

KEYSTONE XL PIPELINE PROJECT

0279-SD-P4-501.3-503.1-S

KEYSTONE XL PIPELINE PROJECT PIPELINE ROUTE VARIATION FORM			
1	VARIATION TYPE: Refinement: <input type="text"/> Reroute: <input checked="" type="checkbox"/> Footprint: <input type="text"/> Design: <input type="text"/> Centerline: <input checked="" type="checkbox"/> Pump Station: <input type="text"/> Valve Site: <input type="text"/> CAR: <input type="text"/>		
2	LOCATION: Sketch: <input type="text"/> Pictures: <input type="text"/> N/A State: <input type="text"/> SD County: <input type="text"/> Harding Quad Map: <input type="text"/> N/A Township: <input type="text"/> 01S Range: <input type="text"/> 28E Aerial Map: <input type="text"/> See attached map sheet Section: <input type="text"/> 06,07,08,09 Centerline: <input type="text"/> 3/14/2012 MP: <input type="text"/> 501.27 to <input type="text"/> 503.14		
3	REASON FOR ROUTE VARIATION (Please include reason for route variation): The primary reason for this reroute is to smooth out and shorten (eliminate 1 PI) the route through the area. The reroute has been proposed based on the field reconnaissance efforts.		
DETAIL ROUTE VARIATION (Please describe route variation in detail): Route variation starts near MP 501.3 and deviates ~10° southeast of CL. It extends in this direction for ~164 ft. Then it turns east for ~1,008 ft. where it crosses the drainage feature. The reroute, then continues further southeast for ~394 ft before turning east once again to parallel an existing field road. It continues in this direction for ~2,660 ft. Then it turns further southeast for ~3,714 ft. During this section it eliminates 1 PI. Lastly, the reroute turns northeast for ~ 1,856 ft. to rejoin the current CL near MP 503.1.			
ADDITIONAL IMPACTS (Please include any additional impacts which may affect cost; crossings, induction bends, etc.): No New Landowners are impacted by this route variation. Four tracts are impacted by reroute: ML-SD-JO-10320.000 (Gary Ferdig, Trustee...) ML-SD-JO-10340.000 and ML-SD-JO-10350.000 (both tracts: John W. Iverson) ML-SD-JO-10360.000 (West Rio Land & Cattle LTD)			
Is there an increase/decrease in the number of crossings? Yes <input type="text"/> No <input checked="" type="checkbox"/>			
If yes, please list: <input type="text"/>			
COST ANALYSIS (costs incurred or saved from the route variation)			
Additional length of route realignment:	<input type="text"/> -83	ft.	\$ (29,767.36) \$ 360/ft
Additional length of side-hill construction:	<input type="text"/>	ft.	\$ - \$ 19/ft
Additional length of wetland construction:	<input type="text"/>	ft.	\$ - \$ 195/ft
Additional bore length (Road, RR):	<input type="text"/>	ft.	\$ - \$ 540/ft
Additional foreign line/pipeline crossings:	<input type="text"/>	EA	\$ - \$ 30,000/EA
Additional water body crossing (streams, ponds, etc.):			
35 - 65' +	<input type="text"/>	EA	\$ - \$ 185,000/EA
10' - 19'	<input type="text"/>	EA	\$ - \$ 77,250/EA
Less than 10'	<input type="text"/>	EA	\$ - \$ 32,500/EA
Additional survey required:			
Civil:	<input type="text"/> 1.85	mile	\$ 9,274.77 \$ 5,000/mile
Cultural:	<input type="text"/> 1.85	mile	\$ 4,637.39 \$ 2,500/mile
Biological:	<input type="text"/> 1.85	mile	\$ 5,193.87 \$ 2,800/mile
Miscellaneous costs saved or added due to route variation from ADDITIONAL IMPACTS listed above: <input type="text"/>			
Overall estimated costs of the route variation: \$ <input type="text"/> (10,661.34) (See "Additional Impacts" above)			

4 **LAND / TransCanada** Tina Hall

a) Is a new landowner affected by the proposed variation? Yes No

b) Is the affected landowner/tract a possible condemnation? Yes No

c) Does proposed route variation impact Tribal Lands? Yes No

d) Does proposed route variation impact any Federal/State Lands? Yes No

-If yes, name type (i.e. USFWS, BLM, etc.):

e) Is proposed realignment outside the easement/workspace? Yes No

f) Is realignment proposed to satisfy landowner request? Yes No

-If yes, name of landowner(s)/track number(s):

g) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No

If no, please explain why:

5 **ENGINEERING/CONSTRUCTION - TransCanada** Meera Kothari

a) Maximum deviation perpendicular to proposed alignment: ft.

b) Does variation (CL) (including workspaces) falls within 500 ft. MDEQ Corridor? Yes N/A No

c) Has the centerline been staked for construction? Yes No

d) Does route variation affect HDD crossing alignment? Yes No

e) Is realignment proposed for engineering/construction reasons? Yes No

f) Will the route variation require the relocation of a pump station? Yes No

g) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No

If no, please explain why:

6 **ENVIRONMENTAL / exp** Jonathan Minton

a) Has the corridor been environmentally surveyed? Yes No

b) Has the proposed variation been environmentally surveyed? Yes No

c) Does proposed route variation impact Sage Grouse areas? Yes No

d) Does route variation impact ABB areas? Yes No

e) Was variation proposed to satisfy environmental issues? Yes No

f) Was realignment proposed to satisfy agency request? Yes No

-If yes, name of agency(s):

g) Environmental features:

Added (+): Subtracted (-):

Wetland ID # for newly impacted wetlands:

h) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No

If no, please explain why:

7 **ENGINEERING / FACILITIES AND HYDRAULICS (if applicable)** Sandra Gigovic

a) Will the route variation require the relocation of a pump station? Yes No

b) Will route variation impact hydraulics? Yes No

c) Are additional valves required at HCA's or water crossing? Yes No

d) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No

If no, please explain why:

8 **STAKEHOLDER RELATIONS / TCPL (if applicable)** Bud Andersen

a) Does the variation result in any new stakeholders? Yes No

b) Does the variation require follow-up with specific stakeholder groups? Yes No

c) Was the variation proposed to satisfy stakeholder request? Yes No

-If yes, please specify issue type (as it aligns to stakeholder database):

d) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No

If no, please explain why:

9

Originator:

Date:

10

Received by:

Date:

Fax to: ?

11

Assigned Tracking Number:

12

Filed by:

Date:

Fax to: ?

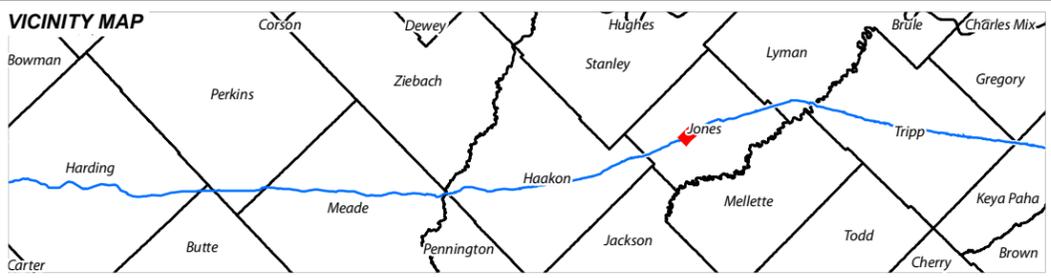
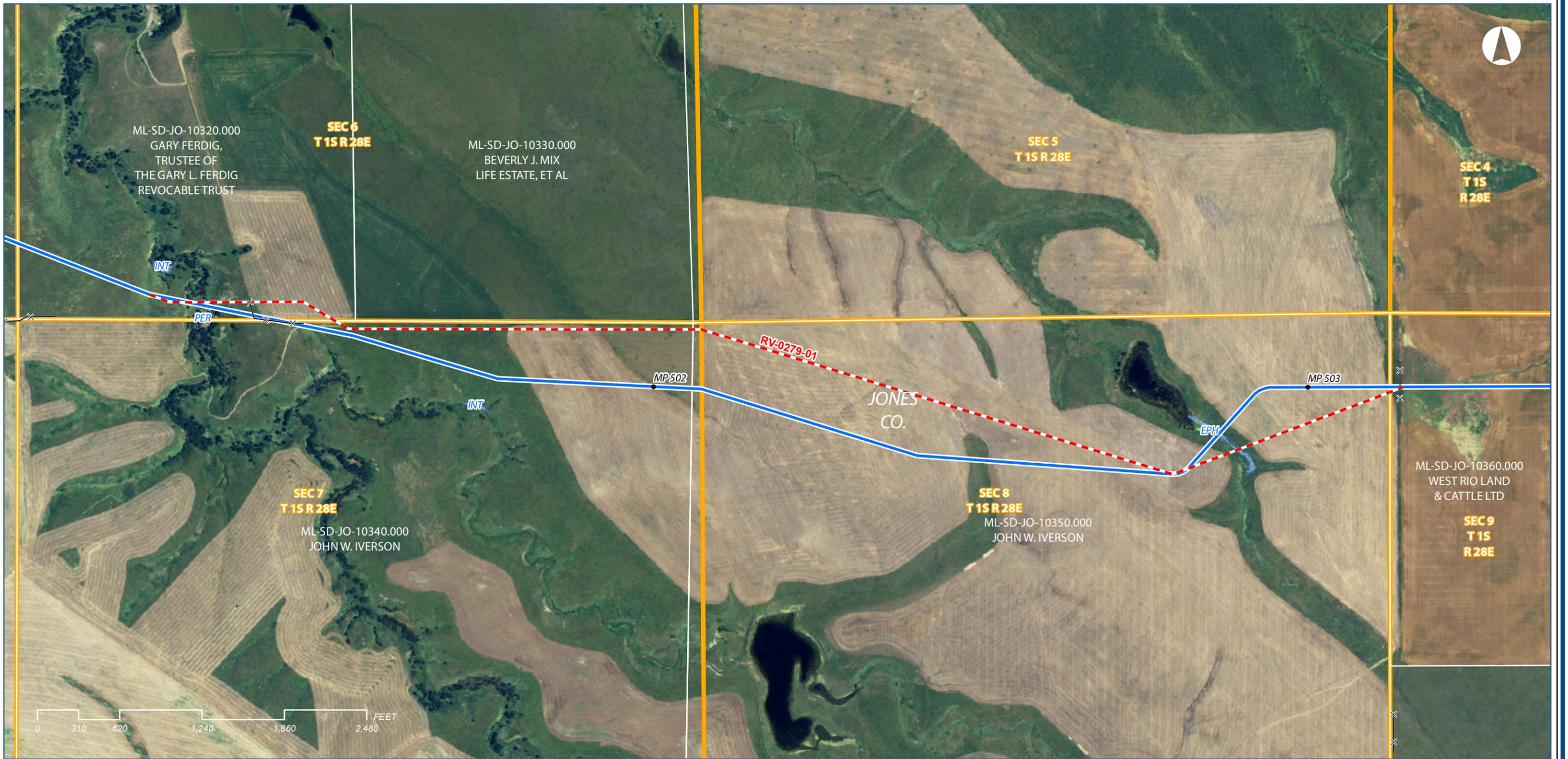
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KEYSTONE XL PIPELINE PROJECT

0279-SD-P4-501.3-503.1-S

KEYSTONE XL PIPELINE PROJECT ROUTE VARIATION AUTHORIZATION FORM		
Date: 3/20/2012	Tracking Number: 0279-SD-P4-501.3-503.1-S	MP: 501.3 to 503.1
Description: The primary reason for this reroute is to smooth out and shorten (eliminate 1 PI) the route through the area.	Originated By: Engineering	Variation Form Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
TransCanada - Land Tina Hall	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 5-14-12
Comments:	If Rejected Why?	
TransCanada - Engineering Meera Kothari	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 4-16-12
Comments:	If Rejected Why?	
Exp - Engineering Butch Wallace	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 3/22/2012
Comments:	If Rejected Why?	
Exp - Environmental Jonathan Minton	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 5-11-12
Comments: Pending Survey	If Rejected Why?	
Stantec - Risk Assessment Heidi Tillquist	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
Facilities - TransCanada Sandra Gigovic	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
TransCanada - PM (Montana) Alan Lietz	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
TransCanada - PM (South Dakota) James Odom	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
TransCanada - PM (Nebraska) Robert Bradley	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
TransCanada - Keystone XL Manager Steve Marr	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
Forward to: Tina Hall <input type="checkbox"/> Meera Kothari <input type="checkbox"/> Butch Wallace <input type="checkbox"/>	Jonathan Minton <input type="checkbox"/> Heidi Tillquist <input type="checkbox"/> Sandra Gigovic <input type="checkbox"/> Alan Lietz <input type="checkbox"/>	James Odom <input type="checkbox"/> Robert Bradley <input type="checkbox"/> Steve Marr <input type="checkbox"/>





LEGEND

- MILEPOST
- KEYSTONE XL CL (2012-03-14)
- - - PROPOSED ROUTE VARIATION
- ▭ SECTION LINE
- ACCESS ROAD
- ▭ PUMP STATION
- ⊗ VALVE
- ⊗ SURVEYED FENCE
- ▭ PROPERTY PARCEL
- ▭ CULTURAL SITE
- ▨ WETLAND
- ▨ WATERBODY
- ▭ 500FT MDEQ CORRIDOR

KEYSTONE PHASE IV, US
Proposed Route Variation 0279-01

COUNTY:	JONES	DRAWN BY:	PD
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	0	REVISION	ISSUED FOR REVIEW.
		DATE	2012-03-19
PRELIMINARY			
DATE:	2012-03-19	PROJECTION:	NAD83 UTM14 N

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DWG: XL-30-P-9200 SHEET: 1