



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No. 3527

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

Elevation 1790. RB Formation Miss Eff. Pay - Ft.

District Pratt Date 2/16/84 Customer Order No. -

COMPANY NAME A.P.C. Inc.

ADDRESS Suite 600 One Main Place Wichita, KS 67202

LEASE AND WELL NO. Haas Estate #5 COUNTY Barber STATE KS Sec. 3 Twp. 3/S Rge. 12W

Mail Invoice To Same Co. Name No. Copies Requested 5

Mail Charts To Same #5 HAAS ESTATE Address No. Copies Requested 5

Formation Test No. 1 Interval Tested From 4435 ft. to 4452 ft. Total Depth 4452 ft.

Packer Depth 4430 ft. Size 6 9/8 in. Packer Depth - ft. Size - in.

Packer Depth 4435 ft. Size 6 9/8 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 4441 ft. Recorder Number 13547 Cap. 4225

Bottom Recorder Depth (Outside) 4444 ft. Recorder Number 13552 Cap. 4050

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

Drilling Contractor Heartland Rig #1 Drill Collar Length 460 I. D. 2 1/4 in.

Mud Type Viscosity 68 Weight Pipe Length I. D. - in.

Weight 9.6 Water Loss 19.4 cc. Drill Pipe Length 3951 I. D. 3.8 in.

Chlorides 9,000 P.P.M. Test Tool Length 24 ft. Tool Size 5/200 in.

Jars: Make Serial Number No Anchor Length 17 ft. Size 5/200 in.

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

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

Blow: Weak blow throughout flow periods

Recovered 90 ft. of Sl. Gas Cut Mud

Recovered 120 ft. of Sl. Oil & Gas Cut Mud (10% oil)

Recovered 60 ft. of Sl. Oil Cut Wty Mud (10% oil) (20% water)

Recovered 60 ft. of Water

Recovered - ft. of Chlorides 35,000 P.P.M. Sample Jars used - Remarks: -

Read bottom Chart

Time On Location 11:00 A.M. Time Pick Up Tool 4:30 P.M. Time Off Location 1:00 A.M.

Time Set Packer(s) 6:45 A.M. Time Started Off Bottom 10:15 P.M. Maximum Temperature 122°

Initial Hydrostatic Pressure (A) 2226 P.S.I.

Initial Flow Period (B) 30 Minutes (C) 162 P.S.I. to (D) 162 P.S.I.

Initial Closed In Period (E) 60 Minutes (F) 1348 P.S.I.

Final Flow Period (G) 60 Minutes (H) 193 P.S.I. to (I) 203 P.S.I.

Final Closed In Period (J) 60 Minutes (K) 1095 P.S.I.

Final Hydrostatic Pressure (L) 2206 P.S.I.

COMPANY TERMS FEB 17 1934

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, or 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 Paul C. Cuy (CARAGIANIS) Signature of Customer or his authorized representative

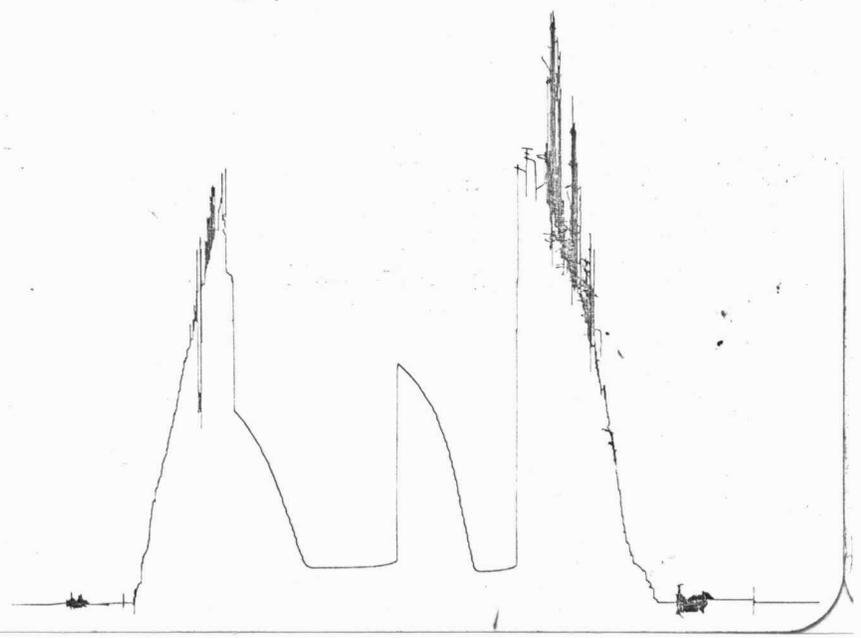
Western Representative Jim Woods Thank You 2376

FIELD INVOICE

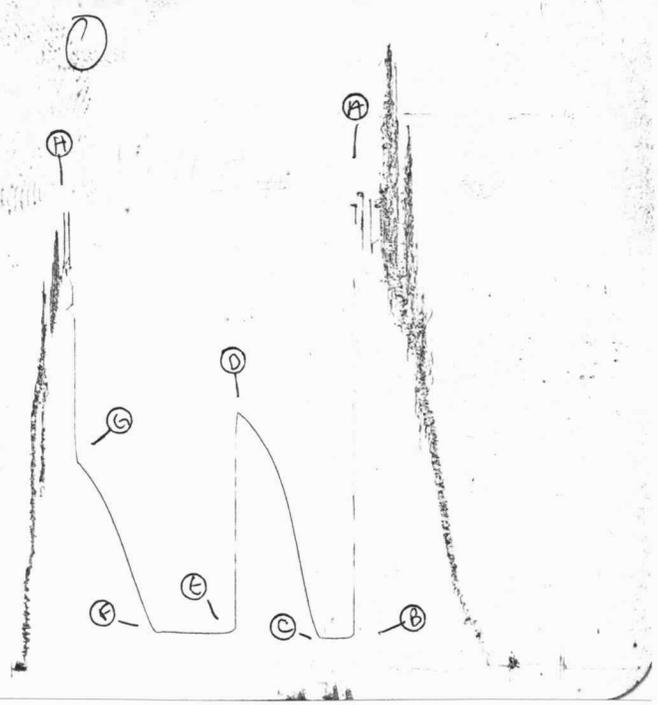
Table with 2 columns: Item, Amount. Includes Open Hole Test (\$5195.00), Misrun, Straddle Test, Jars, Selective Zone, Safety Joint (\$65.00), Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, Insurance, Telecopier, TOTAL.

LC# 3527

I



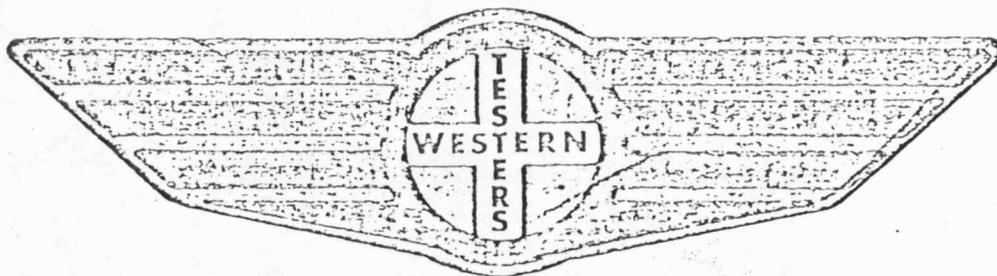
LC# 3527



FORMATION

TEST

REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 2/16/84
CUSTOMER: A.P.C.
WELL: 5
ELEVATION (KB): 1790
SECTION: 3
RANGE: 12W
GAUGE SN #13552

TEST: 1
FORMATION: MISS.
TOWNSHIP: 31S
COUNTY: BARBER
RANGE: 4050

TICKET #3527
LEASE: #5 HAAS ESTATE
GEOLOGIST: CARAGIANIS
STATE: KANSAS
CLOCK: 12

INTERVAL TEST FROM: 4435 FT TO: 4452 FT TOTAL DEPTH: 4452 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 4430 FT SIZE: 6 5/8 IN PACKER DEPTH: 4435 FT SIZE: 6 5/8 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: HEARTLAND
MUD TYPE: VISCOSITY: 68
WEIGHT: 9.6 WATER LOSS (CC): 19.4
CHLORIDES (P.P.M.): 9000
JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 460 FT I.D.: 2.25 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 3951 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 24 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 17 FT SIZE: 5 1/2 O.D. 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 FH IN

BLOW: WEAK BLOW THROUGHOUT FLOW PERIODS.

RECOVERED: 90 FT OF: SLIGHTLY GAS CUT MUD.
RECOVERED: 120 FT OF: SLIGHTLY OIL & GAS CUT MUD. 10% OIL.
RECOVERED: 60 FT OF: SIGHTLY OIL CUT WTY MUD. 10% OIL; 20% WTR.
RECOVERED: 60 FT OF: WATER; CHLORIDES 25000 P.P.M.
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS: READ BOTTOM CHART.

TIME SET PACKER(S): 6:45 A.M. TIME STARTED OFF BOTTOM: 10:15 A.M.
WELL TEMPERATURE: 122 °F
INITIAL HYDROSTATIC PRESSURE: (A) 2222 PSI
INITIAL FLOW PERIOD MIN: 20 (B) 163 PSI TO (C) 167 PSI
INITIAL CLOSED IN PERIOD MIN: 63 (D) 1347 PSI
FINAL FLOW PERIOD MIN: 55 (E) 191 PSI TO (F) 200 PSI
FINAL CLOSED IN PERIOD MIN: 63 (G) 1083 PSI
FINAL HYDROSTATIC PRESSURE (H) 2125 PSI

WESTERN TESTING CO., INC.

Pressure Data

Date: 2-16-84 Test Ticket No. 3527
 Recorder No. 13552 Capacity _____ Location _____ Ft
 Clock No. _____ Elevation _____ Well Temperature _____ °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2000</u> P.S.I.	Open Tool		M
B First Initial Flow Pressure	<u>163</u> P.S.I.	First Flow Pressure	_____ Mins.	_____ Mins.
C First Final Flow Pressure	<u>167</u> P.S.I.	Initial Closed-in Pressure	_____ Mins.	_____ Mins.
D Initial Closed-in Pressure	<u>1347</u> P.S.I.	Second Flow Pressure	_____ Mins.	_____ Mins.
E Second Initial Flow Pressure	<u>191</u> P.S.I.	Final Closed-in Pressure	_____ Mins.	_____ Mins.
F Second Final Flow Pressure	<u>200</u> P.S.I.			
G Final Closed-in Pressure	<u>1083</u> P.S.I.			
H Final Hydrostatic Mud	<u>2125</u> P.S.I.			

PRESSURE BREAKDOWN

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

Initial Shut-In
 Breakdown: 22 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Second Flow Pressure
 Breakdown: 12 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Final Shut-In
 Breakdown: 22 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>163</u>	0	<u>167</u>	0	<u>191</u>	0	<u>200</u>
P 2 5	<u>164</u>	3	<u>189</u>	5		3	<u>200</u>
P 3 10	<u>165</u>	6	<u>242</u>	10		6	<u>200</u>
P 4 15	<u>166</u>	9	<u>321</u>	15		9	<u>232</u>
P 5 20	<u>167</u>	12	<u>420</u>	20	<u>191</u>	12	<u>282</u>
P 6 25		15	<u>525</u>	25	<u>192</u>	15	<u>338</u>
P 7 30		18	<u>632</u>	30	<u>193</u>	18	<u>394</u>
P 8 35		21	<u>733</u>	35	<u>194</u>	21	<u>452</u>
P 9 40		24	<u>832</u>	40	<u>196</u>	24	<u>512</u>
P10 45		27	<u>912</u>	45	<u>198</u>	27	<u>577</u>
P11 50		30	<u>980</u>	50	<u>199</u>	30	<u>638</u>
P12 55		33	<u>1038</u>	55	<u>200</u>	33	<u>698</u>
P13 60		36	<u>1088</u>	60	200	36	<u>757</u>
P14		39	<u>1130</u>	65		39	<u>801</u>
P15		42	<u>1169</u>	70		42	<u>851</u>
P16		45	<u>1202</u>	75		45	<u>896</u>
P17		48	<u>1235</u>	80		48	<u>934</u>
P18		51	<u>1263</u>	85		51	<u>969</u>
P19		54	<u>1289</u>	90		54	<u>1001</u>
P20		57	<u>1314</u>			57	<u>1028</u>
		60	<u>1334</u>			60	<u>1058</u>
		63	<u>1347</u>				<u>1083</u>