

COMPANY: W.W. Buchanan LEASE: Brunswig WELL NO.: A-1
 COUNTY: Greeley LOCATION: SE/4 SECTION: 35 TWP: 16S R1NG: 40W ACRES: 640
 FIELD: Lower Winfield RESERVOIR: Lower Winfield PIPELINE CONNECTION: None
 COMPLETION DATE: 7-19-79 PLUG BACK TOTAL DEPTH: 2990' PACKER SET AT: 2968' - Model "F"
 CASING SIZE: 4 1/2 WT. 10.5 ID. 4.052 SET AT: 3018 PERF. 2952 TO: 2964
 TUBING SIZE: 2 3/8 WT. 4.7 ID. 1.995 SET AT: 2968' PERF. Open Ended TO:
 TYPE COMPLETION (Prover/Flow): Single Zone- Gas TYPE FLUID PRODUCTION: None
 PRODUCING THRU: Casing REF. RESERVOIR TEMPERATURE: 99° F BAR PRESS - P_a: 14.4 psia
 GAS GRAVITY - G_e: .700 Est. % CARBON DIOXIDE: % NITROGEN: API GRAVITY OF LIQUID:
 VERTICAL DEPTH (H): 2958 TYPE METER CONN.: (METER RUN) (PROVER) SIZE: 2"
 REMARKS:

OBSERVED DATA

DURATION OF SHUT-IN HR.

RATE No.	ORIFICE SIZE In.	(METER) (PROVER) PRESSURE psig	DIEP. (h _w) (h _d)	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASING WELL-HEAD PRESS.		TUBING WELL-HEAD PRESS.		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(P _w)(P _i)(P _o) psia	psig	(P _w X)(P _c) psia		
SHUT IN						455	469.4	455	469.4		
1	1/8	448		64		448	462.4	448	462.4	1/2	
2	1/16	441		64		441	455.4	442	456.4	1/2	
3	1/4	429		64		429	443.4	431	445.4	1/2	
4	3/8	400		62		400	414.4	404	418.4	1/2	
5											

RATE OF FLOW CALCULATIONS

RATE NO.	COEFFICIENT (F _p)(F _p) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION √P _m h _w	GRAVITY FACTOR F _g	FLOWING TEMP FACTOR F _t	DEVIATION FACTOR F _{pv}	RATE OF FLOW Q Mcfd	GOR	Q _m
1	.2716	462.4		1.195	.9962	1.056	158		
2	.6237	455.4		1.195	.9962	1.055	357		
3	1.115	443.4		1.195	.9962	1.053	620		
4	2.439	414.4		1.195	.9981	1.052	1268		
5									

PRESSURE CALCULATIONS

RATE NO.	P _i psia	P _c psia	P _w psia	(P _c) ² THOUSANDS	(P _w) ² THOUSANDS	PLOTTING POINTS		% SHUT-IN 100 [(P _w -P _a)/(P _c -P _a)]
						(P _c) ² - (P _w) ² THOUSANDS	Q Mcfd	
1		469.4	462.4	220.3	213.8	6.5	158	99%
2		469.4	456.4	220.3	208.3	12.0	357	97%
3		469.4	445.4	220.3	198.4	21.9	620	95%
4		469.4	418.4	220.3	175.1	45.2	1268	89%
5								

INDICATED WELL-HEAD OPEN FLOW: 5968 Mcfd @ 14.45 psia "n" = 978

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 19th day of July, 1979.

Witness (if any)

For Completion

Rainbo Service Co.

Harold P. Hayer
 Checked by

35-16-40W

TYPE TEST: Deliverability Open Flow TEST DATE: 7-18-19-79

COMPANY: W.W. Buchanan LEASE: Brunswig WELL NO.: A-1

COUN.: Greeley LOCATION: SE/4 SECTION: 35 TWP: 16S RNG: 40W ACRES: 640

FIELD: Lower Winfield RESERVOIR: Lower Winfield PIPELINE CONNECTION: None

COMPLETION DATE: 7-19-79 PLUG BACK TOTAL DEPTH: 2990' PACKER SET AT: 2968' - Model "F"

CASING SIZE: 4 1/2 WT. 10.5 I.D. 4.052 SET AT 3018 PERF. 2952 TO 2964

TUBING SIZE: 2 3/8 WT. 4.7 I.D. 1.995 SET AT 2968' PERF. Open Ended

TYPE COMPLETION (Describe): Single Zone - Gas TYPE FLUID PRODUCTION: None

PRODUCING THRU: casing RESERVOIR TEMPERATURE F: 99° F BAR. PRESS - P_a: 14.4 Psia

GAS GRAVITY - G_g: 700 Est. % CARBON DIOXIDE: ----- % NITROGEN: ----- API GRAVITY OF LIQUID: -----

VERTICAL DEPTH (H): 2958 TYPE METER CONN.: TYPE METER RUN (PROVER) SIZE: 2"

SHUT-IN PRESSURE: SHUT IN 19 AT (AM)(PM) TAKEN 19 AT (AM)(PM)

FLOW TEST: STARTED 19 AT (AM)(PM) TAKEN 19 AT (AM)(PM)

OBSERVED DATA DURATION OF SHUT-IN HR.

SHUT-IN OR FLOW	CRIFICE SIZE in.	(METER) (PROVER) PRESSURE psig	DIFF. in. (h _w)(h _d)	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASINO WELLHEAD PRESS		TUBING WELLHEAD PRESS		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(P _w)(P _i)(P _c) psia	psig	(P _w)(P _i)(P _c) psia		
SHUT-IN						455	469.4	455	469.4		
FLOW	5/16	117		76		117	131.4	282	296.4	21	

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _p)(F _d) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m \times h_w}$	GRAVITY FACTOR F _g	FLOWING TEMP. FACTOR F _L	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR	G _m
1.714	131.4		1.195	.9850	1.014	269		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

$P_c^2 = 20.3$ $(P_w)^2 = 87.9$ $P_d =$ % $(P_c - 14.4) + 14.4 =$ $(P_w)^2 = 0.207$ $(P_d)^2 =$

$(P_c)^2 - (P_w)^2$ or $(P_c)^2 - (P_d)^2$	$(P_c)^2 - (P_w)^2$	$\frac{P_c^2 - P_w^2}{P_c^2 - P_d^2}$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
220.1	132.4	1.6624	.2207	.978	.2159	1.643	

OPEN FLOW 442 Mcfd @ 14.65 psia DELIVERABILITY Mcfd @ 14.65 psia

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

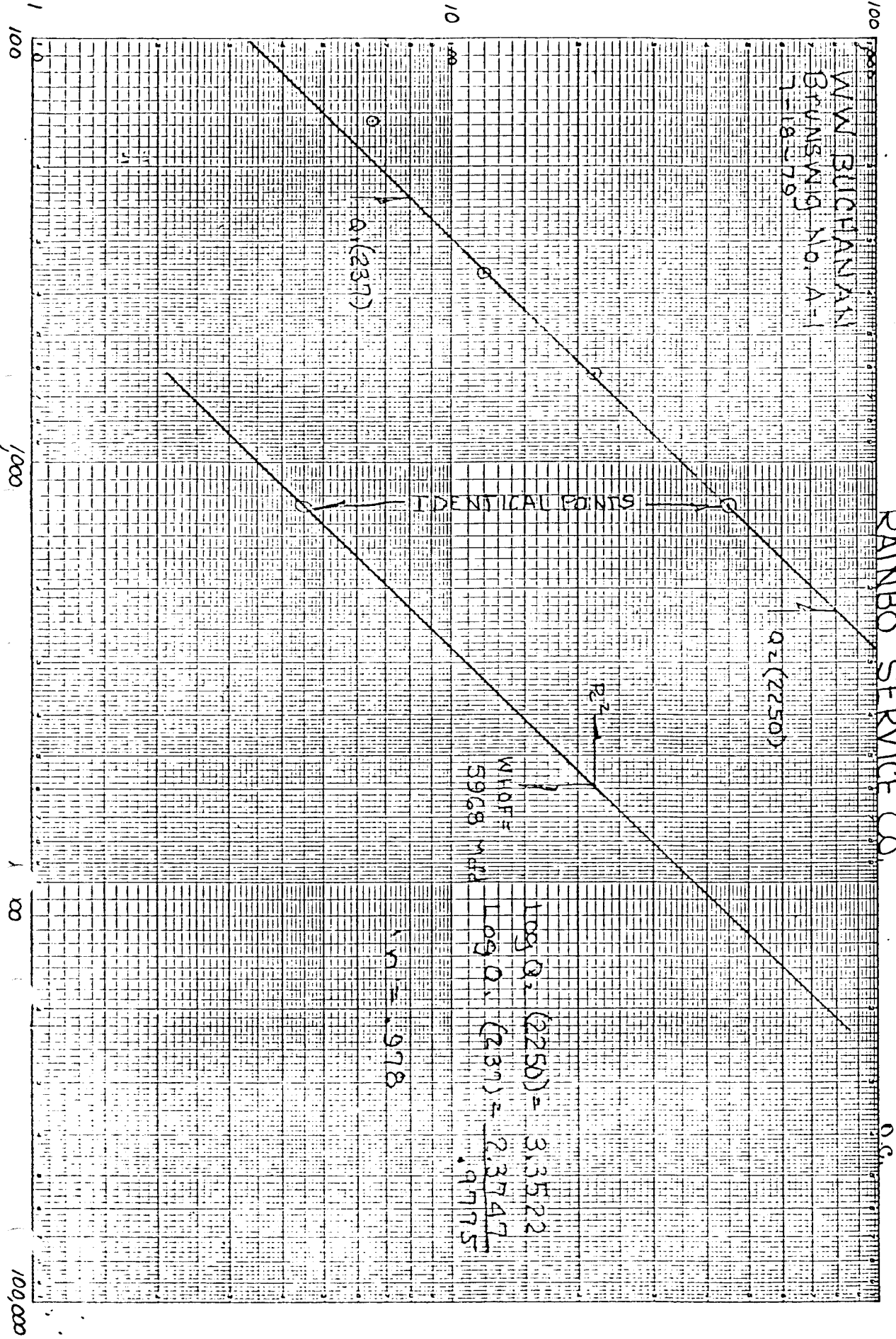
Executed this the 20th day of July, 19 79

Rainbo Service Co.

For Company
Harold R. Hayes
 Checked by

Witness (if any)

For Completion



Mcfd