

石油科技英语测试教程

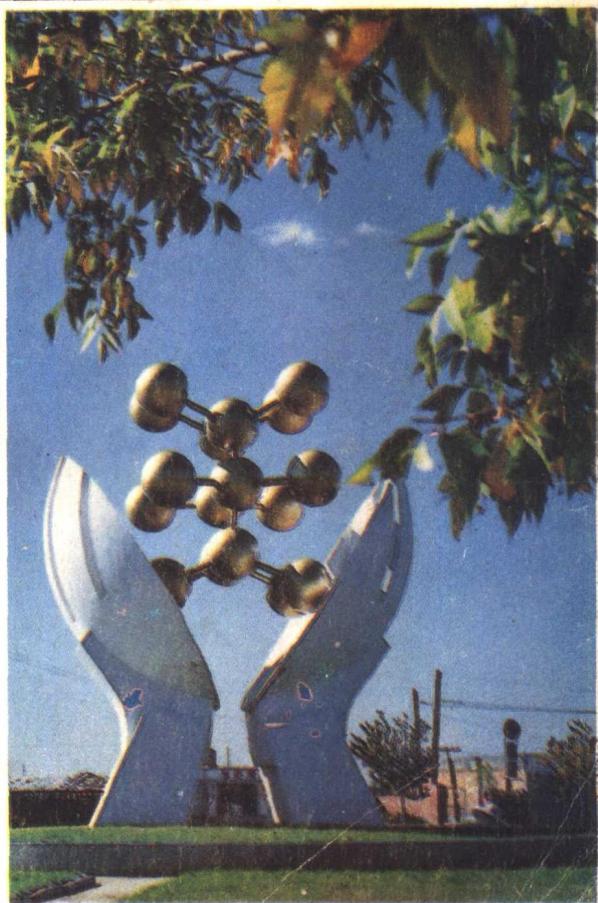
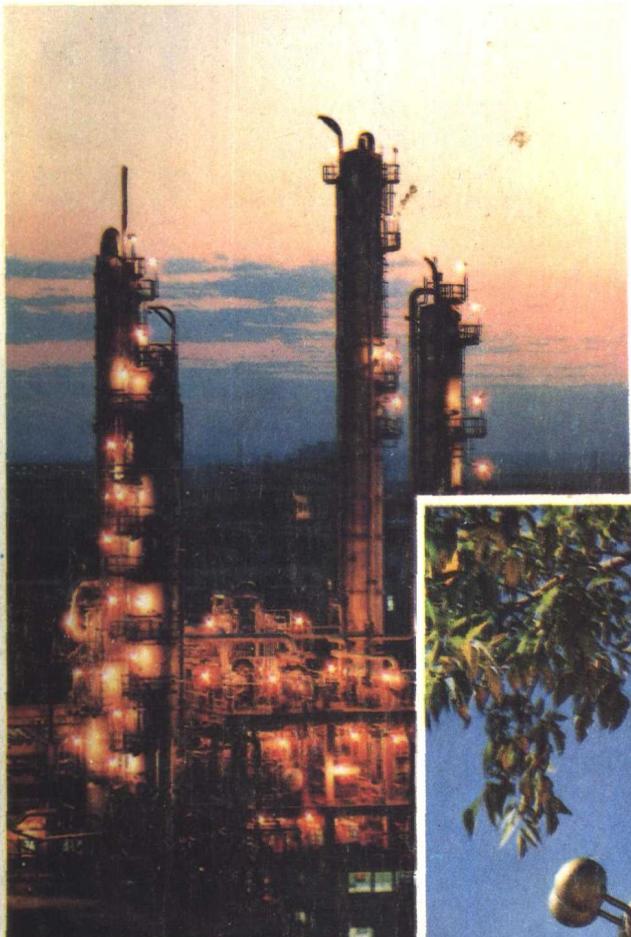
主编

吴松林

罗明江

江淑娟

阴洪池



黑龙江人民出版社



石油科技英语测试教程

吴松林 罗明江

主编

江淑娟 阴洪池

黑龙江人民出版社

(黑) 新登字1号

内 容 提 要

本书根据《大学英语教学大纲》和石油天然气企事业单位《晋升中高级职称外语水平考试》提出的要求、内容与范围，采用试卷模拟形式，分词汇、语法和翻译三个部分，内容覆盖27个油田主体专业，对石油院校学生和石油天然气系统历届晋升中高职称的科研、工程技术、生产、管理、服务以及教学人员都有实质性的指导作用。

责任编辑：张 元 荣

封面设计：马 征 帆

石 油 科 技 英 语 测 试 教 程
SHIYOU KEJI YINGYU CESHIS JIAOCHENG

吴松林 罗明江 江淑娟 阴洪池 主编

黑 龙 江 人 民 出 版 社 出 版 、 发 行

(哈 尔 滨 市 道 里 区 地 段 街 171 号)

黑 龙 江 省 望 奎 印 刷 厂 制 版 、 印 刷

开本：787×1092毫米 1/16 印张：22 字数：520千字

1994年4月第1版 1994年4月第1次印刷

印数：2500 册

ISBN 7-207-02983-7/H · 60

定价：14.80 元

《石油科技英语测试教程》
编辑委员会

主 编 吴松林 罗明江
江淑娟 阴洪池

副主编 赵吉民 赵丹青
印宝宏 孟立新
陈福明 周克良
吕清华 孙建华

前　　言

《石油科技英语测试教程》是根据《大学英语教学大纲》和石油企事业单位《晋升中高级职称外语水平考试》提出的要求、内容与范围进行编写的。它参照了水平考试的试题形式,分词汇、语法、阅读翻译三个部分,覆盖了物探、地探、测量、测井、钻井、采油、油藏工程、炼油、化工、矿机、机制、冶金、炼机、化机、储运、天然气、工民建、电气、电器、自动化、热能、计算机、审计、会计、经济、管理、科普等 27 个油田主体专业。书中词汇和语法部分共 1500 道测试题,选材面广,重点、难点突出,其内容多数达到了大学四级水平,少数内容参考了大学二级和六级英语考试材料。翻译部分的选材程度基本达到大学外语教学大纲规定的四级以上,其内容侧重了专业性、典型性和全面性。相当一部分篇章因注重内容的完整性,没有按照考试要求将每套翻译篇幅限制在 5000 个字符之内。因为只有这样,才能便于了解文章背景,认识作者意图,捋清逻辑关系,把握语言要旨。在选材上,同时还注意避免内容偏高、偏深,避免造成专业上的过分生疏,影响对篇章内容的理解和表达。该书译文条理分明,逻辑性较强,表达式无误,文字简练,忠实地传达了原文的思想内容和文体风格。

本书适用于石油院校学生和石油天然气系统晋升中、高级职称的科研、工程技术、生产、管理、服务以及教学人员。本书可做为教材、辅导资料和教学参考用书。

由于本书的编写时间紧,加之水平有限,错误之处在所难免,敬请专家、学者和广大读者予以批评指正。

Content

目 录

Test 1	1
I. Vocabulary	1
II. Structure	1
III. Translation	2
1. Ore Deposite (1) 矿床 (1)	2
2. Ore Deposite (2) 矿床 (2)	3
3. Ore Deposite (3) 矿床 (3)	4
Test 2	8
I. Vocabulary	8
II. Structure	8
III. Translation	9
1. Minerals 矿物	10
2. Igneous Rocks and Metamorphic Rocks 火成岩和变质岩	10
3. Geology and the Search for Petroleum 地质学与寻找石油	11
Test 3	14
I. Vocabulary	14
II. Structure	15
III. Translation	16
1. Development of an Oilfield 油田的开发	16
2. Seismic Surveys 地震勘探	17
3. Gravity Surveys 重力勘探	17
Test 4	21
I. Vocabulary	21
II. Structure	21
III. Translation	23
1. Magnetic Surveys 磁性勘探	23
2. Geologic Maps and Geologic Sections 地质图和地质剖面图	24
3. Migration of Petroleum 石油的运移	24
Test 5	28
I. Vocabulary	28
II. Structure	28
III. Translation	29
1. Traps and Geology 圈闭与地质	30
2. Properties of the Reservoir Rock 储油岩的性质	30
3. Reserves 储量	31
Test 6	34
I. Vocabulary	34
II. Structure	35
III. Translation	36
1. Solution Gas Drive 溶解气驱	36

2. Fluid Content of the Reservoir 油藏流体	36
3. Water Drive 水驱	37
Test 7	40
I. Vocabulary	40
II. Structure	41
III. Translation	42
1. Oil Reservoirs 油藏	42
2. Liquid Flow and Metering 液流和测量	42
3. Logging 测井	43
Test 8	46
I. Vocabulary	46
II. Structure	47
III. Translation	48
1. Oil Production Techniques 采油技术	48
2. Intermittent Flow 间歇气举	49
3. Natural Flow 自喷	50
Test 9	53
I. Vocabulary	53
II. Structure	54
III. Translation	55
1. Secondary Recovery 二次采油	55
2. Purpose of Artificial Lift 人工举升目的	57
3. Solution for a Variable Wellhead Pressure 井口压力变化时产量的求法	57
Test 10	60
I. Vocabulary	60
II. Structure	61
III. Translation	62
1. Well Sounding Device 油井测声仪	62
2. Blowout control 井喷控制	62
3. Intermittent Gas Lift Cycle 间歇气举循环	63
Test 11	66
I. Vocabulary	66
II. Structure	66
III. Translation	67
1. Drilling an Oil Well 钻井	68
2. Drilling Fluids (1) 钻井液 (1)	68
3. Drilling Fluids (2) 钻井液 (2)	69
Test 12	72
I. Vocabulary	72
II. Structure	72
III. Translation	74
1. Directional Drilling 定向钻井	74
2. Turbo-drill 涡轮钻	74
3. Spudding-in 开钻	75
Test 13	77
I. Vocabulary	77

I. Structure	78
III. Translation	79
1. Drilling a Deep Well 深井钻井	79
2. Product Distribution 产品发送	80
3. Design of Pipelines 管道的设计	81
Test 14	84
I. Vocabulary	84
II. Structure	84
III. Translation	86
1. Pipelines 管线	86
2. Transport of OIL by Tanker 巨轮运输石油	86
3. Tanker 油罐容量	87
Test 15	90
I. Vocabulary	90
II. Structure	90
III. Translation	92
1. Function of a Terminal 转运油库的作用	92
2. Terminal Operation 转运油库业务	92
3. Tanker , Loading and Discharge 油轮装卸油	93
Test 16	96
I. Vocabulary	96
II. Structure	97
III. Translation	98
1. Pumping Stations 泵站	98
2. Corrosion 腐蚀	98
3. LPA and Ethylene Pipelines 液体石油和乙烯管道	98
Test 17	101
I. Vocabulary	101
II. Structure	101
III. Translation	103
1. Oil Pipeline 原油管道	103
2. Tubes and Pipes 管子	103
3. Pipe Lines 管路	104
Test 18	107
I. Vocabulary	107
II. Structure	107
III. Translation	109
1. Cracking 裂化	109
2. Distillation 蒸馏	109
3. Hydrocracking 加氢裂化	110
Test 19	113
I. Vocabulary	113
II. Structure	113
III. Translation	115
1. Primary and Secondary Refining 粗炼和精炼	115
2. Cetane Number 十六烷值	115

3. Thermal Cracking 热裂化	116
Test 20	119
I. Vocabulary	119
II. Structure	120
III. Translation	121
1. Oil Quality 油性	121
2. Catalytic Cracking 催化裂化	122
3. Low Temperature Flow Characteristics 低温流动性	123
Test 21	126
I. Vocabulary	126
II. Structure	126
III. Translation	127
1. Lubricating Oil 润滑油	128
2. Gas and LPG 气体和液化石油	128
3. Kerosene 煤油	129
Test 22	132
I. Vocabulary	132
II. Structure	132
III. Translation	133
1. Extraction 萃取	134
2. Crystallization 结晶	134
3. Evaporation 蒸发	135
Test 23	137
I. Vocabulary	137
II. Structure	138
III. Translation	139
1. Refinery Maintanence 炼厂维修	139
2. Refinery Power 炼厂的动力系统	140
3. Safety 安全	141
Test 24	144
I. Vocabulary	144
II. Structure	144
III. Translation	146
1. Impulse Turbines 冲动式涡轮机	146
2. Heat Engines 热机	146
3. Compressor 压气机	148
Test 25	153
I. Vocabulary	153
II. Structure	153
III. Translation	155
1. Steam Boilers 蒸气锅炉	155
2. The Four-stroke petrol Engine 四冲程汽油机	156
3. Sparking-Plug Polarity in Car Engines 汽车发动机火花塞的极性	157
Test 26	161
I. Vocabulary	161
II. Structure	161

III. Translation	163
1. Gas and Condensate Reservoirs 气藏和凝析气藏	163
2. Occurrence and Composition 天然气的分布和构成	163
3. Transport of Natural Gas and Gas Liquids 天然气及其液态产物的运输	164
Test 27	169
I. Vocabulary	169
II. Structure	169
III. Translation	171
1. Bitumen 沥青	171
2. Waxes 蜡	171
3. Synthetic Products 合成产品	172
Test 28	175
I. Vocabulary	175
II. Structure	176
III. Translation	177
1. Non-hydrocarbons in Petroleum 石油中的非烃	177
2. Oil Product development 石油产品的开发	178
3. Refinery Products 炼制产品	178
Test 29	181
I. Vocabulary	181
II. Structure	181
III. Translation	183
1. Polythene 聚乙烯	183
2. Processes for Polypropylene 聚丙烯工业化工艺	183
3. Ethylene from NGL Feedstocks—Energy Systems Optimization 由液化天然气生产乙烯—能量系统的优化	185
Test 30	189
I. Vocabulary	189
II. Structure	189
III. Translation	191
1. What is Intelligence 什么是智能	191
2. New Concepts in Cybernetics 控制论的新概念	192
3. Numerical Control 数控	193
Test 31	196
I. Vocabulary	196
II. Structure	197
III. Translation	198
1. Fiber Optics 纤维光学	198
2. Working in Parallel 并行操作	199
3. Pattern Recognition 模式识别	199
Test 32	203
I. Vocabulary	203
II. Structure	203
III. Translation	205
1. Information Handling Systems 信息处理系统	205
2. Stoed-Program-Control Switching 程控交换	206

3. Fiber-Optic LANs May Be the Wave of the Future 光纤局域网可能是未来的潮流.....	207
Test 33	210
I. Vocabulary	210
II. Structure	210
III. Translation	212
1. What is a Computer 什么是计算机	212
2. Database Management 数据库管理	213
3. Computer Vision 计算机视觉	214
Test 34	217
I. Vocabulary	217
II. Structure	218
III. Translation	219
1. Exploration Application 计算机的勘探应用	219
2. Computer Virus 计算机病毒	220
3. Computer Security 计算机安全	221
Test 35	225
I. Vocabulary	225
II. Structure	225
III. Translation	227
1. Building Code 建筑规范	227
2. Modern Building Construction 现代化的房屋建筑	228
3. Road Foundations 道路基础	229
Test 36	232
I. Vocabulary	232
II. Structure	232
III. Translation	234
1. Industrial-type Buildings 工业建筑物	234
2. FACTORY Design 厂房设计	234
3. High-rise Buildings 高层建筑	234
Test 37	241
I. Vocabulary	241
II. Structure	241
III. Translation	242
1. Heat Treating Metals 金属的热处理	243
2. The Lathe 车床	243
3. Fatigue 疲劳	244
Test 38	248
I. Vocabulary	248
II. Structure	249
III. Translation	250
1. Surface Treatment 表面处理	250
2. Casting 铸造	251
3. Welding 焊接	252
Test 39	255
I. Vocabulary	255

I. Structure	256
II. Translation	257
1. Integrated Circuits 集成电路	257
2. Electrical Design 电气设计	257
3. Electric Uninterruptible Power Systems 不停电电源系统	259
Test 40	264
I. Vocabulary	264
II. Structure	265
III. Translation	266
1. Synchronous Motors 同步电动机	266
2. Induction Motors 感应电动机	267
3. Resistance Welding 电阻焊	268
Test 41	271
I. Vocabulary	271
II. Structure	272
III. Translation	273
1. Fuels 燃料	273
2. Energy 能	274
3. Electric Heating 电供热	275
Test 42	279
I. Vocabulary	279
II. Structure	280
III. Translation	281
1. Solar Energy 太阳能	281
2. Nuclear Reactor 核反应堆	281
3. The Carburation System 汽化系统	282
Test 43	285
I. Vocabulary	285
II. Structure	286
III. Translation	287
1. The Manager's Job 管理者的职责	287
2. Manager Development 管理人员培养	288
3. Leadership Style 领导作风	289
Test 44	294
I. Vocabulary	294
II. Structure	294
III. Translation	295
1. Profits 利润	296
2. The World Bank 世界银行	296
3. Minimizing Costs of Production 最大限度地降低生产成本	297
Test 45	301
I. Vocabulary	301
II. Structure	302
III. Translation	303
1. Internal Control System and Auditing 内部控制制度与审计	303
2. An Overview of Financial Reporting 财务报告总览	304

3. Short-term and Long-term Investment	短期投资和长期投资	305
Test 46		309
I. Vocabulary		309
II. Structure		310
III. Translation		311
1. Adjusting Entries and Completing the Accounting Cycle 调整帐项和会计循环		311
2. Accounting for Long-term Liabilities	长期负责的会计处理	311
3. Accounting for Long-term Operational Assets	固定资产的会计处理	312
Test 47		316
I. Vocabulary		316
II. Structure		316
III. Translation		317
1. Oil (1) 石油 (1)		318
2. Oil (2) 石油 (2)		319
3. Petroleum 石油		320
Test 48		323
I. Vocabulary		323
II. Structure		324
III. Translation		325
1. Oil in the Earth 地下石油		325
2. Fossils and Oil 化石与石油		326
3. Installation and Depots 储油设施及油库		327
Test 49		333
I. Vocabulary		333
II. Structure		333
III. Translation		335
1. The Laser 激光		335
2. Laser Applications 激光的应用		335
3. Radar 雷达		336
Test 50		340
I. Vocabulary		340
II. Structure		341
III. Translation		342
1. X-Rays X 射线		342
2. Superconductivity 超导性		342
3. Sanitary Engineering 卫生工程		343

Test 1

I . Multiple Choice (Vocabulary)

1. The more power the engineer turns on, the more the train _____.
A. accelerates B. suspends C. sustains D. picks up
2. The atomic theory of matter is so _____ that it can be fully understood only by advanced students.
A. concrete B. definite C. thorough D. abstract
3. A hot-air furnace is not _____ for a large building.
A. appreciable B. applicable C. advisable D. turned
4. We _____ Edison's success to intelligence and hard work.
A. deduce B. account C. owe D. attribute
5. Until recently, the ability to make tools was considered one of the characteristics that distinguished humans and their _____ from all other animals.
A. pioneers B. ancestors C. friends D. explorers
6. The links between cigarette smoking and cancer are now well _____.
A. established B. published C. accomplished D. competes
7. UFO _____ Unidentified Flying Object.
A. stands with B. stands by C. stands out D. stands for
8. This paper offers an _____ of a major development within English language teaching during the present decade.
A. account B. accent C. accident D. access
9. As scheduled, the communications satellite went into _____ round the earth.
A. circle B. orbit C. path D. course
10. An efficient engine is _____. fuel.
A. economic of B. economical of C. economize of D. economy of
11. They stared up into the sky until the noise of the rocket _____.
A. died away B. went out C. gave up D. wore off
12. The new _____ machine is a great help in the production of this factory.
A. adequate B. sufficient C. efficient D. effective
13. Now the problem of energy is becoming critical. It _____ an immediate solution.
A. calls on B. calls for C. calls up D. calls at
14. The mechanic examined the car engine _____ but could not find anything wrong with it.
A. throughout B. exactly C. thoroughly D. altogether
15. We all _____ the achievements he has made in his experiments.
A. admire B. adopt C. advise D. afford

II . Multiple Choice (Structure)

1. Alan is not a careful driver; _____ he wouldn't have had that accident.

- A. nevertheless B. otherwise C. however D. although
2. A _____ achievement of electronics is the electronic computer.
A. widely knowing B. being widely known
C. having widely known D. widely known
3. TOEFL is a test for students _____ native language is not English.
A. that B. of whom C. whose D. which
4. I want to go to the grocery, but you _____ with me.
A. need not to go B. do not need go C. need not go D. need go not
5. _____ certain difficulties can be overcome, further improvement can hardly be made.
A. Except B. Unless C. Because D. If not
6. I spoke to him kindly _____ him.
A. not to frighten B. so as not to frighten
C. for not frightening D. in order to not frighten
7. _____ which road to take, we stopped to look at the map.
A. Knowing not B. Not knew C. Not knowing D. Known
8. I have no doubt _____ he will get through the examination.
A. whether B. why C. which D. that
9. Not even a word _____ concerning.
A. he mentioned B. did he mention C. he mentions D. he does mention
10. _____ to have lunch with us today?
A. Do you like B. Would you like C. Will you like D. Have you like
11. She explained again and again _____ her comrades should misunderstand her.
A. lest B. as soon as C. if D. so long as
12. "Do you know what has happened to your monitor?"
"I don't know. He _____ his leg."
A. may have broken B. might break
C. can have broken D. could break
13. In spite of all _____ has been said, the tourists have been picking leaves and cutting their names on the tree-trunk.
A. what B. that C. which D. as
14. He didn't seem to mind _____ TV while he was trying to study.
A. their watching B. them watching
C. that they watch D. them to watch
15. He insisted that we all _____ in his office at one o'clock.
A. be B. should be C. shall be D. to be

III. Translate the following into Chinese

Ore Deposits (1)

The term ore is often used to mean anything that is taken out of the earth because it is

useful to man. In a more strict sense it is confined to those minerals from which metals are derived. In such cases the term raw materials is used to cover all materials, metals and nonmetals, including such things as coal, oil, salt, building stones. It is with the metallic ores that we are concerned in this chapter.

Nearly all the different metals are made use of today either as simple metals or in some kind of combination, and it would of course be impossible to refer to them all in this book. The commoner types—gold, silver, copper, lead, and iron—will therefore be used as examples.

Of these, gold mostly occurs as the native metal. Silver and copper may also occur native, but also in combination with other elements. For example, copper occurs along with oxygen as an oxide, or along with sulphur as a sulphide. Lead and iron occur in combination with oxygen, sulphur, and carbon as oxides, sulphides, and carbonates. These metals and their ores do not necessarily occur by themselves; quite often several of them occur and are mined together.

The ore minerals may occur in a great variety of ways. For example, one of the ores of iron—magnetite—is commonly found scattered in minute quantities through igneous rocks. Such deposits are at present valueless because they would require too much mining. In the case of gold, however, a very slight concentration would well repay the cost of mining. In fact, it is usually considered that, unless a mineral shows enough concentration to repay working, it is not an ore deposit. This degree of concentration depends on a great variety of circumstances. The ore deposits may fill fissures or cavities in rocks; they may occur as sediments, or again they may form concentrated pockets in gravels.

To begin with, we can divide ore deposits into two large classes. There are those which are primary and are now found in the positions in which they were originally formed, and there are secondary ores which have been transported from their original position by some agency:

Ore Deposits (2)

There are, of course, a great many types of primary ore deposits. Perhaps two Greek words—syngenetic and epigenetic—will serve to explain the differences.

Syngenetic means “born with”. Now there are some ores which have been formed simultaneously with the rocks and are actual constituents of the igneous rocks.

We have already seen that the constituent minerals of an igneous rock crystallize out of molten material or magma. It is thought that during this crystallization minute grains of a metal such as iron have flowed together to form a concentrate, and so have given rise to workable deposits. The iron ores of Sweden are perhaps the best example of this kind of ore. Another igneous ore deposit is nickel, which occurs in Sudbury, Ontario, and is found as a “segregation” at the base of an igneous rock. The diamond mines of South Africa are the decayed rock fillings of the throat or neck of an old volcano.

Our other Greek word, epigenetic, means “born upon”, and is used to indicate that, although the ore is in its original position, it came into the rock after the rock had been

formed, and so was deposited in some kind of cavity or crack. In this case it is obvious that the ores have been deposited from solutions. It is probable that in many cases these solutions were hot and more or less in the condition of a gas, but there are many other cases in which the solutions were not hot, and in fact were the results of percolating rain-water which "leached" the minute grains from the surrounding rocks to concentrate them in some fissure or opening.

We know that the rocks which form the crust of the earth have been badly shattered and cracked, with the result that they are cut by many fissures. Rain-water from the surface and hot solutions from the interior of the earth percolate along these fissures. Cooling will reduce the capacity of a liquid for carrying material in solution, and so as the gases and liquids pass along the cracks in the rocks they deposit their load of mineral matter, which forms a coating on the walls of the fissures. With successive encrustations veins are produced, sometimes a few inches across, but often many yards. Usually the ore is not alone but is mixed with such "gangue" minerals as quartz and calcite. Quartz veins are of common occurrence and are no doubt well known to the reader. Unfortunately these commonly occur without ore minerals in them. Such fissure fillings, called fissure veins, are one of the most important kinds of deposit; they are the chief source of gold, silver, copper. Many such veins have been followed down thousands of feet and ultimately have had to be abandoned because of working difficulties.

Ore Deposits (3)

Placer Deposits

Let us revert to the earlier part of the chapter. We saw that we could consider ore deposits as of two main types—those which are found in their original positions, and those which are not. We already know that the rocks and minerals of the crust are forever undergoing destruction by the agents of weathering and erosion. The ore deposits which are in these rocks are also acted upon by the agents of erosion, and so the primary ores which we have just discussed are frequently broken down and carried away, either mechanically in the same way as mud and sand, or chemically in solution. Orebearing solutions ultimately carry their burden either to the sea—to be, at least for the present, lost—or their load is deposited as secondary ore deposits; some of these are of very great importance. Those which have been concentrated and deposited mechanically, in the same way as the muds and gravels in which they are found, are called placers, the most interesting of which are the gold placers; they were probably the first types of deposit ever worked by man. Grains of gold have been set free from the goldbearing quartz veins by the agents of weathering and finally deposited in a concentrated form in river sands. Originally the working of these placers was carried out by means of "panning", by which, in the swirling waters of the pan, the heavy glittering flakes of pure gold could be separated. At a later stage in the history of gold-mining a strange new technique of mining, by means of a hose-pipe, was instituted. By this method a powerful stream of water is ejected from a hose-