

ORIGINAL SIDE ONE

TIGHT HOLE CONFIDENTIAL

STATE CORPORATION COMMISSION OF KANSAS
OIL & GAS CONSERVATION DIVISION
WELL COMPLETION FORM
ACO-1 WELL HISTORY
DESCRIPTION OF WELL AND LEASE

API NO. 15- 185-22,739-0000
County Stafford
SW NE SW Sec. 10 Twp. 24S Rge. 15W X East West

RELEASED

1650' Ft. North from Southeast Corner of Section
3630' Ft. West from Southeast Corner of Section
(NOTE: Locate well in section plat below.)

Lease Name IRMA SMITH Well # 2-10

Field Name Macksville East

Producing Formation Viola

Elevation: Ground 2019' KB 2028'

Total Depth 4190' PBTB None

Operator: License # 5056

Name: F. G. HOLL COMPANY

Address 6427 E. Kellogg

P.O. Box 780167

City/State/Zip Wichita, KS 67278-0167

Purchaser: Central States Gas Co.

Operator Contact Person: Elwyn H. Nagel

Phone (316) 684-8481

Contractor: Name: Sterling Drilling Company

License: 5142

Wellsite Geologist: W. Bryce Bidleman

Designate Type of Completion

X New Well Re-Entry Workover

X Oil SWD Temp. Abd

X Gas 52 Inj Delayed Comp

Dry Other (Core, Water Supply, etc.)

If OLD: old well info as follows:

Operator:

Well Name:

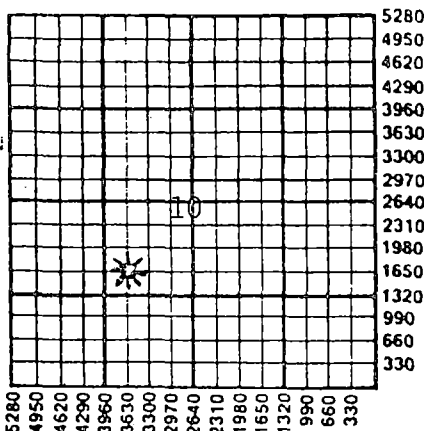
Comp. Date Old Total Depth

Drilling Method:

X Mud Rotary Air Rotary Cable

11/16/90 11/24/90 12/11/90

Spud Date Date Reached TD Completion Date



Amount of Surface Pipe Set and Cemented at 265' KB Feet

Multiple Stage Cementing Collar Used? Yes X No

If yes, show depth set Feet

If Alternate II completion, cement circulated from

feet depth to w/ sx cmt.

INSTRUCTIONS: This form shall be completed in triplicate and filed with the Kansas Corporation Commission, 200 Colorado Derby Building, Wichita, Kansas 67202, within 120 days of the spud date of any well. Rule 82-3-130, 82-3-107 and 82-3-106 apply. Information on side two of this form will be held confidential for a period of 12 months if requested in writing and submitted with the form. See rule 82-3-107 for confidentiality in excess of 12 months. One copy of all wireline logs and drillers time log shall be attached with this form. ALL CEMENTING TICKETS MUST BE ATTACHED. Submit CP-4 form with all plugged wells. Submit CP-111 form with all temporarily abandoned wells. Any recompletion, workover or conversion of a well requires filing of ACO-2 within 120 days from commencement date of such work.

All requirements of the statutes, rules and regulations promulgated to regulate the oil and gas industry have been fully complied with and the statements herein are complete and correct to the best of my knowledge.

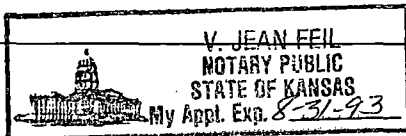
Signature Elwyn H. Nagel

Title Elwyn H. Nagel, Manager Date 3/6/91

Subscribed and sworn to before me this 6th day of March, 1991.

Notary Public V. Jean Feil

Date Commission Expires



K.C.C. OFFICE USE ONLY
F Letter of Confidentiality Attached
C Wireline Log Received
C Drillers Timelog Received
Distribution
KCC SWD/Rep NGPA
KGS Plug Other (Specify)

CONFIDENTIAL

TIGHT HOLE!

SIDE TWO

Operator Name F. G. HOLL COMPANY Lease Name IRMA SMITH Well # 2-10

Sec. 10 Twp. 24S Rge. 15W East West
County Stafford

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 (Attach Additional Sheets.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Formation Description <input checked="" type="checkbox"/> Log <input type="checkbox"/> Sample Name Top Bottom Heebner 3523 (-1495) Brown Lime 3659 (-1631) Lansing 3665 (-1637) BKC 3917 (-1889) Viola 4015 (-1987) Simpson SH 4060 (-2032) Simpson SD 4082 (-2054) Arbuckle 4139 (-2111) RTD 4190 (-2162) LTD 4189 (-2161)
Samples Sent to Geological Survey	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Cores Taken	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Electric Log Run (Submit Copy.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

DST #1 (3676-3718) LANSING "A" ZONE
1) WB throughout 2) WB throughout
REC: 190' Mw/Few Oil Spks
IHP: 1805 IFP: 37-74:30" ISIP: 1097:60"
FHP: 1815 FFP: 85-128:60" FSIP: 1048:60"
BHT: 115F
(See attached sheet for additional DST's)

CASING RECORD <input checked="" type="checkbox"/> New <input checked="" type="checkbox"/> 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" (N)	23#	265'KB	60/40 POZ	225	2%Gel, 3%CC
Production	7 7/8"	4 1/2" (N&U)	10.5#	4186'KB	Lite	100	Salt, Gils.
					50/50 POZ	125	

PERFORATION RECORD		Acid, Fracture, Shot, Cement Squeeze Record (Amount and Kind of Material Used) Depth	
Shots Per Foot	Specify Footage of Each Interval Perforated		
1SPF	4018-4021, 4025-4027, 4032-4034, 4039-4041, 4048-4057 (Viola)	AC:500gls 15% DSFE, FR:18000 gls My-T-Gel III X-Link 250sks 20/40, 280sks 12/20, SWB:80bbls, GSG	4057'

TUBING RECORD	Size 2"	Set At 3996'	Packer At None	Liner Run <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
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Date of First Production None Producing Method Flowing Pumping Gas Lift Other (Explain) Waiting on Gas Line

Estimated Production Per 24 Hours	Oil Bbls.	Gas Mcf	Water Bbls.	Gas-Oil Ratio	Gravity
		3200			

Disposition of Gas: Vented Sold Used on Lease (If vented, submit ACO-18.)

METHOD OF COMPLETION Open Hole Perforation Dually Completed Commingled Other (Specify) _____

Production Interval 4018-4057
(Viola)

TIGHT HOLE!

ORIGINAL
F. G. HOLL COMPANY

6427 EAST KELLOGG - P.O. BOX 780167
WICHITA, KS 67278-0167

CONFIDENTIAL

IRMA SMITH #2-10
SW NE SW
Sec 10-24s-15w
Stafford County, KS
API#: 15-185-22,739

RELEASED

MAR 09 1993

FROM CONFIDENTIAL

DST #2 (4023-4070) Viola

1) SB, GTS in 5 mins.

Gauged 1st Opening:	519,000	CFGPD in 10"
	439,000	" 20"
	439,000	" 30"
Gauged 2nd Opening	439,000	" 10"
	439,000	" 20"
	439,000	" 30"
	439,000	" 40"
	439,000	" 50"
	439,000	" 60"

REC: 175' GM

IHP: 1969 IFP: 107-95:30" ISIP: 1309:60"

FHP: 1949 FFP: 107-86:60" FSIP: 1267:90"

BHT: 116F

DST #3 (4141-4150) Arbuckle

1) WB 1 3/8" in bucket 2) WB 1 3/8" in bucket

REC: 60' VSOCWM

IHP: 2037 IFP: 22-36:30" ISIP: 1322:30"

FHP: 1954 FFP: 42-49:30" FSIP: 1302:30"

BHT: 116F

STATE CONSERVATION COMMISSION

MAR 19 1993

CONSERVATION DIVISION
Wichita, Kansas

ORIGINAL

STATE OF KANSAS - CORPORATION COMMISSION
MULTIPOINT BACK PRESSURE TEST

FORM CG-1

CONFIDENTIAL

TYPE TEST: Initial Annual Special TEST DATE: 12-27-90

COMPANY: F.G. Holl LEASE: Irma Smith WELL NO.: 2-10

COUNTY: Stafford LOCATION: SW/4 SECTION: 10 T: 24S ACRES: RELEASED

FIELD: RESERVOIR PIPELINE CONNECTION: None

COMPLETION DATE: PLUG BACK TOTAL DEPTH: PACKER SET AT: 10 0 1003

CASING SIZE: WT. ID SET AT: FROM CONFIDENTIAL TO

TUBING SIZE: WT. ID. SET AT: PERF. TO

TYPE COMPLETION (Describe): Single TYPE FLUID PRODUCTION: RECEIVED

PRODUCING THRU: Tubing RESERVOIR TEMPERATURE: BAR PRESS - P_a: 14.4 Psia

GAS GRAVITY - G_g: .640 % CARBON DIOXIDE: .081 % NITROGEN: 8.616 API GRAVITY OF LIQUID: 1.1991

VERTICAL DEPTH (H): TYPE METER CONN.: None (METER RUN) (PROVER) SIZE: 2"

REMARKS: CONSERVATION DIVISION, Wichita, Kansas

OBSERVED DATA

DURATION OF SHUT-IN ? HR.

RATE No.	ORIFICE SIZE in.	(METER) (PROVER) PRESSURE psig	DIFF. (h _w) (h _d)	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASING WELLHEAD PRESS.		TUBING WELLHEAD PRESS.		DURATION HOUR	LIQUID PROD. Bbls.
						psig	(P _w)(P _i)(P _d) psia	psig	(P _w X P _i)(P _c) psia		
SHUT IN	7/16		--			1150	1164.4	1150	1164.4	?	
1	7/16	45	--	64°	--	1135	1149.4	1135	1149.4	1	0
2	7/16	101	--	54°	--	1105	1119.4	1105	1119.4	1	0
3	7/16	160	--	52°	--	1071	1085.4	1060	1074.4	1	0
4	7/16	222	--	48°	--	1025	1039.4	1020	1034.4	1	0
5											

RATE OF FLOW CALCULATIONS

RATE NO.	COEFFICIENT (F _d)(F _p) Mafd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m \times h_w}$	GRAVITY FACTOR F _g	FLOWING TEMP FACTOR F _t	DEVIATION FACTOR F _{pv}	RATE OF FLOW Q Mafd	GOR	G _m
1	3.495	59.4	----	1.250	.9962	----	259		
2	3.495	115.4	----	1.250	1.006	----	507		
3	3.495	174.4	----	1.250	1.008	1-014	779		
4	3.495	236.4	----	1.250	1.012	1-022	1068		
5									

PRESSURE CALCULATIONS

RATE NO.	P _i psia	P _o psia	P _w psia	(P _o) ² THOUSANDS	(P _w) ² THOUSANDS	PLOTTING POINTS		% SHUT-IN $100 \left[\frac{P_w - P_a}{P_c - P_a} \right]$
						(P _o) ² - (P _w) ² THOUSANDS	Q Mafd	
1	1149.4	1164.4	1149.4	1355.8	1321.1	34.7	259	98.7
2	1119.4	1164.4	1119.4	1355.8	1253.1	102.7	507	96.1
3	1074.4	1164.4	1085.4	1355.8	1178.1	177.7	779	93.2
4	1034.4	1164.4	1039.4	1355.8	1080.4	275.4	1068	89.3
5								

INDICATED WELLHEAD OPEN FLOW 3200

Mafd @ 14.65 psia

"n" = .703

The undersigned authority, on behalf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct.

Executed this the 15th day of January, 1991.

G. Johnson-F.G. Holl
Witness (if any)

M. Stivers-RNGC
For Company
G. Maier

ORIGINAL

RECEIVED

CONFIDENTIAL

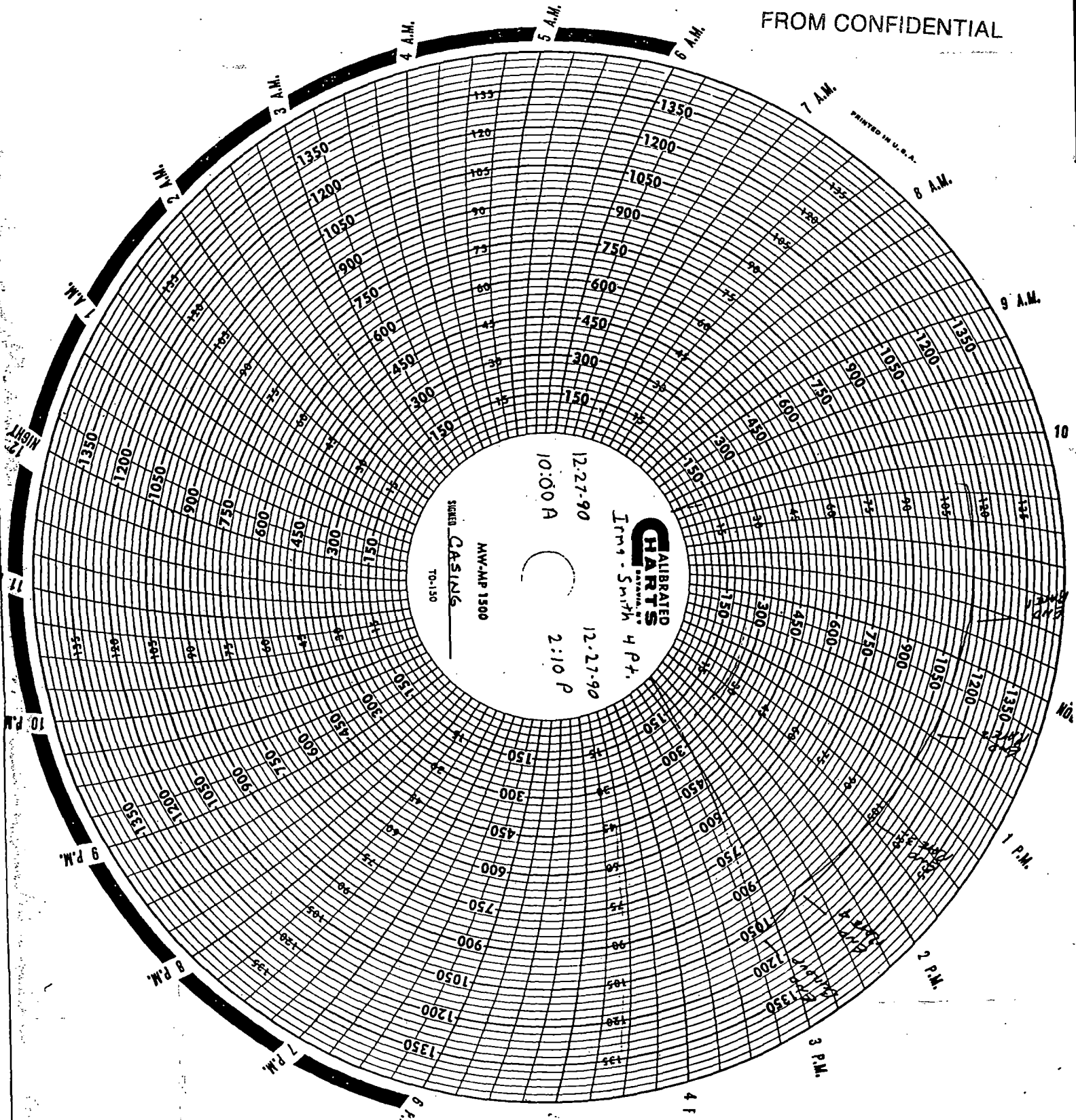
MAR 1 1 1991

CONSERVATION DIVISION
Wichita, Kansas

RELEASED

MAR 9 1993

FROM CONFIDENTIAL



MID CONTINENT MEASUREMENT, INC.

922 South Roland P.O. Box 49 (918)-367-5517 Wistow, OK 74010
 01-08-1991 Page 203

 G A S A N A L Y S I S R E P O R T

Company Name : R.N.G.C. Sample Pres : 1150.00
 Lease Number : POTENTIAL Sample Temp : 24
 Lease Name : IRMA SMITH 2-10 Sample Date : 12/14/90
 Location ID : F.G. HOLL Analysis Date : 91/01/05
 Sample Number : 11
 Cylinder # : 857 Sampled By : MMS

=====		=====	=====
C O M P O N E N T		Mole %	GPM
=====		=====	=====
Helium	He	0.685	
Oxygen	O2	0.000	
Carbon Dioxide	CO2	0.081	
Nitrogen	N2	8.616	
Methane	C1	84.078	
Ethane	C2	3.915	1.0414
Propane	C3	1.571	0.4305
I-Butane	IC4	0.231	0.0752
N-Butane	NC4	0.462	0.1449
I-Pentane	IC5	0.097	0.0353
N-Pentane	NC5	0.104	0.0375
Hexane Plus	C6+	0.160	0.0691
Totals		100.000	1.8339

=====		=====	=====
Calculated BTU Values		Gallons Per Thousand	Specific Gravity
=====		=====	=====
BTU Dry Ideal	993.6666	C2 + GPM - 1.8339	Ideal 0.6398
BTU Wet Ideal	976.3768	C3 + GPM - 0.7925	
		C4 + GPM - 0.3620	
		C5 + GPM - 0.1419	
		Z FACTOR = 0.9979	

IRMA SMITH 2-10 - F.G. HOLL
 SW-4 10-24S-15W
 STAFFORD COUNTY
 TESTED 12-27-90

ORIGINAL

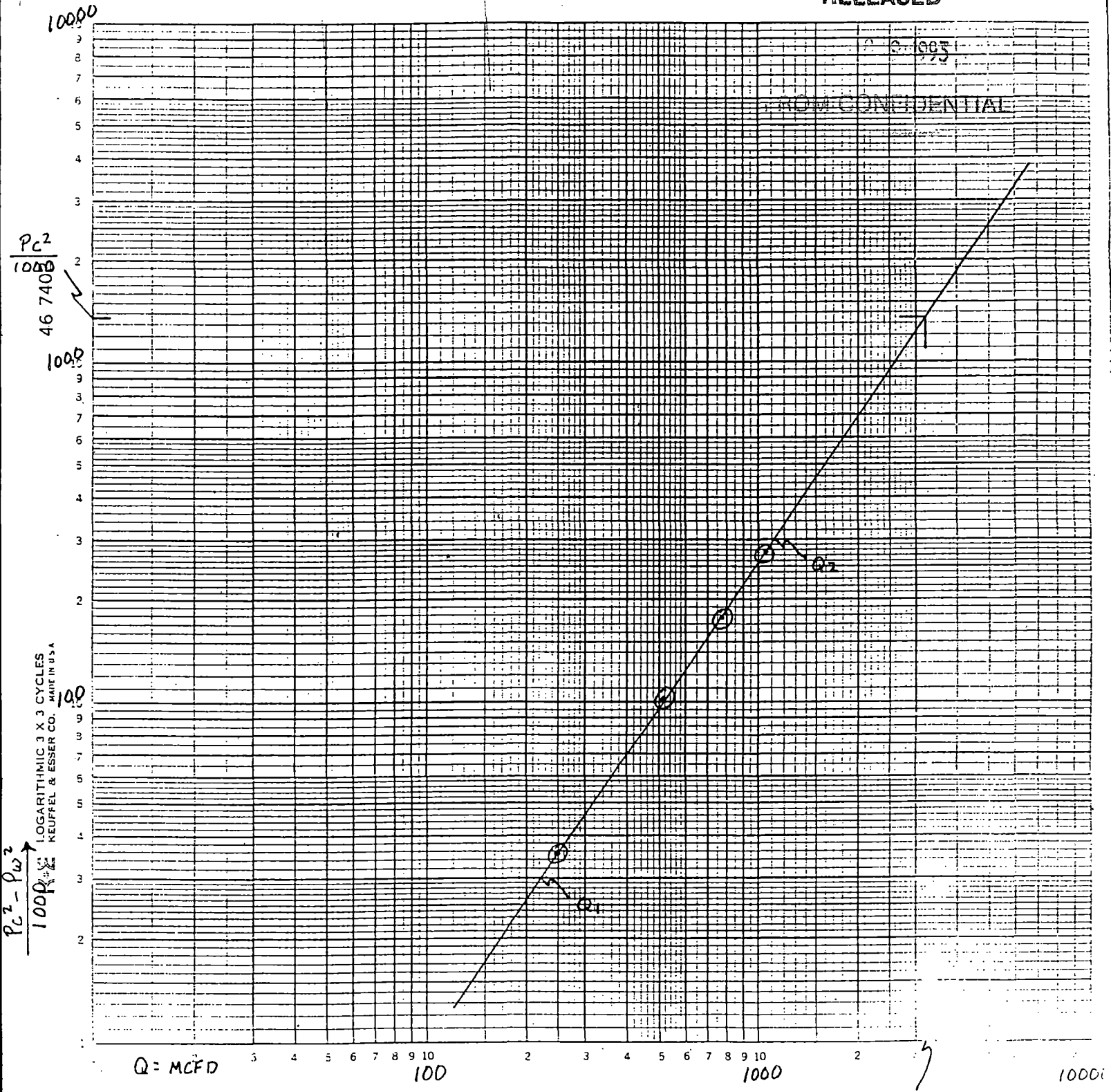
RECEIVED
 STAFFORD COUNTY COMMISSION

MAR 19 1991

CONFIDENTIAL

CONSERVATION DIVISION
 Wichita, Kansas

RELEASED



LOGARITHMIC 3 X 3 CYCLES
 KEUFFEL & ESSER CO. MADE IN U.S.A.

$Q_2 = 1120 = 3.049$
 $Q_1 = 222 = 2.346$
 $"n" = .703$

IWHOF



ORIGINAL

INVOICE DATE
11/16/90

DIRECT BILLING INQUIRIES TO: 713-895-5821	TERMS: NET AMOUNT DUE 30 DAYS FROM DATE OF INVOICE	REMIT TO: B.J. SERVICES P.O. BOX 100836 HOUSTON, TX 77212
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PAGE 1	INVOICE NO. Y3023
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F. G. HOLD
P.O. BOX 158
BELPRE

RELEASED

KS 67519 0 1007

CONFIDENTIAL

AUTHORIZED BY
609188

PURCH. ORDER REF. NO.

WELL NUMBER : 2-10

FROM CONFIDENTIAL

CUSTOMER NUMBER : 08525000

LEASE NAME AND NUMBER IRMA SMITH	STATE 14	COUNTY/PARISH	CITY	DISTRICT NAME GREAT BEND	DISTR. NO. 3310
JOB LOCATION FIELD	M/A DISTRICT	DATE OF JOB 11/16/90	TYPE OF SERVICE LAND-CONDUCTOR/SURFACE		

PRODUCT NUMBER	QUANTITY	DESCRIPTION	UNIT PRICE	U/M	EXTENDED PRICE
10100302	1.00	CEMENT CASING 0 TO 300 FEET		EA CF CF LB LB	
10109005	40.00	MILEAGE CHRG, FROM NEAREST BASE OF			
10430539	1.00	8 5/8" TOP HOLE (SURFACE) PLUG			
10410504	135.00	CLASS "A" CEMENT			
10415018	90.00	FLY ASH			
10420145	387.00	BJ-TITAN GEL, BENTONITE, BULK SALES			
10415049	581.00	A-7-P CALCIUM CHLORIDE PELLETS			
10880001	225.00	MIXING SEVICE CHRG DRY MATERIALS, P			
10940101	408.00	DRAYAGE, PER TON MILE			
10107891	1.00	FUEL SURCHARGE			
<p>STATE CORPORATION COMMISSION</p> <p>MAR 19 1991</p> <p>CONSERVATION DIVISION Wichita, Kansas</p>			SUB TOTAL		
			DISCOUNT		

ACCOUNT	4.25000% STATE TAX 1.00000% COUNTY TAX	
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TAX EXEMPTION STATUS:



INVOICE DATE
11/24/90

DIRECT BILLING INQUIRIES TO: 713-895-5821	TERMS NET AMOUNT DUE 30 DAYS FROM DATE OF INVOICE	SHIP TO: B.J. SERVICES P.O. BOX 100806 HOUSTON, TX 77212
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PAGE 1	INVOICE NO. 23020
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F. G. NELL

C/O ART MERRICK
P.O. BOX 563
BELPRE,

KS 67519

AUTHORIZED BY 635815

PURCH. ORDER REF. NO.

WELL NUMBER : 2-10

CUSTOMER NUMBER : 08525001

LEASE NAME AND NUMBER IRMA SMITH	STATE 14	COUNTY/PARISH	CITY	DISTRICT NAME GREAT BEND	DISTR. NO. 3310
JOB LOCATION/FIELD	MTA DISTRICT	DATE OF JOB 11/24/90	TYPE OF SERVICE LAND-LONG STRING/PRODUCT		

PRODUCT NUMBER	QUANTITY	DESCRIPTION	UNIT PRICE	U/M	EXTENDED PRICE
1010324	1.00	CEMENT CASING 4,001 TO 4,500 FEET			
10109005	-0.00	MILEAGE CHRG, FROM NEAREST BASE OF			
10410504	128.00	CLASS "A" CEMENT		CF	
10415018	97.00	FLY ASH		CF	
10420145	738.00	BJ-TITAN GEL, BENTONITE, BULK SALES		LB	
10415038	1550.00	A-5 SALT		LB	
10415082	625.00	KOL SEAL		LB	
10422008	31.00	CELLO FLAKE		LB	
10424005	79.00	CD-31		LB	
10424530	18.00	FP-8		LB	
10425010	500.00	MUD-SWEEP, WITH BJ-TITAN PUMPING EQ		GL	
10430608	1.00	4 1/2" TOP RESIN/PLASTIC CORE		EA	
10380001	448.00	MIXING SERVICE CHRG DRY MATERIALS, P			
10940101	225.00	DRAYAGE, PER TON MILE			
10409600	1.00	4 1/2 SHOE		GL	
10409600	1.00	INSERT		GL	

ACCOUNT	
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TAX EXEMPTION STATUS: