FORWARD ET AL EWEKKA C-11

DRILLING SUMMARY

MAY 1984

PREPARED FOR:

FORWARD RESOURCES LTD.

PREPARED BY:

Winterhawk Petroleum Consulting Services Ltd.
102, 1040 7th Avenue S.W., Calgary, Alberta T2P 3G9 Telephone: 237-8370

INTRODUCTION

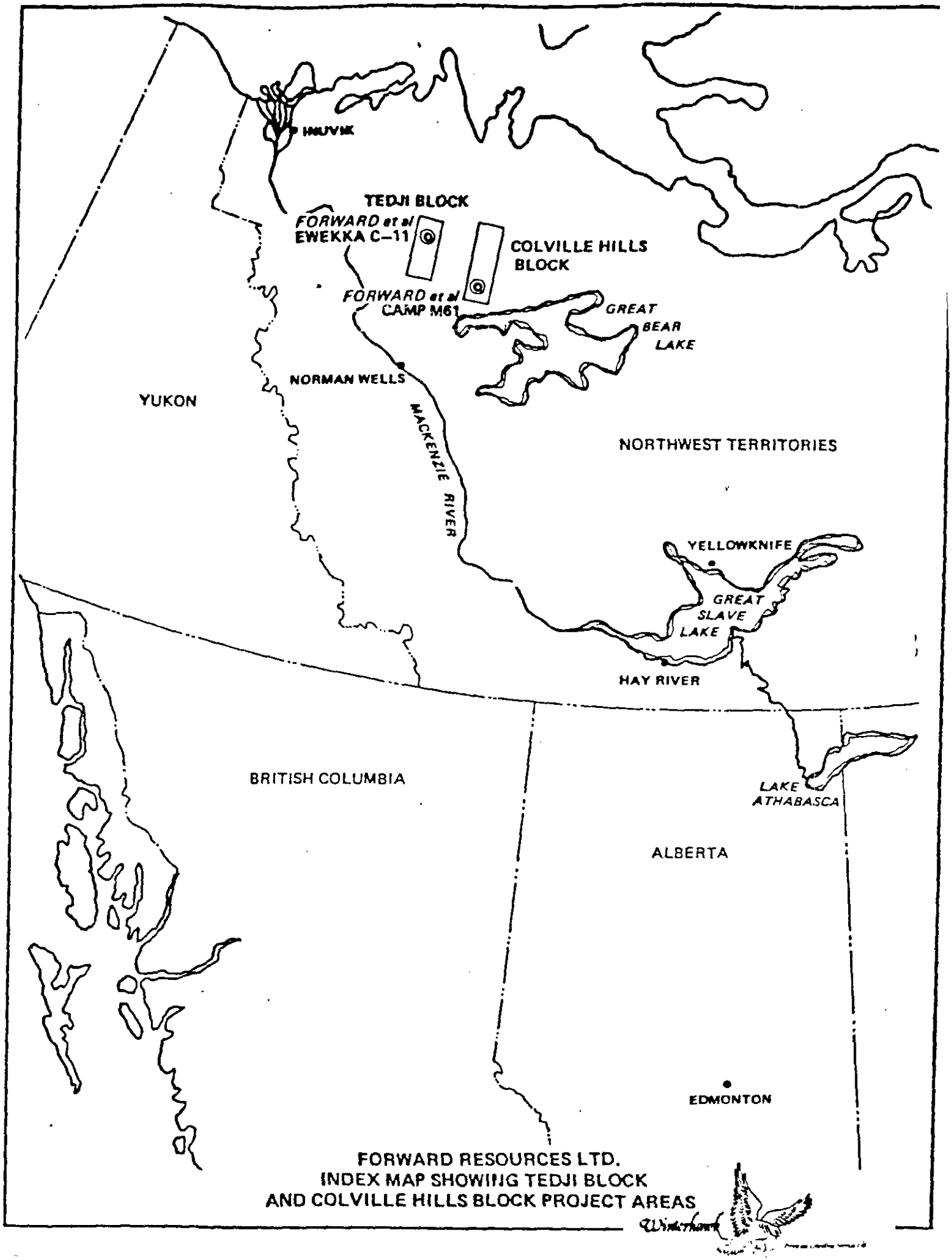
Winterhawk Petroleum Consulting Services Ltd., acting as agents for Forward Resources Ltd., co-ordinated the logistics and drilling of the Forward et al Ewekka C-11 well drilled in February - March of 1984.

The 1983-84 drilling of Ewekka C-11 represented a continuance of the exploration activity which began in 1982-83 pursuant to a farm out agreement between Dome Petroleum Limited et al. and Forward Resources Ltd. In 1982-83, an extensive seismic operation was conducted in the region, with Norman Wells acting as the base station.

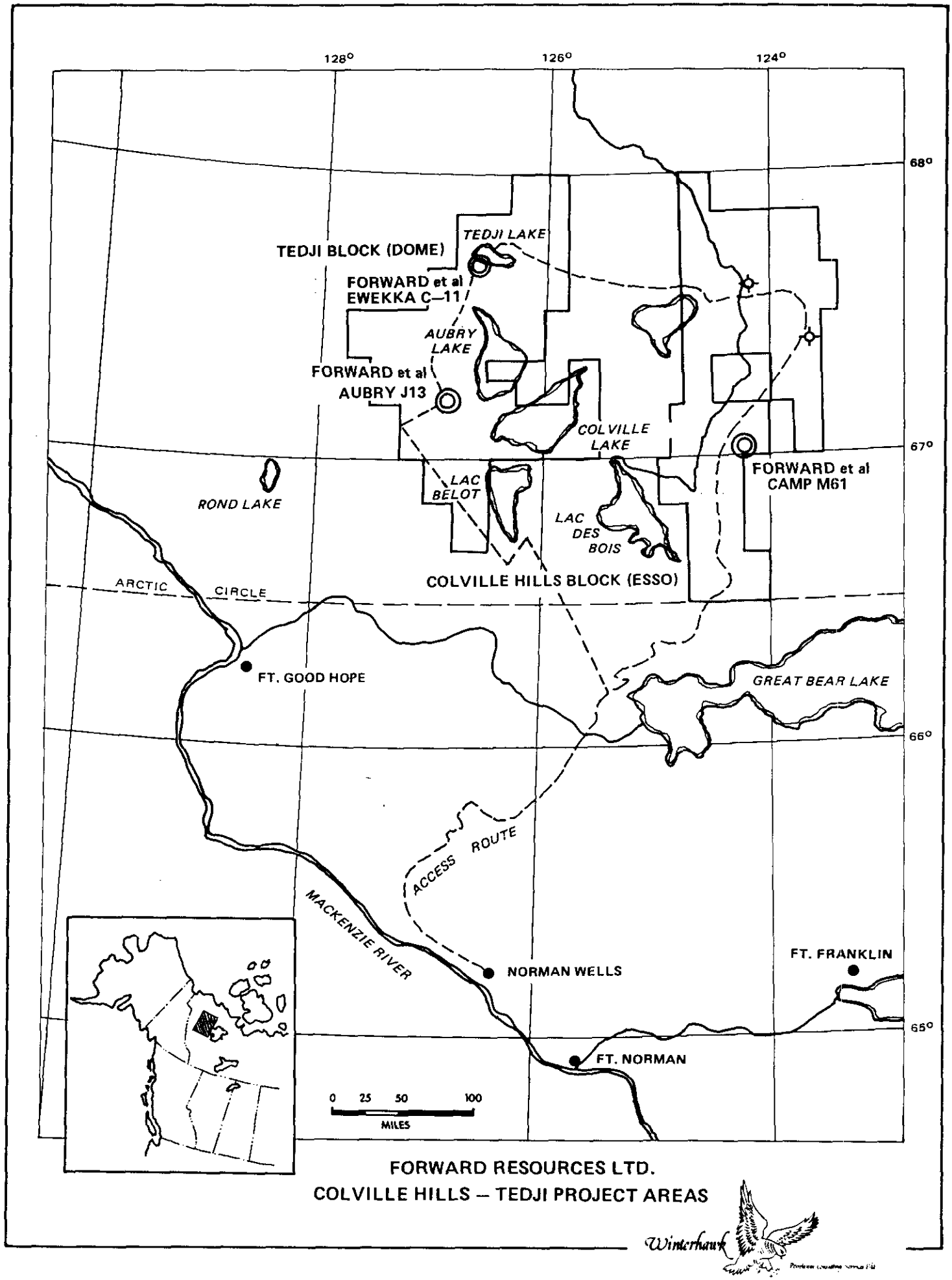
The rig and related components had been racked from the previous year's operation at a storage site in the Northern block of the Esso land as indicated in the enclosed area map. In September of 1983, additional drilling supplies and support services were transported by barge to Norman Wells, N.W.T.

Transportation of the rig and related equipment was carried on simultaneously from the Norman Wells base station and from the racking site in early December of 1983. Drilling commenced on the Camp M-61 well location in early January 1984 and was completed by the end of the month. All supplies and equipment were subsequently moved to the next drilling location, Forward et al Ewekka C-11, in early February of 1984. Forward et al Ewekka C-11 represents the first well to be drilled in the Dome block.

Forward Resources Ltd. hereby gives notice that the enclosed report is to be considered as the **final well summary for the Ewekka C-11 well location.**



FORWARD RESOURCES LTD.
INDEX MAP SHOWING TEDJI BLOCK
AND COLVILLE HILLS BLOCK PROJECT AREAS



FORWARD RESOURCES LTD.

COLVILLE HILLS – TEDJI PROJECT AREAS

Winterhawk

SECTION 1

SUMMARY OF WELL DATA

TABLE OF CONTENTS

FINAL WELL REPORT EWEKKA C-11

The information noted below complies with the "Section 1 - Summary of Well Data" requirements of the Canada Oil and Gas Lands Administration report format.

WELL NAME:	Forward et al Ewekka C-11
LESSOR:	Dome Petroleum Limited et al. farm out to Forward Resources Ltd.
OPERATOR:	Forward Resources Ltd. 6 flr., 700 - 4th Avenue S.W. Calgary, Alberta T2P 3J4
LOCATION:	C-11 67-50-126-30
CO-ORDINATES:	67° 40' 02.26" 126° 32' 51.84"
LEASE NO.:	N/A
DRILLING CONTRACTOR:	Three Hundred Drilling Ltd. "Mr. Ben" National 370 drawworks
DRILLING AUTHORITY:	No. 1130 issued 84-02-06
CLASSIFICATION:	New Field Exploratory (Northern)
ELEVATIONS:	G.L. 356.20 m K.B. 360.40 m
SPUD DATE:	84-02-15
COMPLETED DRILLING DATE:	84-03-07
TOTAL DEPTH, PLUG BACK:	1340 m T.D., 0 m P.B.T.D.
WELL STATUS:	Dry and Abandoned
RIG RELEASED:	84-03-11
HOLE SIZES:	444 mm to 23 m 311 mm to 885 m 215 mm to 1340 m
CASING SIZES:	339 mm to 23.0 m 244 mm to 877.0 m

Winterhawk Petroleum Consulting Services Ltd.

WELL SUMMARY

DATE 84 03 11

Well Forward et al Ewekka C-11 Location

Elevations: KB 360.4 m GL 356.2 m CF 357.05 m

History: Spud Date 84 02 15 R.R. Date 84 03 11 TD 1340 m

Status Dry and Abandoned Producing Zone(s) N/A

A. DRILLING DETAILS

Hole Size 444 mm Depth 23 m Logs

Hole Size 311 mm Depth 885 m Logs

Hole Size 215 mm Depth 1340 m Logs DIL, CN-CDL-GR-4CAL, CBL-GR-CCL

Hole Size Depth Logs BHC/AC-GR-CAL, mud, lithology

Casing Size 339 mm Grade K-55 Depth 23 m Cement Vol. 4 T

Casing Size 244 mm Grade MN-80 Depth 877 m Cement Vol. 26 T

Casing Size Grade Depth Cement Vol. 4 T

Casing Size Grade Depth Cement Vol. 17 sx down, 330 mm annulus

DST No. 1 Int 1300 - 1340 m Zone Old Fort Island

DST No. 2 Int 1283 - 1295 m Zone Old Fort Island

DST No. 3 Int 1152 - 1162 m Zone Mt. Cap Upper

DST No. Int Zone

DST No. Int Zone

Core No. 1 Int 1279 - 1282 m Zone Old Fort Island Rec. 2.9 m

Core No. Int Zone Rec.

Core No. Int Zone Rec.

Plug No. 1 Int 1140 - 1340 m Cement Vol. 8.4 T Felt No

Plug No. 2 Int 860 m Cement Vol. 244 mm Bridge Plug Felt PT 2000 kPa

Plug No. 3 Int 0 - 10 m Cement Vol. 0.4 T Felt No

Plug No. Int Cement Vol. Felt

B. COMPLETION DETAILS

COMPLETION DATE:

Perforations: Int Zone Type

Int Zone Type

Int Zone Type

Stimulations: Formation

Tubing Details:

Anchor/Packer Details:

Pumping Equipment:

Remarks:

See specific forms for more detail.

ENGINEER Schaffer/Ross

SECTION II

GEOLOGICAL SUMMARY

FORWARD ET AL EWEKKA C-11

Lat. 67°40'2.26"N, Long. 126°32'51.84"W

GEOLOGICAL REPORT

Dawson-Long & Associates Ltd.

FORMATION TOPS

Winterhawk

GEOLOGICAL MARKERS

Ground: 356.2 m K.B.: 360.44 m

Formation	Sample Top	Subsea (Sample)	Log Top	Subsea (Log)
Till	0			
Bear Rock	12	+348.44		
Mount Kindle	89	+271.44		
Franklin Mtn.				
Cherty	222	+138.44		
Rhythmic	507	-146.56		
Cyclic	661	-300.56		
Saline River				
Shales - U	868	-507.56		
Salt - L	912	-551.56	912	-551.56
Mt. Cap Upper	1118	-757.56	1117	-756.56
Mt. Cap Lower	1227	-866.56	1125.5	-865.06
Old Fort Island	1280	-919.56	1279.5	-919.06
Shaler-Proterozoic	1318	-957.56	1318	-957.56
T.D.	1340	-979.56	1340	-979.56

PALAEONTOLOGICAL DETERMINATIONS

CORED INTERVALS

CORE DESCRIPTIONS

SAMPLE DESCRIPTIONS

Winterhawk

CORE DATA AND CORING RATE

CORE #1

Formation: Old Fort Island

Interval: 1279 - 1282 m

Total Meters Cored: 3 m

Total Meters Recovered: 3 m

Percent Recovery: 100%

Coring Rate

Depth (m)	Rate (min/.2 m)
1279.0	
1279.2	33
1279.4	33
1279.6	15
1279.8	20
1280.0	14
1280.2	17
1280.4	20
1280.6	13
1280.8	10
1281.0	9
1281.2	9
1281.4	10
1281.6	11
1281.8	10
1282.0	10

CORE DESCRIPTION

CORE #1: 1279 - 1282 m; Cut 3 m, Recovered 3 m

1279 - 1279.49	Mount Cap dark green dolomitic, fissile shale. somewhat milled up.
1279.49 - 1279.76	Old Fort Island Sandstone: light grey, fine (70%) to medium (30%) grained, well rounded, 10% siliceous, 20% dolcmitic cement, well sorted, trace pyrite, trace dead oil stain, tight, in part mottled with light grey, argillaceous, sandy (medium grained - 20%) dolomite that gives a slight oily reaction in acid.
1279.76 - 1280.00	Sandstone: medium (80%) to coarse (20%) grained, light to medium brown, well rounded, well sorted, trace glauconite, brown, dead oil stain, spotty moderate yellow fluorescence, no cut. Siliceous (5%), dolomitic (25%) cement grading to coarsely crystalline medium brown, sandy (medium 30%, coarse 70%), dolomite - tight, no shows.
1280.00 - 1282.00	Dark to medium brown, medium (10%) to coarsely (90%) crystalline in part sandy (fine 5%, medium 10%, coarse 15%), dolomite. There is fracture porosity of 5% with coarse euhedral crystals of dolomite and salt in the cavities. The fracture has much dark brown oil staining that fluoresces bright yellow but does not cut in chlorothene.

CORE LABORATORIES - CANADA, LTD.

Petroleum Reservoir Engineering

CORE ANALYSIS

FORWARD RESOURCES LTD.
FORWARD ET AL EWEKKA C-11
NORTHWEST TERRITORY
67 40'02.47" N. LAT. 126 32'51.69" W. LONG.
84-03-27

CORE LABORATORIES - CANADA, LTD.

COMPANY	FORWARD RESOURCES LTD.	FORMATION		PAGE	1
WELL	FORWARD ET AL EWEKKA C-11	CORING EQUIPMENT	DIAMOND	FILE	7004-84-341B
FIELD	NORTHWEST TERRITORY	CORE DIAMETER.(mm)	88	DATE	84-03-27
LOCATION	67 40'02.47" N. LAT. 126 32'51.69" W. LONG.	CORING FLUID	WATER BASE MUD	ANALYSTS	JH

FULL DIAMETER ANALYSIS

Sample Number	Depth Metres (m)	m Rep.	Sample Length	Permeability to Air Millidarcys mD Max.	mD 90 des.	mD V	Perm. X m	Porosity	Porosity X m	Density kg/m3 Bulk	Grain	Residual Saturation (Frac of Pore Vol) Oil	Water	VISUAL EXAMINATION
	CORE NO. 1	1279.00 m - 1281.92	(core received	2.92 m)	(	3 Boxes)								
NA	1279.00-81.92	2.92	-	-	-	-	-	-	-	-	-	-	-	No analysis requested

CORE LABORATORIES - CANADA, LTD.

CODE KEY - DESCRIPTIONS

anhy = Anhydrite
AST = Appears similiar to
bk = Break
bldr = Boulder
c = Coarse
calc = Calcite (areous)
carb = Carbonaceous
cbl = Cobble
CEC = Cation exchange capacity
cgl = Conglomerate
cht = Chert
coal = Coal/Coal Inclusion
dol = Dolomite
f = Fine
fest = Ironstone
foss = Fossil (iferous)
frac = Fracture
fri = Friable
glauc = Glauconite (ic)
grnl = Granule
gyp = Gypsum
h frac = Horizontal fracture
hal = Halite (Salt)
i = Intersranular
lam = Laminae (Laminated)
lmy = Limy
ls = Limestone
lv = Large vug
m = Medium
mi = Mud invaded
mic = Micaceous
mshy or shy = Moderately shaly (20-40%)
mv = Medium vug
NA = Not analysed by request
NP = No permeability measurement
ool = Oolitic
OB = Overburden
P = Preserved for future studies
pbl = Pebble
POA = portion removed for oil analysis
ppv = Pinpoint Vug
PSA = Particle size analysis
pyr = Pyrite (ic)
pyrbit = Pyrobitumen
SCAL = removed for special core analysis
sdy = Sandy
SEM = Scanning electron microscope analysis
sh = Shale
sltst = Siltstone
slty = Silty
ss = Sandstone
sshy = Slightly Shaly(<20%)
sty = Stylolite (ic)
sulf = Sulphur
sv = wet/dry sieve analysis
tr = Trace
TS = Thin section
uncons = Unconsolidated
vfrac = Vertical fracture
vf = Very fine
VOB = Vertical overburden sample
vshy = Very shaly (>40%)
vug = Vuggy (ular)
* = broken core
** = Permeability > 10240 mD

CLEANING

Solvent
Extraction Equipment
Extraction Time
Drying Equipment
Drying Time
Drying Temperature

ANALYSIS

Pore volume measured by Boyle's Law in a Hassler holder using He
Grain vol msrd by Boyle's Law in a modified U.S.B.M. porosimeter using He
Grain volume measured by Boyle's Law in a matrix cup using He
Bulk volume measured by calipering
Bulk Volume by Archimedes Principle
Porosity determined by summation of fluids (retort)
Fluid saturations by retort on end pieces of full diameter samples
Fluid saturation by retort
Water saturations by Dean-Stark
Oil saturations by weight difference in Dean-Stark
Permeabilities measured on 20mm cubes
Permeabilites measured on mm diameter drilled pluss
X Core Gamma Composite
Core Gamma Spectral

REMARKS:

CORE LABORATORIES -- CANADA, LTD. CORE LAB *Petroleum Reservoir Engineering*

COMPANY FORWARD RESOURCES LTD. FILE NO. 7004-84-341B

WELL FORWARD ET AL EWEKKA C-11 DATE

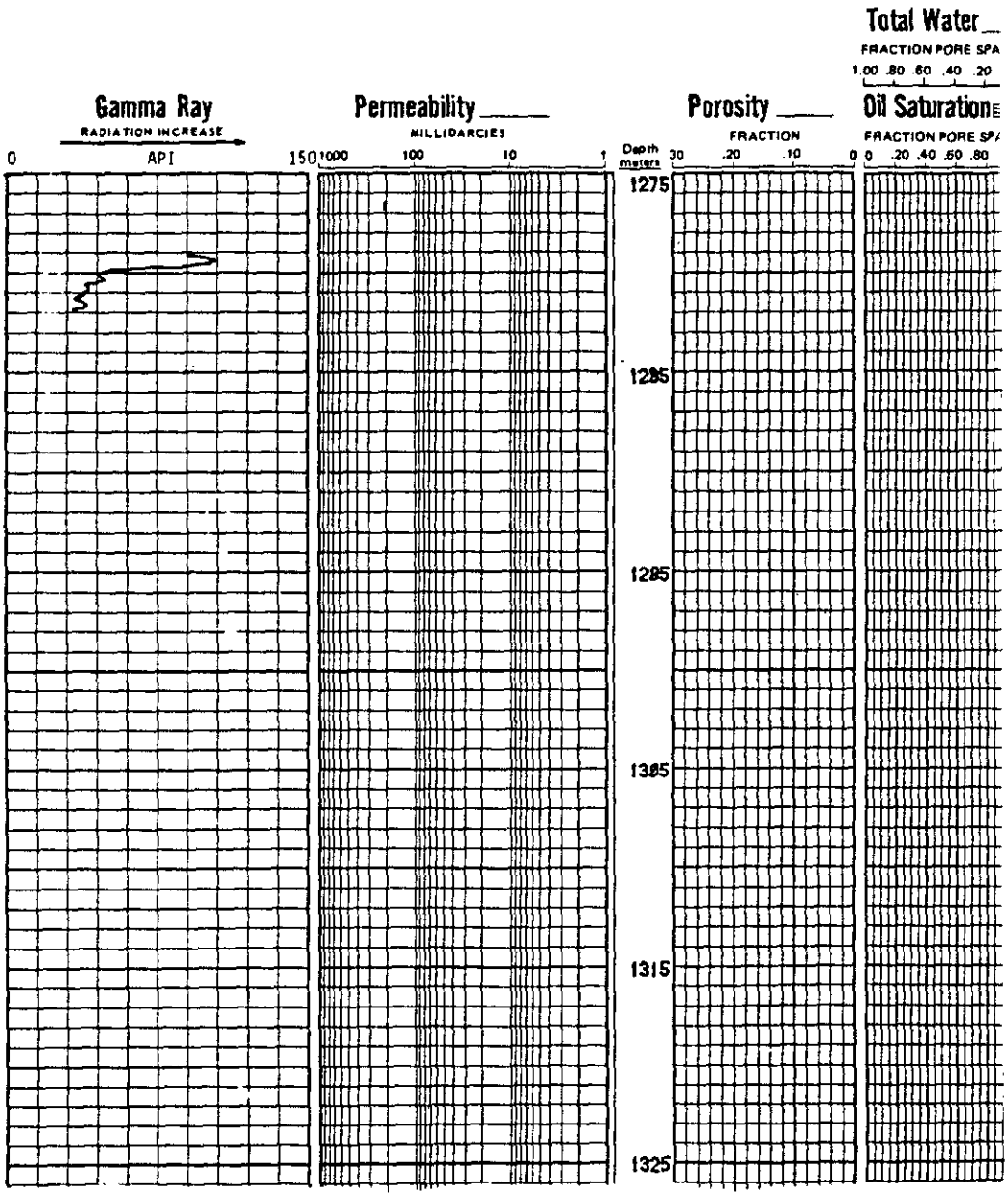
FIELD FORMATION ELEV.

PROVINCE NORTHWEST TERRITORY DRLG. FLD. WATER BASE MUD CORES 1

LOCATION 67°40'02.47" N. LAT. 126°32'51.69" W. LONG

CORRELATION COREGRAPH

VERTICAL SCALE: 10cm = 24m



SECTION III

ENGINEERING SUMMARY

DRILL STEM TESTS

Winterhawk Petroleum Consulting Services Ltd.

PAGE _____

FIELD DRILL STEM TEST REPORT

DATE 84 03 08

A. WELL DATA

Well: Forward et al Ewekka C-11 Location _____

DST No. 1 Interval 1300 - 1340 m Formation Old Fort Island

Last Casing: Size 244 mm Depth 877 m Open Hole: Size 215 mm Depth 1340 m

Hole Troubles: Required Jarring Free Caliper at Packer(s) _____

Mud: Wt. 1230 Vis 70 W.L. 17 % Oil _____ ppm Cl _____

B. TEST STRING DATA

Testing Company Strata Hughes Type of Test Bottom Hole

Type and Number of Packers Two Size 191 mm

DP Size 114 mm Wt 24.7 kg/m Length 1122.09 m

DC Size 159 mm Wt 139 kg/m I.D. 71.4 mm Length 168.28 m

Tail Pipe Size 1 Wt 139 kg/m Length 27.72 m Perfs 7.01 m

T.D. String 1340 Recorder Depth 1291.26 Water Cushion None BH Choke 12.7 mm

Packer Depth(s) 1300 Weight on Packer(s) 20,000 daN

Other Equipment Sampler, Temp Recorder, Safety Joint, Jars

C. TEST RESULTS Recorder #13454

Times: PF 10 ISI 60 Flow 90 SI _____ Flow _____ FSI 180

Pressures: PF 951 IH 16260 ISI 8382 IF 865

TEMP 31 °C FH 16272 FSI 9899 FF 791

Flow Descriptions:

Preflow: Strong air blow throughout

Valve Open Flow: Strong air blow, gas to surface in 4 minutes, lazy 1 m flame, too small to measure.

Recoveries: 30 m drilling mud

D. SAMPLE DETAILS:

1 sampler, 1 bomb, 1 fluid

Sent to: AGAT Via: _____ Date Sent: _____

E. REMARKS:

Successful test

Note: Data reported on this form are field readings taken at the time of test, and are subject to correction.

ENGINEER B. Schaffer

TEST INFORMATION REPORT

STRATA HUGHES TESTING

633 - 6th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 2Y5

WELL NAME: Forward et al Ewekka C-11-67-126

TICKET # A267

D.S.T.# One

(MPANY Forward Resources Ltd. DATE 84/03/08

WELL NAME Forward et al EweKka KB ELV. 360 m TICKET # A267 DST.# One

WELL LOCATION C-11-67-126 GR ELV. 356 m FORMATION Old Fort Island

I TERVAL 1300-1340 T.D. 1340 m NET PAY _ m TYPE of TEST Bottom Hole

CUSTOMER Forward Resources Ltd.

RECORDER DATA — ALL MEASUREMENTS ARE 'SI'

PF	10	REC.#	13454	5572	2659	1250
SF	60	RANGE	24476	44471	43437	11369
	90	CLOCK	24	24	24	24
FS	180	DEPTH	1291.26	1292.78	1307.33	1308.85
			kPa	kPa	kPa	kPa
		Init. Hyd.	16260	16272	16436	16460
		First Flow	951	855	1102	1225
		Final Flow	921	740	1040	1084
		In Shut-in	8382	8538	8548	8571
		Init. Flow	865	728	1022	1107
		Final Flow	791	798	966	989
		Fi Shut-in	9899	9917	10076	10091
		Final Hyd.	16272	16283	16447	16472
Inside/Outside			Inside	Inside	Outside	Outside

RECOVERY

TOTAL FLUID 30 m of 30 m in D.C. and _ m in D.P.

30 m of drilling mud

_ m of _

_ m of _

_ m of _

GAS RECOVERY MEASURED WITH _

TIME	ORIFICE	PRESSURE	H^2O	RATE
mins.	mm	kPa	mm	m^3/d
_				

REMARKS:

PREFLOW - Strong air blow throughout.

SECONDFLOW - Strong air blow. Gas to surface in 4 minutes. Lazy 1 meter flame too small to measure.

TEST SUCCESSFUL

Charts to customer

Samples to AGAT - 1 sampler 1 bomb 1 fluid

TIME DATA [CONVENTIONAL]

PF fr.	15:15	to 15:25	Hr.
IS fr.	15:25	to 16:25	Hr.
SF fr.	16:25	to 17:55	Hr.
FS fr.	17:55	to 20:55	Hr.
T STARTED	11:30		Hr.
T ON BTM	15:00		Hr.
T OPEN	15:15		Hr.
T PULLED	20:55		Hr.
T OUT	24:30		Hr.

TOOL DATA

TOOL WT.	4 000	daN
WT SET ON PACKER	20 000	daN
WT PULLED LOOSE	65 000	daN
INITIAL STR WT	40 000	daN
UNSEATED STR WT	40 000	daN
BTM.CHOKE	12.70	mm
HOLE SIZE	216	mm
D.COLL I.D.	71.4	mm
D.PIPE I.D.	84.8	mm
D.C.LENG	168.28	m
D.P.LENG	1122.09	m

MUD DATA

MUD TYPE	Gel	
WEIGHT	1230	kg/m^3
VIS	70	S/L
W.L.	17	cm^3
F.C.	1.59	mm
MUD DROP	No	m

GENERAL DATA

AMT.OF FILL	Nil	m
BTM.H.TEMP	31	C'
POROSITY %	_	
HOLE COND	Good	
PACKER SIZE	191	mm
# OF PACKERS	2	
CUSHION AMT	None	m
CUSHION TYPE.	None	
REVERSED OUT	No	
TOOL CHASED	No	
TESTER	T. Gibbs	
CO. REP.	B. Schaffer	
CONTRACTOR	300 Drilling	
RIG#	Mr. Ben /S16	

CONVENTIONAL

TEST INFORMATION REPORT

STRATA HUGHES TESTING

633 - 6th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 2Y5

WELL NAME Forward et al Ewekka

LOCATION C-11-67-126

TICKET NO. A267 D.S.T. NO. One DATE 84/03/08

TOTAL TOOL TO BOTTOM TOP PACKERS				14.20
INTERVAL TOOL				11.91
BOTTOM PACKERS and ANCHOR				-
TOTAL TOOL				26.11
DRILL COLLAR IN INTERVAL				27.72
DRILL COLLAR ANCHOR STANDS	STANDS -	SINGLE -	TOTAL	-
DRILL PIPE ANCHOR	STANDS -	SINGLE -	TOTAL	-
TOTAL ASSEMBLY				53.83
DRILL COLLARS ABOVE TOOLS	STANDS -	SINGLE -	TOTAL	168.28
DRILL PIPE ABOVE TOOLS	STANDS -	SINGLE -	TOTAL	1122.09
TOTAL DRILL COLLARS DRILL PIPE AND TOOLS				1344.20
TOTAL DEPTH				1340.00
TOTAL DRILL PIPE ABOVE K.B.				4.20

REMARKS

P.O. Sub	.31
C.O. Sub	.31
Shut-in Tool	1.58
Sampler	1.10
HMV	2.16
REC. # 13454	1.52
REC. # 5572	1.52
Jars	1.85
Safety Joint	.61
PACKER	1.76
PACKER	1.46
Depth 1300.00	-
Stub	.32
Anchor	-
Perfs	7.01
REC. # 2659	1.52
REC. # 1250	1.22
Temp Rec.	.61
CO Sub	.31
Drill Collar	27.72
CO Sub	.31
Bullnose	.61
T.D. 1349.00	-

STRATA HUGHES

TEST INFORMATION REPORT

STRATA HUGHES TESTING

633 - 6th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 2Y5

WELL NAME & LOCATION :FORWARD ET AL EWEKKA C-11-67-126
TICKET# A267 DST# ONE
RECORDER #: 2659 AT 1307.33 M

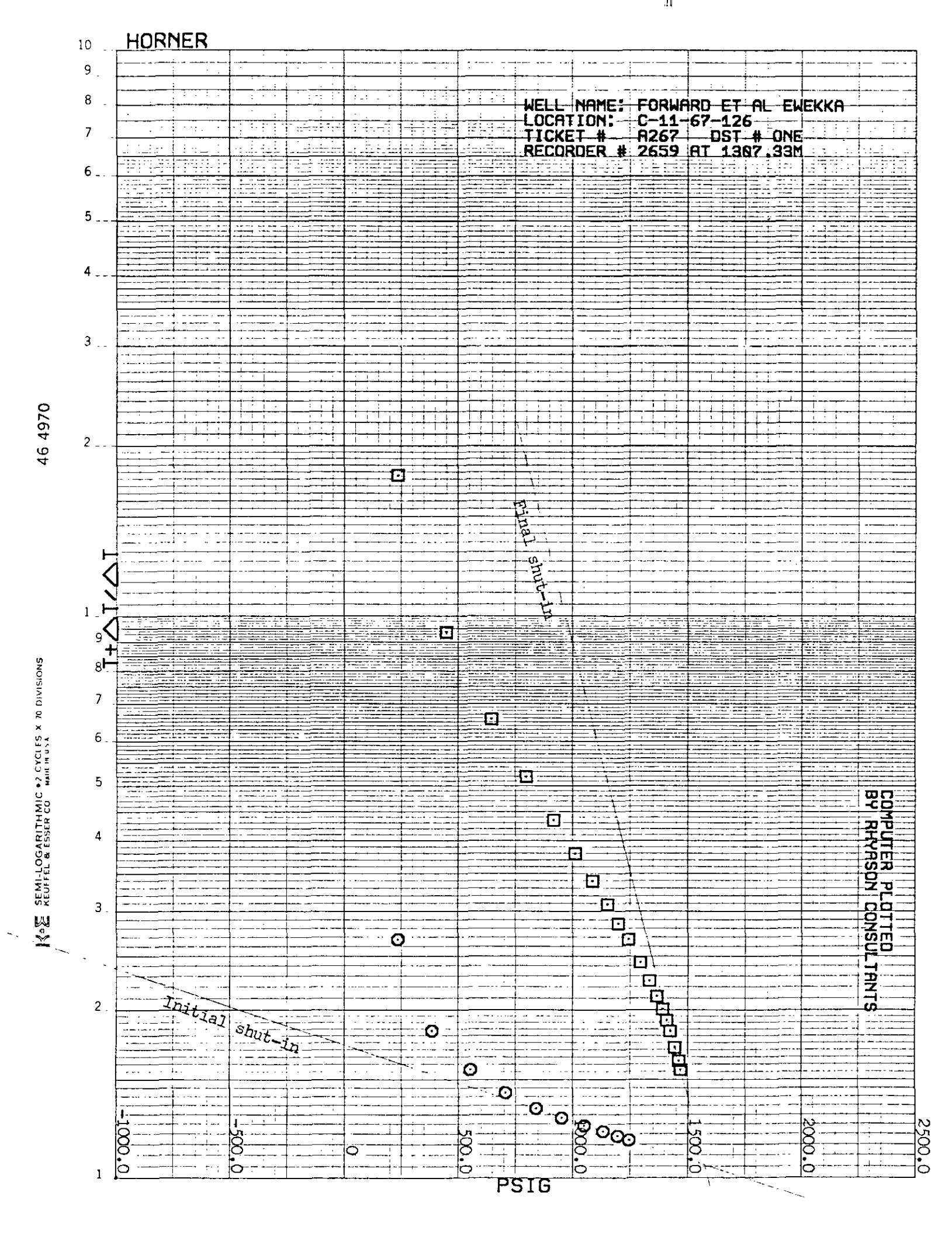
TO = : 10 T = : 100

I T	ITIAL SHUT-IN TIME	TO+ΔT / ΔT	PSIG	KPA	PSIG^2 / 10^6	*	FINAL SHUT-IN TIME	T+ΔT / ΔT	PSIG	KPA	PSIG^2 / 10^6
0		-	150.8	1040	.023	*	0	-	140.1	966	.020
6		2.67	229.9	1585	.053	*	6	17.67	225.7	1556	.051
12		1.83	380.6	2624	.145	*	12	9.33	436.7	3011	.191
18		1.56	548.7	3783	.301	*	18	6.56	636.0	4385	.404
24		1.42	698.6	4817	.488	*	24	5.17	787.6	5430	.620
30		1.33	833.0	5743	.694	*	30	4.33	907.2	6255	.823
36		1.28	947.4	6532	.898	*	36	3.78	1002.4	6911	1.005
42		1.24	1044.7	7203	1.091	*	42	3.38	1077.6	7430	1.161
48		1.21	1125.9	7763	1.268	*	48	3.08	1141.6	7871	1.303
54		1.19	1187.7	8189	1.411	*	54	2.85	1191.3	8214	1.419
60		1.17	1239.8	8548	1.537	*	60	2.67	1232.0	8494	1.518
						*	70	2.43	1285.0	8860	1.651
						*	80	2.25	1326.5	9146	1.760
						*	90	2.11	1358.7	9368	1.846
						*	100	2.00	1382.8	9534	1.912
						*	110	1.91	1400.8	9658	1.962
						*	120	1.83	1415.9	9762	2.005
						*	140	1.71	1435.9	9900	2.062
						*	160	1.62	1451.7	10009	2.107
						*	180	1.56	1461.4	10076	2.136

DATA

	INITIAL SHUTIN		FINAL SHUT-IN	
NO. OF INCREMENTS	10		19	
NO. OF POINTS EXTRAPOLATED	3		4	
SLOPE OF EXTRAPOLATED LINE	0		633	PSI/CYCLE
EXTRAPOLATED PRESSURE	12066	KPA	10914	KPA

COMPUTATIONS BY RHYASON CONSULTANTS
PH: 230-8423


HORNER
WELL NAME: FORWARD ET AL EWEKKA
LOCATION: C-11-67-126
TICKET # A267 DST # ONE
RECORDER # 2659 AT 1307.33M
Final shut-in
Initial shut-in
T+ΔT/ΔT
PSIG
-1000.0
-500.0
0
500.0
1000.0
1500.0
2000.0
2500.0
10
9
8
7
6
5
4
3
2
1
COMPUTER PLOTTED
BY RHYASON CONSULTANTS
46 4970
SEMI-LOGARITHMIC • 2 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO MADE IN U.S.A.

STRATA HUGHES

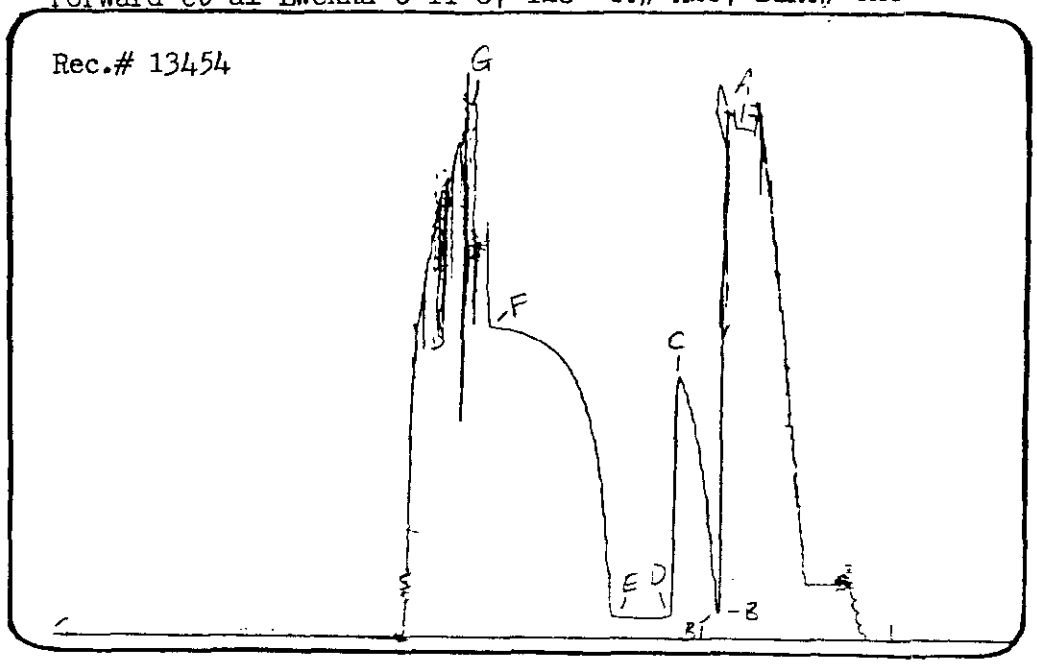
TEST INFORMATION REPORT

STRATA HUGHES TESTING
633 - 6th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 2Y5

"INSIDE"

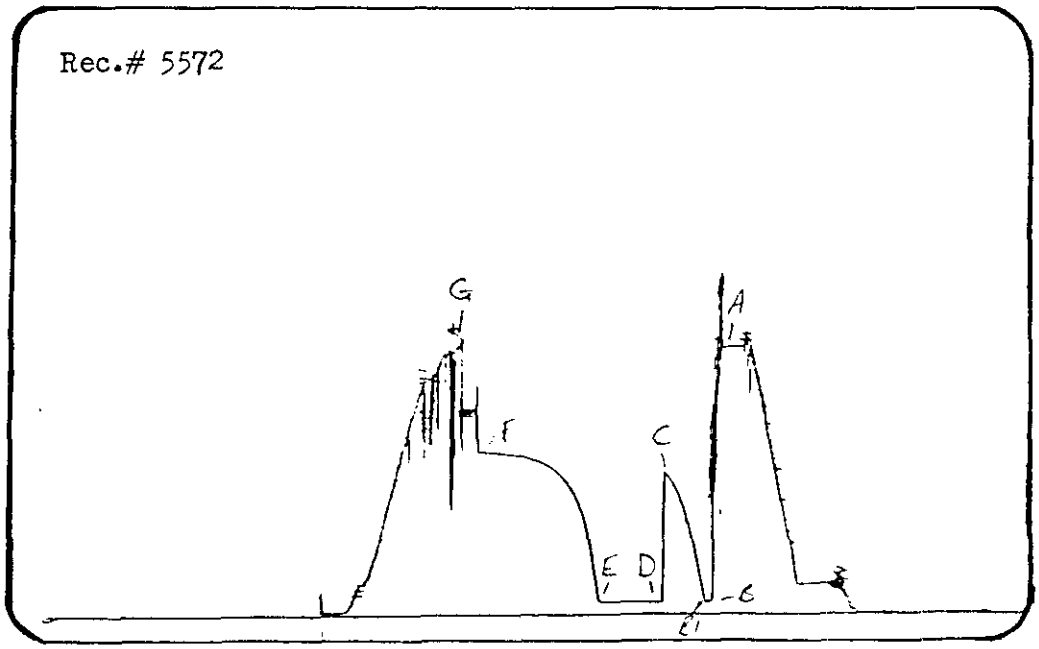
Forward et al Ewekka C-11-67-126 T.# A267 DSR.# One

Rec.# 13454



"INSIDE"

Rec.# 5572



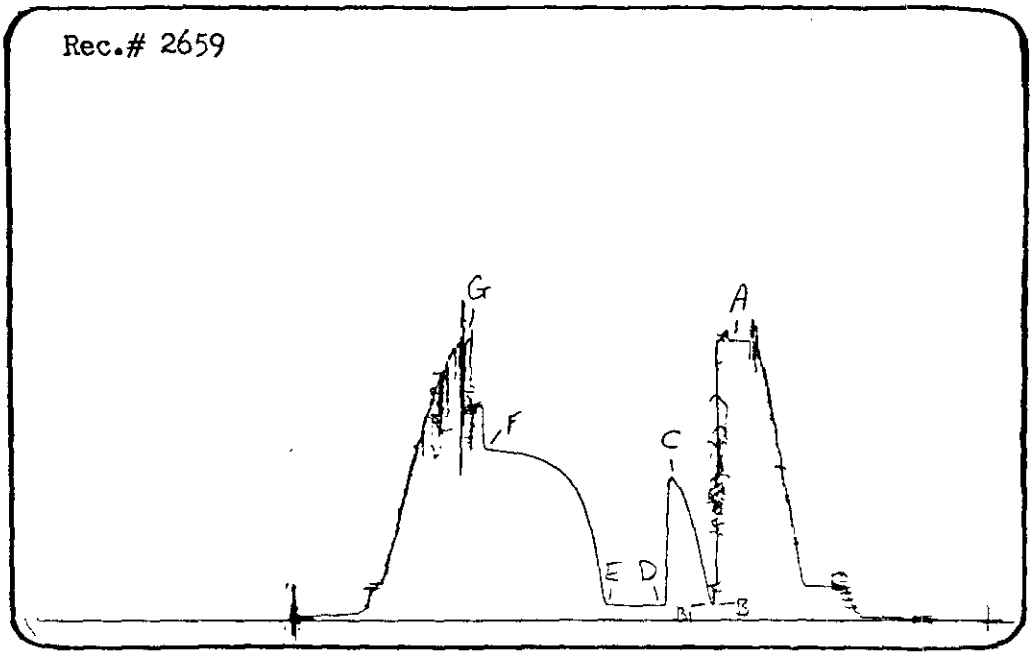
STRATA HUGHES

TEST INFORMATION REPORT

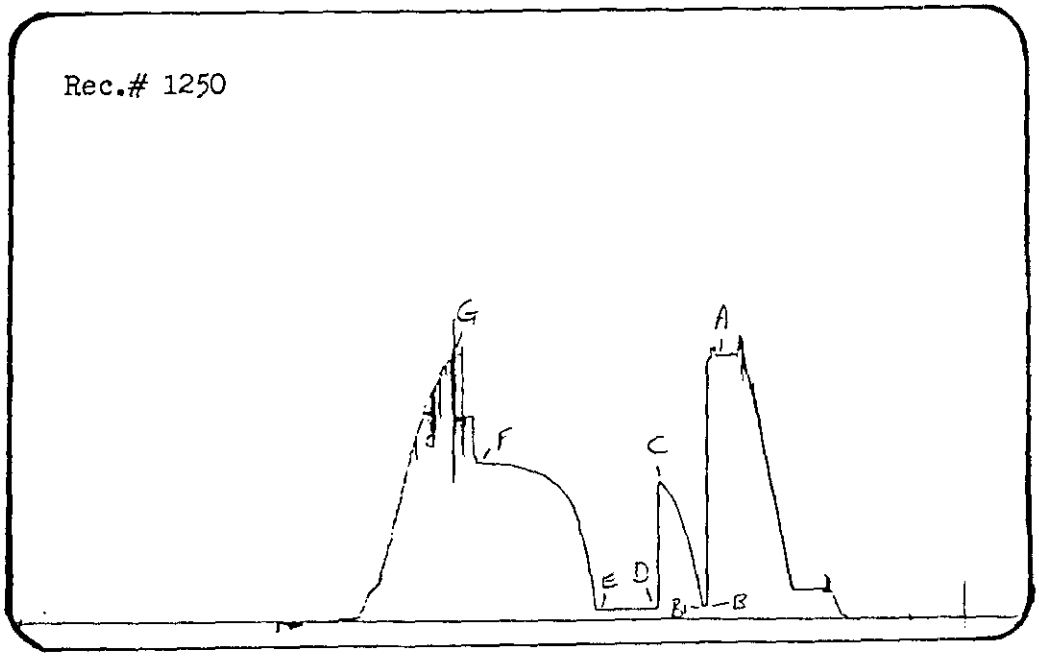
STRATA HUGHES TESTING
633 - 6th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 2Y5

Forward et el Ewekka C-11-67-126 T.# A267 DST.# One

Rec.# 2659



Rec.# 1250



Winterhawk Petroleum Consulting Services Ltd.

PAGE _____

FIELD DRILL STEM TEST REPORT

A. WELL DATA

DATE 84 03 09

Well: Forward et al Ewekka C-11 Location _____

DST No. 2 Interval 1283 - 1295 m Formation Old Fort Island

Last Casing: Size 244 mm Depth 877 mm Open Hole: Size 215 mm Depth 1340 m

Hole Troubles: None - pulled free Caliper at Packer(s) In gage hole

Mud: Wt. 1230 Vis 70 W.L. 17 % Oil _____ ppm Cl _____

B. TEST STRING DATA

Testing Company Strata Hughes Type of Test Bypass Straddle

Type and Number of Packers 4 Size 191 mm

DP Size 114 mm Wt 24.7 kg/m Length 1122.09 m

DC Size 159 mm Wt 139 kg/m I.D. 59 mm Length 158.98 m

Tail Pipe Size 159 mm Wt 139 kg/m Length 37.84 m Perfs 7.40 m

T.D. String 1340 Recorder Depth 1275.46 Water Cushion None BH Choke 12.70 mm

Packer Depth(s) 1283, 1295 Weight on Packer(s) 20,000 daN

Other Equipment Sampler, Safety Joint, Temp Recorder, Jars

C. TEST RESULTS Recorder #5572

Times: PF 10 ISI 60 Flow 90 SI 180 Flow _____ FSI _____

Pressures: PF 613 IH 16145 ISI 9905 IF 1190

TEMP 31 °C FH 15835 FSI 10262 FF 994

Flow Descriptions:

Preflow: Fair air blow

Valve Open Flow: Fair air blow, gas to surface in 8 minutes, 1-1/2 - 2 m lazy orange flame, testing through 3.175 mm orifice - 20 kPa

Recoveries: 140 m above test tool, gas cut water cut drilling mud

D. SAMPLE DETAILS:

1 sampler, 2 gas bombs, 6 fluid

Sent to: AGAT Via: _____ Date Sent: _____

E. REMARKS:

Note: Data reported on this form are field readings taken at the time of test, and are subject to correction.

ENGINEER B. Schaffer

TEST INFORMATION REPORT

STRATA HUGHES TESTING

633 - 6th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 2Y5

WELL NAME: Forward et al Ewekka C-11-67-126

TICKET # A268

D.S.T.# Two

MPANY	Forward Resources Ltd.				DATE	84/03/09	
LL NAME	Forward et al Ewekka	KB ELV.	360	m	TICKET #	A268 DST.#	Two
WELL LOCATION	C-11-67-126	GR ELV.	356	m	FORMATION	Old Fort Island	
NTERVAL	1283-1295 T.D. 1340 m	NET PAY	_	m	TYPE of TEST	Bypass Straddle	
STOMER	Forward Resources Ltd.						

RECORDER DATA — ALL MEASUREMENTS ARE 'SI'

10	REC.#	13454	5572	1250	2659
60	RANGE	24476	44471	41369	43437
90	CLOCK	24	24	24	24
180	DEPTH	1273.94	1275.46	1291.04	1292.26
		kPa	kPa	kPa	kPa
.	Init. Hyd.	_	16145	16317	16334
.	First Flow	Recorder	613	1037	_
Bl.	Final Flow	_	590	1037	_
C.	In Shut-in	Mal-	9905	10056	_
.	Init. Flow	Function	1190	1331 A1	16075
.	Final Flow	_	994	1166	_
F.	Fi Shut-in	_	10262	10430	_
.	Final Hyd.	_	15835	16008	16018
Inside/Outside		Inside	Inside	Outside	Outside

TIME DATA [CONVENTIONAL]

PF	fr. 14:55	to 15:05		Hr.
IS	fr. 15:05	to 16:05		Hr.
SF	fr. 16:05	to 17:35		Hr.
FS	fr. 17:35	to 20:35		Hr.
T STARTED		11:15		Hr.
T ON BTM		14:00		Hr.
T OPEN		14:55		Hr.
T PULLED		20:35		Hr.
T OUT		23:30		Hr.

TOOL DATA

TOOL WT.	4 000	daN
WT SET ON PACKER	20 000	daN
WT PULLED LOOSE	65 000	daN
INITIAL STR WT	40 000	daN
UNSEATED STR WT	41 000	daN
BTM.CHOKE	12.70	mm
HOLE SIZE	216	mm
D.COLL I.D.	59.0	mm
D.PIPE I.D.	84.8	mm
D.C.LENG	158.98	m
D.P.LENG	1122.09	m

RECOVERY

TOTAL FLUID 140 m of 140 m in D.C. and _ m in D.P.

140 m of sassified water cut drilling mud

_ m of _

_ m of _

_ m of _

AS RECOVERY MEASURED WITH Critical Flow Prover

TIME	ORIFICE	PRESSURE	H^2O	RATE
mins.	mm	kPa	mm	m^3/d
30	3.175	20		101
40	3.175	20		101
50	3.175	20		101
60	3.175	20		101

MUD DATA

MUD TYPE	Salt Gel	
WEIGHT	1230	kg/m^3
VIS	70	S/L
W.L.	17	cm^3
F.C.	1.59	mm
MUD DROP	No	m

REMARKS:

PREFLOW - Fair air blow throughout.

SECONDFLOW - Fair air blow. Gas to surface in 8 minutes. Lazy 2 meter flame.

TEST SUCCESSFUL

Charts to customer

Samples to AGAT - 1 sampler 2 gas bombs 6 fluid

GENERAL DATA

AMT.OF FILL	Nil	m
BTM.H.TEMP	31	C'
POROSITY %	_	
HOLE COND	Good	
PACKER SIZE	191	mm
# OF PACKERS	4	
CUSHION AMT	None	m
CUSHION TYPE.	None	
REVERSED OUT	No	
TOOL CHASED	No	
TESTER	T. Gibbs	
CO. REP.	B. Schaffer	
CONTRACTOR	300 Drilling	
RIG#	Mr. Ben /S16	

STRATA HUGHES

TEST INFORMATION REPORT

STRATA HUGHES TESTING

633 - 6th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 2Y5

CONVENTIONAL

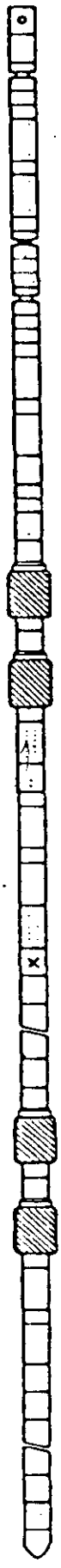
L NAME Forward et al Ewekka

CATION C-11-67-126

TICKET NO. A268 D.S.T. NO. Two DATE 84/03/09

TAL TOOL TO BOTTOM TOP PACKERS				14.52
NTERVAL TOOL				11.98
TTOM PACKERS and ANCHOR				3.90
TAL TOOL				30.40
RILL COLLAR IN INTERVAL				-
ILL COLLAR ANCHOR STANDS	STANDS 1	SINGLE 1	TOTAL	37.84
DRILL PIPE ANCHOR	STANDS -	SINGLE -	TOTAL	-
TAL ASSEMBLY				68.24
RILL COLLARS ABOVE TOOLS	STANDS -	SINGLE -	TOTAL	158.98
DRILL PIPE ABOVE TOOLS	STANDS -	SINGLE -	TOTAL	1122.09
TAL DRILL COLLARS DRILL PIPE AND TOOLS				1349.31
TOTAL DEPTH				1340.00
JTAL DRILL PIPE ABOVE K.B.				9.31

REMARKS



P.O. Sub	.31
C.O. Sub	.31
Shut-in Tool	1.58
Sampler	1.10
HMV	2.16
REC. # 13454	1.52
REC. # 5572	1.52
Jars	1.85
By Pass Hanger	.32
Safety Joint	.61
PACKER	1.78
PACKER	1.46
Depth 1283.00	-
Stub	.32
Anchor	-
Perfs	7.40
By Pass Recvr.	.32
REC. # 1250	1.22
REC. # 2659	1.22
Temp Rec.	.61
T.C.	.89
Depth 1295.00	-
PACKER	.89
PACKER	1.78
CO Sub	.31
Drill Collar	37.84
CO Sub	.31
Bullnose	.61
T.D. 1340.00	-

STRATA HUGHES

TEST INFORMATION REPORT

STRATA HUGHES TESTING

633 - 6th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 2Y5

WELL NAME & LOCATION :FORWARD ET AL EWEKKA C-11-67-126
TICKET# A268 DST# TWO
RECORDER #: 1250 AT 1291.04 M

TO = : 10 T = : 100

ITIAL SHUT-IN TIME	TO+ΔT / ΔT	PSIG	KPA	PSIG^2 / 10^6	*	FINAL SHUT-IN TIME	T+ΔT / ΔT	PSIG	KPA	PSIG^2 / 10^6
0	-	150.4	1037	.023	*	0	-	169.1	1166	.029
6	2.67	476.6	3286	.227	*	6	17.67	568.8	3922	.324
12	1.83	874.7	6031	.765	*	12	9.33	816.6	5630	.667
18	1.56	1079.7	7444	1.166	*	18	6.56	992.6	6844	.985
24	1.42	1210.9	8349	1.466	*	24	5.17	1095.0	7550	1.199
30	1.33	1300.1	8964	1.690	*	30	4.33	1182.1	8150	1.397
36	1.28	1343.2	9261	1.804	*	36	3.78	1253.3	8641	1.571
42	1.24	1387.3	9565	1.925	*	42	3.38	1300.7	8968	1.692
48	1.21	1419.5	9787	2.015	*	48	3.08	1333.8	9196	1.779
54	1.19	1438.2	9916	2.068	*	54	2.85	1366.8	9424	1.868
60	1.17	1458.5	10056	2.127	*	60	2.67	1388.4	9573	1.928
					*	70	2.43	1416.1	9764	2.005
					*	80	2.25	1435.7	9899	2.061
					*	90	2.11	1449.2	9992	2.100
					*	100	2.00	1460.2	10068	2.132
					*	110	1.91	1468.9	10128	2.158
					*	120	1.83	1480.0	10204	2.190
					*	140	1.71	1490.7	10278	2.222
					*	160	1.62	1508.1	10398	2.274
					*	180	1.56	1512.7	10430	2.288

DATA

	INITIAL SHUTIN		FINAL SHUT-IN	
NO. OF INCREMENTS	10		19	
NO. OF POINTS EXTRAPOLATED	8		4	
SLOPE OF EXTRAPOLATED LINE	0		1470	PSI^2/CYCLE
EXTRAPOLATED PRESSURE	11224	KPA	11064	KPA

COMPUTATIONS BY RHYASON CONSULTANTS
PH: 230-8423

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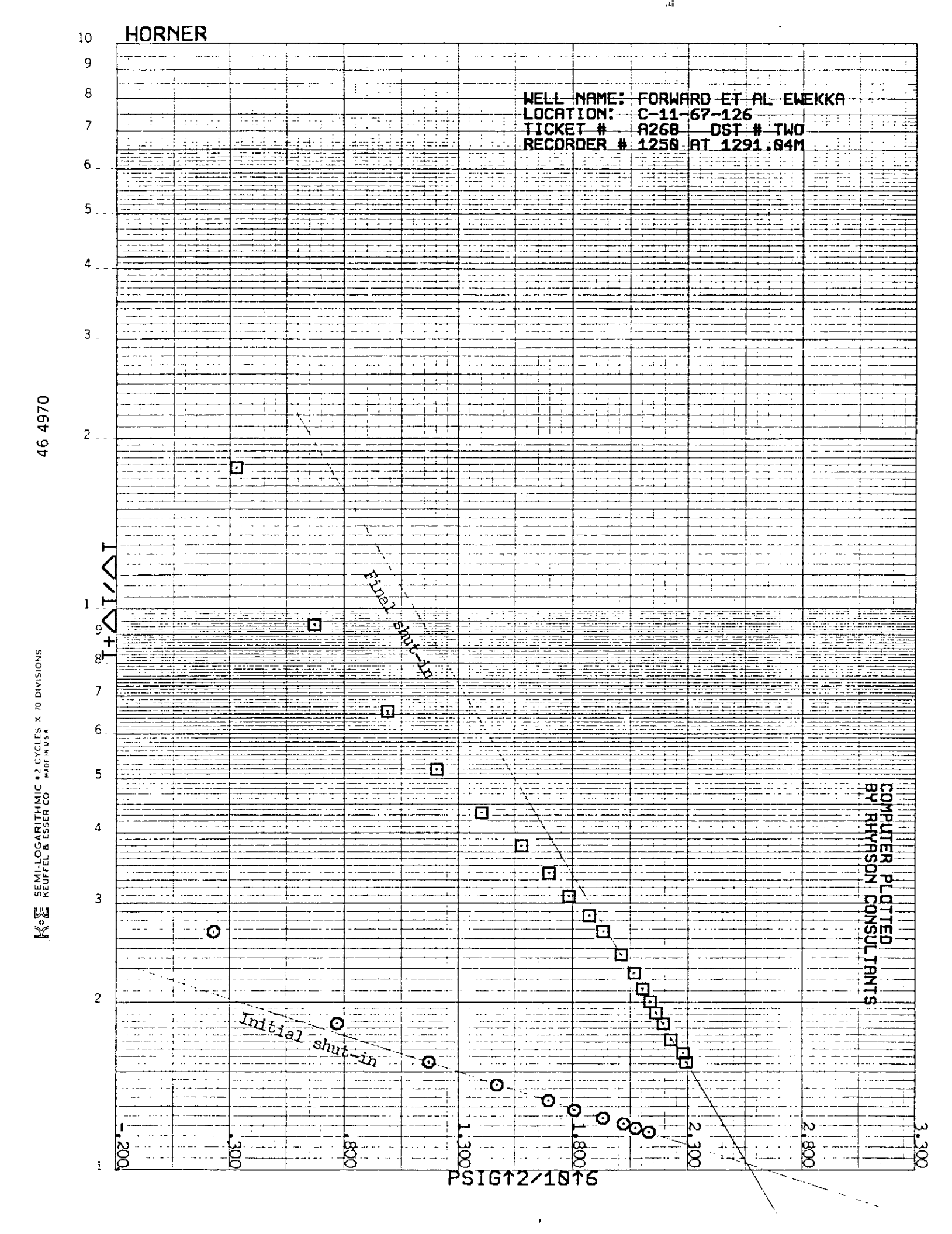

HORNER
WELL NAME: FORWARD ET AL EWEKKA
LOCATION: C-11-67-126
TICKET # A268 DST # TWO
RECORDER # 1250 AT 1291.84M
Final shut-in
Initial shut-in
T+ΔT/ΔT
PSIG↑2/10↑6
1,200
1,300
1,800
2,300
2,800
3,300
COMPUTER PLOTTED BY RHYASON CONSULTANTS
46 4970
SEMI-LOGARITHMIC • 2 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO MADE IN U.S.A.

STRATA HUGHES

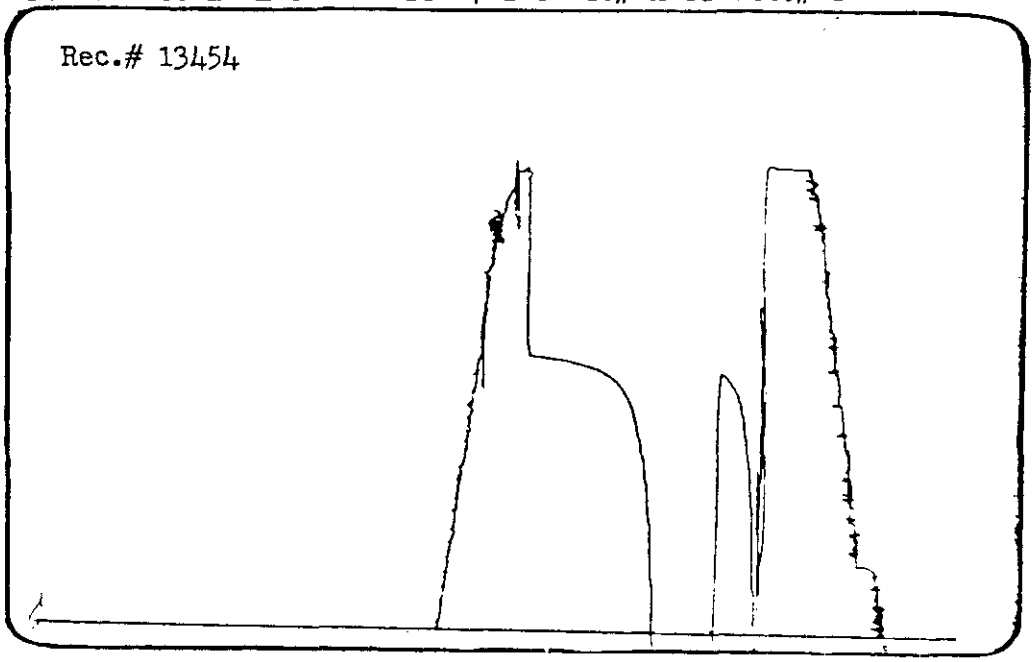
TEST INFORMATION REPORT

STRATA HUGHES TESTING

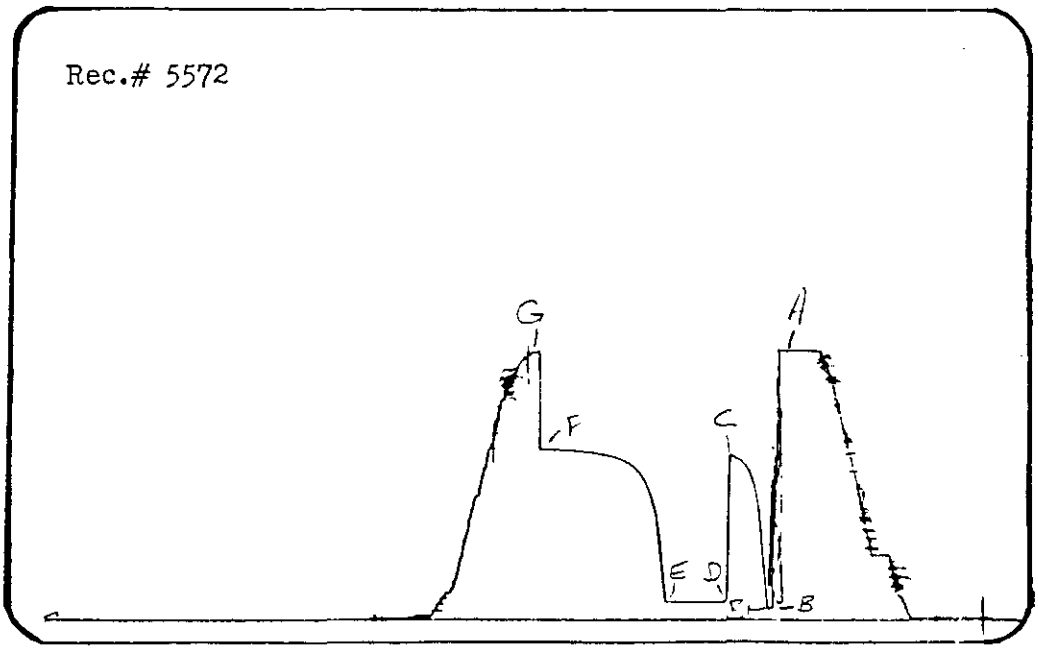
633 - 6th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 2Y5

Forward et al Ewekka C-11-67-126 T.# A268 DST.# Two

Rec.# 13454



Rec.# 5572



STRATA HUGHES

TEST INFORMATION REPORT

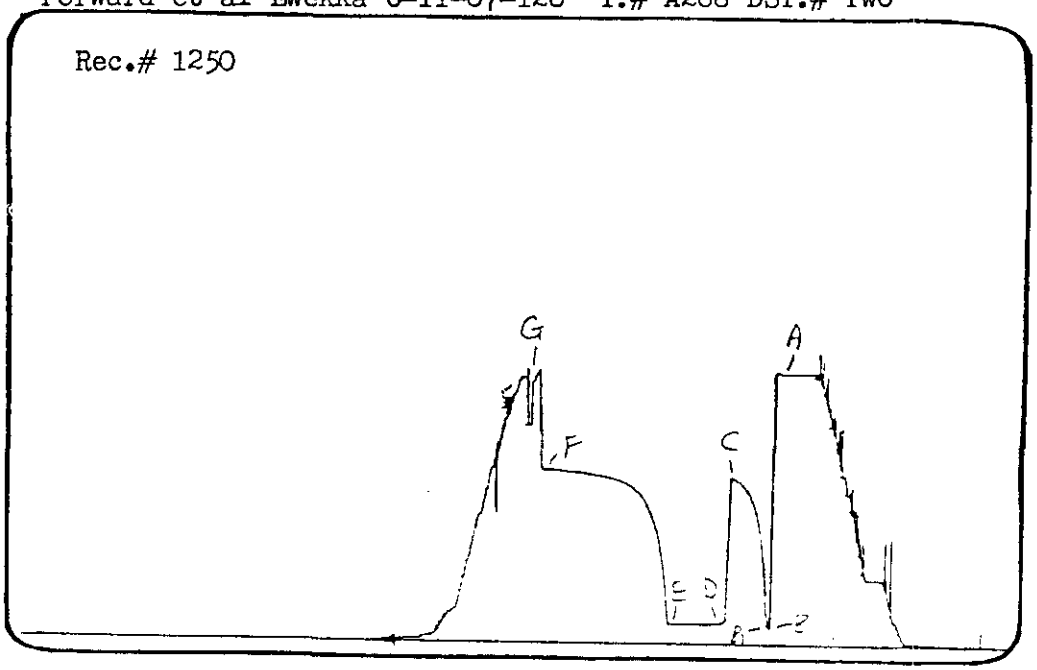
STRATA HUGHES TESTING

633 - 6th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 2Y5

OUTSIDE

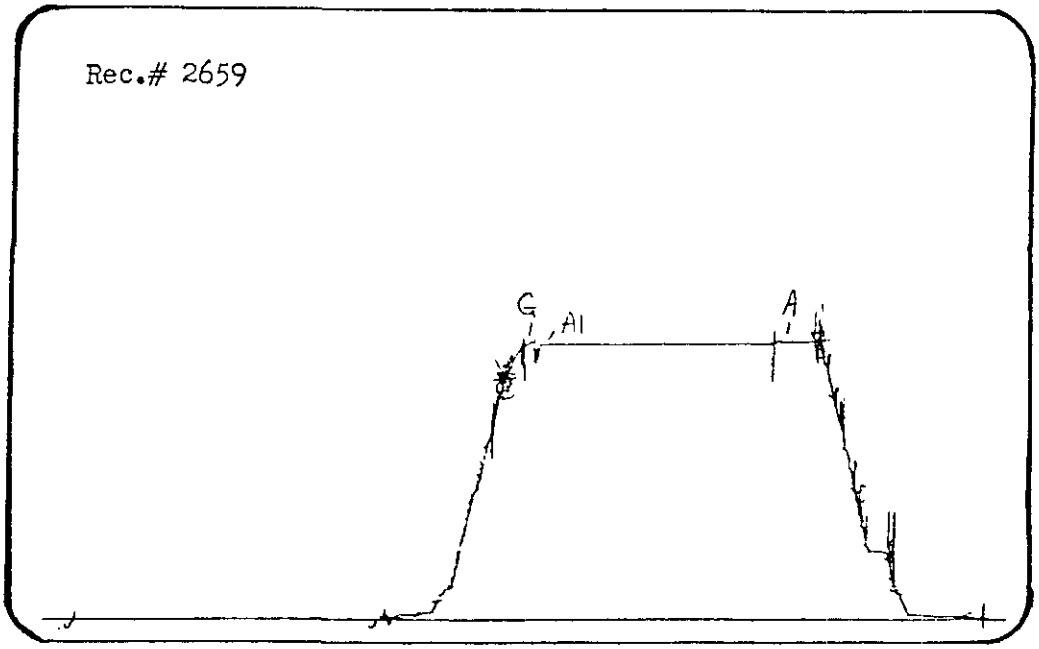
Forward et al Ewekka C-11-67-126 T.# A268 DST.# Two

Rec.# 1250



"OUTSIDE"

Rec.# 2659



Winterhawk Petroleum Consulting Services Ltd.

PAGE _____

FIELD DRILL STEM TEST REPORT

DATE 84 03 10

A. WELL DATA

Well: Forward et al Ewekka C-11 Location: _____

DST No. 3 Interval 1152 - 1162 m Formation Mount Cap Upper

Last Casing: Size 244 mm Depth 877 m Open Hole: Size 215 mm Depth 1340 m

Hole Troubles: None - pulled free after test Caliper at Packer(s) In gage

Mud: Wt. 1230 Vis 70 W.L. 17 % Oil _____ ppm Cl _____

B. TEST STRING DATA

Testing Company Strata Hughes Type of Test Bypass Straddle

Type and Number of Packers 4 Size 191 mm

DP Size 114 mm Wt 24.7 kg/m Length 983.26 m

DC Size 159 mm Wt 139 kg/m I.D. 69 Length 158.98 m

Tail Pipe Size 159 mm DC's Wt 139 kg/m Length 158.98 m Perfs 7.31 m

T.D. String 1340 Recorder Depth 1142.94 Water Cushion None BH Choke 12.70 mm

Packer Depth(s) 1162 m Weight on Packer(s) 20,000 daN

Other Equipment Jars

C. TEST RESULTS

Recorder #13454

Times: PF 10 ISI 60 Flow 90 SI 180 Flow _____ FSI _____

Pressures: PF 982 IH 14525 ISI 1144 IF 832

TEMP 31 °C FH 14433 FSI 1052 FF 647

Flow Descriptions:

Preflow: Weak air blow

Valve Open Flow: Weak air blow, dead in 5 minutes, no gas to surface

Recoveries: 30 m of fluid

D. SAMPLE DETAILS:

3 fluid

Sent to: AGAT Via: _____ Date Sent: _____

E. REMARKS:

Note: Data reported on this form are field readings taken at the time of test, and are subject to correction.

ENGINEER B. Schaffer

TEST INFORMATION REPORT

STRATA HUGHES TESTING

633 - 6th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 2Y5

WELL NAME: Forward et al Ewekka C-11-67-126

TICKET # A269

D.S.T.# Three

OMPANY	Forward Resources Ltd.					DATE	84/03/10	
ELL NAME	Forward et al Ewekka		KB ELV.	360	m	TICKET #	A269 DST.#	Three
WELL LOCATION	C-11-67-126		GR ELV.	356	m	FORMATION	Mt. Cap Upper	
NTERVAL	1152-1162	T.D. 1340 m	NET PAY	_	m	TYPE of TEST	Bypass Straddle	
USTOMER	Forward Resources Ltd.							

RECORDER DATA

ALL MEASUREMENTS ARE 'SI'

F	10	REC.#	13454	5572	1250	2659
SI	60	RANGE	24476	44471	41369	43437
F	90	CLOCK	24	24	24	24
S	180	DEPTH	1142.94	1144.46	1159.95	1164.67
			kPa	kPa	kPa	kPa
. Init. Hyd.			_	14525	14692	14749
. First Flow			Recorder	982	1037	_
BI.Final Flow			_	693	895	_
C. In Shut-in			Mal-	1144	1272	_
. Init. Flow			Function	832	907 A1	11637
E. Final Flow			_	647	813	_
F. Fi Shut-in			_	1052	1225	_
. Final Hyd.			_	14433	14604	14659
Inside/Outside			Inside	Inside	Outside	Outside

ECOVERY

TOTAL FLUID 30 m of 30 m in D.C. and _ m in D.P.

30 m of drilling mud

_ m of _

_ m of _

_ m of _

AS RECOVERY MEASURED WITH _

TIME	ORIFICE	PRESSURE	H^2O	RATE
mins.	mm	kPa	mm	m^3/d
_				

REMARKS:

PREFLOW - Weak air blow throughout.

SECONDFLOW - Weak air blow. Dead in 5 minutes. No gas to surface.

TEST SUCCESSFUL

Charts to customer

Samples to AGAT - 3 fluid

TIME DATA [CONVENTIONAL]

PF	Fr. 05:10	to 05:20		Hr.
IS	Fr. 05:20	to 06:20		Hr.
SF	Fr. 06:20	to 07:50		Hr.
FS	Fr. 07:50	to 10:50		Hr.
T STARTED		01:30		Hr.
T ON BTM		04:45		Hr.
T OPEN		05:10		Hr.
T PULLED		10:50		Hr.
T OUT		13:30		Hr.

TOOL DATA

TOOL WT.	4 000	daN
WT SET ON PACKER	20 000	daN
WT PULLED LOOSE	60 000	daN
INITIAL STR WT	40 000	daN
UNSEATED STR WT	40 000	daN
BTM.CHOKE	12.70	mm
HOLE SIZE	216	mm
D.COLL I.D.	69.0	mm
D.PIPE I.D.	84.8	mm
D.C.LENG	158.98	m
D.P.LENG	983.26	m

MUD DATA

MUD TYPE	Salt Gel	
WEIGHT	1230	kg/m^3
VIS	70	S/L
W.L.	17	cm^3
F.C.	1.59	mm
MUD DROP	No	m

GENERAL DATA

AMT.OF FILL	Nil	m
BTM.H.TEMP	31	C'
POROSITY %	_	
HOLE COND	Good	
PACKER SIZE	191	mm
# OF PACKERS	4	
CUSHION AMT	None	m
CUSHION TYPE.	None	
REVERSED OUT	No	
TOOL CHASED	No	
TESTER	T. Gibbs	
CO. REP.	B. Schaffer	
CONTRACTOR	300 Drilling	
RIG#	Mr. Ben /S16	

CONVENTIONAL

TEST INFORMATION REPORT

STRATA HUGHES TESTING

633 - 6th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 2Y5

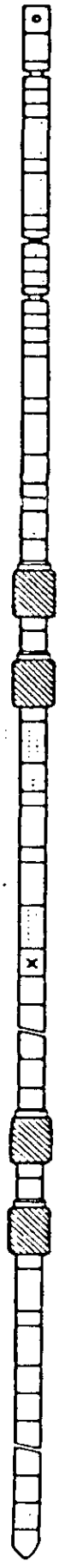
FILE NAME Forward et al Ewekka

LOCATION C-11-67-126

TICKET NO. A269 D.S.T. NO. Three DATE 84/03/10

TOTAL TOOL TO BOTTOM TOP PACKERS				13.42
INTERVAL TOOL				10.06
BOTTOM PACKERS and ANCHOR				8.18
TOTAL TOOL				31.66
DRILL COLLAR IN INTERVAL				-
DRILL COLLAR ANCHOR STANDS	STANDS 1	SINGLE 1	TOTAL	37.84
DRILL PIPE ANCHOR	STANDS 4	SINGLE 2	TOTAL	131.76
TAL ASSEMBLY				201.26
DRILL COLLARS ABOVE TOOLS	STANDS -	SINGLE -	TOTAL	158.98
DRILL PIPE ABOVE TOOLS	STANDS -	SINGLE -	TOTAL	983.26
TOTAL DRILL COLLARS DRILL PIPE AND TOOLS				1343.50
TOTAL DEPTH				1340.00
TOTAL DRILL PIPE ABOVE K.B.				3.50

REMARKS



P.O. Sub	.31
C.O. Sub	.31
Shut-in Tool	1.58
HMV	2.16
REC. # 13454	1.52
REC. # 5572	1.52
Jars	1.85
By Pass Hanger	.32
Safety Joint	.61
PACKER	1.78
PACKER	1.46
Depth 1152.00	-
Stub	.32
Anchor	7.31
By Pass Recvr.	.32
REC. # 1250	1.22
T.C.	.89
Depth 1162.00	-
PACKER	.89
PACKER	1.78
REC. # 2659	1.22
Temp Rec.	.61
Blank Off Sub	2.45
CO Sub	.31
Drill Pipe	131.76
CO Sub	.31
Bullnose	.61
T.D. 1340.00	-

STRATA HUGHES

TEST INFORMATION REPORT

STRATA HUGHES TESTING

633 - 6th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 2Y5

WELL NAME & LOCATION :FORWARD ET AL EWEKKA C-11-67-126
TICKET# A269 DST# THREE
RECORDER #: 1250 AT 1159.95 M

TO = : 10 T = : 100

INITIAL SHUT-IN TIME	TO+ΔT / ΔT	PSIG	KPA	PSIG^2 / 10^6	*	FINAL SHUT-IN TIME	T+ΔT / ΔT	PSIG	KPA	PSIG^2 / 10^6
0	-	129.8	895	.017	*	0	-	117.9	813	.014
6	2.67	133.3	919	.018	*	6	17.67	117.9	813	.014
12	1.83	143.0	986	.020	*	12	9.33	117.9	813	.014
18	1.56	146.9	1013	.022	*	18	6.56	117.9	813	.014
24	1.42	156.6	1080	.025	*	24	5.17	117.9	813	.014
30	1.33	170.9	1178	.029	*	30	4.33	118.8	819	.014
36	1.28	175.4	1209	.031	*	36	3.78	120.1	828	.014
42	1.24	179.4	1237	.032	*	42	3.38	120.4	830	.014
48	1.21	181.2	1249	.033	*	48	3.08	122.0	841	.015
54	1.19	182.7	1260	.033	*	54	2.85	123.0	848	.015
60	1.17	184.5	1272	.034	*	60	2.67	124.7	860	.016
					*	70	2.43	127.6	880	.016
					*	80	2.25	129.8	895	.017
					*	90	2.11	131.5	907	.017
					*	100	2.00	133.7	922	.018
					*	110	1.91	137.1	945	.019
					*	120	1.83	141.3	974	.020
					*	140	1.71	148.7	1025	.022
					*	160	1.62	159.7	1101	.025
					*	180	1.56	177.7	1225	.032

DATA

	INITIAL SHUTIN		FINAL SHUT-IN	
NO. OF INCREMENTS	10		19	
NO. OF POINTS EXTRAPOLATED	4		4	
SLOPE OF EXTRAPOLATED LINE	193		233	PSI/CYCLE
EXTRAPOLATED PRESSURE	1365	KPA	1400	KPA

COMPUTATIONS BY RHYASON CONSULTANTS
PH: 230-8423

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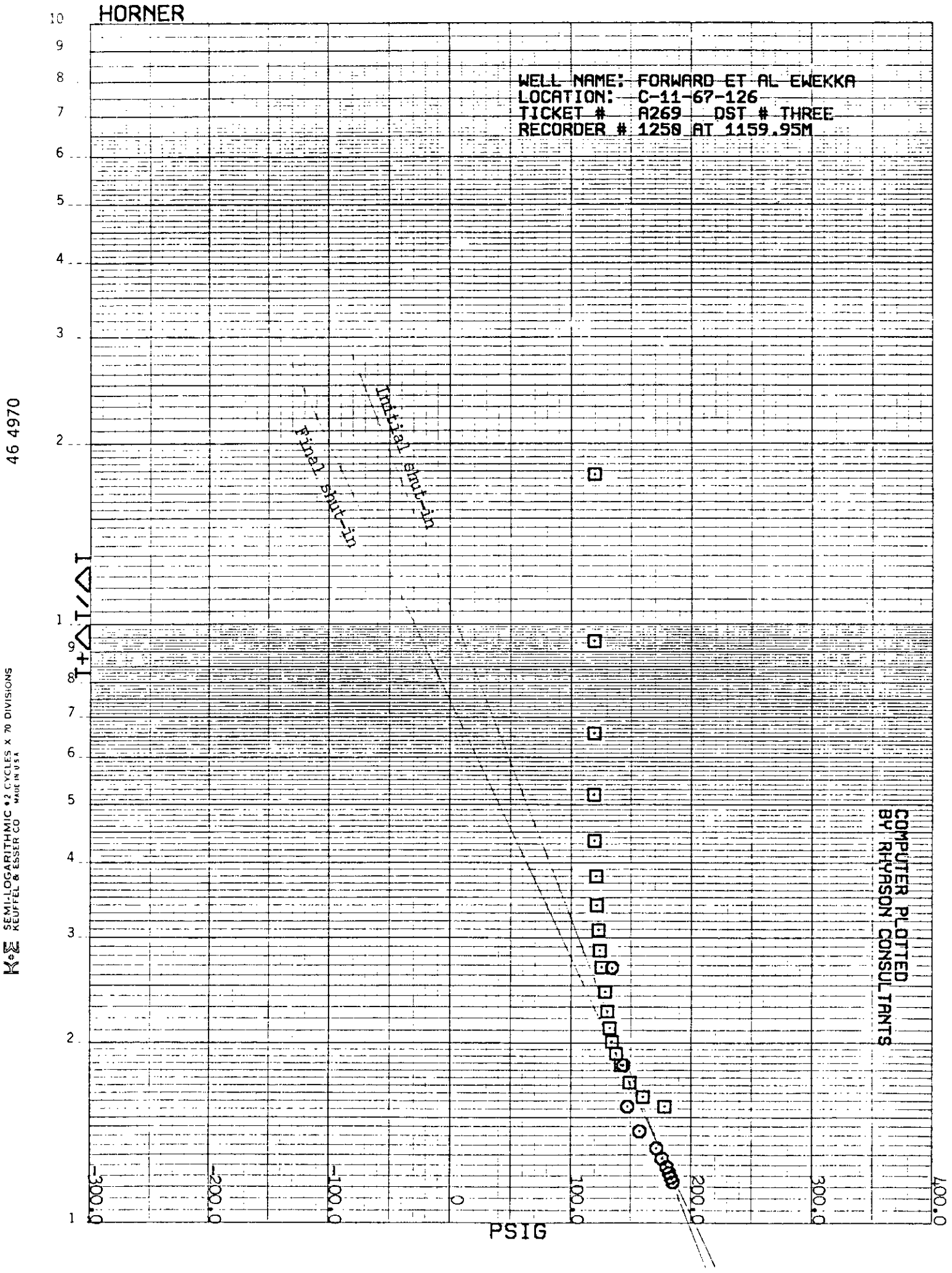

HORNER
WELL NAME: FORWARD ET AL EWEKKA
LOCATION: C-11-67-126
TICKET # A269 DST # THREE
RECORDER # 1250 AT 1159.95M
Initial shut-in
Final shut-in
T+ΔT/ΔT
PSIG
-300.0
-200.0
-100.0
0
100.0
200.0
300.0
400.0
10
9
8
7
6
5
4
3
2
1
COMPUTER PLOTTED
BY RHYASON CONSULTANTS
46 4970
SEMI-LOGARITHMIC • 2 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO MADE IN U.S.A.

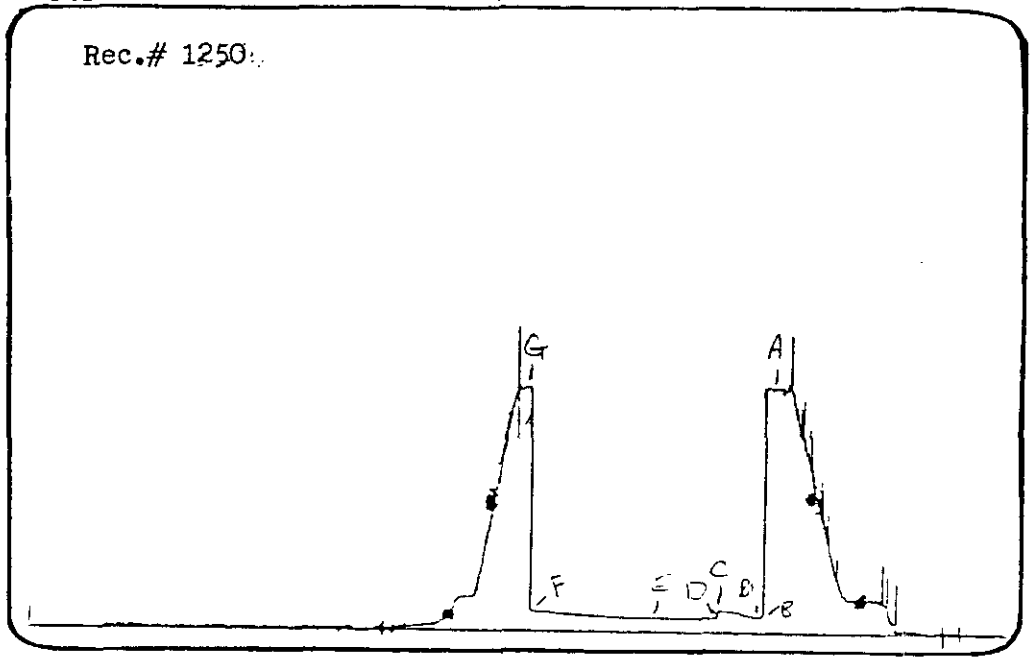
STRATA HUGHES

TEST INFORMATION REPORT

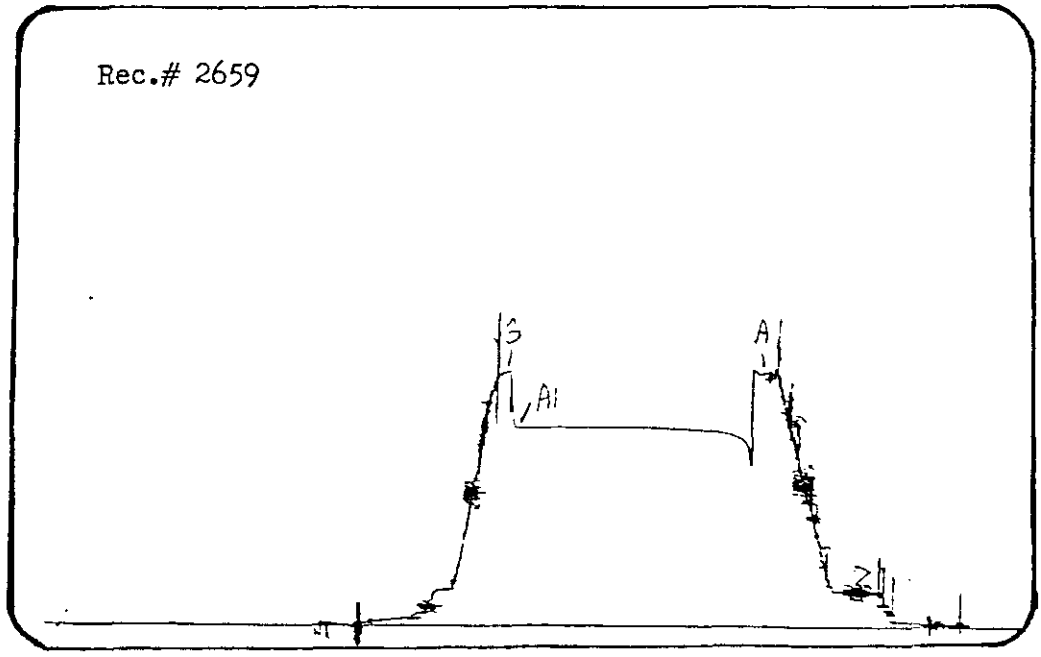
STRATA HUGHES TESTING
633 - 6th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 2Y5

Forward et al Ewekka C-11-67-126 T.# A269 DST.# Three

Rec.# 1250



Rec.# 2659



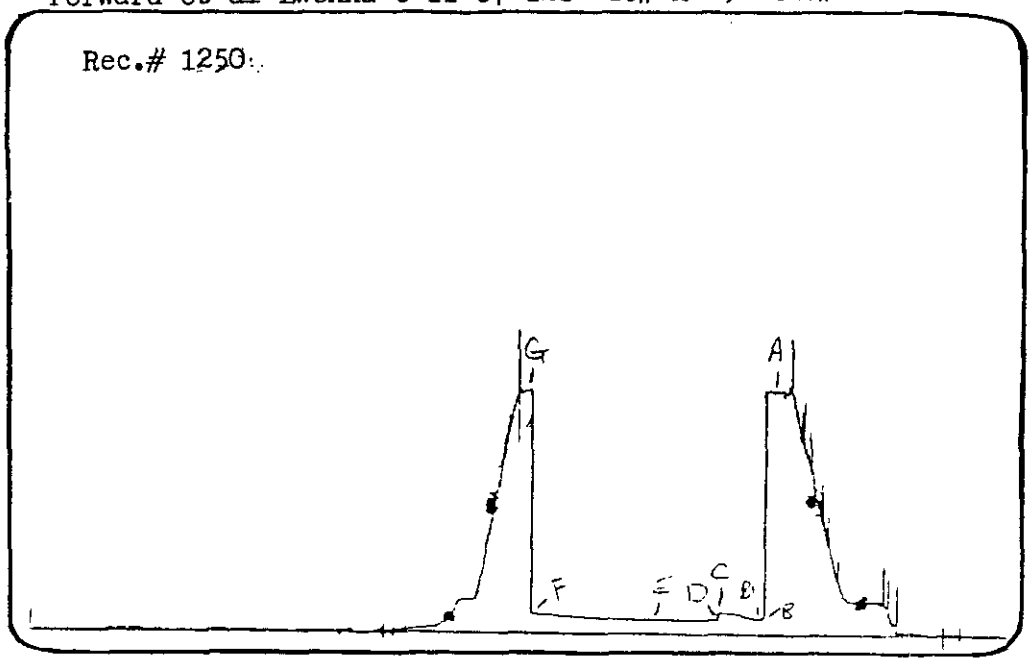
STRATA HUGHES

TEST INFORMATION REPORT

STRATA HUGHES TESTING
633 - 6th AVENUE S.W., CALGARY, ALBERTA, CANADA T2P 2Y5

Forward et al Ewekka C-11-67-126 T.# A269 DST.# Three

Rec.# 1250



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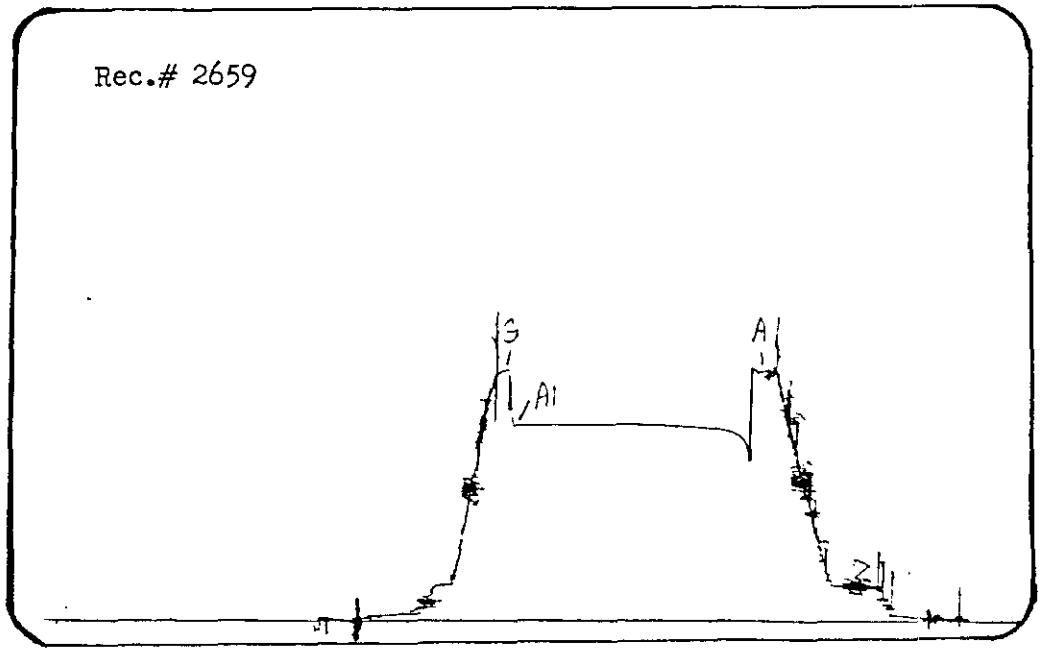


GAS ANALYSIS

3650 - 21st STREET N.E., CALGARY,
ALBERTA, CANADA, T2E 6V6
TELEPHONE (403) 230-1568

AGAT

AGAT Technologies Inc.

AGAT Laboratories AGAT Engineering

7706 - 67th STREET, EDMONTON,
ALBERTA, CANADA, T6B 2K4
TELEPHONE (403) 465-1669

March 16, 1984

FORWARD RESOURCES LIMITED
c/o WINTERHAWK PETROLEUM CONSULTING SERVICES LTD.
102 - 1040 - 7th Avenue S.W.
Calgary, Alberta
T2P 3G9

ATTENTION: SHIRLEY FORD

RE: ROUTINE GAS ANALYSIS, JOB NUMBER E4330

Please find enclosed the above mentioned analysis from the following locations:

FORWARD ET AL EWEKKA C-11-67-126

We are pleased to do this analysis for you. If you have any questions regarding this job, please contact the undersigned.

Respectfully submitted,

AGAT LABORATORIES

Alan Rehaume
Asst. Lab Supervisor
Routine Analysis

AR/jb

ENCL.

LABORATORY DIVISION

AGAT TECHNOLOGIES INC.

BAY 1, 3650 - 21st ST. N.E. CALGARY, ALTA. T2E 6V6

230-2477

GAS ANALYSIS

CONTAINER IDENTIFICATION: UPL-4450

LABORATORY NUMBER: E4330

OPERATOR NAME: FORWARD RESOURCES LTD.

UNIQUE WELL IDENTIFIER: C-11-67-126

WELL NAME: FORWARD et al EWEKKA C-11-67-126

ELEVATIONS KB m: 360 GRD m: 356

FIELD OR AREA: EWEKKA

POOL OR ZONE: OLD FORT ISLAND

NAME OF SAMPLER:

COMPANY: STRATA HUGHES

TEST TYPE: DST NO: 2

TEST RECOVERY:

TEST INTERVAL OR PERFS:

SAMPLING POINT: FLARELINE V.O.#1

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa					20	40
TEMPERATURE °C						15

DATE SAMPLED (Y-M-D): 84-03-09

DATE RECEIVED (Y-M-D): 84-03-13

DATE REPORTED (Y-M-D): 84-03-15

ANALYST: M.L.

OTHER INFORMATION:

COMP	MOLE FRACTION AIR FREE AS RECEIVED	MOLE FRACTION AIR FREE ACID GAS FREE	PETROLEUM LIQUID CONTENT mL/m³
H_2	.0005	.0005	
He	.0081	.0081	
N_2	.1814	.1814	
CO_2	.0000	.0000	
H_2S	.0000	.0000	
C_1	.7366	.7366	
C_2	.0461	.0461	
C_3	.0165	.0165	61.6
IC_4	.0029	.0029	13.1
NC_4	.0045	.0045	19.6
IC_5	.0013	.0013	6.7
NC_5	.0012	.0012	6.2
C_6	.0009	.0009	5.2
C_7	.0000	.0000	.6
C_8			
C_9			
C_{10+}			
TOTAL	1.0000	1.0000	113.0

GROSS HEATING VALUE MJ/m³ 15° C AND 101.325 kPa

MOISTURE AND ACID GAS FREE

MEASURED	CALCULATED	DETERMINED DEW POINT	VAPOUR PRESSURE PENTANES PLUS
	34.06	°C	99.5 kPa

RELATIVE DENSITY

MOISTURE FREE AS SAMPLED		MOISTURE AND ACID GAS FREE	
MEASURED	CALCULATED	MEASURED	CALCULATED
	.681		.681

PSEUDO CRITICAL PROPERTIES (CALCULATED)

AS SAMPLED		ACID GAS FREE	
pPc (abs)	pTc	pPc (abs)	pTc
4344. kPa	188.2 K	4344. kPa	188.2 K

RELATIVE MOLECULAR MASS

TOTAL GAS	C_{7+}
29.7	100.2

H_2S g/m³: .00

REMARKS

AGAT TECHNOLOGIES INC.

LABORATORY DIVISION

BAY 1, 3650 - 21st ST. N.E. CALGARY, ALTA T2E 6V6

230-2477

GAS ANALYSIS

CONTAINER IDENTIFICATION: UPL-124

LABORATORY NUMBER: E4330

OPERATOR NAME: FORWARD RESOURCES LTD.

UNIQUE WELL IDENTIFIER: C-11-67-126

WELL NAME: FORWARD et al EWEKKA C-11-67-126

ELEVATIONS: KB m 360 GRD m 356

FIELD OR AREA: EWEKKA

POOL OR ZONE: OLD FORT ISLAND

NAME OF SAMPLER:

COMPANY: STRATA HUGHES

TEST TYPE: DST NO: 1

TEST RECOVERY:

TEST INTERVAL OR PERFS: 1300-1340 mKB

SAMPLING POINT: FLARELINE

	SEPARATOR	TREATER	RESERVOIR	SOURCE	SAMPLED	RECEIVED
GAUGE PRESSURE kPa					13	25
TEMPERATURE °C						15

DATE SAMPLED (Y-M-D): 84-03-08

DATE RECEIVED (Y-M-D): 84-03-13

DATE REPORTED (Y-M-D): 84-03-15

ANALYST: M.L.

OTHER INFORMATION:

COMP	MOLE FRACTION AIR FREE AS RECEIVED	MOLE FRACTION AIR FREE ACID GAS FREE	PETROLEUM LIQUID CONTENT mL • m⁻³
H_2	.0005	.0005	
He	.0078	.0078	
N_2	.1765	.1765	
CO_2	.0000	.0000	
H_2S	.0000	.0000	
C_1	.7349	.7349	
C_2	.0490	.0490	
C_3	.0184	.0184	68.7
IC_4	.0033	.0033	14.7
NC_4	.0051	.0051	22.0
IC_5	.0015	.0015	7.7
NC_5	.0015	.0015	7.4
C_6	.0012	.0012	7.4
C_7	.0003	.0003	2.4
C_8			
C_9			
C_{10+}			
TOTAL	1.0000	1.0000	130.3

GROSS HEATING VALUE MJm⁻³ 15° C AND 101.325 kPa

MOISTURE AND ACID GAS FREE

MEASURED	CALCULATED	DETERMINED DEW POINT	VAPOUR PRESSURE PENTANES PLUS
	34.66	°C	91.7 kPa

RELATIVE DENSITY

MOISTURE FREE AS SAMPLED		MOISTURE AND ACID GAS FREE	
MEASURED	CALCULATED	MEASURED	CALCULATED
	.687		.687

PSEUDO CRITICAL PROPERTIES (CALCULATED)

AS SAMPLED		ACID GAS FREE	
pPc (abs)	pTc	pPc (abs)	pTc
4349. kPa	189.8 K	4349. kPa	189.8 K

RELATIVE MOLECULAR MASS

TOTAL GAS	C_{7+}
19.9	100.2

H_2S g/m³: .00

REMARKS

CASING SUMMARY

Winterhawk Petroleum Consulting Services Ltd.

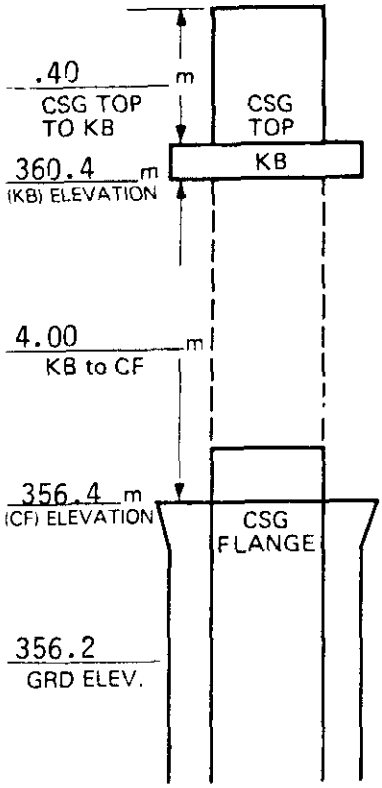
PAGE _____

CASING SUMMARY

WELL Forward et al Ewekka LOCATION C-11 DATE 84 02 15

Conductor SIZE 339 mm KB 360.4 m KB to CF 4 m

New/Used Inspected By: B. Schaffer Drifted To: _____ API diam.



NO.	DESCRIPTION	MEASURED LENGTH	KB DEPTH
	Shoe	.50	23.10
2	339 mm, K-55, 81.1	23.50	+ .40
	Scratchers		
1	Centralizers		

	Total String	24.00	
minus	KB to Csg Top (STICK UP)	.40	Cut-off Jt. Length
	Landed Depth KB	23.60	
	Hole Depth KB	23.60	+ .04
	Distance Csg Landed Off Bottom	0.00	

Cementing Company Halliburton

Wash - Type: H_2O Volume 1.50

Cement Type - Lead Slurry Permafrost Volume: 4 T

Additives N/A Volume: _____

Cement Type - Tail Slurry _____ Volume: _____

Additives _____ Volume: _____

Cement Type - Above Stage Collar _____ Volume: _____

Additives _____ Volume: _____

Displacement Rate: Max. 4-6 Bbl/min Avg. _____ (m^3/min)

Calculated Cement Top(s) Surface KB _____ KB

Returns: Mud _____ m^3 Cement 1.9 m^3

String Wt. in a mud wt. of: _____ kg/m^3 = _____ daN

Wt. set on Slips: _____ daN

Remarks: _____

Engineer: Bill Schaffer

Winterhawk Petroleum Consulting Services Ltd

PIPE TALLY SHEET

PAGE _____ OF _____

WELL Forward et al Ewekka LOCATION C-11

SIZE 339 mm WT. 81.1 kg/m GRADE K-55 COUPLING ST&C THRD 8 RND

DATE 84 02 15

JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH
1	12 00	11		21		31		41	
2	11 50	12		22		32		42	
3		13		23		33		43	
4		14		24		34		44	
5		15		25		35		45	
6		16		26		36		46	
7		17		27		37		47	
8		18		28		38		48	
9		19		29		39		49	
10		20		30		40		50	
A	23 50	B		C		D		E	
51		61		71		81		91	
52		62		72		82		92	
53		63		73		83		93	
54		64		74		84		94	
55		65		75		85		95	
56		66		76		86		96	
57		67		77		87		97	
58		68		78		88		98	
59		69		79		89		99	
60		70		80		90		100	
F		G		H		I		J	

		SUB TOTAL	
A	23 50		
B			
C			
D			
E			
F			
G			
H			
I			
J			
TOTAL	23 50		

Shoe .50
Float Collar N/A
Other N/A

PAGE TOTAL
BROUGHT FWD
GRAND TOTAL

JOINTS	LENGTH
2	23.50
Shoe	.50
	24.00

JOINTS ON LOCATION _____

Remarks: _____

ENGINEER _____

NOTE: Use a new page for each casing type. Number joints in order of running. Indicate joints not run by * and do not include in total length.

HALLIBURTON

CEMENTING AND/OR SPECIAL TOOLS SERVICE REPORT

ATTACH TO INVOICE No 43 103

HALLIBURTON DISTRICT: Frontier

JOB DATE: 1984 (YEAR) 02 (MONTH) 15 (DAY)

OWNER, OPERATOR OR HIS AGENT STATES THE WELL IS IN GOOD CONDITION FOR THE SERVICE JOB TO BE PERFORMED AND SUBMITS THE FOLLOWING DATA

CUSTOMER	FIELD OR AREA	WELL No. AND LEASE
Forward Resources Ltd.	Ewekka	N-20-67°-126°

CALLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED	PROVINCE	LSD	SEC	TWP	RANGE	MERIDIA
84-02-12 DATE / TIME	84-02-13 DATE / TIME	84-02-13 17:03 DATE / TIME	84-02-15 17:30 DATE / TIME	N.W.T.					W

TYPE OF JOB ✓: SURFACE; INTERMEDIATE; PRODUCTION; LINER; SQUEEZE; PLUG; PUMP; PRESSURE TEST; OTHER ✓

WELL OR HOLE DATA

HOLE DATA: HOLE SIZE 445 mm; TOTAL DEPTH 23 m; TYPE MUD Air; VISC. ; DENSITY

CASING, TUBING OR LINER DATA: NEW ✗ / USED ☐ — SIZE 340 mm; kg/m 81; GRADE K-55; DEPTH 24 m

SIZE mm; kg/m ; GRADE ; DEPTH m

PERFORATIONS: FROM m TO m FROM m TO m

FROM m TO m FROM m TO m

WASH FLUID TYPE: Water VOL 1.5 m³; DISPLACING FLUID TYPE: Water VOL 1.94 m³

TEMP DATA: MIXING WATER °C; SLURRY °C; DISPLACING FLUID °C; RETURNS °C

PRODUCTS

EQUIPMENT	QUA
BASKETS	
CENTRALIZERS	
CLAMPS	
FLOAT COLLAR	
FLOAT SHOE	
GUIDE SHOE	
INSERT FLOAT	
SCRATCHERS	
OTHER	

EQUIPMENT

PACKER: TYPE ; SIZE mm; DEPTH SET m; TAIL PIPE m

TOP PLUG TYPE: Wood LA-10

BOTTOM PLUG TYPE:

CEMENT HEAD: CONTINUOUS ☐ KNOCK OFF ☐ SWAGE ✗

OTHER:

CEMENT DATA

TONNE	API CLASS	BRAND	BULK OR SACKED	CEMENT BLEND	ADDITIVES TYPE AND PERCENT	kg/m³	m³/tonn
4.0	G	Inland	Sacked	Permafrost		1830	0.74

HALLIBURTON OPERATOR: K. Town CUSTOMER REP.:

TREATING LOG

CHART POSITION	TIME	RATE m³/min	VOLUME m³ PUMPED	VOLUME m³ IN FORMATION	PRESSURE MPa TUBING	PRESSURE MPa CASING	REMARKS
1	17:03 17:06					2.0	Pump fresh water preflush.
2							Pressure test Howco lines.
3	17:06 17:15					2.0	Mix slurry.
4	17:15 17:26						Release top plug.
5	17:26 17:30					4.0	Displace.

FORM 167A

Winterhawk — Precision Coiled Tubing Services Ltd

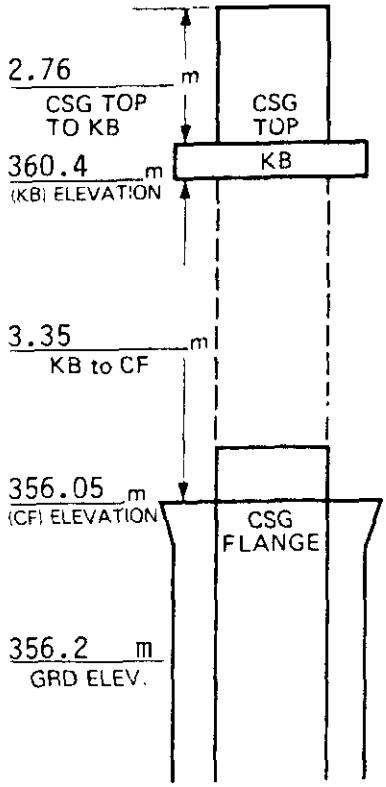
PAGE _____

CASING SUMMARY

WELL Forward et al Ewekka C-11 LOCATION _____ DATE 84 02 27

SURF/INT/PROD/LINER SIZE 244 mm KB 360.4 m KB to CF 3.35 m

New/Used Inspected By: _____ Drifted To: 218.4 mm API diam.



NO.	DESCRIPTION	MEASURED LENGTH	KB DEPTH
1	Float Shoe	.52	876.48
1	244 mm Casing	12.12	864.36
1	Float Collar	.57	863.79
65	244 mm Casing	811.85	51.94
1	TAM ECP	2.25	49.69
1	DV Stage Tool	1.09	48.60
4	244 mm Casing	51.36	+ 2.76
0	Scratchers		
3	Centralizers		

	Total String	879.76	
minus	KB to Csg Top (STICK UP)	2.76	Cut-off Jt. Length
	Landed Depth KB	877.00	
	Hole Depth KB	885.00	6.11
	Distance Csg Landed Off Bottom	8.00	

Cementing Company Halliburton

Wash - Type: H_2O Volume _____

Cement Type - Lead Slurry "G" Oilwell Volume: 26 Tonne

Additives 3% $CaCl_2$ Volume: _____

Cement Type - Tail Slurry _____ Volume: _____

Additives _____ Volume: _____

Cement Type - Above Stage Collar Permafrost Volume: 4 Tonne

Additives _____ Volume: _____

Displacement Rate: Max. 1.0 Avg. 1.0 (m3/min)

Calculated Cement Top(s) _____ KB _____ KB

Returns: Mud None m3 Cement None m3

String Wt. in a mud wt. of: _____ kg/m3 = _____ daN

Wt. set on Slips: _____ daN

Remarks: _____

Engineer: B. Schaffer

Winterhawk Petroleum Consulting Services Ltd.

PIPE TALLY SHEET

PAGE _____ OF _____

WELL Forward et al Ewekka C-11 LOCATION _____

SIZE 244.5 mm WT. 64.7 kg/m GRADE L-80 COUPLING LT&C THRD 8 RND

DATE 84 02 27

JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH	JOINT	LENGTH
1	12 12	11	12 64	21	12 09	31	13 23	41	12 84
2	11 63	12	12 14	22	13 14	32	12 87	42	12 10
3	13 35	13	12 73	23	12 43	33	11 78	43	12 03
4	12 65	14	13 13	24	11 56	34	12 25	44	11 58
5	13 47	15	13 25	25	12 03	35	12 50	45	13 07
6	11 66	16	12 15	26	12 04	36	11 96	46	12 30
7	12 41	17	11 91	27	12 88	37	13 30	47	13 25
8	12 04	18	12 14	28	13 11	38	13 79	48	12 49
9	12 52	19	12 03	29	12 55	39	13 57	49	11 48
10	11 80	20	11 92	30	12 00	40	13 55	50	11 99
A	123 65	B	124 04	C	123 83	D	128 80	E	123 13
51	11 86	61	11 99	71	* 13 59	81		91	
52	13 27	62	12 00	72	* 13 31	82		92	
53	12 95	63	12 16	73	* 13 59	83		93	
54	13 32	64	11 49	74	* 13 58	84		94	
55	11 53	65	13 08	75	* 12 23	85		95	
56	13 51	66	12 94	76	* 13 38	86		96	
57	12 80	67	11 80	77		87		97	
58	12 18	68	13 41	78		88		98	
59	13 99	69	12 85	79		89		99	
60	11 45	70	13 30	80		90		100	
F	126 86	G	125 02	H	0 00	I		J	

		SUB TOTAL
A	123 65	
B	124 04	247 69
C	123 83	371 52
D	128 80	500 32
E	123 13	623 45
F	126 86	750 31
G	125 02	875 33
H	0 00	875 33
I		
J		
TOTAL	875 33	

Shoe _____

Float Collar _____

Other Stage 1.09

Packer 2.25

	JOINTS	LENGTH
PAGE TOTAL	70	875.33
BROUGHT FWD	Packer Shoe Float	4.43
GRAND TOTAL	Stage	879.76

JOINTS ON LOCATION 76

Remarks: 2 Stage Cement Job

* Joints 71,72,73,74,75,76 Out

ENGINEER B. Schaffer

NOTE: Use a new page for each casing type. Number joints in order of running. Indicate joints not run by * and do not include in total length.

HALLIBURTON

CEMENTING AND/OR SPECIAL TOOLS SERVICE REPORT

ATTACH TO INVOICE No. 43 104

HALLIBURTON DISTRICT: Frontier

JOB DATE: 1984 (YEAR) 02 (MONTH) 27 (DAY)

OWNER, OPERATOR OR HIS AGENT STATES THE WELL IS IN GOOD CONDITION FOR THE SERVICE JOB TO BE PERFORMED AND SUBMITS THE FOLLOWING DATA.

CUSTOMER	FIELD OR AREA	WELL No. AND LEASE
Forward Resources Ltd.	Ewekka	Forward et al Ewekka C-11

CALLED OUT (DATE / TIME)	ON LOCATION (DATE / TIME)	JOB STARTED (DATE / TIME)	JOB COMPLETED (DATE / TIME)	PROVINCE	LSD	SEC	TWP	RANGE	MERIDIAN
				N.W.T.					W

TYPE OF JOB ✓

SURFACE	✓
INTERMEDIATE	
PRODUCTION	
LINER	
SQUEEZE	
PLUG	
PUMP	
PRESSURE TEST	
OTHER	

WELL OR HOLE DATA

HOLE DATA: HOLE SIZE 311 mm; TOTAL DEPTH 876 m; TYPE MUD ____; VISC. ____; DENSITY ____

CASING, TUBING OR LINER DATA: NEW ☒ USED ☐ — SIZE 245 mm; kg/m 59.5; GRADE MN-80; DEPTH 872 m

SIZE ____ mm; kg/m ____; GRADE ____; DEPTH ____ m

PERFORATIONS: FROM ____ m TO ____ m FROM ____ m TO ____ m

FROM ____ m TO ____ m FROM ____ m TO ____ m

WASH FLUID TYPE: H_2O VOL. 1.5 m³; DISPLACING FLUID TYPE: Fresh water VOL. 3.5 - 2.7 m³

TEMP DATA: MIXING WATER ____ °C; SLURRY ____ °C; DISPLACING FLUID ____ °C; RETURNS ____ °C

PRODUCTS

EQUIPMENT	QUAN
BASKETS	
CENTRALIZERS	
CLAMPS	
FLOAT COLLAR	
FLOAT SHOE	
GUIDE SHOE	
INSERT FLOAT	
SCRATCHERS	
OTHER	

EQUIPMENT

PACKER

TYPE ____ SIZE ____ mm

DEPTH SET ____ m TAIL PIPE ____ m

TOP PLUG TYPE: Baker Stage Plug

BOTTOM PLUG TYPE: Baker Stage Plug

CEMENT HEAD

CONTINUOUS ☒ KNOCK OFF ☐ SWAGE ☐

OTHER ____

CEMENT DATA

TONNE	API CLASS	BRAND	BULK OR SACKED	CEMENT BLEND	ADDITIVES TYPE AND PERCENT	kg/m³	m³/tonne
26	G	Inland	Bulk	Oilwell	3% $CaCl_2$ in mix water	1895	0.76
4	G	Inland	Sacked	P.F.C.		1880	0.74

HALLIBURTON OPERATOR: R. Connors CUSTOMER REP. ____

TREATING LOG

CHART POSITION	TIME	RATE m³/min	VOLUME m³ PUMPED	VOLUME m³ IN FORMATION	PRESSURE MPa TUBING	PRESSURE MPa CASING	REMARKS
							Stage 1
1							Pressure test Howco lines 21 MPa.
2	17:58 18:00	0.75			Max.	4.0	Pump preflush.
3	18:00 18:20	0.99				6.0	Mix slurry.
4	18:20 18:26						Release plug.
5	18:26 19:00	1.03				15.0	Displace.
6							Release opening plug.
							Stage 2
1							Pressure test Howco lines.
2	23:45 23:47					2.0	Pump preflush.

FORM 167A

HALLIBURTON

TREATING LOG

INVOICE No. 43 104

CHART POSITION	TIME	RATE m³/min	VOLUME PUMPED IN m³			PRESSURE MPa		REMARKS
			STAGE	PUMPED	IN FORMATION	TUBING	CASING	
3	23:47 23:50	0.99					3.0	Mix slurry.
4	23:50 23:57							Release shut off plug.
5	23:57 24:00	0.90					8.0	Displace.

Form 957

BIT RECORD

Winterhawk Petroleum Consulting Services Ltd.

BIT RECORD

WELL NAME Forward et al Ewekka C-11 LOCATION

Contractor 300 Drilling Rig No. Mr. Ben Field

Spud Date 84 02 15 T.D. Date 84 03 07 Rig Release Date 84 03 11

BIT NO.	SIZE mm	MAKE & TYPE	DEPTH OUT	METRES DRLD	ROT. HOURS	TOTAL HOURS	WEIGHT ON BIT – daN	BIT RPM	JETS - mm			PUMP PRESS kPa or MPa	PUMP OUT - PUT m^3/min	DULL COND.		
									1	2	3			T	B	G
1A	444	HW OWVJ	23	23	6.50	6.50	2-3000	65						1	1	I
2	311	SEC M89F	334	311	44.75	51.25	10/12000	90/100	0	P E N		800	Air 50m^3/min	6	6	I
3	311	HW J33	656	322	67.25	118.50	19000	90	0	P E N		3100	Air 30m^3/min	8	7	3 mm
4	311	SF3	885	229	37.50	156.00	19000	100	0	P E N		4900	Air 15-25m^3/min	6	4	2 mm
5	215	HW J44	1171	286	24.25	180.25	3-4000	110	0	P E N		1700	Air 28m^3/min	6	5	I
6	215	HW J55R	1279	108	31.00	211.25	19000	90	7.9	7.9	7.9	8500	Mud	2	2	I
1C	157	DY DRILL	1282	3	4.25	215.50	6000	90								
6RR	215	HW J55R	1340	58	17.75	233.25	6000	75	7.9	7.9	7.9	10000	Mud		N/A	

REMARKS

MUD REPORT

Winterhawk

	DU[illegible]OW BBL.	DURA[illegible] 50 LBS.	AGU[illegible] BBL.	[illegible]STIC 50 LBS.	[illegible]LT 40 KGS.	SODA ASH 40 KGS.	KELZAN 50 LBS.	GEL 100 LBS.	XCPOLYMER
FEB									
15									
16									
17									
18									
19		5							
20									
21		9							
22		10							
23		11							
24		11							
25	11	7							
26									
27									
28									
29		13	1						
MARCH									
1		7							
2				8	526	1	2	60	9
3							2		
4				2			6		
5							2		
6				1			4	18	
7									
8									
9									
10									
11									
	11	73	1	11	526	1	16	78	9

FORWARD RESOURCES LTD.

Re: Summary of Daily Drilling Fluid Tests
Forward et al Ewekka C-11

Prepared By:

CANADIAN FLUID SYSTEMS LTD.

SUMMARY OF DAILY DRILLING FLUID TESTS

FORWARD ET AL EWEKKA C-11

Date	03/01	03/02	03/03	03/04	03/04	03/05	03/06
Depth (m)	1170	1190	1219	1220	1250	1272	1282
Density (Kg/m3)	1200	1160	1160	1190	1190	1190	1190
F.V. (s/L)	62	57	55	53	110	85	53
P.V. (mPa.s)	20	16	16	18	30	15	15
Y.P. (Pa)	9	7	8	5	14	22	5
Gels (0/10 min) (Pa)	6/10	5/8	6/8	5/8	12/21	15/23	4/12
F.L. (cm3/30 min)	14	12	14	12	13	13	13
Cake (mm)	1	1	1	1	1	1	1
Cl (mg/L)	160000	160000	160000	163000	163000	150000	150000
Ca (mg/L)	160	240	260	160	200	240	240
K (mg/L)	-	-	-	-	-	-	-
Sand (vol frac)	.0050	.0025	.0025	.0030	.0060	.0060	.0060
Solids (vol frac)	.128	.103	.103	.106	.106	.106	.106
Water (vol frac)	.872	.897	.897	.894	.894	.894	.894
Oil (vol frac)	-	-	-	-	-	-	-
pH	10	9.5	10.5	12.0	11.5	11.0	11.0
MBT (Kg/m3)	-	-	-	-	-	-	-
Pf/Mf	.15/.7	.1/.6	.2/.8	.25/.7	.2/.7	.2/.7	.15/.6

Date	03/06	03/06	03/07	03/09
Depth (m)	1300	1320	1340	1340
Density (Kg/m3)	1180	1175	1235	1210
F.V. (s/L)	54	62	85	78
P.V. (mPa.s)	15	20	18	26
Y.P. (Pa)	5	6.5	8	10
Gels (0/10 min) (Pa)	5/11	9/15	7/14	7/10
F.L. (cm3/30 min)	20	16	17	16.2
Cake (mm)	2	1	1	1
Cl (mg/L)	140000	140000	140000	140000
Ca (mg/L)	400	480	700	800
K (mg/L)	-	-	-	-
Sand (vol frac)	.0075	.0080	.0100	.0100
Solids (vol frac)	.105	.103	.128	.124
Water (vol frac)	.895	.897	.872	.876
Oil (vol frac)	-	-	-	-
pH	11.5	10.5	9.5	9.5
MBT (Kg/m3)	-	-	-	-
Pf/Mf	.15/.7	.1/.6	.1/.6	TR/.6

NOTE: Lost 50bbls twice on trips due to float being run and not filling pipe. Mud overflowed in trough and ran out desilter. Built 60bbls mud with Halliburton unit and pumped into mud system at 1-1.5 bbls per minute. When out of hole for 24 hrs. when waiting for transformer there was only 4 m fill on bottom. There was no trouble running loss. DST #1 had to be jarred out but #2 and #3 were run with no trouble.

DEVIATION RECORD

SURVEYS

DEPTH (m)	Deviation (°)
27	1/4
55	1/4
92	1/2
121	3/4
148	3/4
176	1/4
204	1/8
232	1
261	1 1/2
289	1
317	1 1/2
345	1 1/2
374	1 1/8
430	1
459	1 1/2
487	1
526	1
553	7/8
582	1
610	1
647	7/8
705	7/8
964	4
972	5
991	6
1010	6 1/2
1020	6 1/4
1029	6
1040	5 3/4
1082	5 1/2
1110	5 1/2
1143	5
1171	5
1208	4
1340	5

ABANDONMENT REPORT

Winterhawk

Canada Oil and Gas Lands Administration
Administration du pétrole et du gaz des terres du Canada

				Well Status	
Nova Scotia	☐	West Coast	☐	Suspended	☐
Newfoundland	☐	Northern	☒	Completed	☐
Gulf of St. Lawrence	☐	Hudson Bay	☐	Abandoned	☒

WELL TERMINATION RECORD

This record is submitted in triplicate in compliance with Section 184 of the Canada Oil and Gas Drilling Regulations.

WELL DATA

Well Name: Forward et al Ewetka C-11 Area: Colville Hills, N.W.T.

Grid Area: 67-50 126-30 Field/Pool: Not Applicable

Permit or Lease No.: N/A Final Coordinates: Lat.: 67°40'02.26" Long: 126°32'51.84"

Drilling Rig: "Mr. Ben" Elevations RT/KB: 380.44 m GL: 356.20 m

Spud Date: 84.02.15 Rig Released: 84.03.11 Total Depth: 1340 m

UWI 300 C11 6750 126 300

CASING AND CEMENTING

O.D.:	Weight:	Grade:	Depth Set:	Cement and Additives:	
339 mm	81.1 kg/m	K-55	23.0 m	4.0 T Permafrost	
244 mm	59.5 kg/m	MN-80	870.0 m	26.0 T Class "G" + 3% $CaCl_2$	Lead
				4.0 T Permafrost	Tail
				Above the DV Tool	

PLUGGING PROGRAM

Approval of the following program was obtained by (person) Gary Laviolette from (person) John Hamilton of the Canada Oil and Gas Lands Administration by means of Verbal Approval on March 10 1984 Written approval was received from COGLA - Yellowknife 84 03 12.

Type of Plug:	Interval:	Fail:	Cement and Additives:
Cement	1140 - 1340 m	No	8.4 T Neat Class "G"
244 mm Bridge Plug	860 m - Pressure tested to 2000 kPa		
Cement	0 - 10 m	No	0.4 T Permafrost

The 244 mm casing was cut off 1 m below ground level and a plate was welded on top of the casing.

Lost Circulation: No lost circulation zones were noted as the hole was drilled with Durafoam/Air Drilling

Provision for Re-entry (Describe and attach sketch): N/A

Cores: Type: 157 mm diamond bit Intervals: 1279 m - 1282 m

Other Downhole Completion/Suspension Equipment: N/A

CERTIFICATION

I certify on the basis of personal knowledge of operations undertaken at the above named well that the above information is accurate.

Signed: A Laviolette P. Eng. Title: Special Projects Engineer

Name: Gary Laviolette Date: March 30, 1984

Acknowledged by: Engineering Branch

Date:

File:

Department of Energy, Mines and Resources — Ministère de l'Énergie des Mines et des Ressources

Department of Indian Affairs and Northern Development — Ministère des Affaires indiennes et du Nord canadien

Canada

HALLIBURTON

CEMENTING AND/OR SPECIAL TOOLS SERVICE REPORT

ATTACH TO INVOICE No. 43 106 / 43 107

HALLIBURTON DISTRICT: Frontier

JOB DATE: 1984 (YEAR) 03 (MONTH) 10 (DAY)

OWNER, OPERATOR OR HIS AGENT STATES THE WELL IS IN GOOD CONDITION FOR THE SERVICE JOB TO BE PERFORMED AND SUBMITS THE FOLLOWING DATA.

CUSTOMER	FIELD OR AREA	WELL No. AND LEASE
Forward Resources Ltd.	Ewekka	Forward et al Ewekka C-11

CALLED OUT	ON LOCATION	JOB STARTED	JOB COMPLETED	PROVINCE	LSD	SEC	TWP	RANGE	MERIDIAN
84-02-27 DATE / TIME	84-02-28 DATE / TIME	84-03-10 23:30 DATE / TIME	84-03-11 14:30 DATE / TIME	N.W.T.					W

TYPE OF JOB ✓

SURFACE	
INTERMEDIATE	
PRODUCTION	
LINER	
SQUEEZE	
PLUG	✓
PUMP	
PRESSURE TEST	
OTHER	

WELL OR HOLE DATA

HOLE DATA: HOLE SIZE 216 mm; TOTAL DEPTH 1340 m; TYPE MUD Gel; VISC. 55; DENSITY 1080

CASING, TUBING OR LINER DATA NEW ☐ USED ☐: SIZE ____ mm kg/m ____ GRADE ____ DEPTH ____ m; SIZE ____ mm kg/m ____ GRADE ____ DEPTH ____ m

PERFORATIONS: FROM ____ m TO ____ m FROM ____ m TO ____ m; FROM ____ m TO ____ m FROM ____ m TO ____ m

WASH FLUID TYPE: Water VOL. 0.8 m³; DISPLACING FLUID TYPE: Water VOL. 8.44 m³

TEMP DATA: MIXING WATER ____ °C; SLURRY ____ °C; DISPLACING FLUID ____ °C; RETURNS ____ °C

PRODUCTS

EQUIPMENT	QUAN
BASKETS	
CENTRALIZERS	
CLAMPS	
FLOAT COLLAR	
FLOAT SHOE	
GUIDE SHOE	
INSERT FLOAT	
SCRATCHERS	
OTHER	

EQUIPMENT

PACKER

TYPE ____ SIZE ____ mm

DEPTH SET ____ m TAIL PIPE ____ m

TOP PLUG TYPE ____

BOTTOM PLUG TYPE ____

CEMENT HEAD

CONTINUOUS ☐ KNOCK OFF ☐ SWAGE ☐

OTHER 114.3 mm F.H. Nubbin

CEMENT DATA

TONNE	API CLASS	BRAND	BULK OR SACKED	CEMENT BLEND	ADDITIVES TYPE AND PERCENT	kg/m³	m³/tonne
	G	Inland	Bulk	Oilwell Neat	3% $CaCl_2$ in mix water	1895	0.76
	G	Inland	Bulk	Permafrost Cement		1880	0.74

HALLIBURTON OPERATOR: F. Halliday CUSTOMER REP. ____

TREATING LOG

CHART POSITION	TIME	RATE m³/min	VOLUME m³ PUMPED	VOLUME m³ IN FORMATION	PRESSURE MPa TUBING	PRESSURE MPa CASING	REMARKS
							PLUG NO. 1
1							Pressure test cement lines.
2							Pump spacer ahead.
3							Mix slurry.
4							Displace.
							PLUG NO. 2
1							Pump spacer ahead.
2							Mix slurry.
3							Displace.

FORM 167A

HALLIBURTON

TICKET NO.: 43 106 - 43 107

PLUG BACK JOB DATA

PLUG NO.	DEPTH TOP	DEPTH BOTTOM	TONNE	DISPLACEMENT (m^3)	TIME (min)
1	1140	1340	8.4	8.44	10
2	Surface	10	0.4	0.071	2

HALLIBURTON

LOST CIRCULATION

LOST CIRCULATION

Porous sections were noted in the following intervals:

38 - 42 m	30 to 35% open porosity
222 - 507 m	5 to 10% vuggy porosity throughout
353 - 356 m	20% vuggy porosity
755 - 765 m	Up to 15% vuggy porosity
1210 - 1212 m	Minor vuggy or fracture porosity
1270 - 1275 m	Partially vuggy to fractured to 3% porosity

Lost circulation was not noted as the well was drilled with Durafoam from 23 m to 1171 m. The well produced water on 311 mm surface hole from approximately the 330 m depth to casing point at 885 m.

ENVIRONMENTAL REPORT

Re: Environmental Effect of Discharging Wellbore Water

Winterhawk

Monenco

Monenco Consultants Limited
400 Monenco Place, 801 - 6th Avenue S W
Calgary, Alberta, Canada T2P 3W3
Tel (403) 298-4170
Telex 038-22636

13 February 1984
MEB 7967-2/000021

Mr. G. Laviolette, P.Eng.
Special Projects Engineer
Winterhawk Petroleum Consulting
Services Ltd.
102, 1040 - 7th Avenue S.W.
CALGARY, Alberta
T2P 3G9

Dear Mr. Laviolette:

RE: Environmental Effect of Discharging Wellbore Water
Forward Resources Colville Hills Project
1983-84

The following comments are pertaining to the environmental effect of discharging wellbore water to the surrounding surface waters (Forward et al Camp M-61) as per your letter to Monenco Consultants of 3 February, 1984.

After due consideration of the water quality analysis information supplied to us by Winterhawk and our further telephone conversations we believe the situation to be as follows:

Formation water is being released from a pipe on the ground in the vicinity of the well which then drains via natural terrain contours into a moderately sized lake near the lease. This water contains small quantities of Duraform additive to control the well properties including: Duraflow - a soap and Duraplex - a polymer.

In considering the environmental effects we assessed

1. The relative dilution between the total formation water released and the lake size;
2. The chemistry and temperature of the two water types; and
3. The likely ecology of the lake in this tundra region.

The estimate of formation water release over the 7 day drilling period is about 54,000 bbls. This is released to a small lake of about 755,000 bbls for a relative dilution of about 14 to 1. We conclude that the lake is really acting as an abnormally large sump (about 20 times larger than a typically

.../2

drilling sump). Dilution is sufficiently large for the lake to be unaffected by the physical and chemical nature of the formation water.

However, the water quality analysis of both the formation water and the lake indicated - assuming the samples are representative of total water volumes - that there is not a great degree of incompatibility in the two water types. The lake water is soft, however, and the barium content of the well water will precipitate out as a barium sulfate and should not represent a toxicity problem to micro-organisms and fish etc. The other components of the formation water also don't appear to represent an environmental concern at these quantities and dilution rates. Also COD and BOD are within normal expected ranges. Temperature as lukewarm when released to the lake would be a potential benefit by encouraging algae blooms if occurring in summer but at this time of year there is unlikely to be any environmental effects.

The addition of durafoam products to the formation water appear to have no immediate or long term environmental consequences to the lake. This is because these products are water soluble, non-toxic and bio-degradable. Residue of the Duraplex polymer being much slower to biodegrade could remain in the lake waters for some years but the dilution is sufficient to suggest that there are no environmental concerns.

A review of the ecology of this type of tundra lake suggests that no fish would be present, the water has a poor nutrient value and consequently the lake is of limited biological significance.

We cannot establish any reason why the formation water might pose an environmental problem. Further, given the water quality and dilution of the formation water there appears to be no reason that the lake water cannot be consumed by any regional wildlife.

We have assumed that there is no outfall from this lake but should there be one further dilution combined with lake settling can only further benefit the situation.

Our analysis of the situation is limited to the information at hand but we see no reason for environmental concern or further studies.

We would be pleased to discuss the matter further should you so desire. We have enclosed the information forwarded to us and will invoice our one day of service.

Yours very truly,

S.W. Behie, Ph.D., P.Eng.
Manager
Environmental Division

per: J.B. Smedley

J.B. Smedley, M.Eng., P.Eng.

JBS:mvh
Encl.

SECTION IV

LOGGING SUMMARY

Dual Laterolog Gamma Ray
Run 1
March 01, 1984
1248.5 m - 877.0 m

Run 2
March 07, 1984
1338.5 - 877.0 m

Compensated Densilog
Compensated Neutron Gamma Ray
Run 1
March 07, 1984
1339.0 m - 35.0 m

Cement Bond Gamma Ray Casing Caliper
Run 1
March 10, 1984
883.5 m - 20.0 m

Borehole Compensated Acoustic Gamma Ray Caliper
Run 1
March 07, 1984
1336.0 m - 877.0 m

Mud Log

Lithology Log

SECTION V

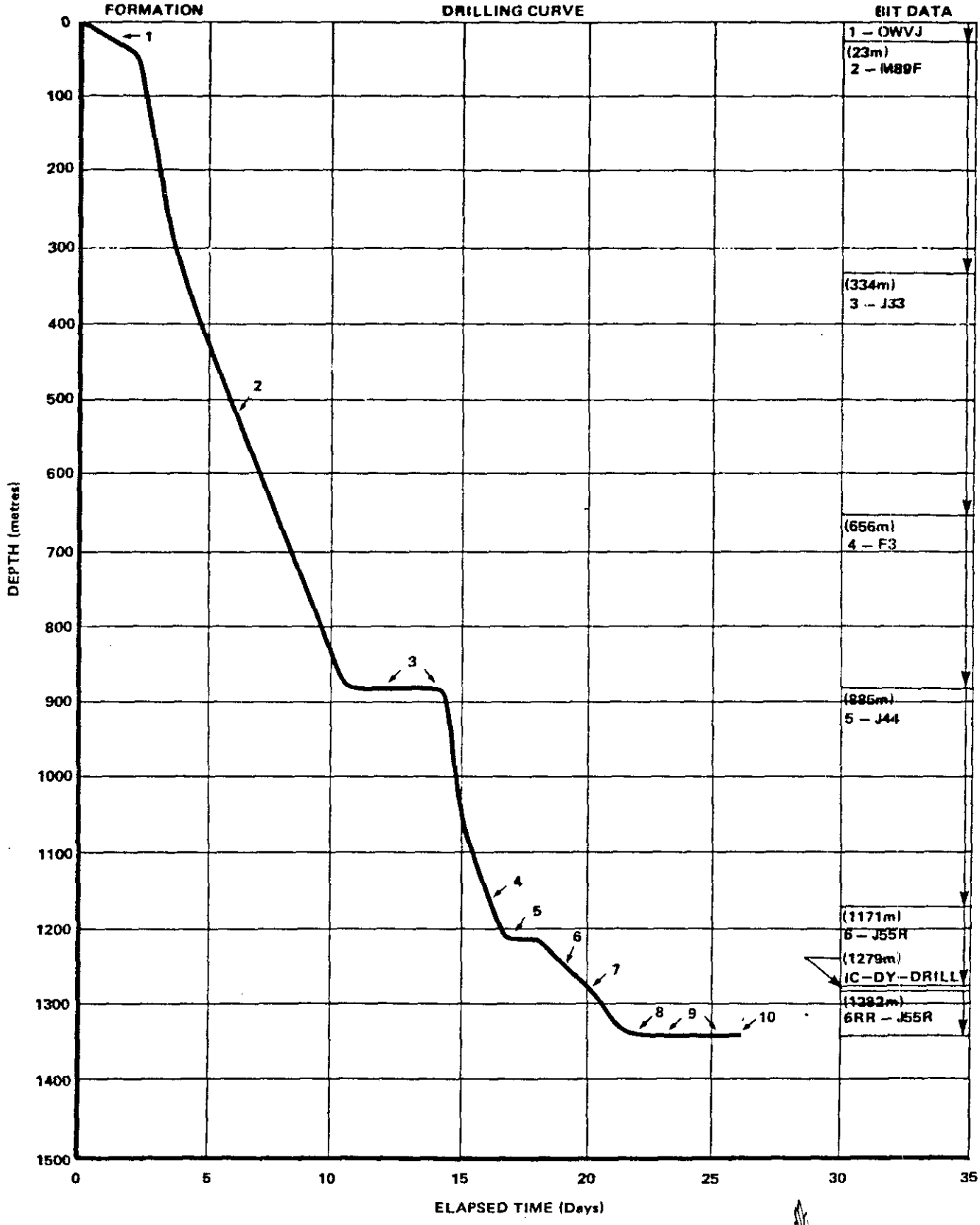
DRILLING CURVE

DRILLING CURVE FOR: FORWARD et al EWEKKA C-11

LAT.: 67°40' 02.26" LONG.: 126°32' 51.84" SPUDDED: 0045 FEB. 15, 1984 RIG RELEASED: 2000 MAR. 11, 1984

CONTRACTOR: 300 DRILLING "MR. BEN" DRAWWORKS: NATIONAL TYPE 370 550HP

PUMPS: 2 NATIONAL 7-P-50 6½" x 7¾" TRI PLEX D.P.: 4½" O.D. D.C.: 6¼"



Winterhawk

DRILLING CURVE

1. Ran 339 mm casing to 23 m.
2. Displaced hole to Durafoam at 506 m.
3. Ran 244 mm casing to 877 m. Re-cement down annulus. Nipple up and pressure test.
4. Displace hole to mud.
5. Repair transformer.
6. Ran DLL.
7. Cut Core #1 1279 - 1282 m.
8. Ran logs.
9. Ran DST #1,
   DST #2, and
   DST #3. Ran Plug #1.
10. Ran bridge plug and surface plug. Release rig.

SECTION VI

DAILY DRILLING REPORTS

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 02 15 2400
Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 1 DEPTH 23 METRES LAST 24 HRS. 23 ROTATING HRS. 6.50

ACTIVITY AT REPORT TIME Nippling Up

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT.

Air

WT. VIS WL. GELS % SOLIDS PV YP pH

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
1	444.5			2-3	65	23	23	23	6.5	6.5	3.5	1	1	

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
1	OPEN			Air Volume 56 m^3/minute				Fluid Volume 16		L/minute	Soap - 8	

DEVIATION SURVEYS

° at ° at

° at ° at

° at ° at

° at ° at

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	6.50	6.50
2. TRIPS	3.00	3.00
3. RIG SERVICE	.25	.25
4. DEVIATION SURVEY		
5. REAM & COND. HOLE		
6. MIX & COND. MUD		
7. CIRCULATING	1.50	1.50
8. RIG REPAIR	.50	.50
9. RUN CASING & CEMENT	11.50	11.50
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		
16. DRILLING OUT		
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP – TEAR OUT	.75	.75
21		
TOTALS	24.00	24.00

OPERATIONS DETAILS PERIOD ENDING 84 02 15 2400
Year - Month - Day - Time

Spud at 0045 hours 84 02 15. Drill ahead. Working sloughing hole. Ran 339 mm, K-55, 81.1 casing, landed at 23 m. Cemented with 4 T permafrost (100% excess). Plug down 1750 hours 84 02 15.

0700 Update - Nippling up.

WANT LIST:

WEATHER -20°C ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 02 16 2400

Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 2 DEPTH 46 METRES LAST 24 HRS. 23 ROTATING HRS. 3.50

ACTIVITY AT REPORT TIME Surveying at 85 m

Air

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. VIS WL. GELS % SOLIDS PV YP pH

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
2	311	M89F	161361	8/10	80/90		23	23	3.50	3.5	6.5			

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
2	O P E N			Air Volume 45 m^3/minute Pressure 800 kPa								

DEVIATION SURVEYS

1/4 °at 27 °at

°at °at

°at °at

°at °at

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING 311 mm hole	3.50	10.00
2. TRIPS		3.00
3. RIG SERVICE	.25	.50
4. DEVIATION SURVEY	.25	.25
5. REAM & COND. HOLE		
6. MIX & COND. MUD		
7. CIRCULATING		1.50
8. RIG REPAIR Grant Head	3.50	4.00
9. RUN CASING & CEMENT	6.50	18.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP	7.00	7.00
16. DRILLING OUT	1.75	1.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP – TEAR OUT	1.25	2.00
21 (Mousehole)		
TOTALS	24.00	48.00

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 02 16 2400
Year - Month - Day - Time

WANT LIST:

WEATHER ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 02 17 2400
Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 3 DEPTH 205 METRES LAST 24 HRS. 159 ROTATING HRS. 19

ACTIVITY AT REPORT TIME Drilling at 260 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. VIS WL. GELS % SOLIDS PV YP pH

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
2	311	M 89 F	161361	18	75		159	182	19	22.5	8.3			

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
2	O P E N			Air Volume 50 m^3/min.			43	Pressure 800 kPa				800

DEVIATION SURVEYS

1/4 ° at 55		1/4 ° at 176	
1/2 ° at 92		1/8 ° at 204	
3/4 ° at 121		° at	
3/4 ° at 148		° at	

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	19.00	29.00
2. TRIPS	.75	3.75
3. RIG SERVICE	1.00	1.50
4. DEVIATION SURVEY	2.50	2.75
5. REAM & COND. HOLE		
6. MIX & COND. MUD		
7. CIRCULATING		1.50
8. RIG REPAIR Grant Head	.75	4.75
9. RUN CASING & CEMENT		18.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		7.00
16. DRILLING OUT		1.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20 RIG UP - TEAR OUT		2.00
21.		
TOTALS	24.00	72.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 02 17 2400
Year - Month - Day - Time

Drill and survey, install new Grant insert head, drill and survey.

Geologist - 160 m higher than prognosis (Tops)

0700 Update: Drilling at 260 m.

WANT LIST:

WEATHER ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 02 18 2400

Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 4 DEPTH 334 METRES LAST 24 HRS. 129 ROTATING HRS. 22.25

ACTIVITY AT REPORT TIME Hoist

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. VIS WL. GELS % SOLIDS PV YP pH

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
2	311	M 89 F	161361	10/12	90/100	334	129	311	22.25	44.75	5.8	6	6	1

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
2	OPEN						43					800
				Water Entering Hole at 330 m								

DEVIATION SURVEYS

1 ° at 232		° at	
1-1/2 ° at 261		° at	
1 ° at 289		° at	
1-1/2 ° at 317		° at	

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY	
CUM.	

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	22.25	51.25
2. TRIPS		3.75
3. RIG SERVICE	.50	2.00
4. DEVIATION SURVEY	1.00	3.75
5. REAM & COND. HOLE		
6. MIX & COND. MUD		
7. CIRCULATING		1.50
8. RIG REPAIR Swivel Pkg.	.25	5.00
9. RUN CASING & CEMENT		18.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		7.00
16. DRILLING OUT		1.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP – TEAR OUT		2.00
21.		
TOTALS	24.00	96.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 02 18 2400
Year - Month - Day - Time

Drill and survey.

0700 Update: Change over to mist.

WANT LIST:

WEATHER -20°C ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk
Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 02 19 2400
Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 5 DEPTH 430 METRES LAST 24 HRS. 96 ROTATING HRS. 19

ACTIVITY AT REPORT TIME Drilling at 470 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. VIS WL. GELS % SOLIDS PV YP pH

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
3	311	J-33	68928	10/15	95		96	96	19	19	5			

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
3	O	P E N		Durafoam Drilling								1400
				Air Volume 35-40 m^3/minute				Fluid	Volume	27-30 L/minute		Soap - 12

DEVIATION SURVEYS

1-1/2 ° at 345		° at	
1-1/8 ° at 374		° at	
1-1/8 ° at 402		° at	
1 ° at 430		° at	

MUD & CHEMICALS ADDED

Duraplex - 5 sx	

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	19.00	70.25
2. TRIPS	2.00	5.75
3. RIG SERVICE	.50	2.50
4. DEVIATION SURVEY	1.25	5.00
5. REAM & COND. HOLE		
6. MIX & COND. MUD		
7. CIRCULATING	1.25	2.75
8. RIG REPAIR		5.00
9. RUN CASING & CEMENT		18.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		7.00
16. DRILLING OUT		1.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19 PLUG & ABANDON		
20. RIG UP – TEAR OUT		2.00
21.		
TOTALS	24.00	120.00

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 02 19 2400
Year - Month - Day - Time

Circulate and unload hole, drill and survey.

0700 Update: 470 m and drilling

12 m Bear Rock Formation
89 m Mt. Kindle
222 m - 465 m Franklin Mountain

WANT LIST:

WEATHER -20°C ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk
Petroleum Consultants Service Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 02 20 2400
Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 6 DEPTH 520 METRES LAST 24 HRS. 90 ROTATING HRS. 18.75

ACTIVITY AT REPORT TIME Drilling

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. VIS WL. GELS % SOLIDS PV YP pH

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
3	311	J-33	68928	15/17	100		90	186	18.75	37.75	4.8			

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
3	O P E N			Air Volume 32 m^3/minute				Fluid Volume 40 L/minute			Soap-20	2,800

DEVIATION SURVEYS

1-1/2 ° at 459		° at	
1 ° at 487		° at	
° at		° at	
° at		° at	

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
				46,000

COSTS

DAILY

CUM.

SUPERVISOR: Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	18.75	89.00
2. TRIPS		5.75
3. RIG SERVICE	.25	2.75
4. DEVIATION SURVEY	1.00	6.00
5. REAM & COND. HOLE		
6. MIX & COND. MUD		
7. CIRCULATING	1.75	4.50
8. RIG REPAIR Grant Head	2.25	7.25
9. RUN CASING & CEMENT		18.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		7.00
16. DRILLING OUT		1.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP – TEAR OUT		2.00
21		
TOTALS	24.00	144.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 02 20 2400
Year - Month - Day - Time

Drill, circulate and survey, drill. Repair air equipment, drill and circulate. Unload hole to durafoam at 506 m. Drill, circulate and unload hole, drill.

0700 Update: 550 m
1^{o} - 526 m

WANT LIST:

WEATHER $-22^{o}C$ ROAD Rough

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk

Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 02 21 2400

Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 7 DEPTH 610 METRES LAST 24 HRS. 90 ROTATING HRS. 19.5

ACTIVITY AT REPORT TIME Drilling

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. VIS WL. GELS % SOLIDS PV YP pH

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
3	311	J-33	68928	19	90		90	276	19.5	57.25	4.6			

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
3	OPEN			Air Volume 28-31 m^3/minute				Fluid Volume 32-40 L/minute				3,100

DEVIATION SURVEYS

1	° at	526		° at	
7/8	° at	553		° at	
1	° at	582		° at	
1	° at	610		° at	

MUD & CHEMICALS ADDED

Duranlex - 9

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	19.50	108.50
2. TRIPS		5.75
3. RIG SERVICE	.25	3.00
4. DEVIATION SURVEY	3.50	9.50
5. REAM & COND. HOLE		
6. MIX & COND. MUD		
7. CIRCULATING		4.50
8. RIG REPAIR Grant Head	.75	8.00
9. RUN CASING & CEMENT		18.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		7.00
16. DRILLING OUT		1.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19 PLUG & ABANDON		
20. RIG UP – TEAR OUT		2.00
21.		
TOTALS	24.00	168.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 02 21 2400
Year - Month - Day - Time

Drill and survey ahead. Rotary head seized, removed kelly drive bushing, drill ahead.

0700 Update: Drilling at 640 m.

WANT LIST:

WEATHER -25°C ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 02 22 2400

Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 8 DEPTH 682 METRES LAST 24 HRS. 72 ROTATING HRS. 13.75

ACTIVITY AT REPORT TIME Drilling

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. VIS WL. GELS % SOLIDS PV YP pH

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
3	311	HW J-33	68928	19	90	656	46	322	10	67.25	4.6	8	7	3
4	311	F3	CZ1537	19	90		26	26	3.75	3.75	6.9			

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
3	O P E N			Air Volume 30	m^3/minute	Fluid Volume 32-40				L/minute	Soap-20	3,700
4												

DEVIATION SURVEYS

7/8 ° at 647 ° at

7/8 ° at 705 ° at

° at ° at

° at ° at

MUD & CHEMICALS ADDED

Duraplex - 10

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	13.75	122.25
2. TRIPS	3.50	9.25
3. RIG SERVICE		3.00
4. DEVIATION SURVEY	1.25	10.75
5. REAM & COND. HOLE	1.50	1.50
6 MIX & COND. MUD		
7. CIRCULATING	1.75	6.25
8. RIG REPAIR Grant Head	2.25	10.25
9. RUN CASING & CEMENT		18.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		7.00
16. DRILLING OUT		1.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20 RIG UP – TEAR OUT		2.00
21		
TOTALS	24.00	192.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 02 22 2400
Year - Month - Day - Time

Drill, replace rubber on Grant head. Drill and survey ahead. Unload hole.
Run in hole to 638 m, break circulation and clean to bottom. Drill ahead.

0700 Update: Drilling at 724 m.

WANT LIST:

WEATHER -15°C ROAD Rough

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 02 23 2400

Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 9 DEPTH 752 METRES LAST 24 HRS. 70 ROTATING HRS. 13.50

ACTIVITY AT REPORT TIME Drilling

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. VIS WL. GELS % SOLIDS PV YP pH

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
4	311	F-3	CZ1537	19	90		70	96	13.5	17.75	5.1			

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
4	OPEN			Air Volume 19 m^3/minute				Fluid Volume 68 L/minute			Soap-24	3,700

DEVIATION SURVEYS

7/8 ° at 705 ° at

° at ° at

° at ° at

° at ° at

MUD & CHEMICALS ADDED

Duraplex - 11

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	13.50	135.75
2. TRIPS		9.25
3. RIG SERVICE	.25	3.25
4. DEVIATION SURVEY	1.00	11.75
5. REAM & COND. HOLE	1.50	3.00
6. MIX & COND. MUD		
7. CIRCULATING	7.25	13.50
8. RIG REPAIR Swivel Pkg.	.50	10.75
9. RUN CASING & CEMENT		18.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		7.00
16. DRILLING OUT		1.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP TEAR OUT		2.00
21		
TOTALS	24.00	216.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 02 23 2400
Year · Month · Day · Time

Drill and survey, circulate and stabilize durafoam, ream to bottom, circulate and stabilize hole, drill, condition hole and repair air equipment.

0700 Hours Update: Drilling at 779 m. (Were stuck in hole from 0400 - 0545 from sloughing shale.)
(Just hit 120 m marker.)

KB 360.44 m
GL 356.2 m

WANT LIST:

WEATHER -22°C ROAD Rough

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 02 24 2400

Year · Month Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 10 DEPTH 838 METRES LAST 24 HRS. 86 ROTATING HRS. 14

ACTIVITY AT REPORT TIME Drilling ahead

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. VIS WL. GELS % SOLIDS PV YP pH

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
4	311	F-3	CZ 1537	19	90		86	182	14	31.75	6.10	-	-	-

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
4	O	P E N		Air Volume 15 m^3/minute			Fluid Volume 59 L/minute			Soap-24		4,900

DEVIATION SURVEYS

° at ° at

° at ° at

° at ° at

° at ° at

MUD & CHEMICALS ADDED

Duraplex - 11 sx

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
				52,000

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	14.00	149.75
2. TRIPS		9.25
3. RIG SERVICE	.25	3.50
4. DEVIATION SURVEY		11.75
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD	1.25	1.25
7. CIRCULATING	8.50	22.00
8. RIG REPAIR		10.75
9. RUN CASING & CEMENT		18.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		7.00
16. DRILLING OUT		1.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP – TEAR OUT		2.00
21.		
TOTALS	24.00	240.00

COSTS

DAILY

CUM.

SUPERVISOR: Bill Schaffer

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 02 24 2400
Year - Month - Day - Time

Drilling ahead.

WANT LIST:

WEATHER -24°C ROAD Rough

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 02 25 2400

Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 11 DEPTH 885 METRES LAST 24 HRS. 47 ROTATING HRS. 6.25

ACTIVITY AT REPORT TIME at casing point - presently running 244 mm casing

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

WT. VIS WL. GELS % SOLIDS PV YP pH

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
4	311	F-3	CZ1537	19	100	885	47	229	6.25	37.5	7.5	6	4	2

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
4	O	P E N		Air Volume 31	m^3/minute	Fluid Volume 59 L/minute		Soap-31				4,900

DEVIATION SURVEYS

° at ° at

° at ° at

° at ° at

° at ° at

MUD & CHEMICALS ADDED

Duraplex - 7 sx

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN
				53,000

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	6.25	156.00
2. TRIPS		9.25
3. RIG SERVICE	.25	3.75
4. DEVIATION SURVEY		11.75
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD		1.25
7. CIRCULATING	4.50	26.50
8. RIG REPAIR		10.75
9. RUN CASING & CEMENT	13.00	31.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14 WAITING ON:		
15. NIPPLE UP & TEST BOP		7.00
16. DRILLING OUT		1.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20 RIG UP - TEAR OUT		2.00
21		
TOTALS	24.00	264.00

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 02 25 2400
Year - Month - Day - Time

Drill ahead to casing point. Pull out of hole to run casing.

WANT LIST:

WEATHER -50°C ROAD Rough

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 02 26 2400

Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION _____

DAY 12 DEPTH 885 METRES LAST 24 HRS. 0 ROTATING HRS. 0

ACTIVITY AT REPORT TIME Waiting on cement

DRILLING MUD PROPERTIES AT SHAKER SUCTION/PIT:

WT. _____ VIS _____ WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH _____

% OIL _____ %SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa

DEVIATION SURVEYS

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

MUD & CHEMICALS ADDED

_____ _____

_____ _____

_____ _____

_____ _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		156.00
2. TRIPS		9.25
3. RIG SERVICE		3.75
4. DEVIATION SURVEY		11.75
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD		1.25
7. CIRCULATING		26.50
8. RIG REPAIR		10.75
9. RUN CASING & CEMENT	24.00	55.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		7.00
16. DRILLING OUT		1.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP – TEAR OUT		2.00
21.		
TOTALS	24.00	288.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 24 02 26 2400
Year - Month - Day - Time

Rigged up rig pump. Pumped 180 barrels water - no returns. Ran 70 joints of 244 mm, MN80, 59.5 kg/m, 8RD, LT&C casing. Landed at 877 m (approximately 11 m fill on bottom). Cemented with 26 T "G" + 3% $CaCl_2$. Plug down at 1900 hours 84 02 26. Cemented with 4 T permafrost. Plug down at 2400 hours 84 02 26, no returns.

0700 Update: Waiting on cement, cut casing and nipple up.

WANT LIST:

WEATHER -40°C ROAD Rough

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 02 27 2400

Year Month Day Time

WELL NAME Forward et al Ewekka C-11 LOCATION _____

DAY 13 DEPTH 885 METRES LAST 24 HRS. _____ ROTATING HRS. _____

ACTIVITY AT REPORT TIME Thaw out manifold lines

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT.

WT. _____ VIS _____ WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH _____

% OIL _____ %SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa

DEVIATION SURVEYS

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

MUD & CHEMICALS ADDED

_____ _____

_____ _____

_____ _____

_____ _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		156.00
2. TRIPS		9.25
3. RIG SERVICE		3.75
4. DEVIATION SURVEY		11.75
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD		1.25
7. CIRCULATING		26.50
8. RIG REPAIR		10.75
9. RUN CASING & CEMENT	8.00	63.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP	16.00	23.00
16. DRILLING OUT		1.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP – TEAR OUT		2.00
21.		
TOTALS	24.00	312.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 02 27 2400
Year - Month - Day - Time

Waiting on cement. Cement down annulus with 17 sx. Nipple up.

0700 Update: Thaw out lines and pressure test.

WANT LIST:

WEATHER -25°C ROAD Rough

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 02 28 2400

Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION _____

DAY 14 DEPTH 885 METRES LAST 24 HRS. _____ ROTATING HRS. _____

ACTIVITY AT REPORT TIME Drill at 930 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. _____ VIS _____ WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH _____

% OIL _____ %SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
5	215	HW J-44	90335	5	60									

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H P.	SURF PRESS kPa
5	O P E N				MISTING							

DEVIATION SURVEYS

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

MUD & CHEMICALS ADDED

_____ _____

_____ _____

_____ _____

_____ _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY	
CUM.	

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		156.00
2. TRIPS		9.25
3. RIG SERVICE		3.75
4. DEVIATION SURVEY		11.75
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD		1.25
7. CIRCULATING		26.50
8. RIG REPAIR		10.75
9. RUN CASING & CEMENT		63.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP	13.25	36.25
16. DRILLING OUT	10.75	12.50
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP – TEAR OUT		2.00
21		
TOTALS	24.00	336.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 02 28 2400
Year - Month - Day - Time

Nipple up BOP, pressure test blind ram, HCR and all manifold valves 2100 kPa to 8500 kPa. OK. Check motor kill. Blow manifold and fill with diesel. Work on Grant head. Drill out DV tool (plug was rotating inside casing). DV tool set at 54 m. Pressure test Hydril 2100 - 4000 kPa. OK. Pressure test rams 2100 - 8500 kPa. OK. Pressure kelly cock 2100 - 8500 kPa. OK. Unload hole, slip and cut line, unload hole, drill float and shoe.

0700 Update: Drilling at 930 m.

Leakoff - hydrostatic head 8731 kPa, 4500 kPa surface induced, 13231 at shoe, no leak off, no break.

WANT LIST:

WEATHER -30°C ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consultant Services Ltd.

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 02 29 2400
Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 15 DEPTH 1050 METRES LAST 24 HRS. 165 ROTATING HRS. 14

ACTIVITY AT REPORT TIME Drilling at 1120 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. VIS WL. GELS % SOLIDS PV YP pH

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
5	215	J-44	90335	2/3	110		165	165	14	14	11.7			

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
5	-	-	-	Air Volume 28 m^3/minute Fluid Volume 50 L/minute Soap - 20								1,700
				Durafoam Drilling								

DEVIATION SURVEYS

4 ° at 964	6-1/4 ° at 1020		
5 ° at 972	6 ° at 1029		
6 ° at 991	5-3/4 ° at 1040		
6-1/2 ° at 1010	° at		

MUD & CHEMICALS ADDED

Duraplex - 13 sacks

Duraguard - 1 sack

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	14.00	170.00
2. TRIPS		9.25
3. RIG SERVICE	.50	4.25
4. DEVIATION SURVEY	4.25	16.00
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD		1.25
7. CIRCULATING	1.75	28.25
8. RIG REPAIR		10.75
9. RUN CASING & CEMENT		63.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP	2.25	38.50
16. DRILLING OUT	1.25	13.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP – TEAR OUT		2.00
21		
TOTALS	24.00	360.00

PLEASE TURN OVER

OPERATIONS DETAILS. PERIOD ENDING 84 02 29 2400
Year - Month - Day - Time

Check BOP. Drill out float and shoe. Run leak off - no break down. Unload hole, run to bottom, unload hole. Drill and survey, control drilling due to deviation.

0700 Update: Drilling at 1120 m. 1110 m - 5-1/2°

WANT LIST:

WEATHER -45°C ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 03 01 2400
Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION _____

DAY 16 DEPTH 1171 METRES LAST 24 HRS. 121 ROTATING HRS. 10.25

ACTIVITY AT REPORT TIME Circulating sample at 1189 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. _____ VIS _____ WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH _____

% OIL _____ %SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
5	215.9	J-44	90335	3/4	110	1171	121	286	10.25	24.25	11.8	6	5	I
6	215	J-55 R												

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
												1,750

DEVIATION SURVEYS

5-1/2 ° at 1082		° at	
5-1/2 ° at 1110		° at	
5 ° at 1143		° at	
5 ° at 1171		° at	

MUD & CHEMICALS ADDED

Duraplex - 7 sx	

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	10.25	180.25
2. TRIPS		9.25
3. RIG SERVICE	.25	4.50
4. DEVIATION SURVEY	3.75	19.75
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD	9.00	10.25
7. CIRCULATING	.75	29.00
8. RIG REPAIR		10.75
9. RUN CASING & CEMENT		63.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		38.50
16. DRILLING OUT		13.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		2.00
21.		
TOTALS	24.00	384.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 03 01 2400
Year - Month - Day - Time

Drill and survey ahead. Mix mud, run to bottom. 2200 - 2400 hours displace hole to mud.

0700 Hours Update: Drilling at 1189 m. Circulate up bottom hole sample looking for core point.

WANT LIST:

WEATHER -32°C ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 03 02 2400

Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 17 DEPTH 1219 METRES LAST 24 HRS. 48 ROTATING HRS. 12.25

ACTIVITY AT REPORT TIME Waiting on parts to repair rig

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1160 VIS 55 WL. 14 GELS 6/8 % SOLIDS .103 PV 16 YP 8 pH 10.5

% OIL 0 %SAND .0075 CAKE 1 PPMCL 160 PPMCa 260

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
6	215.9	J55R	91623	15	90		48	48	12.25	12.25	3.9			

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
6	7.9	7.9	7.9	356	85	152	1.08	42.1	64.3			9,000

DEVIATION SURVEYS

4 ° at 1208 ° at

° at ° at

° at ° at

° at ° at

MUD & CHEMICALS ADDED

Salt - 526 sx Kelzan - 2 sx

Gel - 60 sx XC Ploymer - 9 sx

Caustic - 8 sx

Soda Ash - 1 sack

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	12.25	192.50
2. TRIPS		9.25
3. RIG SERVICE	.25	4.75
4. DEVIATION SURVEY	1.00	20.75
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD	1.50	11.75
7. CIRCULATING Samples	5.00	34.00
8. RIG REPAIR Transformer	4.00	14.75
9. RUN CASING & CEMENT		63.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14 WAITING ON:		
15. NIPPLE UP & TEST BOP		38.50
16. DRILLING OUT		13.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		2.00
21.		
TOTALS	24.00	408.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 03 02 2400
Year - Month - Day - Time

Drill and survey. Repair tranformer - it blew up. Waiting on parts for rig.

WANT LIST:

WEATHER -40°C ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 03 03 2400

Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION _____

DAY 18 DEPTH 1219 METRES LAST 24 HRS. _____ ROTATING HRS. _____

ACTIVITY AT REPORT TIME Repair rig pump

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. _____ VIS _____ WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH _____

% OIL _____ %SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa

DEVIATION SURVEYS

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

MUD & CHEMICALS ADDED

Kelzan - 2 sx

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY	
CUM.	

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		192.50
2. TRIPS		9.25
3. RIG SERVICE		4.75
4. DEVIATION SURVEY		20.75
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD		11.75
7. CIRCULATING		34.00
8. RIG REPAIR Transformer	24.00	38.75
9. RUN CASING & CEMENT		63.00
10. FISHING		
11. LOGGING		
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		38.50
16. DRILLING OUT		13.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		2.00
21		
TOTALS	24.00	432.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 03 03 2400
Year - Month - Day - Time

Repair transformer, pull out of hole to casing shoe. Run in hole. Break circulation and make connection. Rig repair.

0700 Update: Circulate samples

WANT LIST:

WEATHER -18°C ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 03 04 2400

Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 19 DEPTH 1255 METRES LAST 24 HRS. 36 ROTATING HRS. 11

ACTIVITY AT REPORT TIME Drilling 1272 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT

WT. 1160 VIS 67 WL. 13 GELS % SOLIDS PV YP pH 11

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
6	219	J55R	91623	19	90		36	84	11	23.25	3.2			

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H P.	SURF PRESS kPa
6	7.9	7.9	7.9		80	152						8,500

DEVIATION SURVEYS

° at ° at

° at ° at

° at ° at

° at ° at

MUD & CHEMICALS ADDED

Kelzan - 6 sx

Caustic - 2 sx

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	11.00	203.50
2. TRIPS	1.75	11.00
3. RIG SERVICE	.25	5.00
4. DEVIATION SURVEY		20.75
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD		11.75
7. CIRCULATING	1.50	35.50
8. RIG REPAIR	.75	39.50
9. RUN CASING & CEMENT		63.00
10. FISHING		
11. LOGGING	8.00	8.00
12. CORING		
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		38.50
16. DRILLING OUT		13.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19 PLUG & ABANDON		
20. RIG UP - TEAR OUT		2.00
21. Slip & Cut Line	.75	.75
TOTALS	24.00	456.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 03 04 2400
Year - Month - Day - Time

Repair pump. Drill and circulate sample. Hoist to log and run DIL 1250 - 881 m.
Slip and cut. Run in hole. Ream 2 m to bottom.

0700 Update: Drilling at 1272 m. Circulate sample.

WANT LIST:

WEATHER -10°C ROAD Rough

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 03 05 2400
Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 20 DEPTH 1280.5 METRES LAST 24 HRS. 25.5 ROTATING HRS. 7.75 drilling
2.75 coring

ACTIVITY AT REPORT TIME Run in hole to drill ahead at 1282 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1185 VIS 63 WL. 13.5 GELS % SOLIDS PV YP pH 11

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
6	215.9	J55R	91623	19	90	1279	24	106.5	7.75	31.0	3.1	2	2	0
1C	157	djadrill		6	70		3	3	2.75	2.75	1.0			

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
6												
1C					60	152						4,000

DEVIATION SURVEYS

° at ° at

° at ° at

° at ° at

° at ° at

MUD & CHEMICALS ADDED

Kelzan - 2 sx

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	7.75	211.25
2. TRIPS		11.00
3. RIG SERVICE	.25	5.25
4. DEVIATION SURVEY		20.75
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD		11.75
7. CIRCULATING	5.00	40.50
8. RIG REPAIR		39.50
9. RUN CASING & CEMENT		63.00
10. FISHING		
11. LOGGING		8.00
12. CORING	11.00	11.00
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		38.50
16. DRILLING OUT		13.75
17 LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP - TEAR OUT		2.00
21		.75
TOTALS	24.00	480.00

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 03 05 2400
Year - Month - Day - Time

Drill. Strap out - 1 m correction made. Was 1280 - actual 1279 m. Clean to bottom, no fill. Cut Core #1 1279 - 1282 and recovered 2.9 m. Top 4/5 of first 1 m is shale. Rest is sandy dolomitic shale. Run in and drill ahead looking for drilling break.

WANT LIST:

WEATHER -34°C ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 03 06 2400

Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 21 DEPTH 1327 METRES LAST 24 HRS. 46.5 ROTATING HRS. 12.25 drilling
1.50 coring

ACTIVITY AT REPORT TIME Pull out of hole to log - TD 1340 m

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1210 VIS 73 WL. 16 GELS % SOLIDS PV YP pH 11

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
1C						1282	1.5	3	1.5	4.25	1.00			
6	215	J55R		19	90		45	45	12.25	12.25	3.67			

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
6	7.9	7.9	7.9		95	152	1.06					10,000

DEVIATION SURVEYS

° at ° at

° at ° at

° at ° at

° at ° at

MUD & CHEMICALS ADDED

Gel - 18 sx

Kelzan - 4 sx

Caustic - 1 sack

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	12.25	223.50
2. TRIPS	2.00	13.00
3. RIG SERVICE	.25	5.50
4. DEVIATION SURVEY		20.75
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD		11.75
7. CIRCULATING	1.50	42.00
8. RIG REPAIR		39.50
9. RUN CASING & CEMENT		63.00
10. FISHING		
11. LOGGING		8.00
12. CORING	8.00	19.00
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		38.50
16. DRILLING OUT		13.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20 RIG UP - TEAR OUT		2.00
21		.75
TOTALS	24.00	504.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 03 06 2400
Year - Month - Day - Time

Ream rat hole and drill ahead

0700 Update: 1340 TD. Pulling out of hole to log.

WANT LIST:

WEATHER -32°C ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 03 07 2400
Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 22 DEPTH 1340 METRES LAST 24 HRS. 13 ROTATING HRS. 5.50

ACTIVITY AT REPORT TIME Preparing to run Drill Stem Test #1

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1230 VIS 68 WL. 17.5 GELS % SOLIDS PV YP pH 10

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G
6	215	J 55 R	91623	19	90	1340	13	58	5.5	17.75	2.36			

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa
6	7.9	7.9	7.9			159						10,000

DEVIATION SURVEYS

5 ° at 1340 ° at

° at ° at

° at ° at

° at ° at

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR: Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING	5.50	229.00
2. TRIPS		13.00
3. RIG SERVICE	.50	6.00
4. DEVIATION SURVEY	.50	21.25
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD		11.75
7. CIRCULATING		42.00
8. RIG REPAIR		39.50
9. RUN CASING & CEMENT		63.00
10. FISHING		
11. LOGGING	17.50	25.50
12. CORING		19.00
13. FORMATION TESTING		
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		38.50
16. DRILLING OUT		13.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20 RIG UP – TEAR OUT		2.00
21.		.75
TOTALS	24.00	528.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 03 07 2400
Year - Month - Day - Time

Drill, circulate bottoms up, survey. Pull out of hole to log, log. Run Dual Laterlog and Density Neutron. 1340 - 880 m.

Computer arrived at 0330 hours to run Sonic log, finished Sonic log at 0730 hours.

Drill Stem Test #1 1300 - 1340 m
Drill Stem Test #2 1283 - 1296 m

WANT LIST:

WEATHER -32°C ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 03 08 2400

Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION

DAY 23 DEPTH 1340 METRES LAST 24 HRS. ROTATING HRS.

ACTIVITY AT REPORT TIME Preparing to run DST #2

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1210 VIS 63 WL. 16.2 GELS 7/10 % SOLIDS PV 26 YP 10 pH 9.5

% OIL %SAND CAKE PPMCL PPMCa

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G

CIRCULATION RECORD

BIT NO.	JETS – mm 1	JETS – mm 2	JETS – mm 3	PUMP STROKE	PUMP SPM	PUMP LINER	PUMP m^3/min	ANN. VEL. DP	ANN. VEL. DC	JET VEL	H.H.P.	SURF PRESS kPa

DEVIATION SURVEYS

° at ° at

° at ° at

° at ° at

° at ° at

MUD & CHEMICALS ADDED

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		229.00
2. TRIPS		13.00
3. RIG SERVICE	.25	6.25
4. DEVIATION SURVEY		21.25
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD		11.75
7. CIRCULATING		42.00
8. RIG REPAIR		39.50
9. RUN CASING & CEMENT		63.00
10. FISHING		
11. LOGGING	9.00	34.50
12. CORING		19.00
13. FORMATION TESTING	14.00	14.00
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		38.50
16. DRILLING OUT		13.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP – TEAR OUT		2.00
21 slip & cut line	.75	1.50
TOTALS	24.00	552.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 03 08 2400
Year - Month - Day - Time

DST #1 1300 - 1340 m

10/60/90/180

IHP 16260 ISIP 8582 IFP 865

FHP 16272 FSIP 9399 FFP 791

30 m fluid above shut in tool - very slightly gas cut drilling mud

Pump out sub popped prior to reaching surface.

1/4" orifice at surface, no pressure reading. 1 m lazy flame - red/orange.

WANT LIST:

WEATHER ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 03 09 2400
Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION _____

DAY 24 DEPTH 1340 METRES LAST 24 HRS. _____ ROTATING HRS. _____

ACTIVITY AT REPORT TIME Break down test tools

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. 1210 VIS 78 WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH _____

% OIL _____ %SAND _____ CAKE _____ PPMCl _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL.	H.H.P.	SURF PRESS kPa

DEVIATION SURVEYS

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

MUD & CHEMICALS ADDED

_____ _____

_____ _____

_____ _____

_____ _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY	
CUM.	

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		229.00
2. TRIPS		13.00
3. RIG SERVICE	.25	6.50
4. DEVIATION SURVEY		21.25
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD		11.75
7. CIRCULATING		42.00
8. RIG REPAIR		39.50
9. RUN CASING & CEMENT		63.00
10. FISHING		
11. LOGGING		34.50
12. CORING		19.00
13. FORMATION TESTING	23.75	37.75
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		38.50
16. DRILLING OUT		13.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON		
20. RIG UP – TEAR OUT		2.00
21		1.50
TOTALS	24.00	576.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 03 09 2400
Year - Month - Day - Time

Run Drill Stem Test #2, 1283 - 1295 m.

Drill Stem Test #2:
PF 10; ISI 60; Flow 90; SI 180
PF 613 ; IH 16145 ; ISI 9905 ; IF 1190
FH 15335 ; FSI 10262 ; FF 994
Preflow: Fair air blow
Valve Open Flow: GTS in 8 minutes - 1-1/2 - 2 m lazy orange flame testing through 1/16" orifice 20 kPa and 101 m^3/day
Recoveries: 140 m above test tool - gas cut water cut drilling mud

0700 Update: Run Drill Stem Test #3. Just started final shut-in. Hoist Drill Stem Test #3.

WANT LIST:

WEATHER ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 03 10 2400
Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION _____

DAY 25 DEPTH 1340 METRES LAST 24 HRS. _____ ROTATING HRS. _____

ACTIVITY AT REPORT TIME Pull off of Plug #1

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. _____ VIS _____ WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH _____

% OIL _____ %SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G

CIRCULATION RECORD

BIT NO.	JETS – mm 1	2	3	PUMP STROKE	SPM	LINER	m^3/min	ANN. VEL. DP	DC	JET VEL	H.H.P.	SURF PRESS kPa

DEVIATION SURVEYS

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

MUD & CHEMICALS ADDED

_____ _____

_____ _____

_____ _____

_____ _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR Bill Schaffer

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		229.00
2. TRIPS		13.00
3. RIG SERVICE		6.50
4. DEVIATION SURVEY		21.25
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD		11.75
7. CIRCULATING		42.00
8 RIG REPAIR		39.50
9. RUN CASING & CEMENT		63.00
10. FISHING		
11. LOGGING	3.75	38.25
12. CORING		19.00
13. FORMATION TESTING	15.00	52.75
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		38.50
16. DRILLING OUT		13.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS		
19. PLUG & ABANDON	4.75	4.75
20. RIG UP - TEAR OUT		2.00
21. Slip & Cut Line	.50	2.00
TOTALS	24.00	600.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 03 10 2400
Year - Month - Day - Time

Run Drill Stem Test #3, 1152 - 1162 m.

Drill Stem Test #3:

PF 10; ISI 60; Flow 90; SI 180

PF 982 ; IH 14525 , ISI 1144 ; IF 832

FH 14433 ; FSI 1052 ; FF 647

Preflow: Weak air blow

Valve Open Flow: Weak air blow, dead in 5 minutes, no gas to surface

Recoveries: 30 m of fluid

Plug #1 1340 - 1140 - cement with 8.4 T Class G + 3% $CaCl_2$

0700 Update: Lay down collars, run bridge plug.

WANT LIST:

WEATHER ROAD

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

Winterhawk Petroleum Consulting Services Ltd

DAILY DRILLING REPORT

FOR 24 HR. PERIOD ENDING

84 03 11 2400
Year · Month · Day · Time

WELL NAME Forward et al Ewekka C-11 LOCATION _____

DAY 26 DEPTH 1340 METRES LAST 24 HRS. _____ ROTATING HRS. _____

ACTIVITY AT REPORT TIME Tear out

DRILLING MUD PROPERTIES AT SHAKER/SUCTION/PIT:

WT. _____ VIS _____ WL. _____ GELS _____ % SOLIDS _____ PV _____ YP _____ pH _____

% OIL _____ %SAND _____ CAKE _____ PPMCL _____ PPMCa _____

BIT RECORD

BIT NO.	SIZE mm	MAKE & TYPE	SER. NO.	BIT WT.	BIT RPM	DEPTH OUT m	m DRLD TODAY	CUM. m DRLD	Rot. hrs. TODAY	CUM. Rot. hrs.	m/HR	DULL COND T	DULL COND B	DULL COND G

CIRCULATION RECORD

BIT NO.	JETS – mm 1	JETS – mm 2	JETS – mm 3	PUMP STROKE	PUMP SPM	PUMP LINER	PUMP m^3/min	ANN. VEL. DP	ANN. VEL. DC	JET VEL	H.H.P.	SURF PRESS kPa

DEVIATION SURVEYS

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

_____ ° at _____ _____ ° at _____

MUD & CHEMICALS ADDED

_____ _____

_____ _____

_____ _____

_____ _____

BOTTOM ASSEMBLY

TOOL	ID mm	O.D. mm	LENGTH m	WEIGHT daN

COSTS

DAILY

CUM.

SUPERVISOR John Ross

TIME ANALYSIS

OPERATION	TODAY	CUM
1. DRILLING		229.00
2. TRIPS		13.00
3. RIG SERVICE		6.50
4. DEVIATION SURVEY		21.25
5. REAM & COND. HOLE		3.00
6. MIX & COND. MUD		11.75
7. CIRCULATING		42.00
8. RIG REPAIR		39.50
9. RUN CASING & CEMENT		53.00
10. FISHING		
11. LOGGING		38.25
12. CORING		19.00
13. FORMATION TESTING		52.75
14. WAITING ON:		
15. NIPPLE UP & TEST BOP		38.50
16. DRILLING OUT		13.75
17. LOSS CIRC.		
18. LAY DOWN DP & BOPS	7.75	7.75
19. PLUG & ABANDON	6.25	11.00
20. RIG UP – TEAR OUT	10.00	12.00
21.		2.00
TOTALS	24.00	624.00

PLEASE TURN OVER

OPERATIONS DETAILS: PERIOD ENDING 84 03 11 2400
Year - Month - Day - Time

Cement and displace bottom plug. Lay down drill pipe. Set bridge plug 860 m.
Pressure test - 2000 kPa for 15 minutes. Cement top 10 m with 0.4 T. permafrost.

Rig Release 2000 hours 84 03 11.

WANT LIST:

WEATHER -38°C ROAD Good

IN DETAIL: MOVEMENT OF PURCHASE & RENTAL ITEMS (WHERE, WHEN, HOW)

SECTION VII

LOGS

DAWSON - LONG & ASSOCIATES LTD.

LEGEND

SHOWS:

- O POOR, SLIGHT, TRACE
- ◑ FAIR, MEDIUM
- ● GOOD, STRONG, HEAVY
- ●● SATURATED, EXCELLENT
- Q QUESTIONABLE
- F FLUORESCENCE

POROSITY TYPES:

AM	ALGAL MAT	IG	INTERGRANULAR
CK	CHALKY	PP	PINPOINT
FR	FRACTURE	SU	SUCROSIC
IC	INTERCRYSTALLINE	VU	VUGGY

COLOURED STRIP LOG:

LITHOLOGY

- SHALE
- CLAYSTONE
- COAL
- CHERT (BEDDED)
- GLACIAL TILL
- CONGLOMERATE
- SILTSTONE
- SANDSTONE
- MARLSTONE
- LIMESTONE
- DOLOMITE
- ANHYDRITE
- GYPSUM
- SALT
- IGNEOUS
- METAMORPHIC

ACCESSORIES

- SILTY
- SANDY
- PEBBLES
- LT. CHERT / DK. CHERT
- ARGILLACEOUS/SHALEY
- MINOR COAL
- CALCAREOUS
- DOLOMITIC
- ANHYDRITIC
- GLAUCONITE
- PLANT FRAGMENTS
- FISH FRAGMENTS
- fs. FISH SCALES

ORGANICS

- CRINOID
- BIOCLASTIC
- AMPHIPORA
- STROMS
- BRACHIOPOD
- PELECYPOD
- OOLITES
- PELLETS

COLOURS:

BF	BUFF	GN	GREEN	SP	SALT & PEPPER
BK	BLACK	GY	GREY	TN	TAN
BL	BLUE	OR	ORANGE	VC	VARICOLOURED
BR	BROWN	PK	PINK	WH	WHITE
CL	CLEAR	PU	PURPLE	YL	YELLOW
CR	CREAM	RD	RED		

DESCRIPTION OF LITHOLOGY:
STANDARD ABBREVIATIONS USED