

02-R-1101/02-R-1201/02-R-1102/02-R-1202  
LOWER PRODUCTION PONDS

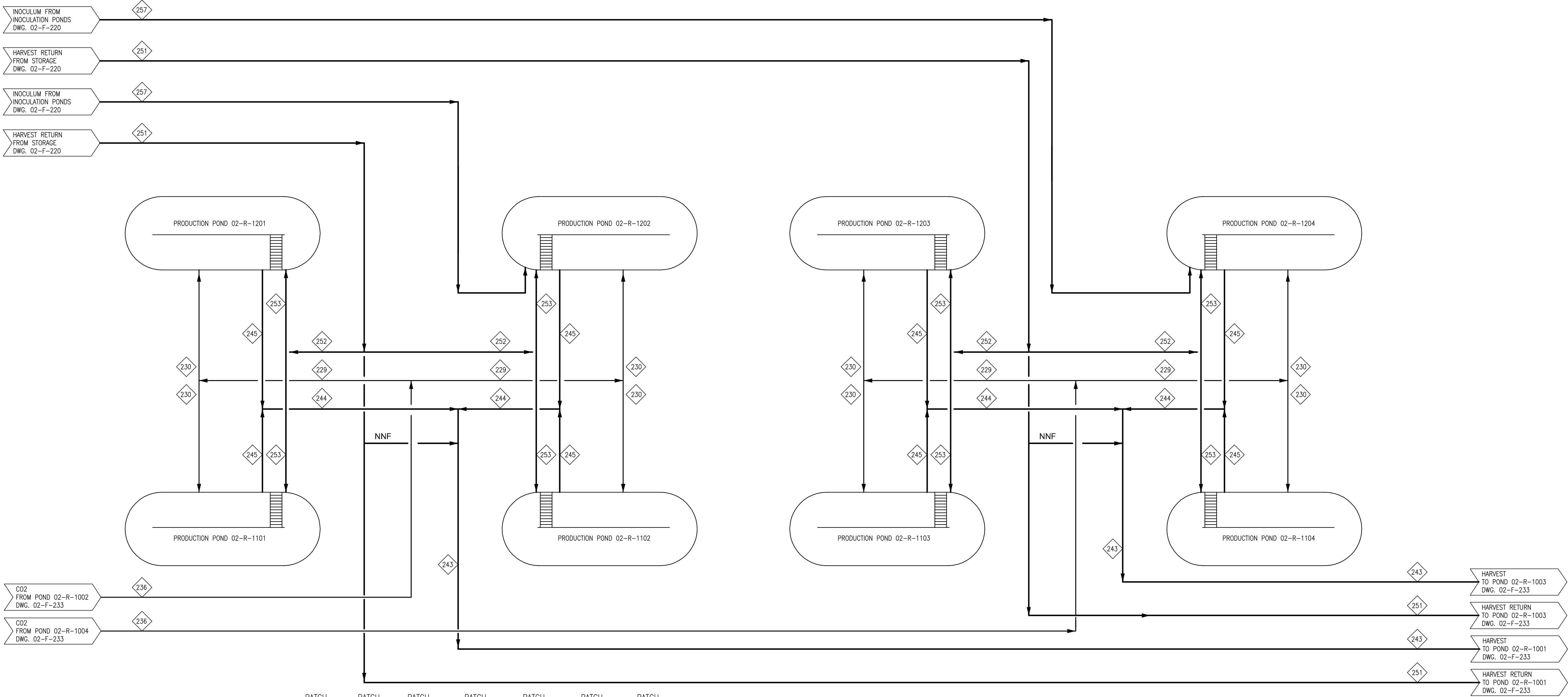
1.1 ACRES EA

02-R-1103/02-R-1203/02-R-1104/02-R-1204  
LOWER PRODUCTION PONDS

1.1 ACRES EA

NOTES

1. STREAM DATA IS FOR PEAK FLOW.



STREAM NO.		229	230	236	BATCH	BATCH	BATCH	BATCH	BATCH	BATCH	BATCH
DESCRIPTION		CO2	CO2	CO2	243	244	245	251	252	253	257
					ALGAE HARVEST	ALGAE HARVEST	ALGAE HARVEST	HARVEST RETURN	HARVEST RETURN	HARVEST RETURN	INOCULUM
FLOW	LB/HR	500	250	1,000	1,251,000	625,500	625,500	1,251,000	625,500	625,500	93,575
FLOW	GPM				2,500	1,250	1,250	2,500	1,250	1,250	187
TEMPERATURE	°F	60	60	60	68	68	68	68	68	68	68
PRESSURE	PSIA	15.6	15.6	136.6	12.6	12.6	12.6	12.6	12.6	12.6	12.6
VAPOR FRACTION		100	100	100	0	0	0	0	0	0	0
% SOLIDS IN AQ SOLNS		0	0	0	0.05	0.05	0.05	0.020	0.020	0.020	0.05
WATER	LB/HR	0	0	0	1,250,339	625,170	625,170	1,250,533	625,266	625,266	93,525
ALGAE OIL	LB/HR	0	0	0	0	0	0	0	0	0	0
ALGAE BIOMASS	LB/HR	0	0	0	589	295	295	203	102	102	44
ASH	LB/HR	0	0	0	71	36	36	47	24	24	5
CO2	LB/HR	500	250	1,000	0	0	0	0	0	0	0
UREA SOLUTION	LB/HR	0	0	0	0	0	0	193	96	96	0
PHOSPHORIC ACID	LB/HR	0	0	0	0	0	0	24	12	12	0
SULFURIC ACID	LB/HR	0	0	0	0	0	0	0	0	0	0
TOLUENE	LB/HR	0	0	0	0	0	0	0	0	0	0
METHANE	LB/HR	0	0	0	0	0	0	0	0	0	0
PROPANE	LB/HR	0	0	0	0	0	0	0	0	0	0
OXYGEN	LB/HR	0	0	0	0	0	0	0	0	0	0
NITROGEN	LB/HR	0	0	0	0	0	0	0	0	0	0
FLOCCULANT	LB/HR	0	0	0	0	0	0	0	0	0	0
COAGULANT	LB/HR	0	0	0	0	0	0	0	0	0	0

XXX DENOTES CHANGE IN STREAM TEMPERATURE ONLY. NO COMPOSITION CHANGE.

XXX DENOTES CHANGE IN STREAM PRESSURE ONLY. NO COMPOSITION CHANGE.

CONFIDENTIAL

CONTAINS PROPRIETARY INFORMATION OF SAPPHIRE ENERGY, INC. ACCESS LIMITED TO NEED TO KNOW. UNAUTHORIZED REPRODUCTION PROHIBITED.

ISSUED FOR CONSTRUCTION



**Brown AND Caldwell**

201 NORTH CMC DRIVE, SUITE 115  
WALNUT CREEK, CA 94596

Scale: AS SHOWN  
PMgr: B. ZINN  
Appr: M. GERHARDT

Drawn: Z. BURKE  
Check: M. GERHARDT

Engr: M. GERHARDT  
Check: L. SLEZAK

**SAPPHIRE ENERGY**  
**SAN DIEGO**  
**CALIFORNIA**

**IABR Columbus, NM.**

**PROCESS FLOW DIAGRAMS**

**LOWER PRODUCTION PONDS 6**

Project No.: 139197  
Drawing: 02-F-234  
Rev: 0

