**Table 9-1. Selected mineral occurrences in the Arabian shield showing their deposit type classification.**

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Name** | **MODS** | **Commodity** | **Deposit type** | | **Long** | | | **Lat** | **References** |
| Ablah | 27, 3207 | Sn-F | I-felsic/Porphyry? | | 41.9167 | | | 20.1667 | Allcott, 1970 |
| Ad Duwayhi | 1182 | Au | I/Mesothermal | | 43.2667 | | | 22.2500 | Doebrich et al., 2004 |
| Al Amar | 8 | Au, Zn | Epithermal | | 45.0695 | | | 23.7816 | Lofts, 1994; Doebrich et al., 2007; Ma'aden website |
| Al Hajar | 649 | Zn-Cu-Ag-Au | VMS | | 42.0175 | | | 19.9800 | BRGM Geoscientists, 1989; Donzeau and Beziat, 1989; Cottard et al., 1993 |
| Al Halahila | 2025 | Zn-Cu-Ag-Au | VMS | | 43.9594 | | | 17.6972 | Parker, 1982; Ransom, 1984; Carten and Tayeb, 1989 |
| Al Khnaiguiyah | 72, 771 | Zn | SZ | | 45.0909 | | | 24.2756 | BRGM Geoscientists, 1993; Testard, 1983 |
| Al Masane | 673, 825 | Zn-Cu-Ag-Au | VMS | | 43.8583 | | | 18.1333 | Fernette and Tawil, 1984; Fernette, 1994; Elsass et al, 1983; Arabian American Development Company Annual reports |
| Al Mehdadah | 2695 | Cu-Ag-Au | VMS? | | 41.7833 | | | 19.1167 | Bayley, 1972, Parker and Smith, 1979; Sanders, 1984 |
| An Najadi | 1272 | Au | Mesothermal | | 42.0833 | | | 26.0000 | Walker et al., 1994; Lewis and Schull, 1994 |
| An Nimmar (An Nimarah) | 19 | Zn-Cu-BP | unclassified | | 41.1125 | | | 25.5306 | Clegg, 1981 |
| An Nuqrah | 13 | Zn-Pb-Cu-Ag-Au | Carbonate replacement/VMS | | 41.4498 | | | 25.6253 | Berge, 1981; Bournat, 1972; Faby and Predali, 1974; Delfour, 1975; Nippon-Mitsui, 1975; Petromin-Granges, 1978-1983, 1980, 1981 |
| Aqiq Ghamid | 24 | Au | Mesothermal | | 41.7000 | | | 20.3333 |  |
| Ar Ridaniyah | 16, 2070, 3649 | Pb-Zn-Sn | Carbonate replacement-skarn/VMS? | | 44.6514 | | | 24.3681 | Elsass, 1981; Lofts, 1984 |
| Ar Rjum | 2179, 3875 | Zn-Au | VMS | | 41.9333 | | | 22.2833 | Martel-Jantin, 1986 |
| Arjah | 135 | Ag-Pb-Zn-Cu | I-felsic | | 44.3500 | | | 24.6666 | Al Shanti, 1976; Blain and Harvey, 1984; Paupy and Salpeteur, 1985 |
| As Safra (Jibal as Sufrah) | 2 | Cu | SZ/E? | | 41.8974 | | | 24.2222 | Beziat and Billa, 1989; Delfour, 1981 |
| As Siham | 114 | Au | Mesothermal | | 42.3872 | | | 23.1913 | Colliver and Fuchter, 1980; Corp and Elsass, 1981; Gaukroger and Morfett, 1982 |
| As Suq | 1918 | Au | Mesothermal | | 42.4000 | | | 22.6667 | Couturier and Vaillant, 1985 |
| Ash Shaib | 625 | Cu-Zn-Ni | VMS | |  | | |  | Riofinex Geological Mission, 1979; Riddler et al., 1983 |
| Ash Shakhtaliyah | 1045 | Au | SZ | | 41.7369 | | | 22.7231 | Roubichou et al., 1991 |
| Ash Shizm | 541 | Cu | VMS | | 37.5404 | | | 26.4546 | Donzeau, 1980 |
| Ashumta | 2099 | Au-W | I/mesothermal | | 42.2833 | | | 24.8500 | Beziat et al., 1991 |
| Azzeraib | 2690 | Au | SZ | | 42.5500 | | | 22.3166 | Couturier, 1985 |
| Ba'id al Jimalah | 2661 | W-Sn | I-felsic | | 42.6833 | | | 25.1500 | Cole et al., 1981; Lofts, 1982, 1985 |
| Bari | 452 | Au | I/mesothermal | | 41.1688 | | | 23.3515 | Cassard and Gelot, 1987 |
| Bilwy | 1321 | Au | Mesothermal | | 38.4000 | | | 24.8333 | Al-Otaibi et al., 1995 |
| Bi'r Jarbuah | 1454 | Au | I/Mesothermal | | 43.5833 | | | 20.8667 | Walker et al., 1989 |
| Bi'r Tawilah | 960, 2688 | W-Sn-Pb-Cu-Zn-As-Ag | I/Mesothermal | | 42.7167 | | | 22.7667 | Labbe, 1985. 1994 |
| Buhairan-Abu Khurg | 634 | W-Sn | I-felsic | | 44.5167 | | | 22.7500 | Dodge and Helaby, 1974; Dodge, 1979 |
| Dahul | 2822 | Sn-Ta-Mo-W | I | | 43.7667 | | | 22.2333 | Ramsay, 1983 |
| Farah Garan | 1127 | Zn-Cu-Ag-Au | VMS | | 43.6407 | | | 17.6809 | Bookstrom et al., 1989; Doebrich, 1989 |
| Fawarah | 7 | Au | Mesothermal | | 45.2000 | | | 23.2667 | Coulomb, 1983 |
| Ghurayyah | 765 | Nb-Ta-REE-U-Sn | I-felsic | | 35.7833 | | | 27.9000 | Riofinex Geological Mission, 1979; WGM, 1979; Drysdall et al;., 1984; Tertiary Minerals plc website |
| Gihab (Al Qihab) | 468 | Au | VMS | | 41.4000 | | | 20.6833 | Kiilsgaard et al, 1978; Roubichou et al., 1989 |
| Hadbah | 2173 | Ni-Co-Fe | VMS/SBS | | 44.1333 | | | 18.1333 | Blain, 1977, 1978 |
| Hamdah | 619 | Au | I/SZ | | 43.6833 | | | 18.9167 | Bookstrom et al., 1992; Cassidy and Carten, 1992 |
| Huqban | 2819 | W-Sn-Ta-Th-U-Ce-Nb | I-felsic | | 43.8833 | | | 21.8667 | Ramsay, 1983 |
| Jabal Aja | 2237 | W-F | I-felsic | | 41.2667 | | | 27.2333 | Collenette and Grainger, 1994 |
| Jabal Akash | 3362 | Sn | I | | 41.9167 | | | 27.5167 | Collenette and Grainger, 1994 |
| Jabal Al Gharabah | n.r. | Pt-Ni | I-mafic/um | | 37.3167 | | | 25.2167 | Chevremont, 1983 |
| Jabal al Ghorah (Jabak ak Gharrah) | 4033 | Sn | I-felsic | | 43.0278 | | | 20.4861 | Collenette and Grainger, 1994 |
| Jabal al Khillah | 1596 | Ag-Pb-Zn-Au | I-felsic | | 44.3166 | | | 24.5666 | Al Shanti, 1976; Blain and Harvey, 1984; Paupy and Salpeteur, 1985 |
| Jabal al Koom (Jabal al Kawm) | 1066 | Au-W | I-felsic | | 42.1000 | | | 24.8167 | Collenette and Grainger, 1994 |
| Jabal al Wask (Wasq) | 224 | Cr | I-mafic/um | | 38.0816 | | | 25.3054 | Bakor et al., 1976 |
| Jabal Baydan | 675 | Zn | VMS | | 39.7500 | | | 22.5167 | Bellivier et al., 1989 |
| Jabal Bitran (Idsas Northwest) | 45 | Cu | Porphyry? | | 41.1000 | | | 20.4667 | Woldeabzghi, 1984 |
| Jabal Daylan | 332 | Zn-Pb-Ag | MVT | | 37.1923 | | | 25.5190 | Vazquez-Lopez and Motti, 1981; Hayes et al., 2002 |
| Jabal Ghadarah | 3278 | Au | I-felsic | | 42.7167 | | | 22.8167 | Viland, 1986 |
| Jabal Guyan | 993 | Au | Mesothermal | | 43.9167 | | | 18.1667 | Smith et al., 1986 |
| Jabal Hamra | 2842 | Nb-Ta-REE-U-Sn | I-felsic | | 38.6000 | | | 26.0667 | Jackson and Douch, 1985; Drysdall et al., 1984 |
| Jabal Humayyan | 70 | Ni-Cu | I-mafic/um | | 44.6500 | | | 24.517 | Kiilsgaard, 1994 |
| Jabal Idsas | 4 | Fe(oxide)-Cu-Au | Fe(oxide)-Cu-Au | | 45.1823 | | | 23.3132 | Ashworth and Abdulaziz, 1978 Doebrich et al., 2007 |
| Jabal Iss | n.r. | Cr | I-mafic/um | | 37.6000 | | | 26.3833 | Chevremont and Johan, 1983 |
| Jabal Judayr | 897 | Ni-Cu | I-mafic/um | | 43.4833 | | | 21.0667 | Puffet et al., 1975 |
| Jabal Kirsh E | 88 | Mo | I-felsic | | 43.7349 | | | 23.0396 | Laval, 1984 |
| Jabal Liban | 4396 | Sn-Mo | I-felsic | | 36.3833 | | | 26.5667 | Collenette and Grainger, 1994 |
| Jabal Mardah | 4795 | Ni-Co | VMS | | 41.4319 | | | 24.9550 | Carten and Tayeb, 1989, 1990; Bosch et al., 1989 |
| Jabal Marya | 3015 | W | I-felsic | | 42.8500 | | | 18.5167 | Gaukroger, 1984 |
| Jabal Minyah | 3945 | Sn-F | I-felsic | | 43.3833 | | | 25.0000 | Collenette and Grainger, 1994 |
| Jabal Sahabiyah (Muwayqirah) | 2014 | Zn | unclassified | | 43.5667 | | | 19.3667 | Riddler et al., 1983; Riofinex Geological Mission, 1979 |
| Jabal Sa'id | 1184 | Nb-Ta-REE-U-Sn | I-felsic | | 40.9333 | | | 23.8167 | Hackett, 1985 |
| Jabal Samran | 410 | Cu-Au | unclassified | | 39.5500 | | | 22.3500 | Ba-Bttat and Hussein, 1984; Ferrand, 1985; Johnson, 1998 |
| Jabal Sayid | 1 | Cu | VMS | | 40.9333 | | | 23.8500 | Bournat, 1981; Roobol and Drysdall, 1984; MMAJ, 2001; Fauvelet et al., 1984; Pitre et al., 1985; Bowden and Smith, 1981; Leveque, 1985; Citadel Resources Group website |
| Jabal Shayban | 411 | Zn-Cu-Au | unclassified | | 39.7500 | | | 22.5833 | Kanaan and Liddicoat, 1979; Coumoul et al., 1991; Cheeseman, 1981; Bishop and Cumpsty, 1982; BRGM/DMMR Geoscientitsts, 1995; Johnson 1998 |
| Jabal Tarban | 1176 | Sn-W-Mo-Be | I-felsic | |  | | |  |  |
| Jabal Tawlah | 1635 | Nb-Ta-REE-U-Sn | I-felsic | | 35.3833 | | | 28.2333 | Drysdall et al., 1984; Drysdall and Douch, 1985 |
| Jabal umm Matirah | 1172 | Au | SZ | | 43.4917 | | | 21.3917 | Smith et al., 1986; Elliott et al., 2001 |
| Jabalat (Jiblat) | 3017 | Mo-Sn-Bi-Cu-Ag-Pb | I-felsic | | 41.2000 | | | 20.7333 | Al Tayyar et al., 1985 |
| Jadmah | 639 | Cu-Au | VMS | | 41.9667 | | | 19.9833 | Vadala et al., 1989 |
| Khnaiguiyah Deposit 1-4 | 771, 770, 073,772 | Zn-Cu-Mn | Knaiguiyah type | | 45.0833 | | | 24.2833 | Lamouille, 1994; Felenc, 1980; BRGM Geoscientists, 1993; Testard, 1983 |
| Kutam | 1128 | Cu-Zn | VMS/SZ | | 43.5833 | | | 17.6000 | Bent and MacInnis, 1977; Legg, 1983; Riofinex Geological Mission, 1978; Smith and others, 1977 |
| Lakathah | 470 | Ti-Fe (titaniferous magnetite) | I-mafic/um | | 41.9333 | | | 19.1500 | Martin et al., 1979; |
| Mahd adh Dhahab | 3 | Zn-Cu-Au-Ag | Epithermal | | 40.8500 | | | 23.5000 | Huckerby et al., 1983; Lowther, 1994; Afifi, 1989; Roberts et al, 1978; Worl, 1978; Worl et al., 1986; Ma'aden website |
| Mamilah | 40 | Au | VMS | | 41.3000 | | | 21.0667 | Coumoul et al., 1989 |
| Marjan | 2093 | Ag-Au-Zn-Pb-Cu | Mesothermal | | 44.9500 | | | 24.0500 | Felenc, 1983 |
| Masaddah | 1357 | Ag | I-felsic | | 44.3000 | | | 24.5333 | Al Shanti, 1976; Blain and Harvey, 1984; Paupy and Salpeteur, 1985 |
| Materah  (Ad Dawadimi district) | 798 | Ag-Pb-Zn | SZ | | 44.3666 | | | 24.4500 | Al Shanti, 1976; Blain and Harvey, 1984; Paupy and Salpeteur, 1985; Kiilsgaard and Paupy, 1994 |
| Muhaddad | 1349 | Zn-Cu-Pb | VMS | |  | | |  | Jaques and Saleh, 2000 |
| Mulgatah | 467 |  | VMS? | | 41.3814 | | | 20.7547 | Killsgaard et al., 1978; Riofinex Geological Mission, 1979; Smith et al., 1983 |
| Murayjib | 1323 | Au | Mesothermal | | 38.4167 | | | 24.8500 | Viland et al., 1987; Al-Otaibi et al., 1995 |
| Qaqab | n.r. | Fe-Ti (magnetite, ilmenite) | I-mafic/um | |  | | |  | Igarashi, 1976; Takahashi, 1976 |
| Rabathan | 463 | Cu-Zn-Au-Ag | VMS | | 41.4000 | | | 20.4000 | Killsgaard et al., 1978; Riofinex Geological Mission, 1979; Koch-Mathian et al., 1994 |
| Ratama | 2792 | Sn-Ta-Nb-Li-F-Be | I-felsic | | 35.3000 | | | 29.0833 | Collenette and Grainger, 1994 |
| Samrah  (Ad Dawadimi district) | 145, 756 | Ag-Pb-Zn | SZ | | 44.3500 | | | 24.3666 | Al Shanti, 1976; Blain and Harvey, 1984; Paupy and Salpeteur, 1985; Kiilsgaard and Paupy, 1994 |
| Sha'ib at Tare (Shaib al Tair) | 464 | Cu-Pb-Au | VMS? | | 41.2167 | | | 20.5833 | Kiilsgaard et al., 1978, Earhart and Mawad, 1970; Riofinex Geological Mission, 1979; Coumoul et al., 1989; Volesky, 2002; Volesky et al., 2003 |
| Shaib Lamisah | 2095 | Cu-Au | VMS? | | 42.5000 | | | 22.5667 | Elsass et al., 1983 |
| Sidriyah | 5 | Ag-Pb |  | | 44.3500 | | | 24.5333 | Al Shanti, 1976; Blain and Harvey, 1984; Paupy and Salpeteur, 1985 |
| Silsilah | 3262 | Sn-W-Ag-Pb-Zn-Cu-As-F | I-felsic | | 42.6667 | | | 26.0833 | du Bray, 1985; Parker et al., 1985; Kamilli and Criss, 1996 |
| Sitarah | 53 | Sn-Zn-Pb-Ag | I-felsic | | 44.7089 | | | 22.0225 | Collenette and Grainger, 1994 |
| Sukhaybarat | 405 | Au | SZ/I/Mesothermal | | 41.9542 | | | 25.4542 | Albino et al., 1995; Al-Dabbagh and Dowd, 1996; Jalal and Christensen, 1995 |
| Sumayrah  (Ad Dawadimi district) | 803 | Ag | SZ | | 44.3666 | | | 24.3666 | Al Shanti, 1976; Blain and Harvey, 1984; Paupy and Salpeteur, 1985 |
| Ujaiyah-Thaaban | 667 | W-Mo-Bi | I-felsic | | 44.4000 | | | 22.8000 | Dodge and Helaby, 1974; Dodge, 1979 |
| Umm ad Dabah | 165 | Cu | Epithermal | | 45.0862 | | | 23.8372 | Eijkelboom, 1966; Felenc, 1982; Mytton, 1956; Bokhari, 1975 |
| Umm ad Damar | 17 | Cu-Zn-Au-Ag | VMS | | 41.0533 | | | 23.6753 | Al-Quorashi et al., 1989; MMAJ, 1999, 2001; Clegg, 1994; Duhamel, 1975; Ransom, 1982, 1984 |
| Umm ad Diba | 2015 | Ni | I-mafic/um | | 43.5500 | | | 19.1333 | Kiilsgaard, 1994 |
| Umm al Birak | 2841 | Nb-Ta-REE-U-Sn | I-felsic | | 39.2000 | | | 23.4000 | Jackson et al., 1983; Drysdall et al., 1984 |
| Umm al Qurayyat | 1288 | Au | SZ/mesothermal | | 36.6167 | | | 26.2167 | Begg, 1981; LeAnderson and Youldash, 1990; Johnson and Offield, 1994; LeAnderson et al, 1995 |
| Umm ash Shalahib | 9 | Au, Zn | Epithermal | | 45.0944 | | | 23.7333 | Vadala et al., 1992; Doebrich et al., 2007 |
| Umm Hadid | 3148 | Ag-Pb-Zn | Epithermal | | 44.3166 | | | 22.3666 | Coulomb, 1983 |
| Umm Hijlan | 1155 | Au | VMS | | 41.4500 | | | 21.0833 | Coumoul et al., 1989 |
| Wadi (Jabal) Thaa | 3143 | Mo | I-felsic | | 38.4194 | | | 26.0781 | Donzeau, 1983 |
| Wadi al Hwanet | n.r. | Cr | I-mafic/um | | 37.5000 | | | 26.3167 | Chevremont and Johan, 1983 |
| Wadi al Myah | 2012 | Cu | I-mafic/um | | 42.6456 | | | 20.7372 | Ransom, 1981 |
| Wadi Gharrah | 4479 | Mo | I-felsic | | 45.4833 | | | 23.2167 | Woldeabzghi, et al., 1986 |
| Wadi Hayyan | 1325 | Fe-Ti (magnetite, ilmenite) | I-mafic/um | | 36.5000 | | | 27.0000 | Takahashi, 1976 |
| Wadi Kamal | 713 | Ni | I-mafic/um | | 37.8167 | | | 24.4000 | Chevremont and Johan, 1981 |
| Wadi Kamal | 714 | Fe-Ti-V (magnetite-ilmenite) | I-mafic/um | | 37.8183 | | | 24.4056 | Chevremont and Johan, 1981 |
| Wadi Kamal | n.r. | PGM | I-mafic/um | | 37.8000 | | | 24.3166 | Chevremont and Cassard, 1986 |
| Wadi Kutan (Kutam) | 1128 | Zn-Cu-Ag-Au | VMS | | 43.5833 | | | 17.6000 | Bent and MacInnis, 1977; Bookstrom et al., 1989; Legg, 1983; Clegg, 1994; Riofinex Geological Mission, 1978 |
| Wadi Leif | 2013 | Zn-Cu-Pb-Ag-Au | VMS? | | 41.3833 | | | 20.6500 | Riofinex Geological Mission, 1979 |
| Wadi Sawawin | 414 | Fe (hematite, magnetite) | BIF | | 35.7833 | | | 27.9333 | Ashworth and McKenzie, 1975; Harris, 1977; Japanese Geological Survey, 1978; Liddicoat amd Abdulaziz, 1984 |
| Wadi Sidarah | 2843 | Mo | I-felsic | | 39.2000 | | | 24.1667 | Jackson, 1982 |
| Wadi Wassat | 617 | Fe (pyrite, pyrhhotite) | VMS | | 44.2167 | | | 18.3667 | Riofinex Geological Mission, 1978; Blain, 1977; Jackaman, 1972 |
| Zalm | 1020 | Au | SZ/mesothermal | | 42.1411 | | | 22.7250 | Viland, 1986 |
|  |  |  |  | |  | | |  |  |
| **Deposit type codes** | |  |  | |  | | |  |  |
| VMS | Volcanic massive sulfide | | | | |  |  |  |  |
| Epithermal | Epithermal | | |  | |  |  |  |  |
| Mesothermal | Mesothermal quartz vein | | | | |  |  |  |  |
| SZ | Shear zone | | |  | |  |  |  |  |
| I-felsic | Felsic intrusive | | | | |  |  |  |  |
| I-mafic/um | Mafic and(or) ultramafic intrusives | | | |  | | |  |  |
| BIF | Banded-iron formation | | | | |  |  |  |  |
| Fe(oxide)-Cu-Au | Iron(oxide)-copper-gold-deposit | | | |  | | |  |  |
| Porphyry? | Possible porphyry system | | | | |  |  |  |  |