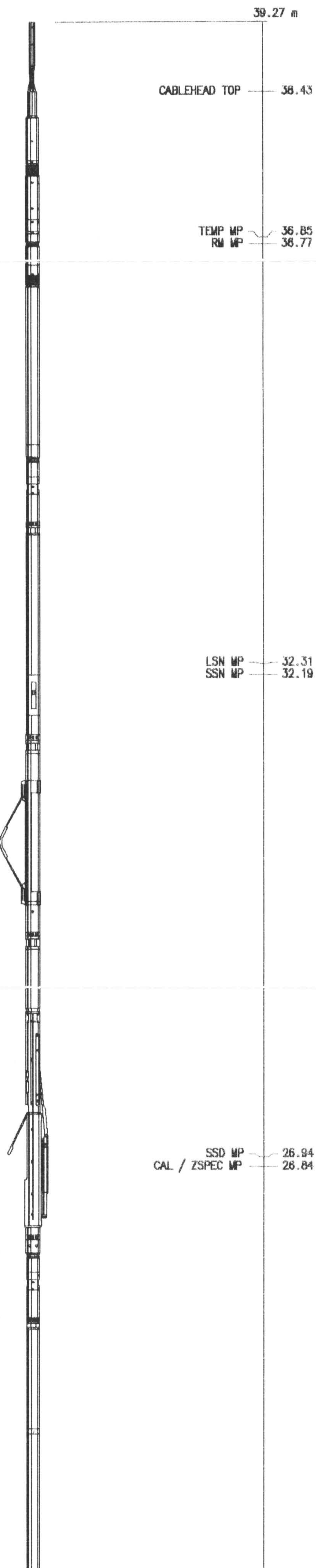
RUN 1 TRIP 1 :

EQUIPMENT DATA

RUN	TRIP	TOOL	SERIES NO.	SERIAL NO.	POSITION
1	1	TTRM	3981XA	10046849	FREE
1	1	COM REMOT	3514XB	153396	FREE
1	1	KNJT	3923XA		KNUCKLE JOINT
1	1	CN	2446XA	155944	DECENTRALIZED
1	1	ZDL	2228EA/2228MA	185952/120009	PAD DEVICE
1	1	ORIENT	4401XB	10118896	FREE
1	1	DAL ELEC	1667EA	168548	FREE
1	1	XMAC	1678MA	188711	CENTRALIZED
1	1	XMAC	1668PA	121635	CENTRALIZED
1	1	XMAC	1668BA	153828	CENTRALIZED
1	1	XMAC	1668FA	121039	CENTRALIZED
1	1	CENT	4341XA	369755	CENTRALIZER
1	1	HDIL	1515EA/1515MA	179449/167570	38 MM STANDOFF
1	1	DGR	1329XA	153174	FREE

INSTRUMENT CONFIGURATION

Source File: /data/pass/paramount_k-29a/t_xmac-tdg



CABLEHEAD
Series : CABL338
Mnemonic : CBLH
Diameter : 8.6 cm
Weight : 10.9 kg
Length : 167.6 cm
Measure Point: 83.8 cm: CABLEHEAD TOP

TTRM SUB
Series : 3981XA
Mnemonic : TTRM
Diameter : 9.2 cm
Weight : 36.4 kg
Length : 116.8 cm
Measure Point: 42.2 cm: TEMP MP
Measure Point: 34.5 cm: RM MP

WTS COMMON REMOTE
Series : 3514XA
Mnemonic : WTS
Diameter : 9.2 cm
Weight : 65.5 kg
Length : 189.5 cm

KNUCKLE JOINT
Series : 3923XA
Mnemonic : KNJT
Diameter : 8.6 cm

COMPENSATED NEUTRON
Series : 2446XA
Mnemonic : CN
Diameter : 9.2 cm
Weight : 88.2 kg
Length : 231.4 cm
Measure Point: 80.3 cm: LSN MP
Measure Point: 68.2 cm: SSN MP

Z-DENSILOG
Series : 2228XA
Mnemonic : ZDL
Diameter : 12.4 cm
Weight : 213.6 kg
Length : 564.6 cm
Measure Point: 107.7 cm: SSD MP
Measure Point: 97.3 cm: CAL / ZSPEC MP

KNUCKLE JOINT
Series : 3923XA
Mnemonic : KNJT
Diameter : 8.6 cm

DIGITAL ORIENTATION
Series : 4401XB
Mnemonic : ORIT
Diameter : 8.6 cm
Weight : 53.6 kg
Length : 329.4 cm
Measure Point: 0.0 cm: ORIENT MP

ARRAY ACOUSTILOG ELECTRONICS
Series : 1667EA
Mnemonic : DAC
Diameter : 8.8 cm
Weight : 61.8 kg
Length : 238.3 cm

CROSS MULTIPOLE ARRAY ACOUSTILOG
Series : 1678MA
Mnemonic : XMAC
Diameter : 9.8 cm
Weight : 68.2 kg
Length : 332.4 cm
Measure Point: 167.6 cm: R8
Measure Point: 152.4 cm: R7
Measure Point: 137.2 cm: R6
Measure Point: 121.9 cm: R5
Measure Point: 106.7 cm: R4
Measure Point: 91.4 cm: R3
Measure Point: 76.2 cm: R2
Measure Point: 61.0 cm: R1

SHEAR WAVE ACOUSTILOG
Series : 1678PB
Mnemonic : XMAC
Diameter : 9.2 cm
Weight : 61.4 kg
Length : 152.4 cm

MULTI-POLE ARRAY ACOUSTIC
Series : 1668BA
Mnemonic : MAC
Diameter : 9.2 cm
Weight : 79.5 kg
Length : 210.8 cm
Measure Point: 165.1 cm: MONOPOLE T2 MP
Measure Point: 142.2 cm: DIPOLE T4 MP
Measure Point: 111.8 cm: DIPOLE T3 MP
Measure Point: 88.9 cm: MONOPOLE T1 MP

MULTI-POLE ARRAY ACOUSTIC
Series : 1668FA
Mnemonic : MAC
Diameter : 8.8 cm
Weight : 34.1 kg
Length : 131.6 cm

KNUCKLE JOINT
Series : 3923XA
Mnemonic : KNJT
Diameter : 8.8 cm

HIGH DEFINITION INDUCTION TOOL
Series : 1515XA
Mnemonic : HDIL
Diameter : 9.2 cm
Weight : 200.5 kg
Length : 827.0 cm
Measure Point: 423.9 cm: SP MP
Measure Point: 226.8 cm: XMTR MP

DIGITAL SPECTRALOG
Series : 1329XA
Mnemonic : DSL
Diameter : 9.2 cm
Weight : 64.5 kg
Length : 222.8 cm
Measure Point: 48.8 cm: GR MP

BULL PLUG 3 1/8

TOTAL LENGTH: 39.34 m
TOTAL WEIGHT: 1099.5 kg
MAX DIAMETER: 12.4 cm

MAIN LOG - TRUE VERTICAL DEPTH

ECLIPS 5.01 Dec 17, 2003 | Cplot 7.13 | Thu Sep 22 07:28:06 2005
Updates: 1,2,3,32 | Prplt /main/59 | Pdf_Cpp /main/16 | Fileview 4.67

PARAMETER AND FILTER SUMMARY REPORT

File: /data/pass/paramount_k-29a/187dvx01.prm
LOGGING MODE: DEPTH DIRECTION: UP
TOP DEPTH: 1797.173 m BOTTOM DEPTH: 2554.186 m

SYMMETRIC FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m) TOP	BOTTOM
X AXIS CALIPER	FILTER ()	light (2)		TOP	BOTTOM
CHT	FILTER ()	medium (1)		"	"
TENSION	FILTER ()	medium (1)		"	"
GR	FILTER ()	medium (1)		"	"
DT24	FILTER ()	medium (1)		"	"

BOREHOLE & CEMENT

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m) TOP	BOTTOM
CASING - BOREHOLE & CEMENT VOLUME	CASING O.D.	177.800	mm	TOP	BOTTOM
BIT SIZE	BIT SIZE	216.000	mm	"	"

ACOUSTIC AVAN CORRELATON

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m) TOP	BOTTOM
MONOPOLE DELTA T	FORMATION TYPE	FAST		TOP	BOTTOM
	CORRELATION METHOD	NTH ROOT		"	"
	RESET TAPERS			"	"
	TAPER - LEFT END	130	us/m	TOP	2523.058
		150	us/m	2523.058	2523.820
		0	us/m	2523.820	2524.277
		140	us/m	2524.277	BOTTOM
	TAPER - RIGHT END	300	us/m	TOP	2516.353
		353	us/m	2516.353	BOTTOM
MONOPOLE COMPRESSIONAL	FORMATION TYPE	FAST		TOP	BOTTOM
	CORRELATION METHOD	NTH ROOT		"	"
	RESET TAPERS			"	"
	TAPER - LEFT END	130	us/m	TOP	2522.906
		140	us/m	2522.906	BOTTOM
	TAPER - RIGHT END	400	us/m	TOP	2142.048
		300	us/m	2142.048	2515.743
		353	us/m	2515.743	BOTTOM
	CORRELATION FLOOR	0.000		TOP	2339.416
		0.200		2339.416	BOTTOM
	AVAN DTMX LIMITS	P&S ONLY-NO STONELEY		TOP	BOTTOM

ACOUSTIC POROSITY

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m) TOP	BOTTOM
DELTA T CURVE SELECTION	DT24 SOURCE	AVAN DT24		TOP	BOTTOM

ACOUSTIC WAVEFORM FILTER

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m) TOP	BOTTOM
WAVEFORM FILTER - FULLWAVE	SURFACE WAVE FILTER	ON		TOP	BOTTOM
	LOW FREQ CUTOFF	7000	Hz	"	"
	HIGH FREQ CUTOFF	30000	Hz	"	"

ACOUSTIC TCC CONTROL PARAMETERS

MEASUREMENT TYPE	PARAMETER	VALUE	UNITS	INTERVAL (m) TOP	BOTTOM
GENERAL TCC PARAMETERS	AGC	ON		TOP	BOTTOM
	SUBCYCLE LENGTH	50		"	"
	SUBSET	6		"	"
GENERAL MONOPOLE TCC PARAMETERS	STACK LEVEL	1		"	"
	LOW FREQ	500		"	"
	HIGH FREQ	23		"	"
DELTA T TCC PARAMETERS	ACQ WINDOW	1536	us	"	"
	MOVEOUT	16	us/ft	"	"
	SAMPLE PERIOD	8		"	"
	RX DELAY	240	us	"	"
FULL WAVE MONOPOLE TCC PARAMETERS	ACQ WINDOW	5184	us	"	"
	SAMPLE PERIOD	12		"	"
	RX DELAY	0	us	"	"

CURVE DESCRIPTION REPORT

CURVE NAME	CURVE ALIAS	CREATION DATE	CURVE DESCRIPTION
F1:BIT	BIT	Sep 22 07:06:44 2005	BIT SIZE
F1:BVOL	BVOL	Sep 22 07:06:44 2005	BOREHOLE VOLUME
F1:CALX	CALX	Sep 22 07:06:44 2005	CALIPER FROM X AXIS OF X-Y CALIPER(S)
F1:CHT	CHT	Sep 22 07:06:44 2005	CABLE HEAD TENSION

F1:CHT	CHT	Sep 22 07:06:44 2005	CABLE HEAD TENSION
F1:DTC	DTC	Sep 22 07:06:44 2005	COMPRESSIONAL WAVE SLOWNESS
F1:GR	GR	Sep 22 07:06:45 2005	GAMMA RAY
F1:MMRK	MMRK	Sep 22 07:06:45 2005	MINUTE MARK
F1:TEN	TEN	Sep 22 07:06:46 2005	DIFFERENTIAL TENSION
F1:TTQI	TT	Sep 22 07:06:46 2005	INTEGRATED TRAVEL TIME FROM ACOUSTIC DELTA-T

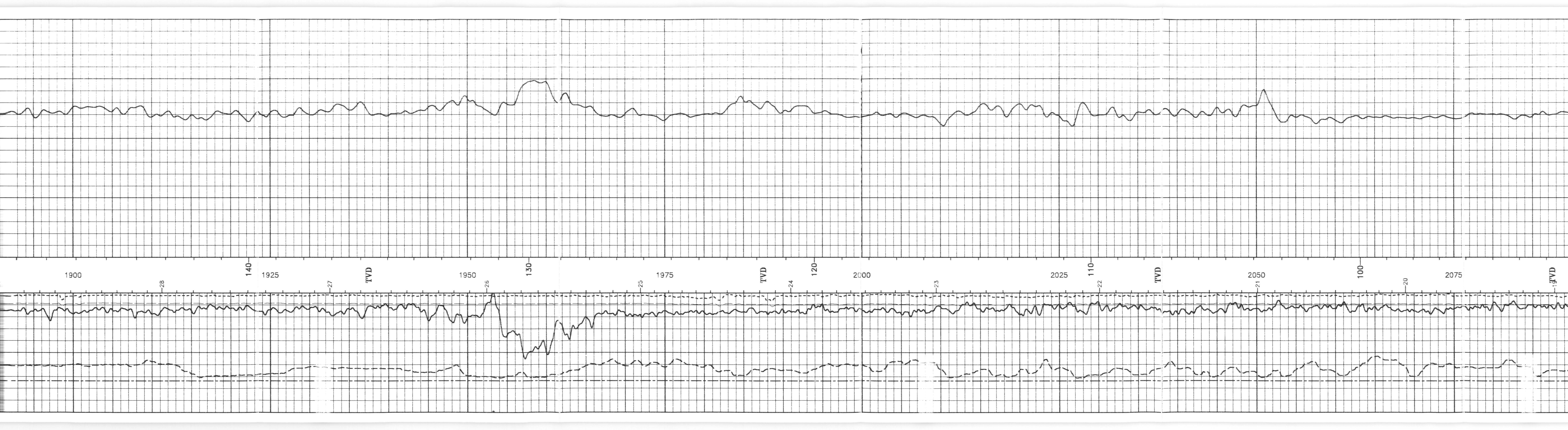
CURVE MEASURE POINT OFFSET

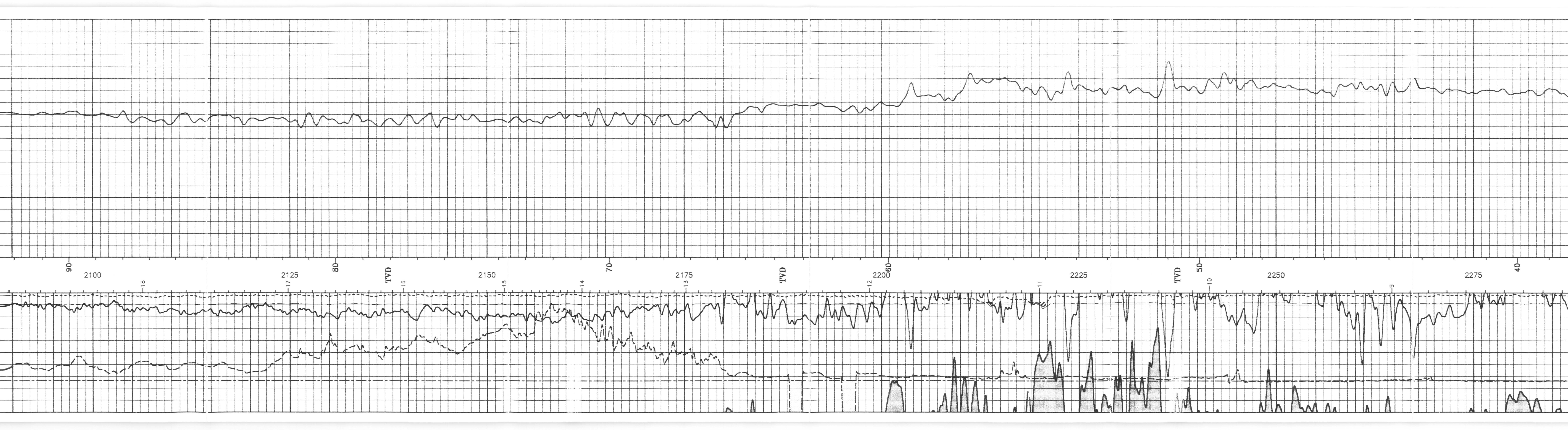
CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)	CURVE	OFFSET (m)
BIT	0.00	CHT	0.00	GR	0.46		
CALX	27.55	DTC	0.00	TEN	0.00		

Presentation : cpu1:/dat1a/pass/paramount_k-29a/t_mac_main.pdf [1:240 Scale]
Plot Interval : 1751.11 - 2457.87 Meters

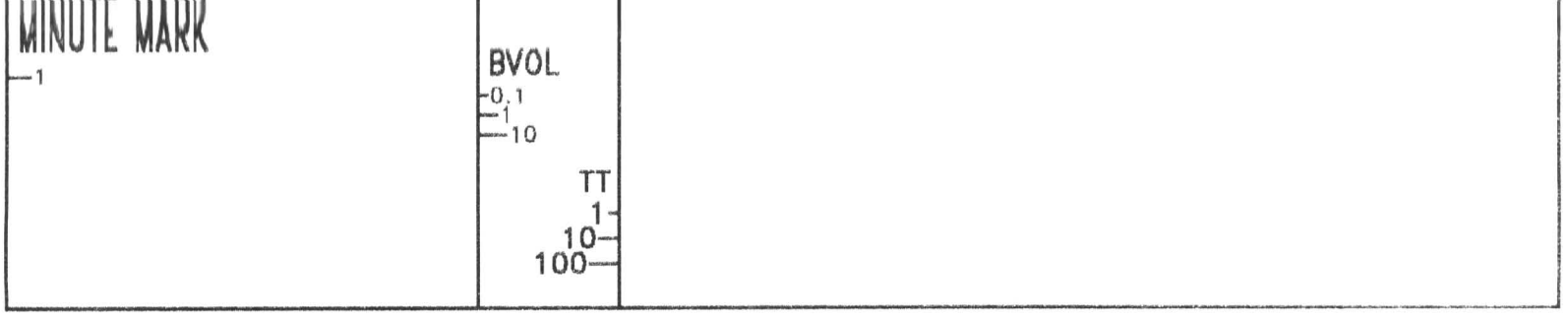
Data File 1 : F1 : cpu1:/dat1a/pass/paramount_k-29a/187dvx3v.xtf
Created On : Sep 22 07:06:44 2005
Company : PARAMOUNT RESOURCES LTD.
Well : PARAMOUNT ET AL LIARD k-29A
Field : LIARD
File Interval : 1751.11 - 2457.87 Meters
Oct : 187dvx

GR BACKUP
TOOL STICKING
XCAL < BIT
GAMMA RAY [gr]
0 150
(gAPI)
Caliper X [calx]
150 400
(mm)
BIT SIZE
150 400
(mm)
DIFF. TENSION [ten]
1900 -100
(kgf)
CH-TENSION [cht]
5500 500
(kgf)
MINUTE MARK
1
METERS
EST. DELTA-T COMP. [dtc]
500 100
BVOL
0.1
1
10
TT
1
10
100
1775
TVD
170
1800
35
1825
32
TVD
160
1850
CSG
GR
CALX
BIT
TEN
CHT
30
1875
DTC
150
TVD
29


1900
1925
1950
1975
2000
2025
2050
2075
140
130
120
110
100
TVD
TVD
TVD
TVD
TVD
28
27
26
25
24
23
22
21
20


90
2100
80
TVD
2125
70
2150
2175
TVD
2200
60
2225
50
TVD
2250
40
2275

TVD
8
2300
7
30
2325
6
TVD
2350
5
20
2375
4
TVD
2400
3
10
2425
2
FR CALX
1
TVD
2450
FR BIT
FR GR
FR CHT
FR TEN
TD
DTC
METERS
GR BACKUP
TOOL STICKING
XCAL < BIT
GAMMA RAY [gr]
0
150
(gAPI)
Caliper X [calx]
150
400
(mm)
BIT SIZE
150
400
(mm)
DIFF. TENSION [ten]
1900
-100
(kgf)
CH-TENSION [cht]
5500
500
(kgf)
EST. DELTA-T COMP. [dtc]
500
100



DIRECTIONAL SURVEY

Source File: /data/pass/paramount_k-29a/t_tvd.prn

Measured Depth Meters	Incl Angle Deg	Drift irection Deg	TRUE Vertical Depth
1854	4.5	69.48	1847.33
1864.37	6.9	45.6	1857.65
1874.77	9.3	37.3	1867.95
1881.5	11.7	26	1874.56
1890.96	14.1	31	1883.78
1900.35	15.7	33.6	1892.86
1909.85	17.4	32.3	1901.96
1919.42	19.5	30.2	1911.04
1928.93	21.8	27	1919.94
1938.53	23.9	22.8	1928.79
1948.15	26.4	21.7	1937.49
1957.62	28.7	21.2	1945.89
1967.14	29.9	20.5	1954.19
1976.74	30.5	20.1	1962.49
1986.09	29.4	17.8	1970.59
1995.43	28.2	14.6	1978.78
2004.94	27.9	13.2	1987.17
2014.44	27.7	13	1995.57
2023.94	27	12	2004.01
2033.56	26.6	11.3	2012.6
2042.92	27.3	10.1	2020.94
2052.35	28	9.4	2029.29
2061.84	28.3	10.2	2037.66
2071.51	28.4	12.3	2046.17
2081.06	29.2	14	2054.54
2090.59	29	15.6	2062.87
2099.43	28.4	17.8	2070.62
2109.43	28.3	17.3	2079.42
2119.14	28.5	17.6	2087.96
2128.8	28.6	17.5	2096.45
2138.25	28.4	16.6	2104.75
2147.92	28	14.6	2113.28
2157.55	27.5	13.6	2121.8
2167.1	26.6	12.1	2130.3
2176.71	26.6	11	2138.9
2186.18	26.2	10.4	2147.38
2195.83	25.4	9.8	2156.07
2205.31	25.1	14	2164.64
2214.96	26.1	16.6	2173.34
2224.47	26.6	19.3	2181.87
2233.7	27.7	20.2	2190.08
2243.31	29.5	21.8	2198.52
2252.79	31.4	19.7	2206.69
2262.33	32.4	18	2214.79
2271.82	32.9	17	2222.78
2281.47	33.8	15.4	2230.84
2290.81	34.6	14.3	2238.57
2300.2	32.4	13.3	2246.39
2309.78	31	9	2254.55
2319.35	29.9	7.5	2262.8
2328.9	28.6	7.2	2271.13
2338.32	27.4	3.4	2279.45
2346.73	27.2	359.5	2286.92
2356.12	27.8	355.2	2295.25
2365.7	28.8	352.2	2303.69
2375.27	28.3	347.9	2312.09
2384.82	28.3	345.1	2320.5
2394.24	28.6	343.6	2328.78
2403.83	28.9	342.7	2337.19
2413.35	28.2	341.1	2345.55
2422.89	27.9	340.6	2353.97
2432.5	28.3	341.8	2362.45
2442.02	29.3	341.8	2370.79
2451.41	30.4	340.7	2378.94
2461.05	31.5	338.8	2387.21
2470.5	33.3	336.5	2395.18
2480.26	35.6	336.2	2403.23
2489.72	37.7	336.4	2410.82
2499.08	38.9	334	2418.17
2508.5	40.1	333.2	2425.44
2517.9	41.8	333.1	2432.53
2527.39	43.9	333.4	2439.49
2536.72	46.4	332.4	2446.07
2546.31	48.1	331.3	2452.58
2550	48.9	331.3	2455.03
2566	52.37	330	2465.17

BAKER HUGHES

Baker Atlas

COMPANY	PARAMOUNT RESOURCES LTD.		FILE NO:
WELL	PARAMOUNT ET AL LIARD k-29A		
FIELD	LIARD		API NO:
PROVINCE	NORTH WEST TERRITORIES		
LOCATION: LIC #: 1125		ELEVATIONS: KB 416.4 M DF GL 409.6 M	UWI: 300k296030123303
		DATE 21-Sep-2005	