# **30th Annual National Conference of the American Society of Mining and Reclamation 2013 – Book of Abstracts**

Held with the 2nd Wyoming Reclamation and Restoration Symposium

Laramie, Wyoming, USA 1-7 June 2013

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### Monday, June 3, 2013 5:00 pm - 7:00 pm

Turn in your poster when you register so they can be set-up for you. If you fail to do so, you will be responsible for your own set-up.

	Poster Session – Salon ABC		
1	Growth of Switchgrass on Reclaimed Surface Mine by C. Brown and J. Skousen (STUDENT)	Pg.	17
2	Effectiveness of Mechanical Thinning for Increasing Mule Deer Forage in and Oil and Gas Development Region by <b>G.J. Stephens, M.W Paschke and D.B. Johnston</b> ( <i>STUDENT</i> )	Pg.	107
3	Using Isotopes to Study Coalbed Natural Gas Co-Produced Water and Soil Interactions by <b>K.J.</b> Lilly and G.F. Vance Pg. 70		
4	Reclaiming Mine Lands with Cattle Grazing on a Southeastern Arizona Mine Site by <b>S. Stone</b> and J. Fehmi ( <i>STUDENT</i> ) Pg.108		
5	Restoring Remnant Hardwood Forest Impacted by Surface Mining for Coal through Removal of the Invasive Tree-of-Heaven ( <i>Ailanthus altissima</i> ) by C.M. Peugh, J.M. Bauman and S.M. Byrd Pg. 91		
6	Third Year Survival and Height Growth of American Chestnut on Post-Bond Release Surface Mines in Eastern Kentucky by H.Z. Angel, C.D. Barton and P.N. Angel (STUDENT) Pg $\cdot$ 3		
7	<i>Ailantus Altissima</i> Interferes with Beneficial Symbionts and Negatively Impacts Oak Regeneration by <b>J.M. Bauman, C. Byrne and S. Hiremath</b> Pg. 8		
8	Effect of Spoil Type on the Chemical and Hydrologic Profiles of Experimental Mine Reforestation Plots in Eastern Kentucky by <b>K. Sena, C. Barton, C. Agouridis and R. Warner</b> ( <i>STUDENT</i> ) Pg.102		
9	Restoration of Surface Disturbances on the Shortgrass Steppe of Northeastern Colorado by S.A. Barr, J. Jonas, and M.W. Paschke (STUDENT) $Pg \cdot 7$		
10	Least Limiting Water Range of a Waste of Laundering Bauxite After Eleven Years Revegetation by <b>G.C. Rocha, L.A. de O.P. Guimarães, L.E. Dias, I.R. de Assis, S.M. de</b> <b>Faria, L.C. lemos Neto and J. Carvalho</b> Pg. 98		
11	Foliar Cover and Canopy Cover Relationships on the Goathill Subsidence in Questa NM by <b>T. Richardson, M. Heil, B.A. Buchanan and D. Heafey</b> Pg . 97		
12	A Comparison Between Proposed Well Pad Reclamation Vegetal Cover Standards and Their Associated Multiple Land Use Vegetation Communities and Well Pads by M. Heil, B.A. Buchanan and H. McDaniel Pg. 48		
13	Canopy Cover Estimation Using Aerial Photography For a Mixed Conifer Zone, Northern, New Mexico by <b>D. Inskeep, M. Heil, B.A. Buchanan and D. Heafey</b> Pg. 57		
14	Impact of Inoculation with Plant Material on Plant Development; Greenhouse Tests by <b>C.</b> <b>Nelson, W. Rider and A. Unc</b> Pg. 81		

15	Seed Source and Sagebrush Habitat Reclamation Success on the Mowry Formation by <b>M.</b> <b>Dillon and M. Cornia</b> Pg. 32				
16	Revegetation of Overburden Dump Slopes in Areas Altered by Iron Mining, Carajás-Pa, Brazil by I.R. Assis, L.E. Dias, G.C Rocha, L.C. Lemos Neto and C.H.S. Rezende Pg. 5				
17	The Effect of Disturbance and A Review of Chemical and Industrial Amendments in Reclamation of Wyoming's Sodium Affected Soils by <b>S.J. Day, J.B. Norton, and E. Aboukila</b> ( <i>STUDENT</i> ) Pg. 28				
18	Closure Criteria for Waste Rock Land Forms in Western Australian Goldfields by A.M. Holm and B. Sinclair Pg . $50$				
19	Field Simulation of Different Approaches to Revegetate Acid Sulfide Spoil in Brazil by , <b>L.E. Dias, I.R. de Assis, J.M. Esper and O.A. Ferriera</b> Pg. 30				
20	Reclamation of Saline Sodic Soils under Semiarid Condition: Comparative Effects ofDifferent Chemical, Organic and Industrial Amendments by E.F. Aboukila, P.D. Stahl, C.F.Strom, and S.J. DayPg. 1				
21	Reclamation of Abandoned Mine Land Through Poultry Litter Biochar Amendment by <b>U.</b> Buyantogtokh and M. Guo ( <i>STUDENT</i> ) Pg. 19				

## SILENT AUCTION

Please bring items to contribute to the ASMR Silent Auction. Items will be displayed prominently in the Grand Ballroom Lobby at the Hilton. This event is used to raise money for the ASMR Student Travel Fund to help students attend future meetings! Bidding will begin on Monday and continue until Thursday at 10:30 am. Winners will be announced at the end of the Awards luncheon.

# WYOMING TERRITORIAL PARK SOCIAL

Buses will begin transporting from the Hilton at 5:00 pm. Those signed up for the social can tour the prison anytime Wednesday if they show their nametag and social ticket. A ghost tour will begin at 9:00 pm. The first bus back to the Hilton will be available at 9:00 pm.

Monday, June 3, 2013				
	Wildlife Impacts Garden Ballroom	<b>Reforestation</b> Salon D	Oil/Gas Site Reclamation/ Monitoring Salon E	Passive Water Treatment Salon FG
	Moderator – Jeff Beck	Moderator – Jennifer Franklin	Moderator – Chris Johnston	Moderator – Louis McDonald
1:00 – 1:30 pm	Female Wild Turkey Ecology on a Midwest Reclaimed Surface Mine by K.S. Delahunt, J.R. Nawrot and C.K. Nielsen Pg. 29	Rebuilding Soils for Forest Restoration on Appalachian Mined Land by C.E. Zipper, J.A. Burger, C.D. Barton and J.G. Skousen Pg.123	Reclamation Planning for Energy Development Projects: Wamsutter, WY; A Case Study by C. Driessen, B. Teson, D. Marshall and R. Ansotegui Pg. 35	Passive Treatment Systems for the Removal of Sele- nium: Selenium Removal Mechanisms with Biochem- ical Reactor Substrate by R.C. Thomas, J.J. Tudini, J.S. Bays, M.A. Girts, K.B. Jen- kins, L.C. Roop and T. Cook
1:30 – 2:00 pm	Can Elk Mitigate Disturbance Risk Associated With Natural Gas Development? By C.B. Buchanan and J.L. Beck (STUDENT) Pg. 18	Growth of Hardwood Trees on Brown and Gray Mine Spoils in West Virginia by L. Wilson-Kokes, J. Skousen, P. Emerson, C. DeLong and C. Thomas (STUDENT) Pg.120	Quantitative Monitoring in Oil and Gas Reclamation: What Can It Do For You? By T.J. Minnick Pg. 76	Passive Treatment Sys- tems for the Removal of Selenium: Barrel Substrate Studies, Design, and Full- Scale Implementation by R.C. Thomas, M.A. Girts, J.J. Tudini, J.S. Bays, K.B. Jen- kins, L.C. Roop and T. Cook
2:00 – 2:30 pm	Sustaining Raptor Populations at the North Antelope Rochelle Mine in Northeast Wyoming by G. McKee, P. Griswold and M. O'Rourke Pg. 75	Native Tree Survival and Herbaceous Establishment on an Experimentally Reclaimed Appalachian Coal Mine by S.C. Koropchak, C.E. Zipper, J.A. Burger and D.M. Evans (STUDENT) Pg. 63	Approaching Oil and Gas Pad Reclamation Using Data Modeling: A Framework for the Future by M.F. Curran, B.J. Wolff and P.D. Stahl (STUDENT) Pg. 23	Off-the-Grid Aeration to Address Nuisance Constituent Production from Specific Passive Treatment System Process Units by R.W. Nairn, and K.A. Strevett Pg. 79
2:30 – 3:00 pm	Genetic Diversity of Brook Trout Populations in Several Sub-watersheds of the West Branch Susquehanna River Watershed by S.M. Rummel and F.J. Brenner Pg. 99	Mature Subalpine Tree and Shrub Transplanting at the Climax Mine, Climax, CO by R.F. Bay, K.E. Carlson and A. Hilshorst Pg. 9	Defining Oil and Gas Pad Reclamation Success on Wyoming BLM Lands by M.F. Curran, B.J. Wolff and P.D. Stahl (STUDENT) Pg. 24	Seasonality of Iron Removal Within the Initial Oxidation Cell of a Passive Treatment System by L.R. Oxenford and R.W. Nairn (STUDENT) Pg. 86
3:00 – 3:30 pm	Break - Salon ABC and l	obby		
	Wildlife Impacts Garden Ballroom	Revegetation Salon D	Oil/Gas Site Reclamation/ Monitoring Salon E	Passive Water Treatment Salon FG
	Moderator – Jeff Beck	Moderator – Abbey Wick	Moderator – Chris Johnston	Moderator – Buck Neely
3:30 – 4:00 pm	Predicting the Influence of Restoration on Greater Sage-Grouse Lek Connectivity by B.A. Fitzpatrick and M.A. Murphy (STUDENT) Pg. 39	Factors Influencing the Establishment of Volunteer Vegetation on Quarry Overburden by J.A. Franklin and D.S. Buckley Pg. 41	Preliminary Findings from Analyzing an Oil and Gas Reclamation Database by M.F. Curran, B.J. Wolff and P.D. Stahl (STUDENT) Pg. 25	The Construction and Initial Results of a Demonstration Passive Treatment System for Removing Sulfate at a Site on Vancouver Island, British Columbia by E.P. BlumensteinPg.11 R.J. Schipper and J.J. Gusek

Monday, June 3, 2013					
4:00 – 4:30 pm	Greater Sage-Grouse Response to Bentonite Mining in the Bighorn Basin, Wyoming by A.C. Pratt and J.L. Beck (STUDENT) Pg. 92	Russian Thistle Population Dynamics at A Former Coal Mine in Northern New Mexico by A. Maier and J. White Pg. 72	Soil Property Recovery on a Natural Gas Pipeline Reclamation Chronosequence by C.K. Gasch, S.V. Huzurbazar and P.D. Stahl (STUDENT) Pg. 44	Passive Aeration Using a Trompe by B.R. Leavitt, B.J. Page, C.A. Neely, R.M. Mahony, T.P. Danehy, C.F. Denholm, S.L. Busler and M.H. Dunn Pg. 68	
4:30 – 5:00 pm	FORESTRY AND WILDLIFE TECHNICAL DIVISION MEETING	Conserving an S1/ G5/T2 Mustard at a South-central Montana Coal Mine Through Nursery Propagation and Transplanting by G.L. Johnson and R.A. Prodgers Pg. 59	Natural Gas Field Reclamation Integrating Reclamation Science, Weed Management, and Monitoring, Wamsutter, Wyoming. A Pre-Field Trip Overview by D. Marshall, R. Ansotegui, B. Teson and C. Driessen Pg. 73	Passively-Enhanced Lime Mixing and Dissolution by T.P. Danehy, B.R. Leavitt, B.J. Page, R.M. Mahony, C.A. Neely, C.F. Denholm, S.L. Busler and M.H. Dunn Pg. 27	
5:00 – 7:00 pm	7:00 pm Sponsor's Social/Posters – Grand Ballroom Lobby and Salon ABC				

Tuesday, June 4,	Tuesday, June 4, 2013				
6:30 – 8:30 am	Breakfast – Salons ABC				
8:00 – 5:00 pm	Wamsutter Field Trip – meet at Hilton lobby between 7:30 am and 7:45 am				
6:00 – 10:00 pm	Early Career Professionals Social, UW Visual Arts Building				

Wednesday, June 5, 2013					
6:30 – 8:30 am	Breakfast – Salons ABC				
	Geomorphic Reclamation Case Studies Garden Ballroom	es Impacts on Soils and Revegetation on Oil Drainage Vegetation & Gas Sites Characterization			
	Moderator – Kimery Vories Moderator – Jay Norton Moderator – Cally Driessen Mo		Moderator - Leah Oxenford		
8:00 - 8:30 am	Geomorphic Reclamation of Abandoned Coal Mines Near Raton, New Mexico I. Design and Construction Oversight by R. Spotts, M. Brennan, R. Wade, K.J. Malers, K.E. Carlson and Z. Isaacson Pg.106	Long-Term Effects of Organic Amendments and Potential Carbon Sequestration in Southwest Virginia Mine Soils by W.L. Nash, W.L. Daniels and J.A. Burger Pg. 80	Design, Development, and Field Experience with Wood-Strand Erosion Control Mulch for Mine and Pipeline Projects by J.H. Dooley, D.N. Lanning and M.C. Perry Pg. 34	Long-Term Trends of Specific Conductance in Waters Emerging From Headwater Valley Fills in Virginia, USA by D.M. Evans, C.E. Zipper, P.F. Donovan, and W.L. Daniels Pg. 37	

Wednesday, J	lune 5, 2013			
8:30 – 9:00 am	Geomorphic Reclamation of Abandoned Coal Mines on Vermejo Park Ranch Near Raton, New Mexico II. Reclamation and Revegetation by K.E. Carlson, R.F. Bay, R. Spotts, and Z. Isaacson Pg. 20	The Fate of Nitrogen in Biosolids Amended Mineral Sands Mine Soils by J. Dickerson, W.L. Daniels, G. Evanylo and K. Haering (STUDENT) Pg.31	Silvertip Pipeline Spill Revegetation by L.J. Ballek and L. Alvey Pg. 6	Chemical Constituents in Water and Sediment from Grand Lake O' the Cherokees, Oklahoma, Downstream from the Tri-State Lead-Zinc Mining District by S.C. Zawrotny, J. Arango-Calderon, L. Diede, A. McLeod, G. Rutelonis, M. Salisbury, M.P. Beltran-Zuniga, G.A. Busch, K.R. Douglas, E.F. Garifalos, L. Liu, N. Nabavizadeh, M. Rice, D.W. Stevens, J.A. LaBar, D.E. Townsend III, R.C. Knox and R.W. Nairn (STUDENT) Pg. 122
9:00 – 9:30 am	A Comparison of the Vegetation Communities on Geomorphic and Non-geomorphic Reclaimed Mine Lands in Northwestern New Mexico by J. Voss and T.C. Ramsey Pg.115	From BS to BMP - Using Biosolids for Taconite Tailings Reclamation by P. Eger, C. Lincoln, T. McMillen, K. Hamel, K. Dykhuis, C. Maxwell and J. Takala Pg. 36	Monitoring and Thresholds for Irrigated Lands in Coal Bed Methane Areas by J. Thomas Pg.114	A Comparison of Stream Chemistry in Three Restored Illinois Coal Basin Streams: Initial Conditions vs. 10 and 20 Years Post- Restoration by B. Borries, K. Williard, J. Schoonover, and J. Nawrot (STUDENT) Pg. 13
9:30 – 10:00 am	Achieving Contemporaneous Geomorphic Reclamation at El Segundo Mine, New Mexico by E. Hydrusko Pg. 56	Compost Rates for Remediating Reclaimed Saline Soils by C. Strom Pg.110	ECOLOGY TECHNICAL DIVISION MEETING	A Combination of Alumina Refining Residue - Bauxsol (Acid B Extra <sup>TM</sup> ) and Pg.89 Biochar to Reduce Metal Concentrations in Acid Mine Drainage by C.D. Peltz, C. Zillich and K.L. Brown
				-
10:00 – 10:30 am	Break – Salons ABC			
	Geomorphic Reclamation Case Studies Garden Ballroom	Organic Impacts on Soils and Vegetation Salon D	Revegetation on Oil & Gas Sites Salon E	Stream and Drainage Characterization Salon FG
	Moderator – Kimery Vories	Moderator – Jay Norton	Moderator - Cally Driessen	Moderator - Leah Oxenford
10:30 – 11:00 am	Stream Restoration Initiative at the Jewett Lignite Mine by J.McKinney, J. Young and D. Ezell Pg. 38	Biochar for Reclamation in the Rocky Mountains: Context, Science and Policy - Can We Find A Nexus That Works? By A. Harley, B. McMullen, and M. Williams Pg. 47	Soil Amendment Application during Drought on Oil and Gas Sites in Wyoming by B.K. Schladweiler Pg.100	Determination of Dominant Trace Metal Sequestration Processes in Two Vertical Flow Bioreactors Using Modified Tessier Extractions by J.A. LaBar and R.W. Nairn (STUDENT) Pg. 65

Wednesday, J	lune 5, 2013			
11:00 ~ 11:30 am	Integrating Geomorphic Reclamation with Undisturbed and Previously Reclaimed Areas Using A Multi-program Computerized Design Approach at McKinley Mine by H. McCabe, S. Motycka, M. Siemsglusz, K. Kutter, R. Spotts, M. Brennan, R. Wade, K.J. Malers, W. Erickson Pg. 74	A Comparison of Different Volumes of Biochar on Acidic Soils to Increase Plant Growth and Reduce Soil Acidity by C.D. Peltz Pg. 88	Comparison of Basal and Aerial Cover for Total Vegetation Cover and Total Ground Cover on Oil and Gas Sites in Wyoming by C. Adams Pg. 2	Decommissioning of an Anaerobic Passive Biochemical Reactor at the Standard Mine Superfund Site, Crested Butte, CO by N.T. Gallagher, E. Blumenstein, T. Rutkowski, J. DeAngelis and C. Progress Pg. 42
11:30 am – 12 noon	Interactive Discussion	Organic Matter Dynamics in Reclaimed Mine Soils by A.F. Wick, P.D. Stahl and W.L. Daniels Pg. 118	WATER MANAGEMENT TECHNICAL DIVISION MEETING	Ten Years After: The Operation of the Luttrell Biochemical Reactor by A.K. Frandsen, D.J. Reisman, and D.T. Shanight Pg.95
12:00 – 1:00 pm	Lunch - Salons ABC			
	Advances in the Science of Geomorphic Reclamation Garden Ballroom	Water Processes in Natural and Mined Sites Salon D	Revegetation Technologies Salon E	Geochemical Processes Salon FG
	Moderator – Kimery Vories	Moderator – Tom Wildeman	Moderator – Brenda Schladweiler	Moderator – Lindsay Wilson- Kokes
1:00 – 1:30 pm	Evaluation of Geomorphic Reclamation Performance and Models in the Southwestern U.S. by M. Stone, J. Stormont, E. Epp, C. Byrne, S. Rahman, R. Powell, W. Rider and S. Perkins Pg.109	A Comparison of Soil Condition, Vegetation Communities, and Soil Redox Characteristics of Surface Mined Wetlands and Natural Wetlands in Southern Illinois by B. Borries, K.W.J. Williard, J. Schoonover and S. Indorante (STUDENT) Pg. 12	Control of Water-soluble Metals and Revegetation of Acidic Mine Waste by Soil Remediation by S.R. Jennings and D.R. Neuman Pg. 58	Geochemical Properties of Weathered Soils and Underlying Overburden of the Pottsville Group in Central Appalachia by D.K. Johnson and W.L. Daniels (STUDENT) Pg. 60
1:30 – 2:00 pm	Comparative Analysis of Multiple Softwares Used in Aiding Geomorphic Reclamation by K. Brown Pg. 15	Field Trial of a Pulsed Limestone Diversion Well by P.L. Sibrell, C. Denholm and M.H. Dunn Pg.103	Investigating Sagebrush Reclamation Success for Bentonite Mined Areas in the Big Horn Basin, WY by Z J. Liesenfeld, P.D. Stahl and L.C. King (STUDENT) Pg. 69	Predicting Total Dissolved Solids Release from Overburden in Appalachian Coal Fields by J. Odenheimer, J. Skousen and L.M. McDonald (STUDENT) Pg. 83
2:00 – 2:30 pm	High Resolution LiDAR as a Base for Designing Geomorphic Reclamation Schemes for Surface Mines in the Central Pg.121 Appalachians by C. Yuill	Infiltration in Reconstructed Channels by K. Bramlett, J.C. Stormont and M. Stone (STUDENT) Pg. 14	Rehabilitation Ironstones Outcrops Area Degraded by the Iron Mining Activity on Minas Gerais State-Brazil by L.A. Lobo de Rexenda, L.E. Dias, I.R. de Assis and R. Braga	Leaching Potentials of Coal Spoil: Effects of Rock Type and Degree of Weathering by Z. Orndorff and W.L. Daniels Pg. 84
2:30 – 3:00 pm	Interactive Discussion	Geochemical Modeling of Uranyl Sorption at a Colorado Test Site by K.M. Brown Pg. 16	Pg. 96 SOILS AND OVERBURDEN TECHNICAL DIVISION MEETING	Use of Spoil as a Low Permeable Barrier by M. da Rosa, C.T. Agouridis and R.C. Warner (STUDENT) Pg. 26

Wednesday, June 5, 2013					
3:00 – 3:30 pm	<b>Break</b> – Salons ABC				
	Soil-Plant Relationships Salon D	Assessment & Permitting Evaluations Salon E	<b>Geochemical Processes</b> Salon F-G		
	Moderator – Stephen Williams	Moderator – Anna Krzyszowska-Waitkus	Moderator – Jerry Schuman		
3:30 – 4:00 pm	Reclamation of Mined Land with Switchgrass, Miscanthus, and Arundo for Biofuel Production by J. Skousen and B. Gutta Pg.104	Federal Agency Benefit Analysis of a Remediation Monitoring tool for Abandoned Mine Lands by L.M. Barber Franklin and D.R. Neuman Pg. 40	Changes in Spoil Electrical Conductivity (EC) and Sodium Adsorption Ration (SAR) Following Irrigation at a Mine Site in Northwestern New Mexico by S. Perkins, K. Applegate, B. Musslewhite, B. Buchanan, and T.H. Brown Pg.90		
4:00 – 4:30 pm	Ectomycorrhizal Species Beneficial for Plant Establishment on Abandoned Mine Lands by S. Hiremath, K. Lehtoma and J.M. Bauman Pg. 49	Transitioning From Clean Water Act Nationwide Permitting to Individual Permitting by M.P. Owens and C.K. Applegate Pg. 85	Coal Combustion By-Products Disposal Practices at a Surface Coal Mine in New Mexico: Leachate and Groundwater Quality Study by C. Parker, K. Hart, R. Webb, B. Thomson, J. Stormont and M. Stone Pg. 87		
4:30 – 5:00 pm	GEOTECHNICAL ENGINEERING/ TAILINGS TECHNICAL DIVISION MEETING	Using Texas Rapid Assessment Method for Pre-mine and Post-mine Wetland Evaluations by E.D. Bearden and J.D. Wooten Pg. 10	LAND USE PLANNING TECHNICAL DIVISION MEETING		
4:30 – 5:30 pm	Happy hour, Hilton shuttle service to Wyoming Territorial Park begins at 5:00 pm				
5:30 – 10:00 pm	Social, Wyoming Territorial Park, 975 Snowy Range Road				

Thursday, June 6, 2013				
6:30 – 9:00 am	Breakfast – Salons ABC			
	Evaluation of Reclamation Success Salon D	Methods for Evaluating Revegetation Salon E	Mine Water Treatment Salon FG	
	Moderator – Vern Pfannenstiel	Moderator – Lyle King	Moderator – Bob Nairn	
8:00 – 8:30 am	Is the Definition of Scale the Key to our Understanding and Delivery of the Components of Structure, Diversity and Function in the Restoration of Ecosystems? By R.N. Humphries Pg. 55	Fitness More Than Diversity Guides Vegetational Recovery by R.A. Prodgers Pg. 93	A Study on the Possibility of Passively Treating a Heap Leach Pad Drain Down Solution by A.M. Moderski, J.J. Gusek, C. Bucknam, C. Hager and T.R. Wildeman Pg. 77	
8:30 – 9:00 am	Development of a Spodumene (Lithium) Mine on Agricultural Land in the Southwest of Western Australia by K. Lindbeck and B. Clark Pg. 71	Vegetation Inventory and Survey Methods; A Reclamation Tool by M.L. Pokorny, D.R. Neuman, K. Edwards and P.D. Smith	Bench-Scale Treatability Testing for <i>In Situ</i> Bioremediation of Mining-Influenced Water by N.T. Smith, N.A. Anton, D.J. Reisman, M.R. Nelson, A.K. Frandsen, R.L. Olsen and W.A. Rosche Pg.105	
9:00 – 9:30 am	Reclamation of Two Coal Mines in Mongolia: The Eren Mine and the Planned Tavan Tolgoi Mine by S.E. Williams, V. Pfannenstiel and A. Jalsrai Pg. 119	Comparison of Vegetation Cover vs. Precipitation on a Reclaimed Coal Mine in Northeastern Wyoming by D. Gardner and B. Schladweiler Pg. 43	Antimony Removal From Mine Water Using Adsorbent Media by D.T. Klempel Pg. 62	

Thursday, June 6	, 2013		
9:30 – 10:00 am	The Contribution of Active Surface Mines in the Conservation of Lower Plant Communities in the South Wales Coalfield, United Kingdom by R.N. Humphries Pg.54	Long-term Comparison of Vegetation Reference Area on Reclaimed Coal Mines in Northeastern Wyoming by B.K. Schladweiler Pg.101	A Short History of Pyrite and Acid Rock Drainage: An Engineer's Perspective of ARD by J.J. Gusek Pg. 45
10:00 – 10:30 am	<b>Break</b> – Salons ABC		
	Evaluation of Reclamation Success Salon D	Long-term Mine Land Reclamation in Australia Salon E	Remediation Problems for Reclamation Salon FG
	Moderator - Vern Pfannenstiel	Moderator – Neil Humphries	Moderator – Bob Nairn
10:30 – 11:00 am	Using The RQ-11 Raven A and the T-Hawk for Oversight Inspections of Surface Coal Mines in West Virginia by N.L. Carter, L.J. Monette and D.T. Beaman Pg. 21	How far have we come? A Reflection of Rehabilitation Research in Australia over the Past Two Decades by D.R. Mulligan Pg. 78	Co-Treatment of Acid Mine Drainage with Municipal Wastewater using the Activated Sludge Process: Impacts on Wastewater Treatment Performance by T.A. Hughes and N.F. GrayPg.53
11:00 – 11:30 am	Field Direct, A Field Inspection Application Designed to Improve Data Integrity and Accessibility for Management Oversight by K. Ward Pg.116	Developments in Mine Closure and Integration with Operations in Australia by H.W.B. Lacy Pg. 67	Case Study: Utilizing Paste Technology for Reclamation of the Ute Ulay Upper Tailings Impoundments, Lake City, Colorado by T. Tafi Pg.111
11:30 am – 12:00 pm	Effectiveness of Commercial Compost Soil Amendment in Montana upland and Riparian Revegetation by R.A. Prodgers Pg. 94	The 8 <sup>th</sup> Year of the International Mine Closure Conferences: Its Positive Influences on Effective Mine Closure, Completion and Reclamation in Australia by H.W.B. Lacy Pg. 66	Remediation of the Milltown Sediments in Montana by D. Neuman, F. Hons, T. Moore, H. Shahandeh, R. Loeppert and C. Bangira Pg. 82
12:00 – 2:00 pm	ASMR Awards Luncheon – Sa	lon ABCD, photos of award recipie	ents will take place after luncheon.
	Innovations in Reclamation/Restoration Salon D	Mine Modeling & Reclamation Salon C	Special Reclamation Challenges Garden Ballroom
	Moderator – Calvin Strom	Moderator – Jessica Odenheimer	Moderator – Stuart Jennings
2:00 – 2:30 pm	Geotechnical-Geophysical Void mapping and Foamed-Sand Backfilling of the Rapson Coal Mine, Colorado Springs, Colorado – Case Study by K. Hanna, J. Pg.46 Pfeiffer, S. Hodges, D. Dunham, R. Palladino and A. Amundson	Azurite Mine - A CERCLA Removal Action Case Study by D.G. Wasley Pg. 117	Surface Reclamation of the Captain Jack Mill Superfund Site by N. Anton, T. Bragdon, M. Boardman, J. Jenkins and C. Van Drie Pg. 4
2:30 – 3:00 pm	Kerber Creek Restoration Project: Case Study Employing Statistical Techniques to Analyze Effects of Restoration Activities, Saguache CO by T.I. Klein, L. Archuleta, J. Willis N. Tedela and B Sanchez Pg.61	Creative Approaches To Old Reclamation Challenges by D. Close Pg. 22	Site Characterization and Evaluation of Reclamation Alternatives at the Black Pine Mine by K.T. Houck, D.J. Clary and M.R. Donner Pg. 51
3:00 – 3:30 pm	Application of Advanced Ecosystem Based Reclamation Study for a Steeply Dipping Open Pit Mine of India: A Case Study by P. Kumar and A. Horel Pg. 64	Application of Landform Grading To Reclaim a Former Wyoming Uranium Mine by J.K. Murphy and M.R. Donner Pg. 33	Ecological Restoration Plan for Abandoned Underground Coal Mine Site in Eastern China by Z. Hu, W. Xiao, Y. Zhao and F. Wang Pg . 52