

NORTHERN NATURAL GAS COMPANY
OBSERVED SURFACE DATA WORKSHEET
SHEET 1

TYPE TEST: 4-Point ☒ INITIAL ☐ ANNUAL ☐ RETEST ☐ SPECIAL TEST DATE: 12-17-77
OPERATOR Amoco Prod. Co. LEASE State C Tract 11 WELL NO. 15
SEC. 2 TWP. 21 RNG. 36 COUNTY Lea STA. NO. 531-050 PIPELINE CONN. 4-N-X
A SYSTEM Lea Co FIELD Evans RESERVOIR

SS. _____ WT. _____ TBG. SIZE _____ WT. _____ PERFS. _____ TO _____
TYPE COMPLETION: SINGLE ☒ GAS-GAS() GAS-OIL() PACKER@ _____ ft. FLOW STRING@ Tubing

DATE ON _____ DATE _____ LENGTH _____ AVG. PREFLO
REFLOW _____ TIME _____ SHUT IN 12-16-77 TIME 0930 OF PREFLOW _____ RATE _____

DATE SHUT IN _____ LENGTH OF _____ SHUT IN _____ SHUT IN _____
PRESS. TAKEN 12-17-77 TIME 0800 SHUT IN 20.50h CSG. PRESS. _____ psig TBG. PRESS. 174 psig

GAS GRAVITY (Cm) _____ API GRAVITY _____ PROVER _____ METER _____ ORIFICE _____ TYPE _____
(Gg) _____ OF LIQUID @ 60°F _____ SIZE _____ RUN SIZE 4 SIZE 1.50 TAPS 20g

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.			
<u>1200</u>	<u>0.5</u>	<u>12-17-77</u>		<u>174</u>								
<u>0800</u>	<u>10.5</u>											
<u>2500</u>		<u>1st rate</u>		<u>124</u>			<u>70.0</u>	<u>0.5</u>	<u>119</u>			
<u>2815</u>	<u>.35</u>			<u>120</u>		<u>62</u>	<u>89.0</u>	<u>0.5</u>	<u>51</u>			
<u>2830</u>	<u>.50</u>			<u>169</u>		<u>62</u>	<u>104.0</u>	<u>0.7</u>	<u>53</u>			
<u>2845</u>	<u>.75</u>			<u>169</u>		<u>60</u>	<u>106.0</u>	<u>0.7</u>	<u>55</u>			
<u>2900</u>	<u>1.00</u>			<u>169</u>		<u>60</u>	<u>107.0</u>	<u>0.7</u>	<u>55</u>	<u>0</u>	<u>0</u>	<u>Est Q = 132 mcf/D</u>
<u>0900</u>		<u>2nd rate</u>					<u>107.0</u>	<u>1.5</u>	<u>55</u>			
<u>2915</u>	<u>.05</u>			<u>159</u>		<u>58</u>	<u>107.0</u>	<u>1.6</u>	<u>57</u>			
<u>2930</u>	<u>.50</u>			<u>159</u>		<u>58</u>	<u>110.0</u>	<u>1.5</u>	<u>58</u>			
<u>2945</u>	<u>.75</u>			<u>159</u>		<u>58</u>	<u>110.0</u>	<u>1.5</u>	<u>58</u>			
<u>1000</u>	<u>1.00</u>			<u>159</u>		<u>60</u>	<u>110.0</u>	<u>1.5</u>	<u>59</u>	<u>0</u>	<u>0</u>	<u>Est Q = 195 mcf/D</u>
<u>1000</u>		<u>3rd rate</u>					<u>110</u>	<u>3.0</u>	<u>59</u>			
<u>1015</u>	<u>.25</u>			<u>144</u>		<u>61</u>	<u>110</u>	<u>3.0</u>	<u>61</u>			
<u>1030</u>	<u>.50</u>			<u>144</u>		<u>60</u>	<u>111</u>	<u>2.9</u>	<u>63</u>			
<u>1045</u>	<u>.75</u>			<u>144</u>		<u>60</u>	<u>111</u>	<u>2.9</u>	<u>63</u>			
<u>1100</u>	<u>1.00</u>			<u>144</u>		<u>60</u>	<u>112</u>	<u>2.8</u>	<u>63</u>	<u>0</u>	<u>0</u>	<u>Est Q = 266 mcf/D</u>
<u>1100</u>		<u>4th rate</u>					<u>113</u>	<u>5.0</u>	<u>63</u>			
<u>1115</u>	<u>.25</u>			<u>124</u>		<u>60</u>	<u>113</u>	<u>4.2</u>	<u>64</u>			
<u>1130</u>	<u>.50</u>			<u>123</u>		<u>62</u>	<u>113</u>	<u>4.5</u>	<u>64</u>			
<u>1145</u>	<u>.75</u>			<u>123</u>		<u>65</u>	<u>114</u>	<u>4.5</u>	<u>65</u>			
<u>1200</u>	<u>1.00</u>			<u>123</u>		<u>65</u>	<u>114</u>	<u>4.5</u>	<u>66</u>	<u>0</u>	<u>0</u>	<u>Est Q = 240 mcf/D</u>
												<u>Bar. 718</u>
												<u>Lab Sample Taken</u>

TESTED BY: Maurice Harmon

WITNESSED BY: 22002