KANSAS CORPORATION COMMISSION
MULTIPOINT BACK PRESSURE TEST

FORM G-1
8-7-58

TYPE TEST: ☒ Initial ☐ Annual ☐ Special				TEST DATE: 10-23-01	
COMPANY			LEASE		WELL NO.
Abercrombie Energy			Lee Ranch		1-5 twin
COUNTY	LOCATION		SECTION	TWP	RNG	ACRES
Barber	app- se-se-se		5	30s	15w	
FIELD	RESERVOIR		PIPELINE CONNECTION			
unnamed	Cherokee sand		Oneok			
COMPLETION DATE		PLUG BACK DEPTH	4697		PACKER SET AT	
7/31/2001		TOTAL DEPTH	4750			
CASING SIZE	WT.	ID	SET AT	PERF.	TO	
4.500	10.500	4.052	4746	4593	4599	
TUBING SIZE	WT.	ID	SET AT	PERF.	TO	
2.375	4.700	1.995	4594			
TYPE COMPLETION (Describe)			TYPE FLUID PRODUCTION			
PRODUCING THRU (Annulus/Tubing)			RESERVOIR TEMPERATURE F		BAR PRESS - Pa	
tubing			117		14.4 psia	
GAS GRAVITY - Gg	% CARBON DIOXIDE		% NITROGEN		API GRAVITY OF LIQUID	
.783	.055		38.342			
VERTICAL DEPTH (H)			TYPE METER CONN.		METER RUN SIZE	
4596					2	
REMARKS						

OBSERVED SURFACE DATA

RATE NO.	ORIFICE SIZE in.	(METER) PRESSURE psig	DIFF. (h_w) (h_t)	FLOWING TEMP. t.	WELLHEAD TEMP. t.	CASING WELLHEAD PRESS. psig	CASING WELLHEAD PRESS. (P_w) (P_t) (P_c) psia	TUBING WELLHEAD PRESS. psig	TUBING WELLHEAD PRESS. (P_w) (P_t) (P_c) psia	DURATION HOURS	LIQUID PROD. Bbls.
SHUT-IN						1307	1321	1205	1219		
1.	.625	129.10	18.80	73		1250	1264	1150	1164	1.00	
2.	.625	129.50	46.80	74		1221	1235	1125	1139	1.00	
3.	.625	130.00	100.60	73		1169	1183	1080	1094	1.00	
4.	.625	115.70	160.30	71		1132	1146	1035	1049	1.00	

FLOW STREAM ATTRIBUTES

RATE NO.	COEFFICIENT (F_b) Mcfd	(METER) PRESSURE psia	EXTENSION $\sqrt{P_m \times H_w}$	GRAVITY FACTOR Fg	FLOWING TEMP FACTOR Ft	DEVIATION FACTOR Fpv	RATE OF FLOW Q Mcfd	GOR	G_m
1.	1.914	143.5	51.94	1.1301	.9877	1.0090	111		.783
2.	1.914	143.9	82.06	1.1301	.9868	1.0090	176		.783
3.	1.914	144.4	120.53	1.1301	.9877	1.0091	259		.783
4.	1.914	130.1	144.41	1.1301	.9888	1.0083	311		.783

PRESSURE CALCULATION

RATE NO.	Pt psia	Pc psia	Pw psia	$(Pc)^2$ Thousands	$(Pw)^2$ Thousands	PLOTTING POINTS $(P_c)^2 - (P_w)^2$ Thousands	PLOTTING POINTS Q Mcfd	% SHUT-IN $100 \left[\frac{Pw - Pa}{Pc - Pa}\right]$
1.	1164.4	1321.4	1264.4	1746.1	1598.7	147.4	112.0	95.6
2.	1139.4	1321.4	1235.4	1746.1	1526.2	219.9	176.7	93.4
3.	1094.4	1321.4	1183.4	1746.1	1400.4	345.7	259.8	89.4
4.	1049.4	1321.4	1146.4	1746.1	1314.2	431.9	311.4	86.6

INDICATED WELLHEAD OPEN FLOW 1324 Mcfd @ 14.65 psia "n" = .992

The undersigned authority, on behaf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated herein and that said report is true and correct. Executed this the 29 day of Oct, 20 01

Witness (if any)

For Company

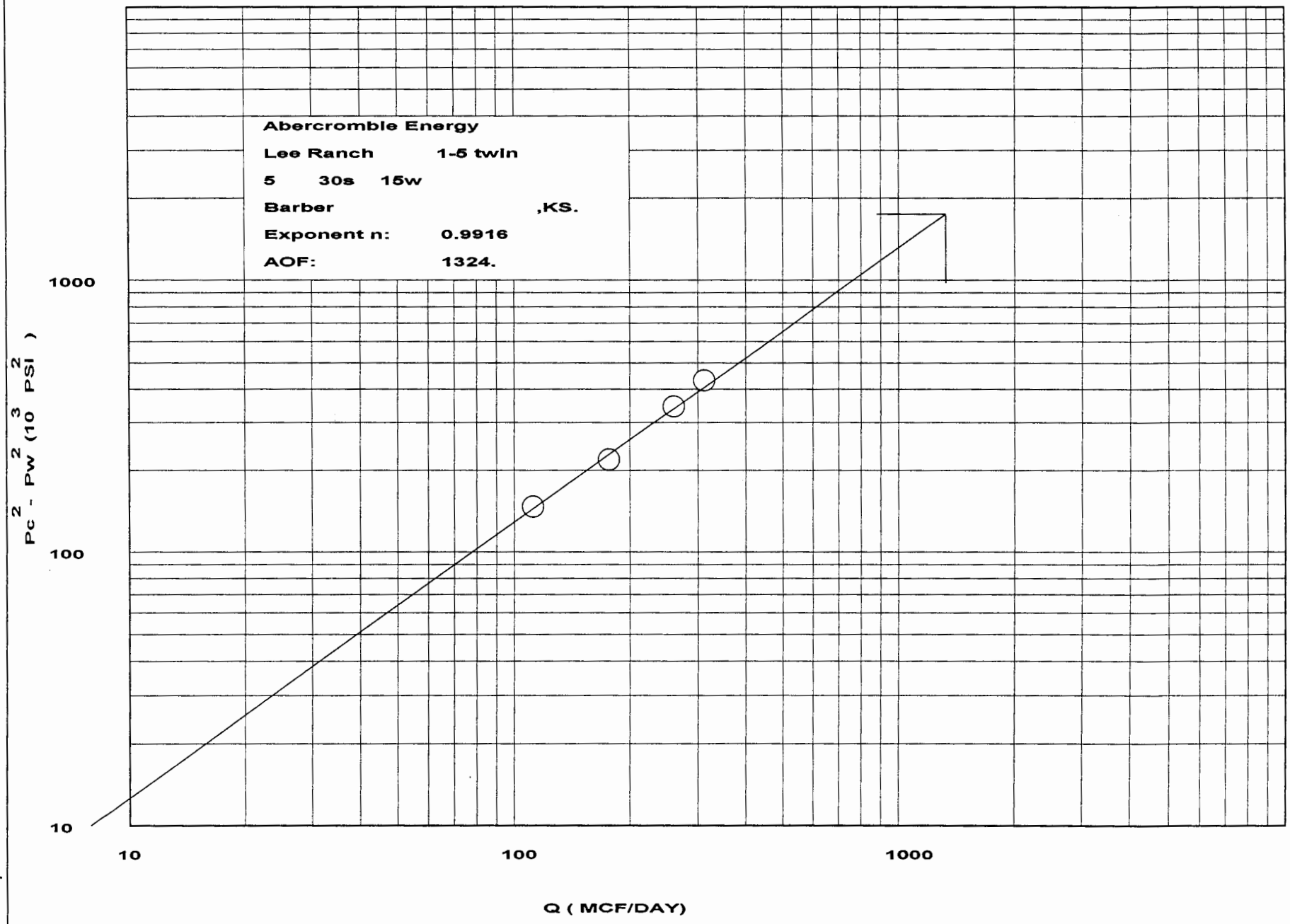
For Commission

Checked by

WELL TESTER: Trilobite Testing

GAS WELL BACK PRESSURE CURVE

TEST DATE: 10-23-01



KANSAS CORPORATION COMMISSION
ONE POINT STABLIZED OPEN FLOW OR DELIVERABILITY TEST

FORM G-2
(Rev.8/98)

TYPE TEST:
☒ Open Flow
☒ Deliverability

TEST DATE: 10/24/01

API No. 15-007-22660

Company	Lease	Well Number
Abercrombie Energy	Lee Ranch	1-5 twin

County	Location	Section	TWP	RNG(E/W)	Acres Attributed
Barber	app- se-se-se	5	30s	15w	

Field	Reservoir	Gas Gathering Connection
unnamed	Cherokee sand	Oneok

Completion Date	Plug Back Total Depth	Packer Set at
7/31/2001	4697	

Casing Size	Weight	Internal Diameter	Set at	Perforations	To
4.500	10.500	4.052	4746	4593	4599

Tubing Size	Weight	Internal Diameter	Set at	Perforations	To
2.375	4.700	1.995	4594		

Type Completion (Describe)	Type Fluid Production	Pump Unit or Traveling Plunger?
		no

Producing Thru(Annulus/Tubing)	% Carbon Dioxide	% Nitrogen	Gas Gravity- Gg
tubing	.008	38.628	.801

Vertical Depth (H)	Pressure Taps	Meter Run Size
4596	flange	2.067

Pressure Buildup: Shut in	10-20-01 @ 1200	TAKEN	10-23-01 @ 1145
Well on Line: Started	10-23-01 @ 1210	TAKEN	10-24-01 @ 1200

OBSERVED SURFACE DATA

Static/ Dynamic Property	Orifice Size in.	Meter Pressure psig	Pressure Diff. In. H_2O	Flowing Temp. t.	WellHead Temp. t.	Casing WellHead Press. (P_w) (P_t) (P_c) psig	Casing WellHead Press. psia	Tubing WellHead Press. (P_w) (P_t) (P_c) psig	Tubing WellHead Press. psia	Duration (Hours)	Liquid Prod. Barrels
Shut-in						1307	1321	1205	1219		
Flow	.625	128.9	44.90	66		1228	1242	1040	1054		

FLOW STREAM ATTRIBUTES

COEFFICIENT (F_b) Mcfd	(METER) PRESSURE psia	EXTENSION $\sqrt{P_m \times H_w}$	GRAVITY FACTOR Fg	FLOWING TEMP FACTOR Ft	DEVIATION FACTOR Fpv	RATE OF FLOW R Mcfd	GOR	G_m
1.914	143.3	80.21	1.1173	.9943	1.0100	172		.801

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS

$(Pc)^2$ = 1746.1 $(Pw)^2$ = 1543.6 Pd = 10.8 % (Pc - 14.4) + 14.4 = $(Pa)^2$ = 0.207 $(Pd)^2$ = 20.45

$(P_c)^2 - (P_a)^2$ or $(P_c)^2 - (P_d)^2$	$(P_c)^2 - (P_w)^2$	$\frac{(P_c)^2 - (P_a)^2 \text{ or } (P_c)^2 - (P_d)^2}{(P_c)^2 - (P_w)^2}$	LOG [ ]	Backpressure Curve Slope "n" ---- or ---- Assigned Standard Slope	n x LOG [ ]	Antilog	Open Flow Deliverability = R x Antilog Mcfd
1745.89	202.54	8.620	.9355	.992	.9280	8.473	1459
1725.65	202.54	8.520	.9304	.992	.9230	8.375	1442

OPEN FLOW 1459 Mcfd @ 14.65 psia DELIVERABILITY 1442 Mcfd @ 14.65 psia

The undersigned authority, on behaf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated herein and that said report is true and correct. Executed this the 29 day of Oct, 20 01

Witness (if any)

For Company

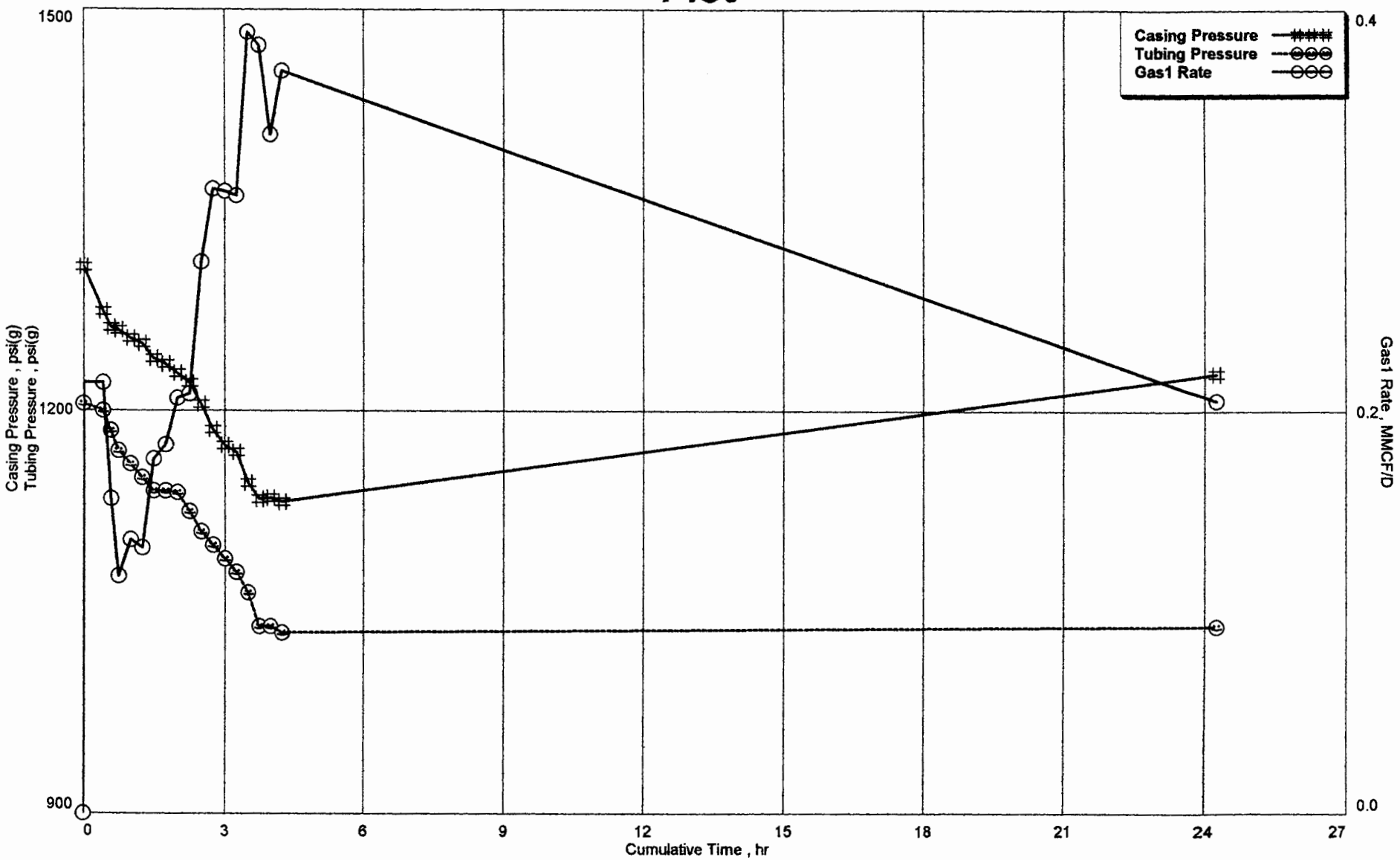
For Commission

Checked by

Abercrombie Energy L.L.C.
SE SE SE 5-30s 15w Barber KS
Start Test Date: 2001/10/23
Final Test Date: 2001/10/24

Lee Ranch #1

Plot



Abercrombie Energy L.L.C.
SE SE SE 5-30s 15w Barber KS
Start Test Date: 2001/10/23
Final Test Date: 2001/10/24

FieldNotes
Field Measurements

Lee Ranch #1

	Date	Clock Time	Comment	Casing Pres	Tubing Pres	Static1 Pres	Diff1 Pres	Meter1 Temp	Orifice1	Gas1 Rate
	yyyy/mm/d	hh:mm:ss		psi(g)	psi(g)	psi(a)	in of H2O	°F	in	MMCF/D
1	2001/10/23	11:45:00	shutin							
2		11:45:00		1307.00	1205.00	0.00	0.00	0.00	0.000	0.000
3		12:10:00		1274.00	1200.00	143.10	50.10	80.20	0.675	0.214
4		12:20:00		1262.00	1185.00	143.30	26.40	74.20		0.156
5		12:30:00		1260.00	1170.00	143.30	15.10	74.20		0.118
6		12:45:00		1254.00	1160.00	143.40	20.00	73.50		0.136
7		13:00:00	1st pt							
8		13:00:00		1250.00	1150.00	143.50	18.80	73.40		0.132
9		13:15:00		1239.00	1140.00	143.60	33.40	73.40		0.176
10		13:30:00		1235.00	1140.00	143.80	36.10	73.50		0.183
11		13:45:00		1228.00	1139.00	143.80	45.80	73.40		0.206
12		14:00:00	2nd pt							
13		14:00:00		1221.00	1125.00	143.90	46.80	74.00		0.209
14		14:15:00		1205.00	1110.00	143.90	80.50	73.00		0.274
15		14:30:00		1186.00	1100.00	144.00	103.10	72.50		0.311
16		14:45:00		1174.00	1090.00	144.20	102.20	72.80		0.310
17		15:00:00	3rd pt							
18		15:00:00		1169.00	1080.00	144.40	100.60	72.80		0.307
19		15:15:00		1146.00	1065.00	139.40	165.50	71.90		0.389
20		15:30:00		1134.00	1040.00	135.70	164.30	71.90		0.382
21		15:45:00		1135.00	1040.00	131.70	133.00	72.40		0.338
22		16:00:00	4th pt							
23		16:00:00		1132.00	1035.00	130.10	160.30	71.90		0.369
24	2001/10/24	12:00:00		1228.00	1040.00	143.30	44.90	66.00		0.205
25		12:00:00	1 pt							

2001/10/23 11:45:00 To 2001/10/24 12:00:00
Gas 0.283 Cum. 0.283 MMCF