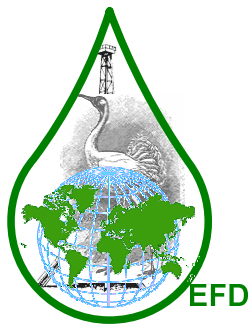


TEAM CHALLENGE: ENVIRONMENTALLY FRIENDLY DRILLING USING LOW IMPACT ACCESS PRACTICES FOR DESERT ECOSYSTEMS



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<http://sites.google.com/a/pe.tamu.edu/low-impact-access/>

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A&M EFD Low Impact Access

Search this site

Related Information

- GPRI Cooperative Low Impact Access Roads Demonstration (Pecos Research Test Center)
- Kickoff Meeting October 9, 2008
- Aerial View of Test Site
- Field Trip February 18th, 2009
- Minimizing Surface Impacts by Optimization of O&G Facilities
- Dura Base Composite Mats
- Inland Environmental Waste Materials Recycling - "Firmus" Technology
- Timeline for Project Sitemap

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Low Impact Access Projects within the EFD Program

The impact of access roads and drilling pads has been identified by the Environmentally Friendly Drilling Program (EFD) as one of the major problems to be managed when conducting oil and gas operations in environmentally sensitive areas. Since 2005 the EFD program has been identifying technology and sponsoring research in reducing surface impact. Three major projects are underway specifically addressing such technology.

1. The "Disappearing Road Competition" is a yearly nation-wide scholastic competition sponsored by Halliburton to create a new concept of moving men and materials to and from well sites. A brief description of this year's awards is attached. From this program will come new ways to move across the landscape in a minimal way. <http://sites.google.com/a/pe.tamu.edu/disappearing-roads-competition/>
2. The Research Partnership to Secure Energy of America (RPSEA) <http://www.rpsea.org> Unconventional Oil & Gas Development (Environmental Issues) is funding a new project by Texas A&M University to construct and then perform demonstrations of low impact O&G lease roads designed to reduce the environmental impact of field development in sensitive new desert ecosystems. A summary of the winning projects is attached here while more information on the site is at: [Low Impact Access Roads Demonstration \(Pecos Research Test Center\)](http://sites.google.com/a/pe.tamu.edu/low-impact-access-roads-demonstration-pecos-research-test-center/)
3. The EFD program and DOE are sponsoring a study on the feasibility of using agri-business hydrology GIS models and databases to optimize siting of O&G operations on sensitive landforms. The concept is to modify biophysical hydrologic models developed in agriculture to determine the impacts of land management on water quality and the landscape. These models could serve terrestrial exploration and development in the oil and gas industry by providing a tool to evaluate environmental impact from drilling and recovery prior to operations. Minimizing Surface Impacts by Optimization of O&G Facilities. <http://sites.google.com/a/pe.tamu.edu/optimization-models-for-surface-placement-of-o-g-drill-sites/Home?previewAsViewer=1>

See attachments.

Subpages (8): [Copper Canyon](#) [Dura Base Composite Mats](#) [Firmus Technology](#) [Inland Environmental](#) [Low Impact Access Roads Demonstration \(Pecos Research Test Center\)](#) [Minimizing Surface Impacts by Optimization of O&G Facilities](#) [Motivation](#) [Timeline for Project](#)

Attachments (3)

-  A&M DR News Release.pdf - on Aug 5, 2008 2:59 PM by David Burnett (version 1)
14k [View](#) [Download](#)
-  Public Executive Summary_2_.pdf - on Aug 5, 2008 3:11 PM by David Burnett (version 2 / [earlier versions](#))
13k [View](#) [Download](#)
-  Siting Surface Activities.pdf - on Aug 5, 2008 4:46 PM by David Burnett (version 1)
619k [View](#) [Download](#)

Low Impact Access- Three Key Programs

Disappearing Roads

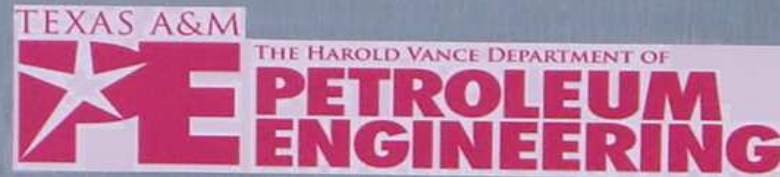
RPSEA Access Roads in Desert Ecosystems

U of Wyoming "Laydown Road"



PECOS ★ **RTC**
RESEARCH & TESTING CENTER

- 
1. Scott Environmental – recycled drill cuttings
 2. NewPark DuraBase Composite Mats
 3. U. of Wyoming “*Laydown Road*”



Texas A&M and RPSEA are developing, testing, and adopting technologies that contribute to the cost-effective construction of low impact roads.



250 ft of Scott DC Pavement



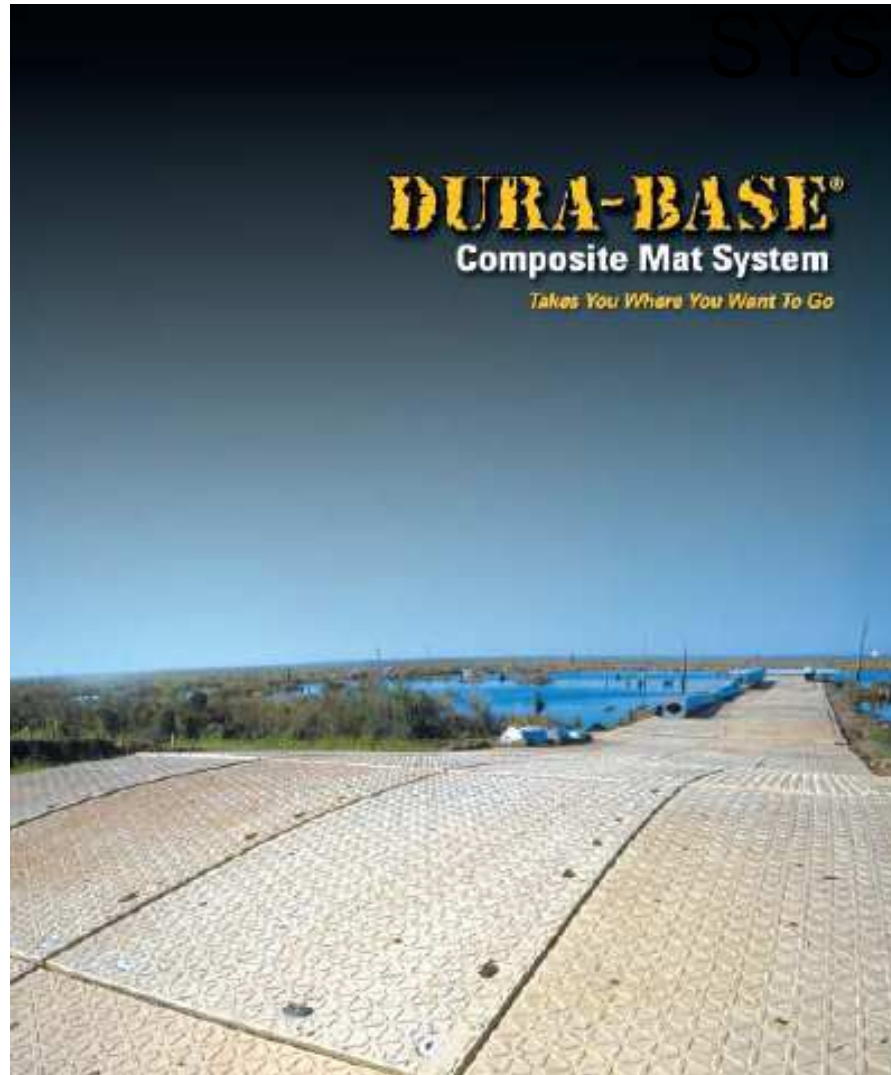
Scott Environmental Services Recycled Drill Cuttings Road Base



DR 10.30.2009 (48 hrs After Rain and Sleet Storm)



DURA-BASE® COMPOSITE MAT



DURA-BASE® Composite Mat System

Takes You Where You Want To Go

DURA-BASE® Features & Accessories

Large Mat Size: 8' x 14' (2.44 m x 4.27 m)
Small Mat Size: 8' x 7' (2.44 m x 2.13 m)

Each large mat has a nominal weight of 1,550 lbs. (407 kg)

The overlapping lip, 16 holes and footmass provide a solid interlocking system to reduce slippage and movement.

Tread pattern for improved traction for load-bearing vehicles and heavy equipment.

The overlapping joint provides a superior connection between mats.

A 1/4" (6.35 mm) thickness creates a solid barrier between the ground and work area.

Custom DRUDGE® for additional information on DURA-BASE® accessories and how each is used: assembly, use, disassembly, storage & maintenance. See the DURA-BASE® Composite Mat System. All published dimensions are nominal.

Heavy Duty Clamping Footmass

Heavy Duty Transition Assembly

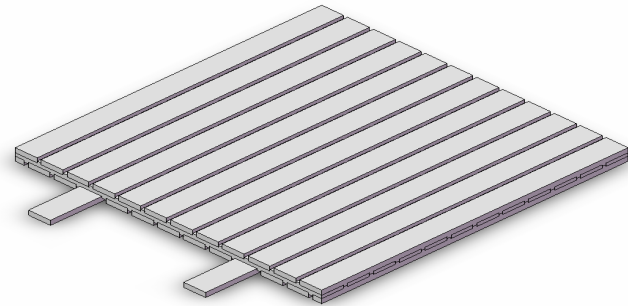
Net system follows surface contours for superior flexibility.

Operator position, centered, allowing the holes in the overlapping joint. A footmass is placed and a quarter turn of the wrench quickly exercises the assembly.

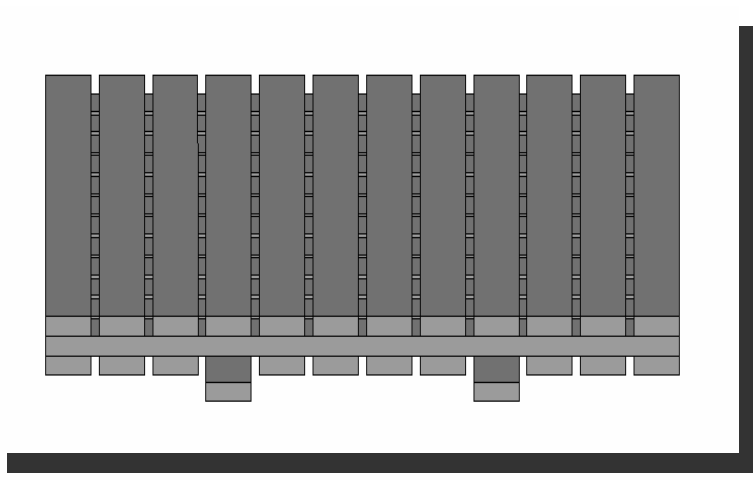
Accessories: Trencher, Mat Cap, Pry Bar, Locking Footmass, Locking Wrench.

Disappearing Roads

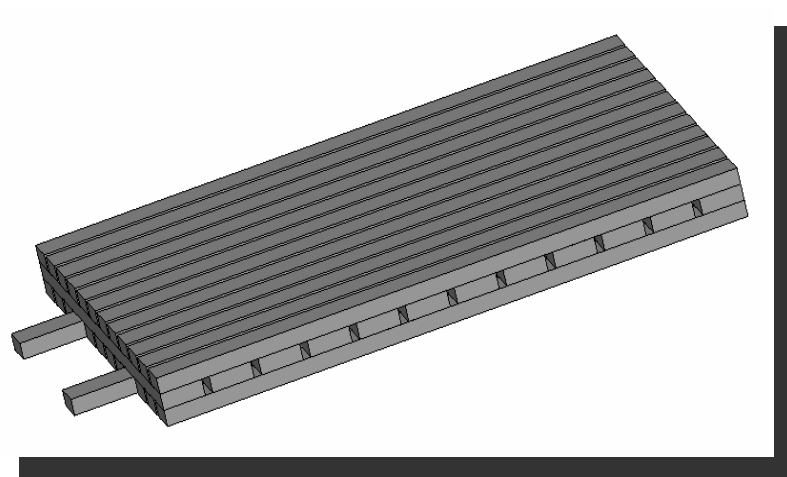
An Exploration Into Low Impact And Efficient Gas Field



University of Wyoming – Multidisciplinary Senior
class project



Front View



Isometric View

Mat Concept

- Mats similar to wood mats



- Uses current mat techniques



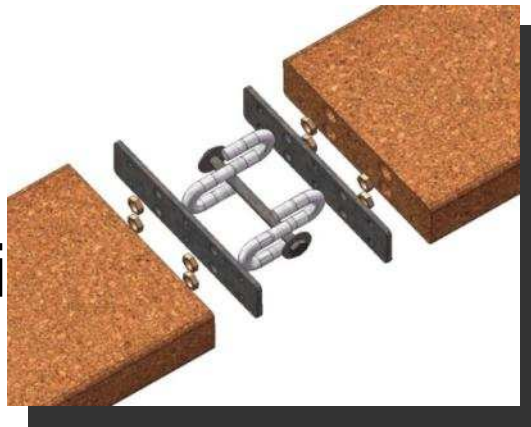
Mat Concept

- Main



- Conformable

- Hi



me



Rollout Road

- Field Test
 - Elastomer joints failed



Rollout Road Concept

The “Disappearing Road Competition” 2009-2010

<http://sites.google.com/a/pe.tamu.edu/disappearing-roads-competition/>

Department of Petroleum Engineering

Crisman Institute, GPRI

Department of Civil Engineering

Texas Transportation Institute

Texas A&M University

Houston Area Research Center

Halliburton, Year 2009-2010 Sponsor

Disappearing Roads Competition

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HOW DO YOU MAKE THIS ROAD DISAPPEAR?

Disappearing Road Entrants -

- Texas A&M Petroleum Engineering
- Auburn University
- Rose-Hulman Institute of Technology
- PolyTechnic University of New York

Thank You!
Any Questions?

