Economic Impact of a Trans-loading Facility

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ES1 Introduction

Coast Range Investments (Coast Range) is proposing to develop a rail served business park/logistics facility as part of a large-scale, mixed-use real estate project known as Rancho Cielo in Belen, New Mexico. Currently, Coast Range is working with two prospective business park "seed tenants" that want to construct a trans-loading facility in Rancho Cielo's business park to serve oil activities in the San Juan Basin of New Mexico.

Methods to move oil to market from the San Juan Basin are at full capacity. A trans-loading facility serving the basin would provide the means of getting the oil from well-head to market and provide an incentive to drill for more oil.

Coast Range Investments contracted with New Mexico State University's Arrowhead Center to estimate the economic impact of the proposed Rancho Cielo trans-loading facility and the possible increase in oil production of 10,000 barrels per day in the San Juan Basin.

ES2 Economic and Revenue Impacts

The construction and operations of the Rancho Cielo trans-loading facility and the drilling and maintenance of enough wells to produce 10,000 barrels of oil per day together with transporting the oil will generate a total of 760 jobs and over $40 million in labor income (see Table ES2.1).

Table ES2.1

Total Impacts: Valencia and San Juan Counties

Impact	Employment	Labor Income	Value Added	Output
Direct	498.7	$29,544,021	$64,258,135	$116,605,841
Indirect	121.9	$5,425,128	$7,857,127	$14,708,321
Induced	140.3	$5,231,194	$9,790,101	$15,563,372
Total	**760.8**	**$40,200,343**	**$81,905,363**	**$146,877,534**

Author Calculations using IMPLAN Pro Version 3.

The impacts will generate indirect tax revenues to the state and local government units. Gross Receipt Tax revenues will increase by $1,841,864, $1,105,119 going to the state and $736,746 going to local government units. Personal Income Tax and Corporate Income Tax revenues will increase by $828,585 and $192,097 respectively (see Table ES2.2).

Table ES.2

Summary Table of GRT, PIT and CIT by County				
		Valencia County	**San Juan County**	**Total**
Labor Income		$10,370,628	$29,829,716	$40,200,343
GRT	**Total**	$475,152	$1,366,712	$1,841,864
	State	$285,091	$820,027	$1,105,119
	Local	$190,061	$546,685	$736,746
PIT		$213,753	$614,832	$828,585
CIT		$49,556	$142,541	$192,097

Calculations by Authors

Direct oil production related revenues will also increase (see Table ES2.3). Total state revenues will increase by $44.4 million and local government revenue will increase by $3.5 million.

Table ES2.3

Summary Table: State and Local Production Tax Revenues	
General Fund Taxes	$9.2
Rents and Royalties	$10.6
Other State Funds	$24.5
Total State Revenue	$44.4
Total Local Government Revenue	$3.5
Grand Total State and Local Revenues	$47.9

Source: Table 5.2

Includes operations for a single year

ES3 Conclusions

Coast Range Investments (Coast Range) is proposing to develop a trans-loading facility in Valencia County to serve oil activities in the San Juan Basin of New Mexico. A trans-loading facility serving the basin would provide the means of getting the oil from well-head to market and provide an incentive to drill for oil. If the facility is built and an increase in production of oil does take place, the state and local government units will be in a position to receive a substantial windfall in revenues from a variety of sources

Economic Impact of a Proposed Trans-loading Facility

1.0 Introduction:

Coast Range Investments (Coast Range) is proposing to develop a rail served business park/logistics facility as part of a large-scale, mixed-use real estate project known as Rancho Cielo in Belen, New Mexico. Currently, Coast Range is working with two prospective business park "seed tenants" that want to construct a trans-loading facility in Rancho Cielo's business park to serve oil activities in the San Juan Basin of New Mexico.

Recently introduced horizontal drilling methods have changed the expectations of the amount of oil that can be extracted from the San Juan Basin. It has been estimated that six billion barrels of oil can economically be extracted from the basin. One of the impediments to the realization of this production is that there is no existing way to move the extracted oil to market. Methods to move oil to market in the basin are at full capacity. Given this full-capacity situation, there is very little incentive to extract more oil. A trans-loading facility serving the basin would provide the means of getting the oil from well-head to market and provide an incentive to drill for oil.

Coast Range Investments has contracted with New Mexico State University's Arrowhead Center to estimate the economic impact of the proposed Rancho Cielo trans-loading facility and the possible increase in oil production in the San Juan Basin. The economic impact of the facility consists of the construction impacts and the operational impacts. The economic impact of the increase in oil production also consists of two parts, the drilling impacts and the operations impacts.

Since it can't be known how much additional oil production would occur if the trans-loading facility is built this analysis measures the impacts based on a conservative, hypothetical increase of 10,000 barrels of oil per day. Encana Corporation, one of a few companies that recently introduced horizontal drilling in the San Juan Basin, has estimated that their production alone could reach as much as 50,000 barrels per day.

The impacts reported below are linearly scalable and can be translated to reflect the impact of the amount of barrels per day actually produced.

2.0 Modeling and Data:

The estimated economic impacts of the Rancho Cielo facility occur in two distinct phases. The impacts associated with construction of the facilities are static impacts. That is, construction of the facilities is a one-time event. Construction of the project is planned to occur in 2014-15. Operational impacts occur yearly. Estimates are provided for the first year of operations. The impacts will occur for every year the center is in operation.

The estimated impacts of the 10,000 barrels of oil per day oil production for one year that could occur because of the logistic center are also estimated in two phases. The cost of drilling enough wells to produce 10,000 barrels per day for one year is the first phase. The operations of those wells are the second phase. The operational impacts will occur for the life of the wells.

Estimated impacts are presented for employment, labor income, value added, and output. These terms are defined as follows:

- Employment refers to full and part-time jobs.
- Labor income consists of employee compensation (including benefits), supplements to wages and salaries (such as employer contributions to pension funds), and proprietor's income.
- Value added refers to the change in value of a good or service during each stage of production. Gross Domestic Product is a value added concept.
- Output refers to gross industry sales or expenditures depending on the context.

Dollar impacts are presented in 2014 (constant) dollars and are not adjusted for inflation over the life of the project.

The impact estimates include the direct, indirect, and induced effects of constructing and operating the logistic center.

- Direct effects are the immediate (or first-round) consequences of a change in economic activity or policy. For example, if a firm spends $1 million on construction of a new building, the direct effect on output (sales) in the construction sector is $1 million. If 8 workers are employed on the construction of the building, then those 8 workers are also a direct effect.
- Indirect effects occur because industries purchase inputs from other industries. If a construction project requires steel beams, there will be indirect effects on iron mining and coke producing industries.
- Induced effects result from households spending the wage and salary income received by those employed directly or indirectly on the new activity.
- Total effects refer to the sum of direct, indirect, and induced effects.

All data are in 2014 dollars.

The impacts have been calculated using an economic modeling system (IMPLAN PRO Version 3.1 with the latest [2012] data and structural matrices available) developed by the Minnesota IMPLAN Group, Inc. This economic modeling software is based on input-output analysis. The key feature of an input-output model is its ability to examine relationships among industries. The model is widely used in both the public and private sectors for economic impact analysis.

3.0 Impact of Construction and Operations of the Trans-loading Facility: Valencia County

The construction costs considered in this section are the costs of preparing the site that will be the location of the trans-loading facility. They include the construction of sewer and water lines; paving, curbs, sidewalks and landscaping; interchange improvements; a rail spur; and other miscellaneous expenditures (refer to Table 3.1). For purposes of this analysis, these costs were estimated to total $26,231,715 based upon a preliminary site layout and scope of facility improvements for one tenant that Coast Range is currently working with. Updated construction cost estimates can be provided once the actual facilities are designed.

This analysis ignores the impacts from additional direct investment by tenants of the business park. These tenants will incur construct costs for their site-specific improvements such as buildings, additional rail spurs, racking and loading equipment, etc. The budget for one tenant is known to be $3.8 million (not including land cost) but the budget for the second user is unknown at this time.

Table 3.1

Cost of Trans-loading Facility (excl. Tenant Investment)	
Sewer	$2,619,186
Water	$1,523,775
Paving, curbs, sidewalks and landscaping	$3,388,737
Interchange improvements	$6,675,000
Rail spur	$6,675,000
Other (signs, drainage and joint utilities	$5,350,017
Total	$26,231,715
Costs supplied by Coast Range Inv.	

The impacts of the expenditures on the site preparation are reported in Table 3.2. The direct expenditure of $26.2 million results in the creation of 184 jobs and labor income of almost $6.7 million. Indirect and induced effects increase employment by 56 jobs and additional labor income of $1.75 million.

Table 3.2

Impacts of Trans-loading Facility Construction				
Impact	**Employment**	**Labor Income**	**Value Added**	**Output**
Direct	184.8	$6,681,963	$8,488,922	$26,231,714
Indirect	36.6	$1,212,272	$1,965,549	$3,944,268
Induced	19.3	$540,084	$1,358,430	$2,143,020
Total	240.7	$8,434,320	$11,812,901	$32,319,002
Calculations by Authors using IMPLAN Pro Version 3				

While the operational costs of the facility are not known exactly, it has been estimated that twelve to fourteen individuals will be employed at the site to accommodate the needs of one tenant that Coast

Range is currently working with. To provide a conservative impact, this analysis assumes that twelve individuals will be employed. The impacts of the operational phase of the facility are provided in Table 3.3.

The employment of twelve direct employees will result in direct labor income of over $1.4 million. Indirect and induced effects increase employment by 13 individuals and additional labor income of almost $460,000.

Table 3.3

Impacts of Trans-loading Facility Operations

Impact	Employment	Labor Income	Value Added	Output
Direct	12.0	$1,476,840	$5,311,047	$8,318,584
Indirect	8.3	$335,975	$505,750	$1,058,844
Induced	4.4	$123,493	$310,069	$489,335
Total	24.7	$1,936,308	$6,126,866	$9,866,764

Calculations by Authors using IMPLAN Pro Version 3

4.0 Impacts of Oil Production, Transportation and Operations: San Juan County

This section estimates the impacts of oil production, transportation and on-going operations and maintenance of wells made possible by the existence of the trans-loading facility. As noted earlier, there is no present way to transport additional oil that could be produced in the San Juan Basin to market in a cost effective manner. All other facilities are at capacity.

The estimated impacts were calculated assuming production of 10,000 barrels of oil per day, but future production could be as high as 50,000 barrels per day, or more according to producers that are active in the basin. The impacts are linear and can be increased or decreased as a proportion of 10,000 barrels per day.

In order to produce 10,000 barrels per day, twenty-five wells producing 400 barrels of oil per day must be in operation. Based on discussions with industry experts familiar with the San Juan basin, it has been estimated that it would take two drilling rigs, with 50 individuals per rig, to drill 25 wells in one year. Hiring 100 individuals for one year would cost $9.9 million and imply cost per well of just over $8 million.

Table 4.1 provides the impacts of drilling 25 wells in a one year period. Direct, indirect and induced jobs generated would total 175. Total labor income is estimated to be slightly more than $11.2 million.

Table 4.1

Drilling Impacts for 10,000 bbls per day for One Year				
Impact	**Employment**	**Labor Income**	**Value Added**	**Output**
Direct	100.0	$7,643,149	$34,150,277	$49,694,858
Indirect	31.9	$1,877,141	$2,589,949	$5,038,986
Induced	43.8	$1,717,352	$3,054,395	$4,862,939
Total	175.7	$11,237,643	$39,794,621	$59,596,783

Calculations using IMPLAN Pro Version 3.

A minimum of twenty-five individuals are needed to operate, maintain and monitor the twenty-five wells. Direct, indirect and induced impacts will generate 41 total jobs and total labor income of over $2.6 million.

Table 4.2

Impacts for Operating, Maintaining and Monitoring 25 Wells				
Impact	**Employment**	**Labor Income**	**Value Added**	**Output**
Direct	25.0	$1,961,219	$1,795,330	$4,438,184
Indirect	5.7	$252,807	$413,681	$792,114
Induced	10.3	$403,794	$717,694	$1,142,755
Total	41.0	$2,617,820	$2,926,706	$6,373,052

Authors Calculations using IMPLAN Pro Version 3.

Industry experts indicate that transportation costs per barrel of oil would be $7.65 to move oil an average of 120 miles from site of production to the facility. The total transportation cost to move 10,000 barrels per day for one year would be $27,922,500 per year.

Table 4.1 provides transportation impacts. A total of 278 direct, indirect and induced jobs would be generated per year. A total labor income of over $15.9 million would be generated. These transportation impacts would occur for the life of the wells.

Table 4.3

Transportation Impacts for 10,000 bbls per day for One Year				
Impact	**Employment**	**Labor Income**	**Value Added**	**Output**
Direct	176.8	$11,780,849	$14,512,560	$27,922,501
Indirect	39.4	$1,746,934	$2,382,197	$3,874,109
Induced	62.4	$2,446,470	$4,349,512	$6,925,323
Total	278.7	$15,974,253	$21,244,269	$38,721,932

Assumes 25 wells per year, 400 bbls per day production for one year, $7.65 per bbl transportation cost. Authors Calculations using IMPLAN Pro Version 3.

5.0 Taxes in New Mexico

The State of New Mexico imposes several taxes on extractive industries operating in the state. In general, these taxes include the severance tax, the emergency school tax, the resource excise tax, and a processors tax. The severance and processors taxes are imposed on the value of production less specified exemptions and deductions. In addition extractive industries are subject to the property tax. Extractive industries leasing federal or state lands also make royalty payments to the appropriate agency.

The development of the trans-loading facility and future oil production will also produce tax revenue for New Mexico indirectly. The main indirect taxes associated with the industry include the Personal Income Tax (PIT), Corporate Income Tax (CIT), and Gross Receipts Tax (GRT) paid by industry employees on goods and services purchased in the state. The PIT, CIT, and GRT account for more than three-quarters of all state tax revenue. The sales of products resulting from oil production are exempt from gross receipts taxes because the industry pays the resource excise tax.

The severance tax, processors tax, personal income tax, and corporate income tax are all state taxes and revenues go directly to the state. The gross receipts tax is composed of an overall state tax and local government tax. The state collects the tax and distributes the appropriate amounts to local government units. All tax estimates presented below are in 2014 dollars and have been estimated based on current tax rates.

5.1 Indirect Tax Impacts

The construction and operation of the trans-loading facility and drilling and production of oil will produce tax revenue for New Mexico indirectly. The main indirect taxes associated with the industry include the Personal Income Tax (PIT), Corporate Income Tax (CIT), and the Gross Receipts Tax (GRT) paid by industry employees on goods and services purchased in the state.

The tax revenue calculations in this report are based on effective tax rates averaged over the 2003 to 2012 period (latest available data). The main reason for using effective tax rates instead of statutory rates is to avoid the nearly impossible task of estimating deductions and exemptions. The effective tax rates used here represent the proportion of labor income actually paid by New Mexicans on average between 2003 and 2012. The effective tax rates used in this study are 4.582% for the Gross Receipts Tax, 2.06% for the Personal Income Tax, and .478% for the Corporate Income Tax.

The personal income tax, and corporate income tax are all state taxes and revenues go directly to the state. The gross receipts tax is composed of an overall state tax and local government tax. The state collects the tax and distributes the appropriate amounts to local government units. While there are slight differences in the proportion distributed in the various counties, it has been assumed that the distribution in this case is 60% to the state and 40% to the county. This is a rule of thumb used by the state to estimate the amount going to counties.

Table 5.1.1 provides estimates of the amounts of gross receipts tax, personal income tax and corporate income tax revenues that will be generated in Valencia County by the construction and the operations of the trans-loading facility. The construction phase will generate a total of $386,436 in Gross Receipts revenue, with $231,862 of it going to the state and $154,575 going to the county government units. The

amount of Personal Income Tax revenues and Corporate Tax revenues going to the state are $173,843 and $42,303 respectively. These are a one-time receipt of revenues during the year of construction.

During the operations phase $88,716 will be generated in Gross Receipts revenues, with $53,230 going to the state and $35,486 going to the local government units. Personal Income Tax revenue generated will total $39,910. Corporate Income Tax revenue will total $9,253. These revenues will be generated every year the facility is in operation.

Table 5.1.1

Valencia County: GRT, PIT and CIT Revenues due to Construction and Operations of Trans-Loading Facility

		Construction	Operations	Total
Labor Income		$8,434,320	$1,936,308	$10,370,628
GRT	**Total**	$386,436	$88,716	$475,152
	State	$231,862	$53,230	$285,091
	Local	$154,575	$35,486	$190,061
PIT		$173,843	$39,910	$213,753
CIT		$40,303	$9,253	$49,556

Calculations by Authors

Table 5.1.2 provides estimates of the tax revenue generated in San Juan County by the drilling of wells, operating and maintaining the wells, and the transportation of oil to trans-loading facility. These estimates are based on an increase in production of 10,000 barrels per day. If the increase was 50,000 barrels per day, these revenues would be multiplied by five.

Table 5.1.2

San Juan County: GRT, PIT and CIT Revenues due to Drilling, Operations and Transportation of 10,000 bbls of Oil per Day for One Year

		Drilling	Operations	Transportation	Total
Labor Income		$11,237,643	$2,617,820	$15,974,253	$29,829,716
GRT	**Total**	$514,877	$119,941	$731,894	$1,366,712
	State	$308,926	$71,965	$439,137	$820,027
	Local	$205,951	$47,976	$292,758	$546,685
PIT		$231,624	$53,957	$329,252	$614,832
CIT		$53,699	$12,509	$76,333	$142,541

Calculations by Authors

The drilling of the 25 wells will generate $514,877 in gross receipts, $308,926 going to the state and $205,951 going to the local government units. Personal Income Tax revenue of $231,624 and Corporate Tax revenue of $53,699 will be generated for the state.

The operation and maintenance of the wells also generated revenues. A total of $119,941 of Gross Receipts revenues will be generated. The state government will receive $71,965 and the local

government units will receive $53,957. Personal Income Tax revenue of $53,957 and Corporate Income Tax revenue of $12,509 will be generated yearly.

Transporting the oil to the trans-loading facility generates $731,894 in Gross Receipts Tax revenues. The state receives $439,137 and the local government units receive $292,252. A total of $329,252 in Personal Income Tax revenue and $76,333 in Corporate Income Tax revenue will be generated.

5.2 Direct Taxes on Oil Production

As noted above the State of New Mexico imposes several taxes on extractive industries operating in the state. In general, these taxes include the severance tax, the emergency school tax, the resource excise tax, and a processors tax. The oil industry is subject to all these taxes, usually based on value

This section of the report is based on the analysis and presentation by Dr. Thomas Clifford, Secretary of Finance and Administration, at the Annual Meeting of the IPANM (Independent Petroleum Association of New Mexico). In that presentation, he estimated the severance tax revenues received by the state in FY2013.

Table 5.2 presents Dr. Clifford's estimates for FY 2013 along with estimates of an increase in production of 10,000 barrels of oil per day results in an increase in 3.65 million barrels per year. Using the same assumptions as in his analysis, the taxable value of the 3.65 million barrels of oil would be $284.2 million, or just under 4% of the taxable value of production in FY2013. Assuming that the increase in production would be similar to the characteristics of the production in FY2013, the revenues associated with the 3.65 million barrels would be just under the 4% of the revenues associated with the FY2013 production.

Table 5.2 shows that an increase in 3.65 million barrels per year, valued at an average price of $87.11 would generate state general fund revenues of $19.9 million and other state funds of $24.5 million. The total revenue to the state would be $44.4 million. In addition, local government revenues would increase by $3.5 million. Another way of saying this is that every barrel of oil generates $12.6 in revenue to the state and $.96 in revenue to the local governments.

Table 5.2

State and Local Oil Production-Related Revenues for FY 2013 and an Increase of 10,000 bbls per Day for One Year

	FY2013	Increase of 10,000 bbls per Day for One Year
Assumptions		
Average Price	$87.11	$87.11
Annual Production Volume (millions of barrels)	92.6	3.65
Deductions as a Percent of Gross Value	10.60%	10.60%
Taxable Value (millions of dollars)	$7,211	$284.2
Revenue Source	**(Millions of $)**	**(Millions of $)**
Oil and Gas School Tax	$221.4	$8.73
Oil and Gas Conservation Tax	$12.4	$0.5
Subtotal: General Fund Taxes	**$233.8**	**$9.2**
Federal Mineral Leasing Royalties	$213.4	$8.4
State Land Office Bounuses and Rents	$56.9	$2.2
Subtotal: Rents and Royalties	$270.2	$10.6
Total: State General Fund Revenue	$505.0	$19.90
Oil and Gas Conservation Fund-Reclamation Fund	$3.0	$0.1
Oil and Gas Severance Tax	$270.4	$10.7
State Land Royalties	$348.5	$13.7
Subtotal: Other State Funds	$621.9	$24.5
Total State Revenue	**$1,126.0**	$44.4
Ad Valorem Production Tax	$75.7	$3.0
Production Equipment Tax	$13.6	$0.5
Total: Local Government Revenue	**$89.3**	$3.5
Grand Total State and Local Revenues	**$1,215.3**	$47.9

Data from a Presentation at the Annual Meeting of the IPANM by Secretary of Finance and Administration Dr. Thomas Clifford and calculations by the authors.

6.0 Summary and Conclusions

Table 6.1 presents the total impacts of facility construction and operations in Valencia County. Total employment of 265 workers and $10.37 million of labor income would be generated by the project. The impacts summarized in this section include construction and operations for a single year.

Table 6.1

Valencia County Total Impacts

Impact	Employment	Labor Income	Value Added	Output
Direct	196.8	$8,158,803	$13,799,968	$34,550,298
Indirect	44.9	$1,548,247	$2,471,299	$5,003,112
Induced	23.7	$663,577	$1,668,499	$2,632,355
Total	**265.4**	**$10,370,628**	**$17,939,767**	**$42,185,766**

Totals represent the sum of facility construction and operations.

Calculations by Authors using IMPLAN Pro Version 3

Table 6.2 presents the total impacts of well drilling, maintenance of the wells and transportation of oil in San Juan County. Total employment of 495 workers and almost $30 million of labor income would be generated.

Table 6.2

San Juan County: Total Impacts

Impact	Employment	Labor Income	Value Added	Output
Direct	301.8	$21,385,218	$50,458,167	$82,055,542
Indirect	77.0	$3,876,882	$5,385,827	$9,705,209
Induced	116.5	$4,567,616	$8,121,602	$12,931,017
Total	**495.4**	**$29,829,716**	**$63,965,596**	**$104,691,768**

Totals Represesnt sum of Tables 4.1, 4.2 and 4.3

Author Calculations using IMPLAN Pro Version 3.

Total impacts in both counties are presented in Table 6.3. A total of 760 jobs and over $40 million in labor income will be generated.

Table 6.3

Total Impacts: Valencia and San Juan Counties

Impact	Employment	Labor Income	Value Added	Output
Direct	498.7	$29,544,021	$64,258,135	$116,605,841
Indirect	121.9	$5,425,128	$7,857,127	$14,708,321
Induced	140.3	$5,231,194	$9,790,101	$15,563,372
Total	**760.8**	**$40,200,343**	**$81,905,363**	**$146,877,534**

Author Calculations using IMPLAN Pro Version 3.

Table 6.4 presents of summary of the GRT, PIT and CIT that will be generated by the project. A total of $1,841,864 of GRT will be generated. The state will receive $1,105,119 of the GRT revenues and the local government units will receive $736,746. Personal Income Tax revenues of $828,585 and Corporate Income Tax revenues of $192,097 will be generated.

Table 6.4

Summary Table of GRT, PIT and CIT by County				
		Valencia County	**San Juan County**	**Total**
Labor Income		$10,370,628	$29,829,716	$40,200,343
GRT	**Total**	$475,152	$1,366,712	$1,841,864
	State	$285,091	$820,027	$1,105,119
	Local	$190,061	$546,685	$736,746
PIT		$213,753	$614,832	$828,585
CIT		$49,556	$142,541	$192,097

Calculations by Authors

Table 6.5 presents a summary of the oil production related taxes that would be generated by an increase in oil production of 10,000 barrels per day for one year. Total state revenue from all sources would be $44.4 million and local government revenue would be $3.5 million.

Table 6.5

Summary Table: State and Local Production Tax Revenues	
General Fund Taxes	$9.2
Rents and Royalties	$10.6
Other State Funds	$24.5
Total State Revenue	$44.4
Total Local Government Revenue	$3.5
Grand Total State and Local Revenues	$47.9

Source: Table 5.2

Includes operations for a single year

Coast Range Investments (Coast Range) is proposing to develop a business park and logistics center in Valencia County that could serve a wide range of employment generators in the future. Currently, Coast Range is working with two prospective business park "seed tenants" that want to construct a trans-loading facility in Rancho Cielo's business park to serve oil activities in the San Juan Basin of New Mexico.

A trans-loading facility serving the basin would provide the means of getting the oil from well-head to market and provide an incentive to drill for oil. It has been estimated that six billion barrels of oil can be economically extracted from the basin.

This report has estimated the impacts of building and operating the Rancho Cielo trans-loading facility and estimated the impacts of drilling and maintaining enough wells to produce 10,000 barrels of oil per

day and then transporting that oil to the trans-loading facility. If the facility is built and an increase in production of oil does take place, the state and local government units will be in a position to receive a substantial windfall in revenues from a variety of sources.

About Arrowhead Center

New Mexico State University's Arrowhead Center fosters sustainable economic development by utilizing a comprehensive approach to generate jobs, wealth, and enhanced quality of life in New Mexico. The Arrowhead Center focuses on the interrelated activities of technology commercialization, entrepreneurship, economic studies/policy analysis, workforce analyses, research park development, and business incubation that lead to economic development. One of the Arrowhead Center's key strategies to accomplish its economic development mission is providing value-added solutions to unmet needs in the region, and to work collaboratively with other economic and business development organizations.

The Arrowhead Center performs its role through two mechanisms, as an organizational unit of NMSU staffed primarily by NMSU personnel, including faculty, staff, and students, and as a non-profit corporation established in 2004, governed by a Board of Directors. The Corporation's Board is comprised of academic, business, and economic development leaders, providing the direction necessary to focus resources across New Mexico State University elements on the challenges of economic development.

The Arrowhead Center performs wide-ranging services that contribute to the creation and expansion of small businesses in New Mexico. These services and products include:

- Business assistance, including business plan development
- Entrepreneurship education and training
- Analysis of policy issues affecting New Mexico
- Incubating businesses in the Arrowhead Business and Research Park
- Identification of labor and training needs associated with commercial enterprises
- Spin-off of commercially viable business concepts and technologies
- Protection of, licensing, and commercialization of NMSU intellectual property
- Connection of key players in the business and economic development process

The Arrowhead Center has been in existence since 2004, with rapid growth in services provided to faculty, staff, students, entrepreneurs, small business, investors, and venture capitalists. Since its inception, the Center has completed more than 200 business research projects involving more than 300 undergraduate and graduate students, fostered the spin-off of a university genetics testing laboratory resulting in a new for-profit corporation, and completed several state-level economic studies. The Arrowhead Center has exceeded expectations and continues to provide quality services to New Mexico.

Board of Directors of Arrowhead Center

The Arrowhead Center's Board of Directors is comprised of leaders from New Mexico State University and at-large members from across New Mexico. Each Director was selected for their expertise and, insight in creating economic opportunities for Citizens of New Mexico.

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