

Borehole Video Technology in Subsurface Investigations

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MCR Borehole Camera System

❖ **GeoVISION™ Jr Deluxe**
borehole video camera
system purchased by
OSM-MCR in August of
2006

**Motorized winch system with
1,000-foot cable**

- Flat, 3 conductor
- Polyethylene coated
- Marked at 1-foot intervals



MCR Borehole Camera System

✓ Color Camera

- Diameter – 1 5/8”
- Length – 3 1/4”
- Weight – < 4 oz
- 100% solid state
- Water proof PVC housing
- Eight white LED lights



MCR Borehole Camera System

✓ Black & White Camera

- Diameter – 1 1/2"
- Length – 2 1/2"
- Weight – < 4 oz
- 100% solid state
- Water proof PVC housing
- Eight white LED lights
- Particularly useful in mine voids and large boreholes



MCR Borehole Camera System

- ✓ Motorized pan/tilt option



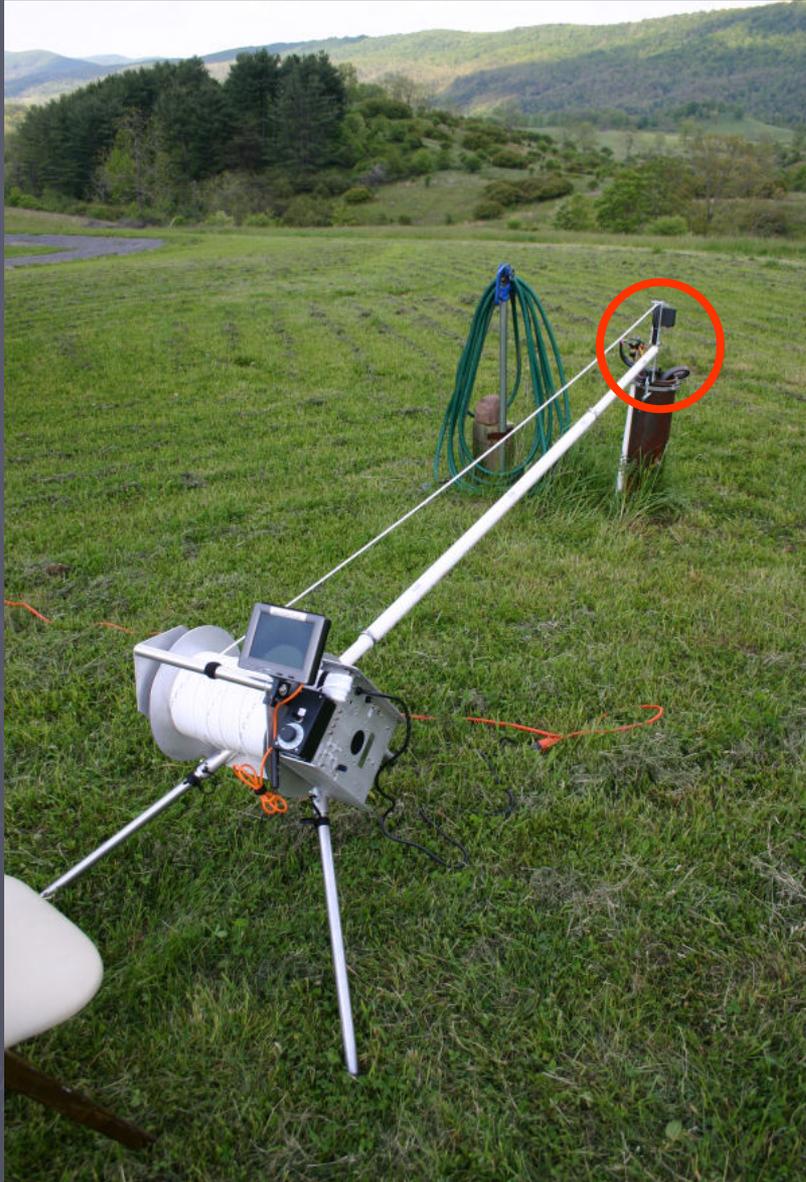
MCR Borehole Camera System

❖ System Power Supply

120-240 VAC 50-60 Hz sine wave source)



MCR Borehole Camera System





+0104FT

MCR Borehole Camera System















Operating Considerations

- ▶ Camera system is not explosion proof.
- ▶ Cable reel and associated electronics are not waterproof.
- ▶ Electric shock hazard addressed by using a ground fault circuit interrupter (GFCI) on the power cord.
- ▶ Turbid water greatly impairs camera usefulness.









MCR Borehole Camera System

- ✓ Other features and Options
 - Side-looking mirror



MCR Borehole Camera System

✓ Other features and Options

- **Compass**



MCR Borehole Camera System

✓ Other features and Options

- **Microphone**
- **Video recording**
- **Auxiliary monitor**

MCR Borehole Camera System

- ✓ Lighting equipment
 - Dual waterproof lights



MCR Borehole Camera System

- **Super 8 auxiliary waterproof lights**







Dive Lights



Droplight 500 W

Spotlight 500 W

500 feet of cable



Applications for Borehole Camera Systems

- ❖ **Well and borehole investigations**
- ❖ **Mine Shafts**
- ❖ **Mine Voids and Subsidence**
- ❖ **Lake Investigations**

Applications for Borehole Camera Systems

- Price of the MCR camera system = **\$17,000**
- Cost to State Programs = **\$0**