Marion, Ky.	90.02	4.72	1.5	....	.....	Colorado Fuel & Iron Company.
Marion, Ky.	92.7	2.5	.64	....	.....	Colorado Fuel & Iron Company.
Marion, Ky.	96.01	1.9	1.88	....	.....	Colorado Fuel & Iron Company.
Marion, Ky.	94.72	1.22	.98	1.82	0.68	Lackawanna Steel Company.
Marion, Ky.	95.63	1.32	.93	.38	1.22	Lackawanna Steel Company.
Fairview, Ill.	88.85	3.4	1.45	....	.....	Carnegie Steel Company.
Fairview, Ill.	87.07	3.12	....	8.96	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	86.31	4.30	....	7.57	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	86.60	2.38	....	10.94	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	85.35	8.17	....	4.50	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	83.49	4.0	....	7.67	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	84.80	3.51	....	8.29	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	84.50	3.85	....	8.27	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	85.63	3.82	....	9.21	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	88.67	5.13	....	4.49	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	85.61	6.05	....	4.22	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	85.57	6.76	....	2.26	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	86.10	7.39	....	2.14	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	86.87	7.39	....	4.44	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	98.27	.58	....	.27	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	96.62	1.67	....	.79	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	98.30	.46	....	.46	.....	Fairview Fluorspar & Lead Company.
Fairview, Ill.	95.38	.47	....	3.55	.....	Fairview Fluorspar & Lead Company.

From these analyses it will be seen that the spar shipped from Mirage, N. Mex., is of an exceptionally high grade, considering the fact that it has not been washed and cleaned as has the Illinois-Kentucky product.

Cost of Production.—The mining of the fluorspar near Deming is done almost wholly by contract. Mexican labour is employed, and miners earn about $1.50 per day. Mining the spar costs per ton $1.75, plus 25 cents for incidentaly expenses, and haulage to the railroad costs $1.50, making a total cost of $3.50 per ton dumped into cars. The spar in 1910 was selling at $5.25 per ton on the cars, based on at least 90 per cent. calcium fluoride, and the freight from Mirage to Pueblo, paid by the purchasers, was $2 per ton. According to contract a penalty of 20 cents per ton is deducted for each per cent. that the spar falls below 90 per cent. calcium fluoride, but no premium is paid unless it carries more than 95 per cent. calcium fluoride, when each unit brings 20 cents more per ton. The equipment for mining the spar is simple, the largest items of expense being the small steam hoist stationed at the deepest working, and the several teams necessary to haul the output. Small store buildings and machine shops have been built at both places where the spar was being developed. The labourers live in tents, and work can be carried on the year round. From the opening of these deposits in the summer of 1909 to the close of 1910 nearly 5,000 tons of fluorspar had been shipped, averaging 92 per cent. calcium fluoride.

Conclusions.—The exploration for and development of fluorspar deposits under present conditions in the western states can not be said to offer attractive profits; nevertheless the market for fluorspar is growing, and where deposits are found so situated that the freight rates do not hold down the price to a profitless level and the cost of haulage does not further wipe out all chances of gain, the development of such deposits should be encouraged.

THE PREVENTION OF ACCIDENTS IN MINES.

In Queensland and New South Wales the Acts for the prevention of accidents in mines provide that in mines employing more than ten men below ground the mining inspector shall be the holder of a first-class mine-manager's certificate, and be over thirty years of age. The Queensland Act states: "Wherever any mining inspector shall have inspected any mine or machinery he shall enter in a book, to be kept on the mine or works for the purpose, his opinion derived from such inspection of the actual condition of the mine and machinery at the time of such inspection, and he shall also record what alterations or requirements he thinks necessary." This is doubly useful, as it keeps the inspector up to the scratch and allows the manager to know at once the position, while should an accident occur it shows that the mine was in a safe condition at the time of the inspection. This record is also useful for reference purposes on any subsequent visit of an inspector. There is another useful regulation in the Queensland Act, namely, that the manager of every mine has once a week to sign a statement in a book kept for the purpose, that during the week he has at least once visited every working face in the mine, and he has to state whether conditions were safe or otherwise. In big mines this regulation will keep the manager up to his work and prevent too much dependence being placed on the foreman.

As to the storage of explosives, the Queensland Act states that: "Detonators for blasting shall be kept on the surface of the ground, in a covered box placed in a separate magazine. No more than 100 detonators shall be kept underground in any level at one time, and these shall be kept in a covered box in a separate drive or chamber and only taken out in such quantities as required for immediate use. Detonators shall not on any pretence whatsoever be placed near any travelling road, pass or working face." The Australian Acts require the mine manager to supply the Mines Department with a copy of the working plans of the mine, and are very particular about the tensile strength of hoisting ropes, etc. In the case of fatal accidents no work other than that required to save life shall be done, nor the conditions altered in any way until the inspector has had an opportunity of examining the position.