

3
1-22-65)

NORTHERN NATURAL GAS CO. ANY
OBSERVED SURFACE DATA WORKSHEET
SHEET 1

PIPE TEST: ☒ INITIAL ☐ ANNUAL ☐ RETEST ☐ SPECIAL TEST DATE: 12-7-80

OPERATOR: FIKOIL Co. LEASE: N.E. Kammitz 2 WELL NO. 5
EC. 23 TWP. 16 RING. SUR. 34 COUNTY: Leas STA. NO. PIPELINE CONN. Vent
SYSTEM: Buehler FIELD: Kammitz 2 RESERVOIR: Marcellus

SG. 5 1/2 WT. 17 TBG. SIZE 2 3/8 WT. 4.7 PERFS. 13186 TO 13208
PIPE COMPLETION: SINGLE ☒ GAS-GAS() GAS-OIL() PACKER@ 13250 ft. FLOW STRING@ tubing

DATE ON REFLOW: DATE: 12-7-80 LENGTH: OF PREFLOW: AVG. PREFLOW RATE:
TIME: SHUT IN: 12-7-80 TIME: 0430

DATE SHUT IN: 12-5-80 TIME: 0930 LENGTH OF SHUT IN: 17 hr. SHUT IN CS. PRESS. psig SHUT IN TBG. PRESS. 3960 psig

AS GRAVITY (Gm) API GRAVITY OF LIQUID @ 60°F: PROVER 2 METER RUN SIZE: ORIFICE 5.00 TYPE: TAPS

DATE TIME OF READING	ELAP TIME HRS.	W.H. PRESSURE DATA				WELL HEAD TEMP	METER OR PROVER DATA			LIQUID HYDRO- CARBONS BBLs	WATER PRODUCED BBLs	REMARKS PERTINENT TO TEST DATA QUALITY
		CASING psig	Δ P CSG.	TUBING psig	Δ P TBG.		PRESS psig	DIFF.	TEMP			
12-8-80												2" Critical Flow
0930	17 hr			3960		S.I.P.						Prover
0930				15 r rate			447					1/4" orifice
0945	0.25			3000	-940	38	385		28			
1000	0.50			2950	-950	43	322		30			
1015	0.75			2620	-130	47	315		36			Making Fluid
1030	1.00			2520	-100	48	300		41			Est Q = 479 mcf/D
1045	1.25			2435	-85	50	280		44			
1100	1.50			2370	-65	50	263		44			
1115	1.75			2310	-60	51	250		48			
1130	2.00			2275	-35	51	228		48			Est Q = 391 mcf/D
1145	2.25			2245	-30	52	215		50			
1200	2.50			2220	-25	52	207		48			
1215	2.75			2200	-20	53	215		48			
1230	3.00			2165	-35	52	222		48			Est Q = 323 mcf/D
1245	3.25			2130	-35	52	220		48			CO2 0.5%
1300	3.50			2100	-30	52	220		49			Sp. 620
1315	3.75			2045	-55	52	217		50			
1330	4.00			2040	-55	52	207		51	5.8	0	Est Q = 300 mcf/D
1345	4.25			2000	-40	52	207		49			
		changed to 3/8 orifice. Do not attempt to change to 1/2" orifice until flow is stable.										
1400	4.50			1920	-80	52	205		47			3/8" orifice
1415	4.75			1850	-70	54	185		50			
1430	5.00			1815	-75	56	90		50			
1445	5.25			1700	-75	56	165		50			
1500	5.50			1615	-60	55	150		47	2.9		
1515	5.75			1580	-40	54	120		50			
1530	6.00			1540	-40	52	122		49			
1545	6.25			1520	-40	51	122		58	1.65	10.9	Est Q = 404 mcf/D
		*Estimated water for last 2 hrs.										

TESTED BY: M. Newman & P. Conway WITNESSED BY: John Conway
PAGE 1 OF 1