



Operator Name Cody Energy, Inc. Lease Name Selzer Well # 16-12  
 Sec. 16 Twp. 34S Rge. 20W  East  West  
 County Comanche

INSTRUCTIONS: Show important tops and base of formations penetrated. Detail all cores. Report all drill stem tests giving interval tested, time tool open and closed, flowing and shut-in pressures, whether shut-in pressure reached static level, hydrostatic pressures, bottom hole temperature, fluid recovery, and flow rates if gas to surface during test. Attach extra sheet if more space is needed. Attach copy of log.

Drill Stem Tests Taken  Yes  No  
 (Attach Additional Sheets.)  
 Samples Sent to Geological Survey  Yes  No  
 Cores Taken  Yes  No  
 Electric Log Run  Yes  No  
 (Submit Copy.)

List All E.Logs Run:

Dual Induction, Microlog, Neutron-Density, Cement Bond

Log		Formation (Top), Depth and Datums	Sample
Name	Top	Datum	
Elgin	3990'	-2228'	
Douglas	4126'	-2364'	
Lansing	4256'	-2494'	
Swope	4692'	-2930'	
Marmaton	4800'	-3038'	
Pawnee	4886'	-3124'	
Chester	5026'	-3264'	
Viola	5917'	-4155'	
Simpson	6088'	-4326'	

CASING RECORD

New  Used

Report all strings set-conductor, surface, intermediate, production, etc.

Purpose of String	Size Hole Drilled	Size Casing Set (In O.D.)	Weight Lbs./Ft.	Setting Depth	Type of Cement	# Sacks Used	Type and Percent Additives
Surface	12 1/4	8 5/8 NEW	23	673'	Lite & C	320	2% CaCl
Production	7 7/8	5 1/2 USED	15.5 & 17	6100'	50/50 H/Poz	585	2% gel, 0.5% FLA 12.5pps Gilsonite

ADDITIONAL CEMENTING/SQUEEZE RECORD

Purpose:	Depth Top Bottom	Type of Cement	#Sacks Used	Type and Percent Additives
<input type="checkbox"/> Perforate <input type="checkbox"/> Protect Casing <input type="checkbox"/> Plug Back TD <input type="checkbox"/> Plug Off Zone				None

Shots Per Foot	PERFORATION RECORD - Bridge Plugs Set/Type	Acid, Fracture, Shot, Cement Squeeze Record	Depth
	Specify Footage of Each Interval Perforated	(Amount and Kind of Material Used)	
2	5985'-5998', 6000'-6012'	1250 gal 15% MCA acid	5985'-6012'
2	5940'-5943', 5951'-5965', 5968'-5971'	900 gal 15% MCA acid	5940'-5971'
		6500 gal 15% NEFE acid	5940'-6012'

TUBING RECORD	Size 2 7/8	Set At 6022'	Packer At None	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Date of First, Resumed Production, SWD or Inj. 6/10/93 Producing Method  Flowing  Pumping  Gas Lift  Other (Explain)

Estimated Production Per 24 Hours	Oil 120 Bbls.	Gas 25 Mcf	Water 72 Bbls.	Gas-Oil Ratio 208	Gravity 46
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Disposition of Gas:

Vented  Sold  Used on Lease

METHOD OF COMPLETION

Open Hole  Perfor.  Dually Comp.  Commingled

Production Interval

5940'-6012'



ACCOUNTING COPY  
The Western Company  
of North America

SERVICE ORDER AND  
FIELD RECEIPT NO. L254721

APR 26 '93

RECEIVED  
30 1993

CUSTOMER (COMPANY NAME) BRANDT DRILL		CREDIT APPROVAL NO. C-94	PURCHASE ORDER NO.		CUSTOMER NUMBER 10361-000	INVOICE NUMBER 4196420
MAIL INVOICE TO: 107 N. MARKET		STREET OR BOX NUMBER Mrs. Ditts 914	CITY LITCHIA	STATE KS	ZIP CODE 67202	
DATE WORK COMPLETED: 4/16/93	MO 4	DAY 16	YEAR 93	WESTERN SERVICE SUPERVISOR C. BRECHER 03015	JOB TYPE CODES	
WESTERN DISTRICT WOODWARD	JOB DEPTH (FT.) 670 8/8		WELL TYPE: (CHECK ONE) <input checked="" type="checkbox"/> NEW <input type="checkbox"/> OLD	WELL CLASS: (CHECK ONE) 1 <input type="checkbox"/> OIL 2 <input checked="" type="checkbox"/> GAS 3 <input type="checkbox"/> DISPOSAL 4 <input type="checkbox"/> INJECTION		
WELL NAME AND NUMBER SELTZER 16-12	TD WELL DEPTH (FT.) 6100	GAS USED ON JOB: (CHECK ONE) 1 <input type="checkbox"/> N <sub>2</sub> 2 <input type="checkbox"/> CO <sub>2</sub>		3 <input type="checkbox"/> NONE 4 <input type="checkbox"/> BINARY		
LOCATION: Sec 16-34S-20W	SEC/TWP/RGE	COUNTY COMANCHE	STATE KS	CEMENTING SERVICES 10. CONDUCTOR 11. SURFACE 12. INTERMEDIATE 13. LONG 14. LINER 15. TIEBACK 16. PLUG & ABANDON 17. PLUG BACK 18. SQUEEZE 19. PUMPING (CEMENT) 20. BULK SALES (CEMENT)		
			STIMULATION SERVICES 30. ACID MATRIX 31. ACID FRACTURE 32. FRACTURE, 0-9,999 psi 33. FRACTURE, 10,000+ psi 34. PUMPING (STIM) 35. BULK SALE (STIM) 40. SAND CONTROL 41. GRAVEL PACK TOOL SALES 42. GRAVEL PACK TOOL RENTAL			
			TOOL SERVICES 50. TOOL SALE 51. TOOL RENTAL 52. TOOL REDRESS 53. TOOL SERVICE			

PRODUCT CODE	DESCRIPTION	UNIT OF MEASURE	QUANTITY	LIST PRICE/UNIT	GROSS AMOUNT	PERCENT DISC.	NET AMOUNT
K4005	HEAVY EQUIPMENT MILEAGE	Per mile	50.00	7.750	137.50	38.00	85.25
K4025	LIGHT EQUIPMENT MILEAGE	Per mile	50.00	1.450	72.50		44.95
F0035	PUMP CHARGE	First 9 hrs	1.00	735.000	735.00		455.70
M1005	SERVICE CHARGE	352 ft <sup>3</sup>	352.00	1.750	410.00		272.80
M2308	DELIVERY CHARGE	30295 ÷ 2000 + 50	757.00	.950	643.45		398.94
P48-2H	PACEMAKER LITE PREMIUM	20240 <sup>#</sup> 24 ft <sup>3</sup>	220.00	7.200	1584.00		982.08
P39-2H	PREMIUM PWS CEMENT	9400 <sup>#</sup> 100 ft <sup>3</sup>	100.00	9.520	952.00		590.24
P05-23	CALCIUM CHLORIDE	600 <sup>#</sup> 12 ft <sup>3</sup>	600.00	.360	216.00		133.92
P715	CELO-SEAL	55 <sup>#</sup>	55.00	1.200	104.50		64.79
P3025	8 <sup>5/8</sup> TOP REDRESS RING	each	1.00	105.000	105.00		65.10
M068	8 <sup>5/8</sup> CENTRALIZER	each	1.00	70.000	70.00		43.40
M120	8 <sup>5/8</sup> BASKET	each	1.00	215.000	215.00		N/C
M112	8 <sup>5/8</sup> INSERT	each	1.00	60.000	60.00		37.51
FIELD DISCOUNTED PRICE					#512045		#317468

ARRIVE LOCATION 4/16/93 12:00 PM	CUSTOMER REP. LAST NAME FREEMAN	SERVICE ORDER: I AUTHORIZE WORK TO BEGIN PER SERVICE INSTRUCTIONS IN ACCORDANCE WITH TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE OF THIS FORM AND REPRESENT THAT I HAVE AUTHORITY TO ACCEPT AND SIGN THIS ORDER.	SERVICE RECEIPT: I CERTIFY THAT THE MATERIALS AND SERVICES LISTED WERE RECEIVED AND ALL SERVICES PERFORMED IN A WORKMANLIKE MANNER.
SEE REVERSE SIDE FOR GENERAL TERMS AND CONDITIONS		CUSTOMER AUTHORIZED AGENT 	CUSTOMER AUTHORIZED AGENT 

15-033-26872-0000



ORIGINAL

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The Western Company of North America

MAY - 7 1993

INVOICE NO. 420696	OUR RECEIPT NO. 256886	DATE 05/02/93
18741	1235	YOUR ORDER NO.

REMIT TO: P.O. BOX 911543 DALLAS, TX 75391-1543

CODY RESOURCES, INC. 731 WEST WADLEY AVE. SUITE 0-114 MIDLAND TX 79705

SERVICES FROM OUR STATION AT WOODWARD CEMENTING	OUR ENGINEER BURCHETT	SIGNED FOR YOU BY BACCUS
FOR SERVICING WELL NAME SELZER #16-12	COUNTY COMANCHE	STATE KS 15

FEDERAL I.D. NO. C 75-0763484

PRODUCT CODE	DESCRIPTION	UNIT OF MEASURE	QUANTITY	LIST PRICE/UNIT	GROSS AMOUNT	PERCENT DISC.	NET AMOUNT
K1005	MILEAGE CHARGE, PER UNIT	MILE	60.0	2.750	165.00	33.00	110.55
K1025	MILEAGE AUTO/PICK-UP/TREATING VAN	MILE	60.0	1.450	87.00	33.00	58.29
F0145	CEMENT CASING, 6001 - 6500'	8HRS	1.0	1745.000	1745.00	33.00	1,169.15
K2305	MULTIPLE STAGE CEMENTING/UNIT/STAGE	8HRS	1.0	1050.000	1050.00	33.00	703.50
M1005	BULK MATERIALS SVC CHG-LAND JOBS	CU FT	780.0	1.250	975.00	33.00	653.25
M2305	DELIVERY CHG BULK MATLS	TONMI	1805.0	.850	1534.25	33.00	1,027.95
P432H	PREMIUM CMT, WOODWARD, OK	SACK	293.0	7.900	2314.70	33.00	1,550.85
P422H	POZ A, WOODWARD, OK	SACK	292.0	3.950	1153.40	33.00	772.78
P0823	SODIUM CHLORIDE-OKLAHOMA	LB	3450.0	.130	448.50	33.00	300.50
P1605	TF-4	LB	98.0	4.300	421.40	33.00	282.34
P1535	CF-14	LB	148.0	6.300	932.40	33.00	624.71
P1705	GILSONITE	LB	7313.0	.400	2925.20	33.00	1,959.88
P3155	SUREBOND SPACER	GAL	1500.0	1.550	2325.00	33.00	1,557.75
K3205	4000 GALLON TRANSPORT	hour	8.0	59.400	475.20	33.00	318.38
	SUB TOTAL				16552.05		11,089.88

AFE 93102  
~~70044~~ 750-22  
 CO  
 [Signature]

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 STATE CORPORATION COMMISSION  
 AUG - 2 1993



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The Western Company  
of North America

SERVICE ORDER AND  
FIELD RECEIPT NO. L256886

CUSTOMER (COMPANY NAME) <i>COOL Resources</i>		CREDIT APPROVAL NO.	PURCHASE ORDER NO.	CUSTOMER NUMBER <i>18741-001</i>	INVOICE NUMBER <i>420696</i>
MAIL INVOICE TO: <i>731 W. WADLEY AVE. Suite 0-114 MIDLAND TX. 79705</i>	STREET OR BOX NUMBER	CITY	STATE	ZIP CODE	JOB TYPE CODES CEMENTING SERVICES 10. CONDUCTOR 11. SURFACE 12. INTERMEDIATE 13. LONG 14. LINER 15. TIEBACK 16. PLUG & ABANDON 17. PLUG BACK 18. SQUEEZE 19. PUMPING (CEMENT) 20. BULK SALES (CEMENT) STIMULATION SERVICES 30. ACID, MATRIX 31. ACID, FRACTURE 32. FRACTURE, 0-9,999 psi 33. FRACTURE, 10,000 + psi 34. PUMPING (STIM) 35. BULK SALE (STIM) 40. SAND CONTROL 41. GRAVEL PACK TOOL SALES 42. GRAVEL PACK TOOL RENTAL TOOL SERVICES 50. TOOL SALE 51. TOOL RENTAL 52. TOOL REDRESS 53. TOOL SERVICE
DATE WORK COMPLETED: <i>5/2/93</i>	MO. DAY YEAR	WESTERN SERVICE SUPERVISOR <i>C. Bunker 03015</i>	WELL TYPE: (CHECK ONE) 1 <input checked="" type="checkbox"/> NEW 2 <input type="checkbox"/> OLD		
WESTERN DISTRICT <i>Woodward</i>	JOB DEPTH (FT.) <i>6100</i>	WELL CLASS: (CHECK ONE) 1 <input checked="" type="checkbox"/> OIL 2 <input type="checkbox"/> GAS 3 <input type="checkbox"/> DISPOSAL 4 <input type="checkbox"/> INJECTION			
WELL NAME AND NUMBER <i>Suzee 16.12</i>	TD WELL DEPTH (FT.) <i>6100</i>	GAS USED ON JOB: (CHECK ONE) 1 <input type="checkbox"/> N <sub>2</sub> 2 <input type="checkbox"/> CO <sub>2</sub> 3 <input checked="" type="checkbox"/> NONE 4 <input type="checkbox"/> BINARY			
WELL LOCATION: <i>Sec 16-34S-20W</i>	SEC/TWP/RGE	COUNTY <i>Comanche</i>	STATE <i>KS.</i>		

PRODUCT CODE	DESCRIPTION	UNIT OF MEASURE	QUANTITY	LIST PRICE/UNIT	GROSS AMOUNT	PERCENT DISC.	NET AMOUNT
K605	Heavy Equipment Meters	Rm mtr	6000	2100	16500	33.00	11055
K625	Light Equipment Meters	Rm mtr	6000	1400	8700		5929
F645	Pump Charge	First 9 Hr	1.00	1745.00	1745.00		1169.15
K2305	SEAL CHARGE	Rm mtr	1.00	1650.00	1650.00		703.50
M605	Service Charge	Rm ft <sup>3</sup>	780.00	1250	975.00		653.25
M2305	SEAL CHARGE	Rm mtr	1805.00	850	1534.25		1027.95
F4324	Premium Cement	Pd SK	293.00	7900	2314.20		1580.85
F4224	Port	Rd SK	272.00	3750	1153.40		772.78
F8-23	Premium Cement	Rd LB	3450.00	130	448.50		300.50
A605	TF-4	Rd LB	98.00	4300	421.40		292.34
A535	CF-14	Rd LB	48.00	6300	932.40		624.71
A705	GILSONITE	Rd LB	7313.00	400	2925.20		1959.88
P3155	SUREBOND	Rd CX	1500.00	1550	2325.00		1557.75
K3205	4000 GAL Transport	Rd HR	8.00	51400	415.20		38.38
					\$16,552.05		\$11,089.88

ARRIVE LOCATION CUSTOMER REP. LAST NAME <i>Bunker</i>	YEAR <i>93</i>	TIME <i>5:30 PM</i>	SERVIC. ORDER: I AUTHORIZE WORK TO BEGIN PER SERVICE INSTRUCTIONS IN ACCORDANCE WITH TERMS AND CONDITIONS PRINTED ON THE REVERSE SIDE OF THIS FORM AND REPRESENT THAT I HAVE AUTHORITY TO ACCEPT AND SIGN THIS ORDER.  <i>[Signature]</i> CUSTOMER AUTHORIZED AGENT	SERVICE RECEIPT: I CERTIFY THAT THE MATERIALS AND SERVICES LISTED WERE RECEIVED AND ALL SERVICES PERFORMED IN A WORKMANLIKE MANNER.  CUSTOMER AUTHORIZED AGENT <i>[Signature]</i> WESTERN APPROVED <i>[Signature]</i>
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# TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

Well Name SELZER 16-12 Test No. 1 Date 4/28/93  
Company CODY RESOURCES INC Zone VIOLA  
Address 731 WADLEY AVE #0-114 MIDLAND TX Elevation 1762  
Co. Rep./Geo. JOHN Cont. BRANDT Est. Ft. of Pay \_\_\_\_\_  
Location: Sec. 16 Twp. 34S Rge. 20W Co. COMANCHE State KS

Interval Tested	<u>5860-5964</u>	Drill Pipe Size	<u>4.5" XH</u>
Anchor Length	<u>104</u>	Wt. Pipe I.D. - 2.7 Ft. Run	_____
Top Packer Depth	<u>5855</u>	Drill Collar - 2.25 Ft. Run	<u>530</u>
Bottom Packer Depth	<u>5860</u>	Mud Wt.	<u>9.1</u> lb/Gal.
Total Depth	<u>5964</u>	Viscosity	<u>50</u>
		Filtrate	<u>9.8</u>

Tool Open @ \_\_\_\_\_ Initial Blow MISRUN (HOLE IN PIPE)

Final Blow \_\_\_\_\_

Recovery - Total Feet \_\_\_\_\_ Flush Tool? \_\_\_\_\_

Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

BHT \_\_\_\_\_ °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 10000 ppm System

(A) Initial Hydrostatic Mud \_\_\_\_\_ PSI AK1 Recorder No. 13308 Range 4700

(B) First Initial Flow Pressure \_\_\_\_\_ PSI @ (depth) 5864 w / Clock No. 21061

(C) First Final Flow Pressure \_\_\_\_\_ PSI AK1 Recorder No. 11057 Range 4500

(D) Initial Shut-in Pressure \_\_\_\_\_ PSI @ (depth) 5900 w / Clock No. 17652

(E) Second Initial Flow Pressure \_\_\_\_\_ PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

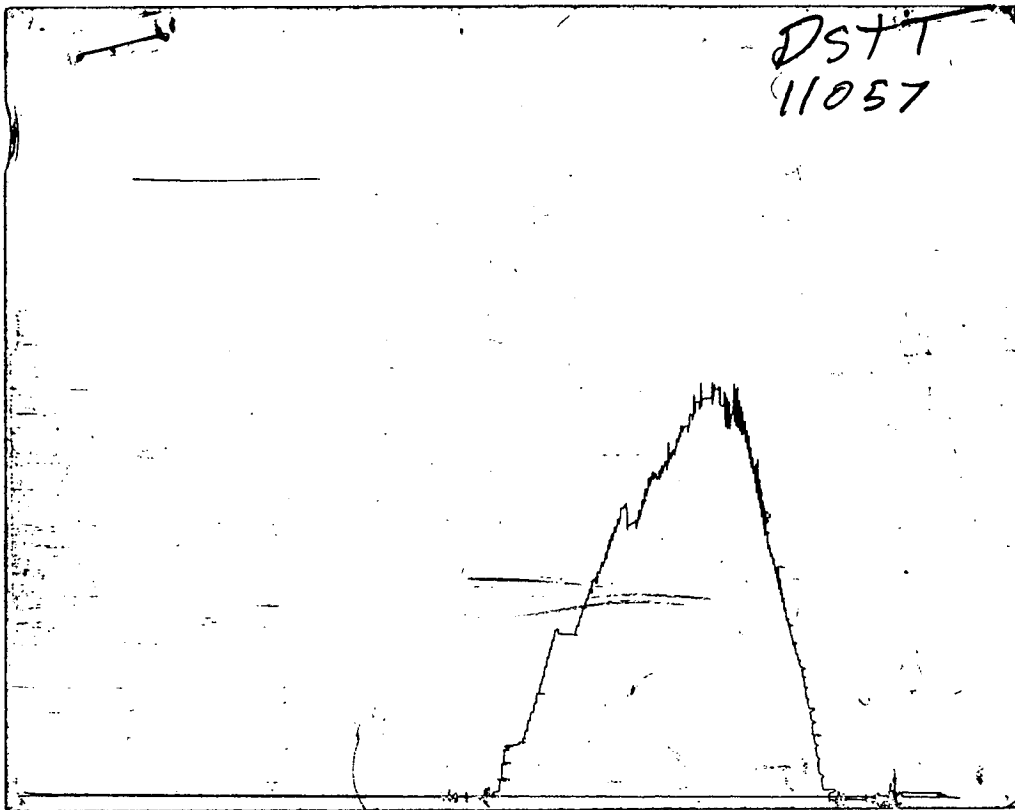
(F) Second Final Flow Pressure \_\_\_\_\_ PSI @ (depth) \_\_\_\_\_ w / Clock No. \_\_\_\_\_

(G) Final Shut-in Pressure \_\_\_\_\_ PSI Initial Opening \_\_\_\_\_ Final Flow \_\_\_\_\_

(H) Final Hydrostatic Mud \_\_\_\_\_ PSI Initial Shut-in \_\_\_\_\_ Final Shut-in \_\_\_\_\_

Our Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

FIELD  
READING

OFFICE  
READING

- (A) INITIAL HYDROSTATIC MUD
- (B) FIRST INITIAL FLOW PRESSURE
- (C) FIRST FINAL FLOW PRESSURE
- (D) INITIAL CLOSED-IN PRESSURE
- (E) SECOND INITIAL FLOW PRESSURE
- (F) SECOND FINAL FLOW PRESSURE
- (G) FINAL CLOSED-IN PRESSURE
- (H) FINAL HYDROSTATIC MUD

FLUID SAMPLER DATA

Ticket No.: 5788 Date: 4/28/93
Company: CODY RESOURCES INC
Lease: SELZER 16-12 Test No.: 1
County: COMANCHE Sec.: 16 Twp.: 34S Rng.: 20W

SAMPLER RECOVERY

Gas
Oil
Mud
Water
Other
Pressure

PIT MUD ANALYSIS

Chlorides 10000
Resistivity ohms@ F
Viscosity 50
Mud Wt. 9.1
Filtrate 9.8
Other P.H. 11.8

TOTAL

SAMPLER ANALYSIS

Resistivity ohms@ F
Chlorides ppm.
Gravity corrected @60F

PIPE RECOVERY

TOP

Resistivity ohms@ F
Chlorides ppm

MIDDLE

Resistivity ohms@ F
Chlorides ppm

BOTTOM

Resistivity ohms@ F
Chlorides ppm



# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

No 5788

Well Name & No. SILZER 16-12 Test No. 1 Date 4-28-92  
Company CODY RESOURCES INC Zone Tested VIOLA  
Address 731 W WADLEY AVE STEO-114 MIDLAND TEXAS  
Co. Rep./Geo. \_\_\_\_\_ Cont. BRANDT Est. Ft. of Pay \_\_\_\_\_  
Location: Sec. 16 Twp. 34 Rge. 20 Co. COMANCHE State KS  
No. of Copies \_\_\_\_\_ Distribution Sheet \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Turnkey \_\_\_\_\_ Yes \_\_\_\_\_ No \_\_\_\_\_ Evaluation \_\_\_\_\_

Interval Tested 5860 - 5964 Drill Pipe Size 4 1/2 XH  
Anchor Length 104 Top Choke — 1" \_\_\_\_\_ Bottom Choke — 3/4" \_\_\_\_\_  
Top Packer Depth 5855 Hole Size — 7 7/8" \_\_\_\_\_ Rubber Size — 6 3/4" \_\_\_\_\_  
Bottom Packer Depth 5860 Wt. Pipe I.D. — 2.7 Ft. Run \_\_\_\_\_  
Total Depth 5964 Drill Collar — 2.25 Ft. Run 530  
Mud Wt. 9.1 L.C.M. lb/gal Viscosity 50 Filtrate 9.8  
Tool Open @ \_\_\_\_\_ Initial Blow MISRUN (HOLE IN PIPE)  
Final Blow \_\_\_\_\_

Recovery — Total Feet	Feet of Gas in Pipe	Flush Tool?				
Rec. _____ Feet Of _____			% gas	% oil	% water	% mud
Rec. _____ Feet Of _____			% gas	% oil	% water	% mud
Rec. _____ Feet Of _____			% gas	% oil	% water	% mud
Rec. _____ Feet Of _____			% gas	% oil	% water	% mud
Rec. _____ Feet Of _____			% gas	% oil	% water	% mud

BHT \_\_\_\_\_ °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity \_\_\_\_\_ °API  
RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 10000 ppm System  
(A) Initial Hydrostatic Mud \_\_\_\_\_ PSI AK1 Recorder No. 13308 Range 4700  
(B) First Initial Flow Pressure \_\_\_\_\_ PSI @ (depth) 5864 w/Clock No. 21061 <sup>2 1/2 HOURS</sup>  
(C) First Final Flow Pressure \_\_\_\_\_ PSI AK1 Recorder No. 11057 Range 4500  
(D) Initial Shut-In Pressure \_\_\_\_\_ PSI @ (depth) 5900 w/Clock No. 17652  
(E) Second Initial Flow Pressure \_\_\_\_\_ PSI AK1 Recorder No. ~~5900~~ Range \_\_\_\_\_  
(F) Second Final Flow Pressure \_\_\_\_\_ PSI @ (depth) \_\_\_\_\_ w/Clock No. \_\_\_\_\_  
(G) Final Shut-In Pressure \_\_\_\_\_ PSI Initial Opening \_\_\_\_\_ Test ✓ 500  
(H) Final Hydrostatic Mud \_\_\_\_\_ PSI Initial Shut-In \_\_\_\_\_ Jars ✓ 200

TRILOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF 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, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Final Flow \_\_\_\_\_ Safety Joint ✓ 50  
Final Shut-In \_\_\_\_\_ Straddle \_\_\_\_\_  
Circ. Sub ✓ 3500  
Sampler ✓ 200  
Extra Packer \_\_\_\_\_  
Other \_\_\_\_\_  
TOTAL PRICE \$ 785.00

Approved By \_\_\_\_\_  
Our Representative Mark Foreman

# TRILOBITE TESTING, L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Drill-Stem Test Data

Well Name SELZER 16-12 Test No. 2 Date 4/29/93  
Company CODY RESOURCES INC Zone VIOLA 'A-B'  
Address 731 WADLEY AVE #0-114 MIDLAND TX Elevation 1762  
Co. Rep./Geo. JOHN Cont. BRANDT Est. Ft. of Pay 10  
Location: Sec. 16 Twp. 34S Rge. 20W Co. COMANCHE State KS

Interval Tested	<u>5860-5964</u>	Drill Pipe Size	<u>4.5" XH</u>
Anchor Length	<u>104</u>	Wt. Pipe I.D. - 2.7 Ft. Run	<u>530</u>
Top Packer Depth	<u>5855</u>	Drill Collar - 2.25 Ft. Run	<u>530</u>
Bottom Packer Depth	<u>5860</u>	Mud Wt.	<u>9.1</u> lb/Gal.
Total Depth	<u>5964</u>	Viscosity	<u>50</u>
		Filtrate	<u>9.8</u>

Tool Open @ 10:12 AM <sup>Initial</sup> Blow GOOD BLOW OFF BOTTOM IN 1 MINUTE  
SLID TOOL TO BOTTOM LOST 30' MUD  
Final Blow OFF BOTTOM IN 30 SECONDS GAS TO SURFACE ON FIRST SHUTIN  
20 IOW ON 1" ORIFICE 115 MCF/DAY

Recovery - Total Feet \_\_\_\_\_ Flush Tool? NO

Rec. \_\_\_\_\_ Feet of CIRCULATED OUT  
Rec. \_\_\_\_\_ Feet of GASSY OIL CUT MUD 5%GAS/2%OIL/93%MUD  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_  
Rec. \_\_\_\_\_ Feet of \_\_\_\_\_

BHT 128 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity 41 °API  
RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 10000 ppm System

(A) Initial Hydrostatic Mud 2975.6 PSI AK1 Recorder No. 13308 Range 4700

(B) First Initial Flow Pressure 217.4 PSI @ (depth) 5864 w / Clock No. 21061

(C) First Final Flow Pressure 202.9 PSI AK1 Recorder No. 11057 Range 4500

(D) Initial Shut-in Pressure 1761.2 PSI @ (depth) 5900 w / Clock No. 17652

(E) Second Initial Flow Pressure 168.1 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_

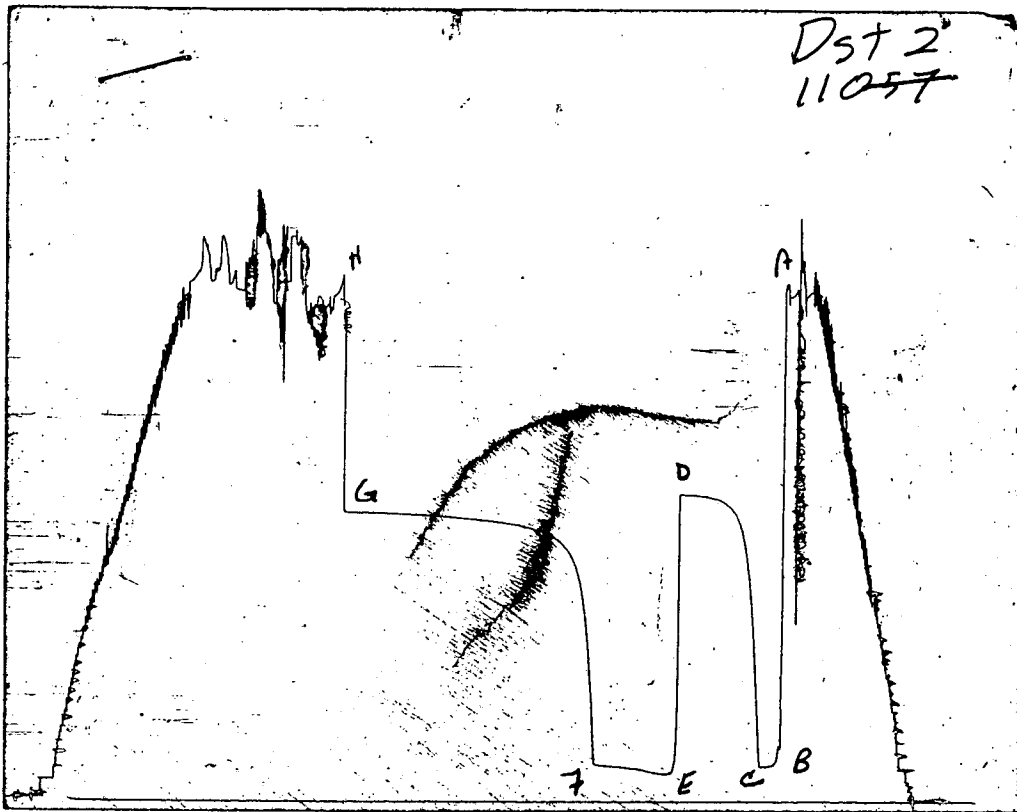
(F) Second Final Flow Pressure 205.1 PSI @ (depth) \_\_\_\_\_ w / Clock No. \_\_\_\_\_

(G) Final Shut-in Pressure 1672.6 PSI Initial Opening 15 Final Flow 60

(H) Final Hydrostatic Mud 2897.6 PSI Initial Shut-in 60 Final Shut-in 180

Our Representative MARK HERSKOWITZ

CHART PAGE



This is an actual photograph of recorder chart

	FIELD READING	OFFICE READING
(A) INITIAL HYDROSTATIC MUD	2956	2975.6
(B) FIRST INITIAL FLOW PRESSURE	216	217.4
(C) FIRST FINAL FLOW PRESSURE	204	202.9
(D) INITIAL CLOSED-IN PRESSURE	1748	1761.2
(E) SECOND INITIAL FLOW PRESSURE	181	168.1
(F) SECOND FINAL FLOW PRESSURE	216	205.1
(G) FINAL CLOSED-IN PRESSURE	1641	1672.6
(H) FINAL HYDROSTATIC MUD	2885	2897.6

COMPUTER EVALUATION BY TRILOBITE TESTING, L.L.C.  
CODY RESOURCES INC

SELZER 16-12 DST 2  
16 34S 20W COMANCHE KS

\*\*\*\*\*

ELEVATION:	1762 KB	EST. PAY:	10 FT.
DATUM:	-4139	ZONE TESTED:	VIOLA 'A-B'
TEST INTERVAL:	5860-5964	TIME INTERVALS:	15-60-60-180
RECORDER DEPTH:	5900	VISCOSITY:	0.01401 CP
BOTTOM HOLE TEMP:	128	HOLE SIZE:	7.875 IN
COMPRESSIBILITY:	0.9965	GAS GRAVITY:	0.7716

\*\*\*\*\*

TEMPERATURE RANKINE:	588.00	&
TRANSMISSIBILITY:	20425.96	Kh/%
THEORITICAL FLOW CAPICITY:	286.25	Kh
AVERAGE EFFECTIVE PERMEABILITY:	28.62	K(md.)
RADIUS OF INVESTIGATION:	43.13	FT.
DAMAGE RATIO:	1.75	
ABSOLUTE OPEN FLOW(MAX)	4395.85	MCFD
ABSOLUTE OPEN FLOW(MIN)	4092.99	MCFD
THEORITICAL OPEN FLOW(MAX)	7702.85	MCFD
THEORITICAL OPEN FLOW(MIN)	7172.15	MCFD
POTENTIOMETRIC SURFACE	0.00	(FT.)

\*\*\*\*\*

INITIAL SHUT-IN VALUES:

SLOPE	54874.93
THEORETICAL STATIC PRESSURE	1777

FINAL SHUT-IN VALUES:

SLOPE	178961.57
THEORETICAL STATIC PRESSURE	1725

DRAWDOWN FACTOR: 2.93 (%)



ANALYTICAL LABORATORY, INC.  
424 Greenwood • Wichita, Kansas 67211 • (316) 269-4200

\*\*\*\*\*  
\*EXTENDED NATURAL GAS ANALYSIS\*  
\*\*\*\*\*

COMPANY NAME: CODY RESOURCES INC      LAB# 9315774  
 SAMPLE ID: SELZER 16-12 / DST 2 / VIOLA A & B  
 SETT #: N/A  
 COUNTY: COMANCHE      LEGAL LOCATION: 16-34-20  
 DATE SAMPLED: N/A 0      SAMPLER: TRILOBITE  
 SAMPLE PRESSURE: N/A      TEMPERATURE (F): N/A  
 DATE ANALYZED: MAY 5 1993  
 QUALITY CONTROL DATE: MAY 5 1993

\*\*\*\*\*ANALYSIS\*\*\*\*\*CALCULATED AT 14.65 PSIA, AT 60 F\*\*NORMALIZED\*\*\*\*\*

HYDROCARBONS	MOLAL%	LIQUID VOLUME%	BTU AMOUNT	GPM
METHANE	75.72	69.08	762.38	0
ETHANE	6.45	9.29	113.78	0
PROPANE	3.59	5.32	90.05	.98
ISO-BUTANE	.54	.95	17.51	.18
NORMAL-BUTANE	1.43	2.43	46.5	.45
ISO-PENTANE	.48	.95	19.14	.17
NORMAL-PENTANE	.72	1.41	28.77	.26
3-METHYLPENTANE	*			
2,3-DIMETHYLBUTANE	*			
2-METHYLPENTANE	*			
CYCLOPENTANE	*			
NORMAL HEXANE	*			
HEXANES+	2.35	5.24	118.67	1.01
NITROGEN	7.73	4.58	0	0
OXYGEN	.18	.09	0	0
CARBON DIOXIDE	.62	.56	0	0
HELIUM	.19	.1	0	
HYDROGEN	TRACE (<.01)			
<hr/>				
TOTALS*****	100	100	1196.8	3.05

BTU/FT³ DRY (IDEAL GROSS): 1196.8  
 BTU/FT³ SATURATED (IDEAL GROSS): 1176.74  
 IDEAL SPECIFIC GRAVITY: .7716  
 COMPRESSIBILITY: .9965  
 GPM: 3.05  
 \* = COMBINED WITH HEXANES+

RESPECTFULLY SUBMITTED

*Paul D. Fournier*

PRIORITY ANALYTICAL LAB

SELZER 16-12  
INITIAL

DST #2  
SHUTIN  
15 TOTAL FLOW TIME

GAS

-----  
Slope 54874.93 psi/cycle  
P \* 1777 psi  
-----

TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
3	737.7	0.778	737.7	6
6	1124.4	0.544	1124.4	4
9	1386.7	0.426	262.3	3
12	1528.1	0.352	141.4	2
15	1617.7	0.301	89.6	2
18	1656.9	0.263	39.2	2
21	1688.3	0.234	31.4	2
24	1711.8	0.211	23.5	2
27	1724.2	0.192	12.4	2
30	1737.6	0.176	13.4	2
33	1745.5	0.163	7.9	1
X 36	1752.5	0.151	7.0	1
39	1753.3	0.141	0.8	1
42	1758.9	0.133	5.6	1
45	1760.1	0.125	1.2	1
48	1760.1	0.118	0.0	1
51	1761.2	0.112	1.1	1
54	1761.2	0.106	0.0	1
57	1761.2	0.101	0.0	1
X 60	1761.2	0.097	0.0	1

SELZER 16-12  
FINAL

DST #2  
SHUTIN  
75 TOTAL FLOW TIME

-----  
Slope 178961.57 psi/cycle  
P \* 1725 psi  
-----

	Pws (psi)	Log Horn T	<> PRESSURE	Horn T	
	-----	-----	-----	-----	
	6	861.6	1.130	861.6	14
	12	1279.1	0.860	417.5	7
	18	1408.1	0.713	129.0	5
	24	1475.3	0.615	67.2	4
	30	1521.2	0.544	45.9	4
	36	1549.3	0.489	28.1	3
	42	1563.8	0.445	14.5	3
	48	1578.4	0.409	14.6	3
	54	1585.1	0.378	6.7	2
	60	1590.8	0.352	5.7	2
	66	1597.1	0.330	6.3	2
	72	1608.7	0.310	11.6	2
	78	1610.9	0.293	2.2	2
	84	1613.2	0.277	2.3	2
	90	1622.1	0.263	8.9	2
	96	1625.5	0.251	3.4	2
	102	1628.9	0.239	3.4	2
	108	1636.7	0.229	7.8	2
	114	1641.2	0.220	4.5	2
	120	1642.3	0.211	1.1	2
X	126	1643.4	0.203	1.1	2
	132	1644.6	0.195	1.2	2
	138	1653.5	0.189	8.9	2
	144	1656.9	0.182	3.4	2
	150	1656.9	0.176	0.0	2
	156	1656.9	0.170	0.0	1
	162	1660.3	0.165	3.4	1
	168	1660.3	0.160	0.0	1
	174	1661.4	0.156	1.1	1
	180	1662.5	0.151	1.1	1
	186	1667.1	0.147	4.6	1
	192	1671.5	0.143	4.4	1
	198	1672.6	0.139	1.1	1
X	214	1672.6	0.130	0.0	1





## INITIAL FLOW

RECORDER # 11057

DST # 2

TIME(MIN)

&lt;&gt; PRESSURE

TIME(MIN)		<> PRESSURE
3	217.4	217.4
6	204.1	-13.3
9	202.9	-1.2
12	202.9	0
15	202.9	0

## FINAL FLOW

RECORDER # 11057

DST # 2

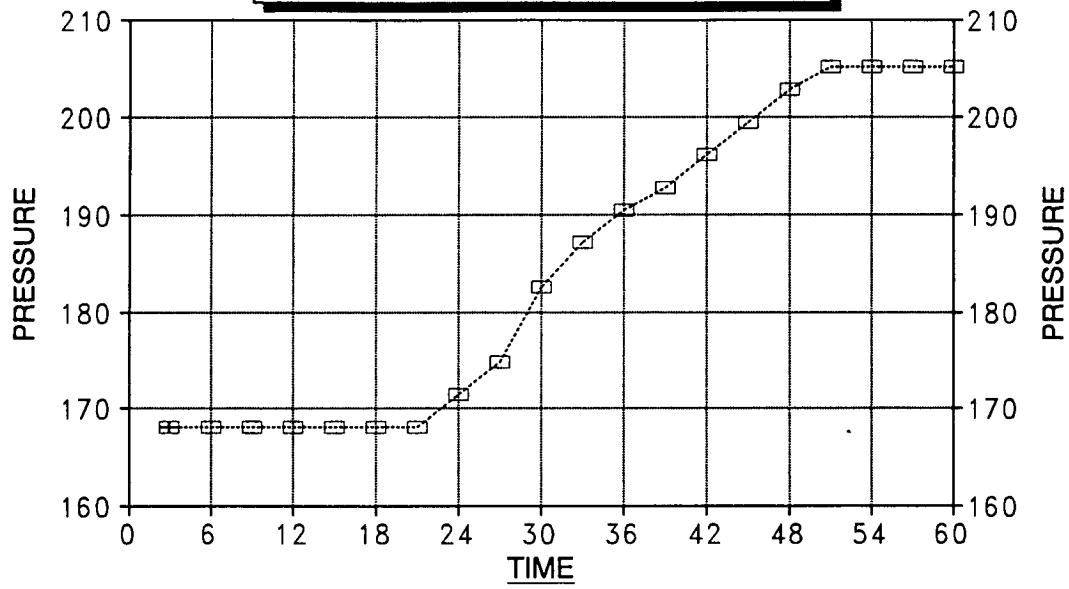
TIME(MIN)

&lt;&gt; PRESSURE

TIME(MIN)		<> PRESSURE
3	168.1	168.1
6	168.1	0
9	168.1	0
12	168.1	0
15	168.1	0
18	168.1	0
21	168.1	0
24	171.5	3.4
27	174.8	3.3
30	182.7	7.9
33	187.2	4.5
36	190.5	3.3
39	192.8	2.3
42	196.1	3.3
45	199.5	3.4
48	202.9	3.4
51	205.1	2.2
54	205.1	0
57	205.1	0
60	205.1	0

# DELTA T DELTA P

FINAL FLOW / DST #2



---SELZER 16-12

INITIAL PRODUCTION CORRECTED TO PSEUDO STEADY FLOW STATE:

19.725

SEEZER 16-12  
INITIAL

DST #2  
SHUTIN

OIL

15 INITIAL FLOW TIME

Slope 165.57 psi/cycle  
P \* 1777 psi

TIME(MIN)	Pws (psi)	Log Horn T	<> PRESSURE	Horn T
3	737.7	0.778	737.7	6
6	1124.4	0.544	386.7	4
9	1386.7	0.426	262.3	3
12	1528.1	0.352	141.4	2
15	1617.7	0.301	89.6	2
18	1656.9	0.263	39.2	2
21	1688.3	0.234	31.4	2
24	1711.8	0.211	23.5	2
27	1724.2	0.192	12.4	2
30	1737.6	0.176	13.4	2
33	1745.5	0.163	7.9	1
X 36	1752.2	0.151	6.7	1
39	1753.3	0.141	1.1	1
42	1758.9	0.133	5.6	1
45	1760.1	0.125	1.2	1
48	1760.1	0.118	0.0	1
51	1761.2	0.112	1.1	1
54	1761.2	0.106	0.0	1
57	1761.2	0.101	0.0	1
X 60	1761.2	0.097	0.0	1

SELZER 16-12  
FINAL

DST #2  
SHUTIN

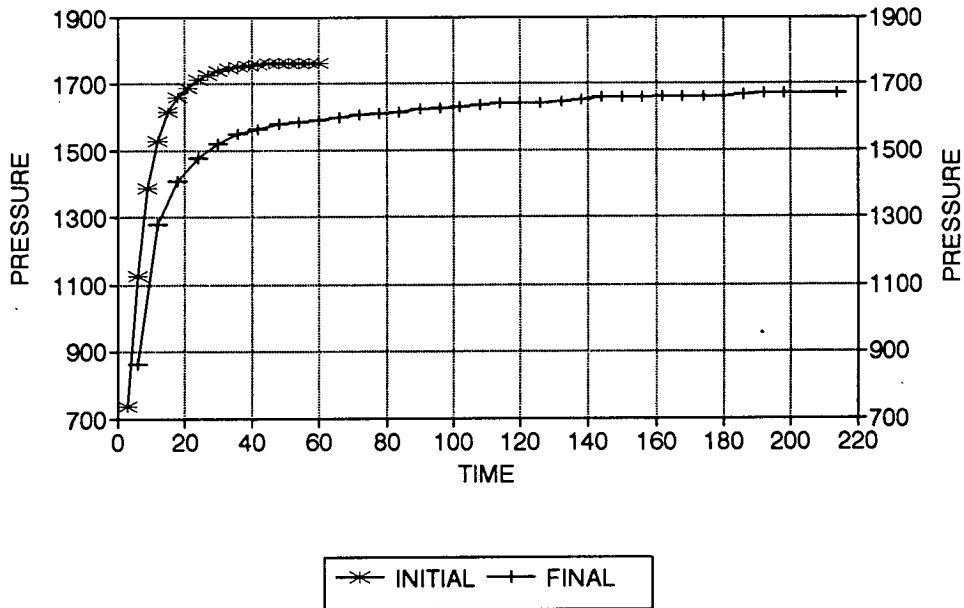
OIL

75 TOTAL FLOW TIME

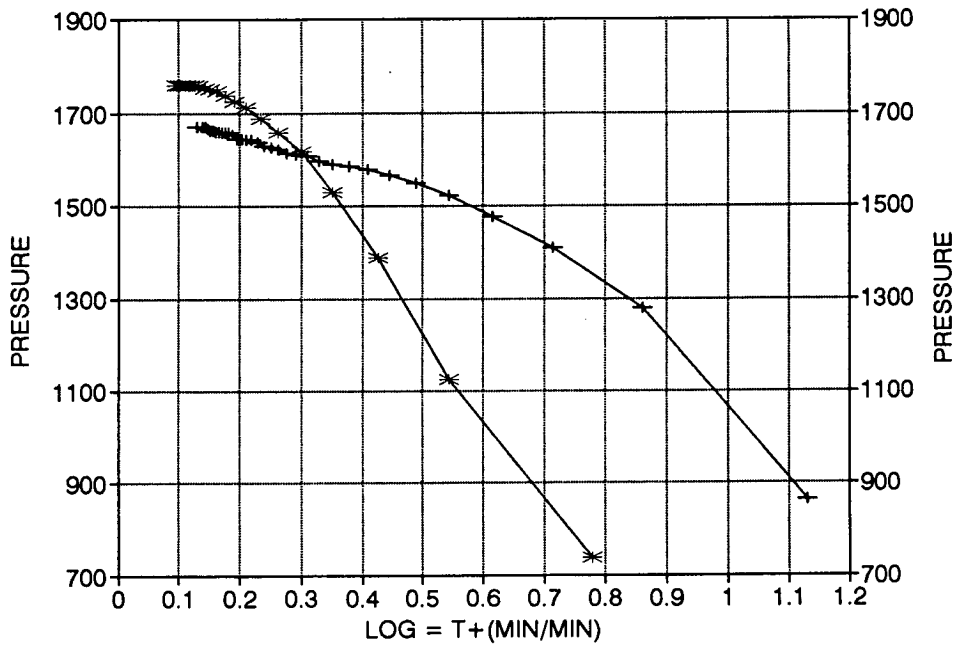
-----  
Slope            403.64 psi/cycle  
P \*                1725 psi  
-----

	Pws (psi)	Log Horn T	<> PRESSURE	Horn T	
	6	861.6	1.130	861.6	14
	12	1279.1	0.860	417.5	7
	18	1408.1	0.713	129.0	5
	24	1475.3	0.615	67.2	4
	30	1521.2	0.544	45.9	4
	36	1549.3	0.489	28.1	3
	42	1563.8	0.445	14.5	3
	48	1578.4	0.409	14.6	3
	54	1585.1	0.378	6.7	2
	60	1590.8	0.352	5.7	2
	66	1597.1	0.330	6.3	2
	72	1608.7	0.310	11.6	2
	78	1610.9	0.293	2.2	2
	84	1613.2	0.277	2.3	2
	90	1622.1	0.263	8.9	2
	96	1625.5	0.251	3.4	2
	102	1628.9	0.239	3.4	2
	108	1636.7	0.229	7.8	2
	114	1641.2	0.220	4.5	2
	120	1642.3	0.211	1.1	2
X	126	1643.4	0.203	1.1	2
	132	1644.6	0.195	1.2	2
	138	1653.5	0.189	8.9	2
	144	1656.9	0.182	3.4	2
	150	1656.9	0.176	0.0	2
	156	1656.9	0.170	0.0	1
	162	1660.3	0.165	3.4	1
	168	1660.3	0.160	0.0	1
	174	1661.4	0.156	1.1	1
	180	1662.5	0.151	1.1	1
	186	1667.1	0.147	4.6	1
	192	1671.5	0.143	4.4	1
	198	1672.6	0.139	1.1	1
X	214	1672.6	0.130	0.0	1

# SELZER 16-12/ DST #2 DELTA T DELTA P



# HORNER PLOT





# GAS VOLUME REPORT

CODY RESOURCES INC

SELZER 16-12

DST # 2

MIN	WATER	ORIFICE	MCF/D	MIN	PSIG	ORIFICE	MCF/D
0		1	0	2	3.5	1	263
5	18	1	110	5	3	1	242
10	20	1	115	10	3	1	242
15	20	1	115	15	2.5	1	220
				20	2	1	195
					WATER		
				25	20	1	115
				30	20	1	115
				35	20	1	115
				40	20	1	115
				45	20	1	115
				50	20	1	115
				55	20	1	115
				60	20	1	115

Remarks: GAS TO SURFACE ON FIRST SHUTIN

# TRILOBITE TESTING L.L.C.

P.O. Box 362 • Hays, Kansas 67601

## Test Ticket

No 5789

Well Name & No. <u>SEIZER 16-12</u>		Test No. <u>2</u>	Date <u>4-29-93</u>
Company <u>COOY DES INC</u>		Zone Tested <u>VIOLA A+B</u>	
Address <u>731 W WADLEY AVE STE 0-114 MIDLAND</u>		Elevation <u>1762 KB</u>	
Co. Rep. / <u>JOHN</u>	Cont. <u>BRANDT</u>	Est. Ft. of Pay <u>10</u>	
Location: Sec. <u>16</u>	Twp. <u>34</u>	Rge. <u>20</u>	Co. <u>COMANCHE</u> State <u>KS</u>
No. of Copies _____	Distribution Sheet _____	Yes _____ No _____	Turnkey _____ Yes _____ No _____
Evaluation _____			

Interval Tested <u>5860 - 5964</u>	Drill Pipe Size <u>4 1/2 X 1 1/4</u>
Anchor Length <u>104</u>	Top Choke — 1" _____ Bottom Choke — 3/4" _____
Top Packer Depth <u>5855</u>	Hole Size — 7 7/8" _____ Rubber Size — 6 3/4" _____
Bottom Packer Depth <u>5860</u>	Wt. Pipe I.D. — 2.7 Ft. Run _____
Total Depth <u>5964</u>	Drill Collar — 2.25 Ft. Run <u>630</u>
Mud Wt. <u>9.1</u> <u>bcn</u> — lb/gal.	Viscosity <u>50</u> Filtrate <u>9.8</u>

Tool Open @ 10:12 AM Initial Blow Good Blow OFF BOTTOM 1 MIN  
Setool 20' to Bottom Loss 30' MUD  
 Final Blow OFF BOTTOM IN 30 SEC GAS TO SUR ON FIRST SHUT-IN  
20 Low ON 1" ORIFICE = 115 MCF/PAY

Recovery — Total Feet _____	Feet of Gas in Pipe _____	Flush Tool? _____
Rec. _____ Feet Of _____	%gas _____ %Oil _____ %water _____ %mud _____	
Rec. _____ Feet Of _____	%gas _____ %Oil _____ %water _____ %mud _____	
Rec. <u>CIRC. OUT</u> Feet Of <u>OIL MUD</u>	<u>5</u> %gas <u>2</u> %Oil _____ %water <u>98</u> %mud	
Rec. _____ Feet Of _____	%gas _____ %Oil _____ %water _____ %mud _____	
Rec. _____ Feet Of _____	%gas _____ %Oil _____ %water _____ %mud _____	

BHT 128 °F Gravity \_\_\_\_\_ °API @ \_\_\_\_\_ °F Corrected Gravity 41 °API

RW \_\_\_\_\_ @ \_\_\_\_\_ °F Chlorides \_\_\_\_\_ ppm Recovery Chlorides 10 000 ppm System

- (A) Initial Hydrostatic Mud 2955 PSI AK1 Recorder No. 13308 Range 4700
- (B) First Initial Flow Pressure 216 PSI @ (depth) 5864 w/Clock No. 2106124 Hour
- (C) First Final Flow Pressure 204 PSI AK1 Recorder No. 11057 Range 4500
- (D) Initial Shut-In Pressure 1748 PSI @ (depth) 5900 w/Clock No. 17652
- (E) Second Initial Flow Pressure 181 PSI AK1 Recorder No. \_\_\_\_\_ Range \_\_\_\_\_
- (F) Second Final Flow Pressure 216 PSI @ (depth) \_\_\_\_\_ w/Clock No. \_\_\_\_\_
- (G) Final Shut-In Pressure 1641 PSI Initial Opening 15 Test  700
- (H) Final Hydrostatic Mud 2885 PSI Initial Shut-In 60 Jars  200

TRIOBITE TESTING L.L.C. SHALL NOT BE LIABLE FOR DAMAGE OF ANY KIND OF 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, OR ITS STATEMENTS OR OPINION CONCERNING THE RESULTS OF ANY TEST. TOOLS LOST OR DAMAGED IN THE HOLE SHALL BE PAID FOR AT COST BY THE PARTY FOR WHOM THE TEST IS MADE.

Final Flow 60 Safety Joint  50  
 Final Shut-In 180 Straddle \_\_\_\_\_  
 Circ. Sub  35.00  
 Sampler  200  
 Extra Packer \_\_\_\_\_  
 Other 50

Approved By [Signature]  
 Our Representative [Signature]