

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Drill-Stem Test Data

Well Name ADAMS 2-31 Test No. 2 Date 1/3/95
Company QUINQUE OPERATING COMPANY Zone MORROW
Address P O BOX 2738, LIBERAL, KS 67905-2738 Elevation 2480
Co. Rep./Geo. MARVIN HARVEY Cont. BEREDCO #2 Est. Ft. of Pay 25
Location: Sec. 31 Twp. 34S Rge. 30W Co. MEADE State KS

Interval Tested 5605-5734 Drill Pipe Size 4.5" XH
Anchor Length 129 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 5600 Drill Collar - 2.25 Ft. Run 523
Bottom Packer Depth 5605 Mud Wt. 9 lb/Gal.
Total Depth 5734 Viscosity 54 Filtrate 9

Tool Open @ 8:15AM Initial Blow STRONG BLOW. BOTTOM OF BUCKET IN 1 MINUTE. GAUGED GA
GAS SAMPLE ON FINAL FLOW.

Final Blow STRONG BLOW. BOTTOM OF BUCKET WHEN TOOL OPENED.

Recovery - Total Feet 430 Flush Tool? NO

Rec. 430 Feet of GASSY MUD.
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

BHT 138 °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW _____ @ _____ °F Chlorides _____ ppm Recovery Chlorides 5,400 ppm System

(A) Initial Hydrostatic Mud 2877.2 PSI AK1 Recorder No. 13754 Range 4000

(B) First Initial Flow Pressure 529.6 PSI @ (depth) 5609 w / Clock No. 27501

(C) First Final Flow Pressure 320.0 PSI AK1 Recorder No. 13849 Range 4375

(D) Initial Shut-in Pressure 1959.8 PSI @ (depth) 5731 w / Clock No. 25810

(E) Second Initial Flow Pressure 313.3 PSI AK1 Recorder No. _____ Range _____

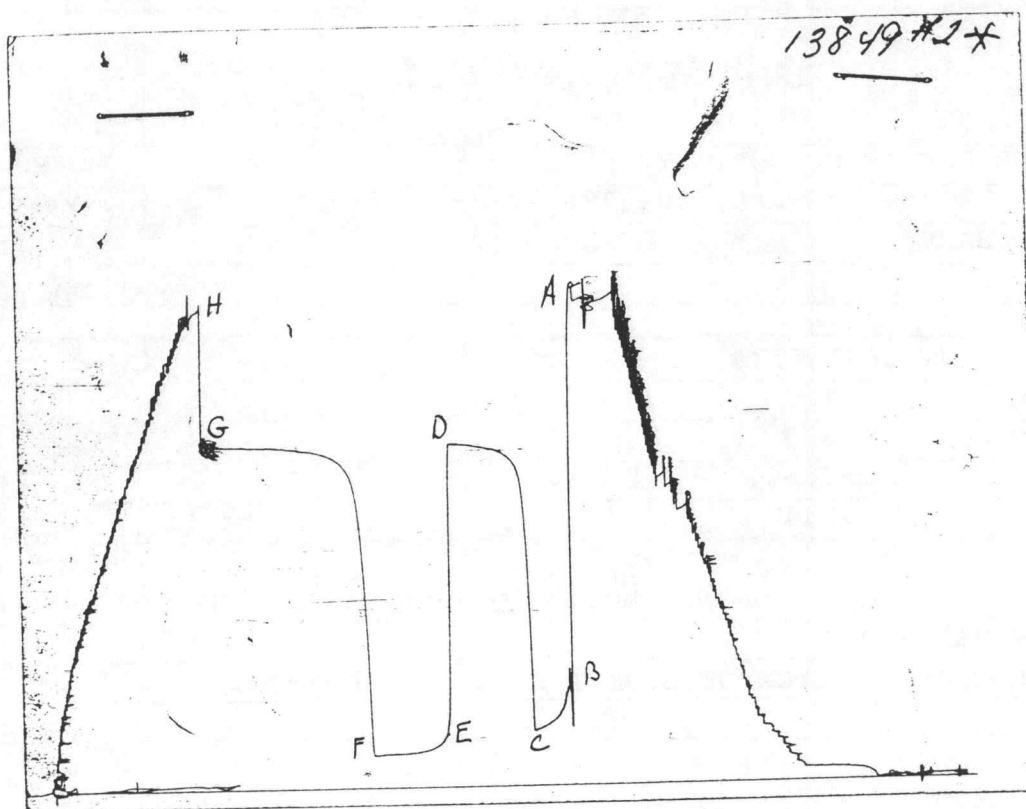
(F) Second Final Flow Pressure 186.7 PSI @ (depth) _____ w / Clock No. _____

(G) Final Shut-in Pressure 1950.0 PSI Initial Opening 30 Final Flow 60

(H) Final Hydrostatic Mud 2783.7 PSI Initial Shut-in 60 Final Shut-in 120

Our Representative DAN BANGLE

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2891	2877.2
(B) FIRST INITIAL FLOW PRESSURE	566	529.6
(C) FIRST FINAL FLOW PRESSURE	333	320
(D) INITIAL CLOSED-IN PRESSURE	1960	1959.8
(E) SECOND INITIAL FLOW PRESSURE	311	313.3
(F) SECOND FINAL FLOW PRESSURE	188	186.7
(G) FINAL CLOSED-IN PRESSURE	1960	1950
(H) FINAL HYDROSTATIC MUD	2782	2783.7

COMPUTER GAS EVALUATION BY TRILOBITE TESTING, L.L.C.

QUINQUE OPERATING COMPANY

ADAMS 2-31

DST 2

31 34S 30W

MEADE KS

ELEVATION:	2480 KB	EST. PAY:	25 FT.
DATUM:	-3252	ZONE TESTED:	MORROW
TEST INTERVAL:	5605-5734	TIME INTERVALS:	30-60-60-120
RECORDER DEPTH:	5731	VISCOSITY:	0.01623 CP
BOTTOM HOLE TEMP:	138	HOLE SIZE:	7.875 IN
COMPRESSIBILITY:	0.9972	GAS GRAVITY:	0.671

TEMPERATURE RANKINE:	598.00	&
TRANSMISSIBILITY:	4607.71	Kh/%
THEORITICAL FLOW CAPICITY:	74.78	Kh
AVERAGE EFFECTIVE PERMEABILITY:	2.99	K(md.)
RADIUS OF INVESTIGATION:	16.41	FT.
DAMAGE RATIO:	5.71	
ABSOLUTE OPEN FLOW(MAX)	500.06	MCFD
ABSOLUTE OPEN FLOW(MIN)	499.53	MCFD
THEORITICAL OPEN FLOW(MAX)	2856.85	MCFD
THEORITICAL OPEN FLOW(MIN)	2853.83	MCFD
POTENTIOMETRIC SURFACE	1094.92	(FT.)

INITIAL SHUT-IN VALUES:

SLOPE	105717.7
THEORETICAL STATIC PRESSURE	1986.6

FINAL SHUT-IN VALUES:

SLOPE	105717.7
THEORETICAL STATIC PRESSURE	1958.5

DRAWDOWN FACTOR:

1.41 (%)

COMPUTER GAS EVALUATION BY TRILOBITE TESTING, L.L.C.

QUINQUE OPERATING COMPANY

ADAMS 2-31

DST 2

31 34S 30W

MEADE KS

ELEVATION:	2480 KB	EST. PAY:	12 FT.
DATUM:	-3252	ZONE TESTED:	MORROW
TEST INTERVAL:	5605-5734	TIME INTERVALS:	30-60-60-120
RECORDER DEPTH:	5731	VISCOSITY:	0.01622 CP
BOTTOM HOLE TEMP:	138	HOLE SIZE:	7.875 IN
COMPRESSIBILITY:	0.9972	GAS GRAVITY:	0.671

TEMPERATURE RANKINE:	598.00	&
TRANSMISSIBILITY:	4607.71	Kh/%
THEORITICAL FLOW CAPICITY:	74.72	Kh
AVERAGE EFFECTIVE PERMEABILITY:	6.23	K(md.)
RADIUS OF INVESTIGATION:	23.67	FT.
DAMAGE RATIO:	5.12	
ABSOLUTE OPEN FLOW(MAX)	500.06	MCFD
ABSOLUTE OPEN FLOW(MIN)	499.53	MCFD
THEORITICAL OPEN FLOW(MAX)	2558.75	MCFD
THEORITICAL OPEN FLOW(MIN)	2556.05	MCFD
POTENTIOMETRIC SURFACE	1094.92	(FT.)

INITIAL SHUT-IN VALUES:

SLOPE	105717.7
THEORETICAL STATIC PRESSURE	1986.6

FINAL SHUT-IN VALUES:

SLOPE	105717.7
THEORETICAL STATIC PRESSURE	1958.5

DRAWDOWN FACTOR:	1.41 (%)
------------------	----------

INITIAL FLOW

DST # 2

RECORDER 13849

TIME(MIN) PRESSURE <>
PRESSURE

0	529.6	529.6
3	529.6	0.0
6	444.4	-85.2
9	403.3	-41.1
12	377.8	-25.5
15	360.0	-17.8
18	344.4	-15.6
21	334.4	-10.0
24	320.0	-14.4
27	320.0	0.0

FINAL FLOW

DST # 2

RECORDER 13849

TIME(MIN)	PRESSURE	<> PRESSURE
0	313.3	313.3
3	258.9	-54.4
6	238.9	-20.0
9	223.3	-15.6
12	216.7	-6.6
15	208.9	-7.8
18	205.6	-3.3
21	200.0	-5.6
24	192.2	-7.8
27	192.2	0.0
30	192.2	0.0
33	192.2	0.0
36	190.0	-2.2
39	190.0	0.0
42	190.0	0.0
45	186.7	-3.3
48	186.7	0.0
51	186.7	0.0
54	186.7	-0.0
57	186.7	0.0

INITIAL SHUT-IN

ADAMS 2-31

DST # 2

INITIAL FLOW TIME 30

SLOPE

105717.7 PSI/CYCLE

P*

1986.59 PSI

TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
3	774.2	1.041	774.2	11
6	1514.9	0.778	740.7	6
9	1610.9	0.637	96.0	4
12	1777.2	0.544	166.3	4
15	1839.2	0.477	62.0	3
18	1869.6	0.426	30.4	3
21	1885.9	0.385	16.3	2
24	1902.2	0.352	16.3	2
27	1914.1	0.325	11.9	2
30	1918.5	0.301	4.4	2
33	1925	0.281	6.5	2
36	1931.5	0.263	6.5	2
39	1935.9	0.248	4.4	2
42	1941.3	0.234	5.4	2
45	1944.6	0.222	3.3	2
48	1948.9	0.211	4.3	2
51	1948.9	0.201	0.0	2
54	1952.2	0.192	3.3	2
57	1956.5	0.184	4.3	2
X 60	1957.6	0.176	1.1	2
63	1958.7	0.169	1.1	1
X 66	1959.8	0.163	1.1	1

FINAL SHUT-IN

ADAMS 2-31

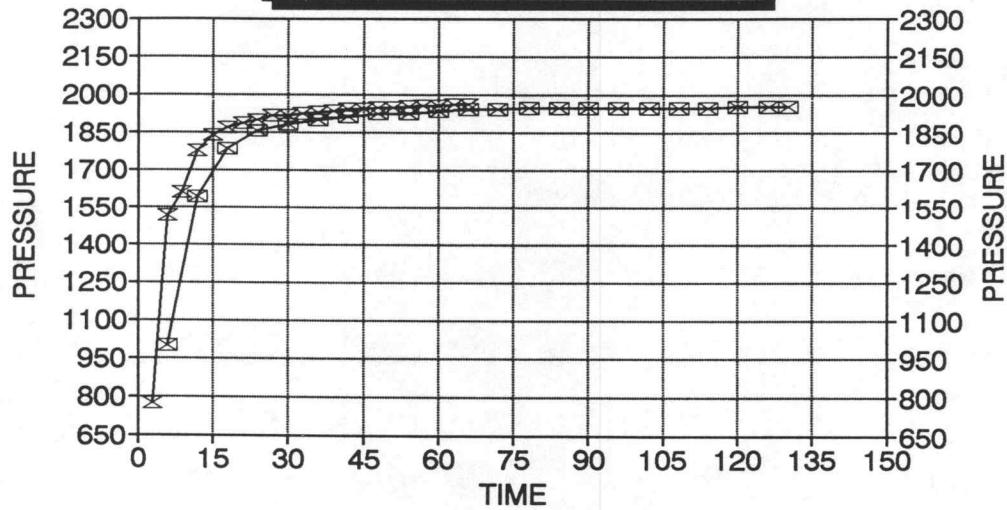
DST # 2

TOTAL FLOW TIME 90

SLOPE 105717.7 PSI/CYCLE
P* 1958.50 PSI

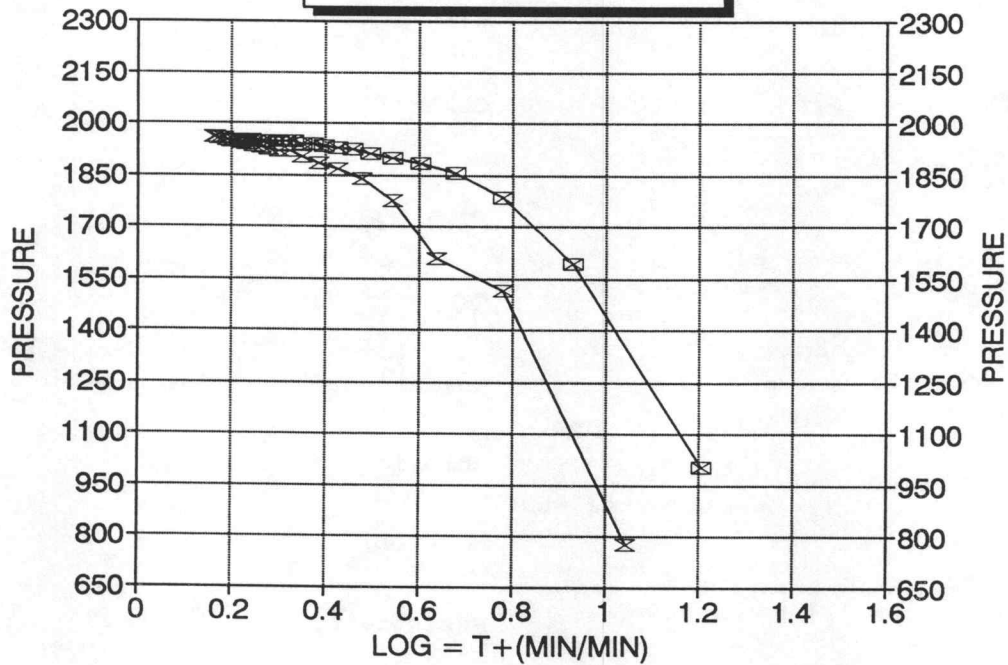
	TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
	-----	-----	-----	-----	-----
	6	1001.1	1.204	1001.1	16
	12	1594.6	0.929	593.5	9
	18	1787.0	0.778	192.4	6
	24	1856.5	0.677	69.6	5
	30	1884.8	0.602	28.3	4
	36	1901.1	0.544	16.3	4
	42	1914.1	0.497	13.0	3
	48	1923.9	0.459	9.8	3
	54	1927.2	0.426	3.3	3
	60	1934.8	0.398	7.6	3
	66	1941.3	0.374	6.5	2
	72	1941.3	0.352	0.0	2
	78	1946.8	0.333	5.4	2
X	84	1946.8	0.316	0.0	2
	90	1946.8	0.301	0.0	2
	96	1948.9	0.287	2.2	2
	102	1948.9	0.275	0.0	2
	108	1948.9	0.263	0.0	2
	114	1948.9	0.253	0.0	2
	120	1950.0	0.243	1.1	2
	126	1950.0	0.234	0.0	2
X	130	1950.0	0.228	0.0	2

DELTA T DELTA P **ADAMS 2-31 / DST #2**



—x— INITIAL —□— FINAL

HORNER PLOT



FLUID SAMPLER DATA

Ticket No.: 7800 Date: 1/3/95
Company: QUINQUE OPERATING COMPANY
Lease: ADAMS 2-31 Test No.: 2
County: MEADE Sec.: 31 Twp.: 34S Rng.: 30W

SAMPLER RECOVERY

Gas 4000 ML
Oil ML
Mud ML
Water ML
Other ML
Pressure 1800 PSI
TOTAL 4000 ML

SAMPLER ANALYSIS

Resistivity ohms@ F
Chlorides ppm.
Gravity corrected @60F

PIT MUD ANALYSIS

Chlorides 5400
Resistivity ohms@ F
Viscosity 54
Mud Wt. 9
Filtrate 9
Other

PIPE RECOVERY

TOP

Resistivity ohms@ F
Chlorides ppm

MIDDLE

Resistivity ohms@ F
Chlorides ppm

BOTTOM

Resistivity ohms@ F
Chlorides ppm

NATURAL GAS ANALYSIS REPORT

Sampled by:
Trilobite Testing, L.L.C.
Hays, Kansas
Scott City, Kansas
Phone: 800-728-5369
Fax: 913-625-5620

Analyzed by:
Caraway Analytical, L.L.C.
728 North Roosevelt
Liberal, Kansas 67901
Phone: 316-624-5389
Fax: 316-626-7108

Lab Number: 950002
Sample From: Adams #2-31 DST 2
Producer: Quinque Operating Co.
Date:
Time:
Sampler:
Source:

Analyzed: 01/03/95
Pressure:
Temperature:
Location: 31-34-30
County: Meade
State: Kansas
Formation: Morrow

	Mole %	GPM
Helium	He: 0.085	0.000
Oxygen	O2:	
Nitrogen	N2: 2.243	0.000
Carbon Dioxide	CO2: 0.190	0.000
Methane	C1: 86.478	0.000
Ethane	C2: 5.394	1.443
Propane	C3: 3.114	0.858
Iso Butane	iC4: 0.418	0.137
Normal Butane	nC4: 0.841	0.265
Iso Pentane	iC5: 0.205	0.075
Normal Pentane	nC5: 0.219	0.079
Hexanes Plus	C6+: 0.813	0.355
TOTAL:	100.000	3.212
Z Fact:	0.9972	
SP.GR.:	0.6710	
BTU (SAT):	1132.7 @ 14.73 psia	
BTU (DRY):	1152.8 @ 14.73 psia	
OCTANE RATING:	122.6	

COMMENTS: Helium content calculated based on Nitrogen

GAS VOLUME REPORT

QUINQUE OPERATING COMPANY

ADAMS 2-31

DST # 2

MIN	IN WATER /PSIG	ORIFICE	MCF/D	MIN	IN WATER /PSIG	ORIFICE	MCF/D
0		1		0		1	
5	9	1	442	5	13	1	552
10	9	1	442	10	12	1	526
15	9	1	442	15	11	1	499
20	9	1	442	20	11	1	499
25	10	1	472	25	11	1	499
30	10	1	472	30	11	1	499
				35	11	1	499
				40	11	1	499
				45	11	1	499
				45	11	1	499
				50	11	1	499
				55	11	1	499
				60	11	1	499

Remarks: GAS TO SURFACE IN 7 MINUTES. GAS SAMPLE TAKEN.

TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

Test Ticket

No 7800

Well Name & No.	<u>Adams 2-31</u>		Test No.	<u>2</u>	Date	<u>1-3-95</u>
Company	<u>Quingue Operating Co.</u>		Zone Tested	<u>Morrow</u>		
Address	<u>P.O. Box 2798 Liberal, Ks. 67905-2798</u>		Elevation	<u>2480 K.B.</u>		
Co. Rep./Geo.	<u>Marvin Harvey</u>	Cont.	<u>Beredco #2</u>	Est. Ft. of Pay	<u>25</u>	
Location: Sec.	<u>31</u>	Twp.	<u>34</u>	Rge.	<u>30</u>	Co. <u>Meade</u> State <u>Ks</u>
No. of Copies	<u>5</u>	Distribution Sheet	<u>Yes</u>	No	Turnkey	<u>Yes</u> <u>No</u> <u>X</u> Evaluation

Interval Tested	<u>5605-5734</u>	Drill Pipe Size	<u>4.5 X H</u>
Anchor Length	<u>129</u>	Top Choke — 1"	Bottom Choke — $\frac{3}{4}$ "
Top Packer Depth	<u>5600</u>	Hole Size — $7\frac{7}{8}$ "	Rubber Size — $6\frac{3}{4}$ "
Bottom Packer Depth	<u>5605</u>	Wt. Pipe I.D. — 2.7 Ft. Run	
Total Depth	<u>5734</u>	Drill Collar — 2.25 Ft. Run	<u>523</u>
Mud Wt.	<u>9</u> lb/gal.	Viscosity	<u>54</u> Filtrate <u>9</u>
Tool Open @	<u>8:15 a.m. Initial Blow Strong - B.O.B. in 1 min.</u>		
	<u>Gauged Gas - Took Gas sample on FF</u>		
Final Blow	<u>Strong - B.O.B. when Tool opened</u>		

Recovery — Total Feet	<u>430</u>	Feet of Gas in Pipe	<u>GTS</u>	Flush Tool?	
Rec.	<u>430</u>	Feet Of	<u>Gsy mud</u>	%gas	%oil
Rec.		Feet Of		%water	%mud
Rec.		Feet Of		%gas	%oil
Rec.		Feet Of		%water	%mud
Rec.		Feet Of		%gas	%oil
Rec.		Feet Of		%water	%mud

BHT	<u>138</u>	°F Gravity		°API @		°F Corrected Gravity		°API
RW		@		°F Chlorides		ppm Recovery	Chlorides <u>5400</u>	ppm System
(A) Initial Hydrostatic Mud	<u>2891</u>	PSI	AK1 Recorder No.	<u>13754</u>	Range	<u>4000</u>		
(B) First Initial Flow Pressure	<u>566</u>	PSI	@ (depth)	<u>5609</u>	w/Clock No.	<u>27501</u>		
(C) First Final Flow Pressure	<u>333</u>	PSI	AK1 Recorder No.	<u>13849</u>	Range	<u>4375</u>		
(D) Initial Shut-In Pressure	<u>1960</u>	PSI	@ (depth)	<u>5231</u>	w/Clock No.	<u>25810</u>		
(E) Second Initial Flow Pressure	<u>311</u>	PSI	AK1 Recorder No.		Range			
(F) Second Final Flow Pressure	<u>188</u>	PSI	@ (depth)		w/Clock No.			
(G) Final Shut-In Pressure	<u>1960</u>	PSI	Initial Opening	<u>30</u>	Test	<u>700</u>		
(H) Final Hydrostatic Mud	<u>2782</u>	PSI	Initial Shut-In	<u>60</u>	Jars	<u>X</u>	<u>200</u>	

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF THE PROPERTY OR PERSONNEL OF THE ONE FOR WHOM A TEST IS MADE, OR FOR ANY LOSS SUFFERED OR SUSTAINED, DIRECTLY OR INDIRECTLY, THROUGH THE USE OF ITS EQUIPMENT, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Approved By Marvin Harvey
Our Representative Dan Rangle

Printcraft Printers - Hays, KS

Final Flow 60 Safety Joint X 50
Final Shut-In 120 Straddle _____
Circ. Sub _____
Sampler X 200
Extra Packer _____
Other val 50
TOTAL PRICE \$ 1200



GAS VOLUME REPORT

Adams # 2-21
WELL NAME AND NO.

2
DST NO.

Remarks: GTS in 2min. Gas sample Taken

TRILOBITE TESTING L.L.C.

P.O. Box 362 - Hays, Kansas 67601

FLUID SAMPLER DATA

Ticket No. 7800 Date 1-2-95
Company Name Quinque Operating Co.
Lease Adams #2-31 Test No. 2
County meade Sec. 31 Twp. 34 Rng. 20

SAMPLER RECOVERY

Gas 4000 ML
Oil 0 ML
Mud 0 ML
Water 0 ML
Other 0 ML
Pressure 1800 PSI
Total 4000 ML

SAMPLER ANALYSIS

Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.
Gravity _____ corrected @ 60 F

PIT MUD ANALYSIS

Chlorides 5400 ppm.
Resistivity _____ ohms @ _____ F
Viscosity 54
Mud Weight 9
Filtrate 9
Other _____

PIPE RECOVERY

TOP
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

MIDDLE
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.

BOTTOM
Resistivity _____ ohms @ _____ F
Chlorides _____ ppm.