

Company Associated Petroleum Consultants, Inc. Lease & Well No. Rutherford #2  
 Elevation --- Formation Indian Cave Effective Pay - Ft. Ticket No. 15895  
 Date 5/4/82 Sec. 3 Twp. 29S Range 11W County Pratt State Kansas  
 Test Approved by Phil Harges Western Representative Jeff Piotrowski

Formation Test No. 1 Interval Tested from 2640 ft. to 2669 ft. Total Depth 2669 ft.  
 Packer Depth 2635 ft. Size 6 3/4 in. Packer Depth -- ft. Size - in.  
 Packer Depth 2640 ft. Size 6 3/4 in. Packer Depth -- ft. Size - in.  
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2643 ft. Recorder Number 1565 Cap 4900  
 Bottom Recorder Depth (Outside) 2646 ft. Recorder Number 1560 Cap 4500  
 Below Straddle Recorder Depth - ft. Recorder Number - Cap -

Drilling Contractor Hartland Drlg. Rig #1 Drill Collar Length 720 I. D. 2.2 in.  
 Mud Type gel Viscosity 28 Weight Pipe Length - I. D. - in.  
 Weight 9.3 Water Loss N/C cc. Drill Pipe Length 1891 I. D. 3.8 in.  
 Chlorides 72,000 P.P.M. Test Tool Length 29 ft. Tool Size 5 1/2 OD in.  
 Jars: Make WTC Serial Number 405 Anchor Length 29 ft. Size 5 1/2 OD in.  
 Did Well Flow? No Reversed Out Yes 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: Weak building to strong on initial flow period. Gas to surface in four minutes on final flow period. See attached sheet for gas measurements.

Recovered 60 ft. of watery mud Chlorides 52,000 ppm  
 Recovered 540 ft. of water 76,000 ppm  
 Recovered          ft. of           
 Recovered          ft. of           
 Recovered          ft. of         

Remarks:         

Time Set Packer(s) 2:30 A.M. Time Started Off Bottom 6:00 A.M. Maximum Temperature 104°  
 Initial Hydrostatic Pressure 1281 P.S.I. (A)  
 Initial Flow Period 30 Minutes (B) 126 P.S.I. to (C) 203 P.S.I.  
 Initial Closed In Period 60 Minutes (D) 916 P.S.I.  
 Final Flow Period 60 Minutes (E) 200 P.S.I. to (F) 225 P.S.I.  
 Final Closed In Period 60 Minutes (G) 912 P.S.I.  
 Final Hydrostatic Pressure 1190 P.S.I. (H)

## GAS FLOW REPORT

Date May 4, 1982 Ticket 15895 Company Associated Petroleum Consultants, Inc.  
 Well Name and No. Rutherford #2 Dst No. 1 Interval Tested 2640'-2669'  
 County Pratt State Kansas Sec. 3 Twp. 29S Rg. 11W

Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	Size of Orifice	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	Description of Flow
<b>PRE FLOW</b>					

Gas to surface in four minutes.			<b>SECOND FLOW</b>		
10 min.	1.0 PSIG	1/2 " orifice			33,900 CFPD
20 min.	1.0 PSIG	1/2 " orifice			33,900 CFPD
30 min.	2.0 PSIG	1/2 " orifice			47,700CFPD
40 min.	2.0 PSIG	1/2 " orifice			47,700 CFPD
50 min.	2.0 PSIG	1/2 " orifice			47,700 CFPD
60 min.	2.0 PSIG	1/2 " orifice			47,700 CFPD

### GAS BOTTLE

Serial No. --- Date Bottle Filled --- Date to be Invoiced 5/4/82

Requisition and Provisions for high pressure stainless steel gas bottles. Western Testing Co., Inc. shall not be liable for damage of any kind to property or personnel of the one whom gas bottle is filled or for any loss suffered or sustained directly or indirectly through the use of these bottles. By signing of this ticket showing receipt of a gas testing bottle, the undersigned agrees for himself and as agent for operator, to return this bottle to Western Testing Co., Inc. within thirty (30) days free of charge, or be invoiced in the amount of \$75.00 (total charge). Should valve or seal plug be missing or damaged beyond repair, operator shall be invoiced for repairs at our invoiced price.

All charges subject to 1 1/2% per month, equal to 18% interest per annum after 30 days from date of invoice. Any expense incurred for collection will be added to the original amount.

COMPANY'S NAME Associated Petroleum Consultants, Inc.  
 Authorized by Phil Harges

# WESTERN TESTING CO., INC.

## Pressure Data

Date 5/4/82 Test Ticket No. 15895  
 Recorder No. 1565 Capacity 4900 Location 2643 Ft.  
 Clock No. - Elevation --- Well Temperature 104 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	1281	P.S.I.	2:30P	M
B First Initial Flow Pressure	126	P.S.I.	30	Mins. 30 Mins.
C First Final Flow Pressure	203	P.S.I.	60	Mins. 60 Mins.
D Initial Closed-in Pressure	916	P.S.I.	60	Mins. 60 Mins.
E Second Initial Flow Pressure	200	P.S.I.	60	Mins. 60 Mins.
F Second Final Flow Pressure	225	P.S.I.		
G Final Closed-in Pressure	912	P.S.I.		
H Final Hydrostatic Mud	1190	P.S.I.		

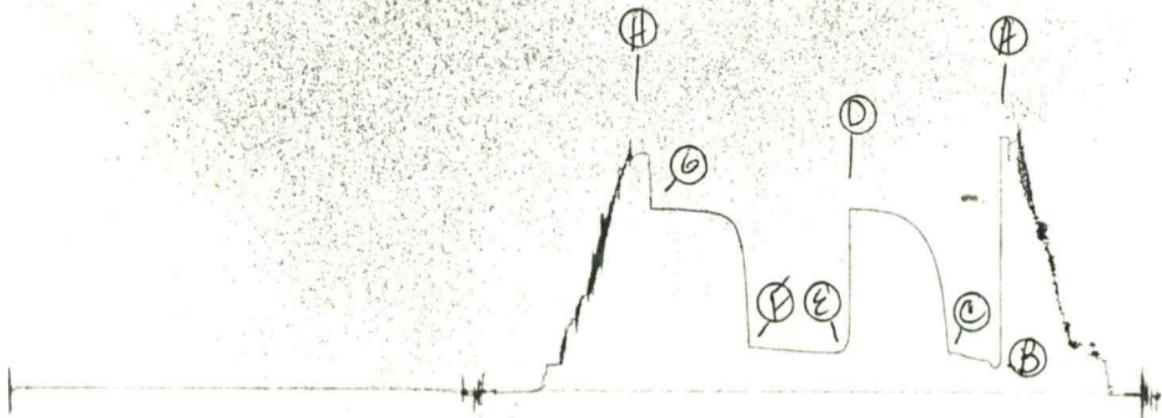
### PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.
	of 5 mins. and a final inc. of 0 Min.		of 3 mins. and a final inc. of 0 Min.		of 5 mins. and a final inc. of 0 Min.		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	126	0	203	0	200	0	225	
P 2 5	126	3	465	5	200	3	644	
P 3 10	163	6	589	10	200	6	767	
P 4 15	171	9	676	15	200	9	832	
P 5 20	181	12	734	20	202	12	860	
P 6 25	196	15	775	25	204	15	875	
P 7 30	203	18	809	30	207	18	886	
P 8		21	833	35	210	21	894	
P 9		24	854	40	214	24	898	
P10		27	870	45	215	27	901	
P11		30	883	50	219	30	902	
P12		33	893	55	223	33	904	
P13		36	899	60	225	36	906	
P14		39	902			39	908	
P15		42	906			42	910	
P16		45	910			45	912	
P17		48	912			48	912	
P18		51	913			51	912	
P19		54	914			54	912	
P20		57	915			57	912	
		60	916			60	912	

1565  
DST #1

JK #15895

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Company Associated Petroleum Consultants, Inc. Lease & Well No. Rutherford #2  
 Elevation 1826 Kelly Bushing Formation Indian Cave Effective Pay -- Ft. Ticker No. 11533  
 Date 5/6/82 Sec. 3 Twp. 29S Range 11W County Pratt State Kansas  
 Test Approved by Phil Harges Western Representative Darrell Claphan

Formation Test No. 2 Interval Tested from 2641 ft. to 2661 ft. Total Depth 2730 ft.  
 Packer Depth 2636 ft. Size 6 5/8 in. Packer Depth 2641 ft. Size 6 5/8 in.  
 Packer Depth - ft. Size - in. Packer Depth 2661 ft. Size 6 5/8 in.  
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 2648 ft. Recorder Number 10980 Cap. 4200  
 Bottom Recorder Depth (Outside) 2652 ft. Recorder Number 6233 Cap. 4000  
 Below Straddle Recorder Depth 2728 ft. Recorder Number - Cap. -

Drilling Contractor Heartland Drlg. Co. Rig #1 Drill Collar Length 402 I. D. 2.2 in.  
 Mud Type maccobar Viscosity 34 Weight Pipe Length - I. D. - in.  
 Weight 9.2 Water Loss - cc. Drill Pipe Length 2210 I. D. 3.8 in.  
 Chlorides 72,000 P.P.M. Test Tool Length 29 ft. Tool Size 4.5 in.  
 Jars: Make WTC Serial Number 414 Anchor Length 20' Tail 69 ft. Size 5.5 in.  
 Did Well Flow? Yes Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.  
 Main Hole Size 7 7/8 in. Tool Joint Size 4.5 in.

Blow: Initial flow period weak building to strong in one minute. Strong blow on final flow period. Gas to surface at 2:55 AM. See attached sheet for gas measurements.

Recovered 790 ft. of salt water Chlorides 14,000ppm Top  
 Recovered - ft. of - Chlorides 97,000 ppm Bottom  
 Recovered - ft. of -  
 Recovered - ft. of -  
 Recovered - ft. of -

Remarks: \_\_\_\_\_  
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Time Set Packer(s) 1:25 ~~P.M.~~ <sup>A.M.</sup> Time Started Off Bottom 4:55 ~~P.M.~~ <sup>A.M.</sup> Maximum Temperature 112°  
 Initial Hydrostatic Pressure ..... (A) 1222 P.S.I.  
 Initial Flow Period ..... Minutes 30 (B) 74 P.S.I. to (C) 200 P.S.I.  
 Initial Closed In Period ..... Minutes 60 (D) 929 P.S.I.  
 Final Flow Period ..... Minutes 60 (E) 168 P.S.I. to (F) 351 P.S.I.  
 Final Closed In Period ..... Minutes 60 (G) 924 P.S.I.  
 Final Hydrostatic Pressure ..... (H) 1206 P.S.I.



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

Date 5/6/82 Recorder No. 10980 Capacity 4200 Test Ticket No. 11533  
 Location 2648 Ft. Elevation 1826 Kelly Bushing Well Temperature 112 °F  
 Clock No. ---

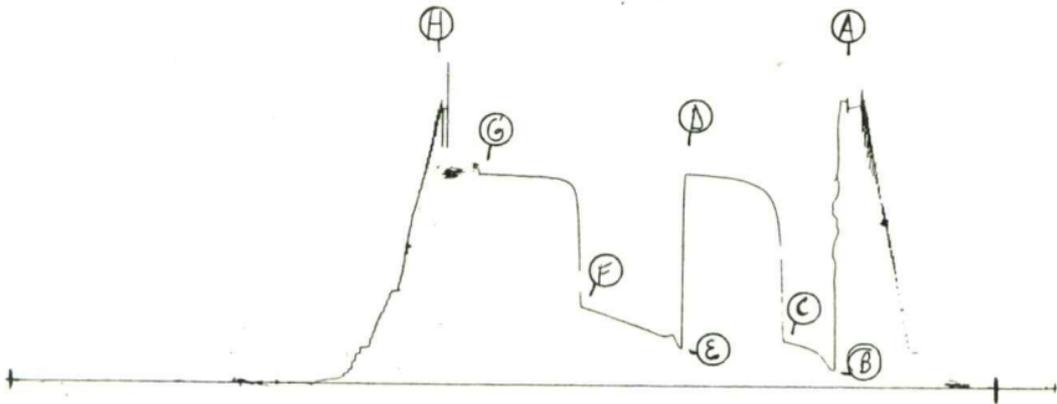
Point	Pressure			Time Given	Time Computed
A Initial Hydrostatic Mud	1222	P.S.I.	Open Tool	1:25A	M
B First Initial Flow Pressure	74	P.S.I.	First Flow Pressure	30	30
C First Final Flow Pressure	200	P.S.I.	Initial Closed-in Pressure	60	60
D Initial Closed-in Pressure	929	P.S.I.	Second Flow Pressure	60	60
E Second Initial Flow Pressure	168	P.S.I.	Final Closed-in Pressure	60	60
F Second Final Flow Pressure	351	P.S.I.			
G Final Closed-in Pressure	924	P.S.I.			
H Final Hydrostatic Mud	1206	P.S.I.			

**PRESSURE BREAKDOWN**

Point Mins.	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.
	of 5 mins. and a final inc. of 0 Min.		of 3 mins. and a final inc. of 0 Min.		of 5 mins. and a final inc. of 0 Min.		of 3 mins. and a final inc. of 0 Min.	
P 1	0	74	0	200	0	168	0	351
P 2	5	107	3	686	5	229	3	827
P 3	10	151	6	791	10	221	6	879
P 4	15	171	9	835	15	233	9	897
P 5	20	182	12	859	20	248	12	905
P 6	25	193	15	875	25	263	15	909
P 7	30	200	18	886	30	277	18	911
P 8			21	895	35	290	21	913
P 9			24	903	40	304	24	914
P10			27	907	45	319	27	915
P11			30	912	50	330	30	916
P12			33	915	55	343	33	917
P13			36	918	60	351	36	918
P14			39	920			39	919
P15			42	922			42	920
P16			45	924			45	921
P17			48	925			48	922
P18			51	926			51	923
P19			54	927			54	924
P20			57	928			57	924
			60	929			60	924

TRT # 11533

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10980  
0860

TKT # 11533

Below Straddle