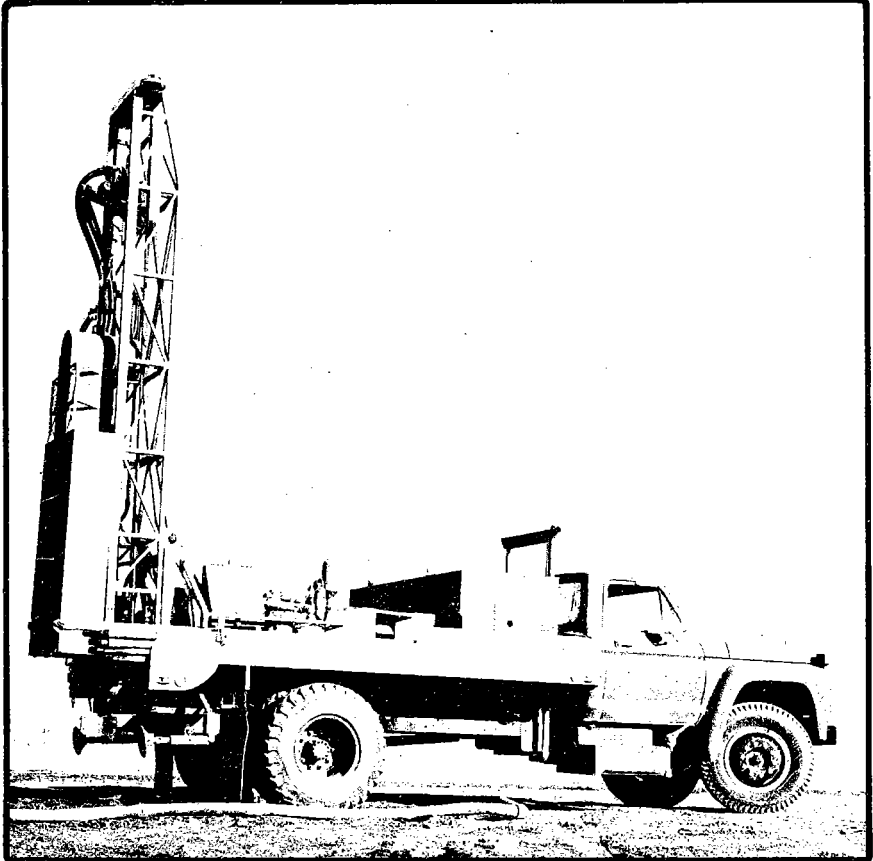


MINERALS REPORT 21

THE MINERAL INDUSTRY
OF SOUTH DAKOTA
IN 1974

by J. H. Aase



DEPARTMENT OF NATURAL RESOURCE DEVELOPMENT

SOUTH DAKOTA GEOLOGICAL SURVEY

VERMILLION, SOUTH DAKOTA-1977

The Mineral Industry of South Dakota

This chapter has been prepared under a cooperative agreement between the Bureau of Mines, U.S. Department of the Interior, and the South Dakota Geological Survey for collecting information on all minerals except fuels.

By J. H. Aase ¹

The value of mineral production in South Dakota rose to an alltime high of \$102.8 million in 1974, 27% more than the previous high record value set in 1973. Nonmetals accounted for 43%, metals 54%, and fuels 3% of the total mineral output value in 1974. Gold continued as the State's leading mineral commodity in terms of value, followed by cement, stone, and sand and gravel.

Nationally, South Dakota ranked first in gold production, with the Homestake mine at Lead accounting for the total State production output of 343,723 troy

ounces valued at nearly \$55 million. Although the quantity of gold produced dropped 3.9% from the 1973 level, the value of 1974 production was 57% higher as a result of major advances in gold prices; the average value increased about \$62 from \$97.81 to \$160 per troy ounce.

A bill to reinstate a State ore tax, which was repealed 4 years ago, was narrowly defeated in the State legislature. The bill would have levied an 8½% tax on the net income of mining operations having a production of 10,000 tons or more annually.

¹ State Liaison Officer, Bureau of Mines, Rapid City, S. Dak.

Table 1.—Mineral production in South Dakota ¹

Mineral	1973		1974	
	Quantity	Value (thousands)	Quantity	Value (thousands)
Clays ² ----- thousand short tons --	201	\$181	190	\$202
Gem stones -----	NA	42	NA	42
Gold (recoverable content of ores, etc.) ----- troy ounces --	357,575	34,974	343,723	54,906
Gypsum ----- thousand short tons --	W	W	32	135
Lime ----- do -----	63	1,206	94	2,059
Mica (scrap) ----- do -----	--	--	W	W
Petroleum (crude) ----- thousand 42-gallon barrels --	275	988	494	3,283
Sand and gravel ----- thousand short tons --	13,963	16,587	9,023	9,720
Silver (recoverable content of ores, etc.) ----- thousand troy ounces --	72	184	62	294
Stone ----- thousand short tons --	2,745	11,607	2,968	14,231
Value of items that cannot be disclosed:				
Cement, clays (bentonite), feldspar, iron ore, natural gas liquids, and values indicated by symbol W -----	XX	15,370	XX	17,938
Total -----	XX	81,139	XX	102,810
Total 1967 constant dollars -----	XX	59,483	XX	P 49,164

^p Preliminary. NA Not available. W Withheld to avoid disclosing individual company confidential data; included with "Value of items that cannot be disclosed." XX Not applicable.

¹ Production as measured by mine shipments, sales, or marketable production (including consumption by producers).

² Excludes bentonite; included with "Value of items that cannot be disclosed."

Table 2.—Value of mineral production in South Dakota, by county¹
(Thousands)

County	1973	1974	Minerals produced in 1974, in order of value
Aurora	\$42	\$45	Sand and gravel.
Beadle	W	W	Do.
Bon Homme	45	17	Do.
Brookings	W	W	Sand and gravel, stone.
Brown	420	385	Sand and gravel.
Brule	28	--	
Buffalo	W	W	Sand and gravel.
Butte	W	2,950	Clays, natural gas liquids, sand and gravel.
Campbell	151	98	Sand and gravel.
Charles Mix	69	87	Do.
Clark	14	47	Do.
Clay	17	25	Do.
Codington	W	555	Do.
Corson	16	51	Do.
Custer	W	867	Stone, feldspar, sand and gravel, mica.
Davison	19	56	Sand and gravel.
Day	W	118	Do.
Deuel	30	554	Do.
Dewey	45	13	Do.
Douglas	143	122	Do.
Edmunds	W	W	Do.
Fall River	W	W	Sand and gravel, stone.
Faulk	45	55	Sand and gravel.
Gregory	W	8,981	Stone, sand and gravel.
Grant	7,608	58	Sand and gravel.
Hamlin	41	109	Do.
Hand	W	72	Do.
Hanson	W	W	Stone, sand and gravel.
Harding	1,020	35	Sand and gravel.
Hughes	17	8	Do.
Hutchinson	151	80	Do.
Hyde	W	47	Do.
Jerauld	13	8	Do.
Kingsbury	11	85	Do.
Lake	W	110	Do.
Lawrence	85,300	W	Gold, silver, sand and gravel, stone.
Lincoln	W	82	Sand and gravel.
Lyman	W	W	Do.
McCook	W	55	Do.
McPherson	W	37	Do.
Marshall	156	102	Do.
Meade	W	W	Sand and gravel, gypsum.
Mellette	--	228	Sand and gravel.
Miner	26	22	Do.
Minnehaha	W	W	Stone, sand and gravel.
Moody	W	110	Sand and gravel.
Pennington	17,026	20,714	Cement, stone, lime, sand and gravel, clays, iron ore, mica, feldspar.
Perkins	102	78	Sand and gravel.
Potter	60	42	Do.
Roberts	W	333	Do.
Sanborn	77	73	Do.
Shannon	11	--	
Spink	132	147	Sand and gravel.
Sully	31	56	Do.
Tripp	83	150	Sand and gravel, stone.
Turner	138	77	Sand and gravel.
Union	63	56	Do.
Walworth	4	8	Do.
Washabaug	W	W	Do.
Yankton	237	W	Sand and gravel, stone.
Ziebach	25	--	
Undistributed ²	17,723	64,803	
Total	81,139	*102,810	

W Withheld to avoid disclosing individual company confidential data; included with "Undistributed."

¹ The following counties are not listed because no production was reported: Bennett, Haakon, Jackson, Jones, Stanley, and Todd.

² Includes gem stones, some sand and gravel and petroleum (1974) that cannot be assigned to specific counties, and values indicated by symbol W.

³ Data do not add to total shown because of independent rounding.

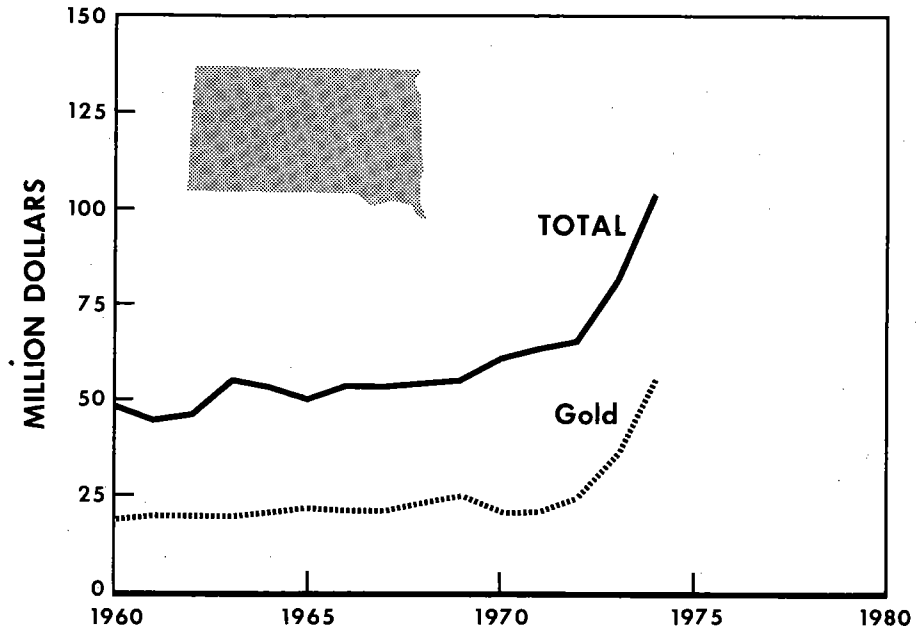


Figure 1.—Value of mine production of gold, and total value of mineral production in South Dakota.

Table 3.—Indicators of South Dakota business activity

	1973	1974 ^p	Change, percent
Employment and labor force, annual average:			
Total labor force	297.9	NA	NA
Employment	254.5	NA	NA
Unemployment	43.4	NA	NA
Nonagricultural employment:			
Mining	2.4	2.5	+4.2
Construction	10.4	10.5	+1.0
Manufacturing	19.9	20.8	+4.5
Government	60.7	63.1	+4.0
Other nonagricultural employment	112.8	118.6	+5.1
Personal income:			
Total	\$3,254	\$3,534	+8.6
Per capita	\$4,771	\$4,218	-11.6
Construction activity:			
Highway construction contracts awarded	\$46.3	\$44.4	-4.1
Cement shipments to and within South Dakota			
thousand short tons	344	354	+2.9
Number of authorized residential units	3,839	2,719	-29.2
Value of nonresidential construction	\$35.8	\$42.7	+19.3
Mineral production value	\$81.1	\$102.8	+26.8

^p Preliminary. NA Not available.

Source: Survey of Current Business; Employment and Earnings; Construction Review; Area Trends in Employment and Unemployment; Roads and Streets; and U.S. Bureau of Mines.

The experimental coal-gasification pilot plant in Rapid City, built and managed by Conoco Coal Development Co. under contract to the Office of Coal Research (U.S. Department of the Interior) and the American Gas Association, has been successful in producing 400-Btu synthetic gas from North Dakota lignite on a sustained around-the-clock basis. Economic studies were initiated to determine the desirability of extending this development to a large-scale demonstration plant with a capacity of 100-250 million cubic feet per day of gas. A methanation unit was installed at the plant to raise the low-Btu gas to a high (950 Btu) pipeline-quality synthetic gas.

Susquehanna Western, Inc., and Mines Development, Inc., wholly-owned subsidiaries of the Susquehanna Corp., sold its uranium properties and milling facility in the Edgemont area to the Tennessee Valley Authority. The properties sold included approximately 94,000 acres of uranium claims and leases in addition to an ore milling and processing facility. This transaction represented substantial completion of Susquehanna's previously announced program to dispose of all of its uranium and vanadium mining and processing properties.

The South Dakota Cement Commission initiated a \$20 million expansion project to double the annual cement production of the State-owned plant in Rapid City from 3 to 6 million barrels by 1976.

REVIEW BY MINERAL COMMODITIES

NONMETALS

Cement.—Production of cement in 1974 remained at approximately the same level as in 1973. Shipments rose 1% compared with those of the previous year. All of the production came from the State-owned Rapid City plant operated by the South Dakota Cement Commission. The disposition of finished portland cement shipments was 65% to ready mix companies, 14% to highway contractors, 11% to concrete product manufacturers, 6% to building material dealers, and the remainder to other various customers. Almost two-thirds of the total shipments was consumed in South Dakota. North Dakota and Minnesota each received about 10%, and the remainder went to other neighboring States.

Owing to the increased demand for cement, customers of this plant were cut at mid-year to a 75% allocation of what they used the preceding year. The plant, which operated at 98% capacity during the year, is the only cement-producing facility in the State.

The Earth Resources Observation System (EROS) Data Center in Sioux Falls has begun extensive expansion of its Computer Branch because of the magnitude of the demands on the computer system. The larger system being installed represents an investment of \$2 million to \$6 million over a 5-year period. In addition to the functions of the computer within the Data Center relating to research, database inquiry, and order entry, terminals from other Geological Survey offices throughout the Nation will be connected to the EROS Data Center. The expanded computer complex will also be used for digital data processing and analysis to provide more timely information to resource managers, and to increase the capability to extract information from space- and aircraft-acquired electronic data and imagery.

Among the publications dealing with the geology of South Dakota in 1974 were a U.S. Geological Survey circular describing gold deposits in the State and how new deposits might be found² and a South Dakota Geological Survey report on geothermal potential in the State.³

Raw materials consumed in 1974 cement production were as follows, in tons: limestone, 641,499; shale 133,054; sand, 38,142; gypsum, 26,863; and iron ore, 9,119.

Clays.—Total output of clays in 1974 declined 2% below that of 1973. Bentonite production accounted for the largest part of the value of clays produced in 1974. The bentonite produced was used principally in oil well drilling mud, water sealant, foundry clay, and animal feed. The American Colloid Co. continued to operate the State's only bentonite-processing

² Norton, J. Gold in the Black Hills, South Dakota, and How New Deposits Might Be Found. U.S. Geol. Survey Circ. 699, 1974, 21 pp.

³ Schoon, R., and D. J. McGregor. Geothermal Potentials in South Dakota. S. Dak. Geol. Survey Rept. Inv. 110, 1974, 76 pp.

plant, at Belle Fourche, using crude material obtained from within the State and from Wyoming sources.

Common clay production for cement manufacturing, lightweight aggregate, and brickmaking declined about 5% in 1974 compared with that of 1973.

Feldspar.—Production of feldspar in 1974 was sharply lower in quantity and value than that of 1973. Seven mines in Custer County and one mine in Pennington were operated during the year, with the bulk of the output processed by Pacer Corp., operators of a grinding mill at Custer.

Gypsum.—The State's production of gypsum, totaling 32,300 tons valued at \$135,000, set a new record high in 1974 and was used in cement manufacturing. The South Dakota Cement Commission was the operator of a small surface mine in Meade County that provided the entire output.

Lime.—Pete Lien & Sons, produced lime in Pennington County for soil stabilization, electric steel furnaces, sewage treatment, and other uses. Output was at a record high of 93,600 tons in 1974, 49% above that of 1973. The lime was used in Colorado, South Dakota, Nebraska, and other areas. Consumption of lime within South Dakota was 32,970 tons.

Mica.—A small tonnage of scrap and flake mica was produced by two mines, one each in Custer and Pennington Counties.

Sand and Gravel.—Production of construction and industrial sand and gravel in 1974 decreased 35% compared with that in 1973. Output totaling 9 million tons was produced at 175 mines operated in 58 counties during 1974. Counties leading in production were Pennington, Minnehaha, Codington, Brown, Brookings, and Mellette; these counties supplied 3.3 million tons, 37% of the State total.

Table 4.—South Dakota: Construction and industrial sand and gravel sold or used by producers
(Thousand short tons and thousand dollars)

Use	1973		1974	
	Quantity	Value	Quantity	Value ¹
Construction:				
Processed:				
Sand -----			1,057	1,598
Gravel -----			6,501	7,114
Unprocessed: Sand and gravel -----	13,963	16,587	1,470	1,010
Industrial:				
Sand -----	--	--	--	--
Gravel -----				
Total -----	13,963	16,587	9,028	9,722

¹ Value data may not be directly comparable to that in tables 1, 5, and 6 because unit value of construction aggregate may be higher than the individual unit values for sand or gravel.

Table 5.—South Dakota: Construction aggregate and industrial sand and gravel sold or used commercially by producers
(Thousand short tons and thousand dollars)

Use	1973		1974	
	Quantity	Value	Quantity	Value ¹
Construction aggregate:				
Nonresidential and residential construction -----			786	1,193
Highway and bridge construction -----			406	652
Other uses (dams, waterworks, airports, etc.) -----			71	101
Concrete products (cement blocks, brick, pipe, etc.) -----	5,209	6,269	362	628
Bituminous paving (asphalt and tar paving) -----			332	462
Roadbase and subbase -----			1,171	990
Unprocessed aggregate -----			1,257	920
Fill -----	618	515	78	69
Other uses ² -----	488	516	218	293
Industrial sand and gravel -----	--	--	--	--
Total -----	6,260	7,800	4,626	5,808

¹ Unit value of construction aggregate may be higher than unit value of sand or gravel.

² Includes miscellaneous (1973).

Table 6.—South Dakota: Construction aggregate sold or used for publicly funded projects by producers
(Thousand short tons and thousand dollars)

Use	1973		1974	
	Quantity	Value	Quantity	Value ¹
Construction aggregate:				
Nonresidential and residential construction -----			2	W
Highway and bridge construction -----			691	1,002
Other uses (dams, waterworks, airports, etc.) -----			---	---
Concrete products (cement blocks, brick, pipe, etc.) -----	7,335	9,064	14	31
Bituminous paving (asphalt and tar paving) -----			981	941
Roadbase and subbase -----			2,211	2,032
Unprocessed aggregate -----			213	90
Fill -----	113	57	82	78
Other -----	254	166	209	238
Total -----	7,702	9,287	4,403	4,412

W Withheld to avoid disclosing individual company confidential data; included with "Highway and bridge construction."

¹ Unit value of construction aggregate may be higher than unit value of sand or gravel.

Stone.—Stone production consisting of granite, quartzite, limestone, and quartz was produced in 10 counties. Output in 1974 amounted to 2.97 million tons valued at \$14.2 million which represents an 8% increase in tonnage and a 23% increase in value compared to 1973.

Granite was quarried by six companies

in Grant County, mostly for monumental and architectural purposes.

Crushed and broken stone accounted for 99% of the total output. Approximately 33% was used as concrete aggregate, 17% in railroad ballast, and the remainder in other miscellaneous uses.

Table 7.—South Dakota: Stone sold or used by producers, by kind
(Thousand short tons and thousand dollars)

Kind of stone	1973		1974	
	Quantity	Value	Quantity	Value
Dimension stone total ¹ -----	40	7,474	36	8,881
Crushed and broken:				
Limestone -----	1,661	1,843	2,019	3,262
Other stone ² -----	1,043	2,290	914	2,087
Total ³ -----	2,745	11,607	2,968	14,231

¹ Data represent granite.

² Data include quartzite, quartz (1974), and granite (1974).

³ Data may not add to totals shown because of independent rounding.

Table 8.—South Dakota: Stone sold or used by producers, by use
(Thousand short tons and thousand dollars, unless otherwise specified)

Use	1973		1974	
	Quantity	Value	Quantity	Value
Dimension stone:				
Rough monumental ¹ ----- thousand cubic feet --	281	W	146	2,295
Dressed monumental ----- do -----	128	W	218	8,442
Total (thousand short tons) ² -----	40	7,474	36	8,881
Crushed and broken stone:				
Bituminous aggregate -----	236	472	268	566
Concrete aggregate -----	1,027	2,015	971	2,120
Macadam aggregate -----	1	1	1	1
Surface treatment aggregate -----	107	149	119	255
Railroad ballast -----	(4)	(4)	512	1,007
Riprap and jetty stone -----	33	53	84	82
Other uses ³ -----	1,299	1,433	1,033	1,387
Total ³ -----	2,704	4,133	2,983	5,849
Grand total ³ -----	2,745	11,607	2,968	14,231

W Withheld to avoid disclosing individual company confidential data; included in "Dimension stone total."

¹ Includes dressed architectural stone.

² Data include stone for rough construction (1973), and architectural work.

³ Data may not add to totals shown because of independent rounding.

⁴ Withheld to avoid disclosing individual company confidential data; included with "Other uses."

⁵ Includes stone used for agricultural limestone, dense graded roadbase stone, and uses not specified. Data also include stone used in unspecified construction aggregate and roadstone, other filler (1973), cement, and lime manufacture.

METALS

Gold and Silver.—The Homestake mine at Lead, South Dakota, the State's sole producer of gold and silver, processed 1.56 million tons of ore in 1974, from which 343,723 ounces of gold and 62,474 ounces of silver were recovered. Although production was down 3.9% for gold and 13.2% for silver compared with 1973 figures, total values rose 57% and 60% for gold and silver, respectively, owing to higher metal prices.

During 1974, the grade of ore decreased slightly at the Homestake mine as a result of a reduction in the cutoff grade and

high production from the lower grade Nine and Eleven ledge ore bodies. The metallurgical recovery improved from 93.6% in 1973 to 95.1% in 1974. Deepening of the No. 6 winze was started and had been advanced 517 feet to a depth of 7,729 feet by yearend. On the 6800 level, preparations were begun for sinking the No. 7 winze. Both winzes will provide access to the 8000 level. To provide access to the western part of the mine, major exploration crosscuts are being driven on the 5300 and 5900 levels.⁴

⁴ Skillings' Mining Review. Homestake Mining Co. Experiences Favorable Year in 1974. V. 64, No. 20, May 17, 1975, p. 12.

Table 9.—South Dakota: Mine production (recoverable) of gold and silver

	1972	1973	1974
Mines producing: Lode -----	1	1	1
Material sold or treated: Gold ore ----- thousand short tons --	1,467	1,574	1,560
Production (recoverable):			
Quantity:			
Gold ----- troy ounces --	407,430	357,575	348,723
Silver ----- do -----	99,992	71,939	62,474
Value:			
Gold ----- thousands --	\$23,875	\$34,974	\$54,906
Silver ----- do -----	168	184	294
Total ----- do -----	24,043	35,158	55,201

¹ Data do not add to total shown because of independent rounding.

Table 10.—South Dakota: Homestake mine ore milled and receipts for gold produced

Year	Ore milled (thousand short tons)	Receipts for gold produced	
		Total (thousands)	Per ton
1970	1,954	\$21,059	\$10.78
1971	1,800	21,179	11.77
1972	1,467	23,875	16.27
1973	1,574	84,974	22.22
1974	1,560	54,906	35.20

Homestake Mining Co. entered into a partnership agreement with Taiga Gold, Inc., of Denver, Colo., to explore the former Bald Mountain Mining Co. property near Lead. Taiga Gold, Inc., acquired the assets of Bald Mountain Mining Co. and contributed them to the partnership. Homestake Mining Co. will be the managing partner. Under the agreement, the partnership will determine whether there is enough gold to warrant mining and milling operations. The Bald Mountain Mining Co. conducted mining and milling operations from 1933 until closure in 1959 when production costs became excessive.⁵

Iron Ore.—A new open pit iron ore property was put into production by Pete Lien & Sons of Rapid City. The property, known as the Black Fox mine, is located in Pennington County and contains a hematite-limonite ore. The mined ore was delivered to the State-owned cement plant in Rapid City for use in cement manufacturing.

Uranium and Vanadium.—No production or processing of uranium or vanadium ore was carried on in the State during 1974. Susquehanna Western, Inc., and Mines Development, Inc., sold their uranium properties and processing facilities at Edgemont, S. Dak., to the Tennessee Valley Authority. Exploration drilling was continued on the property in an effort to extend the uranium-vanadium reserves.

MINERAL FUELS

Petroleum.—In 1974, production of crude oil increased 80% in quantity and 232% in value compared with that of 1973. Output totaling 494,000 barrels was obtained from 31 producing wells throughout 7 fields. The largest producing field was the Travers Ranch, which accounted for 33% of the crude oil production. The Buffalo and State Line fields accounted for 28%

and 19%, respectively, of the State output.

A total of 20 drilling permits were issued in 1974 and 17 test holes were drilled, with a total footage of 86,046 feet. This compares with 17 permits issued and 14 holes drilled for 78,538 feet during 1973. The deepest hole drilled was 9,220 feet and the shallowest was 1,531 feet. The average depth of all wells was 5,061. Six of the test holes had as their objectives the dolomite of the Red River Formation of Ordovician age, a proven producer of oil and gas in the six oilfields of Harding County, as well as in oilfields in adjacent States. The remaining 11 tests were drilled to shallower formations such as the Muddy Sandstone Member of Cretaceous age.

Table 11.—South Dakota: Oil test completions in 1974, by county

County	Total		Status
	Wells	Footage	
Butte	1	2,342	Dry and abandoned.
Corson	1	7,650	Do.
Harding	8	58,777	One development, one discovery, six dry and abandoned.
Hughes	2	3,318	Dry and abandoned.
Jackson	2	8,809	Do.
Meade	1	1,932	Do.
Stanley	1	1,581	Do.
Sully	1	1,637	Do.
Total	17	86,046	

Source: South Dakota Geological Survey, Western Field Office, Rapid City, S. Dak.

No new oilfields were established in 1974, although there was one new discovery well. The well, Depco 22-24 Travers in SENW 24, 27N. 4E., Harding County, reached bottom in late December and had not been put on production at yearend. The discovery lies between the Buffalo and the Travers Ranch fields, and brings the

⁵ Lead Daily Call-Deadwood Pioneer Times. Mining Partnership Revealed. November 8, 1974, p. 1.

number of oil discoveries to nine for the 4-year period 1971-1974.

In addition to the discovery well, a new field development well was completed in the Travers Ranch field early in May. The second well, Hanover-Luff 1-7A Travers in NWN 3, 22N., 5E., Harding County, came into production in August with an initial daily potential pumping rate of 652 barrels of 36° API (gravity) oil, 91 barrels of water, and no gas.

New rules for the conservation of oil and gas in South Dakota were promulgated

during the year by the Board of Natural Resource Development. This board assumed responsibility for oil and gas conservation from the old Oil and Gas Board. The new rules are similar to the older Rules and Regulations of the Oil and Gas Board, except those covering proration and allocation of production, if and when they are needed, can now be enforced by the Board of Natural Resource Development.⁶

⁶ South Dakota Geological Survey, South Dakota Oil and Gas Future Bright. News Release, South Dakota Geol. Survey, Western Field Office, Rapid City, S. Dak., Feb. 22, 1975.

Table 12.—Principal producers

Commodity and company	Address	Type of activity	County
Cement: South Dakota Cement Commission.	P.O. Box 360 Rapid City, S. Dak. 57701	Wet-process, 3-rotary-kiln plant.	Pennington.
Clays: American Colloid Co	5100 Suffield Ct. Skokie, Ill. 60076	Open pit mine and plant.	Butte.
South Dakota Cement Commission.	P.O. Box 360 Rapid City, S. Dak. 57701	Open pit mine	Pennington.
Feldspar: Pacer Corp	Box 811 Custer, S. Dak. 57780	Open pit mines and dry-grinding plant.	Custer.
Gold: Homestake Mining Co	Lead, S. Dak. 57754	Underground mine, cyanidation mill, refinery.	Lawrence.
Gypsum: South Dakota Cement Commission.	P.O. Box 360 Rapid City, S. Dak. 57701	Open pit mine	Meade.
Lime: Pete Lien & Sons	Box 3124, P.O. Annex Rapid City, S. Dak. 57708	1-rotary-kiln, 1-vertical-kiln, continuous-hydrator plant.	Pennington.
Petroleum: Depco, Inc	1025 Petroleum Club Bldg. Denver, Colo. 80202	Crude oil wells	Harding (Yellow Hair and State Line field).
Hanover Planning Co., Inc	1236 North 28 St. Billings, Mont. 59102	do	Harding (Harding Springs field).
Kenneth Luff, Inc	2180 Colorado State Bank Bldg. Denver, Colo. 80202	do	Harding (Travers Ranch field).
Koch Exploration Co	P.O. Box 2256 Wichita, Kans. 67201	do	Harding (Buffalo field).
Phillips Petroleum Co	P.O. Box 2920 Casper, Wyo. 82601	do	Do.
Sand and gravel: Archie Campbell, Inc	New Rockford, N. Dak. 58356	Pit	Various.
Birdsall Sand and Gravel Co., Inc.	Box 767 Rapid City, S. Dak. 57701	Pit and plant	Fall River and Pennington.
Concrete Materials, Inc	100 South Dakota Ave. Sioux Falls, S. Dak. 57102	Pits	Minnehaha and Roberts.
E. L. Lien and Sons, Inc	P.O. Box 46 Aberdeen, S. Dak. 57401	do	Brown.
F. J. McLaughlin Co	Box 13 Watertown, S. Dak. 57201	Pit	Codington.
H. W. Faber & Sons Construction.	Sheldon, Iowa 51201	Pits	Various.
Hallett Construction Co	Box 78 St. Peter, Minn. 56082	Pit and plant	Codington.
Highway Construction Co	Box 511 Rapid City, S. Dak. 57701	Pit	Pennington.
L. G. Everist, Inc	302 Paulton Building Sioux Falls, S. Dak. 57102	Pit and plant	Various.
Mannerud, Inc	Box 223 Brookings, S. Dak. 57006	Plant	Brookings.
Martin L. Meyer	Box 1968 Rapid City, S. Dak. 57701	Pits	Various.
N & M Construction, Inc	Box 337 Sturgis, S. Dak. 57785	Pit	Meade.

Table 12.—Principal producers—Continued

Commodity and company	Address	Type of activity	County
Sand and gravel—Continued			
Reynolds Construction Co --	Box 689 Sioux Falls, S. Dak. 57101	Pit -----	Minnehaha.
W. E. Bartholow & Sons Construction.	Box 3 Huron, S. Dak. 57350	Pit -----	Various.
Weelborg Brothers, Inc ---	Dell Rapids, S. Dak. 57022	Pits and mill ---	Do.
Silver: Homestake Mining Co	Lead, S. Dak. 57754 -----	Underground mine, cyanida- tion mill, refin- ery.	Lawrence.
Stone:			
Cold Spring Granite Co ---	Cold Spring, Minn. 56320	2 quarries -----	Grant.
Concrete Materials Co ----	100 South Dakota Ave. Sioux Falls, S. Dak. 57102	Quarry and plant	Minnehaha.
Dakota Granite Co -----	Box 269 Milbank, S. Dak. 57252	2 quarries -----	Grant.
Hills Materials Co -----	Box 1392 Rapid City, S. Dak. 57701	Quarry and plant	Pennington.
Lee Construction Co -----	Box 348 Spearfish, S. Dak. 57788	Quarry -----	Lawrence.
L. G. Everist, Inc -----	302 Paulton Building Sioux Falls, S. Dak. 57102	Quarry and plant	Minnehaha.
Pete Lien & Sons -----	Box 3124, P.O. Annex Rapid City, S. Dak. 57708	---- do -----	Pennington.
Pioneer Lime Co -----	Humboldt, Iowa 50548 ---	---- do -----	Do.
South Dakota Cement Com- mission.	P.O. Box 360 Rapid City, S. Dak. 57701	Quarry -----	Yankton.
Spencer Quarries, Inc ----	Spencer, S. Dak. 57374 ---	Quarry and plant	Pennington.
		Quarry -----	Hanson.