Improving Processes. Instilling Expertise.
Sustainability

- Profitability
- Productivity

Break Rock
- Chemical & Mechanical Crushing

Move Rock
- Load & Haul

Size Rock
- Screening

Planning and Metrics

Safety Culture
Mobile Crushing & Screening
Canyon Rock History

Canyon Rock  Sonoma County California
Russian River Valley

Third generation , family Operated Since 1972

Principle One : Forestville, CA +/- 1.0 Million STPH

Cazdero Quarry : Green field Operation +/- 200k STPH

Located 10 miles Air and 20 miles road.

Material : Greywacke , Intermittent Clay seams

Support Existing Operation with Gabion and Stone As well as future secure market area , material is mostly used in Santa Rosa Area.

Remain Cost Effective

Health and safety , as well as environmentally suited
Mobile Crushing & Screening
Canyon Rock History
Mobile Crushing & Screening
Canyon Rock Evolution  40 years

Operated Fixed for 20 years

Decided to expand in Contracting added mobiles & recycle plant.

Decided to expand Beyond one operation
Mobile Crushing & Screening
Canyon Rock Pre-selection

Primary Large enough too Support existing facility & Future
Still mobile and self contained for Contracting Crushing
10,000 Hour plus design, Reliable, Robust
Pre-Screen Capability, Large side belt
Low fuel Consumption, Low In Operating costs
Large discharge Belt, with Magnet
Good service access & Service support
Rubber lined feeder for sound reduction
Smooth in operation, and Sound 106 Decibels
Fit Finish and overall quality
Dust suppression System Pre plumbed
Mobile Crushing & Screening

Canyon Rock Flow Diagram
Mobile Crushing & Screening
Canyon Rock: Site Readings Sound

Challenges:
- Heart of Cottage Country
- Resonance from High wall
- In between Mountains
- On A River

Houses 53-61db
- Roadway 57-63 db
- Property 75-85 db
- Scalp Plant 91-106 db
- Jaw Plant 91-103 db
- Trailer Loading 108 db

Changes:
- Feeder liner, Truck Loading
Mobile Crushing & Screening
Canyon Rock Site Equipment

Sandvik UJ 440 Trend 950 K 6.0 GPH
Sandvik QE 440 Scalper Screen 350 K 4.1 GPH
Caterpillar 345 Excavator 550 K 11.0 GPH
Caterpillar 972 Loader 400 K 4.5 GPH
Power screen 65 Stacker 65 K 1.3 GPH
Other Cat 980 Occasional Use

Total Fuel Burn 27.0 – 29.0 GPH @ 350-400 TPH

Costs Gallon 4.00 X $112.00 Hour or $0.35 Ton
Mobile Crushing & Screening
Canyon Rock Mobile Plant Advantages

Guaranteed availability at Forestville
Capability to expand product range
Self Contained, self powered, self controlled
Low investment Capital
Ability to expand beyond home market as required
Advantages over peek Power period
Capability to grow or divest as needed
# Mobile Crushing & Screening

## Canyon Rock Costs Ton Comparison

<table>
<thead>
<tr>
<th>Canyon Rock</th>
<th>Track</th>
<th>Wheel</th>
<th>Static</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>$1,465,000</td>
<td>$1,485,000</td>
<td>$1,385,000</td>
<td>$1,400,000</td>
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<tr>
<td>Plant Investment</td>
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<tr>
<td>Annual Labor</td>
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<td>2304</td>
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<tr>
<td>Mob Hrs Shot</td>
<td>12</td>
<td>24</td>
<td>64</td>
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<tr>
<td>Mob Costs</td>
<td>$43,200</td>
<td>$86,400</td>
<td>$230,400</td>
<td>$430,000</td>
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<tr>
<td>Mob Year</td>
<td>144</td>
<td>288</td>
<td>768</td>
<td>10</td>
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<tr>
<td>Availability Mech.Hrs.</td>
<td>762</td>
<td>672</td>
<td>635</td>
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<tr>
<td>Labor Costs Total</td>
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<td>$691,200</td>
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<tr>
<td>Labor Costs Ton</td>
<td>$3.65</td>
<td>$3.46</td>
<td>$4.01</td>
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<tr>
<td>GPH</td>
<td>15</td>
<td>15</td>
<td>15</td>
<td>762</td>
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<tr>
<td>Plant GPH</td>
<td>13</td>
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<tr>
<td>Total GPH</td>
<td>28</td>
<td>50</td>
<td>50</td>
<td>635</td>
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<tr>
<td>Fuel Total</td>
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<tr>
<td>Fuel Costs Ton</td>
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<td>$0.67</td>
<td>$0.64</td>
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<tr>
<td>Operating Costs</td>
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<td>$825,600</td>
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<tr>
<td>Total Costs Per Ton</td>
<td>$5.12</td>
<td>$5.19</td>
<td>$5.63</td>
<td>$5.12</td>
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</tbody>
</table>

### Notes:
- **Costs**
- **$** indicates currency
- **Annual** indicates annual costs
- **Hr rate** indicates hourly rate
- **Shots** indicates number of shots
- **Tons shot** indicates number of tons shot
- **Mob Year** indicates number of mobile years
- **Availability Mech.Hrs.** indicates availability of mechanical hours
- **Labor Costs Total** indicates total labor costs
- **Labor Costs Ton** indicates labor costs per ton
- **GPH** indicates gallons per hour
- **Fuel Total** indicates total fuel costs
- **Fuel Costs Ton** indicates fuel costs per ton
- **Operating Costs** indicates operating costs
- **Total Costs Per Ton** indicates total costs per ton

**Other costs** include:
- **Track** 762%
- **Wheel** 85%
- **Static** 90%

**Cat C18**
- 35 gph

**Fuel** costs:
- **Track** $4.00
- **Wheel** $3.65
- **Static** $4.01

**Operating Costs**:
- **Track** $13
- **Wheel** $825,600
- **Static** $814,344
### Mobile Crushing & Screening

#### Canyon Rock Costs Ton Comparison

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<tr>
<th>Canyon Rock</th>
<th>Type</th>
<th>Track 10%</th>
<th>Wheel</th>
<th>Static</th>
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<tbody>
<tr>
<td>Investment Costs Ton</td>
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<tr>
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Mobile Crushing & Screening
Canyon Rock Improvement Forward

Less is not always best

Unit Operation Division

Drilling + Blasting + Loading + Haul + Crushing = + 4%
Mobile Crushing & Screening
TAKE AWAY from Canyon Rock

Research Look around and Have a Plan ! What ELSE !

Travel beyond your competition ! Lead do not follow !

Keep an open mind !
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