



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET NO 15734

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

Elevation 1808 GL 1813 KB Formation LANSING D,E,F Eff. Pay - Ft.

District GT Bend Date 2-18-90 Customer Order No.

COMPANY NAME H-30 Drilling, Inc.

ADDRESS 251 N. WATER, SUITE 10 WICHITA, KS 67202

LEASE AND WELL NO. PANNING # 4-18 COUNTY STAFFORD STATE KS Sec. 18 Twp. 22 Rge. 11

Mail Invoice To Co. Name SAME PANNING #4-18 Address No. Copies Requested Reg

Mail Charts To SAME Address No. Copies Requested Reg

Formation Test No. 1 Interval Tested From 3274 ft. to 3318 ft. Total Depth 3318 ft.
Packer Depth 3269 ft. Size 6 5/8 in.
Packer Depth 3274 ft. Size 6 5/8 in.

Top Recorder Depth (Inside) 3276 ft. Recorder Number 10270 Cap. 4150
Bottom Recorder Depth (Outside) 3279 ft. Recorder Number 13268 Cap. 4225
Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor H-30 rig 7
Mud Type Chemical Viscosity 47
Weight 9.2 Water Loss 10 cc.
Chlorides N/A P.P.M.
Jars: Make - Serial Number -
Did Well Flow? - Reversed Out -
Drill Collar Length 30 I. D. 2.2 in.
Weight Pipe Length - I. D. - in.
Drill Pipe Length 3224 I. D. 3.8 in.
Test Tool Length 20 ft. Tool Size 5 1/2 in.
Anchor Length 44 ft. Size 5 1/2 in.
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: IF - weak building to a fair blow 1/2" to 4" blow
FF - fair building to a good blow 4" to 8" blow

Recovered 370 ft. of GAS in Pipe
Recovered 50 ft. of OIL & GAS cut Mud 12% oil 10% GAS 78% mud
Recovered ft. of br oil
Recovered ft. of .5W
Chlorides - P.P.M. Sample Jars used 2 Remarks:

Time On Location 2:15 A.M. Time Pick Up Tool 2:50 P.M. Time Off Location 11:30 A.M.
Time Set Packer(s) 4:20 A.M. Time Started Off Bottom 7:20 P.M. Maximum Temperature 103
Initial Hydrostatic Pressure (A) 1589 P.S.I.
Initial Flow Period Minutes 30 (B) 20 P.S.I. to (C) 20 P.S.I.
Initial Closed In Period Minutes 45 (D) 624 P.S.I.
Final Flow Period Minutes 60 (E) 31 P.S.I. to (F) 31 P.S.I.
Final Closed In Period Minutes 45 (G) 447 P.S.I.
Final Hydrostatic Pressure (H) 1578 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 [Signature] 1925 THANK you

FIELD INVOICE

Open Hole Test \$ 4.00
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 2-18-90 Recorder No. 10570 Capacity 4150 Location \_\_\_\_\_ Ft.  
Well Temperature 102 °F

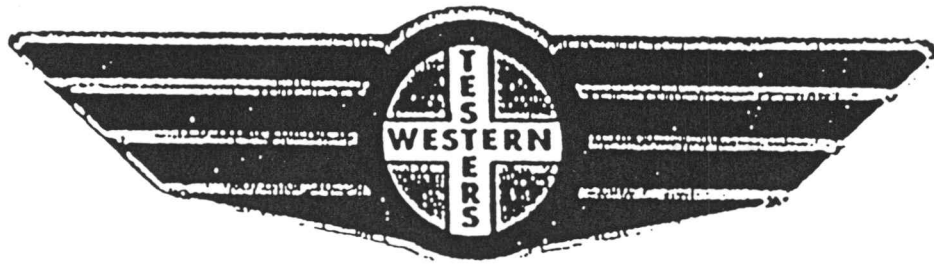
Test Ticket No. 15724

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1628</u> P.S.I.	Open Tool	<u>4:20</u> M	
B First Initial Flow Pressure	<u>41</u> P.S.I.	First Flow Pressure	<u>50</u> Mins	<u>50</u> Mins
C First Final Flow Pressure	<u>41</u> P.S.I.	Initial Closed-in Pressure	<u>45</u> Mins	<u>45</u> Mins
D Initial Closed-in Pressure	<u>633</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins	<u>60</u> Mins
E Second Initial Flow Pressure	<u>49</u> P.S.I.	Final Closed-in Pressure	<u>45</u> Mins	<u>45</u> Mins
F Second Final Flow Pressure	<u>49</u> P.S.I.			
G Final Closed-in Pressure	<u>471</u> P.S.I.			
H Final Hydrostatic Mud	<u>1601</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>41</u>	0	<u>41</u>	0	<u>49</u>	0	<u>49</u>
P 2 5		3	<u>53</u>	5		3	<u>55</u>
P 3 10		6	<u>74</u>	10		6	<u>74</u>
P 4 15		9	<u>107</u>	15		9	<u>96</u>
P 5 20		12	<u>146</u>	20		12	<u>119</u>
P 6 25		15	<u>200</u>	25		15	<u>146</u>
P 7 30	<u>41</u>	18	<u>257</u>	30		18	<u>172</u>
P 8 35		21	<u>316</u>	35		21	<u>207</u>
P 9 40		24	<u>371</u>	40		24	<u>241</u>
P 10 45		27	<u>429</u>	45		27	<u>281</u>
P 11 50		30	<u>471</u>	50		30	<u>318</u>
P 12 55		33	<u>523</u>	55		33	<u>350</u>
P 13 60		36	<u>560</u>	60	<u>49</u>	36	<u>381</u>
P 14 65		39	<u>593</u>	65		39	<u>413</u>
P 15 70		42	<u>633</u>	70		42	<u>449</u>
P 16 75		45	<u>633</u>	75		45	<u>471</u>
P 17 80		48		80		48	
P 18 85		51		85		51	
P 19 90		54		90		54	
P 20 95		57		95		57	
100		60		100		60	

# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY \_\_\_\_\_ H-30 DRILLING, INC. \_\_\_\_\_ LEASE & WELL NO. \_\_\_\_\_ PANNING #4-18 \_\_\_\_\_ SEC. 18 TWP 22S RGE 11W TEST 1 DATE 2/18/90

WESTERN TESTING CO. INC.  
SUBSURFACE PRESSURE SURVEY

DATE : 2/18/90 TICKET : 15734  
CUSTOMER : H-30 DRILLING INC. LEASE : PANNING  
WELL : #4-18 TEST: 1 GEOLOGIST : BURKE  
ELEVATION : 1813 KB FORMATION : LANSING DEF  
SECTION : 18 TOWNSHIP : 22S  
RANGE : 11W COUNTY : STAFFORD STATE : KANSAS  
GAUGE SN# : 10270 RANGE : 4150 CLOCK : 12

INTERVAL FROM : 3274 TO : 3318 TOTAL DEPTH : 3318  
DEPTH OF SELECTIVE ZONE :  
PACKER DEPTH : 3269 SIZE : 6.63  
PACKER DEPTH : 3274 SIZE : 6.63  
PACKER DEPTH : SIZE :  
PACKER DEPTH : SIZE :

DRILLING CON. : H-30 DRILLING RIG #7  
MUD TYPE : CHEMICAL VISCOSITY : 47  
WEIGHT : 9.2 WATER LOSS (CC) : 10.5  
CHLORIDES (PPM) :  
JARS-MAKE : SERIAL NUMBER :  
DID WELL FLOW ? : NO REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 30 FT I.D. inch : 2.20  
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00  
DRILL PIPE LENGTH : 3224 FT I.D. inch : 3.80  
TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50  
ANCHOR LENGTH : 44 FT ANCHOR SIZE : 5.50  
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75  
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

BLOW COMMENT #1 : INITIAL FLOW PERIOD-WEAK BUILDING TO A FAIR BLOW  
BLOW COMMENT #2 : 1/2" TO 4" BLOW.  
BLOW COMMENT #3 : FINAL FLOW PERIOD-FAIR BUILDING TO A GOOD BLOW  
BLOW COMMENT #4 : 4" TO 8" BLOW

RECOVERED : 50 FT OF: OIL & GAS CUT MUD  
RECOVERED : 0 FT OF: 12% OIL 10% GAS 78% MUD

Total Barrels Fluid = 0.42  
Total Fluid Prod Rate = 6.75 BFPD  
Indicated Oil Rate = 0.81 BOPD  
Indicated Wtr Rate = 0.07 BWPD  
Corrected Oil Rate = 2.88 BOPD  
Corrected Wtr Rate = 0.24 BWPD

REMARK 1 :  
REMARK 2 : 370 FT GAS ABOVE FLUID  
REMARK 3 :  
REMARK 4 :

SET PACKER(S) : 4:20 PM  
WELL TEMPERATURE : 103  
INITIAL HYDROSTATIC PRESSURE (A) 1628  
INITIAL FLOW PERIOD MIN: 30 (B) 41 PSI TO (C) : 41  
INITIAL CLOSED IN PERIOD MIN: 45 (D) 633  
FINAL FLOW PERIOD MIN: 60 (E) 49 PSI TO (F) : 49  
FINAL CLOSED IN PERIOD MIN: 45 (G) 471  
FINAL HYDROSTATIC PRESSURE (H) 1601

TIME STARTED OFF BOTTOM : 7:20 PM

WESTERN TESTING CO. INC.  
WICHITA-KANSAS

Pressure Transient Report  
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COMPANY : H-30 DRILLING INC.  
RIG : STAFFORD-KANSAS  
FIELD : PANNING  
WELL : #4-18  
DATE : 2/18/90  
GAUGE NO : 10270

OPERATIONAL COMMENTS

370 FT GAS ABOVE FLUID

COMPANY : H-30 DRILLING INC.  
WELL : #4-18  
GAUGE # : 10270  
DATE : 18/ 2/90

FIELD : PANNING  
JOB # : 15734  
DEPTH : 3318  
TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
INITIAL FLOW PERIOD					
2	4:20: 0	0.000	41.000	103.00	0.000
3	4:24:59	0.083	41.000	103.00	0.000
4	4:30: 0	0.167	41.000	103.00	0.000
5	4:35: 0	0.250	41.000	103.00	0.000
6	4:39:59	0.333	41.000	103.00	0.000
7	4:45: 0	0.417	41.000	103.00	0.000
8	4:50: 0	0.500	41.000	103.00	0.000
INITIAL SHUT-IN PERIOD					
9	4:53: 0	0.550	53.000	103.00	12.000
10	4:56: 0	0.600	74.000	103.00	21.000
11	4:59: 0	0.650	107.000	103.00	33.000
12	5: 2: 0	0.700	146.000	103.00	39.000
13	5: 5: 0	0.750	200.000	103.00	54.000
14	5: 8: 0	0.800	257.000	103.00	57.000
15	5:11: 0	0.850	316.000	103.00	59.000
16	5:14: 0	0.900	371.000	103.00	55.000
17	5:17: 0	0.950	429.000	103.00	58.000
18	5:20: 0	1.000	471.000	103.00	42.000
19	5:23: 0	1.050	523.000	103.00	52.000
20	5:26: 0	1.100	560.000	103.00	37.000
21	5:29: 0	1.150	593.000	103.00	33.000
22	5:32: 0	1.200	623.000	103.00	30.000
23	5:35: 0	1.250	633.000	103.00	10.000
FINAL FLOW PERIOD					
24	5:36: 0	1.267	49.000	103.00	-584.000
25	5:39:59	1.333	49.000	103.00	0.000
26	5:45: 0	1.417	49.000	103.00	0.000
27	5:50: 0	1.500	49.000	103.00	0.000
28	5:54:59	1.583	49.000	103.00	0.000
29	6: 0: 0	1.667	49.000	103.00	0.000
30	6: 5: 0	1.750	49.000	103.00	0.000
31	6: 9:59	1.833	49.000	103.00	0.000
32	6:15: 0	1.917	49.000	103.00	0.000
33	6:20: 0	2.000	49.000	103.00	0.000
34	6:24:59	2.083	49.000	103.00	0.000
35	6:30: 0	2.167	49.000	103.00	0.000
36	6:35: 0	2.250	49.000	103.00	0.000
FINAL SHUT-IN PERIOD					
37	6:38: 0	2.300	55.000	103.00	6.000
38	6:41: 0	2.350	74.000	103.00	19.000
39	6:44: 0	2.400	96.000	103.00	22.000
40	6:47: 0	2.450	119.000	103.00	23.000
41	6:50: 0	2.500	146.000	103.00	27.000
42	6:53: 0	2.550	172.000	103.00	26.000
43	6:56: 0	2.600	207.000	103.00	35.000
44	6:59: 0	2.650	241.000	103.00	34.000
45	7: 2: 0	2.700	281.000	103.00	40.000
46	7: 5: 0	2.750	318.000	103.00	37.000
47	7: 8: 0	2.800	350.000	103.00	32.000
48	7:11: 0	2.850	381.000	103.00	31.000

COMPANY : H-30 DRILLING INC.  
WELL : #4-18  
GAUGE # : 10270  
DATE : 18/ 2/90

FIELD : PANNING  
JOB # : 15734  
DEPTH : 3318  
TEST :

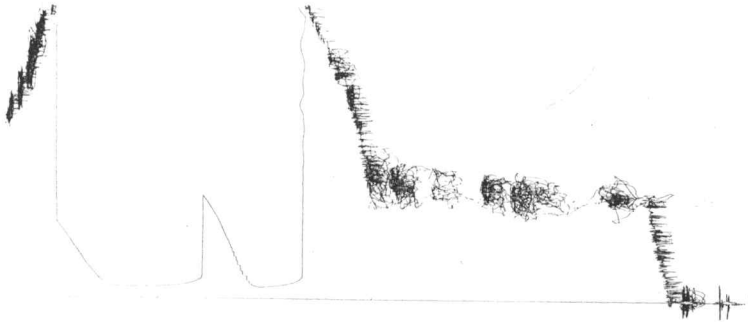
DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
49	7:14: 0	2.900	413.000	103.00	32.000
50	7:17: 0	2.950	444.000	103.00	31.000
51	7:20: 0	3.000	471.000	103.00	27.000

WESTERN TESTING CO. INC.



KT 15754

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12719



WESTERN TESTING CO., INC.  
FORMATION TESTING

TICKET No 15735

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

Elevation 1808 GL 1813 KB Formation Lansing 4, I, J, K Eff. Pay - Ft.

District GT Bend Date 2-19-90 Customer Order No. -

COMPANY NAME H000 H-30 Drilling, Inc

ADDRESS 251 N. WATER - SUITE 10 WICHITA, K0 67202

LEASE AND WELL NO. PANNING #4-18 COUNTY STAFFORD STATE K0 Sec. 18 Twp. 22 Rge. 11

Mail Invoice To SAME Co. Name SAME Address PANNING #4-18 No. Copies Requested Reg

Mail Charts To SAME Address PANNING #4-18 No. Copies Requested Reg

Formation Test No. 2 Interval Tested From 3373 ft. to 3440 ft. Total Depth 3440 ft.

Packer Depth 3368 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 3373 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3376 ft. Recorder Number 10270 Cap. 4150

Bottom Recorder Depth (Outside) 3378 ft. Recorder Number 13268 Cap. 4225

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

Drilling Contractor H-30 Rig 7 Drill Collar Length 30 I. D. 2.2 in.

Mud Type CHEMICAL Viscosity 44 Weight Pipe Length - I. D. - in.

Weight 9.2 Water Loss 9.8 cc. Drill Pipe Length 3323 I. D. 3.8 in.

Chlorides N/A P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.

Jars: Make - Serial Number - Anchor Length 67 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 in.

Blow: -

Recovered 85 ft. of Mud

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of -

Chlorides - P.P.M. Sample Jars used - Remarks: Packers did not hold, set twice

Time On Location 2:00 A.M. Time Pick Up Tool 2:20 P.M. Time Off Location - A.M.

Time Set Packer(s) 3:40 P.M. Time Started Off Bottom 3:50 P.M. Maximum Temperature -

Initial Hydrostatic Pressure 1075 (A) - P.S.I.

Initial Flow Period - Minutes (B) - P.S.I. to (C) - P.S.I.

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

Final Flow Period - Minutes (E) - P.S.I. to (F) - P.S.I.

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

Final Hydrostatic Pressure 1075 (H) - 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.

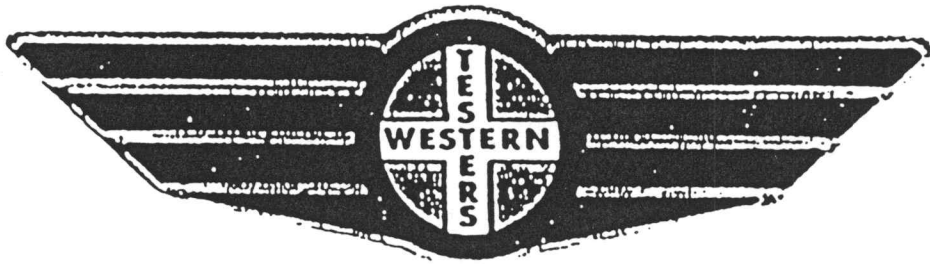
Test Approved By [Signature]  
Signature of Customer or his authorized representative

Western Representative Ray Schwager Thank  
1925 404

FIELD INVOICE

Open Hole Test	\$	
Misrun	\$	<u>400</u>
Straddle Test	\$	
Jars	\$	
Selective Zone	\$	
Safety Joint	\$	
Standby	\$	
Evaluation	\$	
Extra Packer	\$	
Circ. Sub.	\$	
Mileage	\$	
Fluid Sampler	\$	
Extra Charts	\$	
Insurance	\$	
Telecopier	\$	
TOTAL	\$	<u>400</u>

# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.  
SUBSURFACE PRESSURE SURVEY

DATE : 2/19/90 TICKET : 15735  
CUSTOMER : H-30 DRILLING INC. LEASE : PANNING  
WELL : #4-18 TEST: 2 GEOLOGIST : BURKE  
ELEVATION : 1813 KB FORMATION : LANSING HIJK  
SECTION : 18 TOWNSHIP : 22S  
RANGE : 11W COUNTY : STAFFORD STATE : KANSAS  
GAUGE SN# : 10270 RANGE : 4150 CLOCK : 12

INTERVAL FROM : 3373 TO : 3440 TOTAL DEPTH : 3440  
DEPTH OF SELECTIVE ZONE :  
PACKER DEPTH : 3368 SIZE : 6.63  
PACKER DEPTH : 3373 SIZE : 6.63  
PACKER DEPTH : SIZE :  
PACKER DEPTH : SIZE :

DRILLING CON. : H-30 DRILLING RIG #7  
MUD TYPE : CHEMICAL VISCOSITY : 44  
WEIGHT : 9.2 WATER LOSS (CC) : 9.8  
CHLORIDES (PPM) :  
JARS-MAKE : SERIAL NUMBER :  
DID WELL FLOW ? : NO REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 30 FT I.D. inch : 2.20  
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00  
DRILL PIPE LENGTH : 3323 FT I.D. inch : 3.80  
TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50  
ANCHOR LENGTH : 67 FT ANCHOR SIZE : 5.50  
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75  
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

BLOW COMMENT #1 : INITIAL FLOW PERIOD-  
BLOW COMMENT #2 :  
BLOW COMMENT #3 :  
BLOW COMMENT #4 :

RECOVERED : 85 FT OF: MUD

Total Barrels Fluid = 0.91  
Total Fluid Prod Rate = 0.00 BFPD

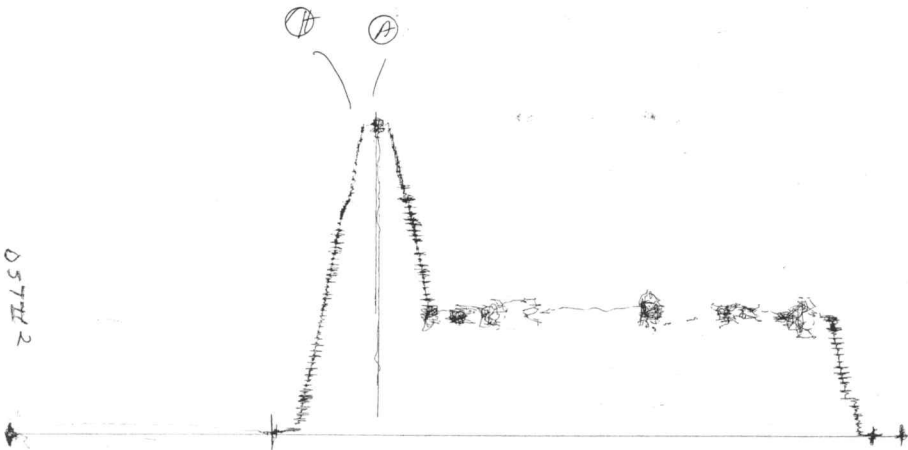
REMARK 1 :  
REMARK 2 : PACKERS DID NOT HOLD SET TWICE  
REMARK 3 :  
REMARK 4 :

SET PACKER(S) :	3:40 PM	TIME STARTED OFF BOTTOM :	3:50 PM
WELL TEMPERATURE :	0		
INITIAL HYDROSTATIC PRESSURE		(A)	1672
INITIAL FLOW PERIOD MIN:	0	(B)	0 PSI TO (C) : 0
INITIAL CLOSED IN PERIOD MIN:	0	(D)	0
FINAL FLOW PERIOD MIN:	0	(E)	0 PSI TO (F) : 0
FINAL CLOSED IN PERIOD MIN:	0	(G)	0
FINAL HYDROSTATIC PRESSURE		(H)	1672

Kit-15725

7

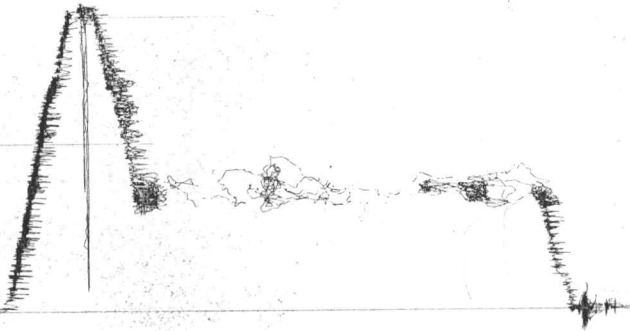
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K+15725

0

05742  
18268





WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 15736

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

Elevation 1808 GL 1813 KB Formation Lansing H, I, J, K Eff. Pay - Ft.

District GT. Bend Date 2-19-90 Customer Order No. -

COMPANY NAME Hood H-30 Drilling, Inc.

ADDRESS 251 N. WATER - Suite 10 WICHITA, KS. 67202

LEASE AND WELL NO. Panning #4-18 COUNTY Stafford STATE KS Sec. 18 Twp. 22 S Rge. 11 W

Mail Invoice To Co. Name SAME Address PANNING #4-18 No. Copies Requested Reg

Mail Charts To Co. Name SAME Address PANNING #4-18 No. Copies Requested Reg

Formation Test No. 3 Interval Tested From 3367 ft. to 3440 ft. Total Depth 3440 ft.

Packer Depth 3362 ft. Size 2 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 3367 ft. Size 2 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3370 ft. Recorder Number 10270 Cap. 4150

Bottom Recorder Depth (Outside) 3373 ft. Recorder Number 13268 Cap. 4225

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

Drilling Contractor H-30 rig 7 Drill Collar Length 30 I. D. 2.2 in.

Mud Type Chemical Viscosity 44 Weight Pipe Length - I. D. - in.

Weight 9.2 Water Loss 9.8 cc. Drill Pipe Length 3317 I. D. 3.8 in.

Chlorides N/A P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.

Jars: Make - Serial Number - Anchor Length 73 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 in.

Blow: IF - WEAK Blow Throughout 1" Blow

FF - VERY WEAK Blow died in 15 min

Recovered 40 ft. of Slightly oil cut Mud 1% oil 99% mud

Recovered - ft. of -

Recovered - ft. of -

Recovered - ft. of - 04 W

Recovered - ft. of - 04 oil

Chlorides - P.P.M. Sample Jars used 1 Remarks: -

Time On Location 2:00 A.M. P.M. Time Pick Up Tool 5:15 A.M. P.M. Time Off Location 11:00 A.M. P.M.

Time Set Packer(s) 6:35 A.M. P.M. Time Started Off Bottom 9:05 A.M. P.M. Maximum Temperature 106°

Initial Hydrostatic Pressure (A) 1651 P.S.I.

Initial Flow Period Minutes 30 (B) 31 P.S.I. to (C) 31 P.S.I.

Initial Closed In Period Minutes 45 (D) 966 P.S.I.

Final Flow Period Minutes 30 (E) 31 P.S.I. to (F) 31 P.S.I.

Final Closed In Period Minutes 45 (G) 894 P.S.I.

Final Hydrostatic Pressure (H) 1630 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 1925 Thank you

FIELD INVOICE

Table with 2 columns: Item Name and Amount. Items include Open Hole Test (400), Misrun, Straddle Test, Jars, Selective Zone, Safety Joint, Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, Insurance, Telecopier, and TOTAL.

WESTERN TESTING CO., INC.  
Pressure Data

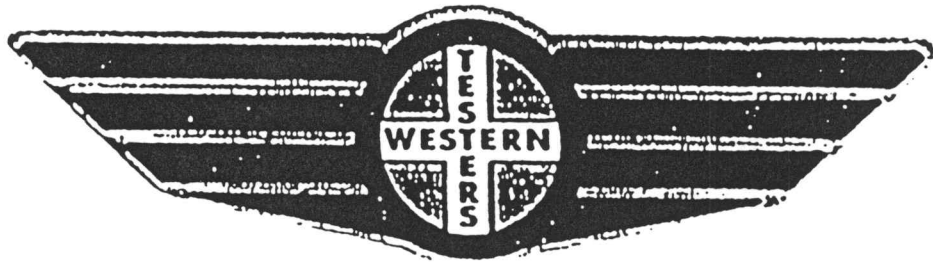
Date 2-19-90 Test Ticket No. 15236  
 Recorder No. 10270 Capacity 4150 Location \_\_\_\_\_ Ft.  
 Clock No. \_\_\_\_\_ Elevation \_\_\_\_\_ Well Temperature 106 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1667</u> P.S.I.	Open Tool	<u>6:35 P</u>	<u>M</u>
B First Initial Flow Pressure	<u>31</u> P.S.I.	First Flow Pressure	<u>49</u> Mins	<u>50</u> Mins
C First Final Flow Pressure	<u>33</u> P.S.I.	Initial Closed-In Pressure	<u>45</u> Mins	<u>45</u> Mins
D Initial Closed-In Pressure	<u>960</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins	<u>30</u> Mins
E Second Initial Flow Pressure	<u>44</u> P.S.I.	Final Closed-in Pressure	<u>45</u> Mins	<u>45</u> Mins
F Second Final Flow Pressure	<u>44</u> P.S.I.			
G Final Closed-in Pressure	<u>904</u> P.S.I.			
H Final Hydrostatic Mud	<u>1655</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>31</u>	0	<u>33</u>	0	<u>44</u>	0	<u>44</u>
P 2 5		3	<u>69</u>	5		3	<u>46</u>
P 3 10		6	<u>174</u>	10		6	<u>65</u>
P 4 15		9	<u>217</u>	15		9	<u>120</u>
P 5 20		12	<u>463</u>	20		12	<u>251</u>
P 6 25		15	<u>573</u>	25		15	<u>362</u>
P 7 30	<u>53</u>	18	<u>676</u>	30	<u>44</u>	18	<u>472</u>
P 8 35		21	<u>749</u>	35		21	<u>574</u>
P 9 40		24	<u>808</u>	40		24	<u>656</u>
P 10 45		27	<u>854</u>	45		27	<u>716</u>
P 11 50		30	<u>887</u>	50		30	<u>767</u>
P 12 55		33	<u>909</u>	55		33	<u>811</u>
P 13 60		36	<u>926</u>	60		36	<u>840</u>
P 14 65		39	<u>940</u>	65		39	<u>869</u>
P 15 70		42	<u>950</u>	70		42	<u>871</u>
P 16 75		45	<u>960</u>	75		45	<u>904</u>
P 17 80		48		80		48	
P 18 85		51		85		51	
P 19 90		54		90		54	
P 20 95		57		95		57	
100		60		100		60	

# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY \_\_\_\_\_ H-30 DRILLING, INC. \_\_\_\_\_ LEASE & WELL NO. \_\_\_\_\_ PANNING #4-18 \_\_\_\_\_ SEC. 18 TWP 22S RGE 11W TEST 3 DATE 2/19/90

WESTERN TESTING CO. INC.  
SUBSURFACE PRESSURE SURVEY

DATE : 2/19/90 TICKET : 15736  
CUSTOMER : H-30 DRILLING INC. LEASE : PANNING  
WELL : #4-18 TEST: 3 GEOLOGIST : BURKE  
ELEVATION : 1813 KB FORMATION : LANSING HIJK  
SECTION : 18 TOWNSHIP : 22S  
RANGE : 11W COUNTY : STAFFORD STATE : KANSAS  
GAUGE SN# : 10270 RANGE : 4150 CLOCK : 12

INTERVAL FROM : 3367 TO : 3440 TOTAL DEPTH : 3440  
DEPTH OF SELECTIVE ZONE :  
PACKER DEPTH : 3362 SIZE : 6.63  
PACKER DEPTH : 3367 SIZE : 6.63  
PACKER DEPTH : SIZE :  
PACKER DEPTH : SIZE :

DRILLING CON. : H-30 DRILLING RIG #7  
MUD TYPE : CHEMICAL VISCOSITY : 44  
WEIGHT : 9.2 WATER LOSS (CC) : 9.8  
CHLORIDES (PPM) :  
JARS-MAKE : SERIAL NUMBER :  
DID WELL FLOW ? : REVERSED OUT ? :

DRILL COLLAR LENGTH : 30 FT I.D. inch : 2.20  
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00  
DRILL PIPE LENGTH : 3317 FT I.D. inch : 3.80  
TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50  
ANCHOR LENGTH : 73 FT ANCHOR SIZE : 5.50  
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75  
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

BLOW COMMENT #1 : INITIAL FLOW PERIOD-WEAK BLOW THROUGHOUT 1" BLOW  
BLOW COMMENT #2 : FINAL FLOW PERIOD-VERY WEAK BLOW DIED IN 15 MINUTES  
BLOW COMMENT #3 :  
BLOW COMMENT #4 :

RECOVERED : 40 FT OF: SLIGHTLY OIL CUT MUD 1% OIL 99% MUD

Total Barrels Fluid = 0.28  
Total Fluid Prod Rate = 6.75 BFPD  
Indicated Oil Rate = 0.07 BOPD  
Indicated Wtr Rate = 0.07 BWPD

REMARK 1 :  
REMARK 2 :  
REMARK 3 :  
REMARK 4 :

SET PACKER(S) :	6:35 PM	TIME STARTED OFF BOTTOM :	9:05 PM
WELL TEMPERATURE :	106		
INITIAL HYDROSTATIC PRESSURE		(A)	1667
INITIAL FLOW PERIOD MIN:	30	(B)	31 PSI TO (C) : 33
INITIAL CLOSED IN PERIOD MIN:	45	(D)	960
FINAL FLOW PERIOD MIN:	30	(E)	42 PSI TO (F) : 42
FINAL CLOSED IN PERIOD MIN:	45	(G)	904
FINAL HYDROSTATIC PRESSURE		(H)	1655

WESTERN TESTING CO. INC.  
WICHITA-KANSAS

Pressure Transient Report  
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COMPANY : H-30 DRILLING INC.  
RIG : STAFFORD-KANSAS  
FIELD : PANNING  
WELL : #4-18  
DATE : 2/19/90  
GAUGE NO : 10270

OPERATIONAL COMMENTS

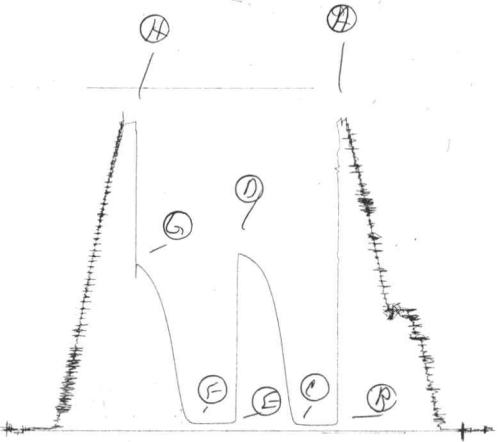
COMPANY : H-30 DRILLING INC.  
 WELL : #4-18  
 GAUGE # : 10270  
 DATE : 19/ 2/90

FIELD : PANNING  
 JOB # : 15736  
 DEPTH : 3440  
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
INITIAL FLOW PERIOD					
2	6:35: 0	0.000	31.000	106.00	0.000
3	6:39:59	0.083	31.000	106.00	0.000
4	6:45: 0	0.167	31.000	106.00	0.000
5	6:50: 0	0.250	31.000	106.00	0.000
6	6:54:59	0.333	31.000	106.00	0.000
7	7: 0: 0	0.417	31.000	106.00	0.000
8	7: 5: 0	0.500	33.000	106.00	2.000
INITIAL SHUT-IN PERIOD					
9	7: 8: 0	0.550	69.000	106.00	36.000
10	7:11: 0	0.600	174.000	106.00	105.000
11	7:14: 0	0.650	317.000	106.00	143.000
12	7:17: 0	0.700	463.000	106.00	146.000
13	7:20: 0	0.750	573.000	106.00	110.000
14	7:23: 0	0.800	676.000	106.00	103.000
15	7:26: 0	0.850	749.000	106.00	73.000
16	7:29: 0	0.900	808.000	106.00	59.000
17	7:32: 0	0.950	854.000	106.00	46.000
18	7:35: 0	1.000	887.000	106.00	33.000
19	7:38: 0	1.050	909.000	106.00	22.000
20	7:41: 0	1.100	926.000	106.00	17.000
21	7:44: 0	1.150	940.000	106.00	14.000
22	7:47: 0	1.200	950.000	106.00	10.000
23	7:50: 0	1.250	960.000	106.00	10.000
FINAL FLOW PERIOD					
24	7:51: 0	1.267	42.000	106.00	-918.000
25	7:54:59	1.333	42.000	106.00	0.000
26	8: 0: 0	1.417	42.000	106.00	0.000
27	8: 5: 0	1.500	42.000	106.00	0.000
28	8: 9:59	1.583	42.000	106.00	0.000
29	8:15: 0	1.667	42.000	106.00	0.000
30	8:20: 0	1.750	42.000	106.00	0.000
FINAL SHUT-IN PERIOD					
31	8:23: 0	1.800	46.000	106.00	4.000
32	8:26: 0	1.850	65.000	106.00	19.000
33	8:29: 0	1.900	120.000	106.00	55.000
34	8:32: 0	1.950	231.000	106.00	111.000
35	8:35: 0	2.000	362.000	106.00	131.000
36	8:38: 0	2.050	472.000	106.00	110.000
37	8:41: 0	2.100	574.000	106.00	102.000
38	8:44: 0	2.150	656.000	106.00	82.000
39	8:47: 0	2.200	716.000	106.00	60.000
40	8:50: 0	2.250	767.000	106.00	51.000
41	8:53: 0	2.300	811.000	106.00	44.000
42	8:56: 0	2.350	840.000	106.00	29.000
43	8:59: 0	2.400	869.000	106.00	29.000
44	9: 2: 0	2.450	891.000	106.00	22.000
45	9: 5: 0	2.500	904.000	106.00	13.000

KT 15736

Z

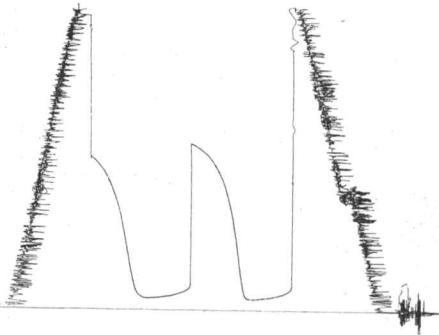


OST#3

KT 15736

0

OSTEAL  
8/18





WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET N° 15737

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

Elevation 1808 GL 1813 KB Formation Simpson Eff. Pay - Ft.

District GT Bend Date 2-20-90 Customer Order No.

COMPANY NAME H-30 Drilling, Inc.

ADDRESS 251 N. WATER - Suite 10 Wichita, Ks 67202

LEASE AND WELL NO. Panning #4-18 COUNTY Stafford STATE Ks Sec. 18 Twp. 22 Rge. 11

Mail Invoice To Co. Name SAME Address PANNING #4-18 No. Copies Requested Reg

Mail Charts To Co. Name SAME Address PANNING #4-18 No. Copies Requested Reg

Formation Test No. 4 Interval Tested From 3550 ft. to 3595 ft. Total Depth 3595 ft.

Packer Depth 3545 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 3550 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3553 ft. Recorder Number 10270 Cap. 4150

Bottom Recorder Depth (Outside) 3556 ft. Recorder Number 13268 Cap. 4225

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

Drilling Contractor H-30 rig 7 Drill Collar Length 30 I. D. 2.2 in.

Mud Type Chemical Viscosity 46 Weight Pipe Length - I. D. - in.

Weight 9.2 Water Loss 12.8 cc. Drill Pipe Length 3500 I. D. 3.8 in.

Chlorides N/A P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.

Jars: Make - Serial Number - Anchor Length 45 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 - WEAK Blow throughout 1/4" Blow FF - Very Weak surface Blow throughout

Recovered 60 ft. of Gas in Pipe

Recovered 10 ft. of Oil cut Mud 5% oil 95% mud

Recovered - ft. of .5 oil .1 w

Recovered - ft. of

Chlorides - P.P.M. Sample Jars used 1 Remarks:

Time On Location 11:10 AM Time Pick Up Tool 11:55 AM Time Off Location 6:45 PM

Time Set Packer(s) 1:05 AM Time Started Off Bottom 5:05 PM Maximum Temperature 106°

Initial Hydrostatic Pressure (A) 1744 P.S.I.

Initial Flow Period Minutes 45 (B) 20 P.S.I. to (C) 20 P.S.I.

Initial Closed In Period Minutes 45 (D) 41 P.S.I.

Final Flow Period Minutes 60 (E) 20 P.S.I. to (F) 20 P.S.I.

Final Closed In Period Minutes 90 (G) 41 P.S.I.

Final Hydrostatic Pressure (H) 1734 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 1925 Hank 404

FIELD INVOICE

Table with 2 columns: Item and Amount. Items include Open Hole Test (400), Misrun, Straddle Test, Jars, Selective Zone, Safety Joint, Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, Insurance, Telecopier, and TOTAL.

WESTERN TESTING CO., INC.  
Pressure Data

Date 2-20-90 Test Ticket No. 15727  
 Recorder No. 10220 Capacity 4150 Location \_\_\_\_\_ Ft.  
 Clock No. \_\_\_\_\_ Elevation \_\_\_\_\_ Well Temperature 106 °F

Point	Pressure	Time Given	Time Computed
A Initial Hydrostatic Mod	<u>1766</u> P.S.I.	<u>1:05 P</u>	
B First Initial Flow Pressure	<u>25</u> P.S.I.	<u>45</u> Mins	<u>45</u> Mins
C First Final Flow Pressure	<u>28</u> P.S.I.	<u>45</u> Mins	<u>45</u> Mins
D Initial Closed-in Pressure	<u>47</u> P.S.I.	<u>60</u> Mins	<u>60</u> Mins
E Second Initial Flow Pressure	<u>29</u> P.S.I.	<u>90</u> Mins	<u>90</u> Mins
F Second Final Flow Pressure	<u>29</u> P.S.I.		
G Final Closed-in Pressure	<u>51</u> P.S.I.		
H Final Hydrostatic Mod	<u>1766</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>25</u>	0	<u>28</u>	0	<u>29</u>	0	<u>29</u>
P 2 5		3	<u>29</u>	5		3	
P 3 10		6	<u>30</u>	10		6	
P 4 15		9	<u>32</u>	15		9	
P 5 20		12	<u>33</u>	20		12	
P 6 25		15	<u>34</u>	25		15	<u>29</u>
P 7 30	<u>25</u>	18	<u>35</u>	30		18	<u>29</u>
P 8 35	<u>26</u>	21	<u>36</u>	35		21	<u>30</u>
P 9 40	<u>27</u>	24	<u>37</u>	40		24	<u>31</u>
P 10 45	<u>28</u>	27	<u>38</u>	45		27	<u>33</u>
P 11 50		30	<u>39</u>	50		30	<u>35</u>
P 12 55		33	<u>40</u>	55		33	<u>37</u>
P 13 60		36	<u>41</u>	60	<u>29</u>	36	<u>38</u>
P 14 65		39	<u>43</u>	65		39	<u>39</u>
P 15 70		42	<u>45</u>	70		42	<u>40</u>
P 16 75		45	<u>47</u>	75		45	<u>41</u>
P 17 80		48		80		48	<u>42</u>
P 18 85		51		85		51	<u>43</u>
P 19 90		54		90		54	<u>5</u>
P 20 95		57		95		57	<u>5</u>
100		60		100		60	<u>43</u>

**WESTERN TESTING CO., INC.**  
**Pressure Data**

Date \_\_\_\_\_

Test Ticket No. 15727

Recorder No. \_\_\_\_\_ Capacity \_\_\_\_\_ Location \_\_\_\_\_ Ft.

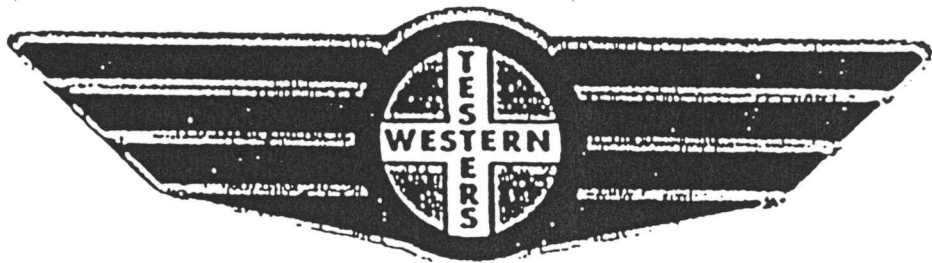
Clock No. \_\_\_\_\_ Elevation \_\_\_\_\_ Well Temperature \_\_\_\_\_ °F

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. _____
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**

Point Mins.	First Flow Pressure	Initial Shut-In	Second Flow Pressure	Final Shut-In
	Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.	Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.	Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.	Breakdown: _____ Inc. of _____ mins. and a final inc. of _____ Min.
	Point Minutes	Point Minutes	Point Minutes	Point Minutes
P 1 <u>105</u>	_____	63	105	63 <u>44</u>
P 2 <u>110</u>	_____	66	110	66 <u>44</u>
P 3 <u>115</u>	_____	69	115	69 <u>45</u>
P 4 <u>120</u>	_____	72	120	72 <u>45</u>
P 5 <u>125</u>	_____	75	125	75 <u>46</u>
P 6 <u>130</u>	_____	78	130	78 <u>47</u>
P 7 <u>135</u>	_____	81	135	81 <u>48</u>
P 8 <u>140</u>	_____	84	140	84 <u>49</u>
P 9 <u>145</u>	_____	87	145	87 <u>50</u>
P10 <u>150</u>	_____	90	150	90 <u>51</u>
P11 <u>155</u>	_____	93	155	93 _____
P12 <u>160</u>	_____	96	160	96 _____
P13 <u>165</u>	_____	99	165	99 _____
P14 <u>170</u>	_____	102	170	102 _____
P15 <u>175</u>	_____	105	175	105 _____
P16 <u>180</u>	_____	108	180	108 _____
P17 <u>185</u>	_____	111	185	111 _____
P18 <u>190</u>	_____	114	190	114 _____
P19 <u>195</u>	_____	117	195	117 _____
P20 <u>200</u>	_____	120	200	120 _____

# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY H-30 DRILLING, INC. LEASE & WELL NO. PANNING #4-18 SEC. 18 TWP 22SRGE. 11W TEST 4 DATE 2/20/90

WESTERN TESTING CO. INC.  
SUBSURFACE PRESSURE SURVEY

DATE : 2/20/90 TICKET : 15737  
CUSTOMER : H-30 DRILLING INC. LEASE : PANNING  
WELL : #4-18 TEST: 4 GEOLOGIST : BURKE  
ELEVATION : 1813 KB FORMATION : SIMPSON  
SECTION : 18 TOWNSHIP : 22S  
RANGE : 11W COUNTY : STAFFORD STATE : KANSAS  
GAUGE SN# : 10270 RANGE : 4150 CLOCK : 12

INTERVAL FROM : 3550 TO : 3595 TOTAL DEPTH : 3595  
DEPTH OF SELECTIVE ZONE :  
PACKER DEPTH : 3545 SIZE : 6.63  
PACKER DEPTH : 3550 SIZE : 6.63  
PACKER DEPTH : SIZE :  
PACKER DEPTH : SIZE :

DRILLING CON. : H-30 DRILLING RIG #7  
MUD TYPE : CHEMICAL VISCOSITY : 46  
WEIGHT : 9.2 WATER LOSS (CC) : 12.8  
CHLORIDES (PPM) :  
JARS-MAKE : SERIAL NUMBER :  
DID WELL FLOW ? : NO REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 30 FT I.D. inch : 2.20  
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00  
DRILL PIPE LENGTH : 3500 FT I.D. inch : 3.80  
TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50  
ANCHOR LENGTH : 45 FT ANCHOR SIZE : 5.50  
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75  
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

BLOW COMMENT #1 : INITIAL FLOW PERIOD-WEAK BLOW THROUGHOUT 1/4" BLOW  
BLOW COMMENT #2 : FINAL FLOW PERIOD-VERY WEAK SURFACE BLOW THROUGHOUT  
BLOW COMMENT #3 :  
BLOW COMMENT #4 :



WESTERN TESTING CO. INC.  
WICHITA-KANSAS

Pressure Transient Report  
-----

COMPANY : H-30 DRILLING INC.  
RIG : STAFFORD-KANSAS  
FIELD : PANNING  
WELL : #4-18  
DATE : 2/20/90  
GAUGE NO : 10270

OPERATIONAL COMMENTS

COMPANY : H-30 DRILLING INC.  
WELL : #4-18  
GAUGE # : 10270  
DATE : 20/ 2/90

FIELD : PANNING  
JOB # : 15737  
DEPTH : 3595  
TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
INITIAL FLOW PERIOD					
2	1: 5: 0	0.000	25.000	106.00	0.000
3	1: 9:59	0.083	25.000	106.00	0.000
4	1:15: 0	0.167	25.000	106.00	0.000
5	1:20: 0	0.250	25.000	106.00	0.000
6	1:24:59	0.333	25.000	106.00	0.000
7	1:30: 0	0.417	25.000	106.00	0.000
8	1:35: 0	0.500	25.000	106.00	0.000
9	1:39:59	0.583	26.000	106.00	1.000
10	1:45: 0	0.667	27.000	106.00	1.000
11	1:50: 0	0.750	28.000	106.00	1.000
INITIAL SHUT-IN PERIOD					
12	1:53: 0	0.800	29.000	106.00	1.000
13	1:56: 0	0.850	30.000	106.00	1.000
14	1:59: 0	0.900	32.000	106.00	2.000
15	2: 2: 0	0.950	33.000	106.00	1.000
16	2: 5: 0	1.000	34.000	106.00	1.000
17	2: 8: 0	1.050	35.000	106.00	1.000
18	2:11: 0	1.100	36.000	106.00	1.000
19	2:14: 0	1.150	37.000	106.00	1.000
20	2:17: 0	1.200	38.000	106.00	1.000
21	2:20: 0	1.250	39.000	106.00	1.000
22	2:23: 0	1.300	40.000	106.00	1.000
23	2:26: 0	1.350	41.000	106.00	1.000
24	2:29: 0	1.400	43.000	106.00	2.000
25	2:32: 0	1.450	45.000	106.00	2.000
26	2:35: 0	1.500	47.000	106.00	2.000
FINAL FLOW PERIOD					
27	2:36: 0	1.517	29.000	106.00	-18.000
28	2:39:59	1.583	29.000	106.00	0.000
29	2:45: 0	1.667	29.000	106.00	0.000
30	2:50: 0	1.750	29.000	106.00	0.000
31	2:54:59	1.833	29.000	106.00	0.000
32	3: 0: 0	1.917	29.000	106.00	0.000
33	3: 5: 0	2.000	29.000	106.00	0.000
34	3: 9:59	2.083	29.000	106.00	0.000
35	3:15: 0	2.167	29.000	106.00	0.000
36	3:20: 0	2.250	29.000	106.00	0.000
37	3:24:59	2.333	29.000	106.00	0.000
38	3:30: 0	2.417	29.000	106.00	0.000
39	3:35: 0	2.500	29.000	106.00	0.000
FINAL SHUT-IN PERIOD					
40	3:38: 0	2.550	29.000	106.00	0.000
41	3:41: 0	2.600	29.000	106.00	0.000
42	3:44: 0	2.650	29.000	106.00	0.000
43	3:47: 0	2.700	29.000	106.00	0.000
44	3:50: 0	2.750	29.000	106.00	0.000
45	3:53: 0	2.800	29.000	106.00	0.000
46	3:56: 0	2.850	30.000	106.00	1.000
47	3:59: 0	2.900	31.000	106.00	1.000
48	4: 2: 0	2.950	33.000	106.00	2.000

COMPANY : H-30 DRILLING INC.  
WELL : #4-18  
GAUGE # : 10270  
DATE : 20/ 2/90

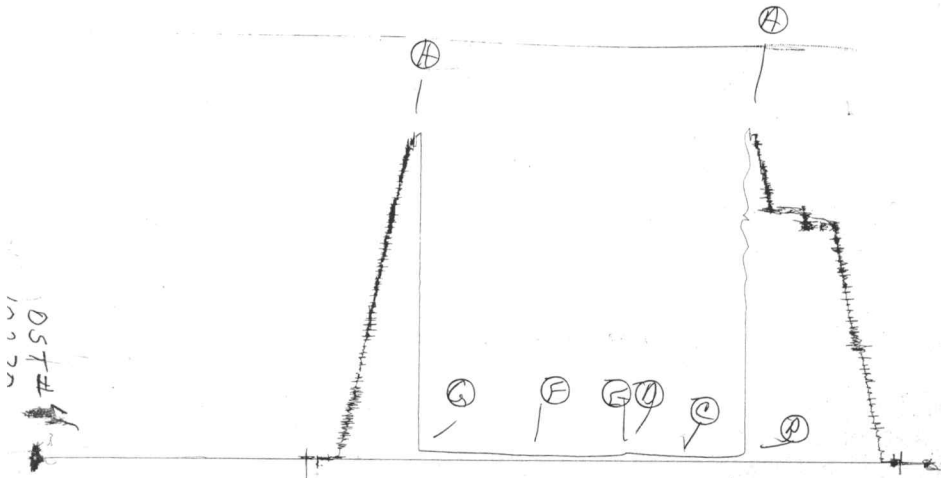
FIELD : PANNING  
JOB # : 15737  
DEPTH : 3595  
TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
49	4: 5: 0	3.000	35.000	106.00	2.000
50	4: 8: 0	3.050	37.000	106.00	2.000
51	4:11: 0	3.100	38.000	106.00	1.000
52	4:14: 0	3.150	39.000	106.00	1.000
53	4:17: 0	3.200	40.000	106.00	1.000
54	4:20: 0	3.250	41.000	106.00	1.000
55	4:23: 0	3.300	42.000	106.00	1.000
56	4:26: 0	3.350	43.000	106.00	1.000
57	4:29: 0	3.400	43.000	106.00	0.000
58	4:32: 0	3.450	43.000	106.00	0.000
59	4:35: 0	3.500	43.000	106.00	0.000
60	4:38: 0	3.550	44.000	106.00	1.000
61	4:41: 0	3.600	44.000	106.00	0.000
62	4:44: 0	3.650	45.000	106.00	1.000
63	4:47: 0	3.700	45.000	106.00	0.000
64	4:50: 0	3.750	46.000	106.00	1.000
65	4:53: 0	3.800	47.000	106.00	1.000
66	4:56: 0	3.850	48.000	106.00	1.000
67	4:59: 0	3.900	49.000	106.00	1.000
68	5: 2: 0	3.950	50.000	106.00	1.000
69	5: 5: 0	4.000	51.000	106.00	1.000

WESTERN TESTING CO. INC.

KT 15727

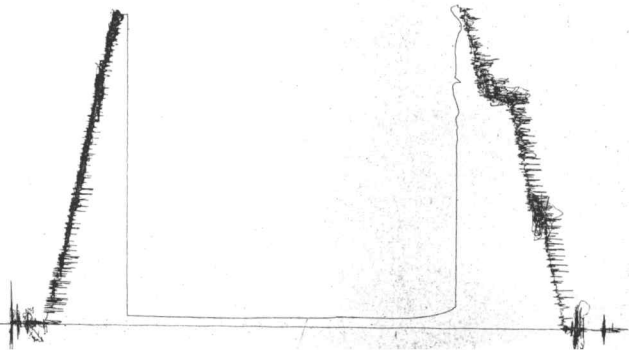
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KI 15727

O.

OST #4  
13268





WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET NO 15738

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

Elevation 1808 GL 1813 KB Formation Arbuckle Eff. Pay Ft.

District GT Bend Date 2-21-90 Customer Order No.

COMPANY NAME H-30 Drilling, Inc.

ADDRESS 251 N. WATER - SUITE 10 WICHITA, KS 67202

LEASE AND WELL NO. PANNING #4-18 COUNTY STAFFORD STATE KS Sec. 18 Twp. 22 Rge. 11

Mail Invoice To Co. Name SAME Address PANNING #4-18 No. Copies Requested Reg

Mail Charts To Co. Name SAME Address PANNING #4-18 No. Copies Requested Reg

Formation Test No. 5 Interval Tested From 3586 ft. to 3613 ft. Total Depth 3613 ft.

Packer Depth 3581 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 3586 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3605 ft. Recorder Number 10270 Cap. 4150

Bottom Recorder Depth (Outside) 3608 ft. Recorder Number 13268 Cap. 4225

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

Drilling Contractor H-30 rig 7 Drill Collar Length - I. D. - in.

Mud Type Chemical Viscosity 47 Weight Pipe Length - I. D. - in.

Weight 9.3 Water Loss 10.4 cc. Drill Pipe Length 3566 I. D. 3.8 in.

Chlorides N/A P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 in.

Jars: Make - Serial Number - Anchor Length 27 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: TK - STRONG BLOW in 5 min FFI - STRONG BLOW throughout

Recovered 2520 ft. of GAS in Pipe

Recovered 420 ft. of CLEAN GASSY OIL GRAVITY 41

Recovered 180 ft. of SLIGHTLY MUDDY GASSY OIL 50% OIL 40% GAS 10% MUD

Recovered ft. of

Recovered ft. of

Chlorides - P.P.M. Sample Jars used 3 Remarks: 510.00 1.8000

Time On Location 12:00 AM P.M. Time Pick Up Tool 12:20 AM P.M. Time Off Location 7:30 AM P.M.

Time Set Packer(s) 1:40 AM P.M. Time Started Off Bottom 4:40 AM P.M. Maximum Temperature 114°

Initial Hydrostatic Pressure (A) 1796 P.S.I.

Initial Flow Period Minutes 30 (B) 52 P.S.I. to (C) 83 P.S.I.

Initial Closed In Period Minutes 45 (D) 1153 P.S.I.

Final Flow Period Minutes 60 (E) 114 P.S.I. to (F) 197 P.S.I.

Final Closed In Period Minutes 45 (G) 1122 P.S.I.

Final Hydrostatic Pressure (H) 1796 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 Ray Schwager 1925 Thank you

FIELD INVOICE

Open Hole Test 400
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

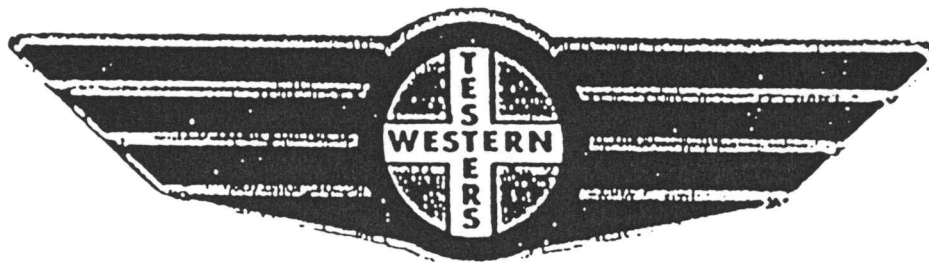
Date 2-21-90 Test Ticket No. 15738  
 Recorder No. 10270 Capacity 4150 Location \_\_\_\_\_ Ft.  
 Clock No. \_\_\_\_\_ Elevation \_\_\_\_\_ Well Temperature 114 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1820</u>	P.S.I.	<u>1:40 A</u>	M
B First Initial Flow Pressure	<u>64</u>	P.S.I.	<u>50</u>	Mins. <u>50</u> Mins.
C First Final Flow Pressure	<u>85</u>	P.S.I.	<u>45</u>	Mins. <u>45</u> Mins.
D Initial Closed-in Pressure	<u>1154</u>	P.S.I.	<u>60</u>	Mins. <u>60</u> Mins.
E Second Initial Flow Pressure	<u>100</u>	P.S.I.	<u>45</u>	Mins. <u>45</u> Mins.
F Second Final Flow Pressure	<u>200</u>	P.S.I.		
G Final Closed-in Pressure	<u>1150</u>	P.S.I.		
H Final Hydrostatic Mud	<u>1807</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>64</u>	0	<u>85</u>	0	<u>50</u>	0	<u>200</u>
P 2 5	<u>64</u>	3	<u>589</u>	5	<u>110</u>	3	<u>852</u>
P 3 10	<u>65</u>	6	<u>1024</u>	10	<u>122</u>	6	<u>1028</u>
P 4 15	<u>68</u>	9	<u>1078</u>	15	<u>129</u>	9	<u>1060</u>
P 5 20	<u>72</u>	12	<u>1100</u>	20	<u>137</u>	12	<u>1072</u>
P 6 25	<u>78</u>	15	<u>1113</u>	25	<u>145</u>	15	<u>1089</u>
P 7 30	<u>85</u>	18	<u>1124</u>	30	<u>152</u>	18	<u>1098</u>
P 8 35		21	<u>1130</u>	35	<u>162</u>	21	<u>1102</u>
P 9 40		24	<u>1134</u>	40	<u>170</u>	24	<u>1108</u>
P 10 45		27	<u>1139</u>	45	<u>179</u>	27	<u>1112</u>
P 11 50		30	<u>1142</u>	50	<u>188</u>	30	<u>1116</u>
P 12 55		33	<u>1147</u>	55	<u>193</u>	33	<u>1121</u>
P 13 60		36	<u>1149</u>	60	<u>200</u>	36	<u>1124</u>
P 14 65		39	<u>1151</u>	65		39	<u>1127</u>
P 15 70		42	<u>1154</u>	70		42	<u>1130</u>
P 16 75		45	<u>1154</u>	75		45	
P 17 80		48		80		48	
P 18 85		51		85		51	
P 19 90		54		90		54	
P 20 95		57		95		57	
100		60		100		60	

# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.  
SUBSURFACE PRESSURE SURVEY

DATE : 2/21/90 TICKET : 15738  
CUSTOMER : H-30 DRILLING INC. LEASE : PANNING  
WELL : #4-18 TEST: 5 GEOLOGIST : BURKE  
ELEVATION : 1813 KB FORMATION : ARBUCKLE  
SECTION : 18 TOWNSHIP : 22S  
RANGE : 11W COUNTY : STAFFORD STATE : KANSAS  
GAUGE SN# : 10270 RANGE : 4150 CLOCK : 12

INTERVAL FROM : 3586 TO : 3613 TOTAL DEPTH : 3613  
DEPTH OF SELECTIVE ZONE :  
PACKER DEPTH : 3581 SIZE : 6.63  
PACKER DEPTH : 3586 SIZE : 6.63  
PACKER DEPTH : SIZE :  
PACKER DEPTH : SIZE :

DRILLING CON. : H-30 DRILLING RIG #7  
MUD TYPE : CHEMICAL VISCOSITY : 47  
WEIGHT : 9.3 WATER LOSS (CC) : 10.4  
CHLORIDES (PPM) :  
JARS-MAKE : SERIAL NUMBER :  
DID WELL FLOW ? : NO REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00  
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00  
DRILL PIPE LENGTH : 3566 FT I.D. inch : 3.80  
TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50  
ANCHOR LENGTH : 27 FT ANCHOR SIZE : 5.50  
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75  
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

BLOW COMMENT #1 : INITIAL FLOW PERIOD-STRONG BLOW IN 5 MINUTES  
BLOW COMMENT #2 : FINAL FLOW PERIOD-STRONG BLOW THROUGHOUT  
BLOW COMMENT #3 :  
BLOW COMMENT #4 :

RECOVERED : 420 FT OF: CLEAN GASSY OIL GRAVITY 41  
RECOVERED : 180 FT OF: SLIGHTLY MUDDY GASSY OIL  
RECOVERED : 0 FT OF: 50% OIL 40% GAS 10% MUD

Total Barrels Fluid = 8.42  
Total Fluid Prod Rate = 134.65 BFPD  
Indicated Oil Rate = 114.45 BOPD  
Indicated Wtr Rate = 0.40 BWPD  
Corrected Oil Rate = 85.93 BOPD  
Corrected Wtr Rate = 0.30 BWPD

REMARK 1 :  
REMARK 2 : 2520 FT GAS ABOVE FLUID  
REMARK 3 :  
REMARK 4 :

SET PACKER(S) : 1:40 AM TIME STARTED OFF BOTTOM : 4:40 AM  
WELL TEMPERATURE : 114  
INITIAL HYDROSTATIC PRESSURE (A) 1820  
INITIAL FLOW PERIOD MIN: 30 (B) 64 PSI TO (C) : 85  
INITIAL CLOSED IN PERIOD MIN: 45 (D) 1156  
FINAL FLOW PERIOD MIN: 60 (E) 120 PSI TO (F) : 200  
FINAL CLOSED IN PERIOD MIN: 42 (G) 1130  
FINAL HYDROSTATIC PRESSURE (H) 1807

WESTERN TESTING CO. INC.  
WICHITA-KANSAS

Pressure Transient Report  
-----

COMPANY : H-30 DRILLING INC.  
RIG : STAFFORD-KANSAS  
FIELD : PANNING  
WELL : #4-18  
DATE : 2/21/90  
GAUGE NO : 10270

OPERATIONAL COMMENTS

COMPANY : H-30 DRILLING INC.  
WELL : #4-18  
GAUGE # : 10270  
DATE : 21/ 2/90

FIELD : PANNING  
JOB # : 15738  
DEPTH : 3613  
TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
INITIAL FLOW PERIOD					
2	1:40: 0	0.000	64.000	114.00	0.000
3	1:44:59	0.083	64.000	114.00	0.000
4	1:50: 0	0.167	65.000	114.00	1.000
5	1:55: 0	0.250	68.000	114.00	3.000
6	1:59:59	0.333	72.000	114.00	4.000
7	2: 5: 0	0.417	78.000	114.00	6.000
8	2:10: 0	0.500	85.000	114.00	7.000
INITIAL SHUT-IN PERIOD					
9	2:13: 0	0.550	589.000	114.00	504.000
10	2:16: 0	0.600	1024.000	114.00	435.000
11	2:19: 0	0.650	1078.000	114.00	54.000
12	2:22: 0	0.700	1100.000	114.00	22.000
13	2:25: 0	0.750	1113.000	114.00	13.000
14	2:28: 0	0.800	1121.000	114.00	8.000
15	2:31: 0	0.850	1130.000	114.00	9.000
16	2:34: 0	0.900	1134.000	114.00	4.000
17	2:37: 0	0.950	1139.000	114.00	5.000
18	2:40: 0	1.000	1143.000	114.00	4.000
19	2:43: 0	1.050	1147.000	114.00	4.000
20	2:46: 0	1.100	1149.000	114.00	2.000
21	2:49: 0	1.150	1151.000	114.00	2.000
22	2:52: 0	1.200	1154.000	114.00	3.000
23	2:55: 0	1.250	1156.000	114.00	2.000
FINAL FLOW PERIOD					
24	2:56: 0	1.267	120.000	114.00	-1036.000
25	2:59:59	1.333	120.000	114.00	0.000
26	3: 5: 0	1.417	123.000	114.00	3.000
27	3:10: 0	1.500	129.000	114.00	6.000
28	3:14:59	1.583	137.000	114.00	8.000
29	3:20: 0	1.667	145.000	114.00	8.000
30	3:25: 0	1.750	153.000	114.00	8.000
31	3:29:59	1.833	162.000	114.00	9.000
32	3:35: 0	1.917	170.000	114.00	8.000
33	3:40: 0	2.000	179.000	114.00	9.000
34	3:44:59	2.083	188.000	114.00	9.000
35	3:50: 0	2.167	193.000	114.00	5.000
36	3:55: 0	2.250	200.000	114.00	7.000
FINAL SHUT-IN PERIOD					
37	3:58: 0	2.300	853.000	114.00	653.000
38	4: 1: 0	2.350	1028.000	114.00	175.000
39	4: 4: 0	2.400	1060.000	114.00	32.000
40	4: 7: 0	2.450	1077.000	114.00	17.000
41	4:10: 0	2.500	1089.000	114.00	12.000
42	4:13: 0	2.550	1098.000	114.00	9.000
43	4:16: 0	2.600	1102.000	114.00	4.000
44	4:19: 0	2.650	1108.000	114.00	6.000
45	4:22: 0	2.700	1113.000	114.00	5.000
46	4:25: 0	2.750	1116.000	114.00	3.000
47	4:28: 0	2.800	1121.000	114.00	5.000
48	4:31: 0	2.850	1124.000	114.00	3.000

COMPANY : H-30 DRILLING INC.  
WELL : #4-18  
GAUGE # : 10270  
DATE : 21/ 2/90

FIELD : PANNING  
JOB # : 15738  
DEPTH : 3613  
TEST :

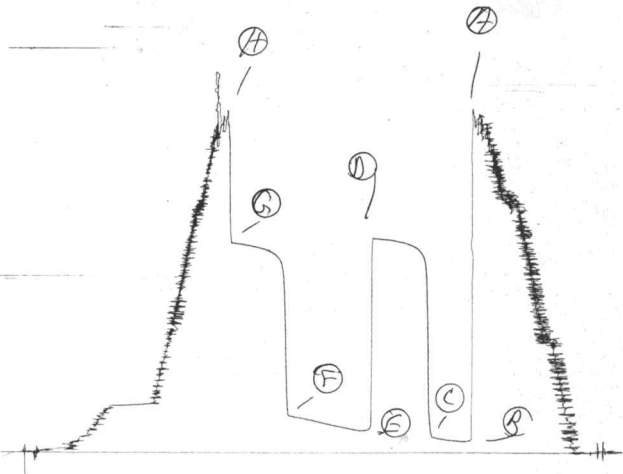
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49	4:34: 0	2.900	1127.000	114.00	3.000
50	4:37: 0	2.950	1130.000	114.00	3.000

WESTERN TESTING CO. INC.

JKF 15738

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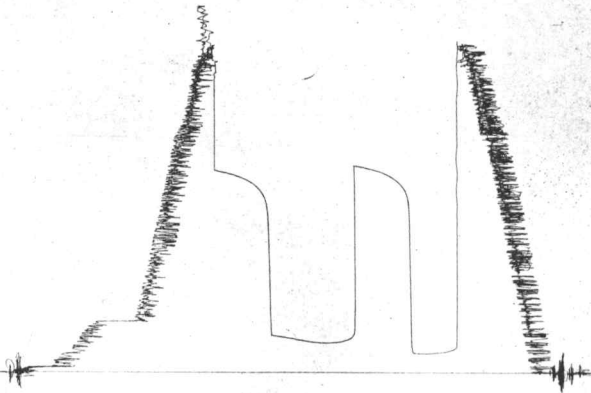
05745  
12270



KT 15728

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OST#5  
13268





WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET NO 15739

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

Elevation 1808 GL 1813 KB Formation Arbuckle Eff. Pay - Ft.

District GT Bend Date 2-21-90 Customer Order No.

COMPANY NAME Hood H-30 Drilling, Inc.

ADDRESS 251 N. WATER - Suite 10 WICHITA, Ks 67202

LEASE AND WELL NO. Panning #4-18 COUNTY Stafford STATE Ks Sec. 18 Twp 22 Rge 11

Mail Invoice To Co. Name SAME Address Panning #4-18 No. Copies Requested Reg

Mail Charts To Co. Name SAME Address Panning #4-18 No. Copies Requested Reg

Formation Test No. 6 Interval Tested From 3613 ft. to 3621 ft. Total Depth 3621 ft.

Packer Depth 3608 ft. Size 6 5/8 in. Packer Depth - ft. Size - in.

Packer Depth 3613 ft. Size 6 7/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3690 ft. Recorder Number 10270 Cap. 4150

Bottom Recorder Depth (Outside) 3698 ft. Recorder Number 13268 Cap. 4225

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

Drilling Contractor H-30 rig 7 Drill Collar Length 30 I. D. 2.2 in.

Mud Type Chemical Viscosity 47 Weight Pipe Length - I. D. - in.

Weight 9.3 Water Loss 10.4 cc. Drill Pipe Length 3559 I. D. 3.8 in.

Chlorides N/A P.P.M. Test Tool Length 29 ft. Tool Size 5 1/2 in.

Jars: Make - Serial Number - Anchor Length 8 ft. Size 5 1/2 in.

Did Well Flow? gas Reversed Out YES Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

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

Blow: FF - Strong Blow, gas to surface in 12 min. to wear to gauge

FF - Gas to surface to wear to gauge

Recovered 2160 ft. of Clean Gassy Oil GRAVITY 40

Recovered - ft. of

Recovered - ft. of

Recovered - ft. of

Recovered - ft. of

Chlorides - P.P.M. Sample Jars used 1 Remarks:

Time On Location 11:00 A.M. Time Pick Up Tool 2:30 P.M. Time Off Location - A.M. P.M.

Time Set Packer(s) 3:45 A.M. P.M. Time Started Off Bottom 6:45 A.M. P.M. Maximum Temperature 109°

Initial Hydrostatic Pressure (A) 1765 P.S.I.

Initial Flow Period (B) 30 Minutes (C) 177 P.S.I. to (D) 427 P.S.I.

Initial Closed In Period (E) 45 Minutes (F) 1018 P.S.I.

Final Flow Period (G) 60 Minutes (H) 500 P.S.I. to (I) 759 P.S.I.

Final Closed In Period (J) 45 Minutes (K) 956 P.S.I.

Final Hydrostatic Pressure (L) 1734 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 Schwapp 1995 Thank you

FIELD INVOICE

Open Hole Test 400
Misrun \$
Straddle Test \$
Jars \$
Selective Zone \$
Safety Joint \$
Standby \$
Evaluation \$
Extra Packer \$
Circ. Sub. 35
Mileage \$
Fluid Sampler \$
Extra Charts \$
Insurance \$
Telecopier \$
TOTAL 435

WESTERN TESTING CO., INC.  
Pressure Data

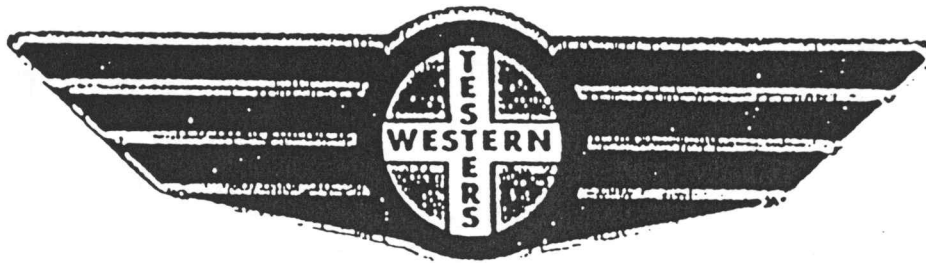
Date 2-21-90 Test Ticket No. 15729  
 Recorder No. 10270 Capacity 4150 Location \_\_\_\_\_ Ft.  
 Clock No. \_\_\_\_\_ Elevation \_\_\_\_\_ Well Temperature 109 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mod	<u>1781</u>	P.S.I.	<u>W: 45</u>	M
B First Initial Flow Pressure	<u>195</u>	P.S.I.	<u>39</u>	Min. <u>39</u> Min.
C First Final Flow Pressure	<u>427</u>	P.S.I.	<u>42</u>	Min. <u>45</u> Min.
D Initial Closed-in Pressure	<u>1027</u>	P.S.I.	<u>60</u>	Min. <u>60</u> Min.
E Second Initial Flow Pressure	<u>517</u>	P.S.I.	<u>45</u>	Min. <u>45</u> Min.
F Second Final Flow Pressure	<u>769</u>	P.S.I.		
G Final Closed-in Pressure	<u>952</u>	P.S.I.		
H Final Hydrostatic Mod	<u>1727</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>195</u>	0	<u>227</u>	0	<u>517</u>	0	<u>769</u>
P 2 5	<u>195</u>	3	<u>808</u>	5	<u>517</u>	3	<u>864</u>
P 3 10	<u>221</u>	6	<u>877</u>	10	<u>550</u>	6	<u>884</u>
P 4 15	<u>288</u>	9	<u>919</u>	15	<u>585</u>	9	<u>877</u>
P 5 20	<u>344</u>	12	<u>942</u>	20	<u>610</u>	12	<u>909</u>
P 6 25	<u>392</u>	15	<u>962</u>	25	<u>627</u>	15	<u>915</u>
P 7 30	<u>427</u>	18	<u>976</u>	30	<u>661</u>	18	<u>922</u>
P 8 35		21	<u>985</u>	35	<u>685</u>	21	<u>925</u>
P 9 40		24	<u>994</u>	40	<u>705</u>	24	<u>931</u>
P10 45		27	<u>1001</u>	45	<u>722</u>	27	<u>936</u>
P11 50		30	<u>1006</u>	50	<u>739</u>	30	<u>939</u>
P12 55		33	<u>1012</u>	55	<u>755</u>	33	<u>942</u>
P13 60		36	<u>1016</u>	60	<u>769</u>	36	<u>946</u>
P14 65		39	<u>1020</u>	65		39	<u>948</u>
P15 70		42	<u>1024</u>	70		42	<u>950</u>
P16 75		45	<u>1027</u>	75		45	<u>952</u>
P17 80		48		80		48	
P18 85		51		85		51	
P19 90		54		90		54	
P20 95		57		95		57	
100		60		100		60	

# FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY H-30 DRILLING, INC. LEASE & WELL NO. PANNING #4-18 SEC. 18 TWP 22SRGE 11W TEST 6 DATE 2/21/90

WESTERN TESTING CO. INC.  
SUBSURFACE PRESSURE SURVEY

DATE : 2/21/90 TICKET : 15739  
CUSTOMER : H-30 DRILLING INC. LEASE : PANNING  
WELL : #4-18 TEST: 6 GEOLOGIST : BURKE  
ELEVATION : 1813 KB FORMATION : ARBUCKLE  
SECTION : 18 TOWNSHIP : 22S  
RANGE : 11W COUNTY : STAFFORD STATE : KANSAS  
GAUGE SN# : 10270 RANGE : 4150 CLOCK : 12

INTERVAL FROM : 3613 TO : 3621 TOTAL DEPTH : 3621  
DEPTH OF SELECTIVE ZONE :  
PACKER DEPTH : 3608 SIZE : 6.63  
PACKER DEPTH : 3618 SIZE : 6.63  
PACKER DEPTH : SIZE :  
PACKER DEPTH : SIZE :

DRILLING CON. : H-30 DRILLING RIG #7  
MUD TYPE : CHEMICAL VISCOSITY : 47  
WEIGHT : 9.3 WATER LOSS (CC) : 10.4  
CHLORIDES (PPM) :  
JARS-MAKE : SERIAL NUMBER :  
DID WELL FLOW ? : GAS REVERSED OUT ? : YES

DRILL COLLAR LENGTH : 30 FT I.D. inch : 2.20  
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00  
DRILL PIPE LENGTH : 3559 FT I.D. inch : 3.80  
TEST TOOL LENGTH : 24 FT TOOL SIZE : 5.50  
ANCHOR LENGTH : 8 FT ANCHOR SIZE : 5.50  
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75  
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5 XH

BLOW COMMENT #1 : INITIAL FLOW PERIOD-STRONG BLOW GAS TO SURFACE  
BLOW COMMENT #2 : IN 12 MINUTES TOO WEAK TO GAUGE.  
BLOW COMMENT #3 : FINAL FLOW PERIOD-GAS TO SURFACE TOO WEAK TO GAUGE.  
BLOW COMMENT #4 :

RECOVERED : 2160 FT OF: CLEAN GASSY OIL GRAVITY 40

Total Barrels Fluid = 30.02  
Total Fluid Prod Rate = 480.27 BFPD  
Indicated Oil Rate = 480.27 BOPD  
Corrected Oil Rate = 357.25 BOPD

REMARK 1 :  
REMARK 2 :  
REMARK 3 :  
REMARK 4 :

SET PACKER(S) :	3:45 PM	TIME STARTED OFF BOTTOM :	6:45 PM
WELL TEMPERATURE :	109		
INITIAL HYDROSTATIC PRESSURE		(A)	1781
INITIAL FLOW PERIOD MIN:	30	(B)	195 PSI TO (C) : 427
INITIAL CLOSED IN PERIOD MIN:	45	(D)	1027
FINAL FLOW PERIOD MIN:	60	(E)	517 PSI TO (F) : 769
FINAL CLOSED IN PERIOD MIN:	45	(G)	952
FINAL HYDROSTATIC PRESSURE		(H)	1727

WESTERN TESTING CO. INC.  
WICHITA-KANSAS

Pressure Transient Report  
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COMPANY : H-30 DRILLING INC.  
RIG : STAFFORD-KANSAS  
FIELD : PANNING  
WELL : #4-18  
DATE : 2/21/90  
GAUGE NO : 10270

OPERATIONAL COMMENTS

COMPANY : H-30 DRILLING INC.  
 WELL : #4-18  
 GAUGE # : 10270  
 DATE : 21/ 2/90

FIELD : PANNING  
 JOB # : 15739  
 DEPTH : 3621  
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
INITIAL FLOW PERIOD					
2	3:45: 0	0.000	195.000	109.00	0.000
3	3:49:59	0.083	195.000	109.00	0.000
4	3:55: 0	0.167	231.000	109.00	36.000
5	4: 0: 0	0.250	288.000	109.00	57.000
6	4: 4:59	0.333	344.000	109.00	56.000
7	4:10: 0	0.417	392.000	109.00	48.000
8	4:15: 0	0.500	427.000	109.00	35.000
INITIAL SHUT-IN PERIOD					
9	4:18: 0	0.550	808.000	109.00	381.000
10	4:21: 0	0.600	877.000	109.00	69.000
11	4:24: 0	0.650	919.000	109.00	42.000
12	4:27: 0	0.700	942.000	109.00	23.000
13	4:30: 0	0.750	962.000	109.00	20.000
14	4:33: 0	0.800	976.000	109.00	14.000
15	4:36: 0	0.850	985.000	109.00	9.000
16	4:39: 0	0.900	994.000	109.00	9.000
17	4:42: 0	0.950	1001.000	109.00	7.000
18	4:45: 0	1.000	1006.000	109.00	5.000
19	4:48: 0	1.050	1012.000	109.00	6.000
20	4:51: 0	1.100	1016.000	109.00	4.000
21	4:54: 0	1.150	1020.000	109.00	4.000
22	4:57: 0	1.200	1024.000	109.00	4.000
23	5: 0: 0	1.250	1027.000	109.00	3.000
FINAL FLOW PERIOD					
24	5: 1: 0	1.267	517.000	109.00	-510.000
25	5: 4:59	1.333	517.000	109.00	0.000
26	5:10: 0	1.417	550.000	109.00	33.000
27	5:15: 0	1.500	585.000	109.00	35.000
28	5:19:59	1.583	610.000	109.00	25.000
29	5:25: 0	1.667	637.000	109.00	27.000
30	5:30: 0	1.750	661.000	109.00	24.000
31	5:34:59	1.833	685.000	109.00	24.000
32	5:40: 0	1.917	705.000	109.00	20.000
33	5:45: 0	2.000	723.000	109.00	18.000
34	5:49:59	2.083	739.000	109.00	16.000
35	5:55: 0	2.167	755.000	109.00	16.000
36	6: 0: 0	2.250	769.000	109.00	14.000
FINAL SHUT-IN PERIOD					
37	6: 3: 0	2.300	861.000	109.00	92.000
38	6: 6: 0	2.350	884.000	109.00	23.000
39	6: 9: 0	2.400	897.000	109.00	13.000
40	6:12: 0	2.450	909.000	109.00	12.000
41	6:15: 0	2.500	915.000	109.00	6.000
42	6:18: 0	2.550	922.000	109.00	7.000
43	6:21: 0	2.600	925.000	109.00	3.000
44	6:24: 0	2.650	931.000	109.00	6.000
45	6:27: 0	2.700	936.000	109.00	5.000
46	6:30: 0	2.750	939.000	109.00	3.000
47	6:33: 0	2.800	943.000	109.00	4.000
48	6:36: 0	2.850	946.000	109.00	3.000

COMPANY : H-30 DRILLING INC.  
WELL : #4-18  
GAUGE # : 10270  
DATE : 21/ 2/90

FIELD : PANNING  
JOB # : 15739  
DEPTH : 3621  
TEST :

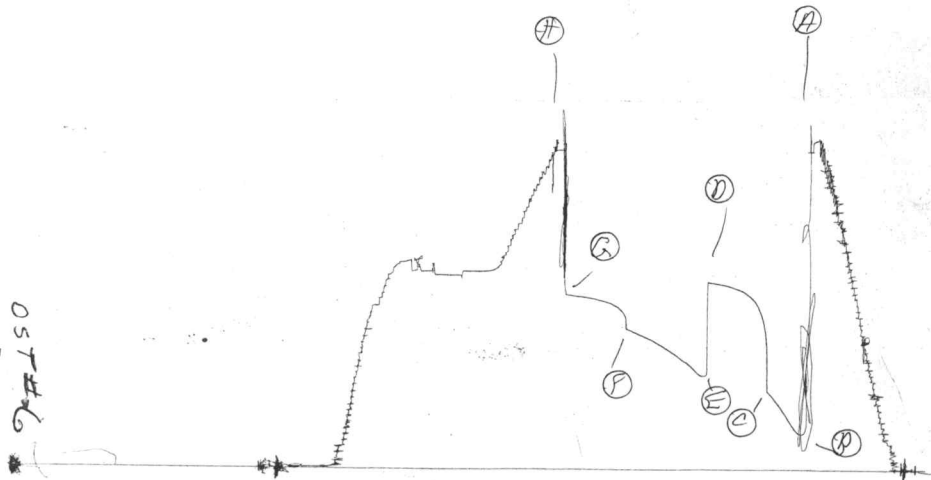
DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
49	6:39: 0	2.900	948.000	109.00	2.000
50	6:42: 0	2.950	950.000	109.00	2.000
51	6:45: 0	3.000	952.000	109.00	2.000

WESTERN TESTING CO. INC.

JK 15729

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OST#6



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OST 46  
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