

Keystone Oil Pipeline Project
 North Dakota Public Service Commission
 Public Hearings
 July 23 -24, 2007



TransCanada – A North American Company



- ~36,500 miles of wholly owned pipeline
- Skilled, expert people
- More than 50 years of construction and operating experience
- Relationships with ~40,000 landowners
- Ideally positioned to connect new sources of supply to growing markets
- ~\$26 billion in total assets

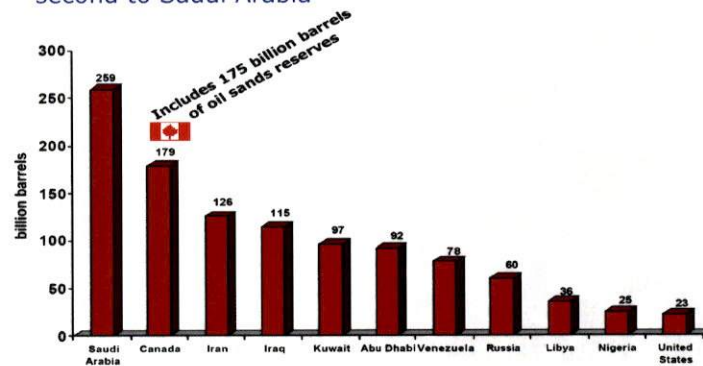


PENGAD 800-637-6989
 EXHIBIT
 T-1
 7-23-07
 Siting

Purpose of Keystone Pipeline Project



- Transport secure supply of crude oil from Canadian oil sand deposits to U.S. refineries and pipeline hubs
- Alberta has second largest crude oil reserves in the world; second to Saudi Arabia



Largest World Oil Reserves
(CAPP, 11/25/2004, Source: Oil and Gas Journal)



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System Alternatives for Serving Project Need



- Potential system alternatives to serve the need of the Keystone project were evaluated
- All identified alternatives involved construction of new pipeline facilities
- Keystone is the only alternative in a position to meet the increased demand for crude oil within the timeframe required



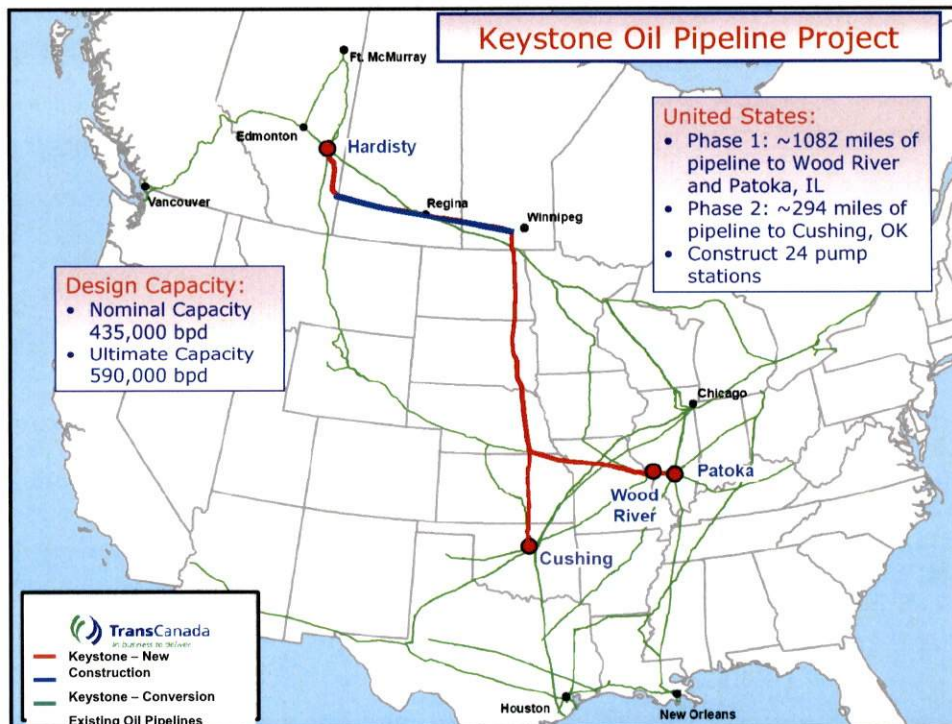
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Commercial Support for Keystone



- Shipper commitments in place
- Contracts totalling 495,000 bpd
 - Initial 340,000 bpd for Wood River and Patoka, IL
 - In-service Q4 2009
 - Additional 155,000 bpd for Cushing, OK
 - In-service Q4 2010
- Average term of 18 years

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Federal and State Regulatory Review



- U.S. Department of State –Presidential Permit Review under National Environmental Policy Act
- Review by other federal agencies (Corps Of Engineers, Fish & Wildlife Service, Department of Transportation)
- North Dakota Public Service Commission:
 - Certificate of Public Convenience and Necessity
 - Certificate of Corridor Compatibility and Route Permit
- ND Department of Health, ND Department of Transportation, and other authorities

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Keystone Project Benefits to North Dakota



Short-term construction benefits

- Food, lodging during construction (~\$3.25 million)
- Construction materials and other supplies (~\$750K)
- 10 – 15% of total construction workforce hired locally

Long-term operations benefits

- ~\$5.2 million in property tax revenues in first year; continued over life of pipeline
- Employment – direct and contract employees to support operations

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Route Selection and Environmental Impact



North Dakota Facilities



- 218 miles of 30 inch pipe
- 5 Pumping Stations
- 13 Mainline Valves
- 4 Check Valves
- 1,440 psig MAOP



Route Selection Process



- Identify Project Objectives
- Identify Control Points
- Define Study Area
- Collect Data and Solicit Input
- Identify Constraints and Opportunities
- Develop and Assess Alternatives
- Additional Input and Route Refinement



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Exclusion Areas



- Defined by ND PSC
- Areas excluded in the consideration for a Route for a transmission facility
- The proposed Route does not cross any Exclusion Areas
- One Exclusion Area within the proposed one mile ND PSC Corridor – Fort Ransom State Park – not impacted by Route

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Avoidance Areas



- Defined by ND PSC
- Areas not to be considered in routing transmission facility unless no reasonable alternative
- Tetrault Woods State Forest – Consultation with State Forest Service – Mitigation measures including Horizontal Directional Drilling (HDD)
- Residences (residence, school, place of business) within 500 feet
 - 23 potentially affected residences
 - Obtained 18 waivers
 - Re-routes resulted in avoidance of 4 residences
 - 1 residence where there is no reasonable alternative

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Environmental Review



- Comprehensive Environmental Review under NEPA
- Extensive Environmental Information filed with US State Department and provided to ND PSC
- Summary of North Dakota-Specific Environmental Impacts at Table 3 of ND PSC Corridor Application addresses:
 - Air Quality, Geology, Soils and Agricultural Production, Water Resources, Vegetation, Wildlife, Aquatic Resources, Sensitive Species, Land Use, Cultural Resources, Native American Consultation, Socioeconomic Conditions, and Public Health and Safety

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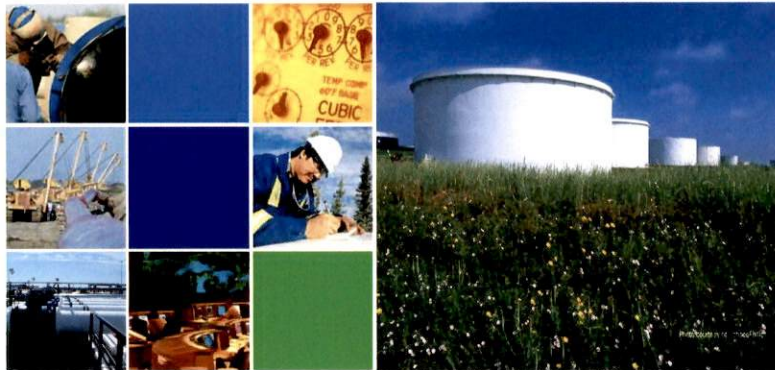


Environmental Mitigation



- Construction Mitigation and Reclamation Plan (CMR Plan)
- State Department will attach environmental mitigation conditions to minimize impacts (i.e. CMR Plan)
- PSC may also attach environmental mitigation conditions to Corridor Certificate and Route Permit
- Adoption of these construction and reclamation commitments ensures environmental impact will be minimal

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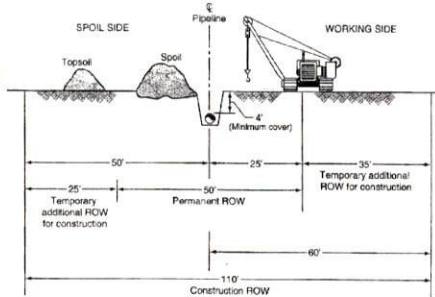


Land and Construction



Typical Land Requirements

- 110 foot construction Right-of-Way (ROW)
 - 60 foot wide temporary workspace
 - 50 foot wide permanent ROW
- Additional temporary workspace for stream, road and railroad crossings, and similar locations
- Pipe yards and contractor yards



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CMR Plan

Covers the following types of lands:

- Agricultural
- Forested
- Wetlands and Water bodies
- Range and Pasture
- Residential, Industrial and Commercial

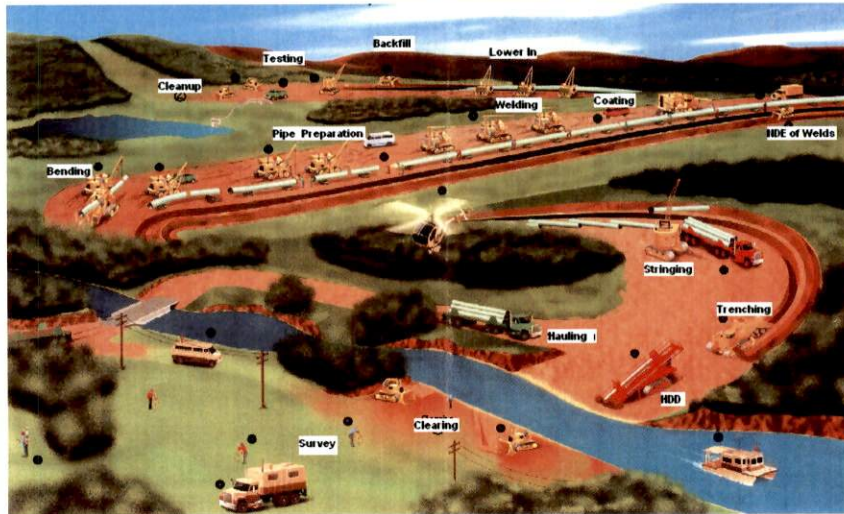
Mitigation & reclamation procedures include:

- Noise, Weed, and Dust Control
- Spill Prevention, Containment & Cleanup Of Construction Equipment
- Topsoil Removal, Storage & Replacement
- Erosion & Sediment Control
- Reclamation (De-compaction, Tilling, Rock Removal, and Seeding)

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Pipeline Construction – “Assembly Line”



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Topsoil Salvage and Storage



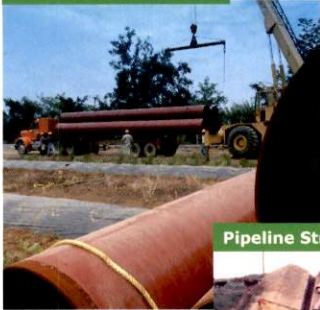
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Pipe Hauling, Stringing and Bending



Pipe Transportation



Pipeline Bending



Pipeline Stringing



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Trenching



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Welding and Welding Inspection



Welding



X-ray Inspection



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Pipe Coating, Inspection & Lowering In



Field Joint Coating



Coating Inspection



Lowering In



© 1999 TransCanada PipeLines



Backfill



Backfill



Padding



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Topsoil Replacement



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Road and Utility Crossings



Hydrovac Locating Existing Utilities



- One Call Notification
- Utility Notification
- "Day-lighting" of existing utilities
- On-site utility inspector

Utility Crossing

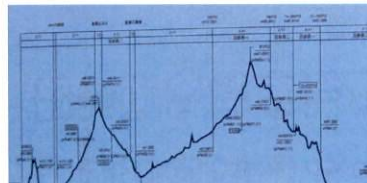


Road Crossing



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Hydrostatic Testing and Pipeline Inspection "Caliper Pig"



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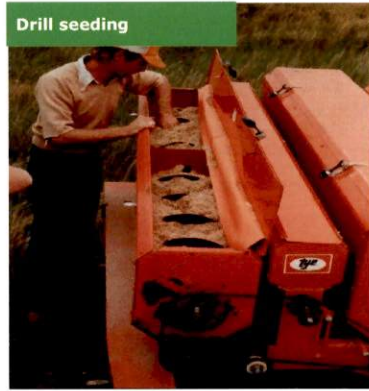
De-compaction, Rock Picking & Seeding



Subsoil De-compaction



Drill seeding



Rock picking



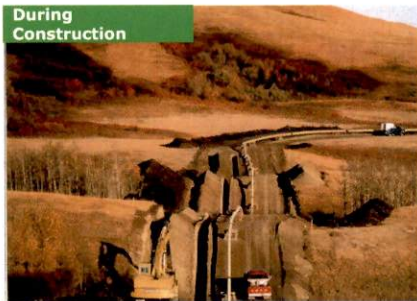
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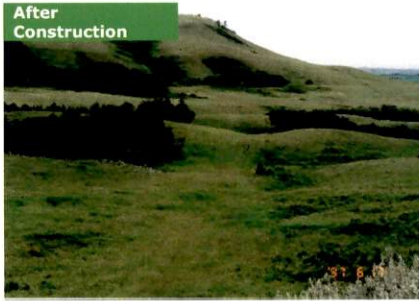
Right-Of-Way Reclamation



During Construction

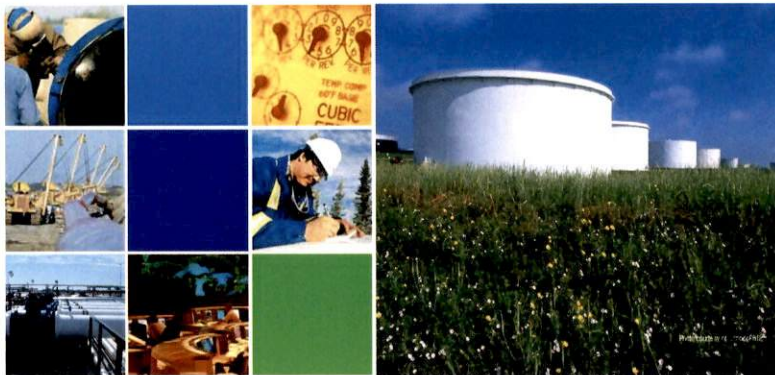


After Construction



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Pipeline Safety and Integrity



Key Regulations & Standards

- Facilities designed, constructed, tested, and operated in accordance with all applicable requirements including:
 - USDOT 49 CFR Part 195, Transportation of Hazardous Liquids by Pipeline
 - American Society of Mechanical Engineers (ASME) Standard B31.4
 - American Petroleum Institute (API) Standards
 - USDOT 49 CFR Part 194, Response Plans for Onshore Oil Pipelines



Key Design Safety Features

- Depth of Cover
- High Strength Steel Pipe
- External Protective Coatings
- Cathodic Protection (CP)
- Marker Signs
- Isolation Valves
- Supervisory Control and Data Acquisition System (SCADA)
- Leak Detection



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Pipeline Operations - SCADA and Leak Detection Systems

- Real-time remote control and monitoring of pump stations and mainline valves
- Fully redundant Primary and Backup Control Centers
- Dual Communication Systems
- Short scan cycle time (6 to 8 seconds)
- 24 hour monitoring, 7 days a week, 365 days a year
- Dedicated Leak Detection System (Computational Pipeline Monitoring System)



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Pipeline Maintenance



- Integrity Management Program that meets or exceeds federal requirements
 - In-line Inspection program
 - Investigation and Repair program
 - On-going monitoring (CP and aerial survey)



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Oil Spill Response Plan



- Preliminary Oil Spill Response Plan submitted to DOS / ND PSC
 - Pre-positioned response equipment at locations based on spill analysis and worst case discharge volume
 - Responders located along route and able to respond in compliance with 49 CFR Part 194
 - Keystone will remediate the area of a spill in coordination with federal and state agencies, including ND Department of Health
- Final Oil Spill Response Plan filed with US DOT Pipeline & Hazardous Materials Safety Administration (PHMSA) prior to line fill

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Keystone Commitment

- To design, construct and operate a safe pipeline
- To build and operate in a socially and environmentally responsible manner
- To meet or exceed industry and government standards
- To consult with all stakeholders on a regular basis
- To treat stakeholders with respect and fairness



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Keystone Contact Information

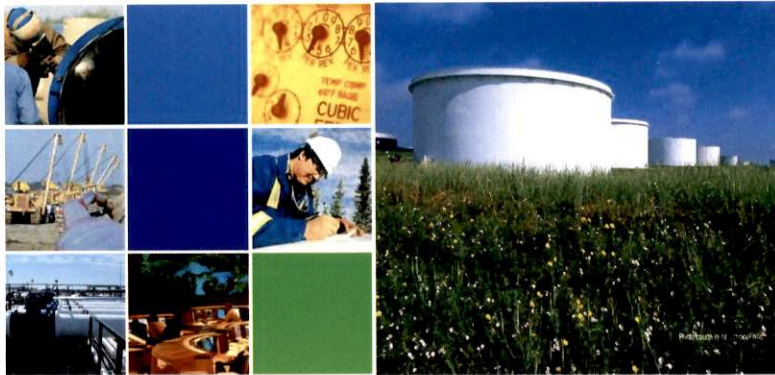
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THANK YOU

