

## PASSIVE AND ACTIVE SOLAR – HEATING CONTRIBUTION

Elko, Nevada      Latitude 40° - 50', Longitude 115° - 40'      Vertical Collector

### SUNTERRA PLAN #1772TD

|   | JAN   | FEB   | MAR   | APR   | MAY   | JUN   | JUL   | AUG   | SEP   | OCT   | NOV   | DEC   | TOTAL      |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------------|
| <b>PASSIVE SOLAR</b>  |       |       |       |       |       |       |       |       |       |       |       |       |            |
| Degree Day Month @ 65° F Base Temperature   | 1,279 | 992   | 857   | 614   | 387   | 154   | 17    | 39    | 233   | 561   | 889   | 1206  | 7,230 DDY  |
| Annual Heating Required 19,400,000 BTU ÷ 7,230 Degree Day Year = 2,683 BTU/One day x Degree Day Month = |       |       |       |       |       |       |       |       |       |       |       |       |            |
| Heating Required Per Month (MBTU)   | 3.432 | 2.662 | 2.299 | 1.647 | 1.038 | .413  | .046  | .105  | .625  | 1.505 | 2.385 | 3.236 | 19,400,000 |
| Passive Solar Heating Per Month<br>See Chart 2  | 1.829 | 1.808 | 1.793 | 1.338 | .860  | .476  | .993  | 1.888 | 2.808 | 3.033 | 1.825 | 1.824 | 13,978,000 |
| Remaining Space Heating Required  | 1.603 | .854  | .506  | .309  | .178  | 0     | 0     | 0     | 0     | 0     | .560  | 1.412 | 5,422,000  |
| <b>ACTIVE SOLAR</b>   |       |       |       |       |       |       |       |       |       |       |       |       |            |
| Domestic Hot Water (MBTU) Required 1.046/Month – Family of Four   |       |       |       |       |       |       |       |       |       |       |       |       | 12,552,000 |
| (MBTU) Required Domestic Hot Water and Space Heating  | 2.649 | 1.900 | 1.552 | 1.355 | 1.224 | 1.046 | 1.046 | 1.046 | 1.046 | 1.046 | 1.606 | 2.458 | 17,974,000 |
| Solar Active System (MBTU) Provided   | 1.950 | 1.843 | 2.791 | 3.046 | 3.376 | 3.758 | 4.273 | 4.210 | 4.239 | 3.621 | 2.255 | 1.782 |            |
| Remaining (MBTU) for Heating  | .699  | .057  | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | 0     | .676  | 1,432,000  |