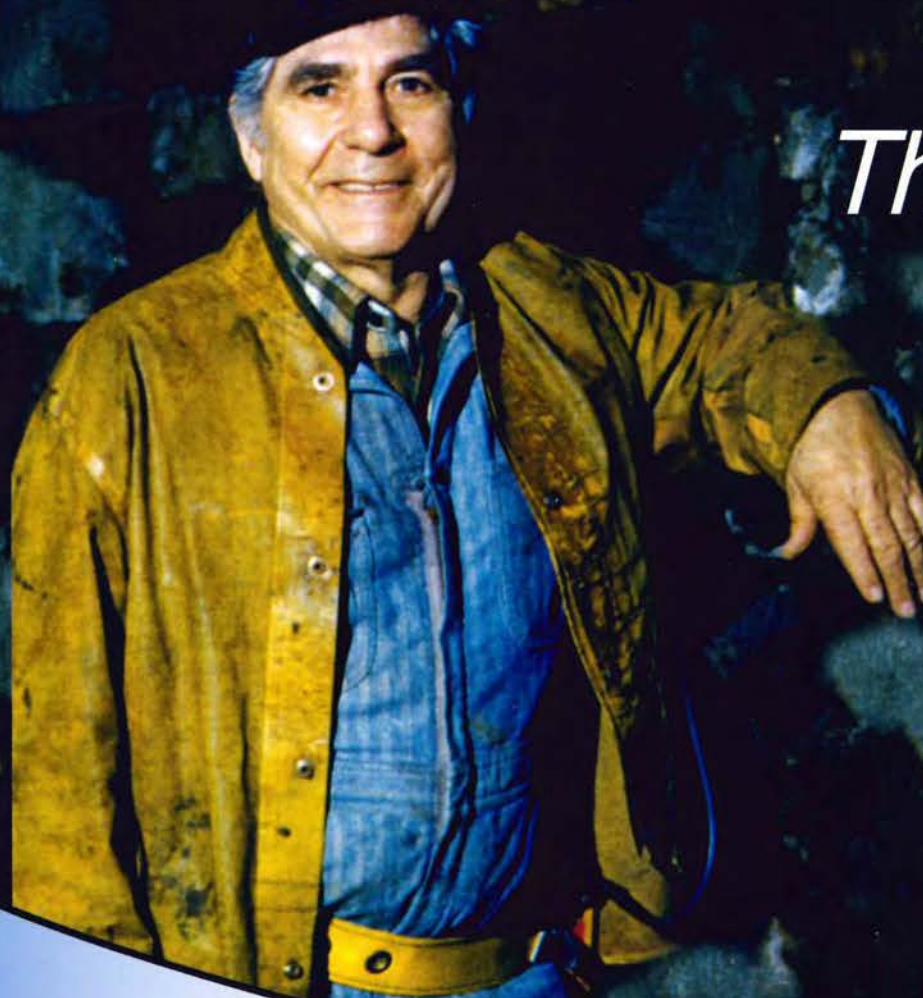


# *SPOKANE RESEARCH LABORATORY*

## *The Faces of Mining 2006*



Jack Hoskins, USBM  
1919 - 2005  
Miner, Professor,  
Researcher, Friend



The Pacific Northwest Region of the Bureau of Mines was established in 1948, and in 1951, an Office of Mining Research was opened in Spokane. This field office of the Albany (Oregon) Metallurgy Research Center engaged in work on such projects as the intercrystalline bond of manganese (metallurgical research), rock pressure in the deep lead and silver mines of northern Idaho, and ceramic and fertilizer materials of the underground phosphate mines of southern Idaho and southwestern Montana.

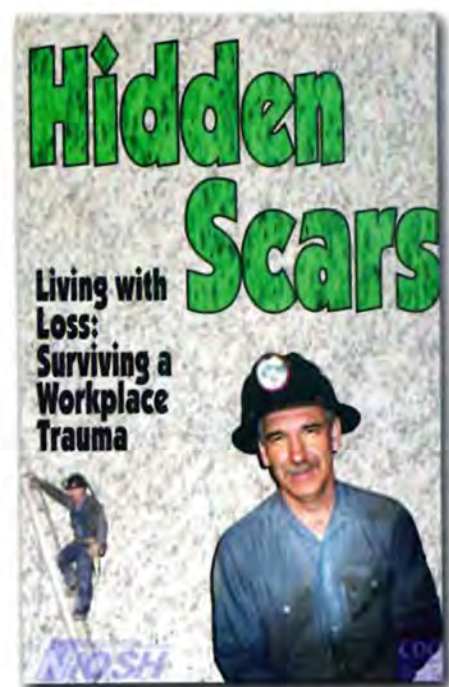
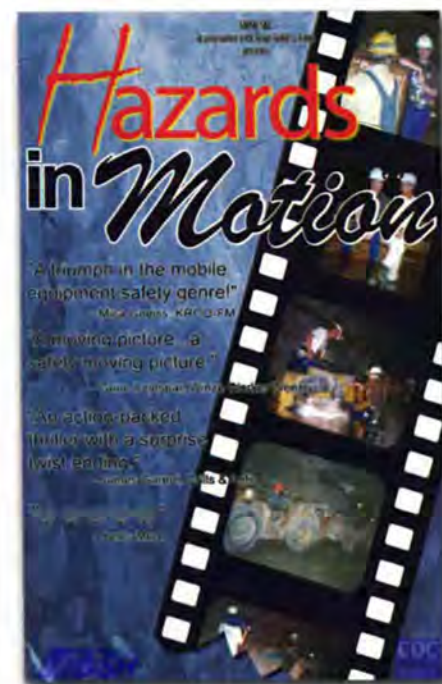
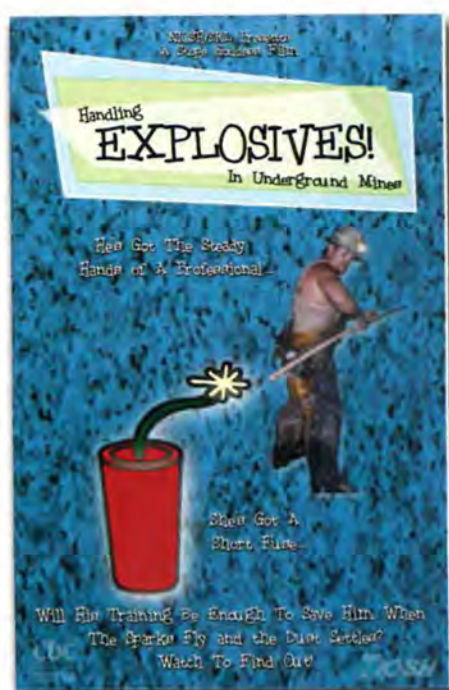
In 1963, the office became the Spokane Mining Research Laboratory, administratively independent of the Albany center, and its focus shifted from metallurgical research to the problems of ground support. Several familiar research topics made their first appearance, including rock bursts, ground control in deep mines, concrete mine supports, hydraulically placed fill, and rock bolt anchorage, among others. Another name change took place in 1971, when the "Laboratory" became a "Center," and again in 1979 when the word "Mining" was dropped from the title.

The number of projects steadily increased: 5 in 1962, 10 in 1964, 15 in 1967, 23 in 1969, and then a whopping increase to 62 in 1972. Actually, in that year, 23 were in-house projects, and 39 were contracts. A peak in project title occurred in FY80: 168. The number of personnel (full and part-time) increased accordingly: from 44 in 1967 to 105 in 1971 to a maximum of 128 in 1977. Contracts, particularly those dealing with the design and manufacturing of prototype mining equipment, continued to make up at least two-thirds of the project titles until 1983, while the staff stabilized at around 120 people.

To accommodate the engineering demands of the increased research load, a new building was designed and constructed in 1974. It contained such features as a structural bay that could support the weight of a simulated mine entry and laboratories where corrosion tests could be run on wire hoist ropes. Although it has undergone a number of modifications as the overall research program of the Bureau changed, this building is still the home of the Spokane laboratory.

In 1996, the health and safety functions of the U.S Bureau of Mines were transferred to the National Institute for Occupational Safety and Health (NIOSH). NIOSH is part of the Centers for Disease Control and Prevention. Problems of the mining industry were not new to NIOSH; in the past, the agency had investigated mining-related issues involving coal dust, silica, dust, and mine fires and explosions. The Pittsburgh Research Laboratory and the Spokane Research Laboratory, operating under the Office for Mine Safety and Health Research within NIOSH, are now responsible for studies on mining-related health and safety problems in coal, nonmetal, metal, stone, and sand-gravel mines.

One of the themes that has run through all the research conducted at the Spokane laboratory and that still forms the core of its work today is the safety of miners. Another is that the goal of the program is not merely to identify problems but to find *solutions* to problems. By working with people in the mining industry -- whether from management, labor, government agencies, contractors, or academia -- the staff of the Spokane Research Laboratory intends to make good on the NIOSH mission of "Delivering on the Nation's promise: Safety and health at work for all people through research and prevention."







**Doug Ward, Troy Mine**

**January 2006**

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|--------|---------|-----------|----------|--------|----------|
| 1      | 2      | 3       | 4         | 5        | 6      | 7        |
| 8      | 9      | 10      | 11        | 12       | 13     | 14       |
| 15     | 16     | 17      | 18        | 19       | 20     | 21       |
| 22     | 23     | 24      | 25        | 26       | 27     | 28       |
| 29     | 30     | 31      |           |          |        |          |



**Ken Groves, Sunshine Mine**

**February 2006**

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|--------|---------|-----------|----------|--------|----------|
|        |        |         | 1         | 2        | 3      | 4        |
| 5      | 6      | 7       | 8         | 9        | 10     | 11       |
| 12     | 13     | 14      | 15        | 16       | 17     | 18       |
| 19     | 20     | 21      | 22        | 23       | 24     | 25       |
| 26     | 27     | 28      |           |          |        |          |





Tom Fuell, Stillwater Mine

March 2006

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|--------|---------|-----------|----------|--------|----------|
|        |        |         | 1         | 2        | 3      | 4        |
| 5      | 6      | 7       | 8         | 9        | 10     | 11       |
| 12     | 13     | 14      | 15        | 16       | 17     | 18       |
| 19     | 20     | 21      | 22        | 23       | 24     | 25       |
| 26     | 27     | 28      | 29        | 30       | 31     |          |





Derek Feedback, Troy Mine

April 2006

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|--------|---------|-----------|----------|--------|----------|
| 1      |        |         |           |          |        |          |
| 2      | 3      | 4       | 5         | 6        | 7      | 8        |
| 9      | 10     | 11      | 12        | 13       | 14     | 15       |
| 16     | 17     | 18      | 19        | 20       | 21     | 22       |
| 23/30  | 24     | 25      | 26        | 27       | 28     | 29       |





Dave “Gator” Truean, Galena Mine

May 2006

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|--------|---------|-----------|----------|--------|----------|
|        | 1      | 2       | 3         | 4        | 5      | 6        |
| 7      | 8      | 9       | 10        | 11       | 12     | 13       |
| 14     | 15     | 16      | 17        | 18       | 19     | 20       |
| 21     | 22     | 23      | 24        | 25       | 26     | 27       |
| 28     | 29     | 30      | 31        |          |        |          |





**Zach Snyder, Galena Mine**

**June 2006**

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|--------|---------|-----------|----------|--------|----------|
|        |        |         |           | 1        | 2      | 3        |
| 4      | 5      | 6       | 7         | 8        | 9      | 10       |
| 11     | 12     | 13      | 14        | 15       | 16     | 17       |
| 18     | 19     | 20      | 21        | 22       | 23     | 24       |
| 25     | 26     | 27      | 28        | 29       | 30     |          |





**Rick Enoff, Yost Drilling**

**July 2006**

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|--------|---------|-----------|----------|--------|----------|
|        |        |         |           |          |        | 1        |
| 2      | 3      | 4       | 5         | 6        | 7      | 8        |
| 9      | 10     | 11      | 12        | 13       | 14     | 15       |
| 16     | 17     | 18      | 19        | 20       | 21     | 22       |
| 23/30  | 24/31  | 25      | 26        | 27       | 28     | 29       |





*Jeff and John James, Galena Mine*

**August 2006**

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|--------|---------|-----------|----------|--------|----------|
|        |        | 1       | 2         | 3        | 4      | 5        |
| 6      | 7      | 8       | 9         | 10       | 11     | 12       |
| 13     | 14     | 15      | 16        | 17       | 18     | 19       |
| 20     | 21     | 22      | 23        | 24       | 25     | 26       |
| 27     | 28     | 29      | 30        | 31       |        |          |





**Kenny Chambers, Lucky Friday Mine**

**September 2006**

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|--------|---------|-----------|----------|--------|----------|
|        |        |         |           |          | 1      | 2        |
| 3      | 4      | 5       | 6         | 7        | 8      | 9        |
| 10     | 11     | 12      | 13        | 14       | 15     | 16       |
| 17     | 18     | 19      | 20        | 21       | 22     | 23       |
| 24     | 25     | 26      | 27        | 28       | 29     | 30       |





**Cecil Jones, Black Thunder Mine**

**October 2006**

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|--------|---------|-----------|----------|--------|----------|
| 1      | 2      | 3       | 4         | 5        | 6      | 7        |
| 8      | 9      | 10      | 11        | 12       | 13     | 14       |
| 15     | 16     | 17      | 18        | 19       | 20     | 21       |
| 22     | 23     | 24      | 25        | 26       | 27     | 28       |
| 29     | 30     | 31      |           |          |        |          |





*Dustin Moore, Yost Drilling*

**November 2006**

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|--------|---------|-----------|----------|--------|----------|
|        |        |         | 1         | 2        | 3      | 4        |
| 5      | 6      | 7       | 8         | 9        | 10     | 11       |
| 12     | 13     | 14      | 15        | 16       | 17     | 18       |
| 19     | 20     | 21      | 22        | 23       | 24     | 25       |
| 26     | 27     | 28      | 29        | 30       |        |          |





Joe D'Oliveira, Smith Ranch Mine

December 2006

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|--------|---------|-----------|----------|--------|----------|
|        |        |         |           |          | 1      | 2        |
| 3      | 4      | 5       | 6         | 7        | 8      | 9        |
| 10     | 11     | 12      | 13        | 14       | 15     | 16       |
| 17     | 18     | 19      | 20        | 21       | 22     | 23       |
| 24/31  | 25     | 26      | 27        | 28       | 29     | 30       |





Mike Achard, Lucky Friday Mine

January 2007

| SUNDAY | MONDAY | TUESDAY | WEDNESDAY | THURSDAY | FRIDAY | SATURDAY |
|--------|--------|---------|-----------|----------|--------|----------|
|        | 1      | 2       | 3         | 4        | 5      | 6        |
| 7      | 8      | 9       | 10        | 11       | 12     | 13       |
| 14     | 15     | 16      | 17        | 18       | 19     | 20       |
| 21     | 22     | 23      | 24        | 25       | 26     | 27       |
| 28     | 29     | 30      | 31        |          |        |          |



# NIOSH

## Haz-Com Helper



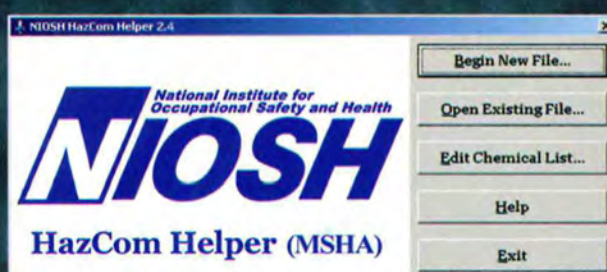
**HazCom Helper - MSHA Version**  
ver. 2.4



[www.cdc.gov/niosh/homepage.html](http://www.cdc.gov/niosh/homepage.html)

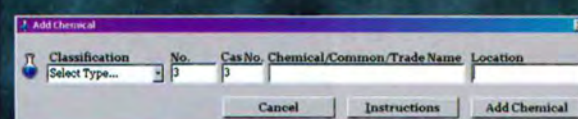
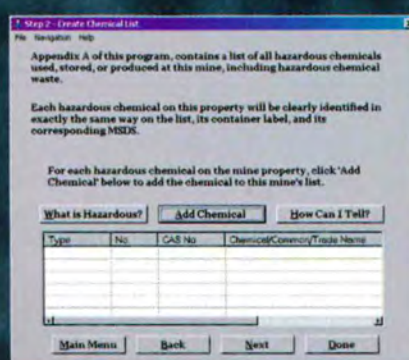
DEPARTMENT OF HEALTH AND HUMAN SERVICES  
Centers for Disease Control and Prevention  
National Institute for Occupational Safety and Health  
DHHS (NIOSH) Publication No. 2003-118  
October 2004

- To Install:
1. Insert CD-ROM
  2. Wait for Setup to Start
  3. Double Click the SETUP icon, or
  4. Under the START Menu, Run "D:/Setup"



This easy to use program helps you write your HazCom plan.

Create and edit your hazardous chemicals list (Appendix A) with the click of a button.





# ***SPOKANE RESEARCH LABORATORY***



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**SAFER • HEALTHIER • PEOPLE™**

Department of Health and Human Services  
Centers for Disease Control and Prevention  
National Institute for Occupational Safety and Health  
DHHS (NIOSH) Publication No. 2006-111