



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 19098

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

Elevation 81195 KB Formation Carb. Eff. Pay - Ft.

District Augusta Date 8-18-83 Customer Order No. -

COMPANY NAME Smitherman Drilling Co.

ADDRESS P.O. Box 2287 La Jolla Calif. 92038

LEASE AND WELL NO. Purdy #1 #1 COUNTY Cowley STATE KS. Sec 33 Twp 31S Rge 3E

Mail Invoice To Same No. Copies Requested 1

Mail Charts To Same #1 Purdy No. Copies Requested 5

Formation Test No. 1 Interval Tested From 3280 ft. to 3300 ft. Total Depth 3300 ft.

Packer Depth 3280 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3275 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 3292 ft. Recorder Number 13266 Cap. 4200

Bottom Recorder Depth (Outside) 3245 ft. Recorder Number 13268 Cap. 4225

Below Straddle Recorder Depth Recorder Number Cap.

Drilling Contractor Hite & Ellis Drilling #7 Drill Collar Length 312 I. D. 2 1/4 in.

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

Weight 9.4 Water Loss 11.2 cc. Drill Pipe Length 2948 I. D. 3.8 in.

Chlorides 1200 P.P.M. Test Tool Length 20 ft. Tool Size 5 1/2 OD in.

Jars: Make - Serial Number - Anchor Length 20 ft. Size 5 1/2 OD in.

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

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

Blow: String diminishing to fan @ end of test

Recovered 135 ft. of Sawing Pipe

Recovered 1320 ft. of Slightly bit cut saltwater (oil volume) 5% @ top - trace @ the bottom

Recovered - ft. of 45,000 PPM Chloride

Recovered - ft. of

Recovered - ft. of

Remarks: 4 Sample jar

Time On Location 1:00 8-18 A.M. Time Pick Up Tool 3:00 A.M. Time Off Location Standby A.M.

Time Set Packer(s) 4:30 A.M. Time Started Off Bottom 6:00 A.M. Maximum Temperature 116

Initial Hydrostatic Pressure (A) 1635 P.S.I.

Initial Flow Period Minutes 60 (B) 60 P.S.I. to (C) 640 P.S.I.

Initial Closed In Period Minutes 30 (D) 1275 P.S.I.

Final Flow Period Minutes None (E) None P.S.I. to (F) - P.S.I.

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

Final Hydrostatic Pressure (H) 1635 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 Leon Smitherman, Jr.

Western Representative Norman Allen

FIELD INVOICE

Table with 2 columns: Item and Amount. Items include Open Hole Test (\$550.00), Miscrun, Straddle Test, Jars, Selective Zone, Safety Joint, Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, Insurance, Telecopier, and TOTAL (\$550.00).

WESTERN TESTING CO., INC.

Pressure Data

Date 8-18 Test Ticket No. 19098
 Recorder No. 13266 Capacity 4200 Location 3292 Ft
 Clock No. --- Elevation 1195 KB Well Temperature 116 °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1631</u> P.S.I.		<u>4:30</u> A.M.	
B First Initial Flow Pressure	<u>58</u> P.S.I.	First Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
C First Final Flow Pressure	<u>628</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>33</u> Mins.
D Initial Closed-in Pressure	<u>1267</u> P.S.I.	Second Flow Pressure	<u>---</u> Mins.	<u>---</u> Mins.
E Second Initial Flow Pressure	<u>---</u> P.S.I.	Final Closed-in Pressure	<u>---</u> Mins.	<u>---</u> Mins.
F Second Final Flow Pressure	<u>---</u> P.S.I.			
G Final Closed-in Pressure	<u>---</u> P.S.I.			
H Final Hydrostatic Mud	<u>1604</u> P.S.I.			

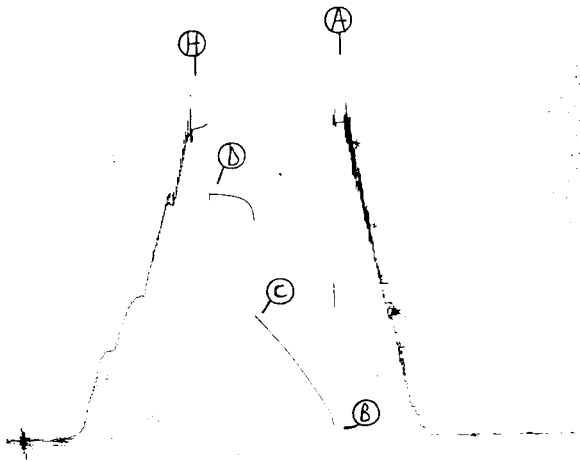
PRESSURE BREAKDOWN

<p>First Flow Pressure Breakdown: <u>13</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.</p>	<p>Initial Shut-In Breakdown: <u>12</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.</p>	<p>Second Flow Pressure Breakdown: <u>0</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.</p>	<p>Final Shut-In Breakdown: <u>0</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.</p>
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Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>58</u>	0	<u>628</u>	0		0	
P 2 5	<u>142</u>	3	<u>1203</u>	5		3	
P 3 10	<u>198</u>	6	<u>1230</u>	10		6	
P 4 15	<u>252</u>	9	<u>1242</u>	15		9	
P 5 20	<u>305</u>	12	<u>1251</u>	20		12	
P 6 25	<u>352</u>	15	<u>1256</u>	25		15	
P 7 30	<u>398</u>	18	<u>1258</u>	30		18	
P 8 35	<u>447</u>	21	<u>1260</u>	35		21	
P 9 40	<u>490</u>	24	<u>1262</u>	40		24	
P10 45	<u>528</u>	27	<u>1264</u>	45		27	
P11 50	<u>568</u>	30	<u>1266</u>	50		30	
P12 55	<u>608</u>	33	<u>1267</u>	55		33	
P13 60	<u>628</u>	36		60		36	
P14		39		65		39	
P15		42		70		42	
P16		45		75		45	
P17		48		80		48	
P18		51		85		51	
P19		54		90		54	
P20		57				57	
		60				60	

TKT. # 19098

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WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 8/18/83
CUSTOMER: SMITHERMAN DRILLING CO.
WELL: 1 TEST: 1
ELEVATION (KB): 1195 FORMATION: ARBUCKLE
SECTION: 33 TOWNSHIP: 31S
RANGE: 3 E COUNTY: COWLEY STATE: KANSAS
GAUGE SN #13266 RANGE: 4200 CLOCK: 12

INTERVAL TEST FROM: 3280 FT TO: 3300 FT TOTAL DEPTH: 3300 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 3280 FT SIZE: 6 3/4 IN PACKER DEPTH: 3275 FT SIZE: 6 3/4 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: WHITE & ELLIS
MUD TYPE: CHEMICAL VISCOSITY: 44
WEIGHT: 9.4 WATER LOSS (CC): 11.2
CHLORIDES (P.P.M.): 1200
JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 312 FT I.D.: 2 1/4 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 2948 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 20 FT SIZE: 5 1/2 OD 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: STRONG BLOW DIMINISHING TO FAIR
AT END OF TEST.

RECOVERED: 135 FT OF: GAS IN PIPE
RECOVERED: 1320 FT OF: SLIGHTLY OIL CUT SALTWATER
RECOVERED: FT OF: (OIL VOLUME) 5% AT TOP - TRACE AT THE BOTTOM
RECOVERED: FT OF: CHLORIDES 45000 PPM
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS:

TIME SET PACKER(S): 4:30 AM TIME STARTED OFF BOTTOM: 6:00 AM
WELL TEMPERATURE: 116 °F
INITIAL HYDROSTATIC PRESSURE: (A) 1631 PSI
INITIAL FLOW PERIOD MIN: 60 (B) 58 PSI TO (C) 628 PSI
INITIAL CLOSED IN PERIOD MIN: 33 (D) 1267 PSI
FINAL FLOW PERIOD MIN: 0 (E) 0 PSI TO (F) 0 PSI
FINAL CLOSED IN PERIOD MIN: 0 (G) 0 PSI
FINAL HYDROSTATIC PRESSURE (H) 1604 PSI



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 19099

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

Elevation 1195 AB Formation Carb Eff. Pay - Ft.

District Augusta Date 8-18-83 Customer Order No. -

COMPANY NAME Smitherman Dalg Co

ADDRESS P.O. Box 2287 La Jolla California 92038

LEASE AND WELL NO Purdy #7 COUNTY Cowley STATE KS Sec 33 Twp 31S Rge 3WE

Mail Invoice To Same Co. Name No. Copies Requested 1

Mail Charts To Same #1 Purdy Address No. Copies Requested 5

Formation Test No. 2 Interval Tested From 3307 ft. to 3314 ft. Total Depth 3314 ft.

Packer Depth 3307 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 3302 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 3296 AP ft. Recorder Number 13266 Cap 4200

Bottom Recorder Depth (Outside) 3310 ft. Recorder Number 13268 Cap 4225

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

Drilling Contractor 21 hite & Co. Drilling #1 Drill Collar Length 312 I. D. 2 in.

Mud Type Chem Viscosity 42 Weight Pipe Length - I. D. - in.

Weight 9.1 Water Loss 12 cc. Drill Pipe Length 2970 I. D. 3.8 in.

Chlorides 2900 P.P.M. Test Tool Length 25 ft. Tool Size 5 1/2 in.

Jars: Make - Serial Number - Anchor Length 7 ft. Size 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 3/8 in. Tool Joint Size 4 1/2 x 1 1/2 in.

Blow: Strong throat test

Recovered 240 ft. of Gas in pipe

Recovered 810 ft. of Gas cut free oil w/ trace of mud 38° Gravity Connected

Recovered 210 ft. of Slightly oil & gas cut salt water (90% oil to a trace of oil in bottom)

Recovered 840 ft. of Saltwater 34,000 PPM Chlorides

Recovered - ft. of -

Remarks:

4 Sample jars

Time On Location 1:00 S.K. A.M. Time Pick Up Tool 1:50 P.M. Time Off Location 2:15 P.M.

Time Set Packer(s) 2:50 P.M. Time Started Off Bottom 3:50 P.M. Maximum Temperature 118

Initial Hydrostatic Pressure (A) 1560 P.S.I.

Initial Flow Period (B) 30 Minutes (C) 355 P.S.I. to (D) 810 P.S.I.

Initial Closed In Period (E) 30 Minutes (F) 1225 P.S.I.

Final Flow Period (G) None (H) Taken P.S.I. to (I) - P.S.I.

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

Final Hydrostatic Pressure (L) 1550 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 James R. Craig Signature of Customer or his authorized representative

Western Representative Norman Allen

FIELD INVOICE

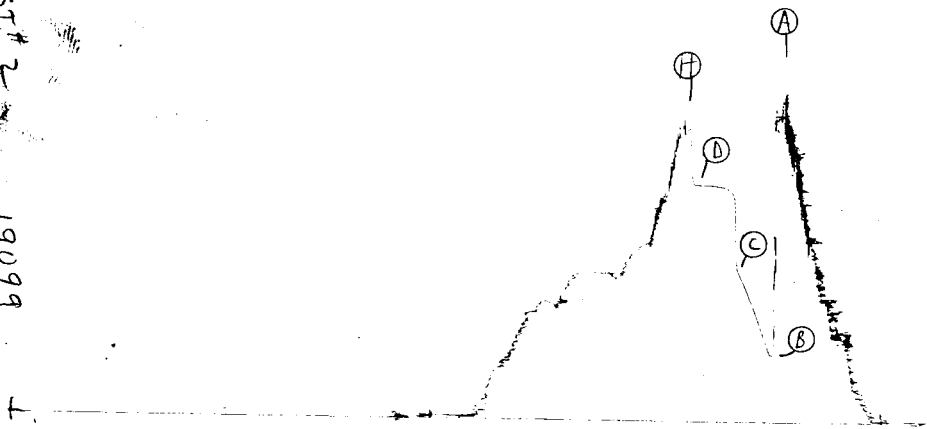
Table with 2 columns: Item and Price. Items include Open Hole Test (\$550.00), Misrun, Straddle Test, Jars, Selective Zone, Safety Joint, Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, Insurance, Telecopier, and TOTAL (\$550.00).

TKT. # 19099

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13266

OST # 2
19099



WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 8/18/83 TICKET #19099
CUSTOMER: SMITHERMAN DRILLING CO. LEASE: PURDY
WELL: 1 TEST: 2 GEOLOGIST: CRAIG
ELEVATION (KB): 1195 FORMATION: ARBUCKLE
SECTION: 33 TOWNSHIP: 31S
RANGE: 3E COUNTY: COWLEY STATE: KANSAS
GAUGE SN #13266 RANGE: 4200 CLOCK: 12

INTERVAL TEST FROM: 3307 FT TO: 3314 FT TOTAL DEPTH: 3314 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 3307 FT SIZE: 6 3/4 IN PACKER DEPTH: 3302 FT SIZE: 6 3/4 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: WHITE & ELLIS
MUD TYPE: CHEMICAL VISCOSITY: 42
WEIGHT: 9.1 WATER LOSS (CC): 12.0
CHLORIDES (P.P.M.): 2900
JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 312 FT I.D.: 2 1/4 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 2970 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 25 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 7 FT SIZE: 5 1/2 OD 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: STRONG BLOW THROUGHOUT TEST.

RECOVERED: 240 FT OF: GAS IN PIPE
RECOVERED: 810 FT OF: GAS CUT FREE OIL W/TRACE OF MUD
RECOVERED: FT OF: 38 DEGREES GRAVITY CORRECTED
RECOVERED: 210 FT OF: SLIGHTLY OIL & GAS CUT SALTWATER
RECOVERED: FT OF: 10% OIL TO A TRACE OF OIL IN BOTTOM
RECOVERED: 840 FT OF: SALTWATER CHLORIDES 34000 PPM
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS:

TIME SET PACKER(S): 2:50 PM TIME STARTED OFF BOTTOM: 3:50 PM
WELL TEMPERATURE: 118 °F
INITIAL HYDROSTATIC PRESSURE: (A) 1560 PSI
INITIAL FLOW PERIOD MIN: 30 (B) 349 PSI TO (C) 788 PSI
INITIAL CLOSED IN PERIOD MIN: 33 (D) 1228 PSI
FINAL FLOW PERIOD MIN: 0 (E) 0 PSI TO (F) 0 PSI
FINAL CLOSED IN PERIOD MIN: 0 (G) 0 PSI
FINAL HYDROSTATIC PRESSURE (H) 1532 PSI

WESTERN TESTING CO., INC.

Pressure Data

Date 8-18 Recorder No. 13266 Capacity 4200 Test Ticket No. 19099
 Clock No. --- Elevation 1195 KB Location 3296 Ft. Well Temperature 118 °F

Point	Pressure	Open Tool	Time Given	Time Computed
A Initial Hydrostatic Mud	<u>1560</u> P.S.I.		<u>2:50 P</u>	
B First Initial Flow Pressure	<u>349</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>788</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>33</u> Mins.
D Initial Closed-in Pressure	<u>1228</u> P.S.I.	Second Flow Pressure	<u>---</u> Mins.	<u>---</u> Mins.
E Second Initial Flow Pressure	<u>---</u> P.S.I.	Final Closed-in Pressure	<u>---</u> Mins.	<u>---</u> Mins.
F Second Final Flow Pressure	<u>---</u> P.S.I.			
G Final Closed-in Pressure	<u>---</u> P.S.I.			
H Final Hydrostatic Mud	<u>1532</u> P.S.I.			

PRESSURE BREAKDOWN

<p>First Flow Pressure Breakdown: <u>7</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.</p>	<p>Initial Shut-In Breakdown: <u>12</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.</p>	<p>Second Flow Pressure Breakdown: <u>0</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.</p>	<p>Final Shut-In Breakdown: <u>0</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.</p>
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Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>349</u>	0	<u>788</u>	0		0	
P 2 5	<u>396</u>	3	<u>1173</u>	5		3	
P 3 10	<u>493</u>	6	<u>1203</u>	10		6	
P 4 15	<u>586</u>	9	<u>1214</u>	15		9	
P 5 20	<u>672</u>	12	<u>1219</u>	20		12	
P 6 25	<u>748</u>	15	<u>1222</u>	25		15	
P 7 30	<u>788</u>	18	<u>1224</u>	30		18	
P 8 35		21	<u>1225</u>	35		21	
P 9 40		24	<u>1226</u>	40		24	
P10 45		27	<u>1227</u>	45		27	
P11 50		30	<u>1228</u>	50		30	
P12 55		33	<u>1228</u>	55		33	
P13 60		36		60		36	
P14		39		65		39	
P15		42		70		42	
P16		45		75		45	
P17		48		80		48	
P18		51		85		51	
P19		54		90		54	
P20		57				57	
		60				60	