

KANSAS CORPORATION COMMISSION
MULTIPOINT BACK PRESSURE TEST

FORM G-1
8-7-58

TYPE TEST: <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special		TEST DATE: 02-01-01		
COMPANY Horsehoe Operating Inc		LEASE Nickelson		WELL NO. 2
COUNTY Greeley	LOCATION C SW	SECTION 4 20S 39W	TWP RNG	ACRES 160
FIELD Bradshaw		RESERVOIR Winfield		
		PIPELINE CONNECTION Oneok		
COMPLETION DATE 10-10-00		PLUG BACK DEPTH 2917		PACKER SET AT
		TOTAL DEPTH 2918		
CASING SIZE 4.500	WT. 10.500	ID 4.000	SET AT 2916	PERF. 2814
				TO 2829
TUBING SIZE 2.375	WT. 4.700	ID 1.995	SET AT	PERF. TO
TYPE COMPLETION (Describe) Gas		TYPE FLUID PRODUCTION		
PRODUCING THRU(Annulus/Tubing) Annulus		RESERVOIR TEMPERATURE F 90		BAR PRESS - Pa 14.4 psia
GAS GRAVITY - Gg .774	% CARBON DIOXIDE .075	% NITROGEN 27.196		API GRAVITY OF LIQUID
VERTICAL DEPTH (H) 2821		TYPE METER CONN. Flange		METER RUN SIZE 2.067
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.		TUBING WELLHEAD PRESS.		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(P _w) (P _t) (P _c) psia	psig	(P _w) (P _t) (P _c) psia		
SHUT-IN						180	194				
1.	.750	55.00	2.00	40		175	189			.50	
2.	.750	55.00	4.00	40		174	188			.50	
3.	.750	55.00	6.00	40		167	181			.50	
4.	.750	55.00	10.00	40		154	168			.50	

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
2.	2.779	69.4	16.66	1.1367	1.0198	1.0065	54		.774
3.	2.779	69.4	20.41	1.1367	1.0198	1.0065	66		.774
4.	2.779	69.4	26.34	1.1367	1.0198	1.0065	85		.774

PRESSURE CALCULATION

RATE NO.	P _t psia	P _c psia	P _w psia	(P _c) ² Thousands	(P _w) ² Thousands	PLOTTING POINTS		% SHUT-IN 100 $\left[\frac{P_w - P_a}{P_c - P_a} \right]$
						(P _c) ² - (P _w) ² Thousands	Q Mcfd	
1.	189.4	194.4	189.4	37.8	35.9	1.9	38.2	97.2
2.	188.4	194.4	188.4	37.8	35.5	2.3	54.0	96.7
3.	181.4	194.4	181.4	37.8	32.9	4.9	66.2	92.8
4.	168.4	194.4	168.5	37.8	28.4	9.4	85.4	85.6

INDICATED WELLHEAD OPEN FLOW

180

Mcf @ 14.65 psia

"n" =

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 herein and that said report is true and correct. Executed this the 9 day of Feb, 2001

Witness (if any)

For Company

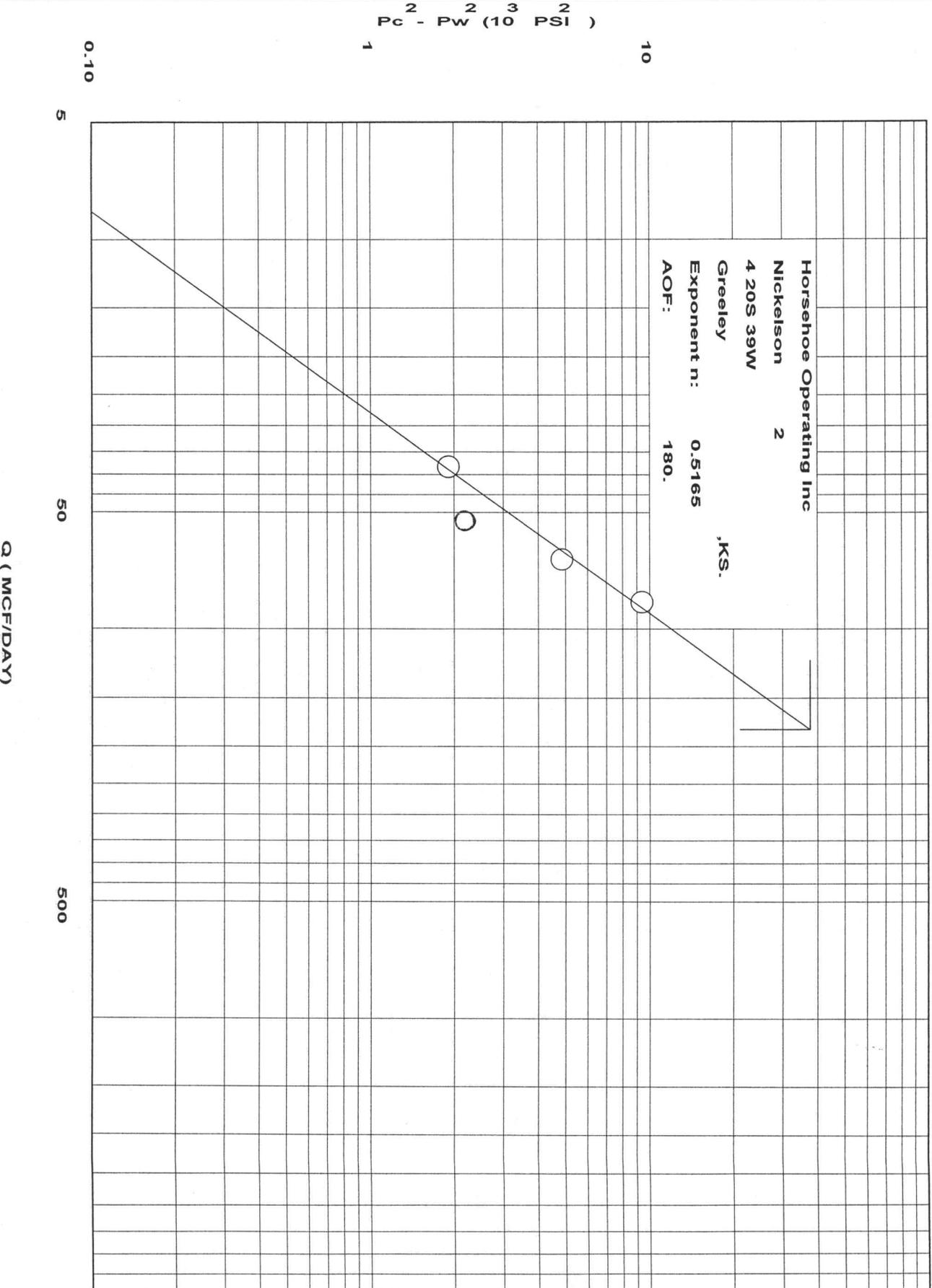
For Commission

Checked by

GAS WELL BACK PRESSURE CURVE

WELL TESTER:

TEST DATE: 02-01-01



FieldNotes

Field Measurements

Horseshoe Operating
 4-20S-39W Greeley co Kansas
 Start Test Date: 2001/02/01
 Final Test Date: 2001/02/02

Date	Clock Time	Comments	Casing Pres psi(g)	Static1 Pres psi(g)	Diff1 Pres in of H2O	Meter1 Temp °F	Gas1 Rate MMCF/D	Orifice1 in
1	2001/02/01	13:05:00						
		Shutin						
2	13:05:00		193.00	0.00	0.00	0.00	0.000	0.750
3	13:15:00		180.00	55.00	2.00	40.00	0.038	
4	13:25:00		179.00	55.00	2.00	40.00	0.038	
5	13:35:00	1st pt						
6	13:35:00		175.00	55.00	2.00	40.00	0.038	
7	13:45:00		175.00	55.00	4.00	40.00	0.054	
8	13:55:00		175.00	55.00	4.00	40.00	0.054	
9	14:05:00	2nd pt						
10	14:05:00		174.00	55.00	4.00	40.00	0.054	
11	14:15:00		170.00	55.00	7.00	40.00	0.071	
12	14:25:00		168.00	55.00	6.00	40.00	0.066	
13	14:35:00	3rd pt						
14	14:35:00		167.00	55.00	6.00	40.00	0.066	
15	14:45:00		163.00	55.00	8.00	40.00	0.076	
16	14:55:00		158.00	55.00	10.00	40.00	0.085	
17	15:05:00	4th pt						
18	15:05:00		154.00	55.00	10.00	40.00	0.085	
19	2001/02/02	13:30:00						
		1pt						
20	13:30:00		111.00	59.00	2.00	40.00	0.039	

2001/02/01 13:05:00 To 2001/02/02 13:30:00
 Gas 0.005 Cum. 0.005 MMCF

