Company Columbine Exploration Corporation Lease & Well No. Muir #1

Elevation 1455 Kelly Bushing Formation Viola-Simpson Effective Pay - Ft. Ticket No. 14828

Date 7/14/81 Sec. 4 Twp. 32S Range 7W County Harper State Kansas

Test Approved by R. Douglas Myers Western Representative Rod Tritt

Formation Test No. 1 Interval Tested from 4630 ft. to 4765 ft. Total Depth 4765 ft.

Packer Depth 4625 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Packer Depth 4630 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4709 ft. Recorder Number 2606 Cap. 4150

Bottom Recorder Depth (Outside) 4710 ft. Recorder Number 4332 Cap. 4200

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

Drilling Contractor Damac Drlg. Drill Collar Length 417 I. D. 2¼ in.

Mud Type chemical Viscosity 55 Weight Pipe Length - I. D. - in.

Weight 9.3 Water Loss 11.2 cc. Drill Pipe Length 4275 I. D. 3.8 in.

Chlorides 9,000 P.P.M. Test Tool Length 28 ft. Tool Size 5½ OD in.

Jars: Make WIC Serial Number 409 Anchor Length 90 + 45 ft. Size 5½ 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 7/8 in. Tool Joint Size 4½ FH in.

Blow: Strong blow throughout test. Gas to surface thirty minutes into final flow period.
See attached sheet for gas measurements.

Recovered 160 ft. of heavy gas cut mud

Recovered 630 ft. of very heavy gas and oil cut watery mud

Recovered 180 ft. of very heavy gas and oil cut muddy water

Recovered 370 ft. of water 82,000 chlorides ppm

Recovered ft. of

Remarks:

Time Set Packer(s) 1:15 A.M. ~~P.M.~~ Time Started Off Bottom 4:15 A.M. ~~P.M.~~ Maximum Temperature 149°

Initial Hydrostatic Pressure			(A)	2502	P.S.I.	
Initial Flow Period	Minutes 25		(B)	287	P.S.I. to (C)	383 P.S.I.
Initial Closed In Period	Minutes 30		(D)	1739	P.S.I.	
Final Flow Period	Minutes 65		(E)	512	P.S.I. to (F)	843 P.S.I.
Final Closed In Period	Minutes 57		(G)	1749	P.S.I.	
Final Hydrostatic Pressure			(H)	2330	P.S.I.	

GAS FLOW REPORT

Date 7/14/81 Ticket 14828 Company Columbine Exploration Corporation

Well Name and No. Muir #1 Dst No. 1 Interval Tested 4636' - 4765'

County Harper State Kansas Sec. 4 Twp. 32S Rg. 7W

Time Gauge Pre-Flow	Time Gauge in Min.	P.S.I. on Merla Orifice Well Tester	P.S.I. on Pitot Tester	P.S.I. on Side Static Tester	P.S.I. on U-Tube Tester	Description of Flow
				PRE FLOW		
				SECOND FLOW		
	30 min.			1/4" orifice		Gas to surface
	40 min.	26" of water		1/4" orifice		8,560 CFPD
	50 min.	34" of water		1/4" orifice		9,790 CFPD
	60 min.	34" of water		1/4" orifice		9,790 CFPD

GAS BOTTLE

Serial No. --- Date Bottle Filled -- Date to be Invoiced 7/14/81

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 1½% 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 Columbine Exploration Corporation

Authorized by R. Douglas Myers

FORM WTC 6

WESTERN TESTING CO., INC.
Pressure Data

Date 7/14/81 Test Ticket No. 14828

Recorder No. 2606 Capacity 4150 Location 4707 Ft.

Clock No. - Elevation 1455 Kelly Bushing Well Temperature 149 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2502 P.S.I.	Open Tool	1:15A M	
B First Initial Flow Pressure	287 P.S.I.	First Flow Pressure	30 Mins.	25 Mins.
C First Final Flow Pressure	383 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	1739 P.S.I.	Second Flow Pressure	60 Mins.	65 Mins.
E Second Initial Flow Pressure	512 P.S.I.	Final Closed-in Pressure	60 Mins.	57 Mins.
F Second Final Flow Pressure	843 P.S.I.			
G Final Closed-in Pressure	1749 P.S.I.			
H Final Hydrostatic Mud	2330 P.S.I.			

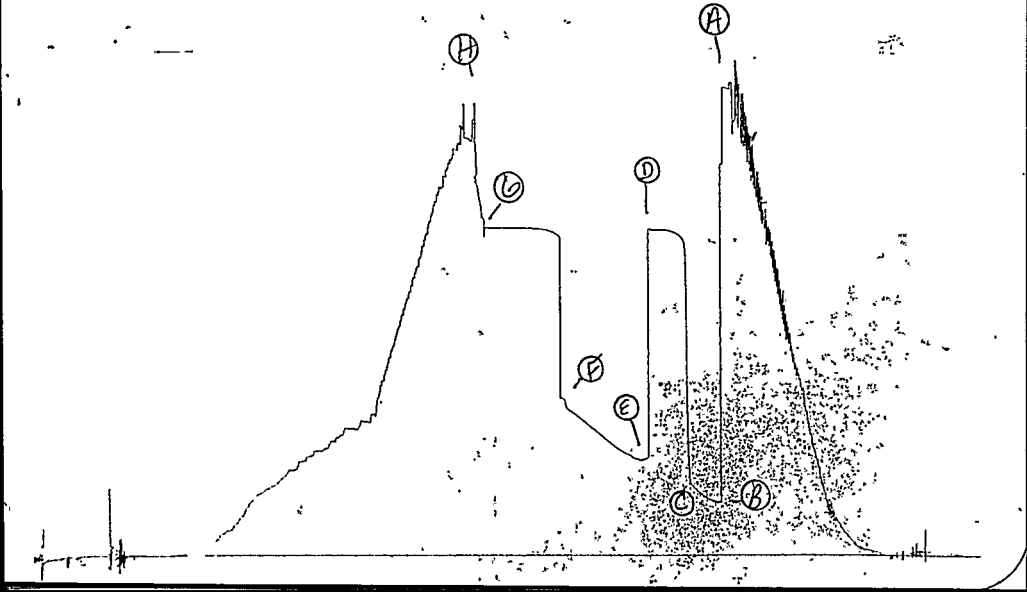
PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: 5 Inc.		Breakdown: 10 Inc.		Breakdown: 13 Inc.		Breakdown: 19 Inc.	
of 5 mins. and a		of 3 mins. and a		of 5 mins. and a		of 3 mins. and a	
final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.		final inc. of 0 Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	287	0	383	0	512	0	843
P 2 5	291	3	1483	5	521	3	1716
P 3 10	306	6	1691	10	523	6	1727
P 4 15	333	9	1712	15	543	9	1735
P 5 20	368	12	1725	20	562	12	1739
P 6 25	383	15	1733	25	587	15	1742
P 7		18	1736	30	616	18	1744
P 8		21	1737	35	645	21	1746
P 9		24	1737	40	676	24	1747
P10		27	1737	45	705	27	1748
P11		30	1739	50	736	30	1749
P12				55	765	33	1749
P13				60	788	36	1749
P14				65	843	39	1749
P15						42	1749
P16						45	1749
P17						48	1749
P18						51	1749
P19						54	1749
P20						57	1749

2606 DST #1

Tkt # 14828

I



Company Columbine Exploration Corporation Lease & Well No. #1 Muir

Elevation - Formation Lansing Effective Pay - Ft. Ticket No. 14869

Date 7/18/81 Sec. 4 Twp. 32S Range 7W County Harper State Kansas

Test Approved by R. Douglas Myers Western Representative Jeff Piotrowski

Formation Test No. 2 Interval Tested from 3968 ft. to 3985 ft. Total Depth 4800 ft.

Packer Depth 3963 ft. Size 6 3/4 in. Packer Depth 3985 ft. Size 6 3/4 in.

Packer Depth 3968 ft. Size 6 3/4 in. Packer Depth ft. Size in.

Depth of Selective Zone Set 4055

Top Recorder Depth (Inside) 3971 ft. Recorder Number 5673 Cap. 5400

Bottom Recorder Depth (Outside) 3974 ft. Recorder Number 1565 Cap. 4900

Below Straddle Recorder Depth 3992 ft. Recorder Number 2607 Cap. 4150

Drilling Contractor Da-Mac Rig #1 Drill Collar Length 420 I. D. 2.2 in.

Mud Type chemical Viscosity 45 Weight Pipe Length - I. D. - in.

Weight 9.4 Water Loss 36.0 cc. Drill Pipe Length 3518 I. D. 3.8 in.

Chlorides 18,000 P.P.M. Test Tool Length 30 ft. Tool Size 5½OD in.

Jars: Make WTC Serial Number 405 Anchor Length 17 ft. Size 5½OD 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 4½XH in.

Blow: Strong blow throughout test.

Recovered 2220 ft. of Mud

Recovered 360 ft. of gas cut mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks: MISRUN

Time Set Packer(s) 7:10 A.M. P.M. Time Started Off Bottom 10:10 A.M. P.M. Maximum Temperature -

Initial Hydrostatic Pressure ..... (A) 2046 P.S.I.

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

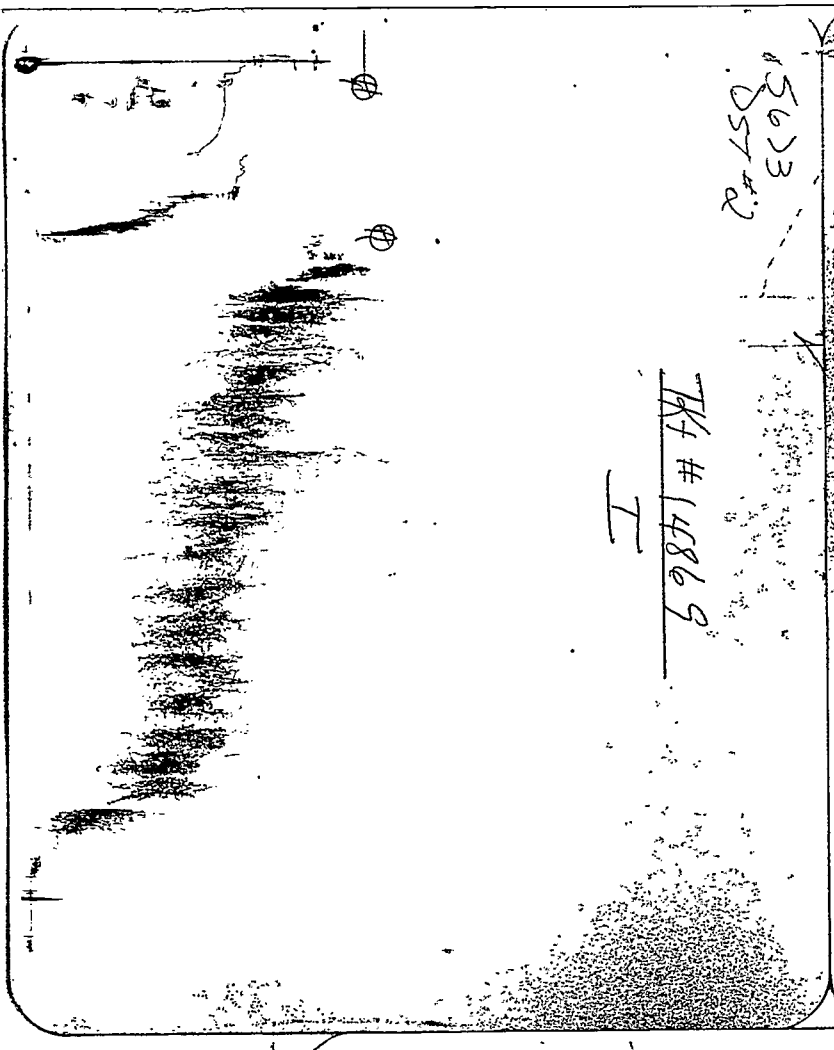
Initial Closed In Period ..... Minutes - (D) - P.S.I.

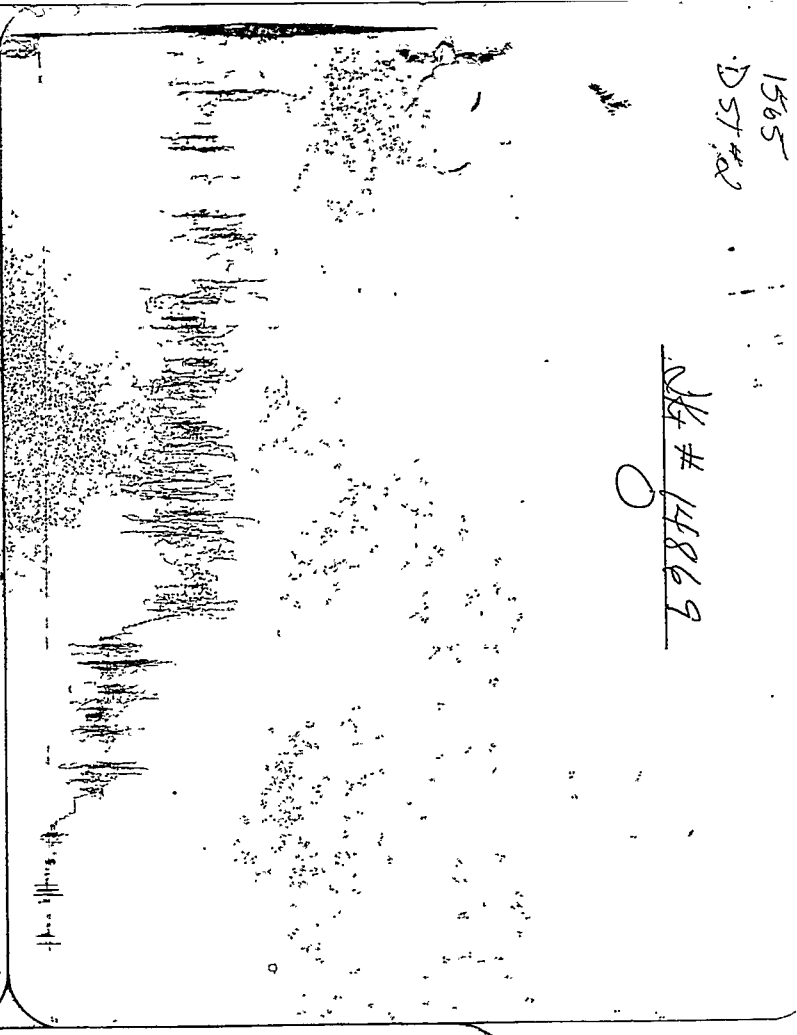
Final Flow Period ..... Minutes - (E) - P.S.I. to (F) - P.S.I.

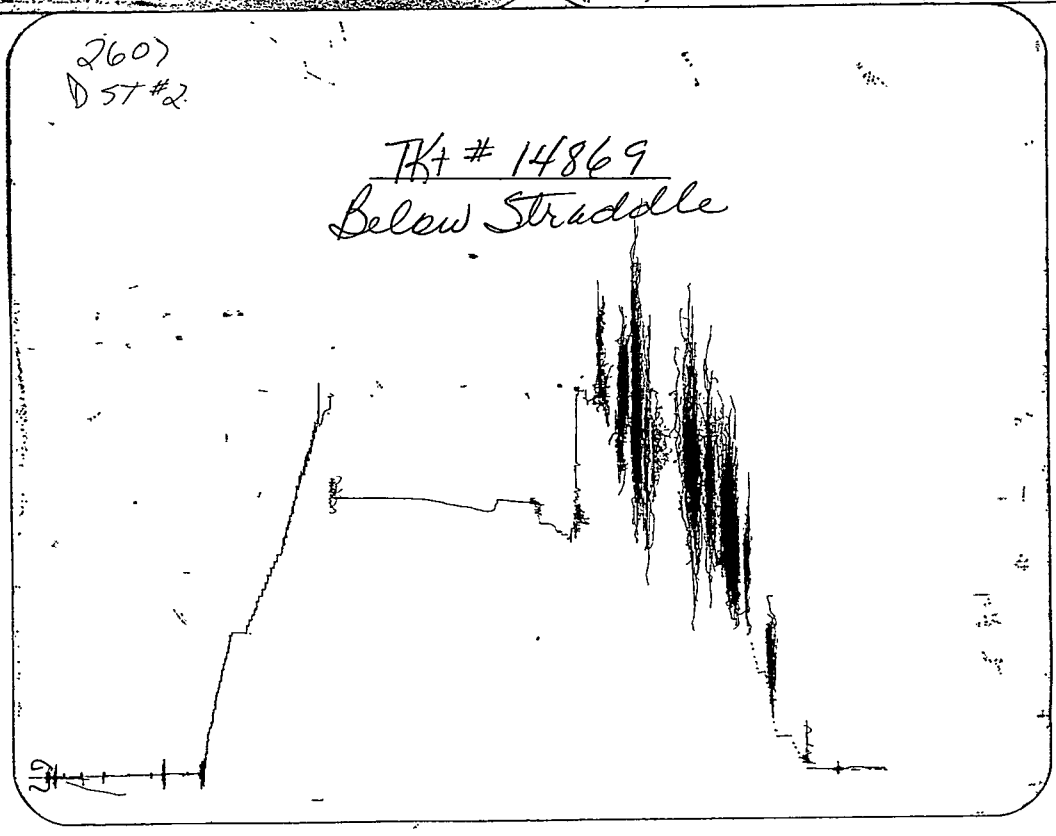
Final Closed In Period ..... Minutes - (G) - P.S.I.

Final Hydrostatic Pressure ..... (H) 2022 P.S.I.

WTC-


2613
DST #2
Tkt # 14869
I


1565
DST #2
Tkt # 14869
O


2607
DST #2
Tkt # 14869
Below Straddle