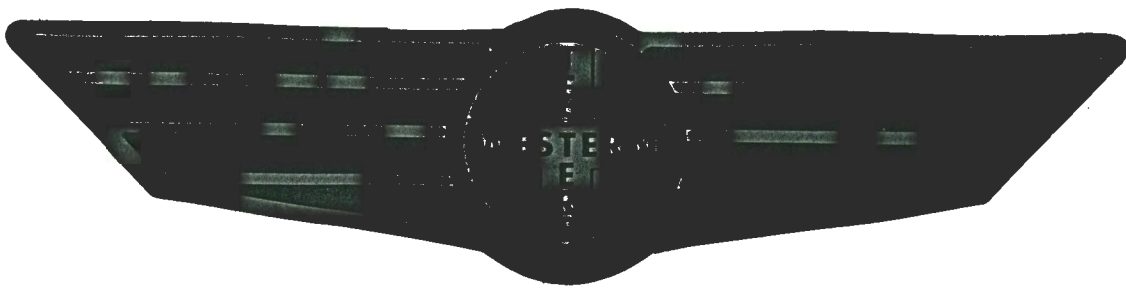


# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-637-021

COMPANY CHARTER PRODUCTION COMPANY LEASE & WELL NO. #1 SWALAR CO. SEC. 7 TWP. 31S RGE. 38W TEST NO. 1 DATE 11/15/93

DST REPORT

GENERAL INFORMATION

DATE : 11/15/93  
 CUSTOMER : CHARTER PRODUCTION CO  
 WELL : #1  
 ELEVATION : 3183 GR  
 SECTION : 7  
 RANGE : 38W  
 GAUGE SN# : 11018  
 COUNTY : STEVENS  
 RANGE : 4425  
 TICKET : 20115  
 LEASE : SWALAR CO.  
 GEOLOGIST : ?  
 FORMATION : MORROW  
 TOWNSHIP : 31S  
 STATE : KS  
 CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM : 5688.00 ft TO : 5714.00 ft TVD : 5714.0 ft  
 DEPTH OF SELECTIVE ZONE :  
 DEPTH OF RECORDERS : 5691.0 ft  
 TEMPERATURE : 137.0

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 :	5142.0 ft	I.D. :	3.800 in
TEST TOOL LENGTH :	26.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH :	26.0 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 :	5683.0 ft	SIZE :	6.750 in
PACKER DEPTH :	5688.0 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. : ZENITH DRILLING  
 MUD TYPE : CHEMICAL  
 WEIGHT : 9.000 ppq  
 CHLORIDES : 1000 ppm  
 WTC :  
 JARS-MAKE :  
 DID WELL FLOW? : NO  
 VISCOSITY : 46.00 cp  
 WATER LOSS : 8.000 cc  
 SERIAL NUMBER : 12369  
 REVERSED OUT? : NO

COMMENTS

Comment  
 INITIAL FLOW PERIOD WEAK BLOW - DEAD IN 10 MINUTES  
 FINAL FLOW PERIOD WEAK BLOW - DEAD IN 13 MINUTES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	30.0	0.0	0.0	0.0	0.0
% Oil	0.0	0.0	0.0	0.0	0.0
% Gas	0.0	0.0	0.0	0.0	0.0
% Water	0.0	0.0	0.0	0.0	0.0
% Mud	100.0	0.0	0.0	0.0	0.0
Comments	DRILLING MUD CHLORIDES 1000 PPM				

RATE INFORMATION

OIL VOLUME:	0.0000 STB	TOTAL FLOW TIME:	40.0000 min.
GAS VOLUME:	0.0000 SCF	AVERAGE OIL RATE:	0.0000 STB/D
MUD VOLUME:	0.1410 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	0.1410 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2632.00

Description	Duration	p1	p End
INITIAL FLOW	20.00	33.00	33.00
INITIAL SHUT-IN	40.00		67.00
FINAL FLOW	20.00	36.00	36.00
FINAL SHUT-IN	60.00		51.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2761.00

Description	Duration	p1	p End
INITIAL FLOW	20.00	56.00	56.00
INITIAL SHUT-IN	36.00		70.00
FINAL FLOW	20.00	47.00	47.00
FINAL SHUT-IN	69.00		58.00

FINAL HYDROSTATIC PRESSURE: 2681.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 11/15/93  
 CUSTOMER : CHARTER PRODUCTION CO  
 WELL : #1  
 ELEVATION : 3183 GR  
 SECTION : 7  
 RANGE : 38W  
 GAUGE SN# : 11018  
 COUNTY : STEVENS  
 RANGE : 4425  
 TICKET : 20115  
 LEASE : SWALAR CO.  
 GEOLOGIST : ?  
 FORMATION : MORROW  
 TOWNSHIP : 31S  
 STATE : KS  
 CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	56.00	56.00
5.00	56.00	0.00
10.00	56.00	0.00
15.00	56.00	0.00
20.00	56.00	0.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horne T
3.00	56.00	56.00	0.00
6.00	56.00	0.00	0.00
9.00	56.00	0.00	0.00
12.00	56.00	0.00	0.00
15.00	57.00	1.00	0.00
18.00	58.00	1.00	0.00
21.00	61.00	3.00	0.00
24.00	64.00	3.00	0.00
27.00	66.00	2.00	0.00
30.00	68.00	2.00	0.00
33.00	69.00	1.00	0.00
36.00	70.00	1.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	47.00	47.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

Time (min)	Pressure	Delta P
5.00	47.00	0.00
10.00	47.00	0.00
15.00	47.00	0.00
20.00	47.00	0.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Hornet T
3.00	47.00	47.00	0.00
6.00	47.00	0.00	0.00
9.00	47.00	0.00	0.00
12.00	47.00	0.00	0.00
15.00	47.00	0.00	0.00
18.00	47.00	0.00	0.00
21.00	47.00	0.00	0.00
24.00	47.00	0.00	0.00
27.00	47.00	0.00	0.00
30.00	47.00	0.00	0.00
33.00	47.00	0.00	0.00
36.00	47.00	0.00	0.00
39.00	48.00	1.00	0.00
42.00	49.00	1.00	0.00
45.00	50.00	1.00	0.00
48.00	51.00	1.00	0.00
51.00	52.00	1.00	0.00
54.00	53.00	1.00	0.00
57.00	54.00	1.00	0.00
60.00	55.00	1.00	0.00
63.00	56.00	1.00	0.00
66.00	57.00	1.00	0.00
69.00	58.00	1.00	0.00



P. O. BOX 1599  
WICHITA, KANSAS 67201  
PHONE (316) 262-5661

**WESTERN TESTING CO., INC.**

FORMATION TESTING  
TICKET No. 20115

Elevation 3153.6 ft. Formation Morrison  
District GREAT BOND Date 11-15-93 Customer Order No.

COMPANY NAME CHARTER PRODUCTION COMPANY ADDRESS 400 KROSS ENERGY CENTER DOWNS WICHITA, KS 67202

LEASE AND WELL NO. SWANER CO. #1 COUNTY STEUBENS STATE KS

Mail Invoice To SWANER CO. #1 ADDRESS #1 Swaine Co. No. Copies Requested 8

Formation Test No. 1 Interval Tested From 5688 ft. to 5714 ft. Total Depth 5714 ft.

Packer Depth 5683 ft. Size 6 3/4 in. Packer Depth 5688 ft. Size 6 3/4 in.

Top Recorder Depth (Inside) 5691 ft. Recorder Number 1108 Cap 4925

Bottom Recorder Depth (Outside) 5711 ft. Recorder Number 13629 Cap 4925

Drilling Contractor ZENITH DRILLING Mud Type CHAMP Viscosity 46

Weight 9.0 Water Loss 8.0 Chlorides 1000 P.P.M.

Jars: Make WESTON Serial Number 12369 Reversed Out NO

Did Well Flow? NO

Blow: 1ST FLOW: WEAK BLOW DEEP IN 12 MINUTES 2ND FLOW: WEAK BLOW DEEP IN 13 MINUTES

Recovered 30 ft. of DRILLING MUD Recovered 30 ft. of Recovered 30 ft. of Recovered 30 ft. of

Chlorides 1000 P.P.M. Sample Jars used 0 Remarks: (Oilfield friendly) Product Co. Amoco needs 3 copies of FINAL REPORT

Time On Location 3:00 A.M. Time Pick Up Tool 5:00 P.M. Time Off Location 3:00 P.M.

Time Set Packer(s) 7:46 P.M. Time Started Off Bottom 10:00 P.M. Maximum Temperature 137°

Initial Hydrostatic Pressure (A) 2632 P.S.I. Initial Flow Period (A) 80 Minutes

Initial Closed In Period (A) 40 Minutes Initial Flow Period (B) 80 Minutes

Final Flow Period (B) 80 Minutes Final Closed In Period (B) 60 Minutes

Final Hydrostatic Pressure (G) 51 P.S.I. Final Flow Period (G) 51 Minutes

Initial Hydrostatic Pressure (H) 2625 P.S.I. Initial Flow Period (H) 36 Minutes

**FIELD INVOICE**

Open Hole Test	✓ 1.00
Mistrun	
Straddle Test	✓ 1.00
Jars	
Selective Zone	✓ 2.50
Safety Joint	
Standby	
Evaluation	
Extra Packer	
Circ. Sub.	
Mileage	
Fluid Sampler	
Extra Charts	
Insurance	
Telecopier	
TOTAL	9.50

**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 *[Signature]*

Western Representative *[Signature]*

WESTERN TESTING CO., INC. Pressure Data

Date: 11-15-93 Recorder No. 11018  
 Test Ticket No. 20115  
 Capacity \_\_\_\_\_ Location \_\_\_\_\_ Elevation \_\_\_\_\_ Well Temperature \_\_\_\_\_  
 P. \_\_\_\_\_ Fc. \_\_\_\_\_

Clock No. \_\_\_\_\_  
 Point \_\_\_\_\_ Pressure 2761  
 A Initial Hydrostatic Mud P.S.I.  
 B First Initial Flow Pressure P.S.I.  
 C First Final Flow Pressure P.S.I.  
 D Initial Closed-in Pressure P.S.I.  
 E Second Initial Flow Pressure P.S.I.  
 F Second Final Flow Pressure P.S.I.  
 G Final Closed-in Pressure P.S.I.  
 H Final Hydrostatic Mud P.S.I.

Open Tool \_\_\_\_\_  
 First Flow Pressure \_\_\_\_\_  
 Initial Closed-in Pressure \_\_\_\_\_  
 Second Flow Pressure \_\_\_\_\_  
 Final Closed-in Pressure \_\_\_\_\_

\_\_\_\_\_ Mins. \_\_\_\_\_ Mins. \_\_\_\_\_ Mins. \_\_\_\_\_ Mins. \_\_\_\_\_ Mins. \_\_\_\_\_ Mins. \_\_\_\_\_ Mins. \_\_\_\_\_ Mins. \_\_\_\_\_ Mins.

PRESSURE BREAKDOWN

Final Shut-In Breakdown: \_\_\_\_\_ Inc. of \_\_\_\_\_ mins. and a \_\_\_\_\_ final inc. of \_\_\_\_\_ Min. Point Minutes

First Flow Pressure Breakdown: \_\_\_\_\_ Inc. of \_\_\_\_\_ mins. and a \_\_\_\_\_ final inc. of \_\_\_\_\_ Min. Point Minutes

Initial Shut-In Breakdown: \_\_\_\_\_ Inc. of \_\_\_\_\_ mins. and a \_\_\_\_\_ final inc. of \_\_\_\_\_ Min. Point Minutes

Second Flow Pressure Breakdown: \_\_\_\_\_ Inc. of \_\_\_\_\_ mins. and a \_\_\_\_\_ final inc. of \_\_\_\_\_ Min. Point Minutes

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	57	0	57	0	57	0	57
P 2 5	57	3	57	3	57	3	57
P 3 10	57	6	57	6	57	6	57
P 4 15	57	9	57	9	57	9	57
P 5 20	57	12	57	12	57	12	57
P 6 25	57	15	57	15	57	15	57
P 7 30	57	18	57	18	57	18	57
P 8 35	57	21	57	21	57	21	57
P 9 40	57	24	57	24	57	24	57
P 10 45	57	27	57	27	57	27	57
P 11 50	57	30	57	30	57	30	57
P 12 55	57	33	57	33	57	33	57
P 13 60	57	36	57	36	57	36	57
P 14 65	57	39	57	39	57	39	57
P 15 70	57	42	57	42	57	42	57
P 16 75	57	45	57	45	57	45	57
P 17 80	57	48	57	48	57	48	57
P 18 85	57	51	57	51	57	51	57
P 19 90	57	54	57	54	57	54	57
P 20 95	57	57	57	57	57	57	57
100	57	60	57	60	57	60	57