

RELEASED

MAY 24 1995

TRILOBITE TESTING, L.L.C.

CONFIDENTIAL

P.O. Box 362 • Hays, Kansas 67601

FROM CONFIDENTIAL

Drill-Stem Test Data

API# 15-081-20814

Well Name CLARK UNIT #2 Test No. 1 Date 11/11/93
 Company MOBIL OIL CO. Zone COUNCIL GROV
 Address 2319 N KANSAS (P O BOX 2173) LIBERAL KS 67901 Elevation 3023
 Co. Rep./Geo. BENNY BRIGGS Cont. CHEYENNE DRLG RIG #4 Est. Ft. of Pay _____
 Location: Sec. 20 Twp. 28S Rge. 34W Co. HASKELL State KS

Interval Tested 2903-2918 Drill Pipe Size 4.5 FH
 Anchor Length 15 Wt. Pipe I.D. - 2.7 Ft. Run _____
 Top Packer Depth 2895 Drill Collar - 2.25 Ft. Run _____
 Bottom Packer Depth 2903 Mud Wt. 1.24 lb/Gal.
 Total Depth 2918 Viscosity 86 Filtrate _____

Tool Open @ 7:50 AM Initial Blow STRONG BLOW - OPEN 2" KCC

Final Blow STRONG BLOW - OPEN 2" FEB 22

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Recovery - Total Feet 120 Flush Tool? NO

Rec. 120 Feet of SOAPY WATER
 Rec. _____ Feet of _____
 Rec. _____ Feet of _____
 Rec. _____ Feet of _____
 Rec. _____ Feet of _____

BHT _____ °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
 RW 0.151 @ 56 °F Chlorides 65000 ppm Recovery Chlorides 2400 ppm System

(A) Initial Hydrostatic Mud _____ PSI AK1 Recorder No. _____ Range _____

(B) First Initial Flow Pressure _____ PSI @ (depth) _____ w / Clock No. _____

(C) First Final Flow Pressure _____ PSI AK1 Recorder No. _____ Range _____

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

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

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

(G) Final Shut-in Pressure _____ PSI Initial Opening _____ Final Flow _____

(H) Final Hydrostatic Mud _____ PSI Initial Shut-in _____ Final Shut-in _____

Our Representative TOM HORACEK

FLUID SAMPLER DATA

Ticket No.: 6665

Date: 11/11/93

Company: MOBIL OIL CO.

Lease: CLARK UNIT #2

Test No.: 1

County: HASKELL

Sec.: 20

Twp.: 28S

Rng.: 34W

SAMPLER RECOVERY

Gas 4000

Oil

Mud

Water

Other

Pressure 170

TOTAL 4000

SAMPLER ANALYSIS

Resistivity ohms@ F

Chlorides ppm.

Gravity corrected @60F

PIT MUD ANALYSIS

Chlorides 2400

Resistivity ohms@ F

Viscosity 86

Mud Wt. 1.24

Filtrate

Other FOAM

PIPE RECOVERY

TOP

Resistivity ohms@ F

Chlorides ppm

MIDDLE

Resistivity ohms@ F

Chlorides ppm

BOTTOM

Resistivity 0.151 ohms@ 56 F

Chlorides 65000 ppm

GAS VOLUME REPORT

CONFIDENTIAL

MOBIL OIL CO.

KCC

CLARK UNIT #2

FEB 22
CONFIDENTIAL

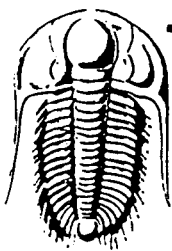
DST # 1

MIN	PSIG	ORIFICE	MCF/D	MIN	PSIG	ORIFICE	MCF/D
5	26	0.125	2.69	5	20	0.375	15.9
10	32	0.125	2.99	10	18	0.375	15.1
15	36	0.125	3.17	15	17	0.375	14.7
20	38	0.125	3.25	20	15	0.375	13.9
25	40	0.125	3.34	25	13	0.375	12.9
30	40	0.125	3.34	30	12	0.375	12.4
				35	10	0.375	11.3
				40	10	0.375	11.3
				45	9	0.375	10.7
				50	9	0.375	10.7
				55	8	0.375	10.1
				60	8	0.375	10.1

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FROM CONFIDENTIAL



TRILOBITE
TESTING L.L.C.

Shut-in tool 5'

Sampler 3'

Hydraulic tool 5'

AP carrier 4'

Jars 5'

Safety Jt. 2'

Shale Packer 8'

Shale Packer 8'

5'

5'

5'

RE

Total depth

2918'

Recorder

Clark Unit #2

DST #1

2895'

2907'

TRILOBITE TESTING, L.L.C.

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Drill-Stem Test Data

Well Name CLARK UNIT #2 Test No. 2 Date 11/12/93
Company MOBIL OIL CO. Zone COUNCIL GROV
Address 2319 N KANSAS (P O BOX 2173) LIBERAL KS 67901 Elevation 3023
Co. Rep./Geo. BENNY BRIGGS Cont. CHEYENNE DRLG RIG #4 Est. Ft. of Pay _____
Location: Sec. 20 Twp. 28S Rge. 34W Co. HASKELL State KS

Interval Tested 2944-2953 Drill Pipe Size 4.5 FH
Anchor Length 9 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 2936 Drill Collar - 2.25 Ft. Run 491
Bottom Packer Depth 2944 Mud Wt. _____ lb/Gal.
Total Depth 2953 Viscosity 88 Filtrate _____

Tool Open @ 10:12 PM Initial Blow 1" BLOW - OPEN 2" KCC

Final Blow NO BLOW FEB 22

CONFIDENTIAL

Recovery - Total Feet 30 Flush Tool? NO

Rec. 30 Feet of SOAPY WATER
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____
Rec. _____ Feet of _____

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FROM CONFIDENTIAL

BHT _____ °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.201 @ 58 °F Chlorides 45000 ppm Recovery Chlorides 900 ppm System

(A) Initial Hydrostatic Mud _____ PSI AK1 Recorder No. _____ Range _____

(B) First Initial Flow Pressure _____ PSI @ (depth) _____ w / Clock No. _____

(C) First Final Flow Pressure _____ PSI AK1 Recorder No. _____ Range _____

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

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

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

(G) Final Shut-in Pressure _____ PSI Initial Opening _____ Final Flow _____

(H) Final Hydrostatic Mud _____ PSI Initial Shut-in _____ Final Shut-in _____

Our Representative TOM HORACEK

FLUID SAMPLER DATA

Ticket No.: 6666 Date: 11/12/93
Company: MOBIL OIL CO.
Lease: CLARK UNIT #2 Test No.: 2
County: HASKELL Sec.: 20 Twp.: 28S Rng.: 34W

SAMPLER RECOVERY

PIT MUD ANALYSIS

Gas Chlorides 900
Oil Resistivity ohms@ F
Mud Viscosity 88
Water 4000 Mud Wt. 0.98
Other Filtrate
Pressure 5 Other FOAM
TOTAL 4000

PIPE RECOVERY

TOP

Resistivity 0.201 ohms@ 58 F
Chlorides 45000 ppm.
Gravity corrected @60F

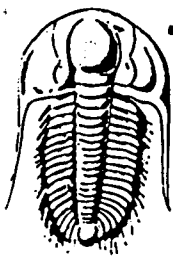
Resistivity ohms@ F
Chlorides ppm

MIDDLE

Resistivity ohms@ F
Chlorides ppm

BOTTOM

Resistivity 0.201 ohms@ 58 F
Chlorides 45000 ppm



TRILOBITE
TESTING L.L.C.

Shut-in tool 5'

Sampler 3'

Hydraulic tool 5'

AP carrier 4'

Jars 5'

Safety Jt. 2'

Shale Packer 8'

Shale Packer 8'

4'	000
	000
	000
5'	000
	000
	000

REC.

CONFIDENTIAL

Total depth 2953'

KCC

FEB 22

CONFIDENTIAL

Clark Unit #2
DST #2

RECORDER

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FROM CONFIDENTIAL

2936'

29114'

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Drill-Stem Test Data

Well Name CLARK UNIT #2 Test No. 3 Date 11/14/93
Company MOBIL OIL CO. Zone COUNCIL GRV
Address 2319 N KANSAS (P O BOX 2173) LIBERAL KS 67901 Elevation 3023
Co. Rep./Geo. BENNY BRIGGS Cont. CHEYENNE DRLG RIG #4 Est. Ft. of Pay _____
Location: Sec. 20 Twp. 28S Rge. 34W Co. HASKELL State KS

Interval Tested 2945-2953 Drill Pipe Size 4.5 FH
Anchor Length 8 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 2937 Drill Collar - 2.25 Ft. Run 491
Bottom Packer Depth 2945 Mud Wt. 1.2 lb/Gal.
Total Depth 2953 Viscosity 86 Filtrate _____

Tool Open @ 8:38 AM Initial Blow 1.5" BLOW - OPEN 2"

Final Blow NO BLOW

KCC

Recovery - Total Feet 30 Flush Tool? NO FEB 22

Rec. 30 Feet of SOAPY WATER CONFIDENTIAL

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

Rec. _____ Feet of _____

BHT _____ °F Gravity _____ °API ~~FROM CONFIDENTIAL~~ Corrected Gravity _____ °API
RW 0.2 @ 59 °F Chlorides 45000 ppm Recovery Chlorides 900 ppm System

(A) Initial Hydrostatic Mud _____ PSI AK1 Recorder No. _____ Range _____

(B) First Initial Flow Pressure _____ PSI @ (depth) _____ w / Clock No. _____

(C) First Final Flow Pressure _____ PSI AK1 Recorder No. _____ Range _____

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

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

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

(G) Final Shut-in Pressure _____ PSI Initial Opening _____ Final Flow _____

(H) Final Hydrostatic Mud _____ PSI Initial Shut-in _____ Final Shut-in _____

Our Representative TOM HORACEK

FLUID SAMPLER DATA

Ticket No.: 6667 Date: 11/14/93
Company: MOBIL OIL CO.
Lease: CLARK UNIT #2 Test No.: 3
County: HASKELL Sec.: 20 Twp.: 28S Rng.: 34W

SAMPLER RECOVERY

Gas
Oil
Mud
Water 4000
Other
Pressure 5
TOTAL 4000

SAMPLER ANALYSIS

Resistivity 0.2 ohms@ 59 F
Chlorides 45000 ppm.
Gravity corrected @60F

PIT MUD ANALYSIS

Chlorides 900
Resistivity ohms@ F
Viscosity 86
Mud Wt. 1.2
Filtrate
Other FOAM

PIPE RECOVERY

TOP

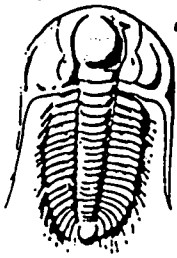
Resistivity ohms@ F
Chlorides ppm

MIDDLE

Resistivity ohms@ F
Chlorides ppm

BOTTOM

Resistivity 0.2 ohms@ 59 F
Chlorides 45000 ppm



TRILOBITE
TESTING L.L.C.

Shut-in tool 5'

Sampler 3'

Hydraulic tool 5'

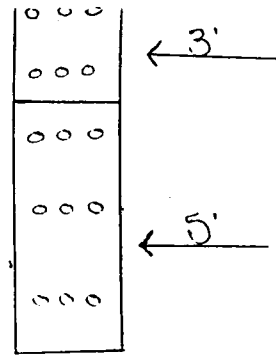
AP carrier 4'

Jars 5'

Safety Jt. 2'

Shale Packer 8'

Shale Packer 8'



CONFIDENTIAL

Total depth 2953'

KCC

FEB 22

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Recorder

Clark Unit #3
DST #3

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MAY 24 1995

FROM CONFIDENTIAL

← 2937'

← 2945'

TRILOBITE TESTING, L.L.C.

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Drill-Stem Test Data

Well Name CLARK UNIT #2 Test No. 4 Date 11/15/93
Company MOBIL OIL CO. Zone COUNCIL GRV
Address 2319 N KANSAS (P O BOX 2173) LIBERAL KS 67901 Elevation 3023
Co. Rep./Geo. BENNY BRIGGS Cont. CHEYENNE DRLG RIG #4 Est. Ft. of Pay _____
Location: Sec. 20 Twp. 28S Rge. 34W Co. HASKELL State KS

Interval Tested 2967-2974 Drill Pipe Size 4.5 FH
Anchor Length 7 Wt. Pipe I.D. - 2.7 Ft. Run _____
Top Packer Depth 2959 Drill Collar - 2.25 Ft. Run 491
Bottom Packer Depth 2967 Mud Wt. 8.5 lb/Gal.
Total Depth 2974 Viscosity 88 Filtrate _____

Tool Open @ 7:48 PM Initial Blow 3" BLOW - OPEN 2" KCC

Final Blow 1" BLOW - OPEN 2" FEB 22

CONFIDENTIAL

Recovery - Total Feet 130 Flush Tool? NO

Rec. 130 Feet of SOAPY WATER RELEASED

Rec. _____ Feet of _____

Rec. _____ Feet of _____ MAY 24 1995

Rec. _____ Feet of _____

Rec. _____ Feet of _____ FROM CONFIDENTIAL

BHT _____ °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.201 @ 49 °F Chlorides 52000 ppm Recovery Chlorides 1600 ppm System

(A) Initial Hydrostatic Mud _____ PSI AK1 Recorder No. _____ Range _____

(B) First Initial Flow Pressure _____ PSI @ (depth) _____ w / Clock No. _____

(C) First Final Flow Pressure _____ PSI AK1 Recorder No. _____ Range _____

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

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

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

(G) Final Shut-in Pressure _____ PSI Initial Opening _____ Final Flow _____

(H) Final Hydrostatic Mud _____ PSI Initial Shut-in _____ Final Shut-in _____

Our Representative TOM HORACEK

FLUID SAMPLER DATA

Ticket No.: 6668 Date: 11/15/93
Company: MOBIL OIL CO.
Lease: CLARK UNIT #2 Test No.: 4
County: HASKELL Sec.: 20 Twp.: 28S Rng.: 34W

SAMPLER RECOVERY

Gas 3600
Oil
Mud
Water 400
Other
Pressure 475
TOTAL 4000

PIT MUD ANALYSIS

Chlorides 1600
Resistivity ohms@ F
Viscosity 88
Mud Wt. 8.5
Filtrate
Other FOAM

SAMPLER ANALYSIS

Resistivity 0.201 ohms@ 49 F
Chlorides 52000 ppm.
Gravity corrected @60F

PIPE RECOVERY

TOP

Resistivity ohms@ F
Chlorides ppm

MIDDLE

Resistivity ohms@ F
Chlorides ppm

BOTTOM

Resistivity 0.201 ohms@ 49 F
Chlorides 52000 ppm

GAS VOLUME REPORT

CONFIDENTIAL

MOBIL OIL CO.

KCC

CLARK UNIT #2

FEB 2 2

DST # 4

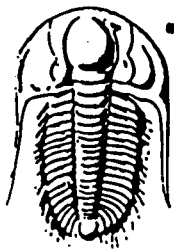
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MIN	PSIG	ORIFICE	MCF/D	MIN	PSIG	ORIFICE	MCF/D
5	12	0.125	1.83	5	12	0.125	1.83
10	14	0.125	1.98	10	14	0.375	1.98
15	16	0.125	2.11	15	16	0.375	2.11
20	16	0.125	2.11	20	20	0.375	2.36
25	16	0.125	2.11	25	22	0.375	2.48
30	16	0.125	2.11	30	22	0.375	2.48
				35	22	0.375	2.48
				40	22	0.375	2.48
				45	20	0.375	2.36
				50	20	0.375	2.36
				55	19	0.375	2.3
				60	19	0.375	2.3

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TRILOBITE TESTING L.L.C.

Shut-in tool 5'

Sampler 3'

Hydraulic tool 5'

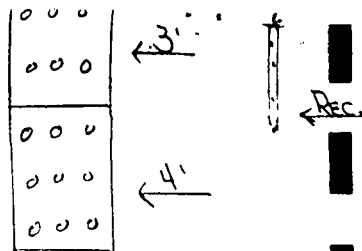
AP carrier 4'

Jars 5'

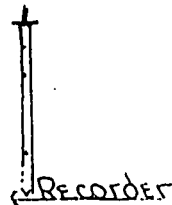
Safety Jt. 2'

Shale Packer 8'

Shale Packer 8'



Total depth 2974'



Clark Unit #2
DST #4

← 2959'

← 2967'

TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

CONFIDENTIAL

Drill-Stem Test Data

Well Name CLARK UNIT #2 Test No. 5 Date 11/17/93
Company MOBIL OIL CO. Zone COUNCIL GRV
Address 2319 N KANSAS (P O BOX 2173) LIBERAL KS 67901 Elevation 3023
Co. Rep./Geo. BENNY BRIGGS Cont. CHEYENNE DRLG RIG #4 Est. Ft. of Pay _____
Location: Sec. 20 Twp. 28S Rge. 34W Co. HASKELL State KS

Interval Tested 3013-3024
Anchor Length 11
Top Packer Depth 3005
Bottom Packer Depth 3013
Total Depth 3024

Drill Pipe Size 4.5 FH
Wt. Pipe I.D. - 2.7 Ft. Run _____
Drill Collar - 2.25 Ft. Run 491
Mud Wt. _____ lb/Gal.
Viscosity 86 Filtrate _____

Tool Open @ 6:22 PM Initial Blow 1/2" BLOW - OPEN 2"

KCC
FEB 22

Final Blow SURFACE BLOW - OPEN 2"

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Recovery - Total Feet 500

Flush Tool? NO

Rec. 500 Feet of SOAPY WATER

RELEASED

Rec. _____ Feet of _____

Rec. _____ Feet of _____

MAY 24 1995

Rec. _____ Feet of _____

Rec. _____ Feet of _____

FROM CONFIDENTIAL

BHT _____ °F Gravity _____ °API @ _____ °F Corrected Gravity _____ °API
RW 0.135 @ 54 °F Chlorides 92000 ppm Recovery Chlorides 5320 ppm System

(A) Initial Hydrostatic Mud _____ PSI AK1 Recorder No. _____ Range _____

(B) First Initial Flow Pressure _____ PSI @ (depth) _____ w / Clock No. _____

(C) First Final Flow Pressure _____ PSI AK1 Recorder No. _____ Range _____

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

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

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

(G) Final Shut-in Pressure _____ PSI Initial Opening _____ Final Flow _____

(H) Final Hydrostatic Mud _____ PSI Initial Shut-in _____ Final Shut-in _____

Our Representative TOM HORACEK

FLUID SAMPLER DATA

Ticket No.: 6669 Date: 11/17/93
Company: MOBIL OIL CO.
Lease: CLARK UNIT #2 Test No.: 5
County: HASKELL Sec.: 20 Twp.: 28S Rng.: 34W

SAMPLER RECOVERY

Gas
Oil
Mud
Water 4000
Other
Pressure 300
TOTAL 4000

SAMPLER ANALYSIS

Resistivity 0.134 ohms@ 54 F
Chlorides 92000 ppm.
Gravity corrected @60F

PIT MUD ANALYSIS

Chlorides 5320
Resistivity ohms@ F
Viscosity 86
Mud Wt. 1.1
Filtrate
Other FOAM

PIPE RECOVERY

TOP

Resistivity 0.14 ohms@ 54 F
Chlorides 74000 ppm

MIDDLE

Resistivity ohms@ F
Chlorides ppm

BOTTOM

Resistivity 0.135 ohms@ 54 F
Chlorides 92000 ppm

GAS VOLUME REPORT

CONFIDENTIAL

MOBIL OIL CO.

KCC

CLARK UNIT #2

FEB 22

DST # 5

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MIN	PSIG	ORIFICE	MCF/D	MIN	PSIG	ORIFICE	MCF/D
5	0.5	0.25	1.26	5	0.5	0.125	0.403
10		0.25	DECREASED	10		0.125	DECREASE
15		0.25	DECREASED	15		0.125	DECREASE
20		0.25	DECREASED	20		0.125	DECREASE
25		0.25	DECREASED	25		0.125	DECREASE
30		0.25	DECREASED	30		0.125	DECREASE
				35		0.125	DECREASE
				40		0.125	DECREASE
				45		0.125	DECREASE
				50		0.125	DECREASE
				55		0.125	DECREASE
				60		0.125	DECREASE

RELEASED

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FROM CONFIDENTIAL