

ORIGINAL

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

CONFIDENTIAL

API #15-129-21236

HANKE TRUST #1—1993 HPEP 3502' GL
C NE SW SECTION 8-33S-42W 3513' KB
MORTON COUNTY, KANSAS
FERRET PROSPECT
10-24-93 7:00 AM 3644' OPERATION: W.O. TESTER

KCC

JAN 17

CONFIDENTIAL

DST #1 3573'-3644' (Lansing)

30"-60"-60"-90"

RECOVERED: 1260' GIP

180' GMW (15% GAS, 30% MUD, 55% WATER)

540' Water (27,000 Chlorides)

Initial Flow Pressure: 116-180 PSI

Final Flow Pressure: 286-338 PSI

Initial Shut In Pressure: 706 PSI

Final Shut In Pressure: 706 PSI

BHT 108°

10-28-93 7:00 AM 4897' OPERATION: CIRCULATING TO
CONDITION HOLE

DST #2 4828'-4897' (LOWER MORROW SAND)

Times: 60"-60"-65"-60"

1st Open: BOB in 1". GTS 5" into ISL

2nd Open: Gas immediately.

5" 18,800 CFPD

10" 17,200 CFPD

15" 15,400 CFPD

20" Caught Gas Sample

25" 12,500 CFPD

30" 10,900 CFPD

35" 10,900 CFPD

40" 5,600 CFPD

45" 6,720 CFPD

50" 7,880 CFPD

55" 8,220 CFPD

60" 8,890 CFPD

65" 9,790 CFPD

RELEASED

MAR 14 1996

FROM CONFIDENTIAL

RECOVERED: 488' GOCM (10% gas, 3% oil, 87% mud)

183' GOCM (18% gas, 3% oil, 79% mud)

Initial Flow Pressure: 115-203 PSI

Final Flow Pressure: 225-264 PSI

Initial Shut In Pressure: 922 PSI

Final Shut In Pressure: 928 PSI

BHT 138°

10-30-93 7:00 AM 5013' OPERATION: TOH with DST #3

DST #3 4963'-5013'

Times: 15"-15"-15"-15"

1st Open: Weak. Died in 1 min

2nd Open: No Blow

RECOVERED: 600' MUD

CONFIDENTIAL

Initial Flow Pressure: 483-511 PSI Final Flow Pressure: 420-499 PSI
Initial Shut In Pressure: 525 PSI Final Shut In Pressure: 490 PSI
BHT 139°

10-31-93

7:00 AM 5013' OPERATION: TIH with DST #4

DST #4 4964'-5013'

Times: 60"-60"-60"-60"

1st Open: Weak. Slowly built to 1 3/4"

2nd Open: Weak 1/4". Died 40" into final flow

RECOVERED: 140' MUD

Initial Flow Pressure: 50-54 PSI

Final Flow Pressure: 89-91 PSI

Initial Shut In Pressure: 1041 PSI

Final Shut In Pressure: 1047 PSI

BHT 139°

11-02-93

7:00 AM 5214' OPERATION: TIH W/DST #5 4941'-4965'

11-03-93

7:00 AM 5214' OPERATION: CEMENTING 5 1/2" PRODUCTION CASING

DST #5 4941'-4965'

Times: 30"-60"-30"-60"

1st Open: Off BOB in 2"

2nd Open: Off BOB in 4"

RECOVERED: 20' MUD

1470' WATER

Initial Flow Pressure: 130-522 PSI

Final Flow Pressure: 563-741 PSI

Initial Shut In Pressure: 1107 PSI

Final Shut In Pressure: 1107 PSI

BHT 142°

Hydrostatic Pressure: 2606-2586 PSI

RELEASED

MAR 1 4 1996

FROM CONFIDENTIAL

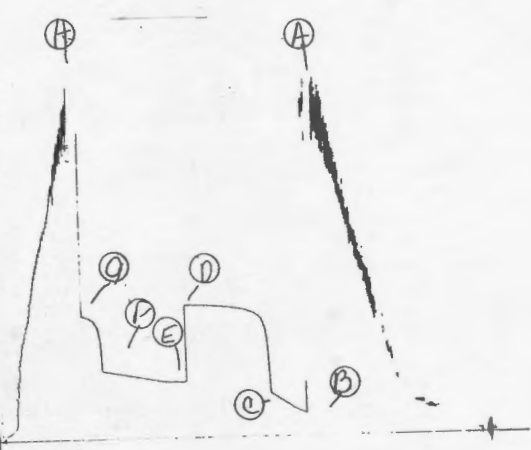
ORIGINAL

RECEIVED
STATE CORPORATION COMMISSION

JAN 19 1994
CONSERVATION DIVISION

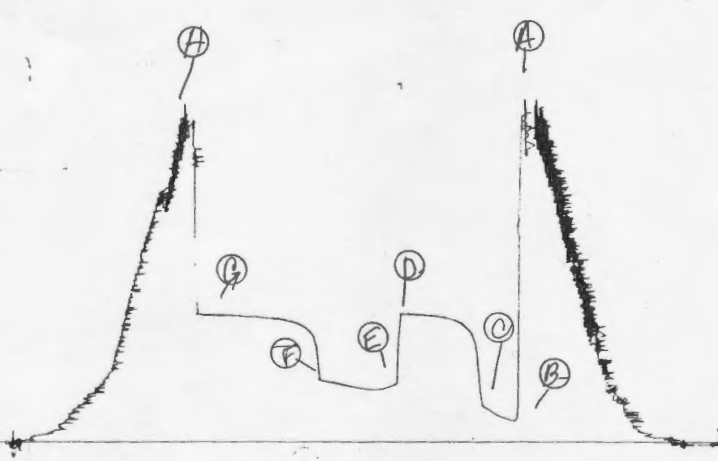
TR-#20085
I.

10270



TR-#20085
D.

A



0571
13550

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 80 - 688 - 7021

COMPANY CHARTER PRODUCTION COMPANY LEASE & WELL NO. #1 HANKE TRUST SEC. 8 TWP. 33S RGE. 42W TEST NO. 1 DATE 10/24/93

DST REPORT

GENERAL INFORMATION

DATE	: 10-24-93	TICKET	: 20085
CUSTOMER	: CHARTER PRODUCTION CO.	LEASE	: HANKE TRUST
WELL	: #1	TEST: 1	GEOLOGIST: R. S.
ELEVATION	: 3502 G.L.	FORMATION	: LANSING KANSAS CITY
SECTION	: 8	TOWNSHIP	: 33S
RANGE	: 42W	COUNTY: MORTON	STATE : KS
GAUGE SN#	: 10270	RANGE : 4150	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM:	3573.00 ft	TO:	3644.00 ft	TVD:	3644.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	3634.0 ft		3637.0 ft		
TEMPERATURE:	108.0				
DRILL COLLAR LENGTH:	520.0 ft	I.D.:		2.200 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	3026.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	27.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	71.0 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:	3568.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	3573.0 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. :	ZENITH DRLG. #6	VISCOSITY :	62.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	8.800 cc
WEIGHT :	9.000 ppg		
CHLORIDES :	1000 ppm	SERIAL NUMBER:	422
JARS-MAKE :	WTC	REVERSED OUT?:	NO
DID WELL FLOW?:	NO		

COMMENTS

Comment

WEAK BUILDING TO A STRONG BLOW ON 3 MINUTES BLOW
STARTED AT 2" IN BUCKET ON INITIAL FLOW PERIOD.
FAIR BLOW BUILDING TO A STRONG BLOW IN 10 MINUTES

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

STARTED OUT AT 4" IN BUCKET ON FINAL FLOW PERIOD.

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
180.0	0.0	15.0	55.0	30.0	GASSY MUDDY WATER
540.0	0.0	0.0	100.0	0.0	WATER
0.0	0.0	0.0	0.0	0.0	1260 GAS ABOVE FLUID
0.0	0.0	0.0	0.0	0.0	CHLORIDES 27000 PPM

RATE INFORMATION

OIL VOLUME:	0.0000	STB		
GAS VOLUME:	2.1265	SCF		
MUD VOLUME:	0.7574	STB		
WATER VOLUME:	4.1138	STB		
TOTAL FLUID :	4.8713	STB		
			TOTAL FLOW TIME:	85.0000 min.
			AVERAGE OIL RATE:	0.0000 STB/D
			AVERAGE WATER RATE:	82.5249 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1778.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	116.00	180.00
INITIAL SHUT-IN	60.00		706.00
FINAL FLOW	60.00	286.00	338.00
FINAL SHUT-IN	90.00		706.00

FINAL HYDROSTATIC PRESSURE: 1748.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1770.00

Description	Duration	p1	p End
INITIAL FLOW	25.00	117.00	196.00
INITIAL SHUT-IN	60.00		696.00
FINAL FLOW	60.00	297.00	347.00
FINAL SHUT-IN	90.00		695.00

FINAL HYDROSTATIC PRESSURE: 1721.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 10-24-93	TICKET : 20085
CUSTOMER : CHARTER PRODUCTION CO.	LEASE : HANKE TRUST
WELL : #1	GEOLOGIST: R. S.
ELEVATION: 3502 G.L.	FORMATION: LANSING KANSAS CITY
SECTION : 8	TOWNSHIP : 33S
RANGE : 42W	STATE : KS
GAUGE SN#: 10270	CLOCK : 12
COUNTY: MORTON	
RANGE : 4150	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	117.00	117.00
5.00	123.00	6.00
10.00	133.00	10.00
15.00	146.00	13.00
20.00	174.00	28.00
25.00	196.00	22.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	379.00	379.00	0.00
6.00	542.00	163.00	0.00
9.00	600.00	58.00	0.00
12.00	625.00	25.00	0.00
15.00	642.00	17.00	0.00
18.00	654.00	12.00	0.00
21.00	665.00	11.00	0.00
24.00	675.00	10.00	0.00
27.00	679.00	4.00	0.00
30.00	683.00	4.00	0.00
33.00	685.00	2.00	0.00
36.00	687.00	2.00	0.00
39.00	688.00	1.00	0.00
42.00	689.00	1.00	0.00
45.00	691.00	2.00	0.00
48.00	692.00	1.00	0.00
51.00	693.00	1.00	0.00
54.00	694.00	1.00	0.00
57.00	695.00	1.00	0.00
60.00	696.00	1.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	297.00	297.00
5.00	298.00	1.00
10.00	288.00	-10.00
15.00	284.00	-4.00
20.00	286.00	2.00
25.00	292.00	6.00
30.00	299.00	7.00
35.00	305.00	6.00
40.00	314.00	9.00
45.00	322.00	8.00
50.00	328.00	6.00
55.00	333.00	5.00
60.00	347.00	14.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	502.00	502.00	0.00
6.00	581.00	79.00	0.00
9.00	608.00	27.00	0.00
12.00	627.00	19.00	0.00
15.00	638.00	11.00	0.00
18.00	648.00	10.00	0.00
21.00	656.00	8.00	0.00
24.00	660.00	4.00	0.00
27.00	664.00	4.00	0.00
30.00	669.00	5.00	0.00
33.00	671.00	2.00	0.00
36.00	673.00	2.00	0.00
39.00	675.00	2.00	0.00
42.00	677.00	2.00	0.00
45.00	679.00	2.00	0.00
48.00	681.00	2.00	0.00
51.00	682.00	1.00	0.00
54.00	683.00	1.00	0.00
57.00	684.00	1.00	0.00
60.00	685.00	1.00	0.00
63.00	686.00	1.00	0.00
66.00	687.00	1.00	0.00
69.00	688.00	1.00	0.00
72.00	689.00	1.00	0.00
75.00	690.00	1.00	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>
78.00	691.00	1.00	0.00
81.00	692.00	1.00	0.00
84.00	693.00	1.00	0.00
87.00	694.00	1.00	0.00
90.00	695.00	1.00	0.00



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET N^o 20085

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

Elevation 3502 GL Formation LANSING KC Eff. Pay — Ft.

District GREAT Bend Date 10-24-93 Customer Order No. —

COMPANY NAME CHARTER Production Company

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

LEASE AND WELL NO Hanke Trust #1 COUNTY MARTON STATE KS Sec. 8 Twp. 33 Rge. 42

Mail Invoice To SAME Co. Name #1 Hanke Trust Address No. Copies Requested 2

Mail Charts To SAME Address No. Copies Requested 2

Formation Test No. 1 Interval Tested From 3573 ft. to 3644 ft. Total Depth 3644 ft.

Packer Depth 3568 ft. Size 6 5/8 in. Packer Depth — ft. Size — in.

Packer Depth 3573 ft. Size 6 7/8 in. Packer Depth — ft. Size — in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3634 ft. Recorder Number 10270 Cap. 4150

Bottom Recorder Depth (Outside) 3637 ft. Recorder Number 13550 Cap. 4175

Below Straddle Recorder Depth — ft. Recorder Number — Cap. —

Drilling Contractor ZENITH drilling Mud Type Chemical Viscosity 62

Weight 9 Water Loss 8.8 cc. Drill Collar Length 520 I. D. 2.2 in.

Chlorides 1000 P.P.M. Test Tool Length 27 ft. Tool Size 5 1/2 in.

Jars: Make WTC Serial Number 422 Anchor Length 71 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 1 1/4 in.

Blow: IF - 4 YEAR building TO A Strong Blow in 3 min. started out at 2"

FF - 7 YEAR building TO A Strong Blow in 10 min. " " " 4"

Recovered 1260 ft. of GAS in Pipe

Recovered 180 ft. of Gassy muddy WATER 15% GAS 30% mud 55% WATER

Recovered 540 ft. of WATER

Recovered — ft. of

Recovered — ft. of

Chlorides 27000 P.P.M. Sample Jars used 4 Remarks:

Time On Location 8:30 A.M. Time Pick Up Tool 9:00 A.M. Time Off Location — A.M.

Time Set Packer(s) 11:25 P.M. Time Started Off Bottom 3:25 P.M. Maximum Temperature 108°

Initial Hydrostatic Pressure (A) 1778 P.S.I.

Initial Flow Period (B) 116 P.S.I. to (C) 180 P.S.I.

Initial Closed In Period (D) 706 P.S.I.

Final Flow Period (E) 286 P.S.I. to (F) 338 P.S.I.

Final Closed In Period (G) 706 P.S.I.

Final Hydrostatic Pressure (H) 1748 P.S.I.

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 Ray Schwager Thank you

FIELD INVOICE

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

WESTERN TESTING CO., INC.

Pressure Data

Date _____

Test Ticket No. 20085

Recorder No. _____ Capacity _____ Location _____ Ft. _____

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1770</u> 1770 P.S.I.			
B First Initial Flow Pressure	<u>117</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>25</u> Mins.
C First Final Flow Pressure	<u>196</u> P.S.I.	Initial Closed-in Pressure	<u>60</u> Mins.	<u>60</u> Mins.
D Initial Closed-in Pressure	<u>696</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>297</u> P.S.I.	Final Closed-in Pressure	<u>90</u> Mins.	<u>90</u> Mins.
F Second Final Flow Pressure	<u>347</u> P.S.I.			
G Final Closed-in Pressure	<u>694</u> P.S.I.			
H Final Hydrostatic Mud	<u>1921</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>117</u>	0	<u>196</u>	0	<u>297</u>	0	<u>347</u>
P 2 5	<u>123</u>	3	<u>379</u>	5	<u>298</u>	3	<u>502</u>
P 3 10	<u>123</u>	6	<u>542</u>	10	<u>288</u>	6	<u>581</u>
P 4 15	<u>146</u>	9	<u>600</u>	15	<u>284</u>	9	<u>608</u>
P 5 20	<u>174</u>	12	<u>625</u>	20	<u>286</u>	12	<u>627</u>
P 6 25	<u>196</u>	15	<u>642</u>	25	<u>292</u>	15	<u>638</u>
P 7 30		18	<u>654</u>	30	<u>299</u>	18	<u>648</u>
P 8 35		21	<u>665</u>	35	<u>305</u>	21	<u>656</u>
P 9 40		24	<u>675</u>	40	<u>314</u>	24	<u>660</u>
P10 45		27	<u>679</u>	45	<u>322</u>	27	<u>664</u>
P11 50		30	<u>683</u>	50	<u>328</u>	30	<u>669</u>
P12 55		33	<u>685</u>	55	<u>333</u>	33	<u>671</u>
P13 60		36	<u>687</u>	60	<u>347</u>	36	<u>673</u>
P14 65		39	<u>688</u>	65		39	<u>675</u>
P15 70		42	<u>689</u>	70		42	<u>677</u>
P16 75		45	<u>691</u>	75		45	<u>679</u>
P17 80		48	<u>692</u>	80		48	<u>680</u>
P18 85		51	<u>693</u>	85		51	<u>682</u>
P19 90		54	<u>694</u>	90		54	<u>683</u>
P20 95		57	<u>695</u>	95		57	<u>684</u>
100		60	<u>696</u>	100		60	<u>685</u>

WESTERN TESTING CO., INC.

Pressure Data

Date: 11/11/2008

Test Ticket No. 20085

Recorder No. _____ Capacity _____ Location _____ Ft. _____

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mud _____ P.S.I.	Open Tool _____ M _____		
B First Initial Flow Pressure _____ P.S.I.	First Flow Pressure _____ Mins. _____ Mins.	30	
C First Final Flow Pressure _____ P.S.I.	Initial Closed-in Pressure _____ Mins. _____ Mins.	60	
D Initial Closed-in Pressure _____ P.S.I.	Second Flow Pressure _____ Mins. _____ Mins.	120	
E Second Initial Flow Pressure _____ P.S.I.	Final Closed-in Pressure _____ Mins. _____ Mins.	120	
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

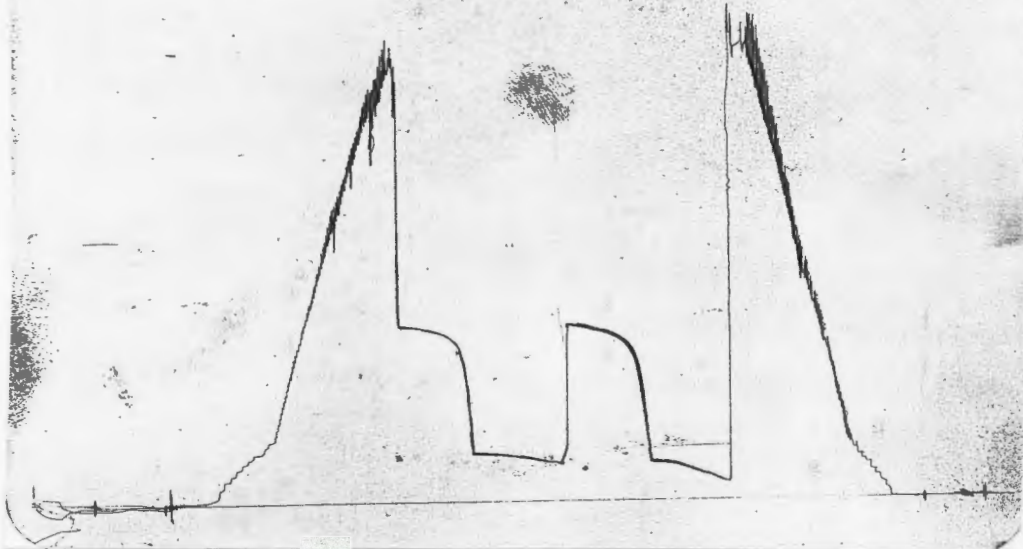
First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of _____ mins. and a		of _____ mins. and a		of _____ mins. and a		of _____ mins. and a	
final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.		final inc. of _____ Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 105	5	63		105		63	686
P 2 110		66		110		66	684
P 3 115		69		115		69	682
P 4 120		72		120		72	689
P 5 125		75		125		75	640
P 6 130		78		130		78	641
P 7 135		81		135		81	692
P 8 140		84		140		84	693
P 9 145		87		145		87	694
P10 150		90		150		90	695
P11 155		93		155		93	
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	

Kt 19956

I

DST #2

10242

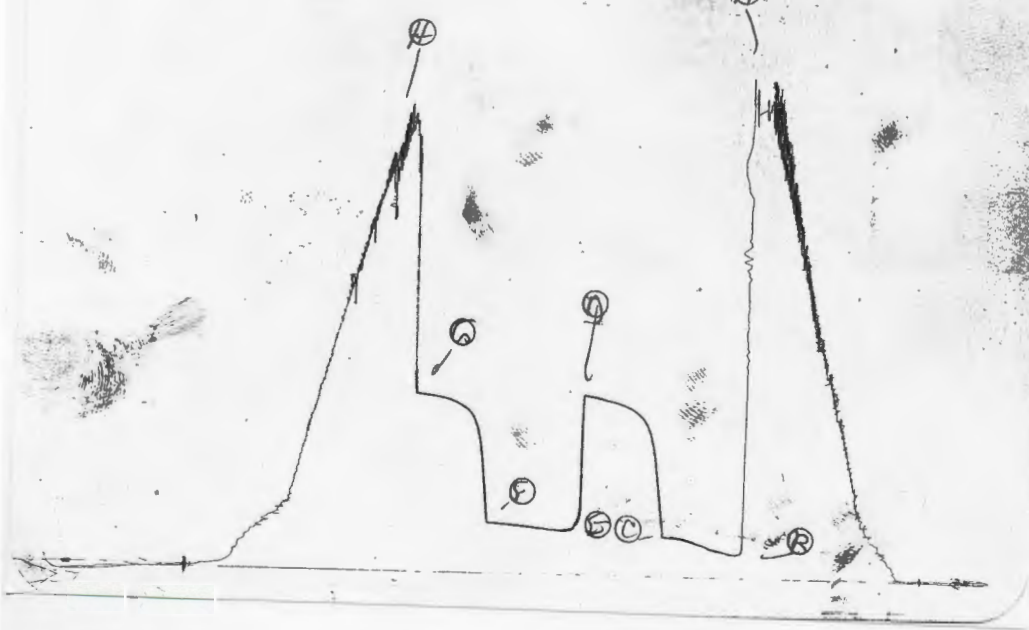


Kt 19956

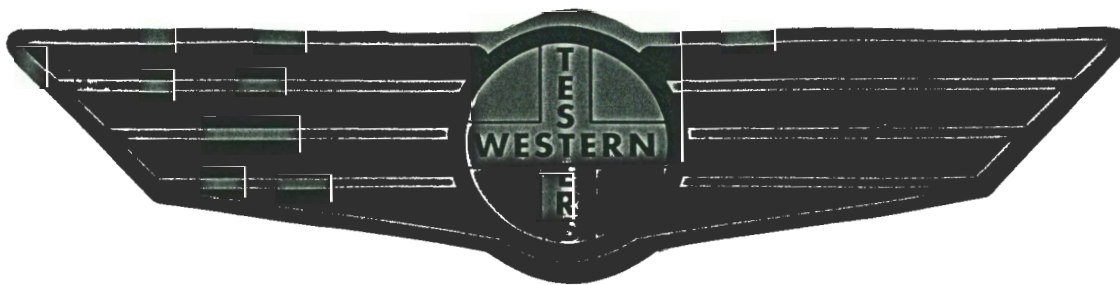
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DST #2

13266 ★



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 80 - 688 - 7021

COMPANY CHARTER PRODUCTION CO. LEASE & WELL NO. HANKE TRUST #1 SFC. 8 TWP. 33s RGE. 42w TEST NO. 2 DATE 10-28-93

DST REPORT

GENERAL INFORMATION

DATE	: 10/28/93	TICKET	: 19936
CUSTOMER	: CHARTER PRODUCTION CO.	LEASE	: HANKE TRUST
WELL	: #1	TEST: 2	GEOLOGIST: R. S.
ELEVATION	: 3502 G.L.	FORMATION	: MORROW
SECTION	: 8	TOWNSHIP	: 33S
RANGE	: 42W	COUNTY: MORTON	STATE : KS
GAUGE SN#	: 13266	RANGE : 4000	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM:	4828.00 ft	TO:	4897.00 ft	TVD:	4897.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	GAS
DEPTH OF RECORDERS:	4855.0 ft		4852.0 ft		
TEMPERATURE:	138.0				
DRILL COLLAR LENGTH:	522.0 ft	I.D.:		2.250 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	4278.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	28.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	69.0 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:	4823.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	4828.0 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. :	ZENITH DRLG RIG 7	VISCOSITY :	66.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	7.200 cc
WEIGHT :	9.200 ppg		
CHLORIDES :	2000 ppm	SERIAL NUMBER:	415
JARS-MAKE :	WTC	REVERSED OUT?:	NO
DID WELL FLOW?:	YES		

COMMENTS

Comment

INITIAL FLOW PERIOD FAIR BLOW - BOTTOM OF BUCKET
IN 1 MINUTE. FINAL FLOW PERIOD STRONG BLOW -
BOTTOM OF BUCKET IMMEDIATELY SEE GAS SHEET

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

ATTACHED.

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
488.0	3.0	10.0	0.0	87.0	GASSY OIL CUT MUD
183.0	3.0	18.0	0.0	79.0	GASSY OIL CUT MUD

RATE INFORMATION

OIL VOLUME: 0.1397 STB
 GAS VOLUME: 3.0191 SCF
 MUD VOLUME: 3.9795 STB
 WATER VOLUME: 0.0000 STB
 TOTAL FLUID : 4.1192 STB

TOTAL FLOW TIME: 130.0000 min.
 AVERAGE OIL RATE: 45.6278 STB/D
 AVERAGE WATER RATE: 0.0000 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2468.00

Description	Duration	p1	p End
INITIAL FLOW	60.00	115.00	203.00
INITIAL SHUT-IN	60.00		922.00
FINAL FLOW	60.00	225.00	264.00
FINAL SHUT-IN	60.00		928.00

FINAL HYDROSTATIC PRESSURE: 2424.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2462.00

Description	Duration	p1	p End
INITIAL FLOW	60.00	120.00	205.00
INITIAL SHUT-IN	60.00		934.00
FINAL FLOW	70.00	231.00	260.00
FINAL SHUT-IN	54.00		929.00

FINAL HYDROSTATIC PRESSURE: 2364.00

GAS FLOW REPORT

GENERAL INFORMATION

DATE : 10/28/93	TICKET : 19936
CUSTOMER : CHARTER PRODUCTION CO.	LEASE : HANKE TRUST
WELL : #1	GEOLOGIST: R. S.
ELEVATION: 3502 G.L.	FORMATION: MORROW
SECTION : 8	TOWNSHIP : 33S
RANGE : 42W	STATE : KS
GAUGE SN#: 13266	CLOCK : 12
COUNTY: MORTON	
RANGE : 4000	

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.
5 MIN	MERLA	0.500	9" WATER	18800 SCF/D
10 MIN	MERLA	0.500	8" WATER	17200 SCF/D
15 MIN	MERLA	0.500	6" WATER	15400 SCF/D
20 MIN	MERLA	0.500	CATCH GAS SAMPLE	0 SCF/D
25 MIN	MERLA	0.500	4" WATER	12500 SCF/D
30 MIN	MERLA	0.500	3" WATER	10900 SCF/D
35 MIN	MERLA	0.500	3" WATER	10900 SCF/D
40 MIN	MERLA	0.250	11" WATER	5600 SCF/D
45 MIN	MERLA	0.250	16" WATER	6720 SCF/D
50 MIN	MERLA	0.250	22" WATER	7880 SCF/D
55 MIN	MERLA	0.250	24" WATER	8220 SCF/D
60 MIN	MERLA	0.250	28" WATER	8890 SCF/D
65 MIN	MERLA	0.250	32" WATER	9500 SCF/D

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 10/28/93	TICKET : 19936
CUSTOMER : CHARTER PRODUCTION CO.	LEASE : HANKE TRUST
WELL : #1	GEOLOGIST: R. S.
ELEVATION: 3502 G.L.	FORMATION: MORROW
SECTION : 8	TOWNSHIP : 33S
RANGE : 42W	STATE : KS
GAUGE SN#: 13266	CLOCK : 12
COUNTY: MORTON	
RANGE : 4000	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	120.00	120.00
5.00	120.00	0.00
10.00	121.00	1.00
15.00	128.00	7.00
20.00	139.00	11.00
25.00	148.00	9.00
30.00	161.00	13.00
35.00	173.00	12.00
40.00	185.00	12.00
45.00	193.00	8.00
50.00	201.00	8.00
55.00	203.00	2.00
60.00	205.00	2.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	395.00	395.00	0.00
6.00	578.00	183.00	0.00
9.00	688.00	110.00	0.00
12.00	760.00	72.00	0.00
15.00	798.00	38.00	0.00
18.00	826.00	28.00	0.00
21.00	845.00	19.00	0.00
24.00	859.00	14.00	0.00
27.00	871.00	12.00	0.00
30.00	879.00	8.00	0.00
33.00	889.00	10.00	0.00
36.00	894.00	5.00	0.00
39.00	899.00	5.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

Time (min)	Pressure	Delta P	Horner T
42.00	904.00	5.00	0.00
45.00	910.00	6.00	0.00
48.00	915.00	5.00	0.00
51.00	920.00	5.00	0.00
54.00	925.00	5.00	0.00
57.00	930.00	5.00	0.00
60.00	934.00	4.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	231.00	231.00
5.00	231.00	0.00
10.00	231.00	0.00
15.00	231.00	0.00
20.00	231.00	0.00
25.00	233.00	2.00
30.00	236.00	3.00
35.00	240.00	4.00
40.00	244.00	4.00
45.00	248.00	4.00
50.00	251.00	3.00
55.00	253.00	2.00
60.00	255.00	2.00
65.00	257.00	2.00
70.00	260.00	3.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	546.00	546.00	0.00
6.00	686.00	140.00	0.00
9.00	769.00	83.00	0.00
12.00	818.00	49.00	0.00
15.00	845.00	27.00	0.00
18.00	858.00	13.00	0.00
21.00	872.00	14.00	0.00
24.00	883.00	11.00	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>
27.00	893.00	10.00	0.00
30.00	901.00	8.00	0.00
33.00	907.00	6.00	0.00
36.00	910.00	3.00	0.00
39.00	913.00	3.00	0.00
42.00	918.00	5.00	0.00
45.00	921.00	3.00	0.00
48.00	924.00	3.00	0.00
51.00	926.00	2.00	0.00
54.00	929.00	3.00	0.00



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET N^o. 19936

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

Elevation 3502 Formation Morrow Eff. Pay Ft.

District Haysdon Date 10-28-93 Customer Order No.
COMPANY NAME Charter Prod. Co.
ADDRESS 400 Kress Energy Center 224 E. Douglas Wichita KS. 67202
LEASE AND WELL NO. Hanke Trust #1 COUNTY Morton STATE KS Sec. 8 Twp. 33S Rge. 42W
Mail Invoice To Charter Prod. Co. No. Copies Requested Reg
Co. Name #1 HANKE TRUST Address
Mail Charts To No. Copies Requested Reg

Formation Test No. 2 Interval Tested From 4828 ft. to 4897 ft. Total Depth 4897 ft.
Packer Depth 4823 ft. Size 6 5/8 in. Packer Depth ft. Size in.
Packer Depth 4828 ft. Size 6 5/8 in. Packer Depth ft. Size in.
Depth of Selective Zone Set

Top Recorder Depth (Inside) 4853 ft. Recorder Number 10242 Cap. 4100
Bottom Recorder Depth (Outside) 4852 ft. Recorder Number 13266 Cap. 4000
Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Zenith #7 Drill Collar Length 522 I. D. 2 1/4 in.
Mud Type Chem. Viscosity 66 Weight Pipe Length I. D. in.
Weight 9.2 Water Loss 7.2 cc. Drill Pipe Length 4309 4278 I. D. 3.8 in.
Chlorides 2000 P.P.M. Test Tool Length 28 ft. Tool Size 5 1/2 in.
Jars: Make WTC Serial Number 415 Anchor Length (31+38) 69 ft. Size 6 + 5 1/2 in.
Did Well Flow? Yes 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 H in.

Blow: FAIR - B.O.B 1 min 6.T.S. 5 min 12 to Initial shut in I.F.
STRONG B.O.B Immediately See Flow chart F.F.

Recovered 488 ft. of lossy oil cut Mud 10% gas 3% oil 87% mud
Recovered 183 ft. of lossy oil cut Mud 19% gas 3% oil 79% mud
Recovered ft. of
Recovered ft. of
Recovered ft. of
Chlorides P.P.M. Sample Jars used Remarks: Tot Fl Rec 671

Time On Location 7:30 A.M. Time Pick Up Tool 10:30 A.M. Time Off Location A.M.
Time Set Packer(s) 1:00 A.M. Time Started Off Bottom 5:05 A.M. Maximum Temperature 138°
Initial Hydrostatic Pressure (A) 2468 P.S.I.
Initial Flow Period Minutes 60 (B) 115 P.S.I. to (C) 203 P.S.I.
Initial Closed In Period Minutes 60 (D) 922 P.S.I.
Final Flow Period Minutes 60 (E) 225 P.S.I. to (F) 264 P.S.I.
Final Closed In Period Minutes 60 (G) 928 P.S.I.
Final Hydrostatic Pressure (H) 2424 P.S.I.

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

FIELD INVOICE

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



Nº 1159

GAS FLOW REPORT

Date 10-28-93 Ticket 19936 Company Charter Prod. Co.
 Well Name and No. Hanke Trust #1 Dst No. 2 Interval Tested 4828 - 4897
 County Morton State KS Sec. 8 Twp. 33S Rg. 42N

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

Gauge with Inches of WTR

SECOND FLOW

G.T.S. 5 min into Initial
shut IN.

5	9	1/2	18,800	CFPD
10	8	1/1	17,200	
15	6	1/1	15,400	
20	CATCH	GAS SAMPLE		
25	4	1/2	12,500	
30	3	1/2	10,900	CFPD
35	3	1/1	10,900	
40	11	1/4	5,600	
45	16	1/4	6,720	
50	22	1/4	7,880	
55	24	1/4	8,220	
60	28	1/4	8,890	
65	32	1/4	9,740	9500

GAS BOTTLE

Serial No. _____ Date Bottle Filled 10-28-93 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.

COMPANY'S NAME Charter Prod. Co.Authorized by Valis

WESTERN TESTING CO., INC.

Pressure Data

Date 10-28-82

Test Ticket No. 19934

Recorder No. B266

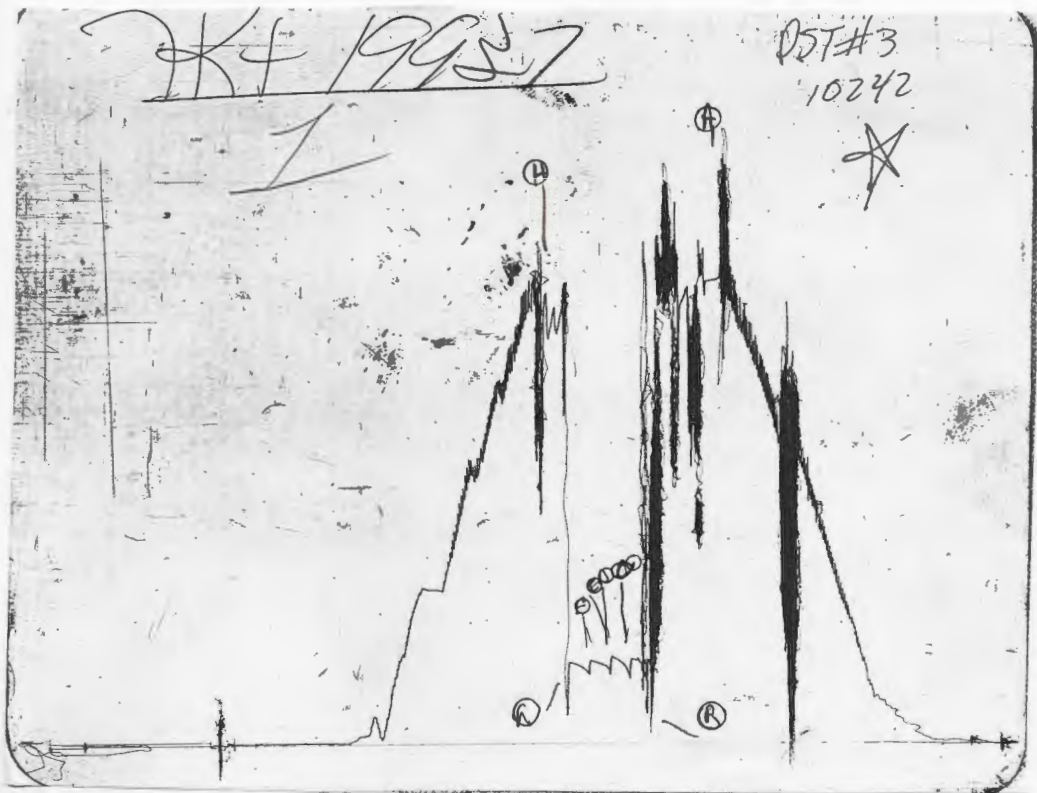
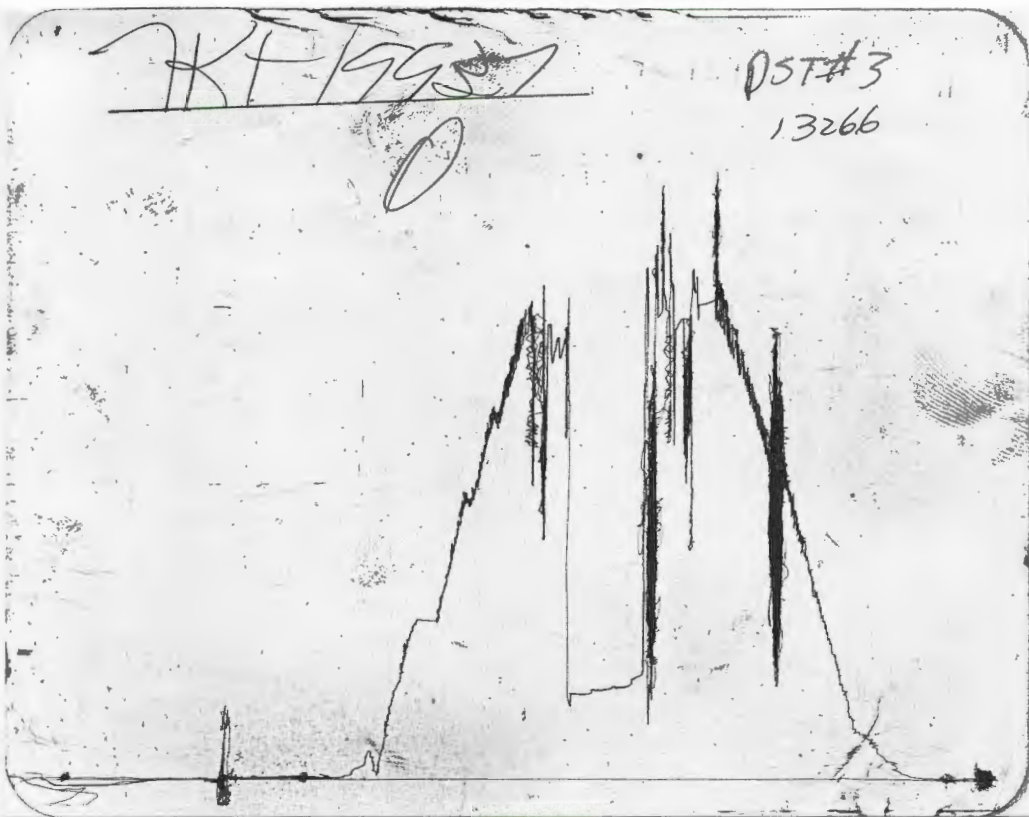
Capacity _____ Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

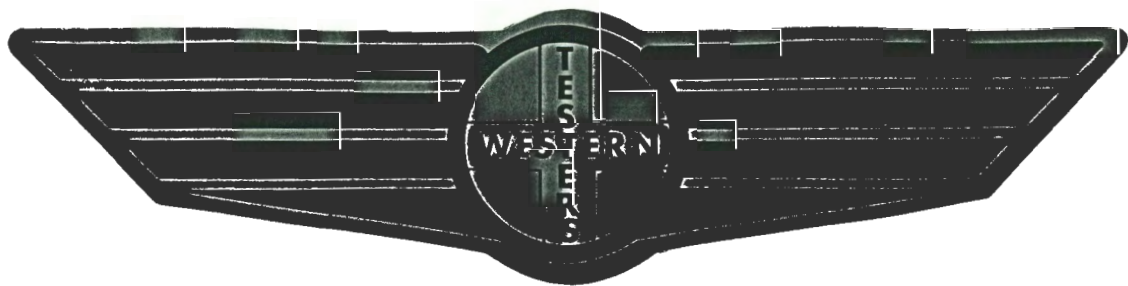
Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud <u>2465</u>	P.S.I.		M	
B First Initial Flow Pressure	P.S.I.	First Flow Pressure	Mins.	Mins.
C First Final Flow Pressure	P.S.I.	Initial Closed-in Pressure	Mins.	Mins.
D Initial Closed-in Pressure	P.S.I.	Second Flow Pressure	Mins.	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 <u>2364</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	120	0	205	0	231	0	240
P 2 5	120	3	295	5		3	546
P 3 10	141	6	528	10	2	6	686
P 4 15	118	9	688	15		9	769
P 5 20	139	12	760	20	231	12	818
P 6 25	128	15	798	25	234	15	845
P 7 30	141	18	824	30	236	18	858
P 8 35	172	21	845	35	240	21	872
P 9 40	185	24	859	40	244	24	882
P10 45	193	27	871	45	248	27	892
P11 50	201	30	879	50	251	30	901
P12 55	203	33	889	55	253	33	907
P13 60	205	36	894	60	255	36	910
P14 65		39	899	65	257	39	912
P15 70		42	904	70	260	42	918
P16 75		45	910	75		45	924
P17 80		48	915	80		48	924
P18 85		51	920	85		51	926
P19 90		54	925	90		54	929
P20 95		57	930	95		57	
100		60	934	100		60	



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 80 - 688 - 7021

COMPANY CHARTER PRODUCTION COMPANY LEASE & WELL NO. #1 HANKE TRUST SEC. 8 TWP. 33S RGE. 42W TEST NO. 3 DATE 10/29/93

DST REPORT

GENERAL INFORMATION

DATE	: 10/29/93	TICKET	: 19937
CUSTOMER	: CHARTER PRODUCTION CO.	LEASE	: HANKE TRUST
WELL	: #1	TEST: 3	GEOLOGIST: R. S.
ELEVATION	: 3502 G.L.	FORMATION	: MORROW
SECTION	: 8	TOWNSHIP	: 33S
RANGE	: 42W	COUNTY: MORTON	STATE : KS
GAUGE SN#	: 10242	RANGE : 4100	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM:	4963.00 ft	TO:	5013.00 ft	TVD:	5013.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	4970.0 ft		4973.0 ft		
TEMPERATURE:	139.0				
DRILL COLLAR LENGTH:	522.0 ft	I.D.:		2.250 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	4413.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	28.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	50.0 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:	4958.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	4963.0 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. :	ZENITH DRLG RIG 7	VISCOSITY :	71.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	8.800 cc
WEIGHT :	9.000 ppg		
CHLORIDES :	1500 ppm	SERIAL NUMBER:	415
JARS-MAKE :	WTC	REVERSED OUT?:	NO
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK BLOW - DIED IN 1 MINUTE.
FINAL FLOW PERIOD NO BLOW.
HIT BIRDGE AT APPROX 3000' - 30' OF FILL ON BOTTOM

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

OPENED TOOL - PICKED-UP TOOL - OPENED ON BOTTOM
WITH NO FILL.

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
600.0	0.0	0.0	0.0	100.0	MUD

RATE INFORMATION

OIL VOLUME:	0.0000	STB		
GAS VOLUME:	0.0000	SCF	TOTAL FLOW TIME:	30.0000 min.
MUD VOLUME:	3.6610	STB	AVERAGE OIL RATE:	0.0000 STB/D
WATER VOLUME:	0.0000	STB	AVERAGE WATER RATE:	0.0000 STB/D
TOTAL FLUID :	3.6610	STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2659.00

Description	Duration	p1	p End
INITIAL FLOW	15.00	483.00	511.00
INITIAL SHUT-IN	15.00		525.00
FINAL FLOW	15.00	420.00	499.00
FINAL SHUT-IN	15.00		490.00

FINAL HYDROSTATIC PRESSURE: 2657.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2482.00

Description	Duration	p1	p End
INITIAL FLOW	15.00	187.00	451.00
INITIAL SHUT-IN	15.00		468.00
FINAL FLOW	15.00	468.00	442.00
FINAL SHUT-IN	15.00		500.00

FINAL HYDROSTATIC PRESSURE: 2455.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 10/29/93	TICKET : 19937
CUSTOMER : CHARTER PRODUCTION CO.	LEASE : HANKE TRUST
WELL : #1	GEOLOGIST: R. S.
ELEVATION: 3502 G.L.	FORMATION: MORROW
SECTION : 8	TOWNSHIP : 33S
RANGE : 42W	STATE : KS
GAUGE SN#: 10242	CLOCK : 12
COUNTY: MORTON	
RANGE : 4100	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	187.00	187.00
5.00	488.00	301.00
10.00	511.00	23.00
15.00	451.00	-60.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	488.00	488.00	0.00
6.00	504.00	16.00	0.00
9.00	517.00	13.00	0.00
12.00	526.00	9.00	0.00
15.00	468.00	-58.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	468.00	468.00
5.00	493.00	25.00
10.00	501.00	8.00
15.00	442.00	-59.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	465.00	465.00	0.00
6.00	481.00	16.00	0.00
9.00	491.00	10.00	0.00
12.00	496.00	5.00	0.00
15.00	500.00	4.00	0.00



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 19937

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

Elevation _____ Formation _____ Eff. Pay _____ Ft.

District Hugoton Date 10-29-93 Customer Order No. _____
COMPANY NAME Charter Prod. Co.
ADDRESS 400 Kress Energy Center 224 E. Douglas Wichita KS 67202
LEASE AND WELL NO. Hanke Trust #1 COUNTY Morton STATE KS Sec. 8 Twp 33S Rge. 42W
Mail Invoice To Charter Prod. No. Copies Requested Ref
Co. Name " Address "
Mail Charts To _____ No. Copies Requested Ref
Address _____

Formation Test No. 3 Interval Tested From 4963 ft. to 5013 ft. Total Depth 5013 ft.
Packer Depth 4958 ft. Size 65/8 in. Packer Depth _____ ft. Size _____ in.
Packer Depth 4963 ft. Size 65/8 in. Packer Depth _____ ft. Size _____ in.
Depth of Selective Zone Set _____
Top Recorder Depth (Inside) 4970 ft. Recorder Number 10242 Cap. 4100
Bottom Recorder Depth (Outside) 4973 ft. Recorder Number 13266 Cap. 4000
Below Straddle Recorder Depth _____ ft. Recorder Number _____ Cap. _____
Drilling Contractor Zenith #7 Drill Collar Length 522 I. D. 2 1/4 in.
Mud Type Chem. Viscosity 26 Weight Pipe Length _____ I. D. _____ in.
Weight 9.0 Water Loss 8.8 cc. Drill Pipe Length 4444 I. D. 3.8 in.
Chlorides 1500 P.P.M. Test Tool Length 28 ft. Tool Size 5 1/2 in.
Jars: Make WTC Serial Number 415 Anchor Length (31+19) 50 ft. Size 6 + 5 1/2 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 H in.

Blow: Weak. Died in 1 min IF
NO Blow
Recovered 600 ft. of Mud
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Chlorides _____ P.P.M. Sample Jars used _____ Remarks: Total Rec 600
Hit Bridge At Approx 3000 - 30' off fill
on bottom opened tool - pick up tool - opened
on bottom with no fill

Time On Location 2:00 A.M. Time Pick Up Tool 11:00 A.M. Time Off Location _____ A.M.
Time Set Packer(s) 3:00 A.M. Time Started Off Bottom 4:00 A.M. Maximum Temperature 139
Initial Hydrostatic Pressure _____ (A) 2659 P.S.I.
Initial Flow Period _____ Minutes 15 (B) 483 P.S.I. to (C) 511 P.S.I.
Initial Closed In Period _____ Minutes 15 (D) 525 P.S.I.
Final Flow Period _____ Minutes 15 (E) 420 P.S.I. to (F) 499 P.S.I.
Final Closed In Period _____ Minutes 15 (G) 490 P.S.I.
Final Hydrostatic Pressure _____ (H) 2657 P.S.I.

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 Victor Cruz

FIELD INVOICE

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

WESTERN TESTING CO., INC.

Pressure Data

Date 10-29-93 Test Ticket No. 19927
 Recorder No. 10242 Capacity _____ Location _____ Ft. _____
 Clock No. _____ Elevation _____ Well Temperature _____ °F
 Point _____ Pressure _____ Time Given _____ Time Computed _____
 A Initial Hydrostatic Mud 2482 P.S.I. Open Tool _____ 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 2455 P.S.I. _____

PRESSURE BREAKDOWN

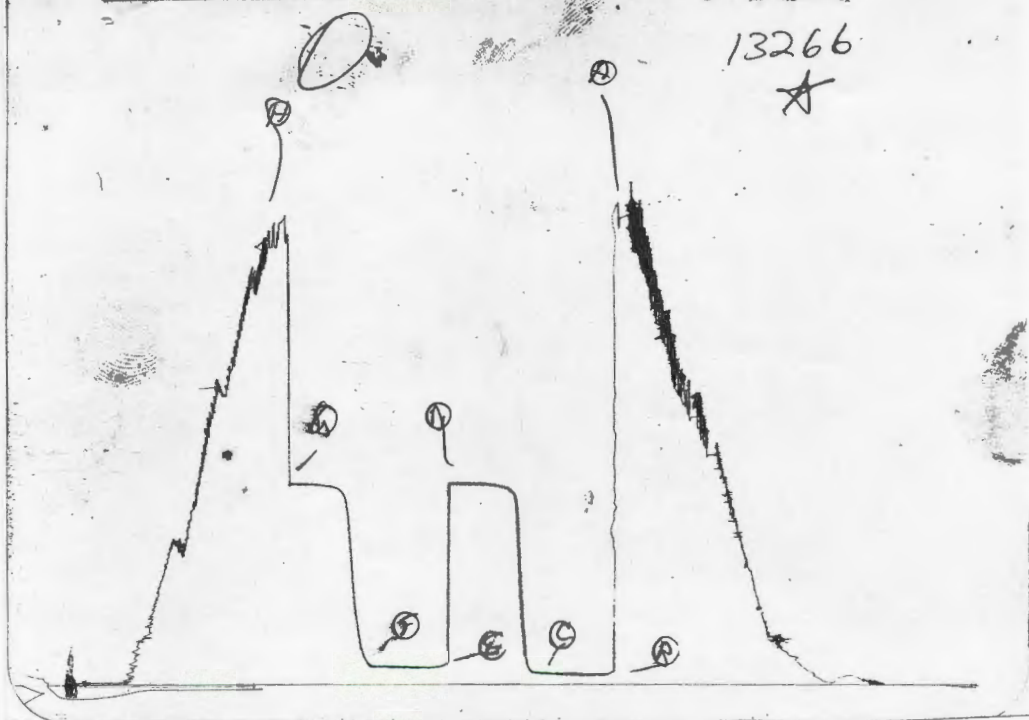
First Flow Pressure			Initial Shut-In			Second Flow Pressure			Final Shut-In		
Breakdown: _____ Inc.			Breakdown: _____ Inc.			Breakdown: _____ Inc.			Breakdown: _____ Inc.		
of <u>5</u> mins. and a			of <u>3</u> mins. and a			of <u>5</u> mins. and a			of <u>3</u> mins. and a		
final inc. of <u>0</u> 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>487</u>		0	<u>451</u>		0	<u>468</u>		0	<u>442</u>	
P 2 5	<u>488</u>		3	<u>488</u>		5	<u>482</u>		3	<u>465</u>	
P 3 10	<u>511</u>		6	<u>504</u>		10	<u>501</u>		6	<u>481</u>	
P 4 15	<u>451</u>		9	<u>517</u>		15	<u>445</u>		9	<u>491</u>	
P 5 20			12	<u>516</u>		20			12	<u>496</u>	
P 6 25			15	<u>468</u>		25			15	<u>500</u>	
P 7 30			18			30			18		
P 8 35			21			35			21		
P 9 40			24			40			24		
P10 45			27			45			27		
P11 50			30			50			30		
P12 55			33			55			33		
P13 60			36			60			36		
P14 65			39			65			39		
P15 70			42			70			42		
P16 75			45			75			45		
P17 80			48			80			48		
P18 85			51			85			51		
P19 90			54			90			54		
P20 95			57			95			57		
100			60			100			60		

KT 19938

DST #4

13266

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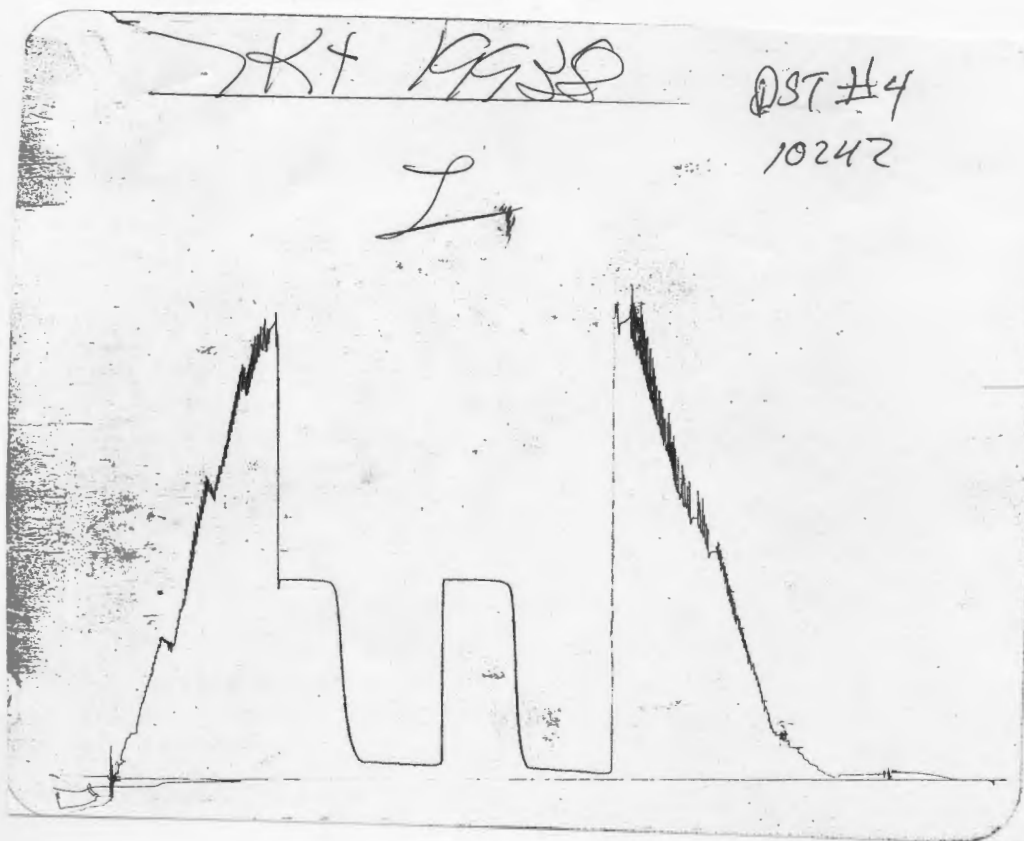


KT 19938

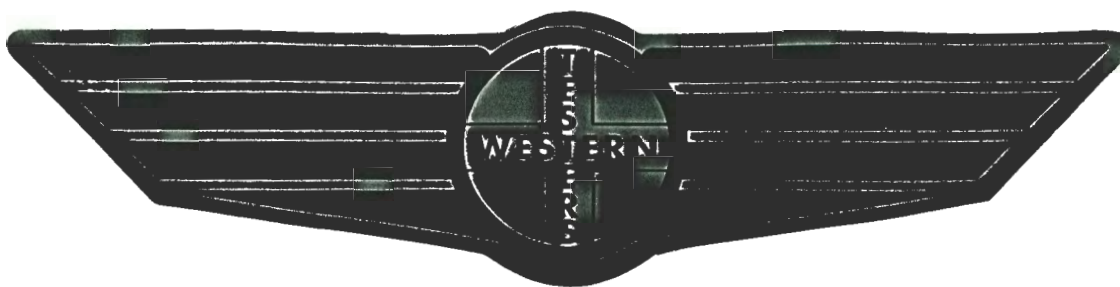
DST #4

10242

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FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 80 - 688 - 7021

COMPANY CHARTER PRODUCTION COMPANY LEASE & WELL NO. #1 HANKE TRUST SEC. 8 TWP. 33S RGE. 42W TEST NO. 4 DATE 10/30/93

DST REPORT

GENERAL INFORMATION

DATE	: 10/30/93	TICKET	: 19938
CUSTOMER	: CHARTER PRODUCTION CO.	LEASE	: HANKE TRUST
WELL	: #1	TEST: 4	GEOLOGIST: R. S.
ELEVATION	: 3502 G.L.	FORMATION:	
SECTION	: 8	TOWNSHIP	: 33S
RANGE	: 42W	STATE	: KS
GAUGE SN#	: 13266	RANGE	: 4000
		CLOCK	: 12

WELL INFORMATION

PERFORATION INTERVAL FROM:	4964.00 ft	TO:	5013.00 ft	TVD:	5013.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	4971.0 ft		4974.0 ft		
TEMPERATURE:	139.0				
DRILL COLLAR LENGTH:	522.0 ft	I.D.:		2.250 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	4414.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	28.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	49.0 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:	4959.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	4964.0 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. :	ZENITH DRLG RIG 7	VISCOSITY :	70.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	7.200 cc
WEIGHT :	8.700 ppg		
CHLORIDES :	1500 ppm	SERIAL NUMBER:	415
JARS-MAKE :	WTC	REVERSED OUT?:	NO
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK BLOW - SLOWLY BUILT TO
1 3/4 INCH BLOW. FINAL FLOW PERIOD WEAK 1/4 INCH
BLOW - DIED IN 40 MINUTES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
140.0	0.0	0.0	0.0	100.0	MUD

RATE INFORMATION

OIL VOLUME:	0.0000	STB		
GAS VOLUME:	0.0000	SCF		
MUD VOLUME:	0.6884	STB		
WATER VOLUME:	0.0000	STB		
TOTAL FLUID :	0.6884	STB		
			TOTAL FLOW TIME:	120.0000 min.
			AVERAGE OIL RATE:	0.0000 STB/D
			AVERAGE WATER RATE:	0.0000 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2468.00

Description	Duration	p1	p End
INITIAL FLOW	60.00	50.00	54.00
INITIAL SHUT-IN	60.00		1041.00
FINAL FLOW	60.00	89.00	91.00
FINAL SHUT-IN	60.00		1047.00

FINAL HYDROSTATIC PRESSURE: 2448.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2492.00

Description	Duration	p1	p End
INITIAL FLOW	60.00	62.00	73.00
INITIAL SHUT-IN	63.00		1063.00
FINAL FLOW	60.00	105.00	112.00
FINAL SHUT-IN	60.00		1064.00

FINAL HYDROSTATIC PRESSURE: 2416.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 10/30/93	TICKET : 19938
CUSTOMER : CHARTER PRODUCTION CO.	LEASE : HANKE TRUST
WELL : #1	GEOLOGIST: R. S.
ELEVATION: 3502 G.L.	FORMATION:
SECTION : 8	TOWNSHIP : 33S
RANGE : 42W	STATE : KS
GAUGE SN#: 13266	CLOCK : 12
COUNTY: MORTON	
RANGE : 4000	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	62.00	62.00
5.00	62.00	0.00
10.00	62.00	0.00
15.00	62.00	0.00
20.00	62.00	0.00
25.00	63.00	1.00
30.00	63.00	0.00
35.00	64.00	1.00
40.00	65.00	1.00
45.00	66.00	1.00
50.00	67.00	1.00
55.00	70.00	3.00
60.00	73.00	3.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	82.00	82.00	0.00
6.00	142.00	60.00	0.00
9.00	401.00	259.00	0.00
12.00	850.00	449.00	0.00
15.00	1002.00	152.00	0.00
18.00	1029.00	27.00	0.00
21.00	1039.00	10.00	0.00
24.00	1044.00	5.00	0.00
27.00	1050.00	6.00	0.00
30.00	1055.00	5.00	0.00
33.00	1059.00	4.00	0.00
36.00	1061.00	2.00	0.00
39.00	1062.00	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>
42.00	1062.00	0.00	0.00
45.00	1062.00	0.00	0.00
48.00	1062.00	0.00	0.00
51.00	1063.00	1.00	0.00
54.00	1063.00	0.00	0.00
57.00	1063.00	0.00	0.00
60.00	1063.00	0.00	0.00
63.00	1063.00	0.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	105.00	105.00
5.00	105.00	0.00
10.00	105.00	0.00
15.00	105.00	0.00
20.00	106.00	1.00
25.00	106.00	0.00
30.00	106.00	0.00
35.00	107.00	1.00
40.00	108.00	1.00
45.00	109.00	1.00
50.00	110.00	1.00
55.00	111.00	1.00
60.00	112.00	1.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	133.00	133.00	0.00
6.00	179.00	46.00	0.00
9.00	294.00	115.00	0.00
12.00	472.00	178.00	0.00
15.00	736.00	264.00	0.00
18.00	954.00	218.00	0.00
21.00	1009.00	55.00	0.00
24.00	1033.00	24.00	0.00
27.00	1043.00	10.00	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>
30.00	1048.00	5.00	0.00
33.00	1052.00	4.00	0.00
36.00	1054.00	2.00	0.00
39.00	1056.00	2.00	0.00
42.00	1058.00	2.00	0.00
45.00	1059.00	1.00	0.00
48.00	1060.00	1.00	0.00
51.00	1061.00	1.00	0.00
54.00	1062.00	1.00	0.00
57.00	1063.00	1.00	0.00
60.00	1064.00	1.00	0.00



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET NO 19938

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

Elevation 3502

Formation

Eff. Pay Ft.

District Hugoton

Date 10-30-93

Customer Order No.

COMPANY NAME Charter Prod. Co.

ADDRESS 400 Kress Energy Ctr 224 E. Douglas Wichita KS 67202

LEASE AND WELL NO. Hank Trust #1 COUNTY Morton STATE KS Sec 8 Twp 33S Rge 42W

Mail Invoice To SAME Co. Name SAME Address 11 No. Copies Requested Reg

Mail Charts To Address No. Copies Requested Reg

Formation Test No. 4 Interval Tested From 4964 ft. to 5013 ft. Total Depth 5013 ft.

Packer Depth 4959 ft. Size 65/8 in. Packer Depth ft. Size in.

Packer Depth 4964 ft. Size 65/8 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4971 ft. Recorder Number 10242 Cap. 4100

Bottom Recorder Depth (Outside) 4974 ft. Recorder Number 13266 Cap. 4000

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Zenith #7 Drill Collar Length 522 I. D. 2 1/4 in.

Mud Type Chem. Viscosity 70 Weight Pipe Length I. D. in.

Weight 8.7 Water Loss 7.2 cc. Drill Pipe Length 4445 4414 I. D. 3.8 in.

Chlorides 1500 P.P.M. Test Tool Length 28 ft. Tool Size 5 1/2 in.

Jars: Make WTC Serial Number 415 Anchor Length (31+18) 49 ft. Size 4+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 XH in.

Blow: WEAR - slowly built to 1 3/4" I.F.
WEAR 1/4" died 40 min into I.F.

Recovered 140 ft. of mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Chlorides P.P.M. Sample Jars used Remarks: Total PL Rec 140

Time On Location 9:00 A.M. Time Pick Up Tool 4:00 A.M. Time Off Location A.M.

Time Set Packer(s) 7:50 P.M. Time Started Off Bottom 11:50 P.M. Maximum Temperature 139°F

Initial Hydrostatic Pressure (A) 2468 P.S.I.

Initial Flow Period Minutes 60 (B) 50 P.S.I. to (C) 54 P.S.I.

Initial Closed In Period Minutes 60 (D) 1041 P.S.I.

Final Flow Period Minutes 60 (E) 89 P.S.I. to (F) 91 P.S.I.

Final Closed In Period Minutes 60 (G) 1047 P.S.I.

Final Hydrostatic Pressure (H) 2448 P.S.I.

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 [Signature]

FIELD INVOICE

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

WESTERN TESTING CO., INC.

Pressure Data

Date 10-30-92 Test Ticket No. 1958
 Recorder No. 132166 Capacity _____ Location _____ Ft.
 Clock No. _____ Elevation _____ Well Temperature _____ °F
 Point _____ Pressure _____ Time Given _____ Time Computed _____
 A Initial Hydrostatic Mud 2492 P.S.I. Open Tool _____ 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 2416 P.S.I.

PRESSURE BREAKDOWN

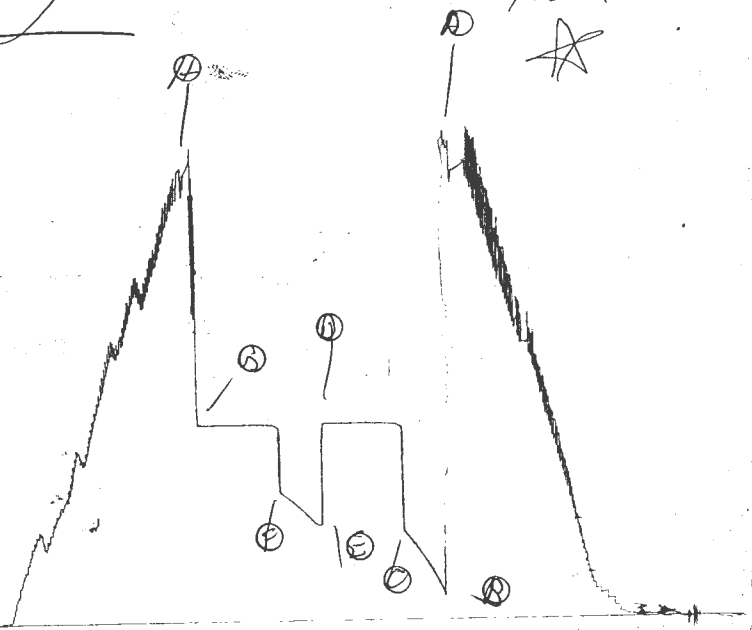
First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.		Breakdown: _____ Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final 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	62	0	73	0	105	0	112
P 2 5	7	3	85	5	9	3	128
P 3 10	2	6	142	10	2	6	179
P 4 15	6	9	401	15	105	9	394
P 5 20	65	12	850	20	106	12	472
P 6 25	63	15	1002	25	5	15	236
P 7 30	62	18	1029	30	106	18	954
P 8 35	64	21	1039	35	107	21	1009
P 9 40	65	24	1044	40	108	24	1032
P10 45	66	27	1050	45	109	27	1042
P11 50	67	30	1055	50	110	30	1048
P12 55	70	33	1059	55	111	33	1052
P13 60	72	36	1061	60	112	36	1054
P14 65		39	1062	65		39	1056
P15 70		42	5	70		42	1058
P16 75		45	1062	75		45	1059
P17 80		48	1062	80		48	1060
P18 85		51	1062	85		51	1061
P19 90		54	5	90		54	1062
P20 95		57	5	95		57	1062
100		60	1062	100		60	1064
		63	1063				

7/4 1993

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DST #5

10242

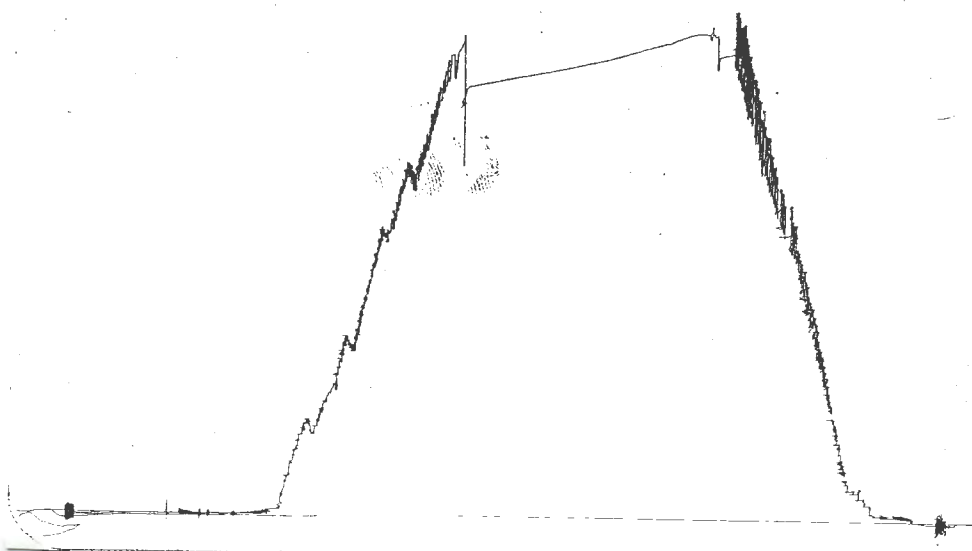


7/4 1993

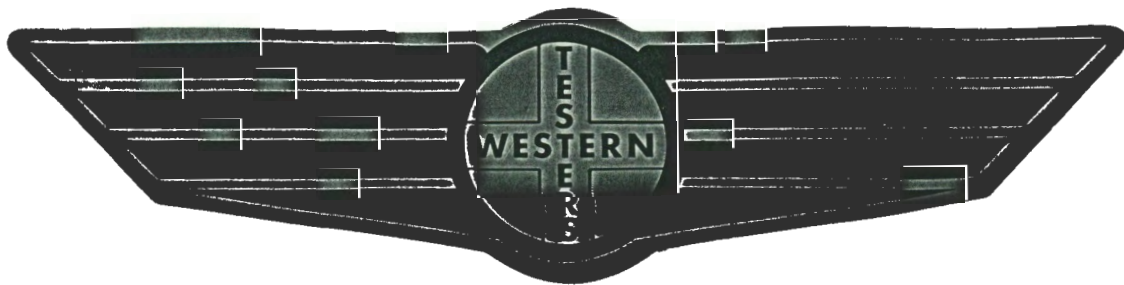
DST #5

13266

Below Straddle



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1 - 80 - 688 - 7021

COMPANY CHARTER PRODUCTION COMPANY LEASE & WELL NO. #1 HANKE TRUST SEC. 8 TWP. 33S RGE. 42W TEST NO. 5 DATE 11/2/93

DST REPORT

GENERAL INFORMATION

DATE	: 11/2/93	TICKET	: 19939
CUSTOMER	: CHARTER PRODUCTION CO.	LEASE	: HANKE TRUST
WELL	: #1	TEST: 5	GEOLOGIST: R. S.
ELEVATION	: 3502 G.L.	FORMATION:	
SECTION	: 8	TOWNSHIP	: 33S
RANGE	: 42W	STATE	: KS
GAUGE SN#	: 10242	RANGE	: 4100
		CLOCK	: 12

WELL INFORMATION

PERFORATION INTERVAL FROM:	4941.00 ft	TO:	4965.00 ft	TVD:	5214.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	4953.0 ft		4956.0 ft		
TEMPERATURE:	142.0				
DRILL COLLAR LENGTH:	522.0 ft	I.D.:	2.250 in		
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:	0.000 in		
DRILL PIPE LENGTH :	4391.0 ft	I.D.:	3.800 in		
TEST TOOL LENGTH :	28.0 ft	TOOL SIZE :	5.500 in		
ANCHOR LENGTH :	273.0 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:	4936.0 ft	SIZE:	6.630 in		
PACKER DEPTH:	4941.0 ft	SIZE:	6.630 in		
PACKER DEPTH:	4965.0 ft	SIZE:	6.630 in		
PACKER DEPTH:	4970.0 ft	SIZE:	6.630 in		

MUD INFORMATION

DRILLING CON. :	ZENITH DRLG RIG 7	VISCOSITY :	57.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	8.000 cc
WEIGHT :	9.000 ppg		
CHLORIDES :	1500 ppm	SERIAL NUMBER:	415
JARS-MAKE :	WTC	REVERSED OUT?:	NO
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD FAIR BLOW - BOTTOM OF BUCKET
IN 2 MINUTES. FINAL FLOW PERIOD FAIR BLOW -
BOTTOM OF BUCKET IN 4 MINUTES.

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

TAILPIPE 233 + 16 PERF.
24 FT ANCHOR.

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
20.0	0.0	0.0	0.0	100.0	MUD
1470.0	0.0	0.0	100.0	0.0	WATER
0.0	0.0	0.0	0.0	0.0	CHLORIDES 2200 PPM

RATE INFORMATION

OIL VOLUME:	0.0000	STB		
GAS VOLUME:	0.0000	SCF		
MUD VOLUME:	0.2805	STB		
WATER VOLUME:	15.8639	STB		
TOTAL FLUID :	16.1444	STB		
			TOTAL FLOW TIME:	60.0000 min.
			AVERAGE OIL RATE:	0.0000 STB/D
			AVERAGE WATER RATE:	380.7338 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2606.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	130.00	522.00
INITIAL SHUT-IN	60.00		1107.00
FINAL FLOW	30.00	563.00	741.00
FINAL SHUT-IN	60.00		1107.00
FINAL HYDROSTATIC PRESSURE:	2586.00		

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2484.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	139.00	524.00
INITIAL SHUT-IN	60.00		1116.00
FINAL FLOW	30.00	567.00	739.00
FINAL SHUT-IN	60.00		1110.00

FINAL HYDROSTATIC PRESSURE: 2467.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 11/2/93	TICKET : 19939
CUSTOMER : CHARTER PRODUCTION CO.	LEASE : HANKE TRUST
WELL : #1	TEST: 5
ELEVATION: 3502 G.L.	GEOLOGIST: R. S.
SECTION : 8	FORMATION:
RANGE : 42W	TOWNSHIP : 33S
COUNTY: MORTON	STATE : KS
GAUGE SN#: 10242	RANGE : 4100
	CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	139.00	139.00
5.00	223.00	84.00
10.00	298.00	75.00
15.00	362.00	64.00
20.00	424.00	62.00
25.00	472.00	48.00
30.00	524.00	52.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	1082.00	1082.00	0.00
6.00	1103.00	21.00	0.00
9.00	1109.00	6.00	0.00
12.00	1111.00	2.00	0.00
15.00	1112.00	1.00	0.00
18.00	1113.00	1.00	0.00
21.00	1114.00	1.00	0.00
24.00	1115.00	1.00	0.00
27.00	1115.00	0.00	0.00
30.00	1115.00	0.00	0.00
33.00	1115.00	0.00	0.00
36.00	1116.00	1.00	0.00
39.00	1116.00	0.00	0.00
42.00	1116.00	0.00	0.00
45.00	1116.00	0.00	0.00
48.00	1116.00	0.00	0.00
51.00	1116.00	0.00	0.00
54.00	1116.00	0.00	0.00
57.00	1116.00	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	1116.00	0.00	0.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	567.00	567.00
5.00	581.00	14.00
10.00	617.00	36.00
15.00	654.00	37.00
20.00	685.00	31.00
25.00	710.00	25.00
30.00	739.00	29.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	1093.00	1093.00	0.00
6.00	1102.00	9.00	0.00
9.00	1108.00	6.00	0.00
12.00	1110.00	2.00	0.00
15.00	1110.00	0.00	0.00
18.00	1110.00	0.00	0.00
21.00	1110.00	0.00	0.00
24.00	1110.00	0.00	0.00
27.00	1110.00	0.00	0.00
30.00	1110.00	0.00	0.00
33.00	1110.00	0.00	0.00
36.00	1110.00	0.00	0.00
39.00	1110.00	0.00	0.00
42.00	1110.00	0.00	0.00
45.00	1110.00	0.00	0.00
48.00	1110.00	0.00	0.00
51.00	1110.00	0.00	0.00
54.00	1110.00	0.00	0.00
57.00	1110.00	0.00	0.00
60.00	1110.00	0.00	0.00



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET N^o 19939

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

Elevation 3502 Formation _____ Eff. Pay _____ Ft.

District Hugaton Date 11-2-93 Customer Order No. _____
COMPANY NAME Charter Packer Co.
ADDRESS 400 Kress Energy Ctr. 224 E. Douglas W. Wichita KS 67202
LEASE AND WELL NO. Haake Trust #1 COUNTY Morton STATE KS Sec. 8 Twp. 33s Rge. 40w
Mail Invoice To _____ No. Copies Requested Reg
Co. Name _____ Address _____
Mail Charts To _____ No. Copies Requested Reg
Address _____

Formation Test No. 5 Interval Tested From 4941 ft. to 4965 ft. Total Depth 5214 ft.
Packer Depth 4936 ft. Size 6 5/8 in. Packer Depth 4965 ft. Size 6 5/8 in.
Packer Depth 4941 ft. Size 6 5/8 in. Packer Depth 4965 ft. Size 6 5/8 in.
Depth of Selective Zone Set _____
Top Recorder Depth (Inside) 4953 ft. Recorder Number 10242 Cap. 4100
Bottom Recorder Depth (Outside) 4956 ft. Recorder Number 1562 Cap. 3900
Below Straddle Recorder Depth 4975 ft. Recorder Number 13266 Cap. 4000
Drilling Contractor Zenith #7 Drill Collar Length 522 I. D. 2 1/4 in.
Mud Type Chem. Viscosity 57 Weight Pipe Length 4624 I. D. 3.8 in.
Weight 9.0 Water Loss 8 cc. Drill Pipe Length 4624 I. D. 3.8 in.
Chlorides 1500 P.P.M. Test Tool Length 28 ft. Tool Size 5 1/2 in.
Jars: Make WTC Serial Number 415 Anchor Length (233+40)273 Size 6 5/8 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 XH in.

Blow: FAIR-B.O.B 2 min I.F.
FAIR-B.O.B 4 min F.F.
Recovered 20 ft. of mud
Recovered 1470 ft. of WTR
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Chlorides 2200 P.P.M. Sample Jars used _____ Remarks: Tail pipe = 233+16 perf.
24' Anchor - Above

Time On Location 4:30 A.M. Time Pick Up Tool 6:00 A.M. Time Off Location _____ A.M.
Time Set Packer(s) 9:08 A.M. Time Started Off Bottom 12:08 A.M. Maximum Temperature 142°
Initial Hydrostatic Pressure _____ (A) 2606 P.S.I.
Initial Flow Period _____ Minutes 30 (B) 130 P.S.I. to (C) 522 P.S.I.
Initial Closed In Period _____ Minutes 60 (D) 1107 P.S.I.
Final Flow Period _____ Minutes 30 (E) 563 P.S.I. to (F) 741 P.S.I.
Final Closed In Period _____ Minutes 60 (G) 1107 P.S.I.
Final Hydrostatic Pressure _____ (H) 2586 P.S.I.

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 Victor E. Galt

FIELD INVOICE

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

WESTERN TESTING CO., INC.

Pressure Data

Date 11-2-93
Recorder No. 10242

Test Ticket No. 19959
Location _____ Ft.

Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2484</u> P.S.I.	Open Tool		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	<u>2467</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>139</u>	0	<u>524</u>	0	<u>567</u>	0	<u>239</u>
P 2 5	<u>252</u>	3	<u>1082</u>	5	<u>581</u>	3	<u>1092</u>
P 3 10	<u>298</u>	6	<u>1102</u>	10	<u>617</u>	6	<u>1102</u>
P 4 15	<u>3102</u>	9	<u>1109</u>	15	<u>654</u>	9	<u>1108</u>
P 5 20	<u>424</u>	12	<u>1112</u>	20	<u>685</u>	12	<u>1110</u>
P 6 25	<u>472</u>	15	<u>1112</u>	25	<u>710</u>	15	<u>1110</u>
P 7 30	<u>524</u>	18	<u>1113</u>	30	<u>739</u>	18	<u>2</u>
P 8 35		21	<u>1114</u>	35		21	<u>2</u>
P 9 40		24	<u>1115</u>	40		24	<u>2</u>
P10 45		27	<u>5</u>	45		27	<u>2</u>
P11 50		30	<u>1115</u>	50		30	<u>1110</u>
P12 55		33	<u>1115</u>	55		33	<u>2</u>
P13 60		36	<u>1114</u>	60		36	<u>2</u>
P14 65		39	<u>5</u>	65		39	<u>2</u>
P15 70		42	<u>5</u>	70		42	<u>2</u>
P16 75		45	<u>1114</u>	75		45	<u>1110</u>
P17 80		48	<u>2</u>	80		48	<u>2</u>
P18 85		51	<u>2</u>	85		51	<u>2</u>
P19 90		54	<u>2</u>	90		54	<u>2</u>
P20 95		57	<u>2</u>	95		57	<u>2</u>
100		60	<u>1116</u>	100		60	<u>1110</u>