

RIO TINTO PLC
Form 11-K
June 29, 2011

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 11-K

(Mark One)

- ANNUAL REPORT PURSUANT TO SECTION 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2010

or

- TRANSITION REPORT PURSUANT TO SECTION 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____.

Commission file number 001-10533

A. Full title of the plan and the address of the plan, if different from that of the issuer named below:

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT CONTRIBUTION PLAN FOR REPRESENTED
HOURLY EMPLOYEES

B. Name of the issuer of the securities held pursuant to the plan and the address of its principal executive office:

Rio Tinto plc
5 Aldermanbury Square
London EC2V 7HR
United Kingdom

U.S. BORAX INC. 401(k) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES
December 31, 2010 and 2009
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*All other schedules required by Section 2520.103-10 of the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 have been omitted because they are not applicable to the U.S. Borax Inc. 401(k) Savings and Retirement Contribution Plan for Represented Hourly Employees.

REPORT OF INDEPENDENT
REGISTERED PUBLIC ACCOUNTING FIRM

The Rio Tinto America Inc. Benefits Governance Committee
U.S. Borax Inc. 401(k) Savings and Retirement Contribution Plan for Represented Hourly Employees

We have audited the accompanying statements of assets available for benefits of the U.S. Borax Inc. 401(k) Savings and Retirement Contribution Plan for Represented Hourly Employees (the Plan) as of December 31, 2010 and 2009, and the related statement of changes in assets available for benefits for the year ended December 31, 2010. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Plan has determined it is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits include consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Plan's internal control over financial reporting. Accordingly, we express no such opinion. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the assets available for benefits of the U.S. Borax Inc. 401(k) Savings and Retirement Contribution Plan for Represented Hourly Employees as of December 31, 2010 and 2009, and the changes in assets available for benefits for the year ended December 31, 2010, in conformity with U.S. generally accepted accounting principles.

Our audits were performed for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental Schedule H, Line 4i - Schedule of Assets (Held at End of Year) as of December 31, 2010, and supplemental schedule H, Line 4a - Schedule of Delinquent Participant Contributions, are presented for the purpose of additional analysis and are not a required part of the basic financial statements, but are supplementary information required by the United States Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. The supplemental schedules are the responsibility of the Plan's management and have been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, are fairly stated in all material respects in relation to the basic financial statements taken as a whole.

/s/ Tanner LLC

Salt Lake City, Utah
June 29, 2011

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES

Statements of Assets Available for Benefits

As of December 31,

| | 2010 | 2009 |
|---|--------------|--------------|
| Assets | | |
| Investments at fair value: | | |
| Plan interest in the Rio Tinto America Inc. Savings Plan Trust | \$34,965,729 | \$- |
| Investments at fair value | - | 34,310,404 |
| Notes receivable from participants | 2,599,143 | 2,940,902 |
| Assets available for benefits, at fair value | 37,564,872 | 37,251,306 |
| Adjustment from fair value to contract value for fully benefit-responsive investment contracts | (15,444) | 579,068 |
| Assets available for benefits | \$37,549,428 | \$37,830,374 |

See accompanying notes to financial statements.

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U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES

Statement of Changes in Assets Available for Benefits

For the Year Ended December 31, 2010

| | |
|---|--------------|
| Additions to assets attributed to: | |
| Investment income | \$3,714,516 |
| Contributions: | |
| Participants | 1,192,183 |
| Employer | 197,933 |
| Total contributions | 1,390,116 |
| Total additions | 5,104,632 |
| Deductions from assets attributed to: | |
| Benefits paid to participants | 5,384,658 |
| Transfers to the Rio Tinto America Inc. 401(k) Savings and Investment Partnership Plan | 920 |
| Total deductions | 5,385,578 |
| Net decrease in assets available for benefits | (280,946) |
| Assets available for benefits: | |
| Beginning of the year | 37,830,374 |
| End of the year | \$37,549,428 |

See accompanying notes to financial statements.

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U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES
Notes to Financial Statements

1. Description of the Plan The following brief description of the U.S. Borax Inc. 401(k) Savings and Retirement Contribution Plan for Represented Hourly Employees (the Plan) is provided for general information purposes only. Participants and other financial statement users should refer to the Plan document, summary plan description, and union agreement for a more complete description of the Plan's provisions.

General

The Plan is a defined contribution plan covering all full-time hourly employees who are represented by or included in a collective bargaining unit of U.S. Borax Inc. and its affiliates (collectively, the Company or the Employer), as defined in the Plan document. U.S. Borax Inc. is an indirect, wholly-owned subsidiary of Rio Tinto America Inc., which is an indirect, wholly-owned subsidiary of Rio Tinto plc (the Parent). The Plan is intended to be a qualified retirement plan under the Internal Revenue Code (IRC) and is subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA), as amended.

Effective May 12, 2010 eligible employees who are represented by Local 30-International Longshoremen's and Warehousemen's Union (Boron represented hourly employees) can participate in the Plan the first of the month after date of hire.

Eligible employees who are represented by Local 20A-International Longshoremen's and Warehousemen's Union (Wilmington represented hourly employees) can participate in the Plan immediately upon employment.

As of August 2, 2010, all of the Plan's investments were transferred into the Rio Tinto America Inc. Savings Plan Trust, (the Master Trust).

Contributions

Participants may elect, under a salary reduction agreement, to contribute to the Plan. Contributions are limited by the IRC, which established a maximum contribution of \$16,500 (\$22,000 for Boron participants over age 50) for the year ended December 31, 2010. Participant contributions are recorded in the period during which the amounts are withheld from participant earnings. Participants may also contribute amounts representing distributions from other qualified defined benefit or defined contribution plans.

Boron represented hourly employees can contribute an amount not less than 1% and not more than 30% of their eligible compensation on a before-tax basis through payroll deductions. Participants may also elect to make an after-tax contribution not less than 1% and not more than 30% of their eligible compensation. Total before-tax and after-tax contributions cannot exceed 30% of each participant's eligible compensation.

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES
Notes to Financial Statements
Continued

1. Description of the Plan
Continued
- Contributions – Continued
The Company matches the Boron participants’ contributions to the Plan at 30%, up to the first 5% of their eligible compensation. Matching contributions are recorded on the date the related participant contributions are withheld.

Wilmington represented hourly employees can contribute an amount not less than 1% and not more than 15% of their eligible compensation on a before-tax basis through payroll deductions. Participants may also elect to make an after-tax contribution not less than 1% and not more than 15% of their eligible compensation. Total before-tax and after-tax contributions cannot exceed 15% of each participant’s eligible compensation.

The Company matches the Wilmington participants’ contributions to the Plan at 35%, up to the first 5% of their eligible compensation. Matching contributions are recorded on the date the related participant contributions are withheld.

Effective May 17, 2010, for new participants in the Plan, (including new hires, rehires, and transfers) and January 1, 2011, for current electing employees, the Company contributes 4% of eligible compensation (excluding overtime, shift differentials, any extraordinary items such as tool allowances or any expense reimbursements, ratification bonuses, gifts and awards paid to or on behalf of the Participant, and severance paid after termination of employment). For communication purposes, the Company refers to this Company contribution as the Retirement Contribution Plan (RCP). Effective as of January 1, 2011, any Boron Represented Hourly Employee who was a participant in the U.S. Borax Inc. Retirement Plan for Represented Hourly Employees and elected to receive contributions under the RCP in lieu of continuing to accrue benefits under the U.S. Borax Inc. Retirement Plan for Represented Hourly Employees. Participants are not required to contribute to the Plan to receive RCP contributions. Participants are vested in the Company RCP contributions based upon the following schedule:

| Completed Years of Vesting Service | Vested % |
|---------------------------------------|----------|
| One year | 0% |
| Two years | 25% |
| Three years | 50% |
| Four years | 75% |
| Five years | 100% |

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES
Notes to Financial Statements
Continued

1. Description of
the Plan
Continued

Participant Accounts

Individual accounts are maintained for each Plan participant. Each participant's account is credited with the participant's contributions, the Company's matching contributions, the Company's RCP contributions (if applicable), and an allocation of the Plan's earnings, and is charged with withdrawals and an allocation of the Plan's losses and administrative expenses. Allocations are based on participant earnings or account balances, as defined. The benefit to which a participant is entitled is the benefit that can be provided from the participant's vested account.

Participant-Directed Options for Investments

Participants direct the investment of their contributions, Company matching contributions, and the Company's RCP contributions (if applicable) into various investment options offered by the Plan. Investment options include mutual funds, a common/collective trust, common stock of the Parent in the form of a unitized fund with American Depositary Receipts (ADRs), and a stable value fund consisting of a money market fund and synthetic guaranteed investment contracts. RCP contributions are not eligible to be contributed to the Company common stock fund.

Vesting

Participants are immediately vested in their contributions and Company matching contributions plus actual earnings thereon, except for the RCP.

Payment of Benefits

On termination of service due to death, disability, or retirement, participants or their beneficiaries may elect to receive lump-sum distributions or annual, semi-annual, quarterly or monthly installments in amounts equal to the value of the participants' vested interests in their accounts. Under certain circumstances, participants may withdraw their contributions prior to the occurrence of these events.

Transfers

Along with the Plan, the Company employees also participate in another 401(k) plan that covers employees not represented by a collective bargaining unit (union). If employees are changed from represented to non-represented status during the year, their account balances are transferred within the Master Trust from this Plan's allocated investments to the non-represented plan's allocated investments. For the year ended December 31, 2010, transfers to the Rio Tinto America Inc. 401(k) Savings and Investment Partnership Plan totaled \$920.

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES
Notes to Financial Statements
Continued

1. Description of the Plan
Continued

Forfeited Amounts
Forfeited non-vested participant account balances may be used to reduce future Company contributions to the Plan. During the year ended December 31, 2010, forfeitures were \$64. As of December 31, 2010, and 2009, the balance of the forfeiture account was \$64 and \$0, respectively.

2. Summary of Significant Accounting Policies

Basis of Presentation
The financial statements of the Plan have been prepared on the accrual basis of accounting in accordance with U.S. generally accepted accounting principles.

Investment contracts held by a defined contribution plan are required to be reported at fair value. However, contract value is the relevant measurement attribute for that portion of the net assets available for benefits of a defined contribution plan attributable to fully benefit-responsive investment contracts because contract value is the amount participants would receive if they were to initiate permitted transactions under the terms of the Plan. The statements of assets available for benefits present the fair value of the Plan's interest in the Master Trust, as well as the adjustment of the Plan's interest in the fully benefit-responsive investment contract from fair value to contract value. The statements of changes in net assets available for benefits are prepared on a contract value basis.

Use of Estimates
The preparation of the Plan's financial statements in conformity with U.S. generally accepted accounting principles requires Plan management to make estimates and assumptions that affect the reported amounts of assets available for benefits at the date of the financial statements, the changes in assets available for benefits during the reporting period and, when applicable, the disclosures of contingent assets and liabilities at the date of the financial statements. Accordingly, actual results could differ from those estimates.

Risks and Uncertainties
The Plan provides for investments in securities that are exposed to various risks, such as interest rate, currency exchange rate, credit and overall market fluctuation. Due to the level of risk associated with certain investment securities, it is reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect participants' account balances and the amounts reported in the Statements of Assets Available for Benefits.

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES

Notes to Financial Statements
Continued

2. Summary of
Significant
Accounting
Policies
Continued

Master Trust

The Master Trust was established July 12, 2010, to hold the qualified defined contribution investment assets of the Plan and certain other benefit plans sponsored by Rio Tinto America Inc. (and its subsidiaries). Investments and the income there from, are allocated to participating plans based on each plan's participation in investment options within the Master Trust.

Investment Valuation and Income Recognition

The Master Trust holds investments in various securities, funds and fully benefit-responsive investment contracts. These investments are valued at fair value.

The Master Trust's investments in mutual funds are valued at quoted market prices, which represent the net asset value of units held by the Master Trust at year end. The Master Trust's investments in common stock are stated at fair value based on quoted market prices. Common collective trusts are valued at the asset value per unit as determined by each common collective trust as of the valuation date. The fair value of the Master Trust's interest in the Dwight Stable Value Fund (see detail of investments included in this fund in Note 5) is generally based upon the per-share net asset values of the underlying securities.

Purchases and sales of securities are recorded on a trade-date basis. Interest income is recorded on an accrual basis. Dividends are recorded on the ex-dividend date.

The investment income from the Master Trust, which includes realized gains (losses) and unrealized appreciation (depreciation) on those investments, is presented in the Statement of Changes in Assets Available for Benefits of the Plan, and totaled \$62,616,649 for the year ended December 31, 2010 (see Note 5).

Payments of Benefits

Benefits are recorded when paid by the Plan.

Administrative Expenses

The Company pays the majority of costs and expenses incurred in administering the Plan. The Company provides accounting and other services for the Plan at no cost to the Plan.

The Master Trust has several fund managers that manage the investments held by the Plan. Fees for investment fund management services are included as a reduction of the return earned on each fund. In addition, during the year ended December 31, 2010, the Company paid all investment consulting fees related to these investment funds.

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES
Notes to Financial Statements
Continued

2. Summary of Significant Accounting Policies Continued
- Administrative Expenses - Continued
Transaction costs associated with the purchase or sale of Rio Tinto plc ADRs are paid by the participants.
- Participant Loans
Participants may borrow from the Plan up to a maximum of \$50,000 or 50% of their account balances, whichever is less. Each loan is secured by the balance in the participant's account and bears interest at a rate commensurate with prevailing rates at the time funds are borrowed, as determined by the Plan Administrator. Loans originated during the year ended December 31, 2010, have interest rates set at prime plus one percent, and are reset quarterly.
- In accordance with the applicable accounting standards, loans to participants have been retrospectively classified separate of investments as a receivable. This change is reflected throughout this document. Loans to participants represent unpaid principal balance plus any accrued but unpaid interest.
3. Recent Accounting Pronouncements
- In January 2010, the FASB issued Accounting Standards Update (ASU) 2010-06, Fair Value Measurements and Disclosures (Topic 820): Improving Disclosures about Fair Value Measurements (ASU 2010-06). ASU 2010-06 amended Accounting Standards Codification 820-10 to clarify certain existing fair value disclosures, to add new disclosure requirements for Levels 1 and 2, and to separate disclosures for purchases, sales, issuances, and settlements relating to Level 3 measurements. ASU 2010-06 was effective for fiscal years beginning after December 15, 2009, except for the requirement to provide Level 3 purchases, sales, issuances, and settlements on a gross basis, which is effective for fiscal years beginning after December 15, 2010. Other than requiring additional disclosures, the adoption of ASU 2010-06 did not have a material effect on the Plan's financial statements.

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES
Notes to Financial Statements
Continued

3. Recent Accounting Pronouncements Continued
- In September 2010, the FASB issued ASU 2010-25, Plan Accounting – Defined Contribution Pension Plans (Topic 962): Reporting Loans to Participants by Defined Contribution Pension Plans (ASU 2010-25). ASU 2010-25 requires participant loans to be measured at their unpaid principal balance plus any accrued but unpaid interest and to be classified as notes receivable from participants in the statement of assets available for benefits. Previously, loans to participants were required to be measured at their fair values and classified as investments. ASU 2010-25 is effective for fiscal years ending after December 15, 2010 and is required to be applied retrospectively. The adoption of ASU 2010-25 did not change the reported amounts of participant loans from the amounts previously reported as of December 31, 2009. Participant loans have been reclassified to notes receivable from participants as of December 31, 2009. Other than the reclassification requirements, the adoption of ASU 2010-25 did not have an effect on the Plan’s financial statements.
4. Fully Benefit-Responsive Investment Contracts
- The Master Trust’s investments include the Dwight Stable Value Fund. The Dwight Stable Value Fund is invested in the following:
- A money market fund (Government Short-Term Investment Fund);
 - Fully benefit-responsive synthetic guaranteed investment contracts (GICs), as follows:
 - a.Synthetic GIC, Dwight Managed Target 2, no specified maturity date, 1.57%;
 - b.Synthetic GIC, Dwight Managed Target 2, no specified maturity date, 1.63%;
- Synthetic GICs provide for a guaranteed return on principal over a specified period of time through fully benefit-responsive wrap contracts, issued by a third party, which are secured by underlying assets. The Master Trust’s wrap contracts have credit ratings ranging from AA+ to AAA. The assets underlying the wrap contracts include diversified bond portfolios. These bond portfolios include investments in securities with contractual cash flows, such as asset backed securities, collateralized mortgage obligations and commercial mortgage backed securities, including securities backed by subprime mortgage loans. The value, liquidity and related income of these securities are sensitive to changes in economic conditions, including real estate value, delinquencies or defaults, or both, and may be adversely affected by shifts in the market’s perception of the issuers and changes in interest rates.

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES

Notes to Financial Statements
Continued

4. Fully Benefit-
Responsive
Investment
Contracts
Continued

The crediting interest rates of the contracts are based on agreed-upon formulas with the issuing third-party, as defined in the contract agreement, but cannot be less than zero. The contract or crediting interest rates for the GICs are typically reset quarterly and are based on capital market developments, the performance of the assets backing the contract, and the expected and actual contributions and withdrawals of all of the plans participating in the contract. These contracts typically provide that realized and unrealized gains and losses on the underlying assets are not reflected immediately in the assets of the fund. Realized and unrealized gains and losses are amortized, usually over the time to maturity or the duration of the underlying investments, through adjustments to the future interest crediting rate. Additional inputs used to determine the crediting interest rates include each contract's portfolio market value, current yield-to-date maturity, duration, and market value relative to contract value.

The fair value of the investment contracts relative to the contract value are reflected in the Statements of Assets Available for Benefits as "adjustment from fair value to contract value for fully benefit-responsive investment contracts" (adjustment).

If the adjustment is positive, this indicates that the contract value is greater than the fair value. The embedded losses will be amortized in the future through a lower interest crediting rate than would otherwise be the case. If the adjustment is negative, this indicates that the contract value is less than the fair value. The embedded gains will cause the future interest crediting rate to be higher than it otherwise would have been. An adjustment is reflected in the Plan's Statements of Assets Available for Benefits as of December 31, 2010 and 2009 in the amount of (\$15,444) and \$579,068, respectively.

These wrap contracts provide benefit withdrawals and investment exchanges at the full contract value of the synthetic contracts (principal plus accrued interest) notwithstanding the actual market value of the underlying investments (fair value plus accrued interest). There are no reserves against contract value for credit risk of the contract issuer or otherwise.

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES
Notes to Financial Statements
Continued

4. Fully Benefit-Responsive Investment Contracts Continued
- Certain events may limit the ability of the Plan to transact at contract value with the issuer of fully benefit-responsive investment contracts. Such events include the following: (1) amendments to the Plan documents (including complete or partial plan termination or merger with another plan), (2) bankruptcy of the Company or other Company events (for example, divestiture or spin-off of a subsidiary) that cause a significant withdrawal from the Plan, or (3) the failure of the trust to qualify for exemption from federal income taxes or any required prohibited transaction exemption under ERISA, as amended. The Plan Administrator does not believe that the occurrence of any such event, which would limit the Plan’s ability to transact at contract value with participants, is probable. The contracts provide that withdrawals associated with certain events which are not in the ordinary course of fund operations, and are determined by the issuer to have a material adverse effect on the issuer’s financial interest, may be paid at other than contract value.

Absent the events described in the preceding paragraph, the synthetic guaranteed investment contracts do not permit the issuers to terminate the agreements prior to the scheduled maturity dates.

Average duration for all investment contracts was 0.95 and 2.77 years as of December 31, 2010 and 2009, respectively. Average yield data for all fully benefit-responsive investment contracts for the years ended December 31, 2010 and 2009 were as follows:

| Average Yields | 2010 | 2009 |
|---|-------|-------|
| Based on actual earnings | 0.77% | 2.65% |
| Based on interest rate credited to participants | 0.83% | 2.10% |

5. Plan Interest In Master Trust
- The Plan’s investments are combined with the investments of the Master Trust to maximize administrative efficiencies. Each participating plan has an interest in the Master Trust. Investment income, investment management fees and other direct expenses relating to the Master Trust are allocated to the individual plans based upon the average daily balances. The Plan’s interest in the Master Trust was 6.4% as of December 31, 2010. As of December 31, 2010, the Plan’s investment assets were held in a trust account at State Street Corporation (State Street) (the Trustee) and consisted of an interest in the Master Trust. The Master Trust also includes the investment assets of the following retirement plans:

Rio Tinto America, Inc. 401(k) Savings and Investment Partnership Plan

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES

Notes to Financial Statements
Continued

5. Plan Interest In Master Trust Continued
- The Master Trust assets, at fair value are detailed below. Investments that represent 5% or more of the total assets are shown separately. The Master Trust was composed of the following investments at December 31, 2010:

| | |
|--|-----------------------|
| Assets of the Dwight Stable Value Fund: | |
| Government Short Term Investment Fund | \$ 79,427,324 |
| State Street Bank & Trust | |
| Synthetic GICs | 31,969,165 |
| Monumental Life Insurance | |
| Company Synthetic GICs | 45,946,453 |
| Total Dwight Stable Value Fund Assets | 157,342,942 |
| | |
| Mutual Funds * | 69,824,097 |
| Rio Tinto Common Stock | 67,720,026 |
| Dodge and Cox Stock Fund | 56,856,891 |
| Pimco Total Return Fund | 56,660,424 |
| Harbor Capital Appreciation | 40,923,329 |
| State Street Bank and Trust Company S&P 500 | |
| Flagship Securities Lending Series C Fund | 37,664,113 |
| Artisan Mid Cap Fund | 32,542,277 |
| American Funds Europacific Growth | 29,902,790 |
| Total investments | \$ 549,436,889 |

* Amount consists of individual investments that do not represent 5% or more of total assets of the Master Trust

Investments that represent 5% or more of the total assets as of December 31, 2009, are shown separately in note 8.

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES

Notes to Financial Statements
Continued

5. Plan Interest In Master Trust Continued
- The net investment income of the Master Trust for the period from August 2, 2010 through December 31, 2010, is summarized as follows:

| | Dividends | Net Appreciation | Total |
|--------------------------|---------------------|----------------------|----------------------|
| Mutual Funds | \$ 1,288,928 | \$ 33,330,440 | \$ 34,619,368 |
| Stable Value Fund | - | 849,249 | 849,249 |
| Rio Tinto Common Stock | 448,673 | 19,338,999 | 19,787,672 |
| Common Collective Trusts | - | 4,974,842 | 4,974,842 |
| Total | \$ 1,737,601 | \$ 58,493,530 | \$ 60,231,131 |

The net investment income of the Plan for the period from January 1, 2010 through August 1, 2010, is summarized as follows:

| | Dividends | Net Appreciation (Depreciation) | Total |
|--------------------------|------------------|---------------------------------------|-------------------|
| Mutual Funds | \$ 56,171 | \$ 18,717 | \$ 74,888 |
| Stable Value Fund | - | 134,480 | 134,480 |
| Rio Tinto Common Stock | 25,370 | (90,462) | (65,092) |
| Common Collective Trusts | - | (496) | (496) |
| Total | \$ 81,541 | \$ 62,239 | \$ 143,780 |

6. Parties-In Interest Transactions
- Certain Master Trust investments are managed by State Street, the Trustee; therefore, these transactions are exempt party-in-interest transactions. Transaction fees paid by the Master Trust or Plan for investment management services were included as a reduction of the return earned on each fund.

Transactions associated with Rio Tinto plc ADRs are considered exempt party-in-interest transactions because Rio Tinto plc is the Parent of the Company. As of December 31, 2010, the Master Trust held \$67,720,026 of the common stock of Rio Tinto plc which includes 947,077 units. During the year ended December 31, 2010, the Plan and the Master Trust recorded dividend income of \$933,094 related to the common stock.

As of December 31, 2009, the Plan held \$3,113,303 of the common stock of Rio Tinto plc which includes 14,454 shares. During the year ended December 31, 2009, the Plan recorded

dividend income of \$372,721 related to the common stock of Rio Tinto plc.

As of December 31, 2010 and 2009, the Plan held Notes Receivable from Participants totaling \$2,599,143 and \$2,940,902, respectively. Loans to participants, at cost, which approximates fair value, are at interest rates ranging from 4.25% to 9.50% and maturities ranging from 2011 to 2021.

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES

Notes to Financial Statements
Continued

7. Global
Securities
Lending
Program

The Master Trust participates in the State Street Bank and Trust Company S&P 500 Flagship Securities Lending Series C Fund (the Fund), a common/collective trust. The Fund invests in certain collective investment funds that participate in the State Street Global Securities Lending Program (Lending Funds). Under the State Street Global Securities Lending Program, securities held by Lending Funds are loaned by State Street Bank, as agent, to certain brokers and other financial institutions (the Borrowers). The Borrowers provide cash, securities, or letters of credit as collateral against loans in an amount at least equal to 100% of the fair value of the loaned securities. The Borrowers are required to maintain the collateral at not less than 100% of the fair value of the loaned securities. Cash collateral provided by the Borrowers may be invested in State Street Bank and Trust Company Collateral Funds (Cash Collateral Funds). The Lending Funds invested cash provided by the Borrowers into the State Street Bank and Trust Company Quality Trust for SSgA Funds.

Risks and Indemnification

State Street Bank, as lending agent, indemnifies Lending Funds for replacement of any loaned securities (or, in certain circumstances, return of equivalent cash value) due to Borrower default on a security loan. Lending Fund participants, however, bear the risk of loss with respect to the investment of collateral.

Withdrawal Safeguards

From time to time, the Trustee of the Lending Funds may exercise its rights in order to protect all participants in the State Street Bank securities lending funds. In an effort to better ensure safety of principal and better maintain adequate liquidity, as well as achieve favorable returns for all securities lending program participants, State Street Bank has temporarily implemented withdrawal safeguards on full or partial redemptions from certain securities lending funds.

The objective of these withdrawal safeguards is to protect the interest of all participants, while providing the maximum level of liquidity that can be prudently made available to all participants. These withdrawal safeguards permit redemptions resulting from ordinary course activity, subject to certain thresholds. Ordinary course activity also may include periodic participant rebalancing of their investment portfolio between Lending Funds and other State Street Bank collective investment funds. Requests for redemptions above these withdrawal safeguards may result in proceeds consisting of cash, units of other State Street Bank collective investment funds, units of Cash Collateral Funds that will be converted into units of a liquidating trust, or a combination thereof. The Trustee continues to monitor market conditions and evaluates the need for withdrawal safeguards, as appropriate.

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES

Notes to Financial Statements
Continued

7. Global
Securities
Lending
Program
Continued

Investment in Cash Collateral Fund Valuation

Management of the Lending Funds regularly reviews the performance of the Cash Collateral Funds and the variation between their per unit fair values and \$1.00. The Cash Collateral Funds primarily utilize quotations from independent pricing services, quotations from bond dealers and information with respect to bond and note transactions (pricing service information) to determine the fair value of its investments. Such pricing service information may also consist of quotations derived from valuation models or matrix pricing. As of December 31, 2010, the per unit fair value was \$1.00 for the State Street Bank and Trust Company Quality Trust for SSgA Funds.

For the purposes of determining transaction price for issuances and redemptions of Lending Fund units, management of the Lending Funds also evaluates additional inputs to the fair value of the Lending Funds' investments in the Cash Collateral Funds, including among other things current market conditions, credit quality, liquidity of the Cash Collateral Funds and the assessed probability of incurring a realized loss on Cash Collateral Fund Assets. Additionally, management of the Lending Funds evaluates the qualitative aspects of the State Street Global Securities Lending Program, including the historical performance of State Street Bank as lending agent, the Cash Collateral Funds' investment strategy and past performance, and the expected continuing transactions price of the Cash Collateral Funds at \$1.00 per unit.

Accordingly, for purposes of calculating the transaction price of the Lending Funds, management of the Lending Funds has valued its investments in Cash Collateral Funds at their per unit transaction price of \$1.00. Management of the Lending Funds will continue to review the Lending Funds participation in the State Street Global Securities Lending Program, including the appropriateness of the fair value of the Lending Funds' investments in the Cash Collateral Funds at \$1.00 per unit for transaction purposes or, alternatively, at a lower per unit fair value.

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES

Notes to Financial Statements
Continued

8. Investments The Plan's investments, stated at fair value, that represented five percent or more of the Plan's assets available for benefits as of December 31, 2009 are as follows:

| | |
|--|-------------------|
| Assets of the Dwight Stable Value Fund: | |
| TBC Pooled Employee | |
| Daily Liquidity Fund | \$ 760,430 |
| SEI Stable Asset Fund | 6,155,598 |
| Monumental Life Insurance | |
| Company Synthetic GICs | 4,809,783 |
| State Street Bank & Trust Synthetic GICs | 4,642,064 |
| Total Dwight Stable Value Assets | 16,367,875 |
| | |
| Rio Tinto plc ADRs | 3,113,303 |
| Dodge and Cox Stock Fund | 3,312,756 |
| Participant Loans | 2,940,902 |
| Harbor Capital Appreciation Fund | 2,801,901 |
| Artisan Mid Cap Fund | 2,102,485 |
| PIMCO Total Return Fund | 1,849,894 |

The Master Trust's investments, stated at fair value, that represented five percent or more of the Plan's assets available for benefits as of December 31, 2010, are disclosed in note 5 above.

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES

Notes to Financial Statements
Continued

8. Investments
Continued

Investments are reported in accordance with established authoritative guidance, which requires a three-level valuation hierarchy for disclosure of fair value measurements. The valuation hierarchy is based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date.

The three levels are defined as follows:

Level 1: Inputs are quoted market prices in active markets for identical assets or liabilities that are accessible at the measurement date.

Level 2: Inputs are from other than quoted market prices included in Level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3: Inputs are unobservable and are used to measure fair value in situations where there is little, if any, market activity for the asset or liability at the measurement date.

The following table summarizes the assets or liabilities carried by the Master Trust at fair value by fair value hierarchy level, as described above, as of December 31, 2010:

| | Level 1 | Level 2 | Level 3 | Total |
|---|-----------------------|-----------------------|-------------|-----------------------|
| Mutual funds | | | | |
| Large Cap | \$ 97,780,220 | \$ - | \$ - | \$ 97,780,220 |
| Mid Cap | 44,896,049 | - | - | 44,896,049 |
| Small Cap | 31,754,722 | - | - | 31,754,722 |
| International | 50,984,312 | - | - | 50,984,312 |
| Blended Investment | 4,634,081 | - | - | 4,634,081 |
| Bond Investments | 56,660,424 | - | - | 56,660,424 |
| Total mutual funds | 286,709,808 | - | - | 286,709,808 |
| Common collective trusts | | | | |
| Large Cap | - | 37,664,113 | - | 37,664,113 |
| Short term investments | 79,427,324 | - | - | 79,427,324 |
| Synthetic guaranteed investment contracts | - | 77,915,618 | - | 77,915,618 |
| Rio Tinto common stock | 67,720,026 | - | - | 67,720,026 |
| | \$ 433,857,158 | \$ 115,579,731 | \$ - | \$ 549,436,889 |

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES

Notes to Financial Statements
Continued

8. Investments
Continued
- The following table summarizes the assets or liabilities of the Plan carried at fair value by fair value hierarchy level, as described above, as of December 31, 2009:

| | Level 1 | Level 2 | Level 3 | Total |
|---|----------------------|----------------------|-------------|----------------------|
| Mutual funds | | | | |
| Large Cap | \$ 6,114,657 | \$ - | \$ - | \$ 6,114,657 |
| Mid Cap | 2,554,600 | - | - | 2,554,600 |
| Small Cap | 1,227,603 | - | - | 1,227,603 |
| International | 1,549,944 | - | - | 1,549,944 |
| Blended Investment | 98,798 | - | - | 98,798 |
| Bond Investments | 1,849,894 | - | - | 1,849,894 |
| Total Mutual funds | 13,395,496 | - | - | 13,395,496 |
| Common Collective Trust | | | | |
| Stable Value Fund | - | 6,155,598 | - | - |
| Large Cap | - | 1,433,730 | - | 7,589,328 |
| Total Common Collective Trust | - | 7,589,328 | - | 7,589,328 |
| Short Term Investments | 760,430 | - | - | 760,430 |
| Synthetic Guaranteed Investment Contracts | - | 9,451,847 | - | 9,451,847 |
| Rio Tinto Common Stock | 3,113,303 | - | - | 3,113,303 |
| | \$ 17,269,229 | \$ 17,041,175 | \$ - | \$ 34,310,404 |

9. Plan Termination
- Although it has not expressed any intention to do so, the Company has the right under the Plan to discontinue its contributions at any time and to terminate the Plan subject to the provisions set forth in ERISA.

If the Plan is terminated in accordance with the terms described in the preceding paragraph, each participant's account shall become fully vested and nonforfeitable and distribution of Plan assets shall be made as directed by the Plan Administrator.

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES

Notes to Financial Statements
Continued

10. Income Tax Status
The Internal Revenue Service has determined and informed the Company by a letter dated August 27, 2003, that the Plan and related trust were designed in accordance with the applicable requirements of the Internal Revenue Code. The Plan has been amended since receiving the determination letter; however, the Plan Administrator and the Plan's legal counsel believe that the Plan is currently designed and is being operated in compliance with the applicable requirements of the Internal Revenue Code. Therefore, no provision for income taxes has been included in the Plan's financial statements. The Plan filed a request to the IRS for a new determination letter on January 31, 2011.

11. Uncertain Tax Positions
Management evaluates tax positions taken by the Plan and recognizes a tax liability (or asset) if the Plan has taken an uncertain position that more likely than not would be sustained upon examination by taxing authorities. Plan management has concluded that as of December 31, 2010, there are no uncertain tax positions that require either recognition or disclosure in the financial statements. The Plan is subject to routine audits by taxing authorities for tax years for which the applicable statutes of limitations have not expired. There are currently no audits for any tax periods in progress. Plan management believes it is no longer subject to income tax examinations for years prior to 2007.

12. Reconciliation of Financial Statements to Form 5500
The following is a reconciliation of assets available for benefits as presented in the financial statements to the Form 5500 as of December 31:

| | 2010 | 2009 |
|--|---------------|---------------|
| Assets available for benefits as presented in the financial statements | \$ 37,549,428 | \$ 37,830,374 |
| Adjustment from contract value to fair value for fully benefit-responsive investment contracts | 15,444 | (579,068) |
| Assets available for benefits as presented in the Form 5500 | \$ 37,564,872 | \$ 37,251,306 |

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES
Notes to Financial Statements
Continued

12. Reconciliation of Financial Statements to Form 5500 Continued
- The following is a reconciliation of changes in assets available for benefits reported in the financial statements to the Form 5500 for the year ended December 31, 2010:

| | |
|--|-------------|
| Decrease in assets available for benefits reported in the financial statements | \$(280,946) |
| Add adjustment from contract value to fair value for fully benefit-responsive investment contracts for 2009 | 579,068 |
| Subtract adjustment from contract value to fair value for fully benefit-responsive investment contracts for 2010 | (15,444) |
| Increase in assets available for Benefits reported in the Form 5500 | \$313,566 |

13. Subsequent Events
- Subsequent to December 31, 2010, the assets held with Dwight Asset Management Group were transferred to Invesco. The Master Trust Investment Committee decided to change their Asset Management Group from Dwight to Invesco to offer one large pool of funds instead of multiple smaller pools.

Effective April 11, 2011, the following plans were included in the Master Trust as the Rio Tinto Alcan 401(k) Savings Plan for Former Employees:

- Alcan Global Pharmaceutical Packaging Retirement Savings Plan
- Alcan Global Pharmaceutical Packaging Collectively Bargained Retirement Savings Plan

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES

Employer Identification Number: 98-0047580

Plan Number: 007

Schedule H, Part IV, Line 4i

Schedule of Assets (Held at End of Year)

December 31, 2010

| (a) Party in Interest | (b) Identity of Issue | (c) Description of Investment | Number of Units | (d) Cost | (e) Current Value |
|-----------------------------|--------------------------|---|--------------------|-------------|-------------------------|
| * | Various participants | Participant loans (maturing 2011 to 2021 at interest rates ranging from 4.25% to 9.50%) | 108 | - | \$2,599,143 |

* Denotes a party-in-interest as defined by ERISA

See accompanying report of independent registered public accounting firm.

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY EMPLOYEES

Employer Identification Number: 98-0047580

Plan Number: 007

Schedule H, Part IV, Line 4a

Schedule of Delinquent Contributions

December 31, 2010

| Payroll | Participant Contributions Transferred Late to the Plan | Employer Contributions Transferred Late to the Plan * | Total That Constitute Nonexempt Prohibited Transactions | Corrective Additional Contributions Made by Plan Sponsor |
|------------|--|---|---|--|
| 2/5/2010 | \$ 67,520 | \$ 11,051 | \$ 78,571 | \$ 73 |
| 8/6/2010 | - | 256 | 256 | - |
| 8/20/2010 | 55,935 | 10,431 | 66,365 | 47 |
| 9/3/2010 | - | 1,311 | 1,311 | - |
| 9/17/2010 | - | 1,328 | 1,328 | - |
| 10/1/2010 | - | 2,841 | 2,841 | - |
| 10/15/2010 | - | 3,714 | 3,714 | - |
| 10/29/2010 | 61,076 | 13,423 | 74,499 | 111 |
| 11/12/2010 | - | 4,083 | 4,083 | - |
| 11/26/2010 | - | 4,134 | 4,134 | - |
| 12/10/2010 | - | 5,033 | 5,033 | - |
| 12/23/2010 | - | 4,597 | 4,597 | - |
| | \$ 184,530 | \$ 62,202 | \$ 246,732 | \$ 230 |

* The plan sponsor made this corrective contribution payment in January 2011.

See accompanying report of independent registered public accounting firm.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the trustees (or other persons who administer the employee benefit plan) have duly caused this annual report to be signed on its behalf by the undersigned hereunto duly authorized.

U.S. BORAX INC. 401(K) SAVINGS AND RETIREMENT
CONTRIBUTION PLAN FOR REPRESENTED HOURLY
EMPLOYEES

By: /s/ Chad Andersen
Name: Chad Andersen
General Manager Human Resources Americas –
Rio Tinto Minerals
Rio Tinto America Inc. Benefits Governance
Committee

Date: June 29, 2011

EXHIBIT INDEX

| Exhibit Number | Document |
|-------------------|--|
| 23.1 | Consent of Independent Registered Public Accounting Firm |