

15-103-20311-0000

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8-7-58
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11-17-86
11-13-86

STATE OF KANSAS - CORPORATION COMMISSION

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

TYPE TEST: Deliverability Open Flow TEST DATE: 11-3-86

COMPANY: Remco Energy Corp. LEASE: Hummelgard WELL NO.: 1

COUNTY: Leavenworth LOCATION: C SE SE SECTION: 7 TWP: 12S RNG: 21E ACRES: 40

FIELD: Rick RESERVOIR: Squirrel PIPELINE CONNECTION: Union Gas Systems

COMPLETION DATE: 11-7-85 PLUG BACK TOTAL DEPTH: 783' PACKER SET AT: None

CASING SIZE: 2 7/8" WT.: 6.40 I.D.: 2.441" SET AT: 783' PERF.: 691 TO: 697

TUBING SIZE: 1" WT.: 1.70 I.D.: 1.049" SET AT: 700' PERF.: 675 TO: 700

TYPE COMPLETION (Describe): Single TYPE FLUID PRODUCTION: Dry Gas

PRODUCING THRU: Casing RESERVOIR TEMPERATURE F: 60 BAR. PRESS - P_a: 14.4 Psia

GAS GRAVITY - G_s: 0.580 % CARBON DIOXIDE: 0.21 % NITROGEN: 5.37 API GRAVITY OF LIQUID: None

VERTICAL DEPTH (H): 694 TYPE METER CONN.: Flange (METER RUN) (PROVER) SIZE: 2"

SHUT-IN PRESSURE: SHUT IN 5-22 1986 AT 2:40 (AM)(PM) TAKEN 9-22 1986 AT 8:40 (AM)(PM) NOT TAKEN

FLOW TEST: STARTED 11-2 1986 AT 8:40 (AM)(PM) TAKEN 11-3 1986 AT 8:40 (AM)(PM)

OBSERVED DATA DURATION OF SHUT-IN DAYS

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) (PROVER) PRESSURE psig	DIFF. in. (h _w)(h _g)	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASING WELL-HEAD PRESS.		TUBING WELL-HEAD PRESS.		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(P _c - 14.4) psia	psig	(P _w - 14.4) psia		
SHUT-IN						280	294.4	280	294.4	Days	
FLOW	0.500	9.0	3	60(E)	60			240	254.4	24	None

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _p) ² Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION √P _m h _w	GRAVITY FACTOR F _g	FLOWING TEMP. F _L	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR	G _m
1.219	104.4	17.7	1.313	1.000	None	23	None	0.580

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 86.671, (P_w)² = 64.719, P_d = None, (P_c - 14.4) + 14.4 = 14.4, (P_c)² = 0.207, (P_d)² = 0.207

$\frac{(P_c)^2 - (P_d)^2}{(P_c)^2 - (P_w)^2}$	(P _c) ² - (P _w) ²	$\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2}$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
86.464	21.952	3.939	0.5953	0.85(E)	0.5061	3.207	74

OPEN FLOW 74 Mcfd @ 14.65 psia DELIVERABILITY None Mcfd @ 14.65 psia

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 12th day of Nov, 1986. *[Signature]* For Company

Witness (if any) _____ For Commission _____
Checked by _____



SOUTHERN FLOW COMPANIES

SOUTHERN FLOW
JOHN P. SQUIER

FLOW MEASUREMENT
SMITH-GOODENOUGH

CUST 7410-01 FOR: REMCO ENERGY CORPORATION SAMPLE REMCO ENERGY CORPORATION
 FLD 2101 IDENT TOPEKA KANSAS
 STA 002 P O BOX 4856 HUMMELGARD #1 NO: 850221-141942
 DATE 02/21/85
 GC # 001 TOPEKA KS 66604 TYPE GAS *7-12S-21E* GPH

SAMPLE: DATE 02/13/85 CYL NO 018-T PSIG NA GRAV NA DIFF/IN H2O NA WATER LBS/MMCF NA
 DATA: TIME NA FLOW MMCF 120 TEMP NA SAMPLED BY - JOHN JENNINGS
 MEMO:

COMPONENT ANALYSIS MOL PERCENT GPM 14.650 PSIA GPM 14.730 PSIA

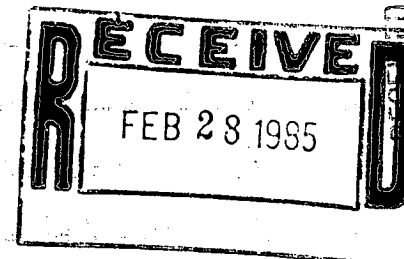
COMPONENT	ANALYSIS	MOL PERCENT	GPM 14.650 PSIA	GPM 14.730 PSIA	C6+ MOLECULAR WEIGHT
C02	CARBON DIOXIDE	0.21	0.036	0.037	0.000
N2	NITROGEN	5.37	0.585	0.589	
C1	METHANE	94.19	15.877	15.965	
C2	ETHANE	0.12	0.032	0.033	
C3	PROPANE	0.06	0.016	0.017	
IC4	ISO-BUTANE	0.03	0.010	0.011	
NC4	N-BUTANE	0.01	0.003	0.004	
IS5	ISO-PENTANE	0.01	0.004	0.005	

TOTAL 100.00

TOTAL ETHANE + GPM 0.065 0.074
 TOTAL ISO-PENTANE + GPM 0.004 0.009

SPECIFIC GRAVITY - 60 DEG F (AIR = 1.000) 0.580

BTU/CU FT - 14.650 PSIA, 60 DEG F DRY 953.4 BTU/CU FT - 14.730 PSIA, 60 DEG F DRY 958.6
 WET 936.7 WET 941.8



STATE CORPORATION COMMISSION

SEP 20 1985

CONSERVATION DIVISION
Wichita, Kansas