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围找矿计划项目资助。

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2012—2014 年老矿山深部和外围找矿成果数据集

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摘要: 2012—2014 年老矿山深部和外围找矿成果数据集是对地质矿产调查评价专项“老矿山深部和外围找矿”计划项目实施的 168 项勘查类项目成果数据进行整理而得。本数据集提供经费、工作量和成果三部分数据。经费数据为项目实施中实际投入经费, 包括中央财政投入、地方财政投入、企业投入经费数据。工作量数据是项目实际完成的主要实物工作量, 包括钻探、坑探、槽探数据。成果数据包括 168 个勘查类项目新增的资源量、延长矿山服务年限、稳定职工就业人数等数据(铀矿信息未列出)。全部数据均是实际投入和完成的, 成果数据是经过国家和省级储量评审机构评审或备案的, 数据质量可靠, 已经公开出版、可共享并提供下载。老矿山找矿成果数据可以反映中国近年来矿产勘查投入和矿山地质工作现状, 为分析当前中国矿产资源形势、提出矿产资源勘查对策建议提供基础数据支撑。

关键词: 老矿山; 经费; 工作量; 资源量; 成果数据

数据服务系统网址: <http://dcc.cgs.gov.cn>

1 引言

老矿山找矿工作是指在有资源潜力的现有矿山深部和外围, 按照地质找矿新机制的要求, 以矿山企业为投资主体, 公益性地质工作给予适当支持, 以增加矿山接替资源为主要目的的矿产勘查活动, 是找矿突破战略行动的重要组成部分。在老矿山深部和外围开展矿产勘查, 增加可采资源储量, 是促进中国矿业城市(镇)可持续发展的有效途径, 是快速实现找矿突破的重要举措, 也是创新机制、完善制度的重要实践。

“老矿山深部和外围找矿”计划项目周期 2012—2014 年, 共安排 168 个矿山找矿工作项目, 累计安排经费 222 961.6 万元(其中中央财政 104 150 万元, 地方财政配套 550.9 万元, 矿山企业匹配 118 260.7 万元), 累计完成钻探 1 007 730 m、坑探 70 335 m。提交勘查报告 168 份, 基本查明了 168 座矿山深部和外围成矿条件, 大致查明了矿山深

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部和外围资源状况,找矿取得重大突破。部署的168个矿山找矿项目中,17个新增资源量达大型规模,38个新增资源量达中型规模,60个新增资源量达小型规模。共探获新增333资源量原煤33896万t,铁矿石27987万t,锰矿石24189万t,铬铁矿81.6万t,铜182.14万t,铅锌452万t,钨(WO₃)6.74万t,锡13万t,锑12.6万t,钼4.1万t,金346t,银2208t^①(表1)。有效地解决了部分大中型矿山资源接续危机状况,全面完成了找矿突破战略行动老矿山找矿目标任务,推动了勘查理论研究,提高了找矿效率^[1-7]。本数据集为168座矿山深部和外围的找矿勘查工作成果数据资料(注:本文所有表格中只列出162座矿山的相关内容,铀矿相关信息未列出)。

表1 老矿山深部和外围找矿项目新增资源储量及投入经费一览表

序号	项目名称	累计新增资源储量			累计投入经费	
		矿产类型	资源/储量类型	单位	完成	万元
北京市						
1	北京市密云县桑园铁矿接替资源勘查	铁	333	矿石/万t	600.00	690
河北省						
2	河北省灵寿县石湖金矿接替资源勘查	金	333	金属/t	0.86	1940
3	河北省迁西县金厂峪金矿桑家峪、黑石峪矿段接替资源勘查	金	122b+333	金属/t	4.80	2710
		铜	332+333	金属/万t	0.23	
4	河北省承德市寿王坟铜矿接替资源勘查	铁	332+333	矿石/万t	215.21	1050
		钼	333	金属/万t	-	
山西省						
5	山西省灵丘县刁泉银铜矿接替资源勘查	银		金属/t	70.00	
		铜	333+334	金属/万t	1.30	1140
		钼		金属/万t	0.04	
6	山西省灵丘县支家地铅锌银矿接替资源勘查	铅锌	333+334	金属/万t	8.89	1670
		银		金属/t	225.00	
7	山西省垣曲县胡家峪铜矿接替资源勘查	铜	333	金属/万t	4.30	1460
		钴		金属/万t	0.50	
内蒙古自治区						
8	内蒙古自治区察哈尔右翼中旗新地沟沃野金矿接替资源勘查	金	332+333	金属/t	1.42	1645
9	内蒙古自治区赤峰市白音诺尔铅锌矿接替资源勘查	铅锌	333+334	金属/万t	20.05	1370
10	内蒙古自治区包头市哈达门金矿接替资源勘查	金	333+334	金属/t	7.90	690
		锌	333	金属/万t	2.39	
11	内蒙古自治区赤峰市红岭铅锌矿接替资源勘查	铜	333	金属/万t	0.09	885
		铁	333	矿石/万t	654.87	
		锡	332	金属/万t	6.00	
		钼	332	金属/万t	4.00	
12	内蒙古自治区克什克腾旗维拉斯托铜锌多金属矿接替资源勘查	铜	332	金属/万t	2	1260
		锌	332	金属/万t	12.00	
		铷	332	金属/万t	19.00	

续表 1

序号	项目名称	矿产 类型	累计新增资源储量		累计投入经费	
			资源 / 储量类型	单位	完成	万元
13	内蒙古自治区包头市白云鄂博铁矿接替资源勘查	铁	333	矿石/万t	6500.00	1575
14	内蒙古自治区东乌珠穆沁旗阿尔哈达铅锌矿接替资源勘查	铅锌	333	金属/万t	0.93	1575
		银	333	金属/t		
15	内蒙古自治区克什克腾旗拜仁达坝西矿区锌多金属矿接替资源勘查	铅锌	333	金属/万t	-	1260
		铜	333	金属/万t	1.07	
		银	333	金属/t	67.18	
辽宁省						
16	辽宁省凤城市白云金矿接替资源勘查	金	122b+333	金属/t	26.70	2250
17	辽宁省阜新市排山楼金矿深部及外围战略性勘查	金	勘查靶区	处	2	580
18	辽宁省凤城市青城子铅锌矿接替资源勘查	铅锌	333	金属/万t	9.31	1210
		金	333	金属/t	0.91	
		银	333	金属/t	225.79	
19	辽宁省北票保国铁矿接替资源勘查	铁	333	矿石/万t	-	1080
20	辽宁省凤城市小佟家堡子金矿接替资源勘查	金	333	金属/t	2.60	1260
		银	333	金属/t	18.80	
21	辽宁省辽阳市弓长岭铁矿接替资源勘查	铁	333	矿石/万t	1113.83	2010
吉林省						
22	吉林省舒兰矿业(集团)有限责任公司亮甲山煤矿接替资源勘查	煤	334	原煤/万t	-	1500
23	吉林省桦甸市夹皮沟金矿接替资源勘查	金	333	金属/t	0.06	1195
		银	333	金属/t	1.45	
24	吉林省白山市板石沟铁矿接替资源勘查	铁	333	矿石/万t	617.00	945
25	吉林省临江市大栗子铁矿接替资源勘查	铁	333	矿石/万t	331.20	1230
黑龙江省						
26	黑龙江省宾县弓棚子铜锌钨矿接替资源勘查	铜	333+334	金属/万t	-	1190
27	黑龙江省庆安县二股铁多金属矿接替资源勘查	铅锌	333	金属/万t	3.70	975
		铁	333	矿石/万t	183.86	
28	黑龙江省逊克县翠宏山铁多金属矿田深部战略性勘查	铁	勘查靶区	处	-	275
29	黑龙江省黑河市三道湾子金矿接替资源勘查	金	333	金属/t	-	1740
30	黑龙江省漠河县砂宝斯金矿接替资源勘查	金	333	金属/t	2.51	1140
江苏省						
31	江苏省南京市栖霞山铅锌矿接替资源勘查	铅锌	332+333	金属/万t	71.40	2100
		银	332+333	金属/t	1113.64	
32	江苏省南京市江宁区铜井金(铜)矿接替资源勘查	金	333+334	金属/t	0.94	1245
		铜	333+334	金属/万t	0.57	
33	江苏省句容市铜山—石矸山地区铜钨矿战略性勘查	铜	勘查靶区	处	1	340
34	江苏省宁芜北段东带矿山密集区深部铁矿战略性勘查	铁	勘查靶区	处	1	705

续表 1

序号	项目名称	矿产类型	累计新增资源储量		累计投入经费	
			资源 / 储量类型	单位	完成	万元
35	江苏省苏州市迂里铅锌银矿接替资源勘查	铅锌	333	金属/万t	-	795
36	江苏省南京市冶山铁矿接替资源勘查	铁	333	矿石/万t	-	630
浙江省						
37	浙江省遂昌县治岭头金矿接替资源勘查	金	333+334	金属/t	1.00	2730
		银	333+334	金属/t	15.00	
38	浙江省绍兴县平水铜矿接替资源勘查	金	333+334	金属/t	3.61	3275
		铜	333+334	金属/万t	3.66	
39	浙江省建德市周家坞地区金钼多金属矿战略性勘查	金	勘查靶区	处	1	720
40	浙江省绍兴县漓渚铁矿深部及外围战略性勘查	铁	勘查靶区	处	1	1360
41	浙江省龙游县灵山铜多金属矿接替资源勘查	铜	333	金属/万t	-	1110
		铅锌	333	金属/万t	-	
安徽省						
42	安徽省池州市黄山岭铅锌矿接替资源勘查	铅锌	333+334	金属/万t	3.61	1150
43	安徽省铜陵市冬瓜山铜矿接替资源勘查	铜	333	金属/万t	-	1080
44	安徽省铜陵市铜山铜矿接替资源勘查	铜	333	金属/万t	-	1150
45	安徽省当涂县钟九一姑山铁矿接替资源勘查	铁	333	矿石/万t	245.01	780
46	安徽省当涂县和睦山铁矿接替资源勘查	铁	333	矿石/万t	1000.00	630
47	安徽省霍山县东溪—南关岭金矿接替资源勘查	金	333	金属/t	-	630
48	安徽省铜陵市新桥铜硫铁矿接替资源勘查	铜	333	金属/万t	-	1110
福建省						
49	福建省尤溪县肖坂金矿接替资源勘查	金	333+334	金属/t	0.44	520
50	福建省德化仙洋—邱村金矿矿集区矿产战略性勘查	金	勘查靶区	处	1	690
51	福建宁化行洛坑钨矿矿集区深部矿产战略性勘查	钨	勘查靶区	处	1	740
52	福建省大瑶煤矿接替资源勘查	煤	333+334	原煤/万t	-	900
53	福建省泰宁县何宝山金矿接替资源勘查	金	333+334	金属/t	6.51	600
54	福建省德化县阳山铁矿接替资源勘查	铁	333	矿石/万t	67.28	1140
江西省						
55	江西省大余县下垄钨矿左拔矿区接替资源勘查	钨	333+334	WO ₃ /万t	0.87	1550
56	江西省九江市九瑞矿山密集区深部铜多金属矿战略性勘查	铜	勘查靶区	处	3	730
57	江西省德兴市金山—铜厂矿山密集区深部金铜铅锌多金属矿战略性勘查	铜	勘查靶区	处	1	750
58	江西省新余市太平山—松山矿区铁矿接替资源勘查	铁	333+334	矿石/万t	6091.00	1090
59	江西省瑞昌市武山铜矿接替资源勘查	铜	333	金属/万t	33.40	900
60	江西省吉安天河煤矿接替资源勘查	煤	333+334	原煤/万t	600.00	720

续表 1

序号	项目名称	矿产类型	累计新增资源储量		累计投入经费	
			资源 / 储量类型	单位	完成	万元
61	江西省赣中铁矿田杨家桥—长溪深部铁矿战略性勘查	铁	勘查靶区	处	1	265
62	江西省大余县下垄钨矿樟斗矿区接替资源勘查	钨	333	WO ₃ /wt	-	1110
63	江西省德安县尖峰坡锡矿接替资源勘查	锡	333+334	金属/wt	0.94	945
64	江西省定南县岿美山钨矿接替资源勘查	钨	333	WO ₃ /wt	-	1140
65	江西省于都县盘古山钨矿接替资源勘查	钨	333	WO ₃ /wt	-	945
山东省						
66	山东省平度市旧店金矿接替资源勘查	金	333+334	金属/t	3.57	750
67	山东省招远市招平断裂带中段深部金矿战略性勘查	金	勘查靶区	处	2	1465
68	山东省招远市上庄矿区金矿接替资源勘查	金	333	金属/t	4.62	1470
69	山东省莱州市焦家金矿望儿山矿区接替资源勘查	金	333	金属/t	0.94	1300
70	山东省龙口市西山矿区金矿接替资源勘查	金	333	金属/t	0.45	1390
71	山东省招远市河东矿区金矿接替资源勘查	金	333	金属/t	0.44	1575
72	山东省招远市玲珑金矿接替资源勘查	金	333	金属/t	13.79	1575
73	山东省招远市玲珑金矿东风矿区金矿接替资源勘查	金	333	金属/t	6.21	1575
河南省						
74	河南省灵宝市秦岭金矿接替资源勘查	金	333+334	金属/t	4.60	1640
75	河南省洛宁县上宫金矿接替资源勘查	金	333	金属/t	11.14	3285
76	河南省桐柏县老湾金矿接替资源勘查	金	333+334	金属/t	31.87	2585
77	河南省灵宝市小秦岭金矿田大湖、灵湖矿区接替资源勘查	金	333	金属/t	12.97	1500
78	河南省灵宝市老鸦岔金矿接替资源勘查	金	333	金属/t	3.46	900
79	河南省嵩县崔香洼金矿接替资源勘查	金	333+334	金属/t	10.10	1570
80	河南省灵宝市金渠金矿接替资源勘查	金	333+334	金属/t	10.13	1575
81	河南省灵宝市灵金一矿接替资源勘查	金	333	金属/t	0.42	1800.7
82	河南省灵宝市樊岔金矿接替资源勘查	金	333	金属/t	-	1640
湖北省						
83	湖北省大冶市铜山口铜矿接替资源勘查	铜	333+334	金属/wt	-	540
84	湖北省鄂州市鄂城岩体深部铁矿战略性勘查	铁	勘查靶区	处	-	410
85	湖北省大冶市阳新岩体西北段深部铜铁金多金属矿战略性勘查	铜	勘查靶区	处	2	405
86	湖北省竹山县银洞沟银铅锌多金属矿接替资源勘查	铅锌	333	金属/wt	-	900
87	湖北省阳新县赤马山铜矿接替资源勘查	铜	333	金属/wt	-	630
湖南省						
88	湖南省临武县香花岭锡多金属矿接替资源勘查	锡	333+334	金属/wt	5.60	1515

续表 1

序号	项目名称	矿产类型	累计新增资源储量			累计投入经费	
			资源 / 储量类型	单位	完成	万元	
89	湖南省茶陵县湘东钨矿接替资源勘查	钨	333	WO ₃ /万t	0.76	540	
90	湖南省永兴县高亭司煤矿接替资源勘查	煤	333+334	原煤/万t	-	720	
91	湖南省双峰县洪山殿矿区南塘向斜深部煤炭资源战略性勘查	煤	333+334	原煤/万t	5488.00	640	
92	湖南省冷水江市锡矿山锑矿接替资源勘查	锑	333	金属/万t	1.01	1290	
93	湖南省常宁市水口山铅锌多金属矿接替资源勘查	铅锌	333	金属/万t	0.00		
		铁	334	矿石/万t	4914.41	1390	
		铜	334	金属/万t	29.87		
94	湖南省平江县黄金洞金矿接替资源勘查	金	333	金属/t	2.01	1110	
95	湖南省桂阳县黄沙坪铅锌矿接替资源勘查	铅锌	333	金属/万t	0.00	1540	
96	湖南省新邵县龙山金锑矿接替资源勘查	金	333+334	金属/t	4.43	1575	
		锑		金属/万t	5.90		
广东省							
97	广东省云浮市大降坪铅锌金矿接替资源勘查	铅锌	333+334	金属/万t	10.79	800	
		金	333+334	金属/t	1.03		
98	广东省韶关市大宝山矿山密集区深部铜金钼矿战略性勘查	铜	勘查靶区	处	3	960	
99	广东省阳春市石录—锡山矿山密集区深部铜钨锡(铅锌)矿战略性勘查	铜	勘查靶区	处	-	550	
100	广东省梅州市玉水铜矿接替资源勘查	铜	333	金属/万t	-	1090	
101	广东省凡口地区矿山密集区铅锌矿战略性勘查	铅锌	勘查靶区	处	-	200	
102	广东省高要市河台金矿接替资源勘查	金	334	金属/t	-	1890	
103	广东省韶关市大宝山铜多金属矿接替资源勘查	铜	333	金属/万t	15.24	1790	
104	广东省韶关市凡口铅锌矿接替资源勘查	铅锌	333	金属/万t	-	1575	
105	广东省翁源县红岭钨矿接替资源勘查	钨	333	WO ₃ /万t	5.11	1260	
广西壮族自治区							
106	广西壮族自治区凤山县金牙金矿接替资源勘查	金	333+334	金属/t	27.34	2365	
		锌		金属/万t	27.07		
107	广西南丹县大厂矿山密集区深部锡多金属矿战略性勘查	铜	334	金属/万t	5.56	800	
		银		金属/t	275.50		
		锡		金属/万t	0.06		
		铅锌		333	金属/万t		2.75
108	广西河池五圩锑多金属矿接替资源勘查	锑	333	金属/万t	1.39	1045	
		银		333	金属/t		71.01
		锰		333+334	矿石/万t		6966.00
109	广西天等县天等锰矿接替资源勘查	锰	333+334	矿石/万t	6966.00	1140	
110	广西大新县土湖锰矿接替资源勘查	锰	333	矿石/万t	225.81	700	
111	广西靖西县湖润锰矿接替资源勘查	锰	333	矿石/万t	-	1050	

续表 1

序号	项目名称	矿产 类型	累计新增资源储量		累计投入经费	
			资源 / 储量类型	单位	完成	万元
海南省						
112	海南省乐东县抱伦金矿接替资源勘查	金	333	金属/t	11.06	1795
113	海南省昌江县石碌矿山密集区深部铁多金属矿战略性勘查	勘查 靶区	处	矿石/万t	-	1890.9
114	海南省东方市不磨金矿接替资源勘查	金	333	金属/t	1.39	1200
重庆市						
115	重庆市永川区永川煤矿接替资源勘查	煤	333+334	原煤/万t	1955.90	1330
116	重庆市合川区三汇一煤矿接替资源勘查	煤	333+334	原煤/万t	7365.80	1890
117	重庆市永荣矿区新店子背斜二叠系龙潭组煤炭资源战略性勘查	煤	334	原煤/万t	13227.00	1430
118	重庆市秀山县笔架山矿山密集区外围锰矿战略性勘查	锰	334	矿石/万t	237.00	515
119	重庆市万盛经开区鱼东煤矿接替资源勘查	煤	333+334	原煤/万t	500.00	630
四川省						
120	四川省盐源县平川铁矿接替资源勘查	铁	333+334	矿石/万t	2434.00	2050
121	四川省南江县红山铁矿接替资源勘查	铁	112b+333	矿石/万t	921.90	1330
122	四川省会理县拉拉铜矿接替资源勘查	铜	333+334	金属/万t	61.36	3660
123	四川省达州市金刚煤矿接替资源勘查	煤	333+334	原煤/万t	1778.00	1160
124	四川省冕宁县泸沽铁矿接替资源勘查	铁	333+334	矿石/万t	1042.90	1035
125	四川省旺苍县唐家河煤矿接替资源勘查	锡	333	金属/万t	0.32	
126	四川省达州市团坝煤矿接替资源勘查	煤	333+334	原煤/万t	2014.00	1200
127	四川省会东县大梁子铅锌矿接替资源勘查	煤	333+334	原煤/万t	968.00	630
128	四川省会东县淌塘铜矿接替资源勘查	铅锌	333+334	金属/万t	1.53	1575
128	四川省会东县淌塘铜矿接替资源勘查	铜	333+334	金属/万t	10.66	1260
云南省						
129	云南省弥渡县九顶山铜钼多金属矿接替资源勘查	铜	333	金属/万t	0.52	1000
		钼	333	金属/万t	0.06	
130	云南省德钦县羊拉铜矿接替资源勘查	铜	122b+332+333	金属/万t	0.64	1080
贵州省						
131	贵州省独山县维寨锑矿接替资源勘查	锑	333+334	金属/万t	4.31	1300
132	贵州省兴仁县灰家堡背斜矿山密集区深部金矿战略性勘查	金	333+334	金属/t	21.40	965
133	贵州省松桃县乌罗—耿溪矿山密集区深部锰矿战略性勘查	锰	333+334	矿石/万t	12270.00	595
134	贵州省观音山铁矿接替资源勘查	铁	333	矿石/万t	196.21	930
135	贵州省贞丰县那郎金矿接替资源勘查	金	333	金属/t	0.33	990
136	贵州省松桃县西溪堡矿山密集区深部锰矿战略勘查	锰	334	矿石/万t	4399.29	340
西藏自治区						
137	西藏自治区曲松县罗布莎铬铁矿接替资源勘查	铬铁 矿	333	矿石/万t	56.27	3520

续表 1

序号	项目名称	矿产类型	累计新增资源储量		累计投入经费	
			资源 / 储量类型	单位	完成	万元
138	西藏自治区曲松县罗布莎岩体矿山密集区深部铬铁矿战略性勘查	铬铁矿	332+333	矿石/万t	25.36	2230
陕西省						
139	陕西省紫阳县屈家山锰矿接替资源勘查	锰	332+333+334+低品位	矿石/万t	90.91	1410
140	陕西省潼关县桐峪—西峪金矿接替资源勘查	金	332+333+334	金属/t	3.95	1020
141	陕西省太白县双王金矿接替资源勘查	金	333+334	金属/t	3.84	1120
142	陕西省凤县铅硐山铅锌矿接替资源勘查	铅锌	333+334	金属/万t	33.21	1575
143	陕西省略阳县何家岩金矿接替资源勘查	金	333	金属/t	0.60	1050
甘肃省						
144	甘肃省白银市白银厂铜多金属矿战略性勘查	铜	勘查靶区	处	2	1060
145	甘肃省玛曲县大水金矿接替资源勘查	金	112b+333+334	金属/t	25.81	2850
146	甘肃省合作市早子沟金矿接替资源勘查	金	112b+332+333+334	金属/t	33.93	3540
147	甘肃省白银市白银厂矿山密集区外围铜多金属矿接替资源勘查	铅锌	333+334	金属/万t	38.74	2605
		铜	333+334	金属/万t	6.89	
148	甘肃省白银市郝泉沟金矿接替资源勘查	金	112b+332+333+334	金属/t	9.81	690
		银		金属/t	5.28	
149	甘肃省肃北县鹰咀山金矿接替资源勘查	金	333	金属/t	4.53	1740
150	甘肃省金昌市龙首铜镍矿接替资源勘查	铜	333	金属/万t	-	1710
		镍	333	金属/万t	-	
151	甘肃省成县厂坝铅锌矿接替资源勘查	铅锌	333	金属/万t	99.80	1120
青海省						
152	青海省兴海县什多龙铅锌矿接替资源勘查	铅锌	331+332+333+334	金属/万t	13.33	1645
		银		金属/t	52.11	
		铜		金属/万t	1.09	
153	青海省门源县松树南沟金矿接替资源勘查	金	122b+2M22+333	金属/t	5.04	780
154	青海省循化县谢坑铜金矿接替资源勘查	金	333+334	金属/t	2.37	1410
		铜	333+334	金属/万t	0.32	
155	青海省都兰县洪水河铁矿接替资源勘查	铁	111b+333	矿石/万t	858.96	1050
新疆维吾尔自治区						
156	新疆鄯善县维权银(铜)矿山银铜多金属矿接替资源勘查	银	332+333+334	金属/t	67.27	1140
		铅锌	333+334	金属/万t	92.91	
157	新疆哈密市金窝子金矿及外围接替资源勘查	金	332+333+334	金属/t	12.25	1610
158	新疆哈密市黄山东铜镍矿接替资源勘查	镍	333	金属/万t	-	1540
		铜	333	金属/万t	-	
		金	333	金属/t	-	
159	新疆鄯善县康古尔金矿接替资源勘查	铜铅锌	333	金属/万t	0.85	1200

续表 1

序号	项目名称	矿产类型	累计新增资源储量		累计投入经费	
			资源 / 储量类型	单位	完成	万元
160	新疆和静县查岗诺尔铁矿区北部战略性勘查	铁	333+334	矿石/万t	-	400
161	新疆富蕴县喀拉通克铜镍矿接替资源勘查	铜	333	金属/万t	3.37	810
		镍	333	金属/万t	1.93	
162	新疆哈密市香山铜镍矿接替资源勘查	铜	333	金属/万t	-	1050
		镍	333	金属/万t	-	

老矿山深部和外围找矿成果数据集 (2012—2014 年) 的元数据简介见表 2。包括数据库 (集) 名称、数据作者、数据采集时间、地理区域、数据量、数据格式、数据出版地址、基金项目、数据库 (集) 组成等。

2 数据采集和处理方法

老矿山深部和外围找矿成果数据集 (2012—2014 年), 涉及全国 28 个省 (直辖市、自治区), 16 个矿种, 168 座矿山深部和外围的找矿勘查工作成果。包括经费数据、工作量数据和成果数据三部分。经费数据为项目实施中实际投入经费, 包括中央财政投入、地方财政投入、企业投入经费数据, 数据量, 按项目、按省和按矿种进行了统计。工作量数据是项目实际完成的主要实物工作量, 包括钻探、坑探、槽探数据, 并按项目、按省和按矿种进行了统计。成果数据为 168 份勘查报告所提交的、并经过国家和省级储量评审机构评审或备案的数据, 按省、按矿种、按矿床规模进行了资源量统计。

3 数据样本描述

老矿山深部和外围找矿成果数据集 (2012—2014 年) 为 Excel 表格型数据, 包含 3 个 Excel 数据文件, 分别为 “funs_laokuangshan.xlsx”、“workload_laokuangshan.xlsx” 和 “resource reserves_laokuangshan.xlsx”。其中 “funs_laokuangshan.xlsx” 数据文件, 描述 168 座矿山深部和外围的找矿勘查工作经费投入信息 (表 3, 铀矿信息未列出); “workload_laokuangshan.xlsx” 数据文件, 描述 168 座矿山深部和外围的找矿勘查工作完成的实物工作量信息 (表 4, 铀矿信息未列出); “resource reserves_laokuangshan.xlsx” 数据文件, 描述新增资源储量, 经济社会效益等数据信息 (表 5)。

表 2 数据库 (集) 元数据简表

条目	描述
数据库 (集) 名称	2012—2014 年老矿山深部和外围找矿成果数据集
数据库 (集) 作者	吕志成, 中国地质调查局发展研究中心 庞振山, 中国地质调查局发展研究中心 薛建玲, 中国地质调查局发展研究中心 耿林, 中国地质调查局发展研究中心 张志辉, 中国地质调查局发展研究中心 甄世民, 中国地质调查局发展研究中心 陶文, 中国地质调查局发展研究中心

续表 2

条目	描述
	贾儒雅, 中国地质调查局发展研究中心 陈 辉, 中国地质调查局发展研究中心 姚 磊, 中国地质调查局发展研究中心
数据时间范围	2012—2014 年
地理区域	全国
数据格式	*.xlsx
数据量	218 KB
数据服务系统网址	http://dcc.cgs.gov.cn
基金项目	地质矿产调查评价专项“老矿山深部和外围找矿”计划项目资助。
语种	中文
数据库(集)组成	数据集由 3 部分数据组成:(1) funs_laokuangshan.xlsx 是经费安排情况数据, 包括分省分项目分矿种中央财政投入、地方财政投入、企业投入经费数据, 数据量;(2) workload_laokuangshan.xlsx 是实物工作量完成情况数据, 包括分省分项目分矿种钻探、坑探、槽探数据, 数据量;(3) resource_reserves_laokuangshan.xlsx 是资源量成果数据, 包括新增资源储量、经济社会效益等数据, 数据量。

4 数据质量控制和评估

针对老矿山深部和外围找矿成果数据, 数据质量控制过程包括对源数据的检查整理、单个数据点的检查、数据入库。对源数据的检查包括文件格式化错误、存储损坏等明显的数据库问题以及文件格式、字段标准化命名、字段量纲、数据完整性等。单个数据点的检查中, 主要针对异常数据进行修正、剔除。经费数据来源于 168 个矿山深部和外围找矿项目承担单位提交的项目经费总结报告, 均通过了各省财政厅委托的第三方审计机构(或经济专家)和中国地质调查局财务部审查, 数据可靠。工作量数据来源于 168 份勘查报告, 为各省国土资源主管部门野外验收核定的数据。成果数据来源于 168 份勘查报告, 均经过中国地质调查局和国家及省级储量评审机构评审或备案, 数据质量可靠。该数据集参加人员单位以及质量控制人员名单见表 6(铀矿信息未列出)。

表 3 funs_laokuangshan.xlsx 数据表内容

序号	字段名称	量纲	数据类型	实例
1	省份		字符型	海南省
2	项目名称		字符型	海南省乐东县抱伦金矿接替资源勘查
3	矿产类型		字符型	金
4	项目性质		字符型	接替
5	起止年限		字符型	2012—2013
6	中央补助资金	万元	浮点型	925
7	地方财政资金	万元	浮点型	-
8	企业自筹	万元	浮点型	870
9	经费合计	万元	浮点型	1795
10	勘查单位		字符型	海南省地质调查院
11	矿山企业		字符型	海南省山金矿业有限公司

表4 workload_laokuangshan.xlsx 数据表内容

序号	字段名称	量纲	数据类型	实例
1	省份		字符型	海南省
2	项目名称		字符型	海南省乐东县抱伦金矿接替资源勘查
3	矿产类型		字符型	金
4	项目性质		字符型	接替
5	起止年限		字符型	2012—2013
6	钻探工作量	m	浮点型	8026.49
7	坑探工作量	m	浮点型	711.20
8	槽探工作量	m	浮点型	3017.00

表5 resource reserves_laokuangshan.xlsx 数据表内容

序号	字段名称	量纲	数据类型	实例
1	省份		字符型	海南省
2	项目名称		字符型	海南省乐东县抱伦金矿接替资源勘查
3	矿产类型		字符型	金
4	项目性质		字符型	接替
5	起止年限		字符型	2012—2013
6	资源 / 储量类型		字符型	333
7	新增资源储量	金属 / t	字符型	11.06
8	规模		字符型	中型
9	延长矿山年限	年	浮点型	9
10	稳定职工就业	人	浮点型	1000

表6 参加人员单位分工表

序号	项目名称	参加单位	主要参加人员
北京市			
1	北京市密云县桑园铁矿接替资源勘查	北京市地质工程设计研究院、北京建昌矿业有限责任公司	李怀永 张海军 葛长峰
河北省			
2	河北省灵寿县石湖金矿接替资源勘查	河北省地矿局石家庄综合地质大队、中国黄金集团石湖矿业有限公司	赵夫旺 张东萌 路亚飞
3	河北省迁西县金厂峪金矿桑家峪、黑石峪矿段接替资源勘查	北京金有地质勘查有限责任公司、河北金厂峪矿业有限公司	罗克军 李文革 张永哲
4	河北省承德市寿王坟铜矿接替资源勘查	华北地质勘查局五一四地质大队、承德铜兴矿业有限公司	梁景利 赵红瑞 张骥远
山西省			
5	山西省灵丘县刁泉银铜矿接替资源勘查	中国冶金地质总局第三地质勘查院、山西省刁泉银铜矿业有限公司	王勇 李宏刚 李红星
6	山西省灵丘县支家地铅锌银矿接替资源勘查	中国冶金地质总局第三地质勘查院、山西煤炭运销集团大同晋银矿业有限公司	温常贵 王勇 张行凯
7	山西省垣曲县胡家峪铜矿接替资源勘查	中国冶金地质总局第三地质勘查院、中条山有色金属集团有限公司	王勇 李兵院 郭双龙
内蒙古自治区			
8	内蒙古自治区察哈尔右翼中旗新地沟沃野金矿接替资源勘查	内蒙古自治区矿产实验研究所、内蒙古沃野矿冶技术开发公司	王建锋 田润福 范云飞

续表 6

序号	项目名称	参加单位	主要参加人员
9	内蒙古自治区赤峰市白音诺尔铅锌矿接替资源勘查	内蒙古赤峰地质矿产勘查开发院、赤峰有色白音诺尔矿业有限公司	王建伟 谭宏利 邱国兴
10	内蒙古自治区包头市哈达门金矿接替资源勘查	中国黄金集团内蒙古金盛矿业开发有限公司、内蒙古包头鑫达黄金矿业有限责任公司	汪振涌 宋文亚 史哲锋
11	内蒙古自治区赤峰市红岭铅锌矿接替资源勘查	内蒙古赤峰地质矿产勘查开发院、赤峰山金红岭有色矿业有限责任公司	吴万宝 杨林 李鹏飞
12	内蒙古自治区克什克腾旗维拉斯托铜锌多金属矿接替资源勘查	内蒙古地质勘查有限责任公司、内蒙古维拉斯托矿业有限公司	付旭 胡格吉乐吐 贾泽阳
13	内蒙古自治区包头市白云鄂博铁矿接替资源勘查	包钢勘察测绘研究院包头钢铁(集团)有限责任公司	张凤仙 张强 唐海燕
14	内蒙古自治区东乌珠穆沁旗阿尔哈达铅锌矿接替资源勘查	内蒙古赤峰地质矿产勘查开发院、锡林郭勒盟山金阿尔哈达矿业有限公司	王泽海 王亮 温海波
15	内蒙古自治区克什克腾旗拜仁达坝西矿区锌多金属矿接替资源勘查	内蒙古地质勘查有限责任公司、内蒙古拜仁矿业有限公司	胡格吉乐吐 王永恒 付旭
辽宁省			
16	辽宁省凤城市白云金矿接替资源勘查	辽宁省有色地质局一〇三队、辽宁招金白云黄金矿业有限公司	李生辉 周洪鸽 齐恩波
17	辽宁省阜新市排山楼金矿深部及外围战略性勘查	辽宁省有色地质局一〇五队、中国黄金集团辽宁有限公司	李友权 高金宝
18	辽宁省凤城市青城子铅锌矿接替资源勘查	辽宁省有色地质局勘查总院、丹东青城子矿业有限公司	刘根韦 高德富 何萌
19	辽宁省北票保国铁矿接替资源勘查	辽宁省第三地质大队、凌钢股份北票保国铁矿有限公司	李春凯 李广贺 王继威
20	辽宁省凤城市小佟家堡子金矿接替资源勘查	辽宁省有色地质局勘查总院、辽宁安泰有色矿业有限公司	何萌 杨宝怀 王明昊
21	辽宁省辽阳市弓长岭铁矿接替资源勘查	辽宁省冶金地质勘查局四〇四队、鞍钢集团矿业公司弓长岭矿业公司	韩经 刘广新 李宏宇
吉林省			
22	吉林省舒兰矿业(集团)有限责任公司亮甲山煤矿接替资源勘查	吉林省煤田地质二〇三勘探公司、舒兰矿业(集团)有限责任公司	崔凤山 王飞际 魏喜文
23	吉林省桦甸市夹皮沟金矿接替资源勘查	吉林省有色金属地质勘查局六〇四队、中国黄金集团夹皮沟矿业有限公司	李彦 王耀武 李凤军
24	吉林省白山市板石沟铁矿接替资源勘查	吉林省第四地质调查所、通化钢铁集团板石矿业有限责任公司	路恩兰 吴玉诗 高明珠
25	吉林省临江市大栗子铁矿接替资源勘查	吉林省有色金属地质勘查局六〇二队、通化钢铁集团大栗子矿业有限责任公司	刘文香 王迪 杨铁军

续表 6

序号	项目名称	参加单位	主要参加人员
黑龙江省			
26	黑龙江省宾县弓棚子铜钨矿接替资源勘查	黑龙江省地球物理勘察院、哈尔滨松江铜业实业有限公司	刘玉 孙作本 南普森
27	黑龙江省庆安县二股铁多金属矿接替资源勘查	黑龙江省地球物理勘察院、庆安帝圣矿业有限公司	何海峰 徐加辉 李弘珂
28	黑龙江省逊克县翠宏山铁多金属矿田深部战略性勘查	黑龙江省第六地质勘察院、黑龙江省矿业集团有限责任公司	岳靖环 吴荣君 许洪峰
29	黑龙江省黑河市三道湾子金矿接替资源勘查	黑龙江省地球物理勘察院、黑龙江省三道湾子金矿有限公司	刘玉 陈旭锋 孙作本
30	黑龙江省漠河县砂宝斯金矿接替资源勘查	黑龙江省第四地质勘察院、漠河砂宝斯矿业有限公司	赵轩 郑军 李晓明
江苏省			
31	江苏省南京市栖霞山铅锌矿接替资源勘查	江苏华东地质调查集团有限公司、华东有色地质矿产勘查开发院、南京银茂铅锌矿业有限公司	魏新良 景山 孙国昌
32	江苏省南京市江宁区铜井金(铜)矿接替资源勘查	江苏省地质矿产局第一地质大队、江苏省金源黄金有限责任公司	钱凌宇 邹芝红 徐树斌 练翔
33	江苏省句容市铜山—石矸山地区铜钼矿战略性勘查	江苏省地质调查研究院句容市宝源矿业有限公司	潘万乾 黄顺生
34	江苏省宁芜北段东带矿山密集区深部铁矿战略性勘查	江苏华东地质调查集团有限公司、华东有色地质矿产勘查开发院	陈雪 丁海红 刘军
35	江苏省苏州市迁里铅锌银矿接替资源勘查	江苏省地质调查研究院苏州市、小茅山铜铅锌矿	仲伟福 魏邦顺 胡福培
36	江苏省南京市冶山铁矿接替资源勘查	江苏省地质调查研究院、南京钢铁集团冶山矿业有限公司	王辉
浙江省			
37	浙江省遂昌县冶岭头金矿接替资源勘查	中国冶金地质总局第一地质勘察院、浙江省遂昌金矿有限公司	李巨宝 华杰雄 闫金宝
38	浙江省绍兴县平水铜矿接替资源勘查	中国冶金地质总局第一地质勘察院、绍兴平铜(集团)有限公司	程飞 郭明春 陈继勇
39	浙江省建德市周家坞地区金钼多金属矿战略性勘查	浙江省第七地质大队	章辉 袁海根 刘小畔
40	浙江省绍兴县漓渚铁矿深部及外围战略性勘查	浙江省有色金属地质勘查局、浙江漓铁集团有限公司	李润豪 罗邦月
41	浙江省龙游县灵山铜多金属矿接替资源勘查	中国冶金地质总局第一地质勘察院、浙江巨化化工矿业有限公司	李巨宝 闫金宝
安徽省			
42	安徽省池州市黄山岭铅锌矿接替资源勘查	铜陵有色金属集团控股有限公司、矿产资源中心安徽铜冠有色金属(池州)有限责任公司	汪宏 汪谦 肖福权 林蔚

续表 6

序号	项目名称	参加单位	主要参加人员
43	安徽省铜陵市冬瓜山铜矿接替资源勘查	安徽省地质矿产勘查局三二一地质队、铜陵有色金属集团股份有限公司冬瓜山铜矿	陈林杰
44	安徽省铜陵市铜山铜矿接替资源勘查	铜陵有色金属集团控股有限公司	汪宏 汪谦 肖福权
45	安徽省当涂县钟九一姑山铁矿接替资源勘查	华东冶金地质勘查局综合地质大队、马钢集团矿业有限公司	洪东良 崔海源 应本兴 高道明
46	安徽省当涂县和睦山铁矿接替资源勘查	华东冶金地质勘查局综合地质大队、马钢集团矿业有限公司	王竞秀 侯丹丹 卜习银
47	安徽省霍山县东溪—南关岭金矿接替资源勘查	中国地质调查局南京地质调查中心、霍山县黄金矿业有限责任公司	张定源 张晓东 方捷
48	安徽省铜陵市新桥铜硫铁矿接替资源勘查	安徽省地质矿产勘查局三二一地质队、铜陵化工集团新桥矿业有限公司	郑凯 陈林杰 戴圣潜
福建省			
49	福建省尤溪县肖坂金矿接替资源勘查	福建省闽西地质大队、福建省尤溪金鑫金矿有限公司	陈繁 陈德福 陈洪明
50	福建省德化仙洋—邱村金矿矿集区矿产战略性勘查	福建省地质调查研究院	蒋永建 陈欣 郑文燕
51	福建宁化行洛坑钨矿矿集区深部矿产战略性勘查	福建省地质调查研究院	葛翠 薛德杰 袁勋
52	福建省大瑶煤矿接替资源勘查	福建省一二一地质大队、福煤（漳平）煤业有限公司	姚修春 黄兵 周仕新 栾经辉
53	福建省泰宁县何宝山金矿接替资源勘查	福建省闽北地质大队、福建省泰宁县金山矿业有限责任公司	郭德昌 李海强 李泽俊
54	福建省德化县阳山铁矿接替资源勘查	福建省地质调查研究院、福建省德化鑫阳矿业有限公司	王衍勋 王芳华 李敬珠
江西省			
55	江西省大余县下垄钨矿左拔矿区接替资源勘查	江西有色地质勘查二队、江西下垄钨业有限公司	曹文 赵键 李灯平
56	江西省九江市九瑞矿山密集区深部铜多金属矿战略性勘查	江西省地质矿产勘查开发局、赣西北大队	樊文阔 孔凡斌 周贤旭
57	江西省德兴市金山—铜厂矿密集区深部金铜铅锌多金属矿战略性勘查	江西有色地质矿产勘查开发院	龙细友 肖剑 胡波
58	江西省新余市太平山—松山矿区铁矿接替资源勘查	江西省地质矿产勘查开发局赣西地质调查大队、新余良山矿业有限责任公司	赖长金 权富 况二龙
59	江西省瑞昌市武山铜矿接替资源勘查	江西省地质矿产勘查开发局赣西北大队、江西铜业股份有限公司武山铜矿	钟浩 李旭辉 周汉初

续表 6

序号	项目名称	参加单位	主要参加人员
60	江西省吉安县天河煤矿接替资源勘查	江西省煤田地质勘察研究院、江西煤业集团有限责任公司	邹勇军 李昌龙 黄立衡 姚嘉
61	江西省赣中铁矿田杨家桥长溪深部铁矿战略性勘查	江西省地质矿产勘查开发局赣西地质调查大队	权富 周栋良 钟炬
62	江西省大余县下垄钨矿樟斗矿区接替资源勘查	江西有色地质勘查二队、江西下垄钨业有限公司	赖小赞 黄江洪 叶绍多
63	江西省德安县尖峰坡锡矿接替资源勘查	江西省地质矿产勘查开发局九一六大队、方圆(德安)矿业投资有限公司	朱元松 周文俊 张园
64	江西省定南县岿美山钨矿接替资源勘查	江西有色地质矿产勘查开发院、江西岿美山钨业有限公司	曾庆友 鲁诗阳 丁亮
65	江西省于都县盘古山钨矿接替资源勘查	江西有色地质勘查二队江西盘古山钨业有限公司	沈浩 邱凯 曹孖硕
山东省			
66	山东省平度市旧店金矿接替资源勘查	山东省第一地质矿产勘查院、青岛金星矿业股份有限公司	李亚东 赵体群 耿安凯
67	山东省招远市招平断裂带中段深部金矿战略性勘查	中国冶金地质总局山东正元地质勘查院、招金矿业股份有限公司	刘永昌 常裕林 李凤坤
68	山东省招远市上庄矿区金矿接替资源勘查	中国冶金地质总局山东正元地质勘查院、招金矿业股份有限公司	孙靖 常裕林 刘永昌
69	山东省莱州市焦家金矿望儿山矿区接替资源勘查	中国冶金地质总局山东正元地质勘查院、山东黄金集团有限公司	崔明飞 王璐 李亚泽 崔秋波
70	山东省龙口市西山矿区金矿接替资源勘查	紫金矿业集团股份有限公司龙口金丰有限公司	安龙洙 刘正良 邓志平
71	山东省招远市河东矿区金矿接替资源勘查	中国冶金地质总局山东正元地质勘查院、招金矿业股份有限公司	秦荣毅 刘永昌 孔祥瑞
72	山东省招远市玲珑金矿接替资源勘查	中国冶金地质总局山东正元地质勘查院、山东黄金矿业(玲珑)有限公司	刘其臣 朱随洲 刘振 吴海庆
73	山东省招远市玲珑金矿东风矿区金矿接替资源勘查	山东省第六地质矿产勘查院、中矿金业股份有限公司	鲍中义 王永庆 刘彩杰
河南省			
74	河南省灵宝市秦岭金矿接替资源勘查	河南省地质矿产勘查开发局第一地质调查队、河南秦岭黄金矿业有限责任公司	毕炳坤 常云真 赵留升
75	河南省洛宁县上宫金矿接替资源勘查	河南省地质矿产勘查开发局第一地质调查队、洛阳坤宇矿业有限公司	颜正信 汪江河 刘耀文
76	河南省桐柏县老湾金矿接替资源勘查	河南省地质矿产勘查开发局第一地质调查队、桐柏兴源矿业有限公司	陈建立 魏从玲 刘菲

续表 6

序号	项目名称	参加单位	主要参加人员
77	河南省灵宝市小秦岭金矿田大湖、灵湖矿区接替资源勘查	河南省地质矿产勘查开发局第一地质调查队、灵宝金源矿业股份有限公司	王社全 王杏村 徐建昌
78	河南省灵宝市老鸦岔金矿接替资源勘查	河南省地质矿产勘查开发局第五地质勘查院、三门峡市河西林场老鸦岔金矿	雷德正 赵志强 张蓬生
79	河南省嵩县荏香洼金矿接替资源勘查	河南省地质矿产勘查开发局第一地质调查队、河南中矿能源有限公司	谢劲松 孟宪锋 李广岸
80	河南省灵宝市金渠金矿接替资源勘查	河南省地质矿产勘查开发局第四地质勘查院、河南金渠黄金股份有限公司	邱顺才 席善峰 柴世刚
81	河南省灵宝市灵金一矿接替资源勘查	河南省地质矿产勘查开发局第一地质矿产调查院、灵宝黄金股份有限公司	黄昊 赵康 梁朝钢
82	河南省灵宝市樊岔金矿接替资源勘查	河南省地质矿产勘查开发局第一地质矿产调查院、灵宝金源矿业股份有限公司	张为民 莘丰培 何永生 常云真 赵留升 徐文超
湖北省			
83	湖北省大冶市铜山口铜矿接替资源勘查	湖北省鄂东南地质大队、大冶有色金属股份有限公司	魏克涛 刘冬勤 李喆明
84	湖北省鄂州市鄂城岩体深部铁矿战略性勘查	中国冶金地质总局中南地质勘查院、武汉钢铁集团矿业有限责任公司	高先念 肖明顺 周敏
85	湖北省大冶市阳新岩体西北段深部铜铁金多金属矿战略性勘查	湖北省鄂东南地质大队、大冶有色金属股份有限公司、湖北三鑫金铜股份有限公司	金尚刚 王鹏飞 张行行
86	湖北省竹山县银洞沟银铅锌多金属矿接替资源勘查	湖北省鄂西北地质矿产调查所、湖北华凯矿业有限公司	项目已暂停
87	湖北省阳新县赤马山铜矿接替资源勘查	中国冶金地质总局中南地质勘查院、大冶有色金属有限责任公司	夏斌 肖明顺 黄盛 范先旺
湖南省			
88	湖南省临武县香花岭锡多金属矿接替资源勘查	湖南省有色地质勘查局一总队、湖南有色集团湘东钨业有限公司	鲁艺 蒋喜桥 闵钊
89	湖南省茶陵县湘东钨矿接替资源勘查	湖南省地质矿产勘查开发局四一六队、湖南有色集团湘东钨业有限公司	刘金云 朱浩锋 余阳春
90	湖南省永兴县高亭司煤矿接替资源勘查	湖南省煤炭地质勘查院、湖南华润煤业有限公司高亭司分公司	黎前 翟铮 李奇华
91	湖南省双峰县洪山殿矿区南塘向斜深部煤炭资源战略性勘查	湖南省煤炭地质勘查院、湖南省煤业集团洪山殿矿业有限公司	马文华 何大芳 巩书华
92	湖南省冷水江市锡矿山锡矿接替资源勘查	湖南省有色地质勘查局二总队、锡矿山闪星锡业有限责任公司	戴雪灵 赵志坚 唐代文
93	湖南省常宁市水口山铅锌多金属矿接替资源勘查	湖南省有色地质勘查局二一七队、水口山有色金属有限责任公司	宛克勇 陈平波 李庆生

续表 6

序号	项目名称	参加单位	主要参加人员
94	湖南省平江县黄金洞金矿接替资源勘查	湖南省地质矿产勘查开发局四〇二队、湖南黄金洞矿业有限责任公司	袁兰陵 徐赛强 范鹏
95	湖南省桂阳县黄沙坪铅锌矿接替资源勘查	湖南省湘南地质勘察院、湖南有色金属股份有限公司黄沙坪矿业分公司	李时谦
96	湖南省新邵县龙山金锑矿接替资源勘查	湖南省地质矿产勘查开发局四一八队、湖南新龙矿业有限责任公司	彭桥梁 郑时干
广东省			
97	广东省云浮市大降坪铅锌金矿接替资源勘查	广东省地质局七一九地质大队、广东广业云硫矿业有限公司	吴善益 冯婷 王立强
98	广东省韶关市大宝山矿山密集区深部铜金钼矿战略性勘查	广东省地调院、广东省大宝山矿业有限公司	吴海陆 罗强 唐铿
99	广东省阳春市石录—锡山矿山密集区深部铜钨锡(铅锌)矿战略性勘查	广东省有色金属地质勘查局、地质勘查研究院、广东省广晟有色金属集团有限公司	欧阳志侠 汪汝澎 吴晓东
100	广东省梅州市玉水铜矿接替资源勘查	广东省地质局第八地质大队、梅州市金雁铜业公司玉水硫铜矿	程细音 王艳丽 蒋斌斌
101	广东省凡口地区矿山密集区铅锌矿战略性勘查	广东省有色地质勘查院	肖元贵 赵剑波 许文祥
102	广东省高要市河台金矿接替资源勘查	广东省地质局第五地质大队、广东金鼎黄金有限公司	邓卓辉 李晨 彭兆金
103	广东省韶关市大宝山铜多金属矿接替资源勘查	广东省地质局第三地质大队、广东省大宝山矿业有限公司	叶茂华 陈武钦 王兰根
104	广东省韶关市凡口铅锌矿接替资源勘查	广东省有色地质勘查院、深圳市中金岭南有色金属股份有限公司	黄红亮 郭兰萱 赵剑波
105	广东省翁源县红岭钨矿接替资源勘查	广东省有色金属地质局九三二队、翁源红岭矿业有限责任公司	吴剑 熊忠 胡振华
广西壮族自治区			
106	广西壮族自治区凤山县金牙金矿接替资源勘查	中国冶金地质总局中南局南宁地质勘查院 广西凤山天承黄金矿业有限责任公司	吴刚 韦运良 李建良
107	广西南丹县大厂矿山密集区深部锡多金属矿战略性勘查	广西壮族自治区二一五地质队有限公司 广西高峰有限公司、广西壮族自治区拉么锌矿、南星锑业有限责任公司、南丹县五一矿	袁远 吴国富 林喜养
108	广西河池五圩锑多金属矿接替资源勘查	中国有色桂林矿产地质研究院、有限公司 河池五吉有限责任公司	刘伟 徐文杰 玉启红
109	广西天等县天等锰矿接替资源勘查	中国冶金地质总局中南局南宁地质勘查院、中信大锰矿业有限责任公司	简耀光 夏柳静 黄桂强

续表 6

序号	项目名称	参加单位	主要参加人员
110	广西大新县土湖锰矿接替资源勘查	中国冶金地质总局广西地质勘查院、广西大新县土湖锰矿	廖青海 朱炳光 赵子令
111	广西靖西县湖润锰矿接替资源勘查	广西壮族自治区地质勘查总队、靖西县锰矿有限责任公司	区洪威 宫研 杨清泉
海南省			
112	海南省乐东县抱伦金矿接替资源勘查	海南省地质调查院、海南省山金矿业有限公司	林弟 王成 傅杨荣
113	海南省昌江县石碌矿山密集区深部铁多金属矿战略性勘查	海南省资源环境调查院、海南矿业股份有限公司	王力 罗洪林 梁振旺
114	海南省东方市不磨金矿接替资源勘查	海南省地质调查院、海南东方招金矿业有限公司	李江山 许国强 王春晓
重庆市			
115	重庆市永川区永川煤矿接替资源勘查	重庆一三六地质队重庆永荣矿业有限公司	唐洋 夏川东 龚云春
116	重庆市合川区三汇一煤矿接替资源勘查	重庆一三六地质队重庆天府矿业有限公司	赵榆 王泽河 赵得全
117	重庆市永荣矿区新店子背斜二叠系龙潭组煤炭资源战略性勘查	重庆一三六地质队重庆永荣矿业有限公司	刘彬 林耀炳 张丽
118	重庆市秀山县笔架山矿山密集区外围锰矿战略性勘查	重庆市地质矿产开勘探发局二〇五地质队	吴立志 黄治清 朱明忠
119	重庆市万盛经开区鱼东煤矿接替资源勘查	重庆地质矿产研究院、重庆南桐矿业有限责任公司	韩锋 覃世福 曾建光
四川省			
120	四川省盐源县平川铁矿接替资源勘查	四川省冶金地质勘查院、四川省盐源县平川铁矿	柏万灵 王维华 肖自为
121	四川省南江县红山铁矿接替资源勘查	四川省冶金地质勘查局六〇四大队、四川省南江铁山冶金矿业有限公司	周三键 廖均 王彬
122	四川省会理县拉拉铜矿接替资源勘查	四川省地质矿产勘查开发局四〇三地质队、凉山矿业股份有限公司	龚灵明 沈和明 黄仕宗
123	四川省达州市金刚煤矿接替资源勘查	四川省煤田地质局一三七队、四川达州煤电(集团)有限责任公司	李明彬 胡平 冯轶群
124	四川省冕宁县泸沽铁矿接替资源勘查	四川省冶金地质勘查院四川省泸沽铁矿	范元建 李作华 柏万灵
125	四川省旺苍县唐家河煤矿接替资源勘查	四川省煤田地质工程勘察设计院、四川广旺能源发展(集团)有限责任公司	魏新 王瑞 胡祖国
126	四川省达州市团坝煤矿接替资源勘查	四川省川煤矿山勘测设计有限责任公司、四川省达州市中山煤业有限责任公司	龚于林 艾月兵 黄鹏

续表 6

序号	项目名称	参加单位	主要参加人员
127	四川省会东县大梁子铅锌矿接替资源勘查	四川省冶金地质勘查院、四川会东大梁矿业有限公司	魏宇 向亮 李兴
128	四川省会东县淌塘铜矿接替资源勘查	四川省地质矿产勘查开发局四〇三地质队、会东县鑫联矿业有限责任公司	曾礼 张济礼 沈和明
云南省			
129	云南省弥渡县九顶山铜钼多金属矿接替资源勘查	中国有色金属工业昆明勘察设计研究院、弥渡县九顶山矿业有限公司	沈忠义 吕晓宏 刘启玉
130	云南省德钦县羊拉铜矿接替资源勘查	中国有色金属工业昆明勘察设计研究院、云南迪庆矿业开发有限责任公司	张弢 吕晓宏 施超
贵州省			
131	贵州省独山县维寨梯矿接替资源勘查	中国建筑材料工业地质勘查中心贵州总队	余文波 龙上飞 张大洪
132	贵州省兴仁县灰家堡背斜矿山密集区深部金矿战略性勘查	贵州省地质矿产勘查开发局一〇五地质大队、贵州紫金矿业股份有限公司	陈发恩 刘建中 刘艳
133	贵州省松桃县乌罗—耿溪矿山密集区深部锰矿战略性勘查	贵州省地质矿产勘查开发局一〇三地质大队、贵州省黔东锰矿	蒋天锐 覃英 潘昌红
134	贵州省观音山铁矿接替资源勘查	贵州省有色金属和核工业地质勘查局地质矿产勘查院、首钢水城钢铁(集团)有限责任公司	莫光员 谭禹 鲍大忠
135	贵州省贞丰县那郎金矿接替资源勘查	贵州省有色金属和核工业地质勘查局地质矿产勘查院、贞丰县那郎金矿	范二川 周福明 兰永文
136	贵州省松桃县西溪堡矿山密集区深部锰矿战略性勘查	贵州省地质矿产勘查开发局一〇三地质大队	杨胜堂 尹廷龙
西藏自治区			
137	西藏自治区曲松县罗布莎铬铁矿接替资源勘查	西藏自治区地质矿产勘查开发局第二地质大队、西藏自治区矿业发展股份有限公司	张能军 张华平 江涛
138	西藏自治区曲松县罗布莎岩体矿山密集区深部铬铁矿战略性勘查	西藏自治区地质矿产勘查开发局第二地质大队、西藏自治区矿业发展股份有限公司	张能军 王敏德 张华平
陕西省			
139	陕西省紫阳县屈家山锰矿接替资源勘查	中国冶金地质总局西北地质勘查院、紫阳县能明矿业有限公司	解新国 钱焕亭 常昊
140	陕西省潼关县桐峪—西峪金矿接替资源勘查	陕西省地质矿产勘查开发局第六地质队、潼关中金黄金矿业有限责任公司	尚小社 赵国富 杜卫国
141	陕西省太白县双王金矿接替资源勘查	陕西省地质矿产勘查开发局第三地质队、陕西太白黄金矿业有限责任公司	赵亚琴 郭友平 李晓国
142	陕西省凤县铅硐山铅锌矿接替资源勘查	陕西省地质矿产勘查开发局第三地质队、陕西铅硐山矿业有限公司	吴军平 王宏军 赵文波

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序号	项目名称	参加单位	主要参加人员
143	陕西省略阳县何家岩金矿接替资源勘查	西北有色地质勘查局七一一总队、略阳县何家岩金矿	陈荔湘 郑崔勇 邓文峰
甘肃省			
144	甘肃省白银市白银厂铜多金属矿战略性勘查	甘肃有色地质勘查局三队	周科慧 罗维斌 南秀斌
145	甘肃省玛曲县大水金矿接替资源勘查	甘肃省地质矿产勘查开发局第三地质矿产勘查院、甘肃玛曲格萨尔黄金实业股份有限公司	刘春先 殷超 张建辉
146	甘肃省合作市早子沟金矿接替资源勘查	甘肃省地质矿产勘查开发局第三地质矿产勘查院、甘肃省合作早子沟金矿有限责任公司	梁志录 龚全胜 麻红顺
147	甘肃省白银市白银厂矿山密集区外围铜多金属矿接替资源勘查	甘肃有色地质勘查局白银矿产勘查院白银有色集团股份有限公司	周科慧 罗维斌 南秀斌
148	甘肃省白银市郝泉沟金矿接替资源勘查	甘肃省有色金属地质勘查局白银矿产勘查院、白银有色集团股份有限公司	王懋海 方春家 周玮
149	甘肃省肃北县鹰咀山金矿接替资源勘查	甘肃省地质矿产勘查开发局第四地质矿产勘查院、肃北县金鹰黄金有限责任公司	叶红刚 魏万鸿 王鹏
150	甘肃省金昌市龙首铜镍矿接替资源勘查	金川集团股份有限公司	卢建全 孟远志 刘国贤
151	甘肃省成县厂坝铅锌矿接替资源勘查	甘肃省有色金属地质勘查局兰州矿产勘查院、甘肃厂坝有色金属有限责任公司	王锦涛 浩德成 杜志忠
青海省			
152	青海省兴海县什多龙铅锌矿接替资源勘查	四川省地质矿产勘查开发局一〇八地质队、兴海县鹏飞有色金属采选有限公司	王勇 蒋天龙 梅建平
153	青海省门源县松树南沟金矿接替资源勘查	四川鑫顺矿业股份有限公司、青海海鑫矿业有限公司	刘强 陈开斌 王登科
154	青海省循化县谢坑铜金矿接替资源勘查	四川省地质矿产勘查开发局一〇八地质队、青海省循化县谢坑铜金矿	罗凤亿 王勇 陈勇兵
155	青海省都兰县洪水河铁矿接替资源勘查	浙江省第十一地质大队、都兰西钢矿业开发有限公司	吴益平 王远洋 钟莉
新疆维吾尔自治区			
156	新疆鄯善县维权银(铜)矿山银铜多金属矿接替资源勘查	新疆维吾尔自治区地质矿产勘查开发局第一地质大队、吐鲁番金源矿冶有限责任公司	聂俊杰 曹清龙 张梦虎
157	新疆哈密市金窝子金矿及外围接替资源勘查	新疆维吾尔自治区有色地质勘查七〇四队、西部黄金哈密金矿有限责任公司	马占鹿 雷军文 王有平
158	新疆哈密市黄山东铜镍矿接替资源勘查	新疆维吾尔自治区地质矿产勘查开发局第六地质大队、新疆亚克斯资源开发股份有限公司	李卫东 谢登科 师霄杰

续表 6

序号	项目名称	参加单位	主要参加人员
159	新疆鄯善县康古尔金矿接替资源勘查	新疆维吾尔自治区地质矿产勘查开发局第一地质大队、鄯善县马头滩金矿	邢德超 冯晓宏 吴生军
160	新疆和静县查岗诺尔铁矿区北部战略性勘查	新疆维吾尔自治区地质矿产勘查开发局第三地质大队	魏梦元 刘建兵 李鹏飞
161	新疆富蕴县喀拉通克铜镍矿接替资源勘查	新疆维吾尔自治区地质矿产勘查开发局第四地质大队、新疆新鑫矿业股份有限公司喀拉通克铜镍矿	蔡勇彪 王勇 何立新
162	新疆哈密市香山铜镍矿接替资源勘查	新疆维吾尔自治区有色地质勘查七〇四队、新疆亚克斯资源开发股份有限公司	尹希文 赵纹琪 景勇

5 结论

(1)老矿山深部和外围找矿项目中央财政投入 104 150 万元, 地方财政配套 550.9 万元, 矿山企业匹配 118 260.7 万元。经济效果好, 有较强的中央财政投资引导效果和税收投资引导效果, 新增静态工业产值和利税效果明显。

(2)实施的 168 个勘查项目, 累计完成钻探 1 007 730 m、坑探 70 335 m, 地质控制程度较高, 找矿发现的资源储量, 可全部为矿山企业直接开发利用。

(3)新增大批短缺重要矿产的资源量, 具有较强的资源保障效果, 大幅延长实施勘查项目矿种和矿山服务年限。

(4)社会效果较强, 稳定直接就业 16.5 万人, 提高人民收入, 提升社会福利。

致谢: 本次工作历时 5 年, 百余个地勘单位和矿山企业参与矿山深部和外围找矿工作, 并编制了相应的勘查报告 168 份, 受篇幅所限, 未能在参考文献中一一列出。在此对参加老矿山深部和外部找矿工作的各位同仁表示衷心感谢!

注释:

- ① 吕志成, 庞振山, 薛建玲, 颜廷杰, 耿林, 张志辉, 甄世民, 陶文, 贾儒雅, 陈辉, 姚磊. 2015. 老矿山深部和外围找矿计划项目成果报告 [R]. 中国地质调查局发展研究中心, 1-815.

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Fund project: Subsidy of special geological mineral resources survey and evaluation project –Ore-Prospecting Surrounding and Beneath the Old Mines Program

Dataset of Ore-Prospecting Results Surrounding and Beneath the Old Mines from 2012 to 2014

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Abstract: This dataset has been constructed through classifying the results of 168 exploration projects under the title of Ore-Prospecting Surrounding and Beneath the Old Mines Program. It features data on funds, workload, and results of the Program. The funds comprises the financial investments from the central government, the local governments, and the mining companies; the workload depicts that of drilling, tunnel drilling, and trenching, while the results of the Program include newly-added mineral resources reserves volumes of 168 exploration projects, extended mine service lives, and increased number of long-term employees (related information of uranium mine is not listed). All data are of real investment and actually finished workload; the results of the Program have been ratified or recorded by the national and provincial mineral reserves examining authorities, which are all of reliable quality and published for sharing and ready for download. This dataset can reflect the inputs of mineral resources exploration and the status quo of geological prospecting towards the mines in China in recent years. It provides basic data not only for analyzing the present situation of mineral resources in China, but also for decision-making of exploring mineral resources in China in the future.

Keywords: old mines, funds, workload, resources volume, result data

Data service system URL: <http://dcc.cgs.gov.cn>

1 Introduction

The ore prospecting surrounding and beneath the old mines with potentials is primarily aimed at increasing the service lives of the old mines. Under the requirements of new mechanism of geological prospecting for mineral resources, with the mining companies being the main investors, and supported by the non-profit geological survey, this circle of mineral resources exploration is an important part of the Ore-searching Breakthrough Strategy. Carrying out mineral resources exploration surrounding and beneath the old mines so as to increase recoverable mineral resources reserves, is an effective approach to facilitate the sustainable development of mining-based cities and towns in China; meanwhile, it is a shortcut to realize the breakthroughs in ore-prospecting geological

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survey; moreover, it is an important practice of innovations in ore-searching mechanisms and administrative regulations.

Based on the study period of 2012—2014, Ore-Prospecting Surrounding and Beneath the Old Mines Program has consolidated ore-prospecting projects of 168 mines, with an aggregate funds outlay of \$358, 644, 000 (\$167, 530, 000 as central government's finance, \$886, 000 as local government's finance, and \$190, 228, 000 from mining companies). The Program has totally involved 1, 007, 730 m of drilling and 70, 335 m of tunnel drilling. With the submission of 168 prospecting reports, this Program has ascertained metallogenic conditions and resources status surrounding and beneath 168 old mines, making major breakthroughs in the ore-prospecting. Among the ore-prospecting projects of 168 mines, the newly-added resources volumes of 17 mines have been found to be of large-scale, while 38 of them are of medium-scale, and 60 mines are of small-scale. As much as 338, 960, 000 t of raw coal, 279, 870, 000 t of iron ores, 241, 890, 000 t of manganese ores, 816, 000 t of chromite ores, 1, 821, 400 t of copper, 4, 520, 000 t of lead and zinc, 67, 400 t of tungsten (WO_3), 130, 000 t of tin, 126, 000 t of antimony, 41, 000 t of molybdenum, 346 t of gold, and 2, 208 t of silver in newly-added 333-graded resources reserves volumes have been fixed^① (see Table 1). These abundant prospecting results have well settled down the resources crisis of some medium- and large-scale old mines, accomplishing the ore-prospecting tasks of old mines scheduled by the Ore-searching Breakthrough Strategy. At the same time, this Program has promoted the theoretical research on prospecting besides improving prospecting efficiency (Lyu Zhicheng, 2001; Pang Zhenshan, 2002; Geng Lin, 2014; Xue Jianling, 2014). In a summary, this dataset has displayed the results of ore-prospecting results surrounding and beneath the 162 old mines. (Note: Only 162 mines are listed in all the tables in this article, and related information of uranium mine is not listed).

Table 1 List of Newly-added Resources Reserves and Investment of Prospecting Projects Surrounding and Beneath the Old Mines

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
Beijing Municipality						
Succeeding Resources						
1	Prospecting of Sangyuan Iron Mine in Miyun County, Beijing	Fe	333	Ore (10, 000 t)	600.00	690
Hebei Province						
Succeeding Resources						
2	Prospecting of Shihu Gold Mine in Lingshou County, Hebei Province	Au	333	Metal (t)	0.86	1940
Succeeding Resources						
3	Prospecting of Sangjiayu, Heishiyu Ore Sections of Jinchangyu Gold Mine in Qianxi County, Hebei Province	Au	122b+333	Metal (t)	4.80	2710

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
4	Succeeding Resources Prospecting of Shouwangfen Copper Mine in Chengde, Hebei Province	Cu	332+333	Metal (10, 000 t)	0.23	
		Fe	332+333	Ore (10, 000 t)	215.21	1050
		Mo	333	Metal (10, 000 t)	-	
Shanxi Province						
5	Succeeding Resources Prospecting of Diaquan Silver and Copper Mine in Lingqiu County, Shanxi Province	Ag		Metal (t)	70.00	
		Cu	333+334	Metal (10, 000 t)	1.30	1140
		Mo		Metal (10, 000 t)	0.04	
6	Succeeding Resources Prospecting of Zhijiadi Lead, Zinc and Silver Mine in Lingqiu County, Shanxi Province	Pb, Zn		Metal (10, 000 t)	8.89	
		Ag	333+334	Metal (t)	225.00	1670
7	Succeeding Resources Prospecting of Hujiayu Copper Mine in Yuanqu County, Shanxi Province	Cu		Metal (10, 000 t)	4.30	
		Co	333	Metal (10, 000 t)	0.50	1460
Inner Mongolia Autonomous Region						
8	Succeeding Resources Prospecting of Xindigou Woye Gold Mine in Qahar Right Wing Middle Banner, Inner Mongolia Autonomous Region	Au	332+333	Metal (t)	1.42	1645
9	Succeeding Resources Prospecting of Baiyinnuoer Lead and Zinc Mine in Chifeng, Inner Mongolia Autonomous Region	Pb, Zn	333+334	Metal (10, 000 t)	20.05	1370
10	Succeeding Resources Prospecting of Hadamen Gold Mine in Baotou, Inner Mongolia Autonomous Region	Au	333+334	Metal (t)	7.90	690
11	Succeeding Resources Prospecting of Hongling Lead and Zinc Mine in Chifeng, Inner Mongolia Autonomous Region	Zn	333	Metal (10, 000 t)	2.39	
		Cu	333	Metal (10, 000 t)	0.09	885
		Fe	333	Ore (10, 000 t)	654.87	
		Sn	332	Metal (10, 000 t)	6.00	
12	Succeeding Resources Prospecting of Weilasituo Copper and Zinc Polymetallic Ore in Hexigten Banner, Inner Mongolia Autonomous Region	Mo	332	Metal (10, 000 t)	4.00	
		Cu	332	Metal (10, 000 t)	2.00	1260
		Zn	332	Metal (10, 000 t)	12.00	
		Rb	332	Metal (10, 000 t)	19.00	

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
13	Succeeding Resources Prospecting of Bayan Obo Iron Mine in Baotou, Inner Mongolia Autonomous Region	Fe	333	Ore (10, 000 t)	6500.00	1575
14	Succeeding Resources Prospecting of Aerhada Lead and Zinc Mine in East Ujimqin Banner, Inner Mongolia Autonomous Region	Pb, Zn	333	Metal (10, 000 t)	0.93	1575
15	Succeeding Resources Prospecting of Zinc Polymetallic Ore of West Mining Area in Bairendaba, Hexigten Banner, Inner Mongolia Autonomous Region	Ag	333	Metal (t)	–	1260
		Pb, Zn	333	Metal (10, 000 t)	1.07	67.18
Liaoning Province						
16	Succeeding Resources Prospecting of Baiyun Gold Mine in Fengcheng, Liaoning Province	Au	122b+333	Metal (t)	26.70	2250
17	Strategic Prospecting Surrounding and Beneath Paishanlou Gold Mine in Fuxin, Liaoning Province	Au	Target	Locality	2	580
18	Succeeding Resources Prospecting of Qingchengzi Lead and Zinc Mine in Fengcheng, Liaoning Province	Pb, Zn	333	Metal (10, 000 t)	9.31	1210
19	Succeeding Resources Prospecting of Baoguo Iron Mine in Beipiao, Liaoning Province	Au	333	Metal (t)	0.91	225.79
20	Succeeding Resources Prospecting of Xiaotongjiapuzi Gold Mine in Fengcheng, Liaoning Province	Ag	333	Metal (t)	–	1080
21	Succeeding Resources Prospecting of Gongchangling Iron Mine in Liaoyang, Liaoning Province	Au	333	Metal (t)	2.60	1260
		Ag	333	Metal (t)	18.80	–
22	Succeeding Resources Prospecting of Liangjiashan Coal Mine of Shulan Mining (Group) Corporation Limited of Jilin Province	Fe	333	Ore (10, 000 t)	1113.83	2010
Jilin Province						
22	Succeeding Resources Prospecting of Liangjiashan Coal Mine of Shulan Mining (Group) Corporation Limited of Jilin Province	Coal	334	Raw Coal (10, 000 t)	–	1500

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
23	Succeeding Resources Prospecting of Jiapigou Gold Mine in Huadian, Jilin Province	Au	333	Metal (t)	0.06	1195
		Ag	333	Metal (t)	1.45	
24	Succeeding Resources Prospecting of Banshigou Iron Mine in Baishan, Jilin Province	Fe	333	Ore (10, 000 t)	617.00	945
25	Succeeding Resources Prospecting of Dalizi Iron Mine in Linjiang, Jilin Province	Fe	333	Ore (10, 000 t)	331.20	1230
Heilongjiang Province						
26	Succeeding Resources Prospecting of Gongpengzi Copper, Zinc and Tungsten Mine in Binxian County, Heilongjiang Province	Cu	333+334	Metal (10, 000 t)	-	1190
		Pb, Zn	333	Metal (10, 000 t)	3.70	
27	Succeeding Resources Prospecting of Ergu Iron Polymetallic Ore in Qing'an County, Heilongjiang Province	Fe	333	Ore (10, 000 t)	183.86	975
		Pb, Zn	333	Metal (10, 000 t)	3.70	
28	Strategic Prospecting Beneath Cuihongshan Iron Polymetallic Ore Field in Xunke County, Heilongjiang Province	Fe	Target	Locality	-	275
29	Succeeding Resources Prospecting of Sandaowanzi Gold Mine in Heihe, Heilongjiang Province	Au	333	Metal (t)	-	1740
30	Succeeding Resources Prospecting of Shabaosi Gold Mine in Mohe County, Heilongjiang Province	Au	333	Metal (t)	2.51	1140
Jiangsu Province						
31	Succeeding Resources Prospecting of Qixiashan Lead and Zinc Mine in Nanjing, Jiangsu Province	Pb, Zn	332+333	Metal (10, 000 t)	71.40	2100
		Ag	332+333	Metal (t)	1113.64	
32	Succeeding Resources Prospecting of Tongjing Gold (Copper) Mine in Jiangning District, Nanjing, Jiangsu Province	Au	333+334	Metal (t)	0.94	1245
		Cu	333+334	Metal (10, 000 t)	0.57	

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
33	Strategic Prospecting of Copper and Molybdenum Mine of Tongshan-Shidangshan Region in Jurong, Jiangsu Province	Cu	Target	Locality	1	340
34	Strategic Prospecting of Iron Ore Beneath Mine Concentration Area in Eastern Belt of North Block of Nanjing-Wuhu of Jiangsu Province	Fe	Target	Locality	1	705
35	Succeeding Resources Prospecting of Yuli Lead, Zinc and Silver Mine in Suzhou, Jiangsu Province	Pb, Zn	333	Metal (10, 000 t)	-	795
36	Succeeding Resources Prospecting of Yeshan Iron Mine in Nanjing, Jiangsu Province	Fe	333	Ore (10, 000 t)	-	630
Zhejiang Province						
37	Succeeding Resources Prospecting of Zhilingtou Gold Mine in Suichang County, Zhejiang Province	Au	333+334	Metal (t)	1	2730
		Ag	333+334	Metal (t)	15.00	
38	Succeeding Resources Prospecting of Pingshui Copper Mine in Shaoxing County, Zhejiang Province	Au	333+334	Metal (t)	3.61	3275
		Cu	333+334	Metal (10, 000 t)	3.66	
39	Strategic Prospecting of Gold and Molybdenum Polymetallic Ore in Zhoujiawu Region, Jiande, Zhejiang Province	Au	Target	Locality	1	720
40	Strategic Prospecting Surrounding and Beneath Lizhu Iron Mine in Shaoxing County, Zhejiang Province	Fe	Target	Locality	1	1360
41	Succeeding Resources Prospecting of Lingshan Copper Polymetallic Ore in Longyou County, Zhejiang Province	Cu	333	Metal (10, 000 t)	-	1110
		Pb, Zn	333	Metal (10, 000 t)	-	

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
Anhui Province						
42	Succeeding Resources Prospecting of Huangshanling Lead and Zinc Mine in Chizhou, Anhui Province	Pb, Zn	333+334	Metal (10, 000 t)	3.61	1150
43	Succeeding Resources Prospecting of Dongguashan Copper Mine in Tongling, Anhui Province	Cu	333	Metal (10, 000 t)	-	1080
44	Succeeding Resources Prospecting of Tongshan Copper Mine in Tongling, Anhui Province	Cu	333	Metal (10, 000 t)	-	1150
45	Succeeding Resources Prospecting of Zhongjiu-Gushan Iron Mine in Dangtu County, Anhui Province	Fe	333	Ore (10, 000 t)	245.01	780
46	Succeeding Resources Prospecting of Hemushan Iron Mine in Dangtu County, Anhui Province	Fe	333	Ore (10, 000 t)	1000.00	630
47	Succeeding Resources Prospecting of Dongxi-Nanganling Gold Mine in Huoshan County, Anhui Province	Au	333	Metal (t)	-	630
48	Succeeding Resources Prospecting of Xinqiao Copper Pyrite in Tongling, Anhui Province	Cu	333	Metal (10, 000 t)	-	1110
Fujian Province						
49	Succeeding Resources Prospecting of Xiaoban Gold Mine in Youxi County, Fujian Province	Au	333+334	Metal (t)	0.44	520
50	Strategic Prospecting of Mineral Products of Ore-Concentrated Area of Xianyang-Qiucun Gold Mine in Dehua, Fujian Province	Au	Target	Locality	1	690
51	Strategic Prospecting of Mineral Products Beneath Ore-Concentrated Area of Xingluokeng Tungsten Mine in Ninghua, Fujian Province	W	Target	Locality	1	740

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
52	Succeeding Resources Prospecting of Dayao Coal Mine of Fujian Province	Coal	333+334	Raw Coal (10, 000 t)	-	900
53	Succeeding Resources Prospecting of Hebaoshan Gold Mine in Taining County, Fujian Province	Au	333+334	Metal (t)	6.51	600
54	Succeeding Resources Prospecting of Yangshan Iron Mine in Dehua County, Fujian Province	Fe	333	Ore (10, 000 t)	67.28	1140
Jiangxi Province						
55	Succeeding Resources Prospecting of Zuoba Mining Area of Xialong Tungsten Mine in Dayu County, Jiangxi Province	W	333+334	WO ₃ (10, 000 t)	0.87	1550
56	Strategic Prospecting of Copper Polymetallic Ore Beneath Concentration Area of Jiurui Mine in Jiujiang, Jiangxi Province	Cu	Target	Locality	3	730
57	Strategic Prospecting of Gold, Copper, Lead and Zinc Polymetallic Ore Beneath Concentration Area of Jinshan-Tongchang Mine in Dexing, Jiangxi Province	Cu	Target	Locality	1	750
58	Succeeding Resources Prospecting of Iron Mine of Taipingshan-Songshan Mining Area in Xinyu, Jiangxi Province	Fe	333+334	Ore (10, 000 t)	6091.00	1090
59	Succeeding Resources Prospecting of Wushan Copper Mine in Ruichang, Jiangxi Province	Cu	333	Metal (10, 000 t)	33.40	900
60	Succeeding Resources Prospecting of Tianhe Coal Mine in Ji'an County, Jiangxi Province	Coal	333+334	Raw Coal (10, 000 t)	600.00	720

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
61	Strategic Prospecting of Iron Mine Beneath Yangjiaqiao-Changxi of Ganzhong Iron Ore Field of Jiangxi Province	Fe	Target	Locality	1	265
62	Succeeding Resources Prospecting of Zhangdou Mining Area of Xialong Tungsten Mine in Dayu County, Jiangxi Province	W	333	WO ₃ (10, 000 t)	-	1110
63	Succeeding Resources Prospecting of Jianfengpo Tin Mine in De'an County, Jiangxi Province	Sn	333+334	Metal (10, 000 t)	0.94	945
64	Succeeding Resources Prospecting of Kuimeishan Tungsten Mine in Dingnan County, Jiangxi Province	W	333	WO ₃ (10, 000 t)	-	1140
		Au	333	Metal (t)	-	
65	Succeeding Resources Prospecting of Pangushan Tungsten Mine in Yudu County, Jiangxi Province	W	333	WO ₃ (10, 000 t)	-	945
Shandong Province						
66	Succeeding Resources Prospecting of Jiudian Gold Mine in Pingdu, Shandong Province	Au	333+334	Metal (t)	3.57	750
67	Strategic Prospecting of Gold Mine Beneath Middle Section of Zhaoping Fault Zone in Zhaoyuan, Shandong Province	Au	Target	Locality	2	1465
68	Succeeding Resources Prospecting of Gold Mine of Shangzhuang Mining Area in Zhaoyuan, Shandong Province	Au	333	Metal (t)	4.62	1470
69	Succeeding Resources Prospecting of Wang'ershan Mining Area of Jiaojia Gold Mine in Laizhou, Shandong Province	Au	333	Metal (t)	0.94	1300

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
70	Succeeding Resources Prospecting of Gold Mine of Xishan Mining Area in Longkou, Shandong Province	Au	333	Metal (t)	0.45	1390
71	Succeeding Resources Prospecting of Gold Mine of Hedong Mining Area in Zhaoyuan, Shandong Province	Au	333	Metal (t)	0.44	1575
72	Succeeding Resources Prospecting of Linglong Gold Mine in Zhaoyuan, Shandong Province	Au	333	Metal (t)	13.79	1575
73	Succeeding Resources Prospecting of Gold Mine of Dongfeng Mining Area of Linglong Gold Mine in Zhaoyuan, Shandong Province	Au	333	Metal (t)	6.21	1575
Henan Province						
74	Succeeding Resources Prospecting of Qinling Gold Mine in Lingbao, Henan Province	Au	333+334	Metal (t)	4.60	1640
75	Succeeding Resources Prospecting of Shanggong Gold Mine in Luoning County, Henan Province	Au	333	Metal (t)	11.14	3285
76	Succeeding Resources Prospecting of Laowan Gold Mine in Tongbai County, Henan Province	Au	333+334	Metal (t)	31.87	2585
77	Succeeding Resources Prospecting of Dahu and Linghu Mining Areas of Xiaoqinling Gold Ore Field in Lingbao, Henan Province	Au	333	Metal (t)	12.97	1500
78	Succeeding Resources Prospecting of Laoyacha Gold Mine in Lingbao, Henan Province	Au	333	Metal (t)	3.46	1500

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
79	Succeeding Resources Prospecting of Huanxiangwa Gold Mine in Songxian County, Henan Province	Au	333+334	Metal (t)	10.10	1570
80	Succeeding Resources Prospecting of Jinqu Gold Mine in Lingbao, Henan Province	Au	333+334	Metal (t)	10.13	1575
81	Succeeding Resources Prospecting of Lingjin Mine I in Lingbao, Henan Province	Au	333	Metal (t)	0.42	1800.7
82	Succeeding Resources Prospecting of Fancha Gold Mine in Lingbao, Henan Province	Au	333	Metal (t)	-	1640
Hubei Province						
83	Succeeding Resources Prospecting of Tongshankou Copper Mine in Daye, Hubei Province	Cu	333+334	Metal (10, 000 t)	-	540
84	Strategic Prospecting of Iron Mine Beneath Echeng Rock Mass in Ezhou, Hubei Province	Fe	Target	Locality	-	410
85	Strategic Prospecting of Copper, Iron and Gold Polymetallic Ore Beneath Northwest Section of Yangxin Rock Mass in Daye, Hubei Province	Cu	Target	Locality	2	405
86	Succeeding Resources Prospecting of Yindonggou Silver, Lead and Zinc Polymetallic Ore in Zhushan County, Hubei Province	Pb, Zn	333	Metal (10, 000 t)	-	900
87	Succeeding Resources Prospecting of Chimashan Copper Mine in Yangxin County, Hubei Province	Cu	333	Metal (10, 000 t)	-	630
Hunan Province						
88	Succeeding Resources Prospecting of Xianghualing Tin Polymetallic Ore in Linwu County, Hunan Province	Sn	333+334	Metal (10, 000 t)	5.60	1515

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
89	Succeeding Resources Prospecting of Xiangdong Tungsten Mine in Chaling County, Hunan Province	W	333	WO ₃ (10, 000 t)	0.76	540
90	Succeeding Resources Prospecting of Gaotingsi Coal Mine in Yongxing County, Hunan Province	Coal	333+334	Raw Coal (10, 000 t)	-	720
91	Strategic Prospecting of Coal Resources Beneath Nantang Syncline of Hongshandian Mining Area in Shuangfeng County, Hunan Province	Coal	333+334	Raw Coal (10, 000 t)	5488.00	640
92	Succeeding Resources Prospecting of Xikuangshan Antimony Mine in Lengshuijiang, Hunan Province	Sb	333	Metal (10, 000 t)	1.01	1290
93	Succeeding Resources Prospecting of Shuikoushan Lead and Zinc Polymetallic Ore in Changning, Hunan Province	Pb, Zn	333	Metal (10, 000 t)	-	
		Fe	334	Ore (10, 000 t)	4914.41	1390
		Cu	334	Metal (10, 000 t)	29.87	
94	Succeeding Resources Prospecting of Huangjindong Gold Mine in Pingjiang County, Hunan Province	Au	333	Metal (t)	2.01	1110
95	Succeeding Resources Prospecting of Huangshaping Lead and Zinc Mine in Guiyang County, Hunan Province	Pb, Zn	333	Metal (10, 000 t)	-	1540
96	Succeeding Resources Prospecting of Longshan Gold and Antimony Mine in Xinshao County, Hunan Province	Au		Metal (t)	4.43	
			333+334			1575
		Sb		Metal (10, 000 t)	5.90	
Guangdong Province						
97	Succeeding Resources Prospecting of Dajiangping Lead and Zinc Gold Mine in Yunfu, Guangdong Province	Pb, Zn	333+334	Metal (10, 000 t)	10.79	
		Au	333+334	Metal (t)	1.03	800

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
98	Strategic Prospecting of Copper, Gold and Molybdenum Mine Beneath Concentration Area of Dabaoshan Mine in Shaoguan, Guangdong Province	Cu	Target	Locality	3	960
99	Strategic Prospecting of Copper, Tungsten and Tin (Lead and Zinc) Mine Beneath Concentration Area of Shilu-Xishan Mine in Yangchun, Guangdong Province	Cu	Target	Locality	-	550
100	Succeeding Resources Prospecting of Yushui Copper Mine in Meizhou, Guangdong Province	Cu	333	Metal (10, 000 t)	-	1090
101	Strategic Prospecting of Lead and Zinc Mine of Mine Concentration Area in Fankou Region, Guangdong Province	Pb, Zn	Target	Locality	-	200
102	Succeeding Resources Prospecting of Hetai Gold Mine in Gaoyao, Guangdong Province	Au	334	Metal (t)	-	1890
103	Succeeding Resources Prospecting of Dabaoshan Copper Polymetallic Ore in Shaoguan, Guangdong Province	Cu	333	Metal (10, 000 t)	15.24	1790
104	Succeeding Resources Prospecting of Fankou Lead and Zinc Mine in Shaoguan, Guangdong Province	Pb, Zn	333	Metal (10, 000 t)	-	1575
105	Succeeding Resources Prospecting of Hongling Tungsten Ore in Wengyuan County, Guangdong Province	W	333	WO ₃ (10, 000 t)	5.11	1260
Guangxi Zhuang Autonomous Region						
106	Succeeding Resources Prospecting of Jinya Gold Mine in Fengshan County, Guangxi Zhuang Autonomous Region	Au	333+334	Metal (t)	27.34	2365

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
107	Strategic Prospecting of Tin Polymetallic Ore Beneath Concentration Area of Dachang Mine in Nandan County, Guangxi	Zn		Metal (10, 000 t)	27.07	
		Cu	334	Metal (10, 000 t)	5.56	800
		Ag		Metal (t)	275.50	
		Sn		Metal (10, 000 t)	0.06	
108	Succeeding Resources Prospecting of Wuxu Antimony Polymetallic Ore in Hechi, Guangxi	Pb, Zn	333	Metal (10, 000 t)	2.75	
		Sb	333	Metal (10, 000 t)	1.39	1045
		Ag	333	Metal (t)	71.01	
109	Succeeding Resources Prospecting of Tiandeng Manganese Mine in Tiandeng County, Guangxi	Mn	333+334	Ore (10, 000 t)	6966.00	1140
110	Succeeding Resources Prospecting of Tuwu Manganese Mine in Daxin County, Guangxi	Mn	333	Ore (10, 000 t)	225.81	700
111	Succeeding Resources Prospecting of Hurun Manganese Mine in Jingxi County, Guangxi	Mn	333	Ore (10, 000 t)	-	1050
Hainan Province						
112	Succeeding Resources Prospecting of Baolun Gold Mine in Ledong County, Hainan Province	Au	333	Metal (t)	11.06	1795
113	Strategic Prospecting of Iron Polymetallic Ore Beneath Concentration Area of Shilu Mine in Changjiang County, Hainan Province	Target	Locality	Ore (10, 000 t)	-	1890.9
114	Succeeding Resources Prospecting of Bumo Gold Mine in Dongfang, Hainan Province	Au	333	Metal (t)	1.39	1200
Chongqing Municipality						
115	Succeeding Resources Prospecting of Yongchuan Coal Mine in Yongchuan District, Chongqing	Coal	333+334	Raw Coal (10, 000 t)	1955.90	1330
116	Succeeding Resources Prospecting of Sanhuiyi Coal Mine in Hechuan District, Chongqing	Coal	333+334	Raw Coal (10, 000 t)	7365.80	1890

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
117	Strategic Prospecting of Coal Resources of Longtan Formation of Permian System of Xindianzi Anticline of Yongrong Mining Area of Chongqing	Coal	334	Raw Coal (10, 000 t)	13227.00	1430
118	Strategic Prospecting Surrounding Manganese Mine of Concentration Area of Bijiashan Mine in Xiushan County, Chongqing	Mn	334	Ore (10, 000 t)	237.00	515
119	Succeeding Resources Prospecting of Yudong Coal Mine in Chongqing Wansheng Economic and Technological Development Zone	Coal	333+334	Raw Coal (10, 000 t)	500.00	630
Sichuan Province						
120	Succeeding Resources Prospecting of Pingchuan Iron Mine in Yanyuan County, Sichuan Province	Fe	333+334	Ore (10, 000 t)	2434.00	2050
121	Succeeding Resources Prospecting of Hongshan Iron Mine in Nanjiang County, Sichuan Province	Fe	112b+333	Ore (10, 000 t)	921.90	1330
122	Succeeding Resources Prospecting of Lala Copper Mine in Huili County, Sichuan Province	Cu	333+334	Metal (10, 000 t)	61.36	3660
123	Succeeding Resources Prospecting of Jingang Coal Mine in Dazhou, Sichuan Province	Coal	333+334	Raw Coal (10, 000 t)	1778.00	1160
124	Succeeding Resources Prospecting of Lugu Iron Mine in Mianning County, Sichuan Province	Fe	333+334	Ore (10, 000 t)	1042.90	1035
		Sn	333	Metal (10, 000 t)	0.32	
125	Succeeding Resources Prospecting of Tangjiahe Coal Mine in Wangcang County, Sichuan Province	Coal	333+334	Raw Coal (10, 000 t)	2014.00	1200
126	Succeeding Resources Prospecting of Tuanba Coal Mine in Dazhou, Sichuan Province	Coal	333+334	Raw Coal (10, 000 t)	968.00	630

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
127	Succeeding Resources Prospecting of Daliangzi Lead and Zinc Mine in Huidong County, Sichuan Province	Pb, Zn	333+334	Metal (10, 000 t)	1.53	1575
128	Succeeding Resources Prospecting of Tangtang Copper Mine in Huidong County, Sichuan Province	Cu	333+334	Metal (10, 000 t)	10.66	1260
Yunnan Province						
129	Succeeding Resources Prospecting of Jiudingshan Copper and Molybdenum Polymetallic Ore in Midu County, Yunnan Province	Cu	333	Metal (10, 000 t)	0.52	1000
		Mo	333	Metal (10, 000 t)	0.06	
130	Succeeding Resources Prospecting of Yangla Copper Mine in Deqin County, Yunnan Province	Cu	122b+332+333	Metal (10,000 t)	0.64	1080
Guizhou Province						
131	Succeeding Resources Prospecting of Weizhai Antimony Mine in Dushan County, Guizhou Province	Sb	333+334	Metal (10, 000 t)	4.31	1300
132	Strategic Prospecting of Gold Mine Beneath Mine Concentration Area of Huijiabao Anticline in Xingren County, Guizhou Province	Au	333+334	Metal (t)	21.40	965
133	Strategic Prospecting of Manganese Mine Beneath Concentration Area of Wuluo-Gengxi Mine in Songtao County, Guizhou Province	Mn	333+334	Ore (10, 000 t)	12270.00	595
134	Succeeding Resources Prospecting of Guanyinshan Iron Mine of Guizhou Province	Fe	333	Ore (10, 000 t)	196.21	930
135	Succeeding Resources Prospecting of Nalang Gold Mine in Zhenfeng County, Guizhou Province	Au	333	Metal (t)	0.33	990

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
136	Strategic Prospecting of Manganese Mine Beneath Concentration Area of Xixibao Mine in Songtao County, Guizhou Province	Mn	334	Ore (10, 000 t)	4399.29	340
Tibet Autonomous Region						
137	Succeeding Resources Prospecting of Luobusha Chromite in Qusong County, Tibet Autonomous Region	Chromite	333	Ore (10, 000 t)	56.27	3520
138	Strategic Prospecting of Chromite Beneath Mine Concentration Area of Luobusha Rock Mass in Qusong County, Tibet Autonomous Region	Chromite	332+333	Ore (10, 000 t)	25.36	2230
Shaanxi Province						
139	Succeeding Resources Prospecting of Qujiashan Manganese Mine in Ziyang County, Shaanxi Province	Mn	332+333+334+ Low grade	Ore (10, 000 t)	90.91	1410
140	Succeeding Resources Prospecting of Tongyu-Xiyu Gold Mine in Tongguan County, Shaanxi Province	Au	332+333+334	Metal (t)	3.95	1020
141	Succeeding Resources Prospecting of Shuangwang Gold Mine in Taibai County, Shaanxi Province	Au	333+334	Metal (t)	3.84	1120
142	Succeeding Resources Prospecting of Qiandongshan Lead and Zinc Mine in Fengxian County, Shaanxi Province	Pb, Zn	333+334	Metal (10, 000 t)	33.21	1575
143	Succeeding Resources Prospecting of Hejiayan Gold Mine in Lueyang County, Shaanxi Province	Au	333	Metal (t)	0.60	1050
Gansu Province						
144	Strategic Prospecting of Baiyinchang Copper Polymetallic Ore in Baiyin, Gansu Province	Cu	Target	Locality	2	1060

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
145	Succeeding Resources Prospecting of Dashui Gold Mine in Maqu County, Gansu Province	Au	112b+333+334	Metal (t)	25.81	2850
146	Succeeding Resources Prospecting of Zaozigou Gold Mine in Hezuo, Gansu Province	Au	112b+332+333+334	Metal (t)	33.93	3540
147	Succeeding Resources Prospecting of Copper Polymetallic Ore Surrounding Concentration Area of Baiyinchang Mine in Baiyin, Gansu Province	Pb, Zn	333+334	Metal (10, 000 t)	38.74	2605
		Cu	333+334	Metal (10, 000 t)	6.89	
148	Succeeding Resources Prospecting of Haoquangou Gold Mine in Baiyin, Gansu Province	Au	112b+332+333+334	Metal (t)	9.81	690
	Ag	5.28				
149	Succeeding Resources Prospecting of Yingjushan Gold Mine in Subei County, Gansu Province	Au	333	Metal (t)	4.53	1740
150	Succeeding Resources Prospecting of Longshou Copper and Nickel Mine in Jinchang, Gansu Province	Cu	333	Metal (10, 000 t)	-	1710
		Ni	333	Metal (10, 000 t)	-	
151	Succeeding Resources Prospecting of Changba Lead and Zinc Mine in Chengxian County, Gansu Province	Pb, Zn	333	Metal (10, 000 t)	99.80	1120
Qinghai Province						
152	Succeeding Resources Prospecting of Shiduolong Lead and Zinc Mine in Xinghai County, Qinghai Province	Pb, Zn		Metal (10, 000 t)	13.33	1645
		Ag	331+332+333+334	Metal (t)	52.11	
		Cu		Metal (10, 000 t)	1.09	
153	Succeeding Resources Prospecting of Songshunangou Gold Mine in Menyuan County, Qinghai Province	Au	122b+2M22+333	Metal (t)	5.04	780
154	Succeeding Resources Prospecting of Xiekeng Copper and Gold Mine in Xunhua County, Qinghai Province	Au	333+334	Metal (t)	2.37	1410
		Cu	333+334	Metal (10, 000 t)	0.32	

Continued table 1

S/N	Project Name	Accumulated Newly-Added Resource Reserves			Cumulative investment	
		Mineral Commodities	Grade of Reserves (Resources)	Tonnage	New Reserves	Ten thousand yuan
155	Succeeding Resources Prospecting of Hongshuihe Iron Mine in Dulan County, Qinghai Province	Fe	111b+333	Ore (10, 000 t)	858.96	1050
Xinjiang Uygur Autonomous Region						
156	Succeeding Resources Prospecting of Silver and Copper Polymetallic Ore of Weiwan Silver (Copper) Mine in Shanshan County, Xinjiang	Ag	332+333+334	Metal (t)	67.27	1140
		Pb, Zn	333+334	Metal (10, 000 t)	92.91	
157	Succeeding Resources Prospecting of Jinwozi Gold Mine and Its Surroundings in Hami, Xinjiang	Au	332+333+334	Metal (t)	12.25	1610
158	Succeeding Resources Prospecting of Huangshandong Copper and Nickel Mine in Hami, Xinjiang	Ni	333	Metal (10, 000 t)	-	1540
		Cu	333	Metal (10, 000 t)	-	
159	Succeeding Resources Prospecting of Kanggur Gold Mine in Shanshan County, Xinjiang	Au	333	Metal (t)	-	1200
		Cu-Pb-Zn	333	Metal (10, 000 t)	0.85	
160	Strategic Prospecting of North of Chagannur Iron Mine Area in Hejing County, Xinjiang	Fe	333+334	Ore (10, 000 t)	-	400
161	Succeeding Resources Prospecting of Kalatongke Copper and Nickel Mine in Fuyun County, Xinjiang	Cu	333	Metal (10, 000 t)	3.37	810
		Ni	333	Metal (10, 000 t)	1.93	
162	Succeeding Resources Prospecting of Xiangshan Copper and Nickel Mine in Hami, Xinjiang	Cu	333	Metal (10, 000 t)	-	1050
		Ni	333	Metal (10, 000 t)	-	

Table 2 gives a brief introduction to the metadata of Dataset of Ore-Prospecting Results Surrounding and Beneath the Old Mines from 2012 to 2014. The table includes name of database (dataset), database (dataset) authors, data acquisition time, geographic area, data format, data size, data service system URL, fund project, database (dataset) composition and other items.

Table 2 Metadata table of Database (Dataset)

Items	Description
Database (dataset) name	Dataset of Ore-Prospecting Results Surrounding and Beneath the Old Mines from 2012 to 2014
Database (dataset) authors	Lyu Zhicheng, Development and Research Center of China Geological Survey Pang Zhenshan, Development and Research Center of China Geological Survey Xue Jianling, Development and Research Center of China Geological Survey Geng Lin, Development and Research Center of China Geological Survey Zhang Zhihui, Development and Research Center of China Geological Survey Zhen Shimin, Development and Research Center of China Geological Survey Tao Wen, Development and Research Center of China Geological Survey Jia Ruya, Development and Research Center of China Geological Survey Chen Hui, Development and Research Center of China Geological Survey Yao Lei, Development and Research Center of China Geological Survey
Data acquisition time	2012—2014
Geographic area	Nationwide
Data format	*.xlsx
Data size	218 KB
Data service system URL	http://dcc.cgs.gov.cn
Fund Project	Subsidy of special geological mineral resources survey and evaluation project—Ore—Prospecting Surrounding and Beneath the Old Mines Program
Language	Chinese
Database (dataset) composition	The dataset is composed of three sets of data: (1) <code>funs_laokuangshan.xlsx</code> : data on fund arrangement, including central government's financial investment, local government's financial investment, and mining company's investment fund data per provinces, projects and mineral commodities, and data volume; (2) <code>workload_laokuangshan.xlsx</code> : data on finished practical exploration work, including drilling, tunnel drilling, and trenching data per provinces, projects and mineral commodities, and data volume; and (3) <code>resource reserves_laokuangshan.xlsx</code> : resources volume result data, including newly-added mineral resources reserves, economic and social benefits, other data, and data volume.

2 Data Acquisition and Processing

The Dataset of Ore-Prospecting Results Surrounding and Beneath the Old Mines from 2012 to 2014 has covered 28 provinces (municipalities, and autonomous regions), dealing with 16 mineral commodities in 168 old mines. It focuses on the data of funds, workload and results of the projects. The funds, which come respectively from the central government, the local government, and the related mining companies and are then classified according to projects, provinces, and mineral commodities, are the real invested figures during the implementation of the projects. Meanwhile, the workload comprises the already finished main practical exploration working carried out for each of the project, including drilling, tunnel drilling, and trenching, which is also classified as projects, provinces, and mineral commodities. Moreover, the results of the projects are the mineral resources volumes in terms of provinces, mineral commodities and scales of ore deposits,

which are embodied in the 168 exploration reports and are ratified and/or recorded by the national and provincial authorities of mineral resources reserves assessment.

3 Description of Data Samples

The Dataset of Ore-Prospecting Results Surrounding and Beneath the Old Mines from 2012 to 2014 has been shown in Excel sheets. It includes 3 Excel data files: “funs_laokuangshan.xlsx”, “workload_laokuangshan.xlsx” and “resource reserves_laokuangshan.xlsx”. The first Excel file describes the fund investment information of ore-prospecting surrounding and beneath 168 mines (see Table 3 related information of uranium mine is not listed); the second file describes the finished practical exploration work information of ore-prospecting surrounding and beneath 168 mines (see Table 4 related information of uranium mine is not listed); the third file describes the newly-added mineral resources reserves, economic and social benefits, and other data information (see Table 5).

Table 3 Contents of funs_laokuangshan.xlsx Datasheet

S/N	Field Name	Measuring Unit	Data Type	Example
1	Province Name		Character	Hainan Province
2	Project Name		Character	Succeeding Resources Prospecting of Baolun Gold Mine in Ledong County, Hainan Province
3	Mineral Commodity		Character	Gold
4	Project Description		Character	Succeeding
5	Starting Year and Ending Year		Character	2012—2013
6	Central Government's Subsidy Fund	RMB 10,000 yuan	Floating Point	925
7	Local Government's Financial Fund	RMB 10,000 yuan	Floating Point	—
8	Mining Enterprise's Self-Raising	RMB 10,000 yuan	Floating Point	870
9	Total Funds	RMB 10,000 yuan	Floating Point	1795
10	Prospecting Organization		Character	Geological Exploration Institute of Hainan Province
11	Mining Enterprise		Character	Hainan Shanjin Mining Co., Ltd.

Table 4 Contents of workload_laokuangshan.xlsx Datasheet

S/N	Field Name	Measuring Unit	Data Type	Example
1	Province Name		Character	Hainan Province
2	Project Name		Character	Succeeding Resources Prospecting of Baolun Gold Mine in Ledong County, Hainan Province
3	Mineral Commodity		Character	Gold
4	Project Description		Character	Succeeding

Continued table 4

S/N	Field Name	Measuring Unit	Data Type	Example
5	Starting Year and Ending Year		Character	2012-2013
6	Drilling Workload	m	Floating Point	8026.49
7	Tunnel Drilling Workload	m	Floating Point	711.20
8	Trenching Workload	m	Floating Point	3017.00

Table 5 Contents of resource reserves_laokuangshan.xlsx Datasheet

S/N	Field Name	Measuring Unit	Data Type	Example
1	Province Name		Character	Hainan Province
2	Project Name		Character	Succeeding Resources Prospecting of Baolun Gold Mine in Ledong County, Hainan Province
3	Mineral Commodity		Character	Gold
4	Project Description		Character	Succeeding
5	Starting Year and Ending Year		Character	2012—2013
6	Resource/Reserve Type		Character	333
7	Newly-Added Mineral Resource Reserves	Metal (t)	Character	11.06
8	Scale		Character	Medium
9	Prolonged Service Life of Mine	Year	Floating Point	9
10	Increased Number of Long-term Employees	Person	Floating Point	1000

4 Data Quality Control and Evaluation

The quality control process for the data of exploration results includes the checking and trim of source data, the checking of singular data points, and the data inputting to database. The source data checking includes the revision of such apparent data quality deficits as the file formatization errors and storage damages, and the checking of file formats, field standardized nomination, field dimension assignment, and data integrity as well. In the process of singular data point checking, the non-regular data was consciously corrected or removed. The data of exploration expenses (data of funds) are extracted from the 168 prospecting reports, which are respectively and successively examined by the provincial third parties (auditing agencies or economic expertise groups) and the financial department of China Geological Survey, and are hence highly reliable. Meanwhile, the workload data from all the 168 prospecting reports are also respectively on-site examined in the field trips

by the provincial administrations of land & resources. Furthermore, all the exploration results from the 168 prospecting reports are ratified and recorded by the national and/or provincial assessing agencies of mineral resources reserves, and are consequentially of reliable qualities.

Table 6 is the list of participating personnel and companies/organizations and quality control personnel of the dataset (related information of uranium mine is not listed).

Table 6 Division of Labor of Participating Personnel and Companies/Organizations

S/N	Project Name	Companies/Organizations	Main Personnel
Beijing Municipality			
1	Succeeding Resources Prospecting of Sangyuan Iron Mine in Miyun County, Beijing	Beijing Geological Engineering Design and Research Institute, Beijing Jianchang Mining Industry Co., Ltd.	Li Huaiyong, Zhang Haijun, Ge Changfeng
Hebei Province			
2	Succeeding Resources Prospecting of Shihu Gold Mine in Lingshou County, Hebei Province	Shijiazhuang Comprehensive Geological Brigade of Hebei Bureau of Geology and Mineral Resources Exploration, Shihu Mining Industry Co., Ltd. of China National Gold Group	Zhao Fuwang, Zhang Dongmeng, Lu Yafei
3	Succeeding Resources Prospecting of Sangjiayu, Heishiyu Ore Sections of Jinchangyu Gold Mine in Qianxi County, Hebei Province	Beijing Jinyou Geological Exploration Co., Ltd., Hebei Jinchangyu Mining Industry Co., Ltd.	Luo Kejun, Li Wenge, Zhang Yongzhe
4	Succeeding Resources Prospecting of Shouwangfen Copper Mine in Chengde, Hebei Province	514 Geological Brigade of North China Geological Exploration Bureau, Chengde Tongxing Mining Industry Co., Ltd.	Liang Jingli, Zhao Hongrui, Zhang Jiyuan
Shanxi Province			
5	Succeeding Resources Prospecting of Diaoquan Silver and Copper Mine in Lingqiu County, Shanxi Province	The Third Geological Exploration Institute of China Metallurgical Geology Bureau, Shanxi Diaoquan Silver and Copper Mining Industry Co., Ltd.	Wang Yong, Li Honggang, Li Hongxing
6	Succeeding Resources Prospecting of Zhijiadi Lead, Zinc and Silver Mine in Lingqiu County, Shanxi Province	The Third Geological Exploration Institute of China Metallurgical Geology Bureau, Datong Jinyin Mining Industry Co., Ltd. of Shanxi Coal Transportation and Sales Group	Wen Changgui, Wang Yong, Zhang Xingkai
7	Succeeding Resources Prospecting of Hujiayu Copper Mine in Yuanqu County, Shanxi Province	The Third Geological Exploration Institute of China Metallurgical Geology Bureau, ZTS Non-ferrous Metals Group Co., Ltd.	Wang Yong, Li Bingyuan, Guo Shuanglong

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
Inner Mongolia Autonomous Region			
8	Succeeding Resources Prospecting of Xindigou Woye Gold Mine in Qahar Right Wing Middle Banner, Inner Mongolia Autonomous Region	Inner Mongolia Minerals Experiment Research Institute, Inner Mongolia Woye Mining and Metallurgy Technology Development Company	Wang Jianfeng, Tian Runfu, Fan Yunfei
9	Succeeding Resources Prospecting of Baiyinnuoer Lead and Zinc Mine in Chifeng, Inner Mongolia Autonomous Region	Inner Mongolia Chifeng Institute of Geology and Mineral Exploration and Development, Chifeng NFC Baiyinnuoer Mining Co., Ltd.	Wang Jianwei, Tan Hongli, Qiu Guoxing
10	Succeeding Resources Prospecting of Hadamen Gold Mine in Baotou, Inner Mongolia Autonomous Region	Inner Mongolia Jinsheng Mining Industry Development Co., Ltd. of China National Gold Group, Inner Mongolia Baotou Xinda Gold Mining Industry Co., Ltd.	Wang Zhenyong, Song Wenya, Shi Zhefeng
11	Succeeding Resources Prospecting of Hongling Lead and Zinc Mine in Chifeng, Inner Mongolia Autonomous Region	Inner Mongolia Chifeng Institute of Geology and Mineral Exploration and Development, Chifeng Shanjinhongling Non-ferrous Mining Industry Co., Ltd.	Wu Wanbao, Yang Lin, Li Pengfei
12	Succeeding Resources Prospecting of Weilasituo Copper and Zinc Polymetallic Ore in Keshikten Banner, Inner Mongolia Autonomous Region	Inner Mongolia Geological Exploration Co., Ltd. Inner Mongolia Weilasituo Mining Industry Co., Ltd.	Fu Xu, Huge Jiletu, Jia Zeyang
13	Succeeding Resources Prospecting of Bayan Obo Iron Mine in Baotou, Inner Mongolia Autonomous Region	Exploration and Surveying and Mapping Research Institute of Baotou Iron and Steel, Baotou Iron and Steel (Group) Co., Ltd.	Zhang Fengxian, Zhang Qiang, Tang Haiyan
14	Succeeding Resources Prospecting of Aehada Lead and Zinc Mine in East Ujimqin Banner, Inner Mongolia Autonomous Region	Inner Mongolia Chifeng Institute of Geology and Mineral Exploration and Development, Xilingol League Shanjin Aehada Mining Industry Co., Ltd.	Wang Zehai, Wang Liang, Wen Haibo
15	Succeeding Resources Prospecting of Zinc Polymetallic Ore of West Mining Area in Bairendaba, Keshikten Banner, Inner Mongolia Autonomous Region	Inner Mongolia Geological Exploration Co., Ltd., Inner Mongolia Bairen Mining Industry Co., Ltd.	Huge Jiletu, Wang Yongheng, Fu Xu
Liaoning Province			
16	Succeeding Resources Prospecting of Baiyun Gold Mine in Fengcheng, Liaoning Province	103 Brigade of Non-ferrous Geological Bureau of Liaoning Province, Liaoning Zhaojinbaiyun Gold Mining Industry Co., Ltd.	Li Shenghui, Zhou Hongge, Qi Enbo
17	Strategic Prospecting Surrounding and Beneath Paishanlou Gold Mine in Fuxin, Liaoning Province	105 Brigade of Non-ferrous Geological Bureau of Liaoning Province, China National Gold Group Liaoning Co., Ltd.	Li Youquan, Gao Jinbao

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
18	Succeeding Resources Prospecting of Qingchengzi Lead and Zinc Mine in Fengcheng, Liaoning Province	General Institute of Exploration of Non-ferrous Geological Bureau of Liaoning Province, Dandong Qingchengzi Mining Industry Co., Ltd.	Liu Genwei, Gao Defu, He Meng
19	Succeeding Resources Prospecting of Baoguo Iron Mine in Beipiao, Liaoning Province	The Third Geological Brigade of Liaoning Province, Beipiao Baoguo Iron Mine Co., Ltd. of Lingyuan Iron and Steel Group	Li Chunkai, Li Guanghe, Wang Jiwei
20	Succeeding Resources Prospecting of Xiaotongjiapuzi Gold Mine in Fengcheng, Liaoning Province	General Institute of Exploration of Non-ferrous Geological Bureau of Liaoning Province, Liaoning Antai Non-ferrous Mining Industry Co., Ltd.	He Meng, Yang Baohuai, Wang Minghao
21	Succeeding Resources Prospecting of Gongchangling Iron Mine in Liaoyang, Liaoning Province	404 Brigade of Liaoning Metallurgical Geological Exploration Bureau, Gongchangling Mining Industry Company of Ansteel Group Mining Industry Company	Han Jing, Liu Guangxin, Li Hongyu
Jilin Province			
22	Succeeding Resources Prospecting of Liangjiashan Coal Mine of Shulan Coal Industry (Group) Corporation Limited of Jilin Province	Jilin Coalfield Geology 203 Exploration Company, Shulan Coal Industry (Group) Corporation Limited	Cui Fengshan, Wang Feiji, Wei Xiwen
23	Succeeding Resources Prospecting of Jiapigou Gold Mine in Huadian, Jilin Province	604 Brigade of Jilin Non-ferrous Metal Geological Exploration Bureau, Jiapigou Mining Industry Co., Ltd. of China National Gold Group	Li Yan, Wang Yaowu, Li Fengjun
24	Succeeding Resources Prospecting of Banshigou Iron Mine in Baishan, Jilin Province	Tonghua Geology & Mineral Resource Prospecting & Exploitation Institute of Jilin Province, Banshi Mining Industry Co., Ltd. of Tonghua Iron and Steel Group	Lu Enlan, Wu Yushi, Gao Mingzhu
25	Succeeding Resources Prospecting of Dalizi Iron Mine in Linjiang, Jilin Province	602 Brigade of Jilin Non-ferrous Metal Geological Exploration Bureau, Dalizi Mining Industry Co., Ltd. of Tonghua Iron and Steel Group	Liu Wenxiang, Wang Di, Yang Tiejun
Heilongjiang Province			
26	Succeeding Resources Prospecting of Gongpengzi Copper, Zinc and Tungsten Mine in Binxian County, Heilongjiang Province	Geophysical Exploration Institute of Heilongjiang Province, Harbin Songjiang Copper Industry Co., Ltd.	Liu Yu, Sun Zuoben, Nan Pusen
27	Succeeding Resources Prospecting of Ergu Iron Polymetallic Ore in Qing'an County, Heilongjiang Province	Geophysical Exploration Institute of Heilongjiang Province, Qing'an Disheng Mining Industry Co., Ltd.	He Haifeng, Xu Jiahui, Li Hongke

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
28	Strategic Prospecting Beneath Cuihongshan Iron Polymetallic Ore Field in Xunke County, Heilongjiang Province	The Sixth Geological Exploration Institute of Heilongjiang Province, Heilongjiang Mining Group Co., Ltd.	Yue Jinghuan, Wu Rongjun, Xu Hongfeng
29	Succeeding Resources Prospecting of Sandaowanzi Gold Mine in Heihe, Heilongjiang Province	Geophysical Exploration Institute of Heilongjiang Province, Heilongjiang Sandaowanzi Gold Mine Co., Ltd.	Liu Yu, Chen Xufeng, Sun Zuoben
30	Succeeding Resources Prospecting of Shabaosi Gold Mine in Mohe County, Heilongjiang Province	The Fourth Geological Exploration Institute of Heilongjiang Province, Mohe Shabaosi Mining Industry Co., Ltd.	Zhao Xuan, Zheng Jun, Li Xiaoming
Jiangsu Province			
31	Succeeding Resources Prospecting of Qixiashan Lead and Zinc Mine in Nanjing, Jiangsu Province	Jiangsu East China Geological Survey Group Co., Ltd. (East China Non-ferrous Geological Mineral Exploration and Development Institute), Nanjing Yinmao Holding Group Co., Ltd.	Wei Xinliang, Jing Shan, Sun Guochang
32	Succeeding Resources Prospecting of Tongjing Gold (Copper) Mine in Jiangning District, Nanjing, Jiangsu Province	The First Geological Brigade of Jiangsu Geology & Mineral Exploration Bureau, Jiangsu Jinyuan Gold Co., Ltd.	Qian Lingyu, Zou Zhihong, Xu Shubin, Lian Xiang
33	Strategic Prospecting of Copper and Molybdenum Mine of Tongshan-Shidangshan Region in Jurong, Jiangsu Province	Jiangsu Geological Survey and Research Institute, Jurong Baoyuan Mining Industry Co., Ltd.	Pan Wanqian, Huang Shunsheng
34	Strategic Prospecting of Iron Ore Beneath Mine Concentration Area in Eastern Belt of North Block of Nanjing-Wuhu of Jiangsu Province	Jiangsu East China Geological Survey Group Co., Ltd. (East China Non-ferrous Geological Mineral Exploration and Development Institute)	Chen Xue, Ding Haihong, Liu Jun
35	Succeeding Resources Prospecting of Yuli Lead, Zinc and Silver Mine in Suzhou, Jiangsu Province	Jiangsu Geological Survey and Research Institute, Suzhou Xiaomaoshan Copper-Lead-Zinc Mine	Zhong Weifu, Wei Bangshun, Hu Fupei
36	Succeeding Resources Prospecting of Yeshan Iron Mine in Nanjing, Jiangsu Province	Jiangsu Geological Survey and Research Institute, Yeshan Mining Industry Co., Ltd. of Nanjing Iron and Steel Group	Wang Hui
Zhejiang Province			
37	Succeeding Resources Prospecting of Zhilingtou Gold Mine in Suichang County, Zhejiang Province	The First Geological Institute of the China Metallurgical Geology Bureau, Zhejiang Province Suichang Gold Mine Co., Ltd.	Li Jubao, Hua Jiexiong, Yan Jinbao
38	Succeeding Resources Prospecting of Pingshui Copper Mine in Shaoxing County, Zhejiang Province	The First Geological Institute of the China Metallurgical Geology Bureau, Shaoxing Pingtong (Group) Co., Ltd.	Cheng Fei, Guo Mingchun, Chen Jiyong

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
39	Strategic Prospecting of Gold and Molybdenum Polymetallic Ore in Zhoujiawu Region, Jiande, Zhejiang Province	The Seventh Geological Brigade of Zhejiang Province	Zhang Hui, Yuan Haigen, Liu Xiaopan
40	Strategic Prospecting Surrounding and Beneath Lizhu Iron Mine in Shaoxing County, Zhejiang Province	Zhejiang Non-ferrous Metal Geological Exploration Bureau, Zhejiang Litie Group Co., Ltd.	Li Runhao, Luo Bangyue
41	Succeeding Resources Prospecting of Lingshan Copper Polymetallic Ore in Longyou County, Zhejiang Province	The First Geological Institute of the China Metallurgical Geology Bureau, Zhejiang Juhua Chemical Mining Industry Co., Ltd.	Li Jubao, Yan Jinbao
Anhui Province			
42	Succeeding Resources Prospecting of Huangshanling Lead and Zinc Mine in Chizhou, Anhui Province	Mineral Resources Center of Tongling Non-ferrous Metals Group Holdings Co., Ltd., Anhui Tongguan Non-ferrous Metals (Chizhou) Co., Ltd.	Wang Hong, Wang Qian, Xiao Fuquan, Lin Wei
43	Succeeding Resources Prospecting of Dongguashan Copper Mine in Tongling, Anhui Province	321 Geological Brigade of Geology and Mineral Resources Exploration Bureau in Anhui Province, Dongguashan Copper Mine of Tongling Non-ferrous Metals Group Co., Ltd.	Chen Linjie
44	Succeeding Resources Prospecting of Tongshan Copper Mine in Tongling, Anhui Province	Tongling Non-ferrous Metals Group Holdings Co., Ltd.	Wang Hong, Wang Qian, Xiao Fuquan
45	Succeeding Resources Prospecting of Zhongjiu-Gushan Iron Mine in Dangtu County, Anhui Province	The Comprehensive Geological Brigade of East China Metallurgical Geographical Prospecting Bureau, Masteel Group Mining Industry Co., Ltd.	Hong Dongliang, Cui Haiyuan, Ying Benxing, Gao Daoming
46	Succeeding Resources Prospecting of Hemushan Iron Mine in Dangtu County, Anhui Province	The Comprehensive Geological Brigade of East China Metallurgical Geographical Prospecting Bureau, Masteel Group Mining Industry Co., Ltd.	Wang Jingxiu, Hou Dandan, Bu Xiyin
47	Succeeding Resources Prospecting of Dongxi-Nanguanling Gold Mine in Huoshan County, Anhui Province	Nanjing Geological Survey Center of China Geological Survey, Huoshan Gold Mining Industry Co., Ltd.	Zhang Dingyuan, Zhang Xiaodong, Fang Jie
48	Succeeding Resources Prospecting of Xinqiao Copper Pyrite in Tongling, Anhui Province	321 Geological Brigade of Geology and Mineral Resources Exploration Bureau in Anhui Province, TCIGCL Xinqiao Mining Corporation Ltd.	Zheng Kai, Chen Linjie, Dai Shengqian
Fujian Province			
49	Succeeding Resources Prospecting of Xiaoban Gold Mine in Youxi County, Fujian Province	The Western Geological Brigade of Fujian, Fujian Youxi Jinxin Gold Mine Co., Ltd.	Chen Fan, Chen Defu, Chen Hongming

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
50	Strategic Prospecting of Mineral Products of Ore-concentrated Area of Xianyang-Qiucun Gold Mine in Dehua, Fujian Province	Fujian Institute of Geological Survey	Jiang Yongjian, Chen Xin, Zheng Wenyan
51	Strategic Prospecting of Mineral Products Beneath Ore-concentrated Area of Xingluokeng Tungsten Mine in Ninghua, Fujian Province	Fujian Institute of Geological Survey	Ge Hui, Xue Dejie, Yuan Xun
52	Succeeding Resources Prospecting of Dayao Coal Mine of Fujian Province	Fujian 121 Geological Brigade, Fumei (Zhangping) Coal Industry Co., Ltd.	Yao Xiuchun, Huang Bing, Zhou Shixin, Luan Jinghui
53	Succeeding Resources Prospecting of Hebaoshan Gold Mine in Taining County, Fujian Province	Northern Geological Brigade of Fujian, Fujian Taining Jinshan Mining Industry Co., Ltd.	Guo Dechang, Li Haiqiang, Li Zejun
54	Succeeding Resources Prospecting of Yangshan Iron Mine in Dehua County, Fujian Province	Fujian Institute of Geological Survey, Fujian Dehua Xinyang Mining Industry Co., Ltd.	Wang Yanxun, Wang Fanghua, Li Jingzhu
Jiangxi Province			
55	Succeeding Resources Prospecting of Zuoba Mining Area of Xialong Tungsten Mine in Dayu County, Jiangxi Province	Jiangxi Non-ferrous Geological Exploration Brigade II, Jiangxi Xialong Tungsten Industry Co., Ltd.	Cao Wen, Zhao Jian, Li Dengping
56	Strategic Prospecting of Copper Polymetallic Ore Beneath Concentration Area of Jiurui Mine in Jiujiang, Jiangxi Province	Northwest Brigade of Jiangxi Geology and Mineral Exploration and Development Bureau	Fan Wenkuo, Kong Fanbin, Zhou Xianxu
57	Strategic Prospecting of Gold, Copper, Lead and Zinc Polymetallic Ore Beneath Concentration Area of Jinshan-Tongchang Mine in Dexing, Jiangxi Province	Jiangxi Non-ferrous Geology and Mineral Exploration and Development Institute	Long Xiyou, Xiao Jian, Hu Bo
58	Succeeding Resources Prospecting of Iron Mine of Taipingshan-Songshan Mining Area in Xinyu, Jiangxi Province	The Brigade of Geological Survey of Ganxi of Jiangxi Geology and Mineral Exploration and Development Bureau, Xinyu Liangshan Mining Industry Co., Ltd.	Lai Changjin, Quan Fu, Kuang Erlong
59	Succeeding Resources Prospecting of Wushan Copper Mine in Ruichang, Jiangxi Province	Northwest Brigade of Jiangxi Geology and Mineral Exploration and Development Bureau, Wushan Copper Mine of Jiangxi Copper Industry Co., Ltd.	Zhong Hao, Li Xuhui, Zhou Hanchu
60	Succeeding Resources Prospecting of Tianhe Coal Mine in Ji'an County, Jiangxi Province	Jiangxi Coalfield Geological Survey and Research Institute, Jiangxi Coal Industry Group Co., Ltd.	Zou Yongjun, Li Changlong, Huang Liheng, Yao Jia

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
61	Strategic Prospecting of Iron Mine Beneath Yangjiaqiao-Changxi of Ganzhong Iron Ore Field of Jiangxi Province	The Brigade of Geological Survey of Ganxi of Jiangxi Geology and Mineral Exploration and Development Bureau	Quan Fu, Zhou Dongliang, Zhong Xuan
62	Succeeding Resources Prospecting of Zhangdou Mining Area of Xialong Tungsten Mine in Dayu County, Jiangxi Province	Jiangxi Non-ferrous Geological Exploration Brigade II, Jiangxi Xialong Tungsten Industry Co., Ltd.	Lai Xiaoyun, Huang Jianghong, Ye Shaoduo
63	Succeeding Resources Prospecting of Jianfengpo Tin Mine in De'an County, Jiangxi Province	916 Brigade of Jiangxi Geology and Mineral Exploration and Development Bureau, Fangyuan (De'an) Mining Industry Investment Co., Ltd.	Zhu Yuansong, Zhou Wenjun, Zhang Yuan
64	Succeeding Resources Prospecting of Kuimeishan Tungsten Mine in Dingnan County, Jiangxi Province	Jiangxi Non-ferrous Geology and Mineral Exploration and Development Institute, Jiangxi Kuimeishan Tungsten Industry Co., Ltd.	Zeng Qingyou, Lu Shiyang, Ding Liang
65	Succeeding Resources Prospecting of Pangushan Tungsten Mine in Yudu County, Jiangxi Province	Jiangxi Non-ferrous Geological Exploration Brigade II, Jiangxi Pangushan Tungsten Industry Co., Ltd.	Shen Hao, Qiu Kai, Cao Zishuo
Shandong Province			
66	Succeeding Resources Prospecting of Jiudian Gold Mine in Pingdu, Shandong Province	The First Institute of Geology and Mineral Resources of Shandong Province, Qingdao Jinxing Mining Industry Co., Ltd.	Li Yadong, Zhao Tiquan, Geng Ankai
67	Strategic Prospecting of Gold Mine Beneath Middle Section of Zhaoping Fault Zone in Zhaoyuan, Shandong Province	Geological Exploration Institute of Shandong Zhengyuan of China Metallurgical Geology Bureau, Zhaojin Mining Industry Co., Ltd.	Liu Yongchang, Chang Yulin, Li Fengkun
68	Succeeding Resources Prospecting of Gold Mine of Shangzhuang Mining Area in Zhaoyuan, Shandong Province	Geological Exploration Institute of Shandong Zhengyuan of China Metallurgical Geology Bureau, Zhaojin Mining Industry Co., Ltd.	Sun Jing, Chang Yulin, Liu Yongchang
69	Succeeding Resources Prospecting of Wang'ershan Mining Area of Jiaojia Gold Mine in Laizhou, Shandong Province	Geological Exploration Institute of Shandong Zhengyuan of China Metallurgical Geology Bureau, Shandong Gold Group Co., Ltd.	Cui Mingfei, Wang Lu, Li Yaze, Cui Qiubo
70	Succeeding Resources Prospecting of Gold Mine of Xishan Mining Area in Longkou, Shandong Province	Zijin Mining Group Co., Ltd., Longkou Jinfeng Co., Ltd.	An Longzhu, Liu Zhengliang, Deng Zhiping
71	Succeeding Resources Prospecting of Gold Mine of Hedong Mining Area in Zhaoyuan, Shandong Province	Geological Exploration Institute of Shandong Zhengyuan of China Metallurgical Geology Bureau, Zhaojin Mining Industry Co., Ltd.	Qin Rongyi, Liu Yongchang, Kong Xiangrui

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
72	Succeeding Resources Prospecting of Linglong Gold Mine in Zhaoyuan, Shandong Province	Geological Exploration Institute of Shandong Zhengyuan of China Metallurgical Geology Bureau, Shandong Gold Mining Industry (Linglong) Co., Ltd.	Liu Qichen, Zhu Suizhou, Liu Zhen, Wu Haiqing
73	Succeeding Resources Prospecting of Gold Mine of Dongfeng Mining Area of Linglong Gold Mine in Zhaoyuan, Shandong Province	Shandong No. 6 Geology and Mineral Exploration Institute, Zhongkuang Gold Industry Co., Ltd.	Bao Zhongyi, Wang Yongqing, Liu Caijie
Henan Province			
74	Succeeding Resources Prospecting of Qinling Gold Mine in Lingbao, Henan Province	The First Geological Survey Brigade of Henan Bureau of Geo-exploration & Mineral Development, Henan Qinling Gold Mining Industry Co., Ltd.	Bi Bingkun, Chang Yunzhen, Zhao Liusheng
75	Succeeding Resources Prospecting of Shanggong Gold Mine in Luoning County, Henan Province	The First Geological Survey Brigade of Henan Bureau of Geo-exploration & Mineral Development, Luoyang Kunyu Mining Industry Co., Ltd.	Yan Zhengxin, Wang Jianghe, Liu Yaowen
76	Succeeding Resources Prospecting of Laowan Gold Mine in Tongbai County, Henan Province	The First Geological Survey Brigade of Henan Bureau of Geo-exploration & Mineral Development, Tongbai Xingyuan Mining Industry Co., Ltd.	Chen Jianli, Wei Congling, Liu Fei
77	Succeeding Resources Prospecting of Dahu and Linghu Mining Areas of Xiaoqinling Gold Ore Field in Lingbao, Henan Province	The First Geological Survey Brigade of Henan Bureau of Geo-exploration & Mineral Development, Lingbao Jinyuan Mining Industry Co., Ltd.	Wang Shequan, Wang Xingcun, Xu Jianchang
78	Succeeding Resources Prospecting of Laoyacha Gold Mine in Lingbao, Henan Province	The Fifth Geological Exploration Institute of Henan Bureau of Geo-exploration & Mineral Development, Sanmenxia Hexi Forest Farm Laoyacha Gold Mine	Lei Dezheng, Zhao Zhiqiang, Zhang Pengsheng
79	Succeeding Resources Prospecting of Huanxiangwa Gold Mine in Songxian County, Henan province	The First Geological Survey Brigade of Henan Bureau of Geo-exploration & Mineral Development, Henan Zhongkuang Energy Co., Ltd.	Xie Jinsong, Meng Xianfeng, Li Guang'an
80	Succeeding Resources Prospecting of Jinqu Gold Mine in Lingbao, Henan Province	The Fourth Geological Exploration Institute of Henan Bureau of Geo-exploration & Mineral Development, Henan Jinqu Gold Co., Ltd.	Qiu Shunca, i, Xi Shanfeng, Chai Shigang
81	Succeeding Resources Prospecting of Lingjin Mine I in Lingbao, Henan Province	No. 1 Institute of Geological & Mineral Resources Survey of Henan Bureau of Geo-exploration & Mineral Development, Lingbao Gold Co., Ltd.	Huang Hao, Zhao Kang, Liang Chaogang

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
82	Succeeding Resources Prospecting of Fancha Gold Mine in Lingbao, Henan Province	No. 1 Institute of Geological & Mineral Resources Survey of Henan Bureau of Geo-exploration & Mineral Development, Lingbao Jinyuan Mining Industry Co., Ltd.	Zhang Weimin, Shen Fengpei, He Yongsheng, Chang Yunzhen, Zhao Liusheng, Xu Wenchao
Hubei Province			
83	Succeeding Resources Prospecting of Tongshankou Copper Mine in Daye, Hubei Province	Southeast Geological Brigade of Hubei, Daye Non-ferrous Metals Co., Ltd.	Wei Ketao, Liu Dongqin, Li Zheming
84	Strategic Prospecting of Iron Mine Beneath Echeng Rock Mass in Ezhou, Hubei Province	Central South Geological Exploration Institute of China Metallurgical Geology Bureau, Wuhan Iron and Steel Group Mining Industry Co., Ltd.	Gao Xiannian, Xiao Mingshun, Zhou Min
85	Strategic Prospecting of Copper, Iron and Gold Polymetallic Ore Beneath Northwest Section of Yangxin Rock Mass in Daye, Hubei Province	Southeast Geological Brigade of Hubei, Daye Non-ferrous Metals Co., Ltd., Hubei Sanxin Gold Copper Limited Company	Jin Shanggang, Wang Pengfei, Zhang Xingxing
86	Succeeding Resources Prospecting of Yindonggou Silver, Lead and Zinc Polymetallic Ore in Zhushan County, Hubei Province	Hubei Northwest Geological and Mineral Survey Institute, Hubei Huakai Mining Industry Co., Ltd.	(The project is suspended)
87	Succeeding Resources Prospecting of Chimashan Copper Mine in Yangxin County, Hubei Province	Central South Geological Exploration Institute of China Metallurgical Geology Bureau, Daye Non-ferrous Metals Co., Ltd.	Xia Bin, Xiao Mingshun, Huang Sheng, Fan Xianwang
Hunan Province			
88	Succeeding Resources Prospecting of Xianghualing Tin Polymetallic Ore in Linwu County, Hunan Province	The First Brigade of Hunan Non-ferrous Metals Geological Exploration Bureau, Xiangdong Tungsten Industry Co., Ltd. of Hunan Non-ferrous Metals Group	Lu Yi, Jiang Xiqiao, Min Zhao
89	Succeeding Resources Prospecting of Xiangdong Tungsten Mine in Chaling County, Hunan Province	416 Brigade of Bureau of Geology and Mineral Exploration and Development of Hunan Province, Xiangdong Tungsten Industry Co., Ltd. of Hunan Non-ferrous Metals Group	Liu Jinyun, Zhu Haofeng, Yu Yangchun
90	Succeeding Resources Prospecting of Gaotingsi Coal Mine in Yongxing County, Hunan Province	The Coal Geological Exploration Institute of Hunan Province, Gaotingsi Branch of Hunan China Resources Coal Industry Co., Ltd.	Li Qian, Zhai Zheng, Li Qihua
91	Strategic Prospecting of Coal Resources Beneath Nantang Syncline of Hongshandian Mining Area in Shuangfeng County, Hunan Province	The Coal Geological Exploration Institute of Hunan Province, Hongshandian Mining Industry Co., Ltd. of Hunan Coal Industry Group	Ma Wenhua, He Dafang, Gong Shuhua

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
92	Succeeding Resources Prospecting of Xikuangshan Antimony Mine in Lengshuijiang, Hunan Province	The Second Brigade of Hunan Non-ferrous Metals Geological Exploration Bureau, Xikuangshan Twinkling Star Antimony Industry Co., Ltd.	Dai Xueling, Zhao Zhijian, Tang Daiwen
93	Succeeding Resources Prospecting of Shuikoushan Lead and Zinc Polymetallic Ore in Changning, Hunan Province	217 Brigade of Hunan Non-ferrous Metals Geological Exploration Bureau, Shuikoushan Non-ferrous Metals Co., Ltd.	Wan Keyong, Chen Pingbo, Li Qingsheng
94	Succeeding Resources Prospecting of Huangjindong Gold Mine in Pingjiang County, Hunan Province	402 Brigade of Bureau of Geology and Mineral Exploration and Development of Hunan Province, Hunan Huangjindong Mining Industry Co., Ltd.	Yuan Lanling, Xu Saiqiang, Fan Peng
95	Succeeding Resources Prospecting of Huangshaping Lead and Zinc Mine in Guiyang County, Hunan Province	Southern Hunan Institute of Geology and Survey, Huangshaping Mining Branch of Hunan Non-ferrous Metals Co., Ltd.	Li Shiqian
96	Succeeding Resources Prospecting of Longshan Gold and Antimony Mine in Xinshao County, Hunan Province	418 Brigade of Bureau of Geology and Mineral Exploration and Development of Hunan Province, Hunan Xinlong Mining Industry Co., Ltd.	Peng Qiaoliang, Zheng Shigan
Guangdong Province			
97	Succeeding Resources Prospecting of Dajiangping Lead and Zinc Gold Mine in Yunfu, Guangdong Province	719 Geological Brigade of Guangdong Geological Bureau, Guangdong Guangye Yunliu Mining Industry Co., Ltd.	Wu Shanyi, Feng Ting, Wang Liqiang
98	Strategic Prospecting of Copper, Gold and Molybdenum Mine Beneath Concentration Area of Dabaoshan Mine in Shaoguan, Guangdong Province	Guangdong Geological Survey Institute, Guangdong Province Dabaoshan Mining Co., Ltd.	Wu Hailu, Luo Qiang, Tang Keng
99	Strategic Prospecting of Copper, Tungsten and Tin (Lead and Zinc) Mine Beneath Concentration Area of Shilu-Xishan Mine in Yangchun, Guangdong Province	Geological Survey and Research Institute of Guangdong Non-ferrous Metals Geological Survey Bureau, Guangdong Rising Non-ferrous Metals Group Co., Ltd.	Ouyang Zhixia, Wang Rupeng, Wu Xiaodong
100	Succeeding Resources Prospecting of Yushui Copper Mine in Meizhou, Guangdong Province	The Eighth Geological Brigade of Guangdong Geological Bureau, Yushui Sulfur-Copper Mine of Meizhou Jinyan Copper Industry Company	Cheng Xiyin, Wang Yanli, Jiang Binbin
101	Strategic Prospecting of Lead and Zinc Mine of Mine Concentration Area in Fankou Region, Guangdong Province	Guangdong Non-ferrous Metals Geological Exploration Institution	Xiao Yuanguai, Zhao Jianbo, Xu Wenxiang

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
102	Succeeding Resources Prospecting of Hetai Gold Mine in Gaoyao, Guangdong Province	The Fifth Geological Brigade of Guangdong Geological Bureau, Guangdong Jinding Gold Co., Ltd.	Deng Zhuohui, Li Chen, Peng Zhaojin
103	Succeeding Resources Prospecting of Dabaoshan Copper Polymetallic Ore in Shaoguan, Guangdong Province	The Third Geological Brigade of Guangdong Geological Bureau, Guangdong Province Dabaoshan Mining Co., Ltd.	Ye Maohua, Chen Wuqin, Wang Langen
104	Succeeding Resources Prospecting of Fankou Lead and Zinc Mine in Shaoguan, Guangdong Province	Guangdong Non-ferrous Metals Geological Exploration Institution, Shenzhen Zhongjin Lingnan Non-ferrous Co., Ltd.	Huang Hongliang, Guo Lanxuan, Zhao Jianbo
105	Succeeding Resources Prospecting of Hongling Tungsten Ore in Wengyuan County, Guangdong Province	932 Brigade of Non-ferrous Metals Geological Bureau of Guangdong Province, Wengyuan Hongling Mining Industry Co., Ltd.	Wu Jian, Xiong Zhong, Hu Zhenhua
Guangxi Zhuang Autonomous Region			
106	Succeeding Resources Prospecting of Jinya Gold Mine in Fengshan County, Guangxi Zhuang Autonomous Region	Nanning Geological Exploration Institute of Central South Bureau of China Metallurgical Geology Bureau Guangxi Fengshan Tiancheng Gold Mining Industry Co., Ltd.	Wu Gang, Wei Yunliang, Li Jianliang
107	Strategic Prospecting of Tin Polymetallic Ore Beneath Concentration Area of Dachang Mine in Nandan County, Guangxi	215 Geological Brigade Co., Ltd. of Guangxi Zhuang Autonomous Region Guangxi Gaofeng Co., Ltd., Lame Zinc Mine of Guangxi Zhuang Autonomous Region, Nanxing Antimony Industry Co., Ltd., Nandan Wuyi Mine	Yuan Yuan, Wu Guofu, Lin Xiyang
108	Succeeding Resources Prospecting of Wuxu Antimony Polymetallic Ore in Hechi, Guangxi	China Non-ferrous Metals (Guilin) Geology and Mining Co., Ltd., Hechi Wuji Co., Ltd.	Liu Wei, Xu Wenjie, Yu Qihong
109	Succeeding Resources Prospecting of Tiandeng Manganese Mine in Tiandeng County, Guangxi	Nanning Geological Exploration Institute of Central South Bureau of China Metallurgical Geology Bureau, CITIC Dameng Mining Industries Limited	Jian Yaoguang, Xia Liuqing, Huang Guiqiang
110	Succeeding Resources Prospecting of Tuhu Manganese Mine in Daxin County, Guangxi	Guangxi Geological Exploration Institute of China Metallurgical Geology Bureau, Guangxi Daxin Tuhu Manganese Mine	Liao Qinghai, Zhu Bingguang, Zhao Zhiling
111	Succeeding Resources Prospecting of Hurun Manganese Mine in Jingxi County, Guangxi	Geological Exploration Institute of Guangxi Zhuang Autonomous Region, Jingxi Manganese Mine Co., Ltd.	Ou Hongwei, Gong Yan, Yang Qingquan

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
Hainan Province			
112	Succeeding Resources Prospecting of Baolun Gold Mine in Ledong County, Hainan Province	Hainan Geological Survey Institute, Hainan Shanjin Mining Industry Co., Ltd.	Lin Di, Wang Cheng, Fu Yangrong
113	Strategic Prospecting of Iron Polymetallic Ore Beneath Concentration Area of Shilu Mine in Changjiang County, Hainan Province	Hainan Resources Environment Survey Institute, Hainan Mining Co., Ltd.	Wang Li, Luo Honglin, Liang Zhenwang
114	Succeeding Resources Prospecting of Bumo Gold Mine in Dongfang, Hainan Province	Hainan Geological Survey Institute, Hainan Oriental Zhaojin Mining Industry Co., Ltd.	Li Jiangshan, Xu Guoqiang, Wang Chunxiao
Chongqing Municipality			
115	Succeeding Resources Prospecting of Yongchuan Coal Mine in Yongchuan District, Chongqing	Chongqing 136 Geological Brigade, Chongqing Yongrong Mining Industry Co., Ltd.	Tang Yang, Xia Chuandong, Gong Yunchun
116	Succeeding Resources Prospecting of Sanhuiyi Coal Mine in Hechuan District, Chongqing	Chongqing 136 Geological Brigade, Chongqing Tianfu Mining Industry Co., Ltd.	Zhao Yu, Wang Zehe, Zhao Dequan
117	Strategic Prospecting of Coal Resources of Longtan Formation of Permian System of Xindianzi Anticline of Yongrong Mining Area of Chongqing	Chongqing 136 Geological Brigade, Chongqing Yongrong Mining Industry Co., Ltd.	Liu Bin, Lin Yaobing, Zhang Li
118	Strategic Prospecting of Manganese Mine Surrounding Concentration Area of Bijjashan Mine in Xiushan County, Chongqing	205 Geological Brigade of Chongqing Bureau of Geology and Minerals Exploration	Wu Lizhi, Huang Zhiqing, Zhu Mingzhong
119	Succeeding Resources Prospecting of Yudong Coal Mine in Chongqing Wansheng Economic and Technological Development Zone	Chongqing Institute of Geology and Mineral Resources, Chongqing Nantong Mining Industry Co., Ltd.	Han Feng, Qin Shifu, Zeng Jianguang
Sichuan Province			
120	Succeeding Resources Prospecting of Pingchuan Iron Mine in Yanyuan County, Sichuan Province	Sichuan Metallurgical Geological Exploration Institute, Pingchuan Iron Mine in Yanyuan County, Sichuan Province	Bai Wanling, Wang Weihua, Xiao Ziwei
121	Succeeding Resources Prospecting of Hongshan Iron Mine in Nanjiang County, Sichuan Province	604 Brigade of Sichuan Metallurgical Geological Exploration Bureau, Sichuan Nanjiang Tieshan Metallurgical Mining Industry Co., Ltd.	Zhou Sanjian, Liao Jun, Wang Bin

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
122	Succeeding Resources Prospecting of Lala Copper Mine in Huili County, Sichuan Province	403 Geological Brigade of Sichuan Bureau of Geology and Mineral Resources, Liangshan Mining Industry Co., Ltd.	Gong Lingming, Shen Heming, Huang Shizong
123	Succeeding Resources Prospecting of Jingang Coal Mine in Dazhou, Sichuan Province	137 Brigade of Sichuan Coalfield Geology Bureau, Sichuan Dazhou Coal Power (Group) Co., Ltd.	Li Mingbin, Hu Ping, Feng Yiqun
124	Succeeding Resources Prospecting of Lugu Iron Mine in Mianning County, Sichuan Province	Sichuan Metallurgical Geological Exploration Institute, Sichuan Lugu Iron Mine	Fan Yuanjian, Li Zuohua, Bai Wanling
125	Succeeding Resources Prospecting of Tangjiahe Coal Mine in Wangcang County, Sichuan Province	Sichuan Institute of Coalfield Geological Engineering Exploration and Designing, Sichuan Guangwang Energy Development (Group) Co., Ltd.	Wei Xin, Wang Rui, Hu Zuguo
126	Succeeding Resources Prospecting of Tuanba Coal Mine in Dazhou, Sichuan Province	Sichuan Chuanmei Mine Surveying and Designing Co., Ltd., Sichuan Dazhou Zhongshan Coal Industry Co., Ltd.	Gong Yulin, Ai Yuebing, Huang Peng
127	Succeeding Resources Prospecting of Daliangzi Lead and Zinc Mine in Huidong County, Sichuan Province	Sichuan Metallurgical Geological Exploration Institute, Sichuan Huidong Daliang Mining Industry Co., Ltd.	Wei Yu, Xiang Liang, Li Xing
128	Succeeding Resources Prospecting of Tangtang Copper Mine in Huidong County, Sichuan Province	403 Geological Brigade of Sichuan Bureau of Geology and Mineral Resources, Huidong County Xinlian Mining Industry Co., Ltd.	Zeng Li, Zhang Jili, Shen Heming
Yunnan Province			
129	Succeeding Resources Prospecting of Jiudingshan Copper and Molybdenum Polymetallic Ore in Midu County, Yunnan Province	China Non-ferrous Metals Industry Kunming Exploration and Design and Research Institute, Midu County Jiudingshan Mining Industry Co., Ltd.	Shen Zhongyi, Lv Xiaohong, Liu Qiyu
130	Succeeding Resources Prospecting of Yangla Copper Mine in Deqin County, Yunnan Province	China Non-ferrous Metals Industry Kunming Exploration and Design and Research Institute, Yunnan Diqing Mining Industry Development Co., Ltd.	Zhang Tao, Lv Xiaohong, Shi Chao
Guizhou Province			
131	Succeeding Resources Prospecting of Weizhai Antimony Mine in Dushan County, Guizhou Province	Guizhou Branch of China National Geological Exploration Center of Building Materials Industry	Yu Wenbo, Long Shangfei, Zhang Dahong
132	Strategic Prospecting of Gold Mine Beneath Mine Concentration Area of Huijiabao Anticline in Xingren County, Guizhou Province	105 Geological Brigade of Guizhou Geology and Mineral Exploration and Development Bureau, Guizhou Zijin Mining Co., Ltd.	Chen Fa'en, Liu Jianzhong, Liu Yan

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
133	Strategic Prospecting of Manganese Mine Beneath Concentration Area of Wuluo-Gengxi Mine in Songtao County, Guizhou Province	103 Geological Brigade of Guizhou Geology and Mineral Exploration and Development Bureau, Guizhou Qiandong Manganese Mine	Jiang Tianrui, Qin Ying, Pan Changhong
134	Succeeding Resources Prospecting of Guanyinshan Iron Mine of Guizhou Province	Geology and Mineral Exploration Institute of Non-ferrous Metals Industry Geological Exploration Bureau of Guizhou, Shougang Shuicheng Iron and Steel (Group) Co., Ltd.	Mo Guangyuan, Tan Yu, Bao Dazhong
135	Succeeding Resources Prospecting of Nalang Gold Mine in Zhenfeng County, Guizhou Province	Geology and Mineral Exploration Institute of Non-ferrous Metals Industry Geological Exploration Bureau of Guizhou, Nalang Gold Mine in Zhenfeng County	Fan Erchuan, Zhou Fuming, Lan Yongwen
136	Strategic Prospecting of Manganese Mine Beneath Concentration Area of Xixibao Mine in Songtao County, Guizhou Province	103 Geological Brigade of Guizhou Geology and Mineral Exploration and Development Bureau	Yang Shengtang, Yin Tinglong
Tibet Autonomous Region			
137	Succeeding Resources Prospecting of Luobusha Chromite in Qusong County, Tibet Autonomous Region	The Second Geological Brigade of Tibet Autonomous Region Geological and Mineral Exploration and Development Bureau, Tibet Autonomous Region Mining Industry Development Co., Ltd.	Zhang Nengjun, Zhang Huaping, Jiang Tao
138	Strategic Prospecting of Chromite Beneath Mine Concentration Area of Luobusha Rock Mass in Qusong County, Tibet Autonomous Region	The Second Geological Brigade of Tibet Autonomous Region Geological and Mineral Exploration and Development Bureau, Tibet Autonomous Region Mining Industry Development Co., Ltd.	Zhang Nengjun, Wang Minde, Zhang Huaping
Shaanxi Province			
139	Succeeding Resources Prospecting of Qujiashan Manganese Mine in Ziyang County, Shaanxi Province	Northwest Geological Exploration Institute of China Metallurgical Geology Bureau, Nengming Mining Industry Co., Ltd. of Ziyang County	Xie Xinguo, Qian Huanting, Chang Hao
140	Succeeding Resources Prospecting of Tongyu-Xiyu Gold Mine in Tongguan County, Shaanxi Province	The Sixth Geological Brigade of Shaanxi Geological and Mineral Exploration and Development Bureau, Tongguan Zhongjin Gold Mining Industry Co., Ltd.	Shang Xiaoshe, Zhao Guofu, Du Weiguo
141	Succeeding Resources Prospecting of Shuangwang Gold Mine in Taibai County, Shaanxi Province	The Third Geological Brigade of Shaanxi Geological and Mineral Exploration and Development Bureau, Shaanxi Taibai Gold Mining Limited Liability Company	Zhao Yaqin, Guo Youping, Li Xiaoguo

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
142	Succeeding Resources Prospecting of Qiandongshan Lead and Zinc Mine in Fengxian County, Shaanxi Province	The Third Geological Brigade of Shaanxi Geological and Mineral Exploration and Development Bureau, Shaanxi Qiandongshan Mining Industry Co., Ltd.	Wu Junping, Wang Hongjun, Zhao Wenbo
143	Succeeding Resources Prospecting of Hejiayan Gold Mine in Lueyang County, Shaanxi Province	711 Brigade of Northwest Non-ferrous Geological Exploration Bureau, Hejiayan Gold Mine in Lueyang County	Chen Lixiang, Zheng Cuiyong, Deng Wenfeng
Gansu Province			
144	Strategic Prospecting of Baiyinchang Copper Polymetallic Ore in Baiyin, Gansu Province	The Third Brigade of Gansu Non-ferrous Geological Exploration Bureau	Zhou Kehui, Luo Weibin, Nan Xiubin
145	Succeeding Resources Prospecting of Dashui Gold Mine in Maqu County, Gansu Province	The Third Institute of Geological and Mineral Exploration of Gansu Bureau of Geological and Mineral Exploration and Development, Gansu Maqu Gesaer Gold Industry Co., Ltd.	Liu Chunxian, Yin Chao, Zhang Jianhui
146	Succeeding Resources Prospecting of Zaozigou Gold Mine in Hezuo, Gansu Province	The Third Institute of Geological and Mineral Exploration of Gansu Bureau of Geological and Mineral Exploration and Development, Gansu Hezuo Zaozigou Gold Mine Co., Ltd.	Liang Zhilu, Gong Quansheng, Ma Hongshun
147	Succeeding Resources Prospecting of Copper Polymetallic Ore Surrounding Concentration Area of Baiyinchang Mine in Baiyin, Gansu Province	Baiyin Mineral Exploration Institute of Gansu Non-ferrous Metals Geological Exploration Bureau, Baiyin Non-ferrous Group Co., Ltd.	Zhou Kehui, Luo Weibin, Nan Xiubin
148	Succeeding Resources Prospecting of Haoquangou Gold Mine in Baiyin, Gansu Province	Baiyin Mineral Exploration Institute of Gansu Non-ferrous Metals Geological Exploration Bureau, Baiyin Non-ferrous Group Co., Ltd.	Wang Maohai, Fang Chunjia, Zhou Wei
149	Succeeding Resources Prospecting of Yingjushan Gold Mine in Subei County, Gansu Province	The Fourth Institute of Geological and Mineral Exploration of Gansu Provincial Bureau of Geology and Mineral Resources, Jinying Gold Co., Ltd. of Subei County	Ye Honggang, Wei Wanhong, Wang Peng
150	Succeeding Resources Prospecting of Longshou Copper and Nickel Mine in Jinchang, Gansu Province	Jinchuan Group Co., Ltd.	Lu Jianquan, Meng Yuanzhi, Liu Guoxian
151	Succeeding Resources Prospecting of Changba Lead and Zinc Mine in Chengxian County, Gansu Province	Lanzhou Mineral Exploration Institute of Gansu Non-ferrous Metals Geological Exploration Bureau, Gansu Changba Non-ferrous Metals Co., Ltd.	Wang Jintao, Hao Decheng, Du Zhizhong

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
Qinghai Province			
152	Succeeding Resources Prospecting of Shiduolong Lead and Zinc Mine in Xinghai County, Qinghai Province	108 Geological Brigade of Sichuan Provincial Bureau of Geological Mineral Exploration and Development, Pengfei Non-ferrous Metals Mining and Dressing Co., Ltd. of Xinghai County	Wang Yong, Jiang Tianlong, Mei Jianping
153	Succeeding Resources Prospecting of Songshunangou Gold Mine in Menyuan County, Qinghai Province	Sichuan Xinshun Mining Industry Co., Ltd., Qinghai Haixin Mining Industry Co., Ltd.	Liu Qiang, Chen Kaibin, Wang Dengke
154	Succeeding Resources Prospecting of Xiekeng Copper and Gold Mine in Xunhua County, Qinghai Province	108 Geological Brigade of Sichuan Provincial Bureau of Geological Mineral Exploration and Development, Xiekeng Copper and Gold Mine in Xunhua County, Qinghai Province	Luo Fengyi, Wang Yong, Chen Yongbing
155	Succeeding Resources Prospecting of Hongshuihe Iron Mine in Dulan County, Qinghai Province	11 Geological Brigade of Zhejiang Province, Dulan Xigang Mining Industry Development Co., Ltd.	Wu Yiping, Wang Yuanyang, Zhong Li
Xinjiang Uygur Autonomous Region			
156	Succeeding Resources Prospecting of Silver and Copper Polymetallic Ore of Weiquan Silver (Copper) Mine in Shanshan County, Xinjiang	The First Geological Brigade of Geological and Mineral Exploration and Development Bureau of Xinjiang Uygur Autonomous Region, Turpan Jinyuan Mining and Metallurgy Co., Ltd.	Nie Junjie, Cao Qinglong, Zhang Menghu
157	Succeeding Resources Prospecting of Jinwozi Gold Mine and Its Surroundings in Hami, Xinjiang	704 Brigade of Non-ferrous Metals Geological Exploration Bureau of Xinjiang Uygur Autonomous Region, Western Region Gold Hami Gold Mine Co., Ltd.	Ma Zhanlu, Lei Junwen, Wang Youping
158	Succeeding Resources Prospecting of Huangshandong Copper and Nickel Mine in Hami, Xinjiang	The Sixth Geological Brigade of Geological and Mineral Exploration and Development Bureau of Xinjiang Uygur Autonomous Region, Xinjiang Yakesi Resource Development Co., Ltd.	Li Weidong, Xie Dengke, Shi Xiaojie
159	Succeeding Resources Prospecting of Kanggur Gold Mine in Shanshan County, Xinjiang	The First Geological Brigade of Geological and Mineral Exploration and Development Bureau of Xinjiang Uygur Autonomous Region, Matoutan Gold Mine in Shanshan County	Xing Dechao, Feng Xiaohong, Wu Shengjun
160	Strategic Prospecting of North of Chagannur Iron Mine Area in Hejing County, Xinjiang	The Third Geological Brigade of Geological and Mineral Exploration and Development Bureau of Xinjiang Uygur Autonomous Region	Wei Mengyuan, Liu Jianbing, Li Pengfei

Continued table 6

S/N	Project Name	Companies/Organizations	Main Personnel
161	Succeeding Resources Prospecting of Kalatongke Copper and Nickel Mine in Fuyun County, Xinjiang	The Fourth Geological Brigade of Geological and Mineral Exploration and Development Bureau of Xinjiang Uygur Autonomous Region, Kalatongke Copper and Nickel Mine of Xinjiang Xinxin Mining Industry Co., Ltd.	Cai Yongbiao, Wang Yong, He Lixin
162	Succeeding Resources Prospecting of Xiangshan Copper and Nickel Mine in Hami, Xinjiang	704 Brigade of Non-ferrous Metals Geological Exploration Bureau of Xinjiang Uygur Autonomous Region, Xinjiang Yakesi Resource Development Co., Ltd.	Yin Xiwen, Zhao Wenqi, Jing Yong

5 Conclusions

(1) The Program of ore-prospecting surrounding and beneath the Old Mines has drawn the investment from the central government of \$167, 530, 000, the local government of \$886, 000, and the mining companies of \$190, 228, 000. The Program has not only reaped good economic feedbacks, but also exerted attractive effects in both guiding the central government's financial investment and leading the investment directions of national tax revenue. Moreover, this Program has also been valuable in terms of newly-added static industrial output value and obvious profits and tax effects.

(2) The 168 exploration projects have totally finished 1, 007, 730 m of drilling and 70, 335 m of tunnel drilling. All the newly-added mineral resources reserves are well fixed by various kinds of prospecting engineering; and all the proven reserves in the Program can be directly utilized by the mining companies.

(3) The Program has newly contributed huge volumes of mineral resources for a big batch of China's urgently-needed mineral commodities; the implementation of this Program has also embodied strong effects in the stable supplying of mineral resources, and has at large spans prolonged the service lives of the target mineral commodities and mines.

(4) The Program has meanwhile brought about outstanding social effects. It has directly offered 165, 000 permanent jobs, which has certainly promoted the income levels of the local people, and has remarkably enhanced the social welfares.

Acknowledgements: During the duration of 5 years of the implementation of the Program, nearly 100 exploration organizations and mining companies have participated in the ore-prospecting surrounding and beneath the 162 old mines. Moreover, 168 exploration reports for each of the old mines exclusively have been compiled accordingly. For the limited schedule of the article, not all the exploration agencies and organizations have been listed one by one in the tables. We would like to express our heartfelt gratitude to all colleagues participating in the ore-prospecting work in this Program.

Notes:

① Lyu Zhicheng, Pang Zhenshan, Xue Jianling, Yan Tingjie, Geng Lin, Zhang Zhihui, Zhen Shimin, Tao Wen, Jia Ruya, Chen Hui, Yao Lei. 2015. Report on Results of Ore-Prospecting Results Surrounding and Beneath the Old Mines Program [R]. Development Research Center, China Geological Survey, 1-815.

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