

ORIGINAL

CHARTER PRODUCTION COMPANY
224 E. DOUGLAS - SUITE 400
WICHITA, KANSAS 67202
316/264-2808

APR 30
CONFIDENTIAL

EVANS #1
DST RESULTS

DST #1: 2688'-2740'. 30"-60"-30"-60". Recovered: 310' M & 232' MW (50% M & 50% W). IHP 1346#, FHP 1316#, IFP 111#-182#, FFP 233#-254#, ISIP 728#, FSIP 728#. BHT 85°.

DST #2: 3000'-3056'. 30"-60"-60"-60". Recovered: 93' GM (10% G & 90% M) & 604' GMSW (25% M, 25% W & 50% G). Initial Blow: NGTS. Initial SI: GTS in 1.5". Final Blow: 3.17 MCF & stabilized. IHP 1456#, FHP 1436#, IFP 81#-152#, FFP 172#-264#, ISIP 747# & FSIP 758#. BHT 95°.

DST #3: 3089'-3153'. 30"-60"-30"-60". Frmn: Neva Ls. Recovered: 792' MSW (40% M & 60% W). IHP 1519#, IFP 100#-270#, FFP 320#-370#, ISIP 946#, FSIP 946#, & FHP 1500#. BHT 98°.

DST #4: 3182'-3218'. 30"-60"-60"-90". Frmn: Foraker Ls. 30"-60"-60"-90". Recovered: 90' GM & 607' GMSW. GTS on SI - 10"-60.2 mcf, 20"-61.9 mcf, 30"-63.5 mcf, 40"-69.5 mcf, 50"-72.4 mcf, 60"-75.1 mcf. IHP 1539#, FHP 1529#. IFP 90#-160#, FFP 150#-210#, ISIP 956#, FSIP 956#.

RELEASED

MAY 24 1995

FROM CONFIDENTIAL

RECEIVED
STATE CONSERVATION COMMISSION

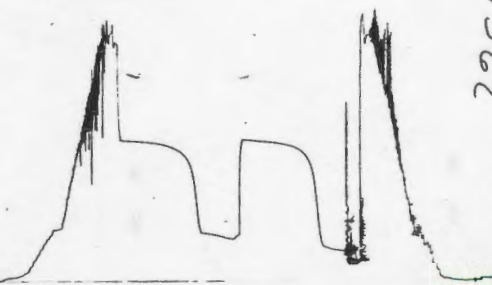
MAY - 4 1995

CONSERVATION DIVISION
Wichita, Kansas

JK+ 19386

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DST# 1562



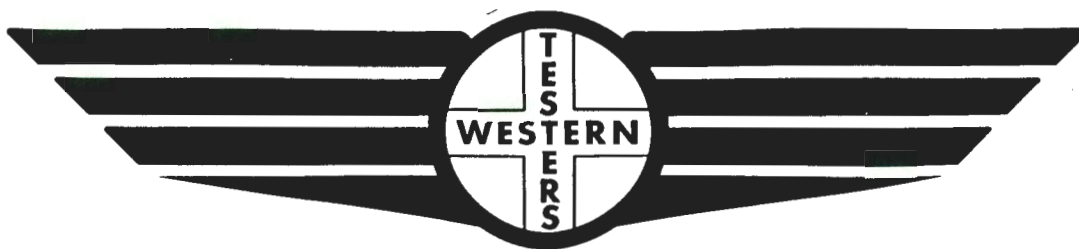
JK+ 19386

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DST# 13246



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800-688-7021

COMPANY CHARTER PRODUCTION COMPANY LEASE & WELL NO. #1 EVANS SEC. 15 TWP. 34S RGE. 28W TEST NO. 1 DATE 1/11/93

DST REPORT

GENERAL INFORMATION

DATE : 1/11/93
CUSTOMER : CHARTER PRODUCTION CO.
WELL : 1 TEST: 1
ELEVATION: 2346 GE
SECTION : 15
RANGE : 28W COUNTY: MEADE
GAUGE SN#: 13266 RANGE : 4000

TICKET : 19386
LEASE : EVANS
GEOLOGIST:
FORMATION: CHASE
TOWNSHIP : 34S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 2688.00 ft TO: 2740.00 ft TVD: 2740.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 2699.0 ft 2702.0 ft
TEMPERATURE: 85.0

DRILL COLLAR LENGTH:	542.0 ft	I.D.:	2.250 in
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH :	2118.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH :	28.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH :	52.0 ft	ANCHOR SIZE:	5.500 in
SURFACE CHOKE SIZE :	0.750 in	BOTTOM CHOKE SIZE:	0.750 in
MAIN HOLE SIZE :	7.875 in	TOOL JOINT SIZE :	4.5XH
PACKER DEPTH:	2693.0 ft	SIZE:	6.630 in
PACKER DEPTH:	2688.0 ft	SIZE:	6.630 in
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in

MUD INFORMATION

DRILLING CON. : EAGLE RIG 1
MUD TYPE : STARCH
WEIGHT : 8.900 ppg
CHLORIDES : 7000 ppm
JARS-MAKE : W.T.C.
DID WELL FLOW?: NO

VISCOSITY : 48.00 cp
WATER LOSS: 15.200 cc

SERIAL NUMBER: 512
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW - BOTTOM OF
BUCKET IN 4 MINUTES. FINAL FLOW PERIOD STRONG
BLOW - BOTTOM OF BUCKET IN 3 MINUTES.

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

(GAS @ TOOL ONLY)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
310.0	0.0	0.0	0.0	100.0	DRILLING MUD
232.0	0.0	0.0	50.0	50.0	MUDDY SALTWATER
0.0	0.0	0.0	0.0	0.0	CHLORIDES 55000 PPM

RATE INFORMATION

OIL VOLUME:	0.0000 STB	
GAS VOLUME:	0.0000 SCF	
MUD VOLUME:	2.0948 STB	
WATER VOLUME:	0.5704 STB	
TOTAL FLUID :	2.6653 STB	
		TOTAL FLOW TIME: 60.0000 min.
		AVERAGE OIL RATE: 0.0000 STB/D
		AVERAGE WATER RATE: 27.3805 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1346.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	111.00	182.00
INITIAL SHUT-IN	60.00		728.00
FINAL FLOW	30.00	233.00	254.00
FINAL SHUT-IN	60.00		728.00

FINAL HYDROSTATIC PRESSURE: 1316.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1307.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	117.00	203.00
INITIAL SHUT-IN	60.00		743.00
FINAL FLOW	30.00	248.00	274.00
FINAL SHUT-IN	63.00		741.00

FINAL HYDROSTATIC PRESSURE: 1287.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 1/11/93	TICKET	: 19386
CUSTOMER	: CHARTER PRODUCTION CO.	LEASE	: EVANS
WELL	: 1	TEST:	1
ELEVATION	: 2346 GE	GEOLOGIST:	
SECTION	: 15	FORMATION:	CHASE
RANGE	: 28W	TOWNSHIP	: 34S
GAUGE SN#	: 13266	COUNTY:	MEADE
		STATE	: KS
		RANGE	: 4000
		CLOCK	: 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	117.00	117.00
5.00	193.00	76.00
10.00	127.00	-66.00
15.00	178.00	51.00
20.00	181.00	3.00
25.00	191.00	10.00
30.00	203.00	12.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	336.00	336.00	0.00
6.00	520.00	184.00	0.00
9.00	610.00	90.00	0.00
12.00	637.00	27.00	0.00
15.00	665.00	28.00	0.00
18.00	685.00	20.00	0.00
21.00	699.00	14.00	0.00
24.00	709.00	10.00	0.00
27.00	716.00	7.00	0.00
30.00	721.00	5.00	0.00
33.00	728.00	7.00	0.00
36.00	731.00	3.00	0.00
39.00	735.00	4.00	0.00
42.00	737.00	2.00	0.00
45.00	738.00	1.00	0.00
48.00	739.00	1.00	0.00
51.00	740.00	1.00	0.00
54.00	741.00	1.00	0.00
57.00	742.00	1.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	743.00	1.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	248.00	248.00
5.00	248.00	0.00
10.00	248.00	0.00
15.00	255.00	7.00
20.00	263.00	8.00
25.00	267.00	4.00
30.00	274.00	7.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	421.00	421.00	0.00
6.00	545.00	124.00	0.00
9.00	617.00	72.00	0.00
12.00	646.00	29.00	0.00
15.00	672.00	26.00	0.00
18.00	686.00	14.00	0.00
21.00	697.00	11.00	0.00
24.00	704.00	7.00	0.00
27.00	713.00	9.00	0.00
30.00	718.00	5.00	0.00
33.00	723.00	5.00	0.00
36.00	727.00	4.00	0.00
39.00	730.00	3.00	0.00
42.00	732.00	2.00	0.00
45.00	734.00	2.00	0.00
48.00	736.00	2.00	0.00
51.00	737.00	1.00	0.00
54.00	738.00	1.00	0.00
57.00	739.00	1.00	0.00
60.00	740.00	1.00	0.00
63.00	741.00	1.00	0.00



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET

No 19386

P. O. BOX 1599 PHONE (316) 262-5861

WICHITA, KANSAS 67201

Elevation G.E. 2346

Formation Chase

Eff. Pay _____ Ft.

District Garden City

Date 1-11-93

Customer Order No. _____

COMPANY NAME Charter Production Company,

ADDRESS 224, E. Douglas Suite 400 Wichita, KS, 67202

LEASE AND WELL NO. Evans #1 COUNTY Meade STATE KS Sec. 15 Twp. 34 Rge. 28W

Mail Invoice To Same

Co. Name

Same

No. Copies Requested Reg

Mail Charts To Same

Address

Same

No. Copies Requested Reg

Address

Formation Test No. 1 Interval Tested From 2688 ft. to 2740 ft. Total Depth 2740 ft.

Packer Depth 2693 ft. Size 6 5/8 in. Packer Depth _____ ft. Size _____ in.

Packer Depth 2688 ft. Size 6 5/8 in. Packer Depth _____ ft. Size _____ in.

Depth of Selective Zone Set _____

Top Recorder Depth (Inside) 2699 ft.

Recorder Number 13266 Cap. 4000

Bottom Recorder Depth (Outside) 2702 ft.

Recorder Number 1562 Cap. 3900

Below Straddle Recorder Depth _____ ft.

Recorder Number _____ Cap. _____

Drilling Contractor Eagle #1

Drill Collar Length 542' I. D. 2 1/2 in.

Mud Type Starch Viscosity 48

Weight Pipe Length _____ I. D. _____ in.

Weight 8.9 Water Loss 15.2 cc.

Drill Pipe Length 2118 I. D. 3.8 in.

Chlorides 7,000 P.P.M.

Test Tool Length 28' ft. Tool Size 5 1/2 in.

Jars: Make WTC Serial Number 512

Anchor Length 52'-3" ft. Size 5 1/2 in.

Did Well Flow? _____ Reversed Out _____

Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 X 4 in.

Blow: Strong bottom bucket In 4min, I.F.P.

Strong bottom bucket In 3min F.F.P.

JAN 18 1993

Recovered 310' ft. of Orig mud

Recovered 232' ft. of Muddy salt water, 50% mud 50% water

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Recovered _____ ft. of _____

Chlorides 55,000 P.P.M. Sample Jars used _____ Remarks: Initial Close Blew Back 4 1/2" In bucket Died 34min

Final Close Blew Back, 5" Thru out

(gas @ tool only,) (total Fluid In Pipe 542')

Time On Location 6:00 A.M. Time Pick Up Tool 7:00 A.M. Time Off Location _____ A.M.

Time Set Packer(s) 8:18 P.M. Time Started Off Bottom 11:18 P.M. Maximum Temperature 85°F

Initial Hydrostatic Pressure _____ (A) 1346 P.S.I.

Initial Flow Period _____ Minutes 30 (B) 111 P.S.I. to (C) 182 P.S.I.

Initial Closed In Period _____ Minutes 60 (D) 728 P.S.I.

Final Flow Period _____ Minutes 30 (E) 233 P.S.I. to (F) 254 P.S.I.

Final Closed In Period _____ Minutes 60 (G) 728 P.S.I.

Final Hydrostatic Pressure _____ (H) 1316 P.S.I. 13266

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to 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, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By [Signature]
Signature of Customer or his authorized representative

Western Representative Brad Boy

Thank you

FIELD INVOICE

Open Hole Test ☒ \$ 1600
Misrun _____
Straddle Test _____
Jars ☒ \$ 225
Selective Zone _____
Safety Joint ☒ \$ 25
Standby _____
Evaluation _____
Extra Packer _____
Circ. Sub. ☒ _____
Mileage _____
Fluid Sampler _____
Extra Charts _____
Insurance _____
Telecopier _____
TOTAL \$ 850

Pressure Data

Test Ticket No. 1596

Clock No. _____ Elevation _____ Well Temperature _____ °F

A Initial Hydrostatic Mud 1507 P.S.I. Open Tool M

A	Initial Hydrostatic Mud	1507	P.S.I.	Open Tool	M	
B	First Initial Flow Pressure	117	P.S.I.	First Flow Pressure	Mins.	20 Mins.
C	First Final Flow Pressure	202	P.S.I.	Initial Closed-in Pressure	Mins.	40 Mins.
D	Initial Closed-in Pressure	242	P.S.I.	Second Flow Pressure	Mins.	20 Mins.
E	Second Initial Flow Pressure	248	P.S.I.	Final Closed-in Pressure	Mins.	60 Mins.
F	Second Final Flow Pressure	274	P.S.I.			
G	Final Closed-in Pressure	241	P.S.I.			
H	Final Hydrostatic Mud	1487	P.S.I.			

First Flow Pressure

Breakdown: _____ Inc.

of 5 mins. and a

final inc. of 0 Min.

Initial Shut-In

Breakdown: _____ Inc.

of 3 mins. and a

final inc. of 0 Min.

Second Flow Pressure

Breakdown: _____ Inc.

of 5 mins. and a

final inc. of 0 Min.

Final Shut-In

Breakdown: _____ Inc.

of 3 mins. and a

final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	117	0	103	0	145	0	124
P 2 5	193	3	336	5	248	3	241
P 3 10	177	6	520	10	248 248	6	545
P 4 15	178	9	610	15	255	9	617
P 5 20	181	12	627	20	262	12	646
P 6 25	191	15	665	25	267	15	672
P 7 30	202	18	685	30	274	18	686
P 8 35		21	699	35		21	697
P 9 40		24	709	40		24	704
P10 45		27	716	45		27	715
P11 50		30	721	50		30	718
P12 55		33	728	55		33	722
P13 60		36	731	60		36	727
P14 65		39	735	65		39	730
P15 70		42	737	70		42	732
P16 75		45	738	75		45	734
P17 80		48	739	80		48	736
P18 85		51	740	85		51	737
P19 90		54	741	90		54	738
P20 95		57	742	95		57	739
100		60	743	100		60	740

62 741

KT 19587

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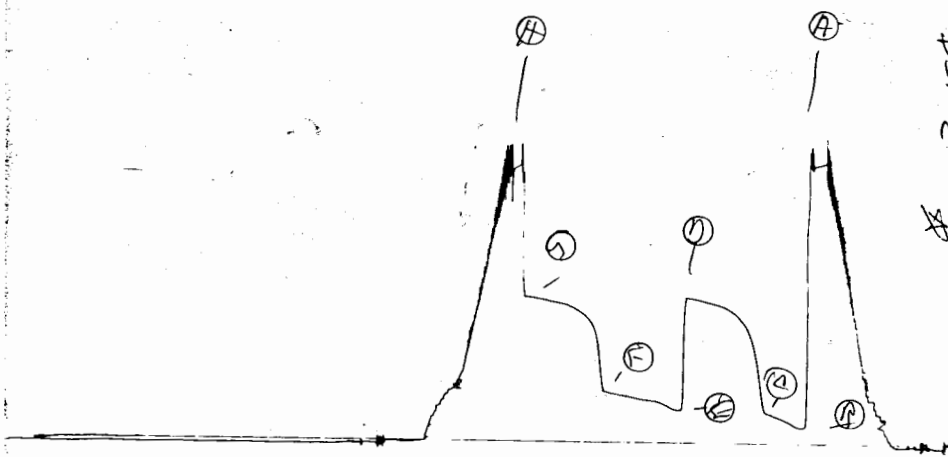
DST# 13266



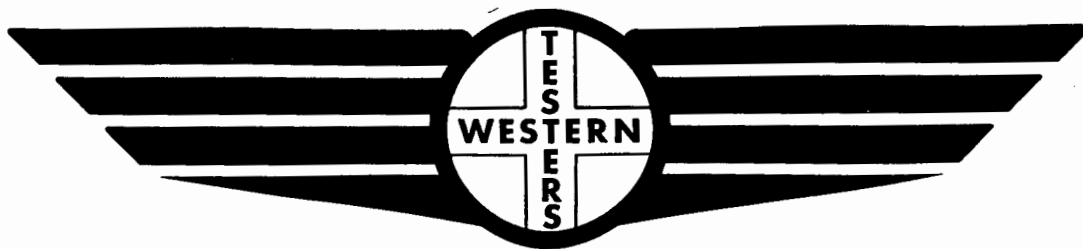
KT 19587

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DST# 1562



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800-688-7021

COMPANY

CHARTER PRODUCTION COMPANY LEASE & WELL NO.

EVANS #1

SEC. 15

TWP. 34S

RGE. 28W

TEST NO.

2

DATE

1/12/93

DST REPORT

GENERAL INFORMATION

DATE	: 1-12-93	TICKET	: 19387		
CUSTOMER	: CHARTER PRODUCTION CO	LEASE	: EVANS		
WELL	: #1	TEST: 2	GEOLOGIST:		
ELEVATION	: 2346 G.L.	FORMATION	: COUNCIL GROVE		
SECTION	: 15	TOWNSHIP	: 34		
RANGE	: 28W	COUNTY: MEADE	STATE	: KS	
GAUGE SN#	: 13266	RANGE	: 4000	CLOCK	: 12HR

WELL INFORMATION

PERFORATION INTERVAL FROM:	3000.00 ft	TO:	3056.00 ft	TVD:	3056.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	GAS
DEPTH OF RECORDERS:	3015.0 ft	3018.0 ft			
TEMPERATURE:	95.0				
DRILL COLLAR LENGTH:	512.0 ft	I.D.:	2.250 in		
WEIGHT PIPE LENGTH:	0.0 ft	I.D.:	0.000 in		
DRILL PIPE LENGTH:	2460.0 ft	I.D.:	3.800 in		
TEST TOOL LENGTH:	28.0 ft	TOOL SIZE:	5.500 in		
ANCHOR LENGTH:	56.0 ft	ANCHOR SIZE:	5.500 in		
SURFACE CHOKE SIZE:	0.750 in	BOTTOM CHOKE SIZE:	0.750 in		
MAIN HOLE SIZE:	7.875 in	TOOL JOINT SIZE:	4.5XH		
PACKER DEPTH:	2995.0 ft	SIZE:	6.750 in		
PACKER DEPTH:	3000.0 ft	SIZE:	6.750 in		
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in		
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in		

MUD INFORMATION

DRILLING CON.:	EAGLE #1	VISCOSITY:	43.00 cp
MUD TYPE	: GEL-STARCH	WATER LOSS:	14.000 cc
WEIGHT	: 9.200 ppg	SERIAL NUMBER:	512
CHLORIDES	: 24000 ppm	REVERSED OUT?:	NO
JARS-MAKE	: WTC		
DID WELL FLOW?:	YES		

COMMENTS

Comment

INITIAL FLOW PERIOD OFF BOTTOM IMMEDIATELY GAS TO
SURFACE IN 1 1/2 MINS ON INITIAL SHUTIN PERIOD
BLOW DOWN SEE GAS FLOW SHEET

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
93.0	0.0	10.0	0.0	90.0	GASSY MUD
604.0	0.0	0.0	50.0	50.0	GASSY MUDDY SALT WATER

RATE INFORMATION

OIL VOLUME:	0.0000	STB		
GAS VOLUME:	0.7324	SCF		
MUD VOLUME:	3.0781	STB		
WATER VOLUME:	1.9041	STB		
TOTAL FLUID :	4.9822	STB		
			TOTAL FLOW TIME:	90.0000 min.
			AVERAGE OIL RATE:	0.0000 STB/D
			AVERAGE WATER RATE:	60.9308 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1456.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	81.00	152.00
INITIAL SHUT-IN	60.00		747.00
FINAL FLOW	60.00	172.00	264.00
FINAL SHUT-IN	60.00		758.00

FINAL HYDROSTATIC PRESSURE: 1436.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1456.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	87.00	163.00
INITIAL SHUT-IN	60.00		760.00
FINAL FLOW	60.00	173.00	268.00
FINAL SHUT-IN	60.00		764.00

FINAL HYDROSTATIC PRESSURE: 1445.00

GAS FLOW REPORT

GENERAL INFORMATION

DATE : 1-12-93	TICKET : 19387
CUSTOMER : CHARTER PRODUCTION CO	LEASE : EVANS
WELL : #1 TEST: 2	GEOLOGIST:
ELEVATION: 2346 G.L.	FORMATION: COUNCIL GROVE
SECTION : 15	TOWNSHIP : 34
RANGE : 28W COUNTY: MEADE	STATE : KS
GAUGE SN#: 13266 RANGE : 4000	CLOCK : 12HR

PRE FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
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SECOND FLOW

Time Guage (min)	Tester Type	Orifice Size	Pressure	Flow Desc.
10	MERLA	0.125	24"OF WTR	2590 SCF/D
20	MERLA	0.125	37"OF WTR	3170 SCF/D
30	MERLA	0.125	34"OF WTR	3080 SCF/D
40	MERLA	0.125	36"OF WTR	3170 SCF/D
50	MERLA	0.125	37"OF WTR	3210 SCF/D
60	MERLA	0.125	37"OF WTR	3210 SCF/D

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 1-12-93	TICKET : 19387
CUSTOMER : CHARTER PRODUCTION CO	LEASE : EVANS
WELL : #1	GEOLOGIST:
ELEVATION: 2346 G.L.	FORMATION: COUNCIL GROVE
SECTION : 15	TOWNSHIP : 34
RANGE : 28W	STATE : KS
GAUGE SN#: 13266	CLOCK : 12HR
COUNTY: MEADE	
RANGE : 4000	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	87.00	87.00
5.00	91.00	4.00
10.00	108.00	17.00
15.00	128.00	20.00
20.00	148.00	20.00
25.00	152.00	4.00
30.00	163.00	11.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	315.00	315.00	11.00
6.00	407.00	92.00	6.00
9.00	513.00	106.00	4.33
12.00	578.00	65.00	3.50
15.00	618.00	40.00	3.00
18.00	648.00	30.00	2.67
21.00	672.00	24.00	2.43
24.00	684.00	12.00	2.25
27.00	704.00	20.00	2.11
30.00	708.00	4.00	2.00
33.00	716.00	8.00	1.91
36.00	722.00	6.00	1.83
39.00	728.00	6.00	1.77
42.00	734.00	6.00	1.71
45.00	742.00	8.00	1.67
48.00	748.00	6.00	1.63
51.00	750.00	2.00	1.59
54.00	754.00	4.00	1.56
57.00	756.00	2.00	1.53

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	760.00	4.00	1.50

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	173.00	173.00
5.00	173.00	0.00
10.00	173.00	0.00
15.00	207.00	34.00
20.00	224.00	17.00
25.00	226.00	2.00
30.00	230.00	4.00
35.00	236.00	6.00
40.00	244.00	8.00
45.00	246.00	2.00
50.00	254.00	8.00
55.00	264.00	10.00
60.00	268.00	4.00

FINAL SHUT IN

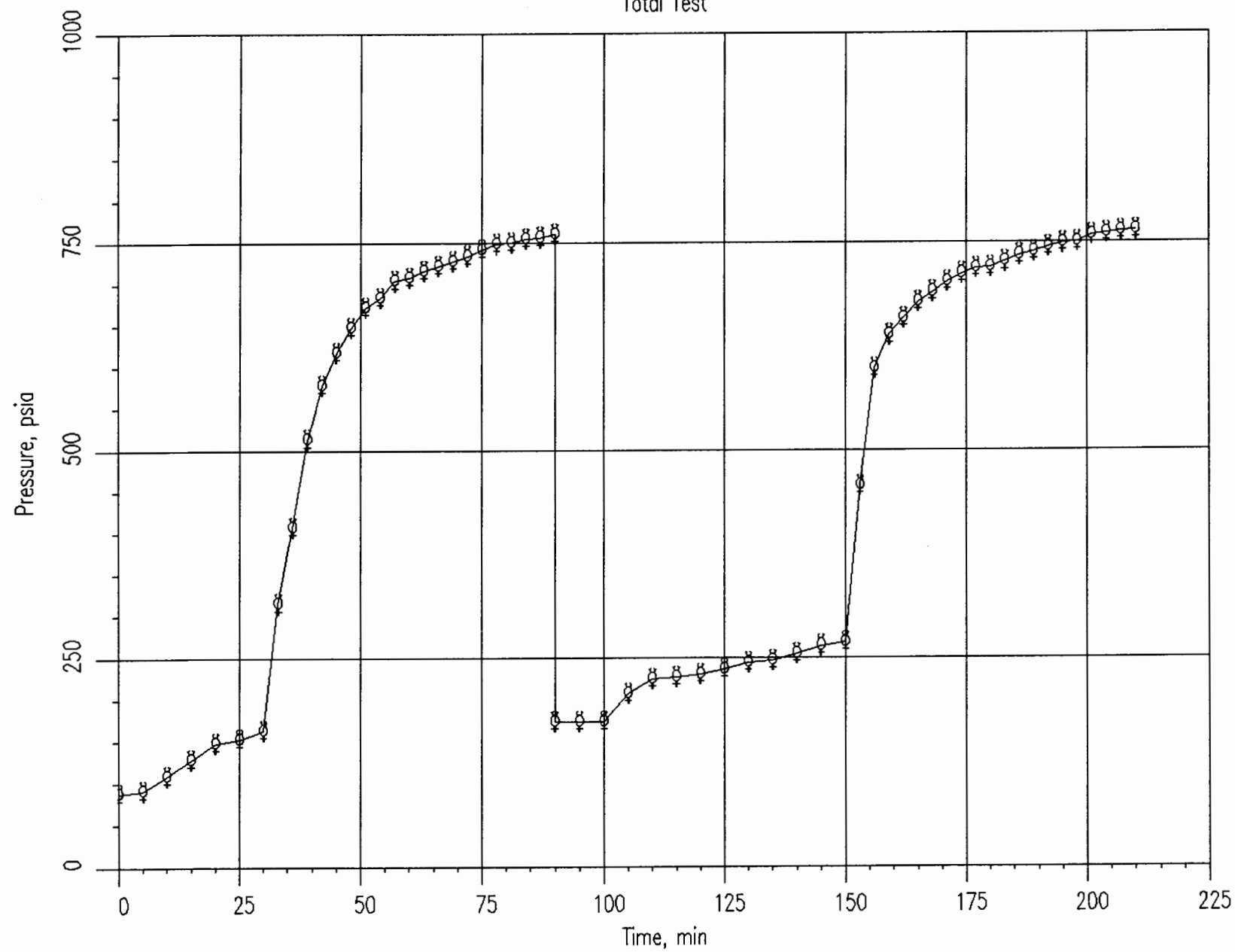
<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	457.00	457.00	21.00
6.00	598.00	141.00	11.00
9.00	638.00	40.00	7.67
12.00	658.00	20.00	6.00
15.00	678.00	20.00	5.00
18.00	690.00	12.00	4.33
21.00	702.00	12.00	3.86
24.00	712.00	10.00	3.50
27.00	718.00	6.00	3.22
30.00	720.00	2.00	3.00
33.00	726.00	6.00	2.82
36.00	734.00	8.00	2.67
39.00	738.00	4.00	2.54
42.00	744.00	6.00	2.43
45.00	748.00	4.00	2.33
48.00	750.00	2.00	2.25

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
51.00	758.00	8.00	2.18
54.00	760.00	2.00	2.11
57.00	762.00	2.00	2.05
60.00	764.00	2.00	2.00

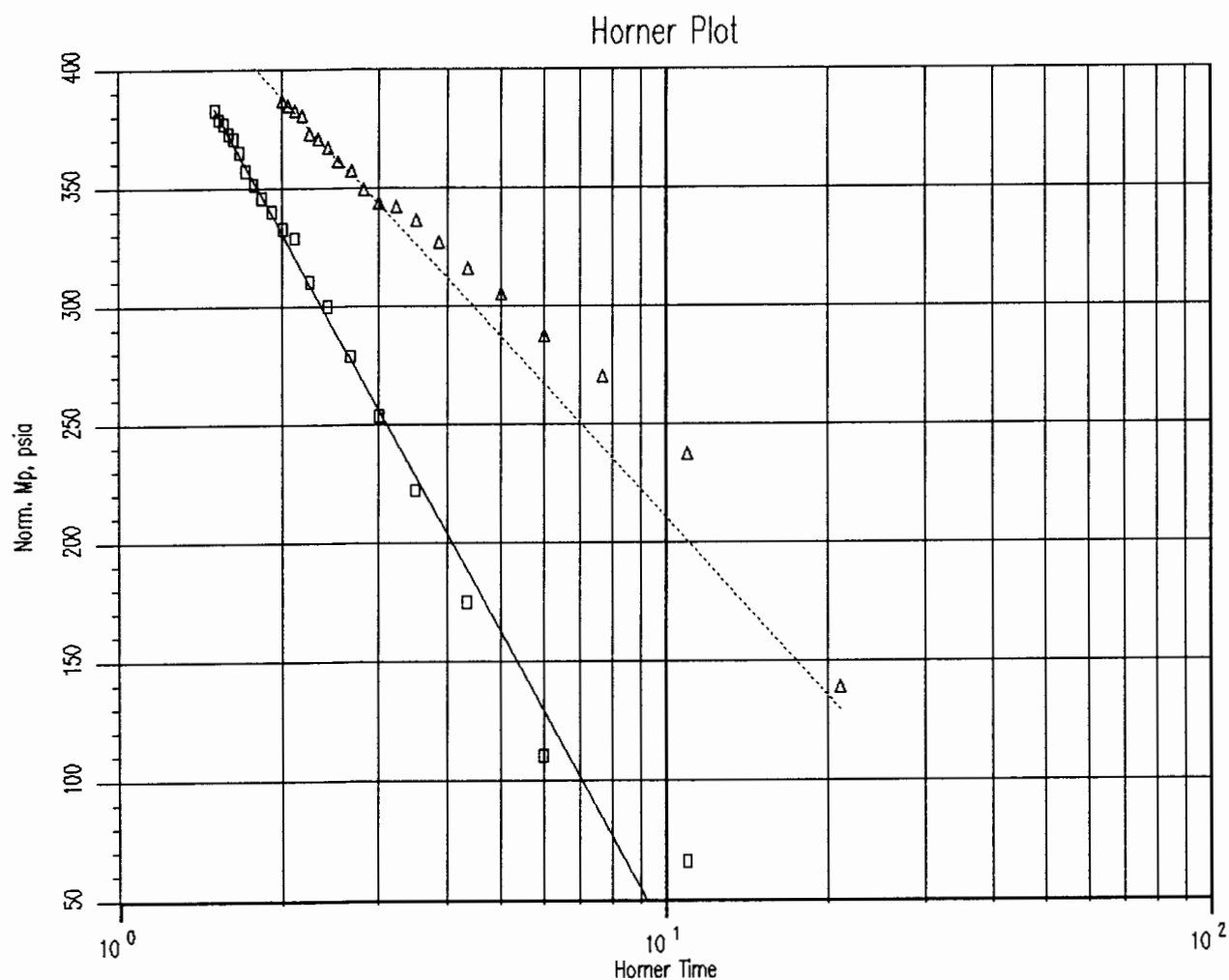
Profile Plot
Total Test



DATE 1-12-93
 CUSTOMER CHARTER PRODUCTION CO
 WELL #1
 ELEVATION 2346 G.L.
 SECTION 15
 RANGE 28W
 GAUGE SN# 13266

TEST 2
 COUNTY MEADE
 RANGE 4000

TICKET 19387
 LEASE EVANS
 GEOLOGIST
 FORMATION COUNCIL GROVE
 TOWNSHIP 34
 STATE KS
 CLOCK 12HR



Result

	#1	#2
tp, hrs	0.50	1.00
Slope	-421.97	-253.05
Pstar, psig	831.46	837.48
P1hr, psig	383.11	387.81
Skin	-0.42	-0.32
k, md	0.05	0.08
kh/u, md-ft/cp	4.06	6.77
ri, ft	2.21	4.04
DR, %	0.51	0.70
Drawdown Factor, %		-0.005
Drawdown P*		-0.007

— BUILD 1

..... BUILD 2

HORNER ANALYSIS REPORT

GENERAL INFORMATION

DATE : 1-12-93	TICKET : 19387
CUSTOMER : CHARTER PRODUCTION CO	LEASE : EVANS
WELL : #1 TEST: 2	GEOLOGIST:
ELEVATION: 2346 G.L.	FORMATION: COUNCIL GROVE
SECTION : 15	TOWNSHIP : 34
RANGE : 28W COUNTY: MEADE	STATE : KS
GAUGE SN#: 13266 RANGE : 4000	CLOCK : 12HR

Input Data

Porosity 0.300 Rw: 0.328 ft h: 1.000 ft

qg 3210.0 STB

Pvt Data

Evaluation Pressure : 760.0
Evaluation Temperature: 95.0

Gas Grav 0.65 API
Bg 0.003 RBL/STB Vis 0.013 cp Ct 1.4617E-003 1/PSI

Horner Results

	Initial Shut-In	Final Shut-In
pseudo pressure time	0.50 hrs	1.00 hrs
slope	-421.97	-253.05
pstar	831.46 psig	837.48 psig
plhr	383.11 psig	387.81 psig
skin	-0.42	-0.32
permeability	0.05 md	0.08 md
transmissability	4.06 md-ft/cp	6.77 md-ft/cp
radius of investigation	2.21 ft	4.04 ft
Damage-Ratio	0.51 percent	0.7 percent
Drawdown Factor		-0.005 percent
Drawdown P*		-0.007 percent



P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET

No 19387

Elevation G.E. 2346 Formation Council Grove Eff. Pay Ft.

District Garden City Date 1-12-93 Customer Order No.

COMPANY NAME Charter Production Company

ADDRESS 224 E. Douglas Suite 400 Wichita KS 67202

LEASE AND WELL NO. Evan's #1 COUNTY meade STATE KS Sec. 15 Twp. 34 Rge. 28W

Mail Invoice To Same Co. Name Same Address Same No. Copies Requested Reg

Mail Charts To Same Address Same No. Copies Requested Reg

Formation Test No. 2 Interval Tested From 3000 ft. to 3,056 ft. Total Depth 3,056 ft.

Packer Depth 2995 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Packer Depth 3000 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3015 ft. Recorder Number 13266 Cap. 4000

Bottom Recorder Depth (Outside) 3018 ft. Recorder Number 1562 Cap. 3900

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Eagle #1 Drill Collar Length 512 I. D. 2 1/4 in.

Mud Type Gel-starch Viscosity 43 Weight Pipe Length I. D. in.

Weight 9.2 Water Loss 14.0 cc. Drill Pipe Length 2460 I. D. 3.8 in.

Chlorides 24000 P.P.M. Test Tool Length 28 ft. Tool Size 5 1/2 x 20 in.

Jars: Make WTC Serial Number 512 Anchor Length 56 ft. Size 5 1/2 x 20 in.

Did Well Flow? NO Reversed Out NO Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 x 4 in.

Blow: Bottom bucket immediately (Gas to surface on shut in) In 1 1/2 min Bleeding off

See gas flow sheet.

Recovered 93' ft. of gassy mud 10% gas 90% mud

Recovered 604' ft. of gassy muddy salt water, 50% mud, 50% water

Recovered ft. of

Recovered ft. of

Recovered ft. of

Chlorides 130,000 P.P.M. Sample Jars used Remarks: (697' total Fluid) JAN 18 1993

Time On Location 8:30 A.M. Time Pick Up Tool 11:30 A.M. Time Off Location A.M.

Time Set Packer(s) 12:53 P.M. Time Started Off Bottom 4:23 P.M. Maximum Temperature 95°F

Initial Hydrostatic Pressure (A) 1456 P.S.I.

Initial Flow Period 30 Minutes (B) 81 P.S.I. to (C) 152 P.S.I.

Initial Closed In Period 60 Minutes (D) 747 P.S.I.

Final Flow Period 60 Minutes (E) 172 P.S.I. to (F) 264 P.S.I.

Final Closed In Period 60 Minutes (G) 758 P.S.I.

Final Hydrostatic Pressure (H) 1436 P.S.I. 1562

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to 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, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By
Signature of Customer or his authorized representative

Western Representative Brad Boy

Thank you

FIELD INVOICE

Open Hole Test	\$ <u>1000</u>
Misrun	\$ <u> </u>
Straddle Test	\$ <u> </u>
Jars	\$ <u>275</u>
Selective Zone	\$ <u>25</u>
Safety Joint	\$ <u> </u>
Standby	\$ <u> </u>
Evaluation	\$ <u> </u>
Extra Packer	\$ <u> </u>
Circ. Sub.	\$ <u> </u>
Mileage	\$ <u> </u>
Fluid Sampler	\$ <u> </u>
Extra Charts	\$ <u> </u>
Insurance	\$ <u> </u>
Telecopier	\$ <u> </u>
TOTAL	\$ <u> </u>

Phone 316 262-5861



P. O. Box 1599
WICHITA, KANSAS 67201

Nº 1146.

GAS FLOW REPORT

Date 1-13-93 Ticket 19387 Company Charter Production Company
Well Name and No. Evans #1 Dst No. 2 Interval Tested 3000-3056
County meade State KS Sec. 15 Twp. 34 Rg. 28^U

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
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PRE FLOW

[illegible]

SECOND FLOW

Inches water gauge			
10	24	$\frac{1}{8}$	2,570 MCF/Per Day.
20	37	$\frac{1}{8}$	3,170 MCF/Per Day.
30	34	$\frac{1}{8}$	3,080 CF/Per Day.
40	36	$\frac{1}{8}$	3,170 CF/Per Day.
50	37	$\frac{1}{8}$	3,170 CF/Per Day.
60	37	$\frac{1}{8}$	3,170 CF/Per Day.
ASK IF ANALYSIS NEEDED RUS			

GAS BOTTLE

Serial No. 006 Date Bottle Filled 1-13-93 Date to be Invoiced _____

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1½% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME.

Authorized by _____

DST#2

WESTERN TESTING CO., INC.
Pressure Data

Date _____

Test Ticket No. 19387

Recorder No. _____ Capacity _____ Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	P.S.I.		M	
B First Initial Flow Pressure	P.S.I.	First Flow Pressure	Mins.	Mins.
C First Final Flow Pressure	P.S.I.	Initial Closed-in Pressure	Mins.	Mins.
D Initial Closed-in Pressure	P.S.I.	Second Flow Pressure	Mins.	Mins.
E Second Initial Flow Pressure	P.S.I.	Final Closed-in Pressure	Mins.	Mins.
F Second Final Flow Pressure	P.S.I.			
G Final Closed-in Pressure	P.S.I.			
H Final Hydrostatic Mud	P.S.I.			

PRESSURE BREAKDOWN

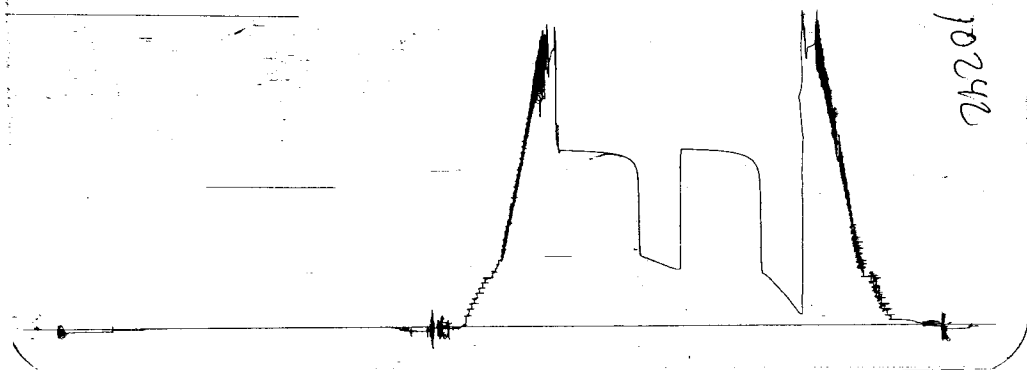
First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>86</u>	<u>0</u>	<u>160</u>	<u>0</u>	<u>170</u>	<u>0</u>	<u>264</u>
P 2 <u>5</u>	<u>90</u>	<u>3</u>	<u>310</u>	<u>5</u>	<u>170</u>	<u>3</u>	<u>450</u>
P 3 <u>10</u>	<u>106</u>	<u>6</u>	<u>400</u>	<u>10</u>	<u>190</u>	<u>6</u>	<u>590</u>
P 4 <u>15</u>	<u>124</u>	<u>9</u>	<u>505</u>	<u>15</u>	<u>209</u>	<u>9</u>	<u>630</u>
P 5 <u>20</u>	<u>140</u>	<u>12</u>	<u>570</u>	<u>20</u>	<u>220</u>	<u>12</u>	<u>650</u>
P 6 <u>25</u>	<u>150</u>	<u>15</u>	<u>610</u>	<u>25</u>	<u>222</u>	<u>15</u>	<u>670</u>
P 7 <u>30</u>	<u>160</u>	<u>18</u>	<u>640</u>	<u>30</u>	<u>224</u>	<u>18</u>	<u>682</u>
P 8 _____		<u>21</u>	<u>664</u>	<u>35</u>	<u>232</u>	<u>21</u>	<u>694</u>
P 9 _____		<u>24</u>	<u>674</u>	<u>40</u>	<u>240</u>	<u>24</u>	<u>704</u>
P10 _____		<u>27</u>	<u>696</u>	<u>45</u>	<u>242</u>	<u>27</u>	<u>710</u>
P11 _____		<u>30</u>	<u>700</u>	<u>50</u>	<u>250</u>	<u>30</u>	<u>712</u>
P12 _____		<u>33</u>	<u>708</u>	<u>55</u>	<u>260</u>	<u>33</u>	<u>718</u>
P13 _____		<u>36</u>	<u>714</u>	<u>60</u>	<u>264</u>	<u>36</u>	<u>726</u>
P14 _____		<u>39</u>	<u>720</u>			<u>39</u>	<u>730</u>
P15 _____		<u>42</u>	<u>726</u>			<u>42</u>	<u>736</u>
P16 _____		<u>45</u>	<u>734</u>			<u>45</u>	<u>740</u>
P17 _____		<u>48</u>	<u>740</u>			<u>48</u>	<u>742</u>
P18 _____		<u>51</u>	<u>742</u>			<u>51</u>	<u>750</u>
P19 _____		<u>54</u>	<u>746</u>			<u>54</u>	<u>752</u>
P20 _____		<u>57</u>	<u>748</u>			<u>57</u>	<u>754</u>
		<u>60</u>	<u>752</u>			<u>60</u>	<u>756</u>

JK 19588

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Dist #
3

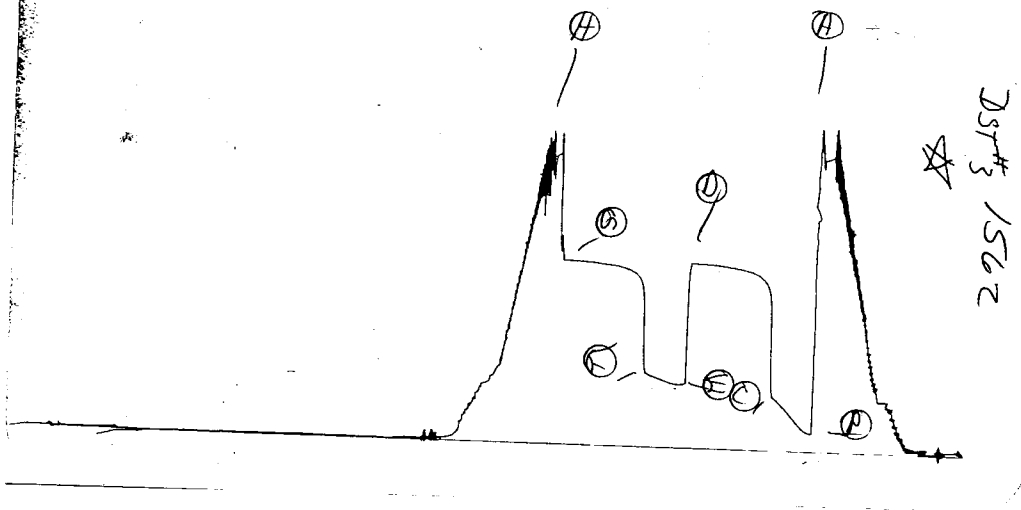
10242



JK 19588

I

Dist #
3 1562



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800-688-7021

COMPANY

CHARTER PRODUCTION COMPANY LEASE & WELL NO.

EVANS #1

SEC. 15 TWP. 34S RGE. 28W TEST NO. 3 DATE 1/13/93

DST REPORT

GENERAL INFORMATION

DATE	: 1/13/93	TICKET	: 19388
CUSTOMER	: CHARTER PRODUCTION CO.	LEASE	: EVANS
WELL	: 1	TEST: 3	GEOLOGIST:
ELEVATION	: 2346 GE	FORMATION:	COUNCIL GROVE
SECTION	: 15	TOWNSHIP	: 34S
RANGE	: 28W	STATE	: KS
GAUGE SN#	: 1562	RANGE	: 3900
		CLOCK	: 12

WELL INFORMATION

PERFORATION INTERVAL FROM:	3089.00 ft	TO:	3153.00 ft	TVD:	3153.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	3112.0 ft		3115.0 ft		
TEMPERATURE:	98.0				
DRILL COLLAR LENGTH:	512.0 ft	I.D.:		2.250 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	2549.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	28.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	64.0 ft	ANCHOR SIZE:		5.500 in	
SURFACE CHOKE SIZE :	0.750 in	BOTTOM CHOKE SIZE:		0.750 in	
MAIN HOLE SIZE :	7.875 in	TOOL JOINT SIZE :		4.5XH	
PACKER DEPTH:	3084.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	3089.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	0.0 ft	SIZE:		0.000 in	
PACKER DEPTH:	0.0 ft	SIZE:		0.000 in	

MUD INFORMATION

DRILLING CON. :	EAGLE RIG 1	VISCOSITY :	40.00 cp
MUD TYPE :	GEL & STARCH	WATER LOSS:	12.800 cc
WEIGHT :	9.200 ppg	SERIAL NUMBER:	512
CHLORIDES :	20000 ppm	REVERSED OUT?:	NO
JARS-MAKE :	W.T.C.		
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK BLOW BUILDING TO BOTTOM
OF BUCKET IN 5 MINUTES. FINAL FLOW PERIOD WEAK
BLOW BUILDING TO STRONG BLOW - BOTTOM OF BUCKET

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

IN 8 MINUTES.

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
792.0	0.0	0.0	40.0	60.0	MUDDY SALTWATER
0.0	0.0	0.0	0.0	0.0	CHLORIDES 125000 PPM

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	60.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	3.8671	STB	AVERAGE WATER RATE:	154.6831	STB/D
WATER VOLUME:	2.5781	STB			
TOTAL FLUID :	6.4451	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1519.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	100.00	270.00
INITIAL SHUT-IN	60.00		946.00
FINAL FLOW	30.00	320.00	370.00
FINAL SHUT-IN	60.00		946.00

FINAL HYDROSTATIC PRESSURE: 1500.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1499.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	90.00	270.00
INITIAL SHUT-IN	60.00		947.00
FINAL FLOW	30.00	325.00	373.00
FINAL SHUT-IN	63.00		946.00

FINAL HYDROSTATIC PRESSURE: 1488.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 1/13/93	TICKET : 19388
CUSTOMER : CHARTER PRODUCTION CO.	LEASE : EVANS
WELL : 1	GEOLOGIST:
ELEVATION: 2346 GE	FORMATION: COUNCIL GROVE
SECTION : 15	TOWNSHIP : 34S
RANGE : 28W	STATE : KS
GAUGE SN#: 1562	CLOCK : 12
COUNTY: MEADE	
RANGE : 3900	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	90.00	90.00
5.00	100.00	10.00
10.00	132.00	32.00
15.00	173.00	41.00
20.00	210.00	37.00
25.00	247.00	37.00
30.00	270.00	23.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	736.00	736.00	0.00
6.00	847.00	111.00	0.00
9.00	875.00	28.00	0.00
12.00	893.00	18.00	0.00
15.00	907.00	14.00	0.00
18.00	915.00	8.00	0.00
21.00	920.00	5.00	0.00
24.00	925.00	5.00	0.00
27.00	929.00	4.00	0.00
30.00	933.00	4.00	0.00
33.00	936.00	3.00	0.00
36.00	939.00	3.00	0.00
39.00	942.00	3.00	0.00
42.00	944.00	2.00	0.00
45.00	946.00	2.00	0.00
48.00	946.00	0.00	0.00
51.00	947.00	1.00	0.00
54.00	947.00	0.00	0.00
57.00	947.00	0.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	947.00	0.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	325.00	325.00
5.00	325.00	0.00
10.00	328.00	3.00
15.00	337.00	9.00
20.00	350.00	13.00
25.00	362.00	12.00
30.00	373.00	11.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	726.00	726.00	0.00
6.00	853.00	127.00	0.00
9.00	884.00	31.00	0.00
12.00	897.00	13.00	0.00
15.00	906.00	9.00	0.00
18.00	914.00	8.00	0.00
21.00	919.00	5.00	0.00
24.00	925.00	6.00	0.00
27.00	928.00	3.00	0.00
30.00	932.00	4.00	0.00
33.00	934.00	2.00	0.00
36.00	936.00	2.00	0.00
39.00	938.00	2.00	0.00
42.00	940.00	2.00	0.00
45.00	942.00	2.00	0.00
48.00	943.00	1.00	0.00
51.00	944.00	1.00	0.00
54.00	945.00	1.00	0.00
57.00	946.00	1.00	0.00
60.00	946.00	0.00	0.00
63.00	946.00	0.00	0.00



P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET

No 19388

Elevation G.E 2346 Formation Council Grove Eff. Pay Ft.

District Garden City Date 1-13-93 Customer Order No.

COMPANY NAME Charter Production Company

ADDRESS 224 E. Douglas Suite 400, Wichita KS, 67202

LEASE AND WELL NO. Evans #1 COUNTY Meade STATE KS Sec. 15 Twp. 34 Rge. 28

Mail Invoice To Same Co. Name Same Address Same No. Copies Requested Reg

Mail Charts To Same Address Same No. Copies Requested Reg

Formation Test No. 3 Interval Tested From 3089 ft. to 3153 ft. Total Depth 3153 ft.

Packer Depth 3084 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Packer Depth 3089 ft. Size 6 5/8 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3112 ft. Recorder Number 1562 Cap. 3900

Bottom Recorder Depth (Outside) 3115 ft. Recorder Number 10242 Cap. 4100

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Eagle #1 Drill Collar Length 512' I. D. 2 1/4 in.

Mud Type Gel & starch Viscosity 40 Weight Pipe Length I. D. in.

Weight 9.2 Water Loss 12.8 cc. Drill Pipe Length 2549 I. D. 3.8 in.

Chlorides 20,000 P.P.M. Test Tool Length 28 ft. Tool Size 5 1/2 od in.

Jars: Make LTC Serial Number 512 Anchor Length 64 ft. Size 5 1/2 od in.

Did Well Flow? NO Reversed Out NO Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 x 1 1/2 in.

Blow: Strong blow

Weak, building to bottom bucket in 5 min F.F.P.

Weak, building to strong blow bottom bucket in 8 min F.F.P.

Recovered 792 ft. of muddy salt water 40% mud 60% water

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Chlorides 125,000 P.P.M. Sample Jars used Remarks: (Total Fluid 792')

JAN 18 1993

Time On Location 4:00 A.M. Time Pick Up Tool 6:30 A.M. Time Off Location A.M.

Time Set Packer(s) 8:06 A.M. Time Started Off Bottom 11:06 A.M. Maximum Temperature 98° F

Initial Hydrostatic Pressure 1519 P.S.I.

Initial Flow Period 30 Minutes (B) 100 P.S.I. to (C) 270 P.S.I.

Initial Closed In Period 60 Minutes (D) 946 P.S.I.

Final Flow Period 30 Minutes (E) 320 P.S.I. to (F) 370 P.S.I.

Final Closed In Period 60 Minutes (G) 946 P.S.I.

Final Hydrostatic Pressure 1500 P.S.I. 1562

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to 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, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By
Signature of Customer or his authorized representative

Western Representative Brad Boy Thank you,

FIELD INVOICE

Open Hole Test ☒ \$ 1000
Misrun \$
Straddle Test \$
Jars ☒ \$ 225
Selective Zone \$
Safety Joint ☒ \$ 25
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. ☒ \$
Mileage \$
Fluid Sampler \$
Extra Charts \$
Insurance \$
Telecopier \$
TOTAL \$

WESTERN TESTING CO., INC.

Pressure Data

Date 1-12-20 Test Ticket No. 19388
 Recorder No. 1562 Capacity _____ Location _____ Ft. _____
 Clock No. _____ Elevation _____ Well Temperature _____ °F

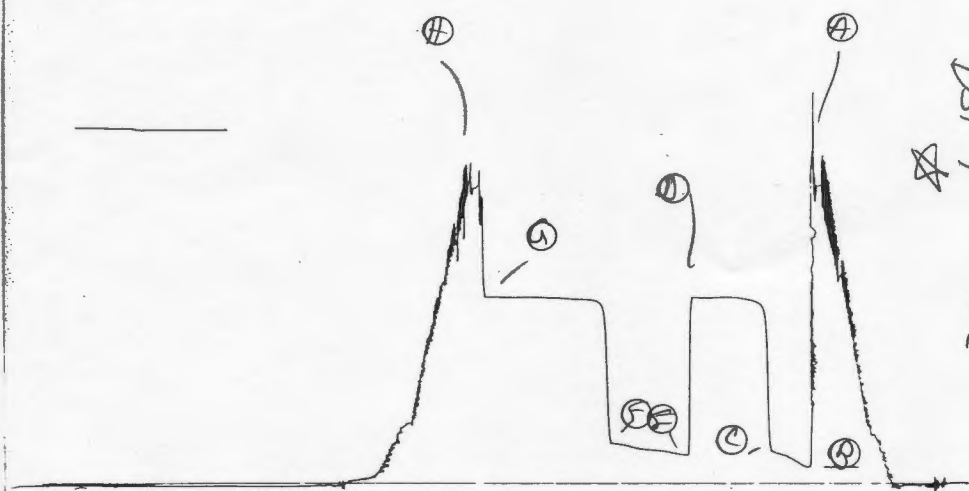
Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1499</u> P.S.I.	Open Tool		M
B First Initial Flow Pressure	<u>90</u> P.S.I.	First Flow Pressure		Mins. <u>20</u> Mins.
C First Final Flow Pressure	<u>720</u> P.S.I.	Initial Closed-in Pressure		Mins. <u>60</u> Mins.
D Initial Closed-in Pressure	<u>947</u> P.S.I.	Second Flow Pressure		Mins. <u>20</u> Mins.
E Second Initial Flow Pressure	<u>325</u> P.S.I.	Final Closed-in Pressure		Mins. <u>60</u> Mins.
F Second Final Flow Pressure	<u>220</u> P.S.I.			
G Final Closed-in Pressure	<u>946</u> P.S.I.			
H Final Hydrostatic Mud	<u>1488</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>90</u>	0	<u>220</u>	0	<u>325</u>	0	<u>220</u>
P 2 5	<u>100</u>	3	<u>226</u>	5	<u>325</u>	3	<u>224</u>
P 3 10	<u>132</u>	6	<u>847</u>	10	<u>328</u>	6	<u>850</u>
P 4 15	<u>170</u>	9	<u>825</u>	15	<u>327</u>	9	<u>884</u>
P 5 20	<u>210</u>	12	<u>890</u>	20	<u>350</u>	12	<u>897</u>
P 6 25	<u>247</u>	15	<u>907</u>	25	<u>362</u>	15	<u>906</u>
P 7 30	<u>220</u>	18	<u>915</u>	30	<u>370</u>	18	<u>914</u>
P 8 35		21	<u>920</u>	35		21	<u>919</u>
P 9 40		24	<u>925</u>	40		24	<u>925</u>
P10 45		27	<u>929</u>	45		27	<u>928</u>
P11 50		30	<u>930</u>	50		30	<u>932</u>
P12 55		33	<u>936</u>	55		33	<u>937</u>
P13 60		36	<u>937</u>	60		36	<u>936</u>
P14 65		39	<u>940</u>	65		39	<u>938</u>
P15 70		42	<u>944</u>	70		42	<u>940</u>
P16 75		45	<u>946</u>	75		45	<u>942</u>
P17 80		48	<u>946</u>	80		48	<u>943</u>
P18 85		51	<u>947</u>	85		51	<u>944</u>
P19 90		54	<u>9</u>	90		54	<u>945</u>
P20 95		57	<u>9</u>	95		57	<u>946</u>
100		60	<u>947</u>	100		60	<u>946</u>

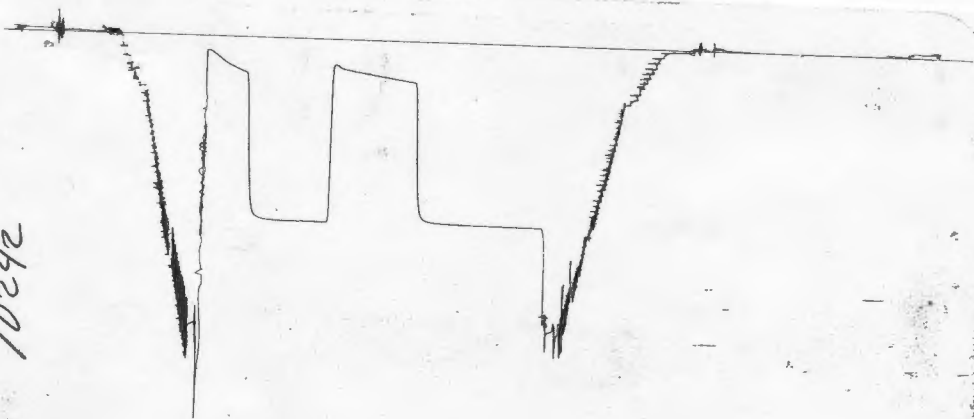
KT 19589

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DST #4
1562

DST #4 10242

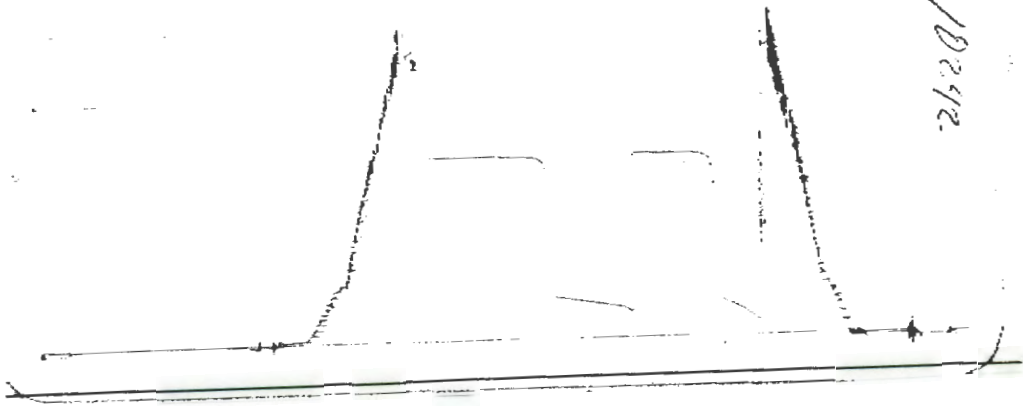


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KT 19589

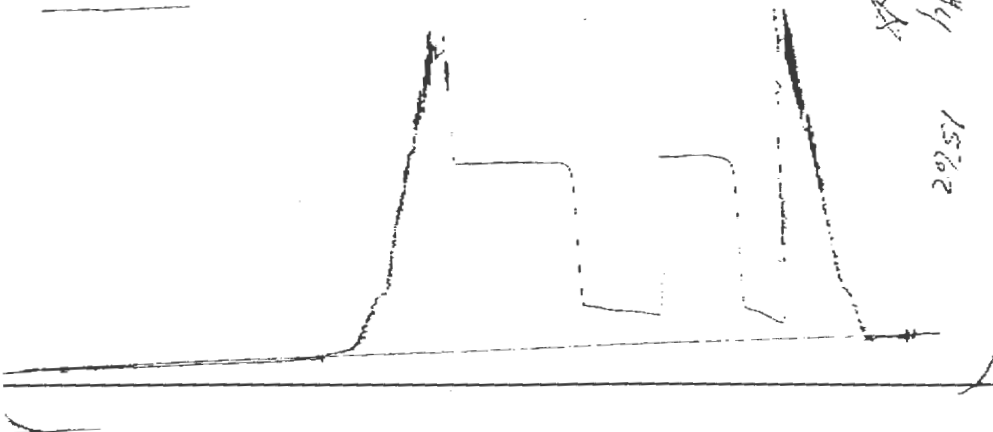
DST #4

18292

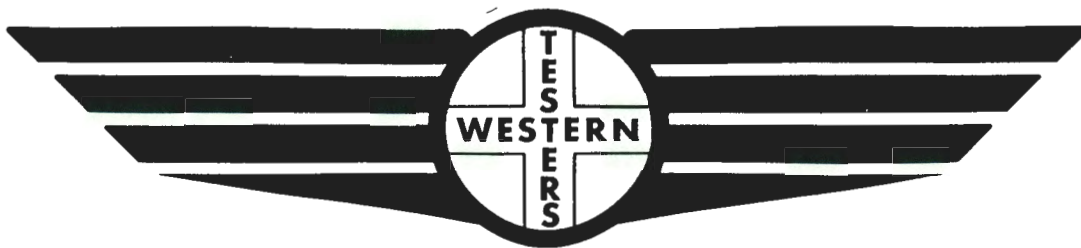


DST #4

15602



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 800-688-7021

COMPANY CHARTER PRODUCTION COMPANY LEASE & WELL NO. EVANS #1

SEC. 15 TWP. 34S. RGE. 28W TEST NO. 4 DATE 1/14/93

DST REPORT

GENERAL INFORMATION

DATE	: 1/14/93	TICKET	: 19389
CUSTOMER	: CHARTER PRODUCTION CO.	LEASE	: EVANS
WELL	: 1	TEST: 4	GEOLOGIST:
ELEVATION	: 2346 GL	FORMATION:	COUNCIL GROVE
SECTION	: 15	TOWNSHIP	: 34S
RANGE	: 28W	STATE	: KS
GAUGE SN#	: 1562	RANGE	: 3900
		CLOCK	: 12

WELL INFORMATION

PERFORATION INTERVAL FROM:	3182.00 ft	TO:	3218.00 ft	TVD:	3218.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	GAS
DEPTH OF RECORDERS:	3209.0 ft		3214.0 ft		
TEMPERATURE:	94.0				
DRILL COLLAR LENGTH:	542.0 ft	I.D.:		2.250 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	2612.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	28.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	36.0 ft	ANCHOR SIZE:		5.500 in	
SURFACE CHOKE SIZE :	0.750 in	BOTTOM CHOKE SIZE:		0.750 in	
MAIN HOLE SIZE :	7.875 in	TOOL JOINT SIZE :		4.5XH	
PACKER DEPTH:	3177.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	3182.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	0.0 ft	SIZE:		0.000 in	
PACKER DEPTH:	0.0 ft	SIZE:		0.000 in	

MUD INFORMATION

DRILLING CON. :	EAGLE RIG 1	VISCOSITY :	41.00 cp
MUD TYPE :	GEL-STARCH	WATER LOSS:	12.000 cc
WEIGHT :	9.100 ppg	SERIAL NUMBER:	512
CHLORIDES :	22000 ppm	REVERSED OUT?:	NO
JARS-MAKE :	W.T.C.		
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD BOTTOM OF BUCKET IN 1 1/2
MINUTES. GAS TO SURFACE ON FINAL SHUT-IN PERIOD.
SEE GAS FLOW REPORT.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
90.0	0.0	0.0	0.0	100.0	MUD (GASSY)
607.0	0.0	0.0	75.0	25.0	MUDDY SALT WATER (GASSY)
0.0	0.0	0.0	0.0	0.0	CHLORIDES 140000 P.P.M.

RATE INFORMATION

OIL VOLUME:	0.0000	STB		
GAS VOLUME:	0.0000	SCF		
MUD VOLUME:	2.1566	STB		
WATER VOLUME:	2.6827	STB		
TOTAL FLUID :	4.8394	STB		
			TOTAL FLOW TIME:	90.0000 min.
			AVERAGE OIL RATE:	0.0000 STB/D
			AVERAGE WATER RATE:	57.2318 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1539.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	90.00	160.00
INITIAL SHUT-IN	60.00		956.00
FINAL FLOW	60.00	150.00	210.00
FINAL SHUT-IN	90.00		956.00

FINAL HYDROSTATIC PRESSURE: 1529.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1539.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	84.00	162.00
INITIAL SHUT-IN	60.00		958.00
FINAL FLOW	60.00	144.00	206.00
FINAL SHUT-IN	93.00		960.00

FINAL HYDROSTATIC PRESSURE: 1533.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 1/14/93	TICKET	: 19389
CUSTOMER	: CHARTER PRODUCTION CO.	LEASE	: EVANS
WELL	: 1	TEST:	4
ELEVATION:	2346 GL	GEOLOGIST:	
SECTION	: 15	FORMATION:	COUNCIL GROVE
RANGE	: 28W	TOWNSHIP	: 34S
GAUGE SN#:	1562	STATE	: KS
		CLOCK	: 12
	COUNTY: MEADE		
	RANGE : 3900		

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	84.00	84.00
5.00	86.00	2.00
10.00	98.00	12.00
15.00	122.00	24.00
20.00	138.00	16.00
25.00	152.00	14.00
30.00	162.00	10.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	192.00	192.00	0.00
6.00	613.00	421.00	0.00
9.00	896.00	283.00	0.00
12.00	930.00	34.00	0.00
15.00	936.00	6.00	0.00
18.00	944.00	8.00	0.00
21.00	948.00	4.00	0.00
24.00	954.00	6.00	0.00
27.00	958.00	4.00	0.00
30.00	958.00	0.00	0.00
33.00	958.00	0.00	0.00
36.00	958.00	0.00	0.00
39.00	958.00	0.00	0.00
42.00	958.00	0.00	0.00
45.00	958.00	0.00	0.00
48.00	958.00	0.00	0.00
51.00	958.00	0.00	0.00
54.00	958.00	0.00	0.00
57.00	958.00	0.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

Time (min)	Pressure	Delta P	Horner T
60.00	958.00	0.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	144.00	144.00
5.00	150.00	6.00
10.00	150.00	0.00
15.00	158.00	8.00
20.00	166.00	8.00
25.00	172.00	6.00
30.00	172.00	0.00
35.00	178.00	6.00
40.00	180.00	2.00
45.00	188.00	8.00
50.00	194.00	6.00
55.00	200.00	6.00
60.00	206.00	6.00

FINAL SHUT IN

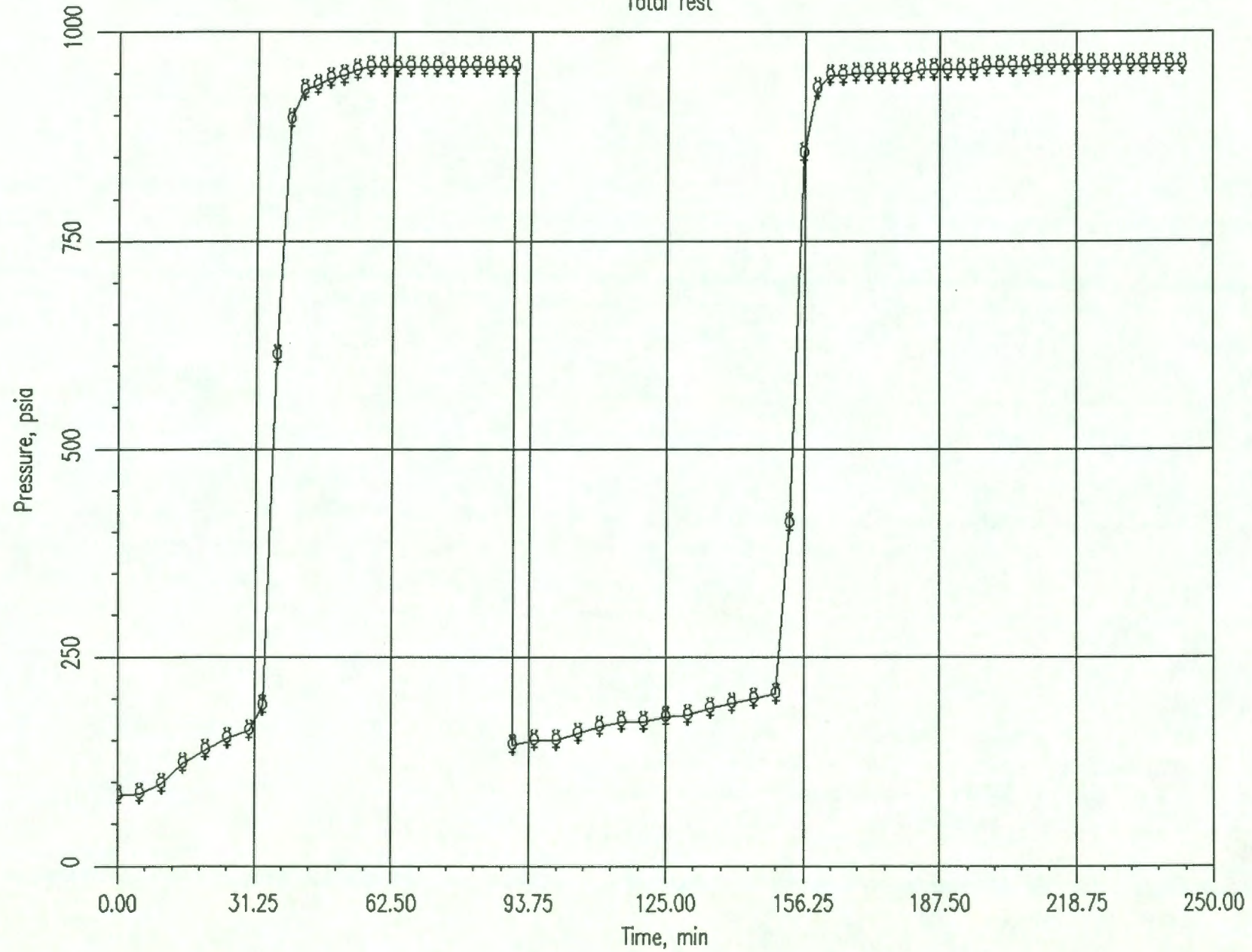
Time (min)	Pressure	Delta P	Horner T
3.00	410.00	410.00	0.00
6.00	855.00	445.00	0.00
9.00	932.00	77.00	0.00
12.00	948.00	16.00	0.00
15.00	948.00	0.00	0.00
18.00	950.00	2.00	0.00
21.00	950.00	0.00	0.00
24.00	950.00	0.00	0.00
27.00	950.00	0.00	0.00
30.00	950.00	0.00	0.00
33.00	954.00	4.00	0.00
36.00	954.00	0.00	0.00
39.00	954.00	0.00	0.00
42.00	954.00	0.00	0.00
45.00	954.00	0.00	0.00
48.00	958.00	4.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
51.00	958.00	0.00	0.00
54.00	958.00	0.00	0.00
57.00	958.00	0.00	0.00
60.00	960.00	2.00	0.00
63.00	960.00	0.00	0.00
66.00	960.00	0.00	0.00
69.00	960.00	0.00	0.00
72.00	960.00	0.00	0.00
75.00	960.00	0.00	0.00
78.00	960.00	0.00	0.00
81.00	960.00	0.00	0.00
84.00	960.00	0.00	0.00
87.00	960.00	0.00	0.00
90.00	960.00	0.00	0.00
93.00	960.00	0.00	0.00

Profile Plot
Total Test





WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 19389

P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

Elevation G.E. 2346 Formation Council Grove Eff. Pay 8 Ft.

District Garden City Date 1-14-93 Customer Order No.

COMPANY NAME Charter Production Company

ADDRESS 224 E. Douglas Suite 400 Wichita KS 67202

LEASE AND WELL NO. Evan's #1 COUNTY meade STATE KS Sec. 15 Twp. 34 Rge. 28

Mail Invoice To Same Same No. Copies Requested Reg

Co. Name Same Address Same No. Copies Requested Reg

Mail Charts To Same Address Same No. Copies Requested Reg

Formation Test No. 4 Interval Tested From 3182 ft. to 3218 ft. Total Depth 3218 ft.

Packer Depth 3177 ft. Size 6 5/8 in. Packer Depth — ft. Size — in.

Packer Depth 3182 ft. Size 6 5/8 in. Packer Depth — ft. Size — in.

Depth of Selective Zone Set —

Top Recorder Depth (Inside) 3209 ft.

Recorder Number 1562 Cap. 3900

Bottom Recorder Depth (Outside) 3214 ft.

Recorder Number 10242 Cap. 4100

Below Straddle Recorder Depth — ft.

Recorder Number — Cap. —

Drilling Contractor Eagle #1

Drill Collar Length 542 I. D. 2 1/4 in.

Mud Type gel-starch Viscosity 41

Weight Pipe Length — I. D. — in.

Weight 9.1 Water Loss 12.0 cc.

Drill Pipe Length 2612 I. D. 3.8 in.

Chlorides 22000 P.P.M.

Test Tool Length 28 ft. Tool Size 5 1/2 od in.

Jars: Make WTC Serial Number 512

Anchor Length 36 ft. Size 5 1/2 od in.

Did Well Flow? no Reversed Out no

Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 x 4 in.

Blow: Bottom bucket 1 1/2 min (gas to surface on shut in)

See gas flow sheet

Recovered 90 ft. of mud gassy

Recovered 607 ft. of muddy salt water, gassy 25% mud 75% water

Recovered — ft. of —

Recovered — ft. of —

Recovered — ft. of —

Chlorides 140000

P.P.M. Sample Jars used —

Remarks: (Total Fluid 697')

JAN 18 1993

Time On Location 11:00 A.M.

Time Pick Up Tool 11:30 A.M.

Time Off Location — A.M.

Time Set Packer(s) 3104 A.M.

Time Started Off Bottom 7:04 A.M.

Maximum Temperature 94°F

Initial Hydrostatic Pressure 1539 P.S.I.

Initial Flow Period 30 Minutes (B) 90 P.S.I. to (C) 160 P.S.I.

Initial Closed In Period 60 Minutes (D) 956 P.S.I.

Final Flow Period 60 Minutes (E) 150 P.S.I. to (F) 210 P.S.I.

Final Closed In Period 90 Minutes (G) 956 P.S.I.

Final Hydrostatic Pressure 1529 P.S.I.

1562

COMPANY TERMS

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All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By [Signature]
Signature of Customer or his authorized representative

Western Representative Brad Borg

Thank you

FIELD INVOICE

Open Hole Test ☒ \$ 1600
Misrun \$ —
Straddle Test \$ —
Jars ☒ \$ 1285
Selective Zone \$ —
Safety Joint ☒ \$ 25
Standby \$ —
Evaluation ☒ \$ 50
Extra Packer \$ —
Circ. Sub. ☒ \$ —
Mileage \$ —
Fluid Sampler \$ —
Extra Charts \$ —
Insurance \$ —
Telecopier \$ —
TOTAL \$ 900



Nº 1147

GAS FLOW REPORT

Date 1-14-93 Ticket 19389 Company Charter
 Well Name and No. Evans #1 Dst No. 4 Interval Tested 3182-3218
 County meade State KS Sec. 15 Twp. 34 Rg. 28

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
--------------------	-------------------------------------	-----------------	------------------------	------------------------------	---------------------

PRE FLOW

					gas to surface on
					Initial Shut In.

SECOND FLOW

10	3/4	18#	60,200	CF/Per Day
20	3/4	19#	61,900	CF/Per Day
30	3/4	21#	63,500	CF/Per Day
40	3/4	24#	69,500	CF/Per Day
50	3/4	26#	72,400	CF/Per Day
60	3/4	28#	75,100	CF/Per Day

GAS BOTTLE

Serial No. 001 Date Bottle Filled 1-14-93 Date to be Invoiced _____

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1½% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME CharterAuthorized by [Signature]

Page 1
WESTERN TESTING CO., INC.
Pressure Data

1-15-93
Order No. 1562
Job No. 15112
Capacity 3900
Elevation G.E. 2346
Test Ticket No. 19389
Location 3209 Ft.
Well Temperature 94° F
Time Given 3:04
Time Computed 7:04

Initial Hydrostatic Mod. (1550) 1539 P.S.I.	Open Tool	
First Initial Flow Pressure 84 P.S.I.	First Flow Pressure	30 Mins 30 Mins
First Final Flow Pressure 162 P.S.I.	Initial Closed-In Pressure	60 Mins 60 Mins
Initial Closed-In Pressure 958 P.S.I.	Second Flow Pressure	60 Mins 60 Mins
Second Initial Flow Pressure 144 P.S.I.	Final Closed-In Pressure	90 Mins 93 Mins
Second Final Flow Pressure 206 P.S.I.		
Final Closed-In Pressure 960 P.S.I.		
Final Hydrostatic Mod. (1545) 1533 P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Loc		Breakdown: _____ Loc		Breakdown: _____ Loc		Breakdown: _____ Loc	
of 5 mins and a		of 3 mins and a		of 5 mins and a		of 3 mins and a	
beat inc of 0 Min		beat inc of 0 Min		beat inc of 0 Min		beat inc of 0 Min	
Point Mins	Press	Point Mins	Press	Point Mins	Press	Point Mins	Press
P 1 0 84	84	0 162	162	0 145	144	0 205	206
P 2 5 86	86	3 192	192	5 150	150	3 410	410
P 3 10 98	98	6 614	613	10 150	150	6 858	855
P 4 15 122	122	9 900	896	15 158	158	9 936	932
P 5 20 138	138	12 935	930	20 165	166	12 952	948
P 6 25 152	152	15 940	936	25 172	172	15 952	948
P 7 30 162	162	18 948	944	30 172	172	18 954	950
P 8 35		21 952	948	35 178	178	21 954	950
P 9 40		24 958	954	40 180	180	24 954	950
P 10 45		27 962	958	45 188	188	27 954	950
P 11 50		30 962	958	50 195	194	30 954	950
P 12 55		33 962	958	55 200	200	33 958	954
P 13 60		36 962	958	60 205	206	36 958	954
P 14 65		39 962	958	65		39 958	954
P 15 70		42 962	958	70		42 958	954
P 16 75		45 962	958	75		45 958	954
P 17 80		48 962	958	80		48 962	958
P 18 85		51 962	958	85		51 962	958
P 19 90		54 962	958	90		54 962	958
P 20 95		57 962	958	95		57 962	958
100		60 962	958	100		60 964	960

WESTERN TESTING CO., INC. Pressure Data

Date: 1-15-93 Test Ticket No. 19389
 Recorder No. 1562 Capacity 3900 Location 3202 Ft.
 Clock No. 15112 Elevation G.E. 2346 Well Temperature 94° °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud (1100)	<u>1539</u> P.S.I.	<u>3:04</u> M	<u>7:04</u>
B First Initial Flow Pressure	<u>84</u> P.S.I.	<u>30</u> Mins	<u>30</u> Mins.
C First Final Flow Pressure	<u>1162</u> P.S.I.	<u>60</u> Mins	<u>60</u> Mins.
D Initial Closed-in Pressure	<u>958</u> P.S.I.	<u>60</u> Mins	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>144</u> P.S.I.	<u>90</u> Mins	<u>93</u> Mins.
F Second Final Flow Pressure	<u>206</u> P.S.I.		
G Final Closed-in Pressure	<u>960</u> P.S.I.		
H Final Hydrostatic Mud (1100)	<u>1533</u> P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of _____ mins. and a		of _____ mins. and a		of _____ mins. and a		of _____ mins. and a	
final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 105		63		105		63 964	960
P 2 110		66		110		66 964	960
P 3 115		69		115		69 964	960
P 4 120		72		120		72 964	960
P 5 125		75		125		75 964	960
P 6 130		78		130		78 964	960
P 7 135		81		135		81 964	960
P 8 140		84		140		84 964	960
P 9 145		87		145		87 964	960
P10 150		90		150		90 964	960
P11 155		93		155		93 964	960
P12 160		96		160		96	
P13 165		99		165		99	
P14 170		102		170		102	
P15 175		105		175		105	
P16 180		108		180		108	
P17 185		111		185		111	
P18 190		114		190		114	
P19 195		117		195		117	
P20 200		120		200		120	



P. O. BOX 1599 PHONE (316) 262-8861
WICHITA, KANSAS 67201

WESTERN TESTING CO., INC. FORMATION TESTING

TICKET NO. 19389

Location: G.E. 2346 Formation: Council Grove Est. Pay: 8 Ft.

District: Garden City

Date: 1-14-93

Customer Order No.

COMPANY NAME: Charter Production Company

ADDRESS: 224 E. Douglas Suite 400 Wichita KS 67202

LEASE AND WELL NO: Evans #1 COUNTY: Meade STATE: KS Sec: 15 Twp: 34 Rge: 28

Mail Invoice To: Same

Address: Same

No. Copies Requested: Reg

Mail Check To: Same

Address: Same

No. Copies Requested: Reg

Formation Test No. 4 Interval Tested from 3182 ft. to 3218 ft. Total Depth 3218 ft.

Packer Depth 3177 ft. Size 6 5/8 in.

Packer Depth 3182 ft. Size 6 5/8 in.

Depth of Selective Zone Set

Top Recorder Depth (Inches) 3209 ft. Recorder Number 1562 Cap 3900

Bottom Recorder Depth (Inches) 3214 ft. Recorder Number 10242 Cap 4100

Below Straddle Recorder Depth

Drilling Contractor: Eagle Drift Water Length 542 I.D. 2 1/4 in.

Mud Type: Gel-Stack Viscosity 41 Weight 91 Water Loss 12.0 in. Tight Pipe Length 2612 I.D. 3 1/8 in.

Chlorides 22,000 Test Tool Length 28 ft. Test Tool Length 28 ft. Test Tool Length 28 ft.

Jest Make: WTC Serial Number 512 Anchor Length 36 ft. Surface Choke Size 3/4 in.

Did Well Flow? NO Reversed Out NO Main Hose Size 7 1/8 Test Line Size 4 1/2 in.

Blow: Bottom bucket of the gun. (gas to surface on shut in)

See gas flow sheet

Recovered: 90 ft. of moist drab

Recovered: 607 ft. of muddy salt water, gassy 25% mud 75% water

Recovered: ft. of

Recovered: ft. of

Chlorides: 149,000 PPM Sample Jars used: (Total Fluid 697')

Time On Location: 11:00 AM Time Pick Up Tool: 1:30 AM Time Off Location: AM

Time Set Packer: 3:04 AM Time Second Oil In: 7:04 AM Maximum Temperature: 94°F

Initial Hydrostatic Pressure: 1539 PSI

Initial Flow Period: 30 Minutes 90 PSI to (C) 160 PSI

Initial Closed In Period: 60 Minutes 956 PSI

Final Flow Period: 60 Minutes 150 PSI to (E) 210 PSI

Final Closed In Period: 90 Minutes 256 PSI

Final Hydrostatic Pressure: 1529 PSI 1562

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages or injury to the property or personnel of the one for whom a test is made or for any loss or damage to the property or personnel of the one for whom a test is made through the use of its equipment, or its personnel or equipment, or the results of any test. Tools lost or damaged in the test shall be paid for by the party for whom the test is made.

All charges subject to 12% interest after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By: Brad Borg

Signature of Customer: Brad Borg

Western Representative: Brad Borg

FIELD INVOICE

Open Hole Test	✓	\$	✓
Mud		\$	
Straddle Test		\$	
Test	✓	\$	✓
Selective Zone		\$	
Salinity Test	✓	\$	✓
Sealability		\$	
Isolation		\$	
Water Packer		\$	
Circ. Sub	✓	\$	
Mud		\$	
Flow Sampler		\$	
Flow Meter		\$	
Isolation		\$	
Telescope		\$	
TOTAL		\$	

Phone 316 262-5861



P. O. Box 1599
WICHITA, KANSAS 67201

Nº 1147.

GAS FLOW REPORT

Date 1-14-93 Ticket 19389 Company Charter
Well Name and No. Evans #1 Dist No. 4 Interval Tested 3182-3218
County meade State KS Sec. 15 Twp. 34 Rg. 28

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
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PRE FLOW

gas to surface on
Initial Shut In

SECOND FLOW

10	3/4	18#	60,200	CF/Per Day
20	3/4	19#	61,900	CF/Per Day
30	3/4	20#	63,500	CF/Per Day
40	3/4	24#	69,500	CF/Per Day
50	3/4	26#	72,400	CF/Per Day
60	3/4	28#	75,200	CF/Per Day

GAS BOTTLE

Serial No. 001 Date Bottle Filled 1-14-93 Date to be Invoiced _____

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1 1/2% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

WESTERN TESTING CO., INC.
Pressure Data

1-15-93

Job No. 1562

No. 15112

Description G.E. 2346

Job Ticket No. 19387

Location 3209

Well Temperature 94°

Time
GivenTime
Computed

3:04

7:04

Initial Hydraulic Mod. (1530) 1539 P.S.I.
 First Initial Flow Pressure 84 P.S.I.
 First Final Flow Pressure 162 P.S.I.
 Initial Closed-In Pressure 958 P.S.I.
 Second Initial Flow Pressure 144 P.S.I.
 Second Final Flow Pressure 206 P.S.I.
 Final Closed-In Pressure 960 P.S.I.
 Final Hydraulic Mod. (1545) 1533 P.S.I.

Open Test

First Flow Pressure

Initial Closed-In Pressure

Second Flow Pressure

Final Closed-In Pressure

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown		Breakdown		Breakdown		Breakdown	
at 5 mins. and 1		at 3 mins. and 1		at 5 mins. and 1		at 3 mins. and 1	
Final loc. of 0 Min.		Final loc. of 0 Min.		Final loc. of 0 Min.		Final loc. of 0 Min.	
Point Minutes	Pressure	Point Minutes	Pressure	Point Minutes	Pressure	Point Minutes	Pressure
1	84	0	162	0	145	0	205
2	86	3	192	3	150	3	410
3	98	6	164	10	150	6	858
4	122	9	900	13	158	9	936
5	138	12	935	20	165	12	952
6	152	15	940	23	172	15	952
7	162	18	948	30	172	18	954
8	35	21	952	33	178	21	954
9	40	24	958	40	180	24	954
10	45	27	962	43	188	27	954
11	50	30	962	50	195	30	954
12	55	33	962	53	200	33	958
13	60	36	962	60	205	36	958
14	65	39	962	63		39	958
15	70	42	962	70		42	958
16	75	45	962	73		45	958
17	80	48	962	80		48	962
18	85	51	962	83		51	962
19	90	54	962	90		54	962
20	95	57	962	93		57	962
	100	60	962	100		60	964

17602 L
WESTERN TESTING CO., INC.
Pressure Data

Date 1-15-93 Test Ticket No. 19389
 Recorder No. 1562 Capacity 3500 Location 3202 Ft.
 Clock No. 15112 Elevation G.E. 2376 Well Temperature 94° °F
 Point Pressure Time Given Time Computed
 A Initial Hydrostatic Mud (14005) 1539 P.S.I. Open Tool 3:04 M 7:04
 B First Initial Flow Pressure 84 P.S.I. First Flow Pressure 30 Mins 30 Mins
 C First Final Flow Pressure 162 P.S.I. Initial Closed-in Pressure 60 Mins 60 Mins
 D Initial Closed-in Pressure 958 P.S.I. Second Flow Pressure 60 Mins 60 Mins
 E Second Initial Flow Pressure 144 P.S.I. Final Closed-in Pressure 90 Mins 93 Mins
 F Second Final Flow Pressure 206 P.S.I.
 G Final Closed-in Pressure 960 P.S.I.
 H Final Hydrostatic Mud (14005) 1533 P.S.I.

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of _____ mins. and a		of _____ mins. and a		of _____ mins. and a		of _____ mins. and a	
final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>105</u>		<u>63</u>		<u>105</u>		<u>63</u> <u>964</u>	<u>960</u>
P 2 <u>110</u>		<u>66</u>		<u>110</u>		<u>66</u> <u>964</u>	<u>960</u>
P 3 <u>115</u>		<u>69</u>		<u>115</u>		<u>69</u> <u>964</u>	<u>960</u>
P 4 <u>120</u>		<u>72</u>		<u>120</u>		<u>72</u> <u>964</u>	<u>960</u>
P 5 <u>125</u>		<u>75</u>		<u>125</u>		<u>75</u> <u>964</u>	<u>960</u>
P 6 <u>130</u>		<u>78</u>		<u>130</u>		<u>78</u> <u>964</u>	<u>960</u>
P 7 <u>135</u>		<u>81</u>		<u>135</u>		<u>81</u> <u>964</u>	<u>960</u>
P 8 <u>140</u>		<u>84</u>		<u>140</u>		<u>84</u> <u>964</u>	<u>960</u>
P 9 <u>145</u>		<u>87</u>		<u>145</u>		<u>87</u> <u>964</u>	<u>960</u>
P 10 <u>150</u>		<u>90</u>		<u>150</u>		<u>90</u> <u>964</u>	<u>960</u>
P 11 <u>155</u>		<u>93</u>		<u>155</u>		<u>93</u> <u>964</u>	<u>960</u>
P 12 <u>160</u>		<u>96</u>		<u>160</u>		<u>96</u>	
P 13 <u>165</u>		<u>99</u>		<u>165</u>		<u>99</u>	
P 14 <u>170</u>		<u>102</u>		<u>170</u>		<u>102</u>	
P 15 <u>175</u>		<u>105</u>		<u>175</u>		<u>105</u>	
P 16 <u>180</u>		<u>108</u>		<u>180</u>		<u>108</u>	
P 17 <u>185</u>		<u>111</u>		<u>185</u>		<u>111</u>	
P 18 <u>190</u>		<u>114</u>		<u>190</u>		<u>114</u>	
P 19 <u>195</u>		<u>117</u>		<u>195</u>		<u>117</u>	
P 20 <u>200</u>		<u>120</u>		<u>200</u>		<u>120</u>	