TKT 20226
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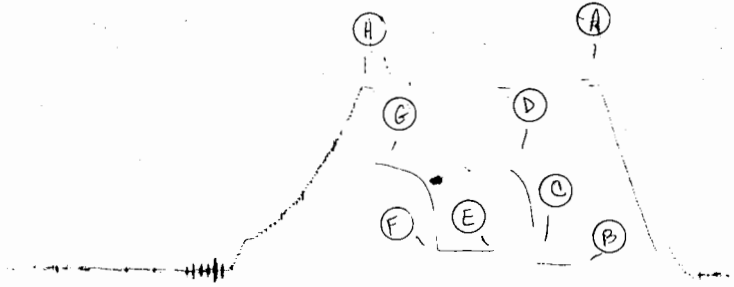
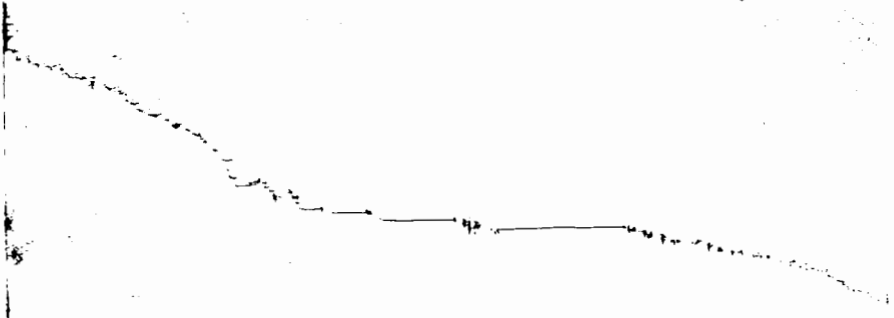


TKT 20226
BELOW STRADDLE

13548
20226.
Btm Straddle



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13521
20226

WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET Nº 20226

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

Elevation 1409 GL Formation KC Eff. Pay Ft.

District Augusta Date 12-31-93 Customer Order No.

COMPANY NAME Hellar Drlg Co. Inc

ADDRESS 125 N. Market Suite 1422 Wichita, Ks. 67202

LEASE AND WELL NO Hammer #1 COUNTY Cowley STATE KS Sec. 14 Twp. 30 Rge. 6E

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

Mail Charts To Same Address No. Copies Requested

Formation Test No. 1 Interval Tested From 2268 ft. to 2366 ft. Total Depth 3335 ft.

Packer Depth 2263 ft. Size 6 3/4 in. Packer Depth 2366 ft. Size 6 3/4 in.

Packer Depth 2268 ft. Size 6 3/4 in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 2272 ft. Recorder Number 4339 Cap. 4325

Bottom Recorder Depth (Outside) 2363 ft. Recorder Number 13521 Cap. 4300

Below Straddle Recorder Depth 3335 ft. Recorder Number 13545 Cap. 4075

Drilling Contractor Summit Rig 1 Drill Collar Length 239 I. D. 2 1/4 in.

Mud Type Chemical Viscosity 35 Weight Pipe Length — I. D. — in.

Weight 9.1 Water Loss 10 cc. Drill Pipe Length 2008 I. D. 3 in.

Chlorides 6,500 P.P.M. Test Tool Length 21 ft. Tool Size 5 1/2 in.

Jars: Make — Serial Number — Anchor Length 98 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 XH - 3 1/2 XH

Blow: Weak Slowly Building to 10" in Bucket
2ND Flow - Steady 3" Blow

Recovered 250 ft. of muddy water

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Chlorides 18,000 P.P.M. Sample Jars used Remarks: Initial Shut-in Lost packer seat after 21 minutes

Time On Location 8:30 A.M. P.M. Time Pick Up Tool 12:30 A.M. P.M. Time Off Location A.M. P.M.

Time Set Packer(s) 3:10 A.M. P.M. Time Started Off Bottom 5:40 A.M. P.M. Maximum Temperature

Initial Hydrostatic Pressure			(A)	1122	P.S.I.	
Initial Flow Period	Minutes 30	(B)	68	P.S.I. to (C)	79	P.S.I.
Initial Closed In Period	Minutes 30	(D)	622	P.S.I.		
Final Flow Period	Minutes 45	(E)	136	P.S.I. to (F)	136	P.S.I.
Final Closed In Period	Minutes 45	(G)	633	P.S.I.		
Final Hydrostatic Pressure		(H)	1078	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 Stuart Stover

Thanks!

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 12-31-93 Test Ticket No. 20226

Recorder No. 4339 Capacity Location Ft.

Clock No. Elevation Well Temperature °F

Point		Pressure		Time Given	Time Computed
A	Initial Hydrostatic Mud	1134 P.S.I.	Open Tool	M	
B	First Initial Flow Pressure	P.S.I.	First Flow Pressure	30 Mins.	25 Mins.
C	First Final Flow Pressure	P.S.I.	Initial Closed-in Pressure	30 Mins.	21 Mins.
D	Initial Closed-in Pressure	P.S.I.	Second Flow Pressure	45 Mins.	40 Mins.
E	Second Initial Flow Pressure	P.S.I.	Final Closed-in Pressure	45 Mins.	48 Mins.
F	Second Final Flow Pressure	P.S.I.	ISI - LOST PACKER SEAT @ 21 min		
G	Final Closed-in Pressure	P.S.I.			
H	Final Hydrostatic Mud	1073 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Mins.		Press.
P 1	0	65
P 2	5	65
P 3	10	64
P 4	15	67 OK
P 5	20	70
P 6	25	70
P 7	30	
P 8	35	
P 9	40	
P10	45	
P11	50	
P12	55	
P13	60	
P14	65	
P15	70	
P16	75	
P17	80	
P18	85	
P19	90	
P20	95	
	100	

Initial Shut-In
Breakdown: Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	70
3	339
6	380
9	481
12	533
15	564
18	592
21	605
24	
27	
30	
33	
36	
39	
42	
45	
48	
51	
54	
57	
60	

Second Flow Pressure
Breakdown: Inc.
of 5 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	140
5	
10	
15	140
20	
25	
30	140
35	
40	140
45	
50	
55	
60	
65	
70	
75	
80	
85	
90	
95	
100	

Final Shut-In
Breakdown: Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Minutes	Press.
0	140
3	512
6	416
9	485
12	527
15	555
18	575
21	585
24	596
27	605
30	612
33	619
36	625
39	630
42	634
45	637
48	639
51	
54	
57	
60	

DST REPORT

GENERAL INFORMATION

DATE	: 12/31/93	TICKET	: 20226
CUSTOMER	: HELLAR DRILLING CO., INC.	LEASE	: HAMMER OWWO
WELL	: #1 TEST: 1	GEOLOGIST	: BAKER
ELEVATION	: 1409 GL	FORMATION	: KANSAS CITY
SECTION	: 14	TOWNSHIP	: 30S
RANGE	: 6E COUNTY: COWLEY	STATE	: KS
GAUGE SN#	: 4339 RANGE : 4325	CLOCK	: 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 2268.00 ft TO: 2366.00 ft TVD: 3335.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 2272.0 ft 2363.0 ft
TEMPERATURE: 0.0

DRILL COLLAR LENGTH:	239.0 ft	I.D.:	2.250 in
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH :	2008.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH :	21.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH :	98.0 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:	2263.0 ft	SIZE:	6.750 in
PACKER DEPTH:	2268.0 ft	SIZE:	6.750 in
PACKER DEPTH:	2366.0 ft	SIZE:	6.750 in
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in

MUD INFORMATION

DRILLING CON.	: SUMMIT RIG 1		
MUD TYPE	: CHEMICAL	VISCOSITY :	35.00 cp
WEIGHT	: 9.100 ppg	WATER LOSS:	10.000 cc
CHLORIDES	: 6500 ppm		
JARS-MAKE	:	SERIAL NUMBER:	
DID WELL FLOW?	: NO	REVERSED OUT?:	NO

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK BLOW SLOWLY BUILDING TO 10 INCHES IN BUCKET. FINAL FLOW PERIOD STEADY 3 INCH BLOW.

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

LOST PACKER SEAT @ 21 MINUTES ON INITIAL SHUT-IN.

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
250.0	0.0	0.0	70.0	30.0	MUDDY WATER
0.0	0.0	0.0	0.0	0.0	CHLORIDES 18000 PPM

RATE INFORMATION

OIL VOLUME:	0.0000 STB		
GAS VOLUME:	0.0000 SCF	TOTAL FLOW TIME:	65.0000 min.
MUD VOLUME:	0.3989 STB	AVERAGE OIL RATE:	0.0000 STB/D
WATER VOLUME:	0.9307 STB	AVERAGE WATER RATE:	29.4550 STB/D
TOTAL FLUID :	1.3296 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1122.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	68.00	79.00
INITIAL SHUT-IN	30.00		622.00
FINAL FLOW	45.00	136.00	136.00
FINAL SHUT-IN	45.00		633.00

FINAL HYDROSTATIC PRESSURE: 1078.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1134.00

Description	Duration	p1	p End
INITIAL FLOW	25.00	65.00	70.00
INITIAL SHUT-IN	21.00		605.00
FINAL FLOW	40.00	140.00	140.00
FINAL SHUT-IN	48.00		639.00

FINAL HYDROSTATIC PRESSURE: 1073.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 12/31/93	TICKET	: 20226
CUSTOMER	: HELLAR DRILLING CO., INC.	LEASE	: HAMMER OWWO
WELL	: #1 TEST: 1	GEOLOGIST	: BAKER
ELEVATION	: 1409 GL	FORMATION	: KANSAS CITY
SECTION	: 14	TOWNSHIP	: 30S
RANGE	: 6E COUNTY: COWLEY	STATE	: KS
GAUGE SN#	: 4339 RANGE : 4325	CLOCK	: 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	65.00	65.00
5.00	65.00	0.00
10.00	64.00	-1.00
15.00	67.00	3.00
20.00	70.00	3.00
25.00	70.00	0.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	339.00	339.00	0.00
6.00	380.00	41.00	0.00
9.00	481.00	101.00	0.00
12.00	533.00	52.00	0.00
15.00	564.00	31.00	0.00
18.00	592.00	28.00	0.00
21.00	605.00	13.00	0.00

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	140.00	140.00
5.00	140.00	0.00
10.00	140.00	0.00
15.00	140.00	0.00
20.00	140.00	0.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

Time (min)	Pressure	Delta P
25.00	140.00	0.00
30.00	140.00	0.00
35.00	140.00	0.00
40.00	140.00	0.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	312.00	312.00	0.00
6.00	416.00	104.00	0.00
9.00	485.00	69.00	0.00
12.00	527.00	42.00	0.00
15.00	555.00	28.00	0.00
18.00	575.00	20.00	0.00
21.00	585.00	10.00	0.00
24.00	596.00	11.00	0.00
27.00	605.00	9.00	0.00
30.00	612.00	7.00	0.00
33.00	619.00	7.00	0.00
36.00	625.00	6.00	0.00
39.00	630.00	5.00	0.00
42.00	634.00	4.00	0.00
45.00	637.00	3.00	0.00
48.00	639.00	2.00	0.00