EVALUATION OF THE INTERESTS OF

DEREK OIL & GAS CORPORATION

IN THE LAK RANCH FIELD

WESTON COUNTY, WYOMING

(Current & Forecast Prices and Costs)

Prepared For

Derek Oil & Gas Corporation

By

Petrotech Engineering Ltd.

Effective Date

May 1, 2004

DEREK OIL & GAS CORPORATION

Lak Ranch Project Weston County, Wyoming

Index Map

Figure 1 May 2004

Table of Contents

Letter of Transmittal

Definition of Reserves Category

Independent Engineer's Consent

Certificates of Qualification

I Discussion - Introduction
LAK Ranch History

II Geology - General
Porosity

III Reserves and Development Forecast - Project Review
Reserves
Development/Production

IV Economic Forecast

Tables	Description
1.	Estimate of Crude Oil Reserves and Oil-in-Place
2.	Development and Production Forecasts
3.	Economic Parameters
4.	Individual Entity Economic Forecasts

Figures	Description
1.	Index Map
2.	Land Map
3.	Structure – Top Newcastle Beach Sand
4.	Net Oil Pay – Newcastle Beach Sand
5.	Structure – Lower Channel Sand, Newcastle Fm.
6.	Net Oil Pay – Lower Channel Sand, Newcastle Fm.

Appendices	Description
A	Schedule of Lands
B	Well List and Status
C	Individual Well Reservoir Parameters

PETROTECH ENGINEERING LTD.
7536 Manzanita Place, Burnaby, B. C., Canada V3N 4X1 Phone: (604) 525 6896
Email: johnyu@axion.net

April 28, 2004

Ref: 04 - 08

Derek Oil & Gas Corporation
1201 – 1111 West Hastings Street
Vancouver, B. C.
Canada V6E 2J3

Attention: Mr. Barry C.J. Ehrl, President & C.E.O.

Dear Sirs:

Re: Evaluation of the Interests of Derek Oil & Gas Corporation's LAK Ranch Field in Weston County, Wyoming

At your request, we have conducted a geological analysis and economic evaluation of Derek Oil & Gas Ltd. (here-in-after referred to as "Derek") interests in the LAK Ranch Modified SAGD Prospect, Weston County, Wyoming. The evaluation is prepared using an effective date of May 1, 2004. The purpose of this evaluation is for annual information filing and other corporate purposes.

Derek has entered into a farm-in and joint operating agreement with Ivanhoe Energy (USA) Inc. (Ivanhoe) of Bakersfield, California dated January 20, 2004. Under the terms of the agreement Ivanhoe will initially earn a 30% working interest by financing the re-activation of the LAK Ranch enhanced oil recovery (EOR) project and continuing study of the geology, reservoir and production methods necessary to implement a commercial EOR heavy oil project. Ivanhoe will have the option to increase interest in the project on an incremental basis; for each $1,000,000US invested in the project, Ivanhoe will earn an additional 6% working interest to a maximum 60% working interest upon a total capital investment of $5,000,000. In addition to the Ivanhoe agreement, Derek has an agreement with SEC Oil & Gas Partnership (SEC) wherein, subject to certain conditions, SEC will hold a 5% working interest in the project. In the event that each party meets the agreed to conditions, the property ownership will be Ivanhoe, 60%; SEC, 5% and Derek 35%. Furthermore to the working interest scenario described above, Derek owns a 6.0462% royalty interest in certain tracts within the project area. The total landowner and overriding royalty burdens are approximately 21%.

This evaluation uses the definition of reserves category from the Canadian Oil and Gas Evaluation Handbook and conforms to NI 51-101 (Standards of Disclosure for Oil & Gas Activities). The net cash flow is calculated at **forecast prices and costs** and **constant prices and costs** for the possible reserves, to all future time and after deduction of the capital and operating costs, royalties, severance and ad Valorem tax but before income tax. All cash flow data is in U. S. dollars. A summary of the Company's net share of possible reserves and net share of the future net revenue undiscounted and discounted at 10% is presented as follows:

Reserve Category	Gross to the Company Oil	Net to the Company Oil
Escalated & Constant Cases	(Mbbl – Heavy Oil)	(Mbbl – Heavy Oil)
Possible	4,588.9	3,627.6

Reserve Category	Present Worth Net Cash Flow (in $M) Discounted @			
	0%	10%	15%	20%
Possible **(Escalated Case)**	49,584.9	23,062.2	16,599.8	12,318.1
Possible **(Constant Case)**	74,574.5	35,764.8	26,092.2	19,595.3

Details of the reserves and cash flow forecasts are in Tables 1 and 4. The forecast case uses the price forecasts of Gilbert Lausten Jung Associates (www.glja.com – see attachment) and the constant case uses the oil price of $34.25/barrel on May 1, 2004. The gross reserve is Derek's share of production before royalties and the net reserve is Derek's share of production after deduction of royalties.

The estimated cash flow values do not represent a fair market value. Abandonment costs have been included, however facilities and environmental costs have not been included as it is assumed that the salvage value of field equipment will offset the said liabilities.

In reviewing the reserves estimates provided, it should be understood that there are inherent uncertainties and limitations with both the database available for analysis and the interpretation of such engineering and geological data. The judgements used in assessing the reserves are considered reasonable given the knowledge of the property reviewed. Pertinent information such as extent and character of ownership and all factual data submitted by Derek and Derek's representatives are believed to be true. A field inspection of the properties was not conducted due to the available data.

If additional information is required, please advise.

Respectfully Submitted,

Petrotech Engineering Ltd.

John Yu, P. Eng.

DEFINITION OF RESERVE CATEGORY

Taken from the Canadian Oil and Gas Evaluation Handbook, Volume 1 by the Society of Petroleum Evaluation Engineers (Calgary Chapter) and the Canadian Institute of Mining, Metallurgy and Petroleum (Petroleum Society), June 30, 2002.

Crude Oil: A mixture, consisting mainly of pentanes and heavier hydrocarbons that exists in the liquid phase in reservoirs and remains liquid at atmospheric pressure and temperature. Crude oil may contain sulphur and other nonhydrocarbon compounds, but does not include liquids obtained from the processing of natural gas. Classes of crude oil are often reported on the basis of density, sometimes with different meanings. Acceptable ranges are as follows:

- Light: less than 870 kg/m^3 (greater than 31.1^o API)
- Medium: 870 to 920 kg/m^3 (31.1^o API to 22.3^o API)
- Heavy: 920 to 1000 kg/m^3 (22.3^o API to 10^o API)
- Extra-heavy: greater than 1000 kg/m^3 (less than 10^o API)

Heavy or extra-heavy crude oils, as defined by the density ranges given, but with viscosities greater than 10 000 mPa.s measured at original temperature in the reservoir and atmospheric pressure, on a gas-free basis, would generally be classified as crude bitumen.

Natural Gas: A mixture of lighter hydrocarbons that exist either in the gaseous phase or in solution in crude oil in reservoirs but are gaseous at atmospheric conditions. Natural gas may contain sulphur or other non-hydrocarbon compounds.

Natural Gas Liquids: Those hydrocarbon components that can be recovered from natural gas as liquids including but not limited to, ethane, propane, butanes, pentanes plus, condensate and small quantities of nonhydrocarbons.

Reserves Categories

Reserves are estimated remaining quantities of oil and natural gas and related substances anticipated to be recoverable from know accumulations, from a given date forward, based on

- Analysis of drilling, geological, geophysical and engineering data;
- The use of established technology;
- Specified economic conditions, which are generally accepted as being reasonable, and shall be disclosed.

Reserves are classified according to the degree of certainty associated with the estimates.

a. Proved Reserves are those reserves that can be estimated with high degree of certainty to be recoverable. It is likely that the actual remaining quantities recovered will exceed the estimated proved reserves.

b. Probable Reserves are those additional reserves that are less certain to be recovered than proved reserves. It is equally likely that the actual remaining quantities recovered will be greater or less than the sum of the estimated proved + probable reserves.

c. Possible Reserves are those additional reserves that are less certain to be recovered than probable reserves. It is unlikely that the actual remaining quantities recovered will exceed the sum of the estimated proved + probable + possible reserves.

Development and Production Status

Each of the reserves categories (proved, additional, and possible) may be divided into developed and undeveloped categories.

a. Developed reserves are those reserves that are expected to be recovered from existing wells and installed facilities or, if facilities have not been installed, that would involve a low expenditure (e.g., when compared to the cost of drilling a well) to put the reserves on production. The developed category may be subdivided into producing and non-producing.

Developed producing reserves are those reserves that are expected to be recovered from completed intervals open at the time of the estimate. These reserves may be currently producing or shut in, they must have previously been on production, and the date of resumption of production must be known with reasonably certainty.

Developed non-producing reserves are those reserves that either have not been on production, or have previously been on production, but are shut in, and the date of resumption of production is unknown.

b. Undeveloped Reserves are those reserves expected to be recovered from known accumulations where a significant expenditure (e.g., when compared to the cost of drilling a well) is required to render them capable of production. They must fully meet the requirements of the reserves classification (proved, probable, possible) to which they are assigned.

In multi-well pools, it may be appropriate to allocate total pool reserves between the developed and undeveloped categories or to subdivide the developed reserves for the pool between developed producing and developed non-producing. This allocation should be based on the estimator's assessment as to the reserves that will be recovered from specific wells, facilities, and completion intervals in the pool and their respective development and production status.

Levels of Certainty for Reported Reserves

The qualitative certainty levels contained in these definitions are applicable to individual Reserves Entities, which refers to the lowest level at which reserves calculations are performed, and to Reported Reserves, which refers to the highest level sum of individual entity estimates for which reserves estimates are presented. Reported Reserves should target the following levels of certainty under a specific set of economic conditions:

- At least a 90 percent probability that the quantities actually recovered will equal or exceed the estimated proved reserves;
- At least a 50 percent probability that the quantities actually recovered will equal or exceed the sum of the estimated proved + probable reserves;
- At least a 10 percent probability that the quantities actually recovered will equal or exceed the sum of the estimated proved + probable + possible reserves.

A quantitative measure of the certainty levels pertaining to estimates prepared for the various reserves categories is desirable to provide a clearer understanding of the associated risks and uncertainties. However, the majority of reserves estimates will be prepared using deterministic methods that do not provide a mathematically derived quantitative measure of probability. In principle, there should be no difference between estimates prepared using probabilistic or deterministic methods.

Crude Oil and Natural Gas Price Forecast

The price forecast (effective April 1, 2004) is taken from Gilbert Laustsen Jung Associates Ltd.'s website of www.glja.com as follows:

	West Texas Intermediate @ Cushing, Oklahoma		U.S. Gulf Coast Gas Price @ Henry Hub	
Year	Constant 2004 $ $US/bbl	Then Current $US/bbl	Constant 2004 $ $US/Mcf	Then Current $US/Mcf
1993	22.56	18.46	2.58	2.11
1994	20.62	17.18	2.33	1.94
1995	22.03	18.39	2.04	1.70
1996	25.78	21.99	2.95	2.52
1997	23.79	20.61	2.85	2.47
1998	16.38	14.42	2.45	2.16
1999	21.72	19.29	2.61	2.32
2000	33.45	30.22	4.79	4.33
2001	27.99	25.97	4.37	4.05
2002	27.40	26.08	3.53	3.36
2003	31.93	31.07	5.65	5.50
2004	34.25	34.25	5.70	5.70
2005	28.50	29.00	4.75	4.80
2006	26.25	27.00	4.35	4.50
2007	24.00	25.00	4.15	4.35
2008	23.50	25.00	4.10	4.35
2009	23.25	25.00	4.05	4.35
2010	23.25	25.50	4.05	4.40
2011	23.25	25.75	4.05	4.50
2012	23.25	26.25	4.05	4.55
2013	23.25	26.50	4.05	4.60
2014	23.25	27.00	4.05	4.70
		+1.5%/yr		+1.5%/yr

PETROLEUM ENGINEER'S CONSENT

To: British Columbia Securities Commission
Alberta Securities Commission

The undersigned firm of Petroleum Engineers of Burnaby, British Columbia, Canada, knows that it is named as having prepared a geological analysis and economic evaluation of certain interests for Derek Oil & Gas Ltd. in the LAK Ranch Field, Weston County, Wyoming, and it hereby grants its consent to the use of its name or the use of evaluation in its entirety in an annual information filing. The effective date of the above-mentioned evaluation is May 1, 2004.

Petrotech Engineering Ltd.

CERTIFICATE OF QUALIFICATION

I, JOHN YU, P. Eng., with an office at 7536 Manzanita Place, Burnaby, British Columbia hereby certify

1. That I am a Consulting Petroleum Engineer employed by Petrotech Engineering Ltd., which company has prepared a report on the interests for Derek Oil & Gas Corporation during the months of March and April 2004.

2. That Petrotech Engineering Ltd.'s officers or its employees have no direct or indirect interests, nor do they expect to receive any direct or indirect interest, in the properties or in any securities of Derek Oil & Gas Corporation.

3. That I attended the University of Alberta and that I graduated with a Bachelor of Science in Metallurgical Engineering in 1974. That I am a registered Professional Engineer in the Province of British Columbia and a member of the Society of Petroleum Engineers, and that I have in excess of twenty nine years experience in engineering studies, evaluation of oil and gas properties, drilling, completion, production and process engineering of oil and gas operations and evaluation of mineral properties in Canada, U. S. A., Guatemala, Colombia, Australia, New Zealand, China, Kazakhstan, United Arab Emirates, and Indonesia.

4. That a personal field inspection of the Company's property was not conducted due to the availability of data.

John Yu,
Professional Engineer

Reg. No. B. C. - 12068
SPE - 115979-7

CERTIFICATE OF QUALIFICATION

I, JAMES R. BRITTON, P. Geol., P. Eng. with an office at 2615 Skilift Place, West Vancouver, British Columbia hereby certify

1. That I am a Consulting Petroleum Geologist and Engineer employed by J R BRITTON & ASSOCIATES LTD, and have prepared a report for Derek Oil & Gas Corporation during the months of March and April 2004.

2. That I have no direct or indirect interest, nor do I expect to receive any direct or indirect interest, in the properties or in any securities of Derek Oil & Gas Corporation.

3. That I attended the University of Toronto and graduated with a Bachelor of Applied Science degree in Applied Geology in 1958. That I am a registered Professional Geologist in the Province of Alberta, and a registered Professional Engineer in the Province of British Columbia. I have over forty five years experience in oilfield geological studies, evaluation of oil and and gas properties, drilling, completion, and production engineering on a wide variety of areas in Canada and the U.S.A.

4. Due to the availability of data, that a field inspection of Derek's property was not conducted.

J.R. Britton,
P. Geol., P. Eng.

Reg. No. M11002 Alberta
No. 15802 B.C.

CERTIFICATE OF QUALIFICATION

I, David B. Finn, A. Sc. T. Petroleum Technologist, of 328, 5647 – 16th Avenue, Delta, British Columbia hereby certify

1. That I am a Consulting Petroleum Technologist employed by Petrotech Engineering Ltd., which company has prepared a report on the interests for Gusher Oil & Gas Ltd. during the months of March and April, 2004.

2. That Petrotech Engineering Ltd.'s officers or its employees have no direct or indirect interests, nor do they expect to receive any direct or indirect interest, in the properties or in any securities of Gusher Oil & Gas Ltd.

3. That I attended the British Columbia Institute of Technology and that I graduated with a Diploma of Engineering Technology in Natural Gas and Petroleum Technology in 1969; that I am a Registered Applied Science Technologist in the Province of British Columbia; and that I have in excess of thirty three years experience in oil and gas reservoir studies of Canadian and United States oil and gas fields, and during the last twenty five years have been directly involved in the preparation of independent oil and gas property evaluations.

4. That a personal field inspection of the Company's property was not conducted due to the availability of data.

D. B. Finn, A. Sc. T.

I Discussion

Introduction

Derek Oil & Gas Corporation (Derek) holds certain petroleum and natural gas interests in approximately 7,400 gross acres in the LAK Ranch Field, Weston County, Wyoming. It is situated on Highway 16, approximately 4.5 miles southeast of the town of Newcastle, Wyoming just west of the South Dakota Border. An Index Map is included as Figure 1. The interest acreage covers portions of Township 44N, Ranges 60-61W and includes fee and federal leases as shown on the Land Map, Figure 2. LAK Ranch is a cattle ranching area of generally flat terrain, covered by grasses and other vegetation typical of a mid continent climate. The schedule of lands is included as Appendix A.

The LAK Ranch Field is situated on the eastern edge of the Powder River Basin and is prospective of heavy napthenic oil production from the Cretaceous age Newcastle Sandstone formation. The Newcastle sand is similar to the Muddy Sand reservoirs of the producing Skull Creek and Mush Creek oil fields located about 9 miles west of LAK Ranch. The Muddy Sand reservoirs produce 30 to 32 ^{o}API napthenic crude but lie structurally deeper within the Powder River Basin. The Newcastle sands at LAK Ranch outcrop at the surface along the northern and eastern edge of the field and dips into the basin in a synclinal form to a depth of approximately 2,500 feet+ at the southern end of the property. The absence of a reservoir seal has allowed the crude to biodegrade to a 19 ^{o}API gravity oil with a high viscosity at reservoir conditions.

Commercial production of the LAK Ranch will require application of one or more non-traditional oil recovery methods. The combination of complex geology, reservoir heterogeneity, and oil quality present unique recovery challenges. As many as 33 exploratory/production wells have been drilled in the field and three separate enhanced oil recovery (EOR) pilot schemes were carried out from the 1950's to 1980's, none of which for a variety of reasons, resulted in commercial operation. Derek acquired certain interests in the LAK Ranch field in 1997 with the objective of using horizontal wells and SAGD (Steam Assisted Gravity Drainage) technology to develop the field based on successful application of the technique in heavy oil producing areas of Alberta and California. Work began on the project with the drilling of four delineation wells in November, 1997. Further delineation drilling, geological study and thermal simulation modeling culminated with the drilling of two horizontal wells in 2000. Steam generation and injection facilities were then constructed and steam injection was initiated in March 2001. Two separate steam/production cycles were carried out by the end of 2001 recovering approximately 5,000 barrels of oil, demonstrating the economic potential for development. The pilot operation identified areas requiring further technical and geological study necessary to proceed to commercial operation; therefore, in 2004 Derek established a partnership with Ivanhoe Energy, Inc., a company with extensive experience in heavy oil operations, to design, operate and develop the LAK Ranch property.

The terms of the agreement between Ivanhoe and Derek is structured such that upon an expenditure of $5,000,000U.S, Ivanhoe will have earned a 60% working interest and Derek will hold a 35% working interest in the property. Initially, Ivanhoe will hold a 30% working interest and increase participation by 6% for each $1,000,0000U.S. invested in the project. Additionally, Derek holds mineral and overriding royalty interests totaling 6.0462%.

This independent geological evaluation of the property together with the cash flow forecasts of Derek's interests is based on Ivanhoe's preliminary development model.

LAK Ranch History

The existence of oil at LAK Ranch has long been known and there have been many attempts to recover the resource since discovery. Originally, oil was recovered from hand dug "wells" in areas (Section 1, T44N, R61W) of surface oil seeps along the Newcastle outcrop as early as the 1920's. About 15 wells were drilled between 1945 and 1965, none of which recovered more than 2,000 barrels of oil. Prior to Derek's SAGD pilot, three EOR attempts were initiated to test their technical and commercial viability.

The first EOR pilot operation in the field was a solvent flood carried out by Parrent Company in 1957-58. The project was located in the northwest quarter of section 19 Twp 44N, Rge 60W, approximately 3 miles south of the Derek SAGD operation. A 1968 report by Parrent states the site was chosen based upon the presence of residual crude oil stain at the Newcastle formation outcrop at that site. A core hole at 19-1-T44N-R61W, recovered oil saturated core samples from a depth of approximately 165 feet. The formation dips 50-60 degrees striking N-10-E at the site and sand thickness in excess of 22 feet was encountered at depths from about 160 to 300 feet. A solvent consisting of approximately 100,000 gallons of a liquefied petroleum gas and gasoline mixture was injected into the center well of an inverted 4 spot triangular well configuration, at an average rate of 1,000 gallons per day. At the end of the injection phase, the production wells had filled with crude. One well, #3W produced 50 barrels of crude over a two-day period. The pilot project was halted at that time due to the death of a principal of the company and never reactivated. Though no similar pilots have been attempted since that time, it did demonstrate the technical potential of such an operation.

In 1965 Conoco Oil Company drilled 5 vertical wells in the LAK Ranch field to evaluate the Newcastle reservoir. Two wells, located in NW, NW 12-T44N-R61W were selected as a site to test the feasibility of using steam in a huff and puff type of oil recovery operation. Steam was injected into well LAK Ranch Fee 12-6 for 31days at 572^{o}F and 1,200 psig. It was produced for 34 days and recovered 1,569 barrels of water and 76 barrels of oil. Steam was injected into the well LAK Ranch 12-7 for 20 days at 575^{o}F at 1,200 to 1,300 psig. It was produced for 53 days with cumulative oil and water production of 230 and 4,296 barrels respectively. There was no soak period and only the one cycle was carried out. The flow line temperatures declined from an initial 200^{o}F to approximately 80^{o}F during the flow period. It was observed by Conoco that the facilities were under designed for the operation and that heat loss likely occurred updip of the wells. Though there is very little data available on this operation to draw any substantive conclusions, oil was produced with the limited heat applied and without the assistance of gravity drainage. The process did demonstrate the potential of production through application of heat with steam.

In the 1980's Exoil Services/Surtec conducted an independent appraisal of the application of a hot alkaline-surfactant-polymer solution flood. The injection solution produced with the oil was recycled through the reservoir. The wells were active from 1985 until 1995+ and produced a cumulative 19.1 Mstb over that period. There was no technical data found which described any attempts to improve recovery subsequent to start up in 1985. It is evident from the injection and production history of the wells that the flood fluid channeled from the start of operation. The injection/production fluid volumes match closely showing the fluid was simply circulated through the reservoir and reported water volumes were not formation water. The operation was suspended due to low oil prices and high producing water oil ratios.

II **Geology**

General

Regionally, the LAK Ranch field falls within the Osage-Fiddler Creek and Clareton-Mush Creek-Skull Creek, Newcastle sand producing trend of the eastern Powder River Basin (see Figure 2 LAK Ranch property and wells). The Lower Cretaceous Newcastle is the lithostratgraphic equivalent of the Muddy Sandstone of the Powder River Basin and "J" Sandstone of the Denver Basin and the Viking sands in the Western Sedimentary Basin of Alberta, Canada. Regional structure is dominated by convergence of the eastern edge of the Powder River Basin with the Black Hills Uplift. The boundary is delineated by two monoclines, Black Hills and Fanny Peak, which intersect at LAK Ranch. These monoclinal flexures grade from faults at depth to folds at surface outcrops (Lisenbee, 1978 and Farmer, 1981). The prominent northeast and lesser north-south and northwest lineations are postulated to be surface expressions of Precambrian shear zones, which are thought to have influenced early Cretaceous sedimentation and Newcastle channel distribution (Slack, 1981, Weimer et al). Local structural configuration caused by the intersection of the Black Hills and Fanny Peak monoclines at the LAK Ranch area is manifested as a west-southwest plunging syncline. The Newcastle outcrops at the surface along the north and eastern borders of the property. The north and eastern flanks of the syncline dip south and west at approximately 45 degrees in the subsurface for approximately a mile gradually lessening to 10 degrees into the basin.

Geological and geophysical data maintained in the Derek files pertinent to the evaluation were reviewed to estimate the extent of the heavy oil in place in the outcropping Newcastle sands reservoirs. Outcrop sections were correlated and approximately 9 miles of 20 fold vibroseismic was studied to derive two-way time structure contours on the Newcastle reflections. One 3.5 mile north-south line and three two-mile crosslines were found to tie. The seismic allows for the delineation of structure over the central portion of LAK Ranch; however, 3D seismic over the entire lease will be required to direct further exploration. Recommended coverage is a 35 meter bin over the entire property with a detailed 10 meter bin area in the N/2 of Section 12 in the area where maximum drilling has been done.

Outcrop data and surface faults were integrated with seismic faults and subsurface structure to construct a preliminary map of the Newcastle sand, integrating well data. Four maps were drawn including structure and net pays of the Upper Marine sand and Lower Channel sequence of the Newcastle formation. The structure maps are included as Figures 3 and 5. The net pay maps were used to estimate the oil in place for the LAK Ranch and adjacent areas and are presented as Figures 4 and 6.

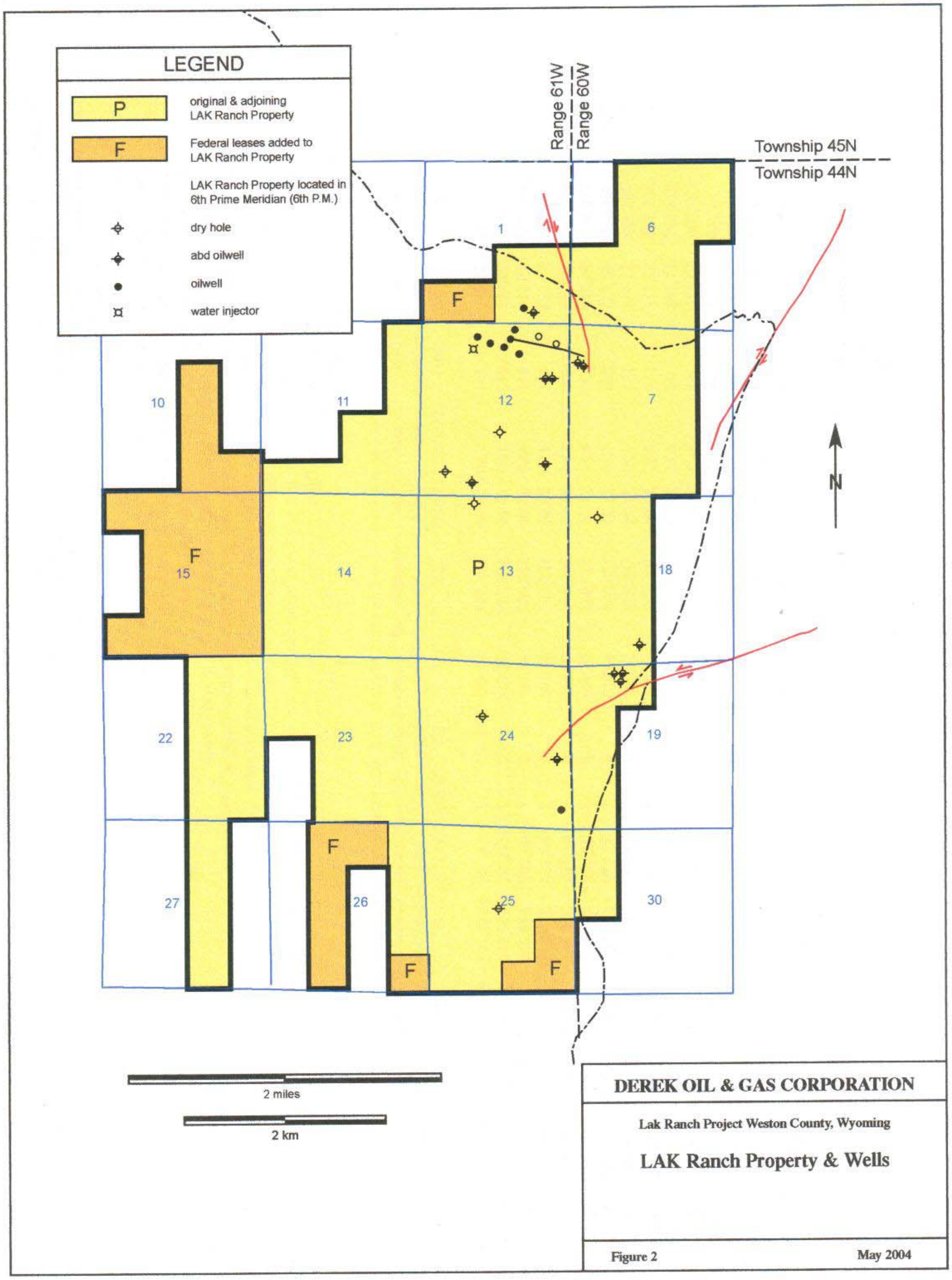
The structure map on the Newcastle top or the top of the Marine Sand shows strike of NNW in the basin area located in Sections 11, 14, 15, 22, 23, 26, and 27-T44N-R61W. The base of the Marine sand and top of the Channel sands are separated by approximately 10 to 15 feet of shale. The Channel erodes up to 70 feet into the underlying Skull Creek shale. The channel sand structure conforms to that of the Marine sand. Basinal dips are about 130 feet per mile to the SW. Following the outcrop, a structural ramp strikes N-S through Sections 25, 24 and 13 T44N-R61W and W/2 Sections 18 and 7-T44N-R60W. The ramp dips West and NW at 2,500 feet per mile; the ramp structure turns E-W in the N/2-12, N/2-11 and N/2-10-T44N-R61W where the ramp dips to the south at 2,850 ft per mile. Seismic suggest that the compressional hinge line between the basin and ramp is caused by deep seated "flower structures" where the faulting is caused by Black Hills uplift to the east. Both radial and circumferential faults are expected to have occurred in the late Cretaceous (70 million years). The age of the Newcastle sediments are thought to be about 120 million years age.

Across the mapped area, the Newcastle isopach varies from zero to 104 feet of section. The thickest section outcrop in the SE of SE of Section 1-44N R61W, where the upper marine sand is absent but the lower channel has 73 feet of sand in a two-cycle deposition sequence. Where the gross isopach is 70 to 90 feet, there is usually a thick 50 feet channel sand below a thin beach sand which tends to be thin over the thick channel. There are two reservoir quality sand channels trending NNW. The westerly channel is identified by seismic data in the E/2 section 14-T44N-R61W and present in wells drilled in W/2 Section 12-T44N-R61W. Two oil stained outcrop intervals located in Sections 9 and 10 –T44N-R61W show 27 feet and 35 feet of sand thickness. In the E/2 Section 2 and W/2 Section 1-T44N-R61W, the channel is expected to drain to the north following the main channel. This channel also trends virtually N-S with the thicker 70 feet+ sections to the north. It probably drains north and turns west following outcrop data north of the eroded edge. This conclusion is supported by data from wells located in Sections 7, 18-T44N-R60W and Section 24-T44N-R61W as well as outcrop section #1 located in NW/4 Section 31 T44N-R60W. The easterly channel contains the bulk of future possible oil reserves with a 70 feet+ thick channel which could easily be delineated with 3D seismic.

The limit of the Upper Marine sandstones are shown by the outcrop at the east and north of the LAK Ranch, but also the sand changes from 10 ft. to zero in Sections 6, 7, 18, and 19-T44N-R60W where onlap occurs. The sand shales out along a NNW trend to the west in Sections 10, 15, 22, and 27 T44N-R61W showing that the beach sand is only 2.5 miles wide. There is a N-S thinning (3 to 5 feet) on the west half of Section 12-T44N-R61W due to thicks or highs on the underlying channel series; alternatively, the thinning may be caused by an inter beach or lagoonal deposition. Note, the thickest 30 feet beach extends to the NNW through Sections 2 and 3-T44N-R61W and Sections 34, 33, and 28-T45N-R61W, close to the outcrop east of the town of Newcastle. All of the outcrops are stained with oil. Cores suggest an oil saturation of 50 to 55% heavy oil. The upper beach and lower Channel sands have been perforated and acidized in a number of wells; no gas or light ends were evident, likely as a result of biodegration due to fresh water influx.

Porosity

Porosity values measured from well logs and core analyses are consistent and show a range of 18% to 24% with an average of 22%. The Upper Beach sand is well sorted so that permeability should be constant whereas the lower channel (porosity also averages approximately 22%) may contain bentonite, montmorillonite and illite clays, which render the fringe or finger channels tight. The channel sands exhibit extensive damage on logs due to mud filtrate invasion. Permeability is quite variable in the channel deposition. Future horizontal drilling should be located along the thickest channel development to access heterogeneous reservoir. This type of reservoir is expected because of faulting with calcite cementation or shaleouts from one bed to another along the channel sand. This is evident in the example of the 12-4-T44N-R61W well where the Lower Channel sand at 100 feet has a 21-foot section with 18% porosity; approximately 106,000 barrels of water was injected from November 1984 to February 1986 and increased to 1,300,000 barrels by July 2001 at which time it plugged off.



LEGEND
P
original & adjoining LAK Ranch Property
F
Federal leases added to LAK Ranch Property
LAK Ranch Property located in 6th Prime Meridian (6th P.M.)
dry hole
abd oilwell
oilwell
water injector
Range 61W
Range 60W
Township 45N
Township 44N
1
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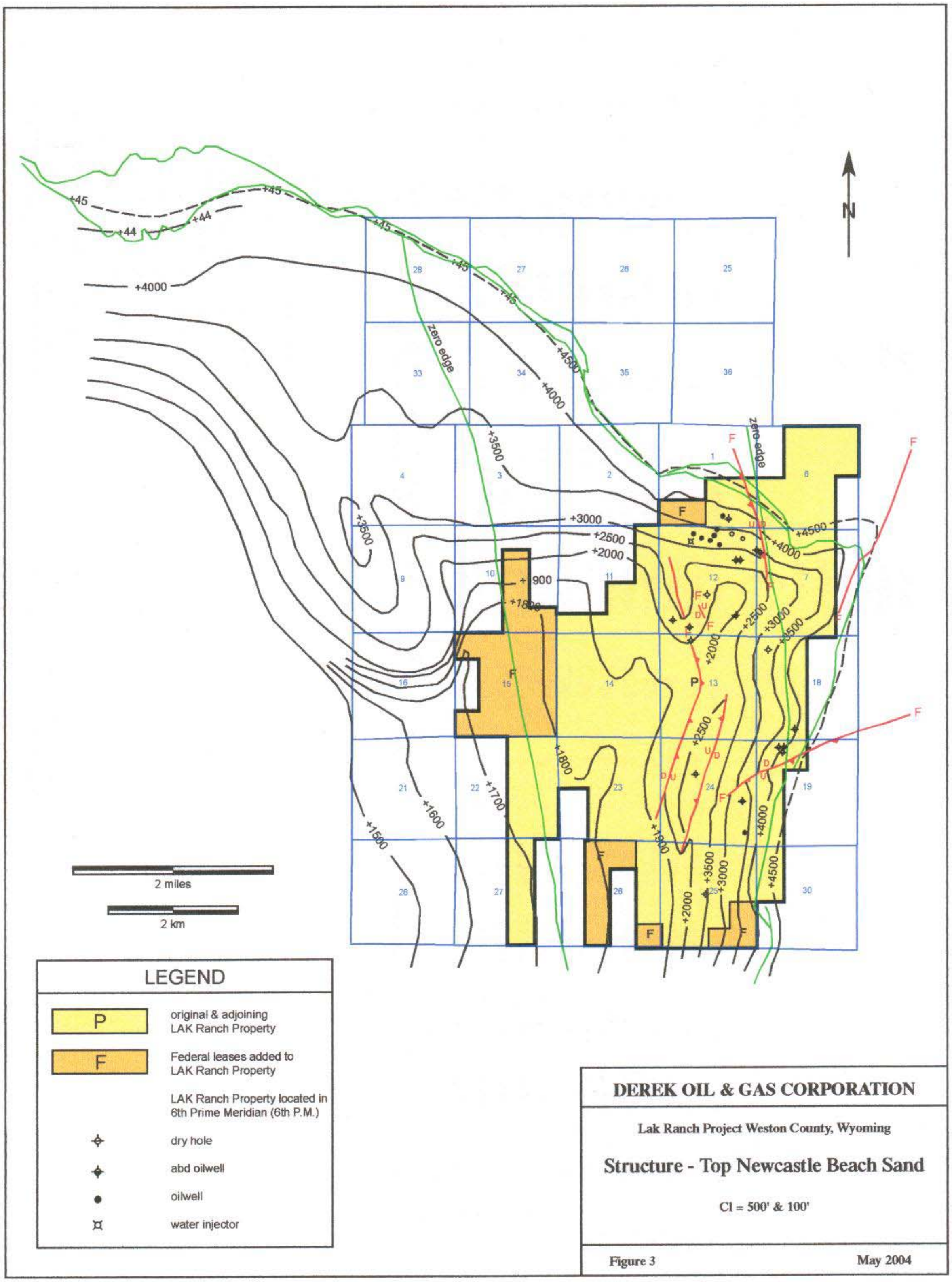
DEREK OIL & GAS CORPORATION
Lak Ranch Project Weston County, Wyoming
LAK Ranch Property & Wells
Figure 2
May 2004



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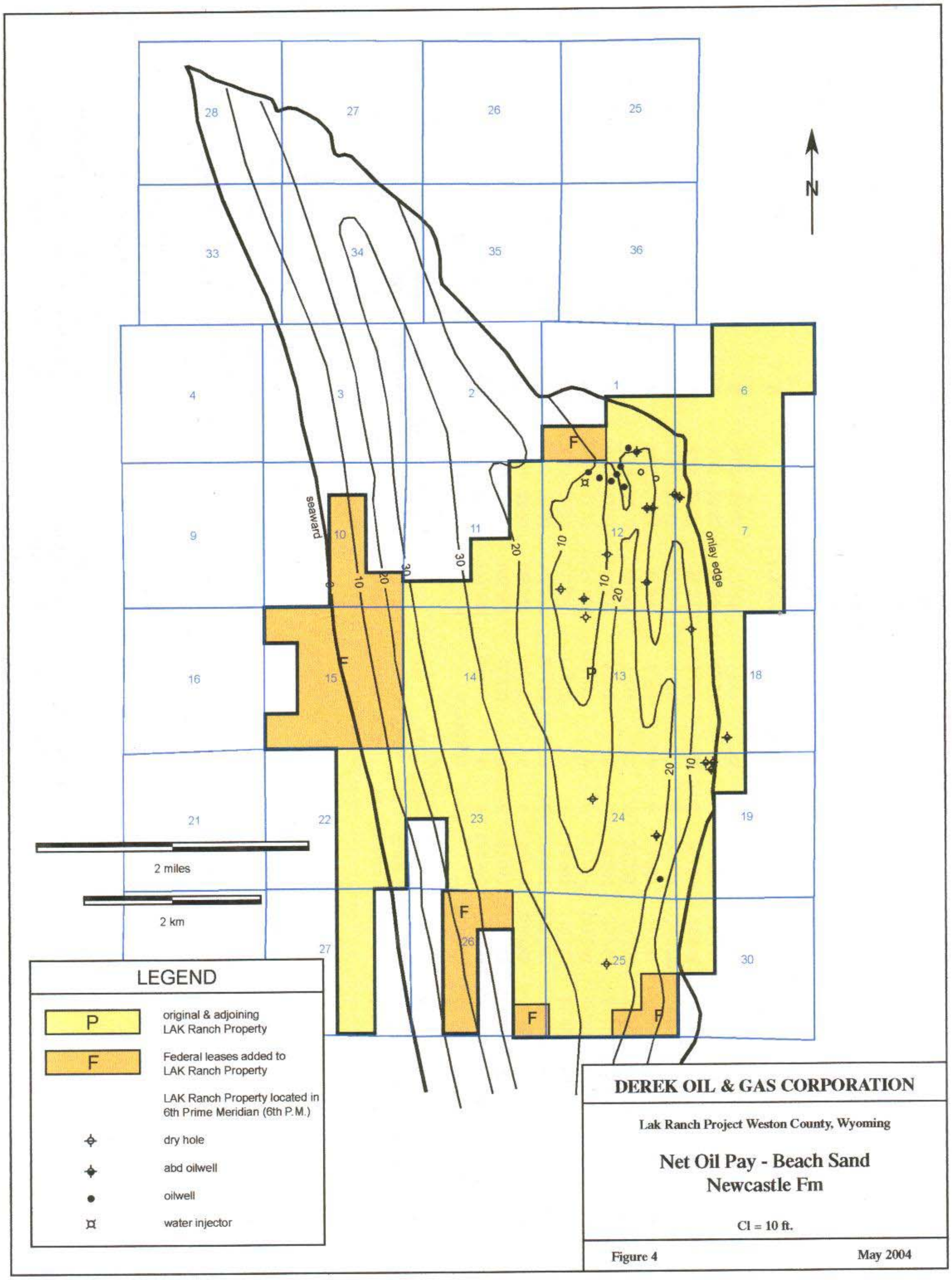
2 km
LEGEND
P original & adjoining LAK Ranch Property
F Federal leases added to LAK Ranch Property
LAK Ranch Property located in 6th Prime Meridian (6th P.M.)
dry hole
abd oilwell
oilwell
water injector
DEREK OIL & GAS CORPORATION
Lak Ranch Project Weston County, Wyoming
Structure - Top Newcastle Beach Sand
CI = 500' & 100'
Figure 3
May 2004



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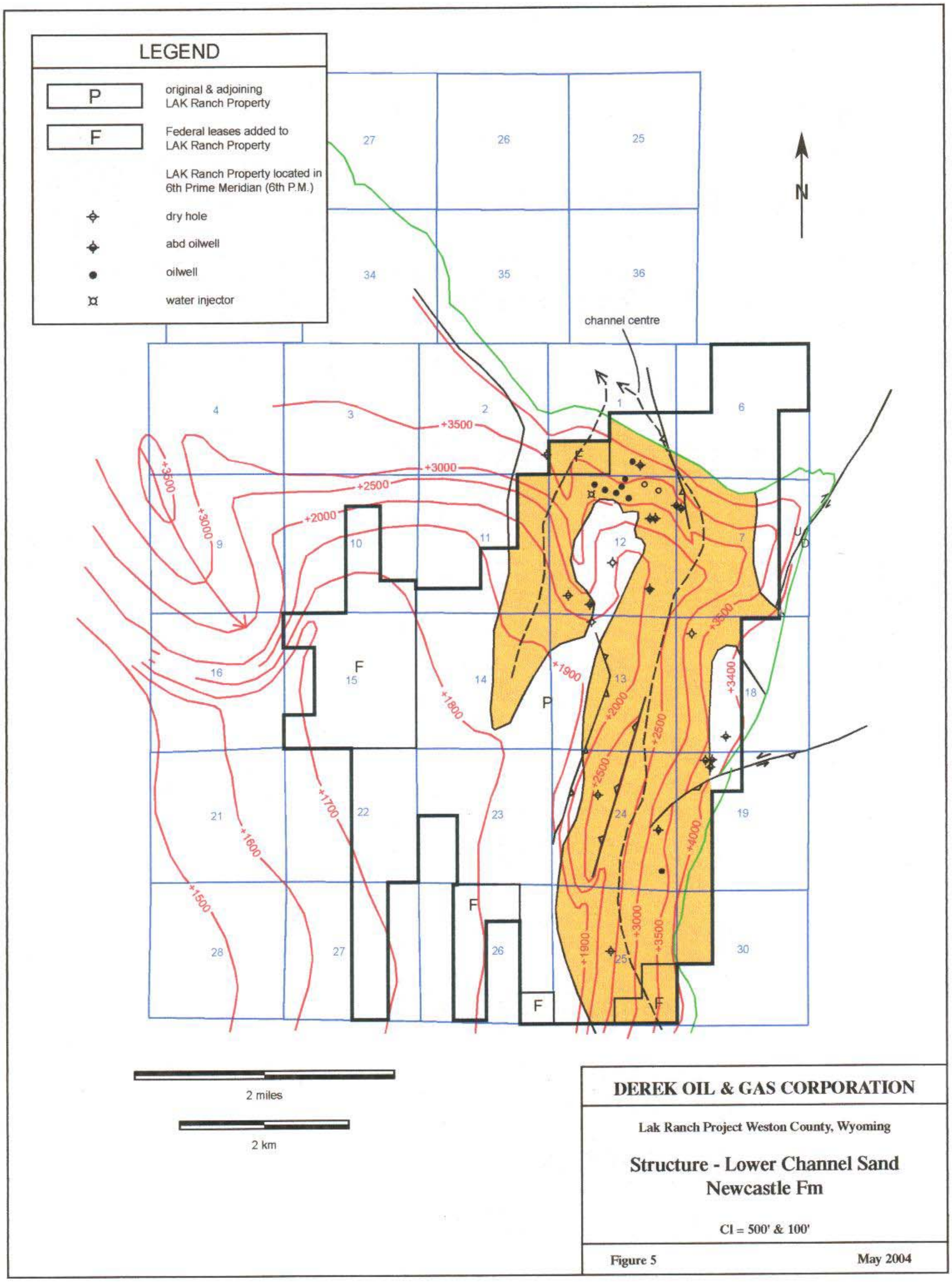
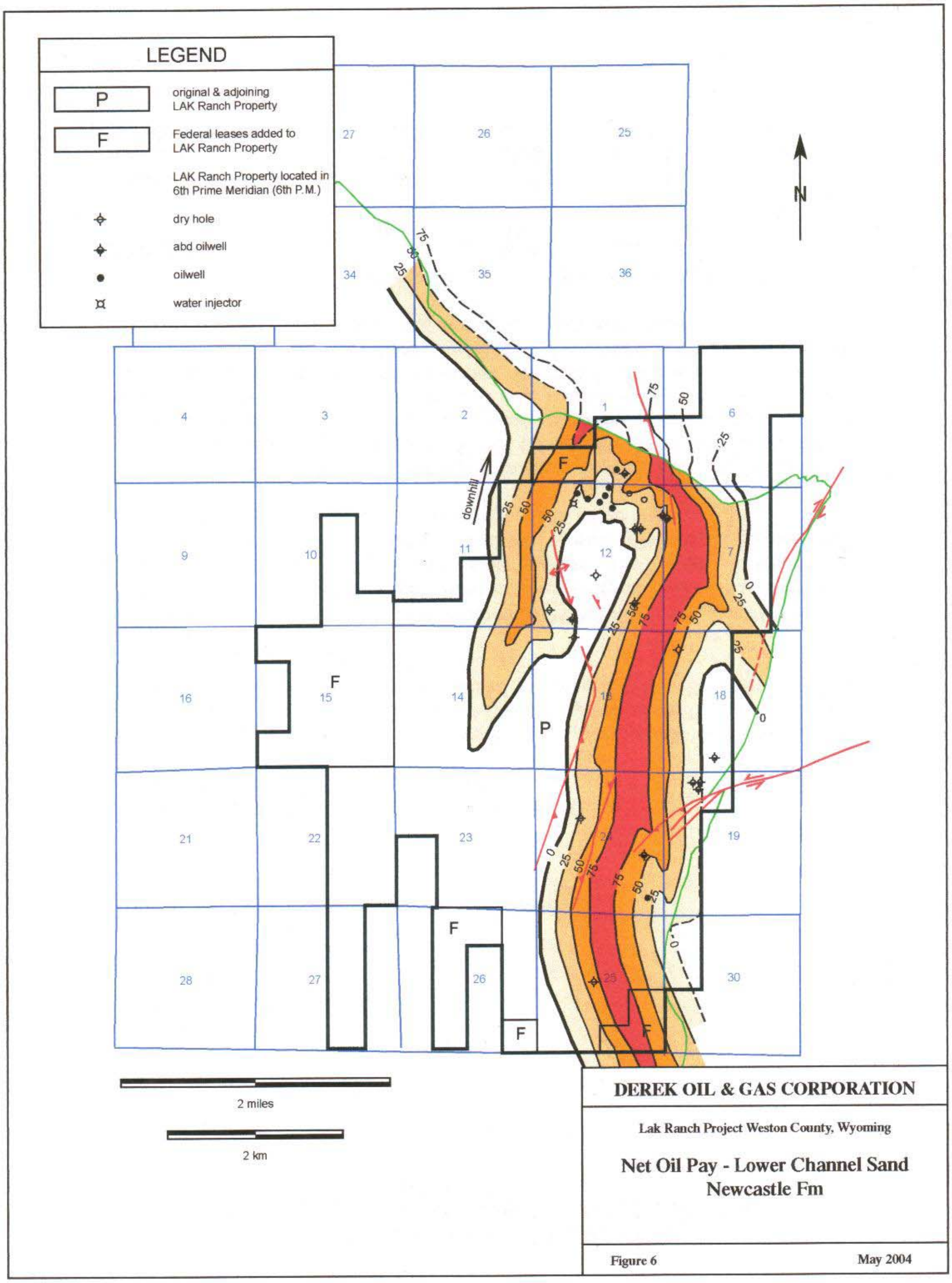
2 miles
2 km
LEGEND
P original & adjoining LAK Ranch Property
F Federal leases added to LAK Ranch Property
LAK Ranch Property located in 6th Prime Meridian (6th P.M.)
dry hole
abd oilwell
oilwell
water injector
DEREK OIL & GAS CORPORATION
Lak Ranch Project Weston County, Wyoming
Net Oil Pay - Beach Sand
Newcastle Fm
CI = 10 ft.
Figure 4
May 2004


LEGEND
P original & adjoining LAK Ranch Property
F Federal leases added to LAK Ranch Property
LAK Ranch Property located in 6th Prime Meridian (6th P.M.)
dry hole
abd oilwell
oilwell
water injector
N
channel centre
2 miles
2 km
DEREK OIL & GAS CORPORATION
Lak Ranch Project Weston County, Wyoming
Structure - Lower Channel Sand Newcastle Fm
CI = 500' & 100'
Figure 5
May 2004



III Reserves and Development Forecast

Project Review

Derek began planning for an enhanced oil recovery pilot project at LAK Ranch with Steam Assisted Gravity Drainage (SAGD) using horizontal well pairs in 1997 based upon the successful application of the technique in the heavy oil producing areas of Alberta. Unlike the Alberta reservoirs, the Newcastle has a steep dip. It was felt that the steep dip would facilitate the upward migration of steam, reduce heat loss and aid the gravity response in oil recovery. Design of the horizontal well placement used the upper horizontal as an injector with the lower the producer. Derek drilled four delineation wells in late 1997 and with reservoir data from previous drilling, chose the location and path of the horizontal well pair. The preliminary thermal reservoir simulation models used to design the SAGD project were conducted in 1998 by Dr. John Donnelly with Marengo Energy Research Limited and Dr. Ken Kisman of Rangewest Resources, Ltd. The horizontal wells were drilled in June and July, 2000. Steam generation, injection and other surface facilities were constructed through the winter. Steam injection commenced on March 10, 2001 and temporarily shut down on June 9, 2001. Based on Wyoming Oil & Gas Corporation Commission (WOGCC) records, during this period, a cumulative of 81,900 barrels of steam was injected at pressures of approximately 500 psig and temperature of 500^{o}F. Cumulative oil and water production for the corresponding period was 3,264 barrels and 81,685 barrels respectively. The oil rates ranged from 35 to 55 barrels per day. The project operation resumed in October, 2001 and was shut down again in early January, 2002. During this period, total injected steam was 107,173 barrels at pressures as high as 580 psig, while cumulative oil and water production was 1,939 barrels and 106,805 barrels respectively. The oil rates varied between 10 and 30 bopd (the lower rates are thought to be due to steam breakthrough as a result of higher injection pressures; as in the early breakthrough experienced in the Exoil/Surtec polymer flood, this demonstrates the heterogeneity of the reservoir and the necessity for close monitoring). The project was shut down due to financial constraints at the time. The cumulative production from the two operating periods totaled 5,253 barrels of oil, demonstrating the technical feasibility of the application of heat to produce the LAK Ranch Newcastle formation heavy crude.

The LAK Ranch SAGD pilot project encountered numerous problems from the outset. Data reports on older wells, necessary to the drilling design was found to be erroneous in some cases. The complex geology necessitated operational modification during the horizontal drilling process and numerous trajectory changes had to be made. Mud losses during drilling were high which later caused problems with production startup. Sustained injection/production operations were not achieved due to non technical reasons; therefore, the potential of a fully operational SAGD operation was not achieved. The pilot project ceased operation at the end of 2001. Since that time, horizontal drilling technology and SAGD enhanced heavy oil recovery techniques have advanced significantly. This knowledge, as described hereafter, will be applied at LAK Ranch.

Reserves

Past exploration and exploitation attempts at LAK Ranch did not result in commercial operation at that time for a variety of reasons. However, the data accumulated from those efforts coupled with state of the art EOR drilling, completion and production technology and current economic climate, has allowed for the expectation that commercial operation is possible. In addition to the analysis of the existing LAK Ranch data base, a review of other heavy oil modified SAGD operations was undertaken. Based upon interpretation of the data and analog operations, the assignment of reserves in the possible undeveloped category is forecast.

The commercial operation of heavy oil EOR projects employing the modified SAGD/horizontal wells configuration in steeply dipping reservoirs is limited. A paper on the subject, which highlights the potential of the LAK Ranch property, was presented at the 2002, SPE/PS-CIM/CHOA International Thermal Operations and Heavy Oil Symposium and International Horizontal Well Technology Conference, titled “Improving Project Performance in a Heavy Oil Horizontal Well Project in the San Joaquin Valley, California” (paper number: SPE/Petroleum Society of CIM/CHOA 78981) by Veronica J.Cline/Chevron Texaco Exploration & Production Company and Michael Basham/Chevron Texaco Exploration and Production Technology Company. The paper discusses the improvement in production performance of the Tulare and Amnicola sand reservoirs in the Cymric-McKittrick fields, San Joaquin Valley, California employing vertical wells as steam injectors positioned updip of the horizontal well producer, initiating production from new wells by cyclic steam stimulation of the producer and other drilling and facility operation optimization undertakings. The report states, with implementation of program changes and “As a result of cyclic steaming, the wells averaged between 150-250 BOPD above forecast for the first six months of production”. The increase in productivity was substantial, citing an example of a “cold start” well where the production rate increased from 60 bopd to a peak of 600 bopd and sustained 300 bopd rate.

A comparison of the Cymric-McKittrick/LAK Ranch reservoirs is as follows:

	Cymric-McKittrick	LAK Ranch
Porosity:	32-34%	18-24%
Permeability:	400-7000 md	+/- 800 md
Sand Thickness:	20-25 feet	25-75 feet
Reservoir Dip:	20-65^o	25-45^o
Reservoir Pressure:	75-150 psig	0-500 psig
Oil Gravity:	10-14 ^{o}API	19 ^{o}API
Viscosity@100^{o}F:	3000-10,000cp	+/-50 cp

The lower porosity and permeability of LAK Ranch may be offset by the high fracture density of the Newcastle sands and higher gravity/lower viscosity of the LAK crude. Of the numerous operational facets examined by the study, of particular significance to the LAK Ranch development include: the advances made to configuration of vertical steam injector/horizontal production wells; the discovery that cyclic steam stimulation of new wells was found to improve reservoir heating and establish faster communication with the continuous steam drive of the vertical injectors (problems related to premature steam breakthrough were not realized); the increase in overall gross fluid rate by pumping off the a well as soon as possible after the cyclic steam phase improved flow and lowered the steam oil ratio (improved $/bbl operating economics).

It is realized that the comparison of the two operations is tenuous at this stage; however, Ivanhoe Energy is proposing similar development and operating procedures described in the paper as a preliminary development model for LAK Ranch. Ivanhoe has scheduled a 27.5 feet x 27.5 feet bin size 3D seismic program for the fall of 2004 to assist in the location of faults and identification of reservoir quality channel sand development. Additional reservoir data and refinement of horizontal placement will be gained through drilling. Employing state of the art horizontal drilling technology will substantially improve directional control over that previously applied at the site. Subsequent to interpretation of the 3D seismic data, Ivanhoe's preliminary development model includes capital to drill two delineation, 1.7 monitor and five steam injection wells per production well. The re-start of the pilot project will include cyclic steam stimulation of the producing well to assess the benefit to the LAK Ranch operation. The capital to accomplish the foregoing, as well as all of the surface facilities required in a SAGD operation are included in the economic forecasts presented herein.

The Newcastle formation at LAK Ranch has two separate depositional sequences exhibiting reservoir quality development as discussed in the Geology section. Based on interpretation of the seismic and well data and oil shows and/or production information, possible oil in place estimates for both sequences have been calculated. Current economic and reservoir conditions necessary to commercial SAGD operations, and thus assignment of reserves, apply only to the lower, channel sand reservoir at this time. The possible oil in place estimate calculated for the Marine sands has been included herein for information purposes; the reserve potential of the upper, Marine sands is significant. As development of the Lower Channel sands progress, economies of scale may support the exploitation of the upper sands at some future date.

Thirty three wells have been drilled on the LAK Ranch property to date, based upon WOGCC public records. For the most part, the wells are clustered around former EOR sites in proximity to the exposed Newcastle outcrop on the north and east boundary of the field in Section 12-T44N-R61W. A total of ten wells were drilled south of Section 12 along the eastern border of the property to Section 25-T44N-R61W and with the seismic data, allowed for the mapping of the Lower Channel sand. A summary of well data is included in Table 3. The Lower Newcastle Channel sand as mapped (Figure 6), flows along the eastern boundary of the property and is interpreted to be present in a gross area of 2,460 acres (net pay thickness range of 0-75 feet and average of 44.3 feet) within the prospect area. The Newcastle Marine (beach) sand as mapped includes approximately 4,400 acres with a net pay range of 0-30 feet and average of 18.4 feet. Figure 3 through 6 present the Newcastle Channel and Marine formations structure and net pay isopach maps. The average reservoir parameters for the Lower Channel and Marine sands are included in Appendix C.

The pilot facility is scheduled to resume operation in late April, 2004. During the heating phase, real time temperature data will be recorded from the horizontal injector well, Ivanhoe H 2-I and offsetting delineation/stratigraphic test wells. A number of past articles describing the Newcastle reservoirs quote a reservoir temperature of 48^{o}F. Records of past drilling data show values ranging from 68 to 100+ ^{o}F. The temperature data will be used, along with existing geological mapping to identify areas of high heat loss and possible faults. This knowledge will contribute to optimizing steam injection location, rate and pressure. The initial steam injection phase is estimated to take three to four weeks followed by a one to two week "soak", depending on monitoring results. Subsequent to the soak period, the well will be placed on production and produced cyclically (huff & puff) for a period of time before continuous steam injection, similar to the successful application of this technique used at the previously mentioned Cymric-McKttric field. The producing well Ivanhoe H 1-P is forecast to begin producing in June, 2004.

Exoil Services Inc. of Golden Colorado conducted coreflood studies on Newcastle cores in 1983 to assess performance efficiencies of various oil recovery techniques. The study concluded that steam was the most efficient, yielding an average of 57.8% recovery from eight tests. Tests done on the Mapco well 12-2 were higher, quote "*Relative permeability tests were performed on fresh core samples from Mapco well 12-2. This work confirmed the low initial water saturations and low final oil saturations, with recoveries ranging from 69.8 to 75.9%. The water relative permeability curves indicate a water-wet system, which favours a high displacement efficiency and it is noted that reverse flow water permeabilities gave little or no indication of fines movement.*"

Ivanhoe's preliminary development model forecasts drilling 21 horizontal production and associated vertical delineation, injector and monitor wells beginning with 2 wells in 2005, 1 well in 2006 and then 6 wells per year for the subsequent three years. The well placement is scheduled herein to follow the thickest and highest quality reservoir pay section of the Lower Channel sand. The Ivanhoe preliminary Pilot to Phase II production model forecast estimates an ultimate recovery of approximately 13 million barrels of oil. Based on the interpreted Channel sand development as shown on Figure 6, the recovered reserves represent a recovery factor of 12% of the interest acreage oil in place as per mapping, or 24% assuming half of the oil is downdip and unavailable to this set of wells by gravity drainage. The recovery factor is below the core study parameters; having regard for the reservoir heterogeneities, the Ivanhoe forecast appears reasonable at this time (as the reservoir data base improves, refinement of the recovery estimate will improve). Also, based on recovery factors of established SAGD heavy oil operations, there is upside potential to the Ivanhoe forecast. The Ivanhoe development and production forecast is included in Table 2.

Economic Forecast

The economic parameters including product prices, operating and capital costs are summarized in Table 3. The capital and operating costs were provided by Ivanhoe while product prices used are Gilbert Laustsen Jung Associates Ltd. 2004-04 base case forecasts. Though the Newcastle 19 ^{o}API crude is classified as heavy oil, it is our understanding that the napthenic based crude demands a WTI price locally plus quality adjustment. Derek provided actual January 2002 sales receipts from the oil produced during the initial pilot operation which show the price received was $15.85/bbl, $0.60/bbl above "Wyoming Sweet" grade; WTI was posted at $15.75/bbl at the same date.

The major portion of the operating costs associated with SAGD operation is the energy requirement cost to produce the steam. At this time the fuel source for the LAK Ranch project is natural gas. The operator has secured a short term purchase contract with a price, including marketing and transportation fees, of approximately $5.00/Mcf. The price has been used in the "Constant Price and Costs" economic forecast; the "Forecast Price and Costs" economic forecast assumes the contract price will be in effect for 2004 and then match the GLJ, "Gulf Coast @ Henry Hub" forecast price (US$) thereafter.

Well abandonment costs have been included in the evaluation; however potential environmental and salvage considerations have not been included.

The Derek working interest and royalty interest entity cash flows are included in Table 4.

Table 1

Estimated Crude Oil Reserves at Standard Conditions (60^{o}F and 14.65 psia)

Reserve Category:		**Possible**
Location		LAK Ranch: Sec. 1, 12, 13, 24, 25-T44N-R61W; Sec. 7, 8, 18, 19-T44N-R60W
Formation Depth	(feet)	0 to 2,300
Formation Name		Newcastle Lower Channel sand
Drainage area	(acres)	2,460
Net pay thickness	(feet)	44.3
Rock Volume	(acre-feet)	108,945.4
Porosities	(percent)	22%
Water saturation	(percent)	40%
Formation Volume Factor	(rb/stb)	1.0204
Initial oil-in-place	(stb/acre-feet)	1,003.6
Initial oil-in-place	(Mstb)	109,334.9
Cum production to 2004/04/30	(Mstb)	26.2
Remaining oil-in-place	(Mstb)	109,309
Recovery factor	(percent)	12
Recoverable oil reserve	(stb)	13,000,000
Permeability	(mD)	759
Gas Oil Ratio	(scf/bbl)	<50
API	(degree)	19

Table 1 (continued)

Estimated Crude Oil Reserves at Standard Conditions (60^{o}F and 14.65 psia)

Reserve Category:		**Oil-in-Place**
Location		LAK Ranch
Formation Depth	(feet)	0 to 2,300
Formation Name		Newcastle Marine Sand
Total area	(acres)	4,420
Net pay thickness	(feet)	18.4
Rock Volume	(acre-feet)	81,328
Porosities	(percent)	22
Water saturation	(percent)	40
Formation Volume Factor	(rb/stb)	1.0204
Initial oil-in-place	(stb/acre-feet)	1,003.6
Initial oil-in-place	(Mstb)	81,618
Cumulative production	(Mstb)	0
Remaining oil-in-place	(Mstb)	81,618
Permeability	(mD)	800+/-
Gas Oil Ratio	(scf/bbl)	n/a
API	(degree)	19

Table 2 - Development and Production Forecasts

Year	Re-activate Pilot Wells	Pilot Steam Injection	Drill & Compl 2 HZ Wells in 2005	Steam Injec. Commencing 2005	Drill & Compl 1 HZ Well in 2006	Steam Injec. Commencing 2006	Drill & Compl 6 HZ Well in 2007	Steam Injec. Commencing 2007	Drill & Compl 6 HZ Well in 2008	Steam Injec. Commencing 2008	Drill & Compl 6 HZ Well in 2009	Steam Injec. Commencing 2009	Total Project Oil Production	Total Project Steam Injection
	bopd	bspd	bopd	bspd	bopd	bspd	bopd	bspd	bopd	bspd	bopd	bspd	bopd	bspd
2004	130	522	0	0	0	0	0	0	0	0	0	0	130	522
2005	294	914	260	1044			0	0	0	0	0	0	554	1958
2006	203	914	588	1828	130	522	0	0	0	0	0	0	921	3264
2007	176	914	406	1828	294	914	780	3134	0	0	0	0	1656	6790
2008	161	849	352	1828	203	914	1764	5484	780	3134	0	0	3260	12209
2009	150	783	322	1828	176	914	1218	5484	1764	5484	780	3134	4410	17627
2010	128	718	300	1698	161	914	1056	5484	1218	5484	1764	5484	4627	19782
2011	133	653	256	1566	150	849	966	5484	1056	5484	1218	5484	3779	19520
2012	128	522	266	1436	128	783	900	5092	966	5484	1056	5484	3444	18801
2013	123	0	256	1306	133	718	768	4709	900	5092	966	5484	3146	17309
2014	0	0	246	1044	128	653	798	4309	768	4709	900	5092	2840	15807
2015	0	0	0	0	123	522	768	3917	798	4309	768	4709	2457	13457
2016	0	0	0	0	0	0	738	3134	768	3917	798	4309	2304	11360
2017	0	0	0	0	0	0	0	0	738	3134	768	3917	1506	7051
2018	0	0	0	0	0	0	0	0	0	0	738	3134	738	3134

Table 3

LAK Ranch Prospect
Economic Parameters

A) Price Forecast(U.S. Funds)

Gilbert Laustsen Jung (2004-04) Pricing

Oil purchaser – Equiva Trading Company , WTI Posted Price ($34.25/bbl in 2004) + quality adjustment

B) Operating Costs (2004 U.S. Dollars)

Fixed Costs:

Producing well:	$ 1,500/well/month
Injection well:	$ 500/well/month (5 injectors per producer)
Facilities:	$ 75,000/year

Variable Costs:

Power Costs (Natural Gas): 2.2 barrels of steam per Mcf priced at Gilbert Laustsen Jung (2004-04) Pricing – @ Henry Hub ($5.70/Mcf in 2004)

Water Treating: $0.10/bbl of steam

Start Up Operating – Steam Cycle ($45,000 per producing well)

2004	1 well - $ 45,000
2005	2 wells - $ 90,000
2006	1 well - $ 45,000
2007	6 wells - $270,000
2008	6 wells - $270,000
2009	6 wells - $270,000

C) Capital Costs (2004 U.S. Dollars)

Costs:

Drill & Complete HZ Production Well -	$650,000
Drill & Complete Injection Well -	$ 60,000
Drill & Complete Delineation Well -	$ 50,000
Drill & Complete Observation Well -	
Pilot and Phase I	$ 50,000
Phase II	$ 55,000
Steam Generator -	$500,000
Water Plant -	$500,000

Gathering/Injection Lines/well -	$ 12,500
Well Workovers/Prod. Well -	$ 35,000
Field Facilities -	Variable

Schedule:

Year	Development Description	Gross Capital Expenditure
2004	Drill & Complete 5 Injection wells	$ 300,000
	Steam Generator	$ 150,000
	Gathering/Injection lines	$ 30,000
	Surface Facilities	$ 100,000
	3D Seismic	$ 900,000
Total		$ 1,480,000
2005	Drill & Complete 2HZ wells	$ 1,300,000
	Drill & Complete 10 Injection wells	$ 600,000
	Drill & Complete 2 Observation wells	$ 100,000
	Drill & Complete 4 Delineation wells	$ 200,000
	Drill & Complete Water Disposal well	$ 170,000
	1 Steam Generator	$ 500,000
	Water Plant	$ 500,000
	Gathering/Injection lines	$ 150,000
	Surface Facilities	$ 455,000
Total		$ 3,975,000
2006	Drill & Complete 1 HZ well	$ 650,000
	Drill & Complete 5 Injection wells	$ 300,000
	Drill & Complete 4 Observation wells	$ 200,000
	Drill & Complete 2 Delineation wells	$ 100,000
	2 Steam Generators	$ 1,000,000
	Water Plant	$ 500,000
	Gathering/Injection lines	$ 60,000
	Surface Facilities	$ 350,000
Total		$ 3,160,000
2007	Drill & Complete 6 HZ wells	$ 3,900,000
	Drill & Complete 30 Injection wells	$ 1,800,000
	Drill & Complete 10 Observation wells	$ 550,000
	Drill & Complete 12 Delineation wells	$ 600,000
	2 Steam Generators	$ 1,000,000
	Water Plant	$ 500,000
	Gathering/Injection lines	$ 360,000
	Surface Facilities	$ 350,000
Total		$ 9,060,000

2008	Drill & Complete 6 HZ wells	$ 3,900,000
	Drill & Complete 30 Injection wells	$ 1,800,000
	Drill & Complete 10 Observation wells	$ 550,000
	Drill & Complete 12 Delineation wells	$ 600,000
	2 Well Workovers	$ 70,000
	2 Steam Generators	$ 1,000,000
	Gathering/Injection lines	$ 360,000
	Surface Facilities	$ 350,000
Total		$ 8,630,000
2009	Drill & Complete 6 HZ wells	$ 3,900,000
	Drill & Complete 30 Injection wells	$ 1,800,000
	Drill & Complete 10 Observation wells	$ 550,000
	Drill & Complete 12 Delineation wells	$ 600,000
	1 Well Workover	$ 35,000
	Gathering/Injection lines	$ 360,000
Total		$ 7,245,000
2010	6 Well Workovers	$ 210,000
2011	8 Well Workovers	$ 280,000
2012	7 Well workovers	$ 245,000
2014	6 Well Workovers	$ 210,000
2015	6 Well Workovers	$ 210,000
2016	6 Well Workovers	$ 210,000

D) <u>Abandonment Costs (2004 U.S. Dollars)</u>

Well Abandonment Cost: $10,000/well

Year	Number of Wells	Total Cost
2015	5	$50,000
2016	5	$50,000
2017	25	$250,000
2018	25	$250,000
2019	25	$250,000
2020	20	$200,000
2021	20	$200,000
2022	20	$200,000
2023	18	$180,000

Table 4

Resource Economic Analysis Program
Derek Oil & Gas Corporation

File LAKWI+RI-F
Time 22/04/2004 7:16:59 AM
Version REAP Ver 1.37.6

Derek Oil & Gas Corporation
LAK Ranch Modified SAGD Project
Weston County, Wyoming
Constant Price & Costs (US$); WI+RI Consolidation
Effective: May 1, 2004

Reserve Category : Possible Undeveloped
Province: Wyoming
Q2 2004 GLJ Price Deck(US$)

Evaluation Interest Summary

		Oil Production			Total	Operating				BTax	Tax	ATax
		Rate	Volume	Price	Revenue	Expense		Burden	Capital	CashFlow		CashFlow
Year	Mo	BBL/D	MSTB	$/BBL	M$	M$	$/BBL	M$	M$	M$	M$	M$
2004	4	72.7	8.8	35.25	311.9	108.5	12.33	58.1	0.0	145.4	42.3	103.0
2005	12	260.5	95.1	35.25	3,351.6	962.7	10.12	554.7	182.1	1,652.1	524.6	1,127.5
2006	12	322.5	117.7	35.25	4,149.1	1,116.9	9.49	504.4	1,106.0	1,421.9	691.3	730.6
2007	12	579.8	211.6	35.25	7,460.5	2,391.5	11.30	906.9	3,171.0	991.1	971.1	19.9
2008	12	1,141.2	416.5	35.25	14,682.9	4,161.5	9.99	1,784.8	2,996.0	5,740.5	2,166.0	3,574.5
2009	12	1,543.7	563.5	35.25	19,862.1	5,923.5	10.51	2,414.4	2,535.8	8,988.5	2,880.7	6,107.8
2010	12	1,619.6	591.1	35.25	20,838.0	6,467.7	10.94	2,533.0	73.5	11,763.8	3,108.0	8,655.8
2011	12	1,322.4	482.7	35.25	17,014.7	6,373.4	13.20	2,068.3	98.0	8,475.0	2,250.6	6,224.4
2012	12	1,204.3	439.6	35.25	15,494.7	6,149.9	13.99	1,883.5	85.8	7,375.5	1,993.1	5,382.4
2013	12	1,100.7	401.8	35.25	14,162.2	5,690.1	14.16	1,721.5	35.0	6,715.6	1,838.0	4,877.6
2014	12	995.2	363.2	35.25	12,803.9	5,196.4	14.31	1,556.4	91.0	5,960.0	1,664.6	4,295.5
2015	12	862.4	314.8	35.25	11,096.4	4,461.3	14.17	1,348.9	108.5	5,177.7	1,461.2	3,716.5
2016	12	808.6	295.2	35.25	10,404.2	3,809.2	12.90	1,264.7	196.0	5,134.3	1,482.2	3,652.1
2017	12	528.4	192.9	35.25	6,798.0	2,389.6	12.39	826.3	192.5	3,389.5	977.3	2,412.3
2018	12	258.8	94.5	35.25	3,329.9	1,089.1	11.52	404.8	192.5	1,643.6	478.1	1,165.5
SubTotal			4,588.9		161,759.9	56,291.1		19,830.7	11,063.6	74,574.5	22,529.2	52,045.3
Remainder			0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total			4,588.9		161,759.9	56,291.1	12.27	19,830.7	11,063.6	74,574.5	22,529.2	52,045.3

	Before Tax			After Tax
Discount Rate (%)	Operating Income M$	Capital Invest M$	CashFlow M$	CashFlow M$
0.0	85,638.1	11,063.6	74,574.5	52,045.3
10.0	42,888.5	7,123.7	35,764.8	24,569.1
12.0	37,992.8	6,583.5	31,409.3	21,503.8
15.0	31,967.7	5,875.5	26,092.2	17,771.2
20.0	24,508.1	4,912.8	19,595.3	13,230.0

		Gross	W.I.	Royalty	Net
Oil	MSTB	13,032.4	4,588.9	961.4	3,627.6
Gas Raw	MMCF	0.0			
Gas Sales	MMCF	0.0	0.0	0.0	0.0
NGL	MSTB	0.0	0.0	0.0	0.0
Pentane	MSTB	0.0	0.0	0.0	0.0
Butane	MSTB	0.0	0.0	0.0	0.0
Propane	MSTB	0.0	0.0	0.0	0.0
Ethane	MSTB	0.0	0.0	0.0	0.0
Sulphur	MTon	0.0	0.0	0.0	0.0
BOE	MSTB	13,032.4	4,588.9	961.4	3,627.6

Table 4 (continued)

Resource Economic Analysis Program
Derek Oil & Gas Corporation

LAK Ranch Modified SAGD Project
Weston County Wyoming
Pilot to Phase II Operation: **Working Interest Position**
Constant Price and Costs (U.S. Dollars)
Effective Date: May 1 2004

Reserve Category : Possible Undeveloped

Province: Other

Field: LAK Ranch

Q2 2004 GLJ Price Deck(US$)

Working Interest Initial 56.00%
Final 35.00%

		Gross	W.I.	Royalty	Net
Oil	MSTB	13,032.4	4,588.9	961.4	3,627.6
Gas Raw	MMCF	0.0	0.0		
Gas Sales	MMCF	0.0	0.0	0.0	0.0
NGL	MSTB	0.0	0.0	0.0	0.0
Pentane	MSTB	0.0	0.0	0.0	0.0
Butane	MSTB	0.0	0.0	0.0	0.0
Propane	MSTB	0.0	0.0	0.0	0.0
Ethane	MSTB	0.0	0.0	0.0	0.0
Sulphur	MTon	0.0	0.0	0.0	0.0
BOE	MSTB	13,032.4	4,588.9	961.4	3,627.6

Economic Indicators		Before Tax	Discount Rate	Before Tax Operating Income	Before Tax Capital Invest	Before Tax CashFlow
			(%)	M$	M$	M$
Internal Rate of Return (%)		29.3	0.0	57,955.2	11,063.6	46,891.7
Pseudo Rate of Return (%)		800.0	10.0	29,333.2	7,123.7	22,209.5
PayOut	Yr	0.5	12.0	26,038.0	6,583.5	19,454.5
Retrun on Invest Undisc %	$/$	4.24	15.0	21,974.4	5,875.5	16,098.8
Return on Invest Disc @15%	$/$	1.46	20.0	16,927.0	4,912.8	12,014.2
Net Profit Interest Disc @15%	$/BOE	3.51				

Reversion Point Aug 2004

Producded To Reversion Point			Capital Remaining	Remaining
Oil	MSTB	-0.1	13,032.5	100.0%
Gas Raw	MMCF	0.0	0.0	0.0%

		GROSS RATE			GROSS VOLUME			INTEREST RATE			INTEREST VOLUME			NET VOLUME			PRICE		
		Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids
Year	Wells	BBL/D	MCF/D	BBL/D	MSTB	MMCF	MSTB	BBL/D	MCF/D	BBL/D	MSTB	MMCF	MSTB	MSTB	MMCF	MSTB	$/BBL	$/MCF	$/BBL
2004 (4)	1.0	129.9	0.0	0.0	15.8	0.0	0.0	72.7	0.0	0.0	8.8	0.0	0.0	7.0	0.0	0.0	35.25	5.00	0.00
2005 (12)	3.0	554.2	0.0	0.0	202.3	0.0	0.0	260.5	0.0	0.0	95.1	0.0	0.0	75.2	0.0	0.0	35.25	5.00	0.00
2006 (12)	4.0	921.4	0.0	0.0	336.3	0.0	0.0	322.5	0.0	0.0	117.7	0.0	0.0	93.0	0.0	0.0	35.25	5.00	0.00
2007 (12)	10.0	1,656.7	0.0	0.0	604.7	0.0	0.0	579.8	0.0	0.0	211.6	0.0	0.0	167.3	0.0	0.0	35.25	5.00	0.00
2008 (12)	16.0	3,260.5	0.0	0.0	1,190.1	0.0	0.0	1,141.2	0.0	0.0	416.5	0.0	0.0	329.3	0.0	0.0	35.25	5.00	0.00
2009 (12)	22.0	4,410.7	0.0	0.0	1,609.9	0.0	0.0	1,543.7	0.0	0.0	563.5	0.0	0.0	445.4	0.0	0.0	35.25	5.00	0.00
2010 (12)	22.0	4,627.4	0.0	0.0	1,689.0	0.0	0.0	1,619.6	0.0	0.0	591.1	0.0	0.0	467.3	0.0	0.0	35.25	5.00	0.00
2011 (12)	22.0	3,778.4	0.0	0.0	1,379.1	0.0	0.0	1,322.4	0.0	0.0	482.7	0.0	0.0	381.6	0.0	0.0	35.25	5.00	0.00
2012 (12)	22.0	3,440.8	0.0	0.0	1,255.9	0.0	0.0	1,204.3	0.0	0.0	439.6	0.0	0.0	347.5	0.0	0.0	35.25	5.00	0.00
2013 (12)	22.0	3,144.9	0.0	0.0	1,147.9	0.0	0.0	1,100.7	0.0	0.0	401.8	0.0	0.0	317.6	0.0	0.0	35.25	5.00	0.00
2014 (12)	20.0	2,843.3	0.0	0.0	1,037.8	0.0	0.0	995.2	0.0	0.0	363.2	0.0	0.0	287.1	0.0	0.0	35.25	5.00	0.00
2015 (12)	19.0	2,464.1	0.0	0.0	899.4	0.0	0.0	862.4	0.0	0.0	314.8	0.0	0.0	248.8	0.0	0.0	35.25	5.00	0.00
2016 (12)	18.0	2,310.4	0.0	0.0	843.3	0.0	0.0	808.6	0.0	0.0	295.2	0.0	0.0	233.3	0.0	0.0	35.25	5.00	0.00
2017 (12)	12.0	1,509.6	0.0	0.0	551.0	0.0	0.0	528.4	0.0	0.0	192.9	0.0	0.0	152.4	0.0	0.0	35.25	5.00	0.00
2018 (12)	6.0	739.5	0.0	0.0	269.9	0.0	0.0	258.8	0.0	0.0	94.5	0.0	0.0	74.7	0.0	0.0	35.25	5.00	0.00
SubTotal					13,032.4	0.0	0.0				4,589.0	0.0	0.0	3,627.5	0.0	0.0			
Remaind					0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0			
Total					13,032.4	0.0	0.0				4,589.0	0.0	0.0	3,627.5	0.0	0.0			

	REVENUE					BURDENS					OPERATING COSTS				SUMMARY		
	Oil	Sales Gas	Liquids	Other	Total	Crown	Freehold	Other	Total	Percent	Fixed	Variable	Total	Percent	Income	Capital	CashFlow
Year	M$	M$	M$	M$	M$	M$	M$	M$	M$	%	M$	M$	M$	%	M$	M$	M$
2004 (4)	311.9	0.0	0.0	0.0	311.9	0.0	0.0	91.6	91.6	29.4%	23.0	85.5	108.5	34.8%	111.8	0.0	111.8
2005 (12)	3,351.6	0.0	0.0	0.0	3,351.6	0.0	0.0	984.5	984.5	29.4%	102.9	859.8	962.7	28.7%	1,404.4	182.1	1,222.4
2006 (12)	4,149.1	0.0	0.0	0.0	4,149.1	0.0	0.0	1,218.7	1,218.7	29.4%	93.5	1,023.4	1,116.9	26.9%	1,813.5	1,106.0	707.5
2007 (12)	7,460.5	0.0	0.0	0.0	7,460.5	0.0	0.0	2,191.4	2,191.4	29.4%	194.3	2,197.3	2,391.5	32.1%	2,877.6	3,171.0	-293.4
2008 (12)	14,682.9	0.0	0.0	0.0	14,682.9	0.0	0.0	4,312.8	4,312.8	29.4%	295.1	3,866.5	4,161.5	28.3%	6,208.6	2,996.0	3,212.6
2009 (12)	19,862.1	0.0	0.0	0.0	19,862.1	0.0	0.0	5,834.1	5,834.1	29.4%	395.9	5,527.6	5,923.5	29.8%	8,104.6	2,535.8	5,568.8
2010 (12)	20,838.0	0.0	0.0	0.0	20,838.0	0.0	0.0	6,120.7	6,120.7	29.4%	395.9	6,071.8	6,467.7	31.0%	8,249.6	73.5	8,176.1
2011 (12)	17,014.7	0.0	0.0	0.0	17,014.7	0.0	0.0	4,997.7	4,997.7	29.4%	395.9	5,977.5	6,373.4	37.5%	5,643.6	98.0	5,545.6
2012 (12)	15,494.7	0.0	0.0	0.0	15,494.7	0.0	0.0	4,551.2	4,551.2	29.4%	395.9	5,754.1	6,149.9	39.7%	4,793.5	85.8	4,707.8
2013 (12)	14,162.2	0.0	0.0	0.0	14,162.2	0.0	0.0	4,159.9	4,159.9	29.4%	395.9	5,294.2	5,690.1	40.2%	4,312.3	35.0	4,277.3
2014 (12)	12,803.9	0.0	0.0	0.0	12,803.9	0.0	0.0	3,760.9	3,760.9	29.4%	362.3	4,834.2	5,196.4	40.6%	3,846.6	91.0	3,755.6
2015 (12)	11,096.4	0.0	0.0	0.0	11,096.4	0.0	0.0	3,259.3	3,259.3	29.4%	345.5	4,115.8	4,461.3	40.2%	3,375.7	108.5	3,267.2
2016 (12)	10,404.2	0.0	0.0	0.0	10,404.2	0.0	0.0	3,056.0	3,056.0	29.4%	328.7	3,480.6	3,809.2	36.6%	3,539.0	196.0	3,343.0
2017 (12)	6,798.0	0.0	0.0	0.0	6,798.0	0.0	0.0	1,996.8	1,996.8	29.4%	227.9	2,161.7	2,389.6	35.2%	2,411.6	192.5	2,219.1
2018 (12)	3,329.9	0.0	0.0	0.0	3,329.9	0.0	0.0	978.1	978.1	29.4%	127.1	962.0	1,089.1	32.7%	1,262.7	192.5	1,070.2
SubTotal	161,759.	0.0	0.0	0.0	161,760.1	0.0	0.0	47,513.5	47,513.5	29.4%	4,079.1	52,212.0	56,291.1	34.8%	57,955.1	11,063.7	46,891.6
Remaind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0	0.0	0.0	0.0%	0.0	0.0	0.0
Total	161,759.	0.0	0.0	0.0	161,760.1	0.0	0.0	47,513.5	47,513.5	29.4%	4,079.1	52,212.0	56,291.1	0.0%	57,955.1	11,063.7	46,891.6

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Table 4 (continued)

Resource Economic Analysis Program
Derek Oil & Gas Corporation

LAK Ranch Modified SAGD Project
Weston County Wyoming
Pilot to Phase II Operation: **Royalty Interest Position**
Constant Price and Costs(U.S. Dollars)
Effective Date:May 1, 2004

Reserve Category : Possible

Province: Other

Field: LAK Ranch

Q2 2004 GLJ Price Deck(US$)

Working Interest Initial 0.00%
Final 0.00%

		Gross	W.I.	Royalty	Net
Oil	MSTB	13,032.4	0.0	0.0	0.0
Gas Raw	MMCF	0.0	0.0		
Gas Sales	MMCF	0.0	0.0	0.0	0.0
NGL	MSTB	0.0	0.0	0.0	0.0
Pentane	MSTB	0.0	0.0	0.0	0.0
Butane	MSTB	0.0	0.0	0.0	0.0
Propane	MSTB	0.0	0.0	0.0	0.0
Ethane	MSTB	0.0	0.0	0.0	0.0
Sulphur	MTon	0.0	0.0	0.0	0.0
BOE	MSTB	13,032.4	0.0	0.0	0.0

Economic Indicators		**Before Tax**	**Discount Rate** (%)	**Before Tax Operating Income** M$	**Before Tax Capital Invest** M$	**Before Tax CashFlow** M$
Internal Rate of Return (%)		0.0				
Pseudo Rate of Return (%)		0.0	0.0	27,682.8	0.0	27,682.8
PayOut	Yr	0.5	10.0	13,555.3	0.0	13,555.3
Retrun on Invest Undisc %	$/$	0.0	12.0	11,954.8	0.0	11,954.8
Return on Invest Disc @15%	$/$	0.0	15.0	9,993.3	0.0	9,993.3
Net Profit Interest Disc @15%	$/BOE		20.0	7,581.1	0.0	7,581.1

Reversion Point Aug 2004

Producded To Reversion Point			Capital Remaining	Remaining
Oil	MSTB	-0.1	13,032.5	100.0%
Gas Raw	MMCF	0.0	0.0	0.0%

		GROSS RATE			GROSS VOLUME			INTEREST RATE			INTEREST VOLUME			NET VOLUME			PRICE		
		Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids
Year	Wells	BBL/D	MCF/D	BBL/D	MSTB	MMCF	MSTB	BBL/D	MCF/D	BBL/D	MSTB	MMCF	MSTB	MSTB	MMCF	MSTB	$/BBL	$/MCF	$/BBL
2004 (4)	1.0	129.9	0.0	0.0	15.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
2005 (12)	3.0	554.2	0.0	0.0	202.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
2006 (12)	4.0	921.4	0.0	0.0	336.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
2007 (12)	10.0	1,656.7	0.0	0.0	604.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
2008 (12)	16.0	3,260.5	0.0	0.0	1,190.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
2009 (12)	22.0	4,410.7	0.0	0.0	1,609.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
2010 (12)	22.0	4,627.4	0.0	0.0	1,689.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
2011 (12)	22.0	3,778.4	0.0	0.0	1,379.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
2012 (12)	22.0	3,440.8	0.0	0.0	1,255.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
2013 (12)	22.0	3,144.9	0.0	0.0	1,147.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
2014 (12)	20.0	2,843.3	0.0	0.0	1,037.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
2015 (12)	19.0	2,464.1	0.0	0.0	899.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
2016 (12)	18.0	2,310.4	0.0	0.0	843.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
2017 (12)	12.0	1,509.6	0.0	0.0	551.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
2018 (12)	6.0	739.5	0.0	0.0	269.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
SubTotal					13,032.4	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0			
Remaind					0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0			
Total					13,032.4	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0			

	REVENUE					BURDENS					OPERATING COSTS				SUMMARY		
	Oil	Sales Gas	Liquids	Other	Total	Crown	Freehold	Other	Total	Percent	Fixed	Variable	Total	Percent	Income	Capital	CashFlow
Year	M$	M$	M$	M$	M$	M$	M$	M$	M$	%	M$	M$	M$	%	M$	M$	M$
2004 (4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-33.6	-33.6	0.0%	0.0	0.0	0.0	0.0%	33.6	0.0	33.6
2005 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-429.7	-429.7	0.0%	0.0	0.0	0.0	0.0%	429.7	0.0	429.7
2006 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-714.4	-714.4	0.0%	0.0	0.0	0.0	0.0%	714.4	0.0	714.4
2007 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1,284.5	-1,284.5	0.0%	0.0	0.0	0.0	0.0%	1,284.5	0.0	1,284.5
2008 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2,528.0	-2,528.0	0.0%	0.0	0.0	0.0	0.0%	2,528.0	0.0	2,528.0
2009 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3,419.7	-3,419.7	0.0%	0.0	0.0	0.0	0.0%	3,419.7	0.0	3,419.7
2010 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3,587.7	-3,587.7	0.0%	0.0	0.0	0.0	0.0%	3,587.7	0.0	3,587.7
2011 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2,929.4	-2,929.4	0.0%	0.0	0.0	0.0	0.0%	2,929.4	0.0	2,929.4
2012 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2,667.7	-2,667.7	0.0%	0.0	0.0	0.0	0.0%	2,667.7	0.0	2,667.7
2013 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2,438.3	-2,438.3	0.0%	0.0	0.0	0.0	0.0%	2,438.3	0.0	2,438.3
2014 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2,204.4	-2,204.4	0.0%	0.0	0.0	0.0	0.0%	2,204.4	0.0	2,204.4
2015 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1,910.5	-1,910.5	0.0%	0.0	0.0	0.0	0.0%	1,910.5	0.0	1,910.5
2016 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1,791.3	-1,791.3	0.0%	0.0	0.0	0.0	0.0%	1,791.3	0.0	1,791.3
2017 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1,170.4	-1,170.4	0.0%	0.0	0.0	0.0	0.0%	1,170.4	0.0	1,170.4
2018 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-573.3	-573.3	0.0%	0.0	0.0	0.0	0.0%	573.3	0.0	573.3
SubTotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-27,682.8	-27,682.8	0.0%	0.0	0.0	0.0	0.0%	27,682.9	0.0	27,682.9
Remaind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0	0.0	0.0	0.0%	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-27,682.8	-27,682.8	0.0%	0.0	0.0	0.0	0.0%	27,682.9	0.0	27,682.9

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Table 4 (continued)

Resource Economic Analysis Program
Derek Oil & Gas Corporation

Working Interest Initial 56.00%
Final 35.00%

LAK Ranch Modified SAGD Project
Weston County Wyoming
Pilot to Phase II Operation: **Working Interest Position**
Forecast Price and Costs (U.S. Dollars)
Effective Date: May 1 2004

Reserve Category : Possible Undeveloped

Province: Other

Field: LAK Ranch

Q2 2004 GLJ Price Deck

		Gross	W.I.	Royalty	Net
Oil	MSTB	13,032.4	4,588.9	961.4	3,627.6
Gas Raw	MMCF	0.0	0.0		
Gas Sales	MMCF	0.0	0.0	0.0	0.0
NGL	MSTB	0.0	0.0	0.0	0.0
Pentane	MSTB	0.0	0.0	0.0	0.0
Butane	MSTB	0.0	0.0	0.0	0.0
Propane	MSTB	0.0	0.0	0.0	0.0
Ethane	MSTB	0.0	0.0	0.0	0.0
Sulphur	MTon	0.0	0.0	0.0	0.0
BOE	MSTB	13,032.4	4,588.9	961.4	3,627.6

Economic Indicators		Before Tax	Discount Rate (%)	Before Tax Operating Income M$	Before Tax Capital Invest M$	CashFlow M$
Internal Rate of Return (%)		20.7				
Pseudo Rate of Return (%)		800.0	0.0	39,430.0	11,206.0	28,224.0
PayOut	Yr	0.5	10.0	19,990.5	7,313.1	12,677.4
Retrun on Invest Undisc %	$/$	2.52	12.0	17,760.1	6,768.2	10,991.9
Return on Invest Disc @15%	$/$	0.80	15.0	15,011.6	6,050.6	8,961.1
Net Profit Interest Disc @15%	$/BOE	1.95	20.0	11,600.1	5,068.5	6,531.6

Reversion Point Aug 2004

Producded To Reversion Point			Capital Remaining	Remaining
Oil	MSTB	-0.1	13,032.5	100.0%
Gas Raw	MMCF	0.0	0.0	0.0%

		GROSS RATE			GROSS VOLUME			INTEREST RATE			INTEREST VOLUME			NET VOLUME			PRICE		
		Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids
Year	Wells	BBL/D	MCF/D	BBL/D	MSTB	MMCF	MSTB	BBL/D	MCF/D	BBL/D	MSTB	MMCF	MSTB	MSTB	MMCF	MSTB	$/BBL	$/MCF	$/BBL
2004 (4)	1.0	129.9	0.0	0.0	15.8	0.0	0.0	72.7	0.0	0.0	8.8	0.0	0.0	7.0	0.0	0.0	35.25	5.00	0.00
2005 (12)	1.0	554.2	0.0	0.0	202.3	0.0	0.0	260.5	0.0	0.0	95.1	0.0	0.0	75.2	0.0	0.0	30.00	4.80	0.00
2006 (12)	1.0	921.4	0.0	0.0	336.3	0.0	0.0	322.5	0.0	0.0	117.7	0.0	0.0	93.0	0.0	0.0	28.00	4.50	0.00
2007 (12)	1.0	1,656.7	0.0	0.0	604.7	0.0	0.0	579.8	0.0	0.0	211.6	0.0	0.0	167.3	0.0	0.0	26.00	4.35	0.00
2008 (12)	1.0	3,260.5	0.0	0.0	1,190.1	0.0	0.0	1,141.2	0.0	0.0	416.5	0.0	0.0	329.3	0.0	0.0	26.00	4.35	0.00
2009 (12)	1.0	4,410.7	0.0	0.0	1,609.9	0.0	0.0	1,543.7	0.0	0.0	563.5	0.0	0.0	445.4	0.0	0.0	26.00	4.35	0.00
2010 (12)	1.0	4,627.4	0.0	0.0	1,689.0	0.0	0.0	1,619.6	0.0	0.0	591.1	0.0	0.0	467.3	0.0	0.0	26.50	4.40	0.00
2011 (12)	1.0	3,778.4	0.0	0.0	1,379.1	0.0	0.0	1,322.4	0.0	0.0	482.7	0.0	0.0	381.6	0.0	0.0	26.75	4.50	0.00
2012 (12)	1.0	3,440.8	0.0	0.0	1,255.9	0.0	0.0	1,204.3	0.0	0.0	439.6	0.0	0.0	347.5	0.0	0.0	27.25	4.55	0.00
2013 (12)	1.0	3,144.9	0.0	0.0	1,147.9	0.0	0.0	1,100.7	0.0	0.0	401.8	0.0	0.0	317.6	0.0	0.0	27.40	4.60	0.00
2014 (12)	1.0	2,843.3	0.0	0.0	1,037.8	0.0	0.0	995.2	0.0	0.0	363.2	0.0	0.0	287.1	0.0	0.0	28.00	4.70	0.00
2015 (12)	1.0	2,464.1	0.0	0.0	899.4	0.0	0.0	862.4	0.0	0.0	314.8	0.0	0.0	248.8	0.0	0.0	28.40	4.75	0.00
2016 (12)	1.0	2,310.4	0.0	0.0	843.3	0.0	0.0	808.6	0.0	0.0	295.2	0.0	0.0	233.3	0.0	0.0	28.80	4.80	0.00
2017 (12)	1.0	1,509.6	0.0	0.0	551.0	0.0	0.0	528.4	0.0	0.0	192.9	0.0	0.0	152.4	0.0	0.0	29.25	4.85	0.00
2018 (12)	1.0	739.5	0.0	0.0	269.9	0.0	0.0	258.8	0.0	0.0	94.5	0.0	0.0	74.7	0.0	0.0	29.65	4.90	0.00
SubTotal					13,032.4	0.0	0.0				4,589.0	0.0	0.0	3,627.5	0.0	0.0			
Remaind					0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0			
Total					13,032.4	0.0	0.0				4,589.0	0.0	0.0	3,627.5	0.0	0.0			

	REVENUE					BURDENS					OPERATING COSTS				SUMMARY		
	Oil	Sales Gas	Liquids	Other	Total	Crown	Freehold	Other	Total	Percent	Fixed	Variable	Total	Percent	Income	Capital	CashFlow
Year	M$	M$	M$	M$	M$	M$	M$	M$	M$	%	M$	M$	M$	%	M$	M$	M$
2004 (4)	311.9	0.0	0.0	0.0	311.9	0.0	0.0	91.6	91.6	29.4%	23.0	85.5	108.5	34.8%	111.8	0.0	111.8
2005 (12)	2,852.4	0.0	0.0	0.0	2,852.4	0.0	0.0	837.3	837.3	29.4%	57.8	827.6	885.4	31.0%	1,129.7	182.1	947.7
2006 (12)	3,295.7	0.0	0.0	0.0	3,295.7	0.0	0.0	967.1	967.1	29.3%	43.7	929.9	973.6	29.5%	1,355.1	1,122.6	232.5
2007 (12)	5,502.8	0.0	0.0	0.0	5,502.8	0.0	0.0	1,614.0	1,614.0	29.3%	44.4	1,941.2	1,985.5	36.1%	1,903.2	3,266.8	-1,363.6
2008 (12)	10,829.9	0.0	0.0	0.0	10,829.9	0.0	0.0	3,176.5	3,176.5	29.3%	45.0	3,416.6	3,461.6	32.0%	4,191.8	3,132.8	1,059.0
2009 (12)	14,650.1	0.0	0.0	0.0	14,650.1	0.0	0.0	4,297.1	4,297.1	29.3%	45.7	4,883.9	4,929.6	33.6%	5,423.5	2,691.3	2,732.1
2010 (12)	15,665.5	0.0	0.0	0.0	15,665.5	0.0	0.0	4,595.3	4,595.3	29.3%	46.4	5,414.8	5,461.2	34.9%	5,608.9	79.2	5,529.8
2011 (12)	12,911.8	0.0	0.0	0.0	12,911.8	0.0	0.0	3,787.8	3,787.8	29.3%	47.1	5,428.9	5,476.0	42.4%	3,648.1	107.2	3,540.9
2012 (12)	11,978.1	0.0	0.0	0.0	11,978.1	0.0	0.0	3,514.2	3,514.2	29.3%	47.8	5,297.7	5,345.5	44.6%	3,118.5	95.2	3,023.3
2013 (12)	11,008.4	0.0	0.0	0.0	11,008.4	0.0	0.0	3,229.8	3,229.8	29.3%	48.5	4,940.6	4,989.1	45.3%	2,789.5	0.0	2,789.5
2014 (12)	10,170.4	0.0	0.0	0.0	10,170.4	0.0	0.0	2,984.3	2,984.3	29.3%	49.2	4,592.0	4,641.2	45.6%	2,545.0	84.0	2,460.9
2015 (12)	8,940.0	0.0	0.0	0.0	8,940.0	0.0	0.0	2,623.4	2,623.4	29.3%	49.9	3,978.4	4,028.3	45.1%	2,288.3	105.6	2,182.7
2016 (12)	8,500.5	0.0	0.0	0.0	8,500.5	0.0	0.0	2,494.6	2,494.6	29.3%	50.7	3,408.0	3,458.7	40.7%	2,547.1	107.2	2,439.9
2017 (12)	5,640.9	0.0	0.0	0.0	5,640.9	0.0	0.0	1,655.5	1,655.5	29.3%	51.5	2,152.7	2,204.2	39.1%	1,781.1	104.6	1,676.5
2018 (12)	2,800.9	0.0	0.0	0.0	2,800.9	0.0	0.0	822.1	822.1	29.4%	20.4	970.0	990.4	35.4%	988.4	127.4	861.0
SubTotal	125,059.	0.0	0.0	0.0	125,059.3	0.0	0.0	36,690.5	36,690.5	29.3%	671.0	48,267.8	48,938.8	39.1%	39,430.0	11,206.0	28,224.0
Remaind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0	0.0	0.0	0.0%	0.0	0.0	0.0
Total	125,059.	0.0	0.0	0.0	125,059.3	0.0	0.0	36,690.5	36,690.5	29.3%	671.0	48,267.8	48,938.8	0.0%	39,430.0	11,206.0	28,224.0

Table 4 (continued)

Resource Economic Analysis Program
Derek Oil & Gas Corporation

Working Interest Initial 0.00%
Final 0.00%

LAK Ranch Modified SAGD Project
Weston County Wyoming
Pilot to Phase II Operation: **Royalty Interest Position**
Forecast Price and Costs (U.S. Dollars)
Effective Date: May 1 2004

Reserve Category : Possible Undeveloped

Province: Other

Field: LAK Ranch

Q2 2004 GLJ Price Deck

		Gross	W.I.	Royalty	Net
Oil	MSTB	13,032.4	0.0	0.0	0.0
Gas Raw	MMCF	0.0	0.0		
Gas Sales	MMCF	0.0	0.0	0.0	0.0
NGL	MSTB	0.0	0.0	0.0	0.0
Pentane	MSTB	0.0	0.0	0.0	0.0
Butane	MSTB	0.0	0.0	0.0	0.0
Propane	MSTB	0.0	0.0	0.0	0.0
Ethane	MSTB	0.0	0.0	0.0	0.0
Sulphur	MTon	0.0	0.0	0.0	0.0
BOE	MSTB	13,032.4	0.0	0.0	0.0

Economic Indicators		Before Tax	Discount Rate (%)	Before Tax Operating Income M$	Capital Invest M$	CashFlow M$
Internal Rate of Return (%)		0.0				
Pseudo Rate of Return (%)		0.0	0.0	21,360.9	0.0	21,360.9
PayOut	Yr	0.5	10.0	10,384.7	0.0	10,384.7
Retrun on Invest Undisc %	$/$	0.0	12.0	9,149.4	0.0	9,149.4
Return on Invest Disc @15%	$/$	0.0	15.0	7,638.7	0.0	7,638.7
Net Profit Interest Disc @15%	$/BOE		20.0	5,786.5	0.0	5,786.5

Reversion Point Aug 2004

Producded To Reversion Point			Capital Remaining	Remaining
Oil	MSTB	-0.1	13,032.5	100.0%
Gas Raw	MMCF	0.0	0.0	0.0%

		GROSS RATE			GROSS VOLUME			INTEREST RATE			INTEREST VOLUME			NET VOLUME			PRICE		
		Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids	Oil	Sales Gas	Liquids
Year	Wells	BBL/D	MCF/D	BBL/D	MSTB	MMCF	MSTB	BBL/D	MCF/D	BBL/D	MSTB	MMCF	MSTB	MSTB	MMCF	MSTB	$/BBL	$/MCF	$/BBL
2004 (4)	1.0	129.9	0.0	0.0	15.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.25	5.00	0.00
2005 (12)	1.0	554.2	0.0	0.0	202.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.00	4.80	0.00
2006 (12)	1.0	921.4	0.0	0.0	336.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.00	4.50	0.00
2007 (12)	1.0	1,656.7	0.0	0.0	604.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.00	4.35	0.00
2008 (12)	1.0	3,260.5	0.0	0.0	1,190.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.00	4.35	0.00
2009 (12)	1.0	4,410.7	0.0	0.0	1,609.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.00	4.35	0.00
2010 (12)	1.0	4,627.4	0.0	0.0	1,689.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.50	4.40	0.00
2011 (12)	1.0	3,778.4	0.0	0.0	1,379.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.75	4.50	0.00
2012 (12)	1.0	3,440.8	0.0	0.0	1,255.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.25	4.55	0.00
2013 (12)	1.0	3,144.9	0.0	0.0	1,147.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.40	4.60	0.00
2014 (12)	1.0	2,843.3	0.0	0.0	1,037.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.00	4.70	0.00
2015 (12)	1.0	2,464.1	0.0	0.0	899.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.40	4.75	0.00
2016 (12)	1.0	2,310.4	0.0	0.0	843.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.80	4.80	0.00
2017 (12)	1.0	1,509.6	0.0	0.0	551.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.25	4.85	0.00
2018 (12)	1.0	739.5	0.0	0.0	269.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	29.65	4.90	0.00
SubTotal					13,032.4	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0			
Remaind					0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0			
Total					13,032.4	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0			

	REVENUE					BURDENS					OPERATING COSTS				SUMMARY		
	Oil	Sales Gas	Liquids	Other	Total	Crown	Freehold	Other	Total	Percent	Fixed	Variable	Total	Percent	Income	Capital	CashFlow
Year	M$	M$	M$	M$	M$	M$	M$	M$	M$	%	M$	M$	M$	%	M$	M$	M$
2004 (4)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-33.6	-33.6	0.0%	0.0	0.0	0.0	0.0%	33.6	0.0	33.6
2005 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-365.5	-365.5	0.0%	0.0	0.0	0.0	0.0%	365.5	0.0	365.5
2006 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-566.8	-566.8	0.0%	0.0	0.0	0.0	0.0%	566.8	0.0	566.8
2007 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-946.1	-946.1	0.0%	0.0	0.0	0.0	0.0%	946.1	0.0	946.1
2008 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1,861.9	-1,861.9	0.0%	0.0	0.0	0.0	0.0%	1,861.9	0.0	1,861.9
2009 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2,518.7	-2,518.7	0.0%	0.0	0.0	0.0	0.0%	2,518.7	0.0	2,518.7
2010 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2,693.6	-2,693.6	0.0%	0.0	0.0	0.0	0.0%	2,693.6	0.0	2,693.6
2011 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2,220.2	-2,220.2	0.0%	0.0	0.0	0.0	0.0%	2,220.2	0.0	2,220.2
2012 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-2,059.9	-2,059.9	0.0%	0.0	0.0	0.0	0.0%	2,059.9	0.0	2,059.9
2013 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1,893.2	-1,893.2	0.0%	0.0	0.0	0.0	0.0%	1,893.2	0.0	1,893.2
2014 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1,749.2	-1,749.2	0.0%	0.0	0.0	0.0	0.0%	1,749.2	0.0	1,749.2
2015 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1,537.7	-1,537.7	0.0%	0.0	0.0	0.0	0.0%	1,537.7	0.0	1,537.7
2016 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-1,462.2	-1,462.2	0.0%	0.0	0.0	0.0	0.0%	1,462.2	0.0	1,462.2
2017 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-970.4	-970.4	0.0%	0.0	0.0	0.0	0.0%	970.4	0.0	970.4
2018 (12)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-481.9	-481.9	0.0%	0.0	0.0	0.0	0.0%	481.9	0.0	481.9
SubTotal	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-21,360.9	-21,360.9	0.0%	0.0	0.0	0.0	0.0%	21,360.9	0.0	21,360.9
Remaind	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%	0.0	0.0	0.0	0.0%	0.0	0.0	0.0
Total	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-21,360.9	-21,360.9	0.0%	0.0	0.0	0.0	0.0%	21,360.9	0.0	21,360.9

File LAKRI-EFREAP at www.boe.ca
Time 22/04/2004 6:53:43 AM

Table 4 (continued)

Resource Economic Analysis Program File LAKWI+RI-EF
Derek Oil & Gas Corporation Time 22/04/2004 7:11:04 AM
Version REAP Ver 1.37.6

Derek Oil & Gas Corporation
LAK Ranch Modified SAGD Project
Weston County, Wyoming
Forecast Price & Costs($US);WI+RI Consolidation
Effective: May 1, 2004

Reserve Category : Possible Undeveloped
Province: Wyoming

Q2 2004 GLJ Price Deck(US$)

Evaluation Interest Summary

Year	Mo	Oil Production Rate BBL/D	Oil Production Volume MSTB	Price $/BBL	Total Revenue M$	Operating Expense M$	Operating Expense $/BBL	Burden M$	Capital M$	BTax CashFlow M$	Tax M$	ATax CashFlow M$
2004	4	72.7	8.8	35.25	311.9	108.5	12.33	58.1	0.0	145.4	42.3	103.0
2005	12	260.5	95.1	30.00	2,852.4	885.4	9.31	471.8	182.1	1,313.1	425.9	887.2
2006	12	322.5	117.7	28.00	3,295.7	973.6	8.27	400.2	1,122.6	799.3	514.2	285.1
2007	12	579.8	211.6	26.00	5,502.8	1,985.5	9.38	668.0	3,266.8	-417.6	582.1	-999.7
2008	12	1,141.2	416.5	26.00	10,829.9	3,461.6	8.31	1,314.6	3,132.8	2,920.9	1,370.5	1,550.4
2009	12	1,543.7	563.5	26.00	14,650.1	4,929.6	8.75	1,778.3	2,691.3	5,250.9	1,814.7	3,436.2
2010	12	1,619.6	591.1	26.50	15,665.5	5,461.2	9.24	1,901.8	79.2	8,223.4	2,062.1	6,161.2
2011	12	1,322.4	482.7	26.75	12,911.8	5,476.0	11.34	1,567.5	107.2	5,761.1	1,450.6	4,310.5
2012	12	1,204.3	439.6	27.25	11,978.1	5,345.5	12.16	1,454.3	95.2	5,083.2	1,318.8	3,764.3
2013	12	1,100.7	401.8	27.40	11,008.4	4,989.1	12.42	1,336.6	0.0	4,682.6	1,231.2	3,451.4
2014	12	995.2	363.2	28.00	10,170.4	4,641.2	12.78	1,235.0	84.0	4,210.2	1,150.5	3,059.7
2015	12	862.4	314.8	28.40	8,940.0	4,028.3	12.80	1,085.7	105.6	3,720.4	1,034.9	2,685.5
2016	12	808.6	295.2	28.80	8,500.5	3,458.7	11.72	1,032.4	107.2	3,902.2	1,102.7	2,799.4
2017	12	528.4	192.9	29.25	5,640.9	2,204.2	11.43	685.1	104.6	2,646.9	746.7	1,900.2
2018	12	258.8	94.5	29.65	2,800.9	990.4	10.48	340.2	127.4	1,342.8	380.7	962.1
SubTotal			4,588.9		125,059.3	48,938.8		15,329.6	11,206.0	49,584.9	15,228.2	34,356.7
Remainder			0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0
Total			4,588.9		125,059.3	48,938.8	10.66	15,329.6	11,206.0	49,584.9	15,228.2	34,356.7

Discount Rate (%)	Before Tax Operating Income M$	Before Tax Capital Invest M$	Before Tax CashFlow M$	After Tax CashFlow M$
0.0	60,790.9	11,206.0	49,584.9	34,356.7
10.0	30,375.2	7,313.1	23,062.2	15,553.8
12.0	26,909.5	6,768.2	20,141.3	13,503.1
15.0	22,650.3	6,050.6	16,599.8	11,026.9
20.0	17,386.6	5,068.5	12,318.1	8,054.5

		Gross	W.I.	Royalty	Net
Oil	MSTB	13,032.4	4,588.9	961.4	3,627.6
Gas Raw	MMCF	0.0			
Gas Sales	MMCF	0.0	0.0	0.0	0.0
NGL	MSTB	0.0	0.0	0.0	0.0
Pentane	MSTB	0.0	0.0	0.0	0.0
Butane	MSTB	0.0	0.0	0.0	0.0
Propane	MSTB	0.0	0.0	0.0	0.0
Ethane	MSTB	0.0	0.0	0.0	0.0
Sulphur	MTon	0.0	0.0	0.0	0.0
BOE	MSTB	13,032.4	4,588.9	961.4	3,627.6

Appendix A - Land Description and Royalty Schedule, LAK Ranch Field

Township	Range	Sect.	Sub-Sect.	Gross Acres	Mineral Owner	Lessor Royalty %	Total Override Royalty %	Overriding Royalty $/Bbl
44 North	60 West	6	SW1/4	160	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	60 West	6	NE1/4	160	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	60 West	6	E1/2NW1/4	80	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	60 West	6	W1/2SE1/4	80	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	60 West	7	W1/2	320	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	60 West	7	W1/2E1/2	160	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	60 West	18	S1/2SW1/4	80	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	60 West	18	NW1/4	160	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	60 West	19	W1/2W1/2	160	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	60 West	19	NE1/4NW1/4	40	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	1	SE1/4	160	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	11	SE1/4	160	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	11	E1/2NE1/4	80	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	11	S1/2SW1/4	80	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	12	ALL	640	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	13	W1/2	320	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	13	S1/2SE1/4	80	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	14	ALL	640	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	22	NE1/4	160	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	23	N1/2	320	Non-Federal Lease	15.63%	8.700%	$0.1360838
44 North	61 West	23	SE1/4	160	Non-Federal Lease	15.63%	8.700%	$0.1360838
44 North	61 West	23	E1/2SW1/4	80	Non-Federal Lease	15.63%	8.700%	$0.1360838
44 North	61 West	24	NW1/4	160	Non-Federal Lease	15.63%	8.700%	$0.1360838
44 North	61 West	24	NE1/4	160	Non-Federal Lease	15.63%	8.700%	$0.1360838
44 North	61 West	24	SW1/4	160	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	24	W1/2SE1/4	80	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	25	NW1/4NE1/4	40	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	25	N1/2NW1/4	80	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	25	SW1/4NW1/4	40	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	25	NW1/4SW1/4	40	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	26	E1/2NE1/4	80	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	26	NE1/4SE1/4	40	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	24	SE1/4SE1/4	40	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	24	NE1/4SE1/4	40	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	25	S1/2SW1/4	80	Non-Federal Lease	12.25%	8.700%	$0.1360838

44 North	61 West	25	NE1/4SW1/4	40	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	25	NW1/4SE1/4	40	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	25	E1/2NE1/4	80	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	25	SW1/4NE1/4	40	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	61 West	25	SE1/4NW1/4	40	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	60 West	30	W1/2NW1/4	80	Non-Federal Lease	12.25%	8.700%	$0.1360838
44 North	60 West	18	N1/2SW1/4	80	Non-Federal Lease	6.62%	8.700%	$0.1360838
44 North	61 West	13	NE1/4	160	Non-Federal Lease	6.62%	8.700%	$0.1360838
44 North	61 West	13	N1/2SE1/4	80	Non-Federal Lease	6.62%	8.700%	$0.1360838
44 North	61 West	22	SE1/4	160	Non-Federal Lease	6.62%	8.700%	$0.1360838
44 North	61 West	27	W1/2E1/2	160	Non-Federal Lease	6.62%	8.700%	$0.1360838
44 North	61 West	1	S1/2SW1/4	80	Federal W-022180A	0.00%	8.700%	$0.1360838
44 North	61 West	10	SW1/4NE1/4	40	Federal W-149512	0.00%	8.700%	$0.1360838
44 North	61 West	10	W1/2SE1/4 **(Note 1)**	80	Federal W-149512	0.00%	8.700%	$0.1360838
44 North	61 West	10	SE1/4SE1/4 **(Note 1)**	40	Federal W-149512	0.00%	8.700%	$0.1360838
44 North	61 West	15	W1/2E1/2	160	Federal W-149512	0.00%	8.700%	$0.1360838
44 North	61 West	15	E1/2W1/2	160	Federal W-149512	0.00%	8.700%	$0.1360838
44 North	61 West	15	NW1/4NW1/4	40	Federal W-149512	0.00%	8.700%	$0.1360838
44 North	61 West	15	SW1/4SW1/4	40	Federal W-149512	0.00%	8.700%	$0.1360838
44 North	61 West	15	E1/2E1/2 **(Note 2)**	160	Federal W-149512	0.00%	8.700%	$0.1360838
44 North	61 West	25	NE1/4SE1/4	40	Federal W-149512	0.00%	8.700%	$0.1360838
44 North	61 West	25	S1/2SE1/4	80	Federal W-149512	0.00%	8.700%	$0.1360838
44 North	61 West	26	NW1/4NE1/4	40	Federal W-149512	0.00%	8.700%	$0.1360838
44 North	61 West	26	E1/2SW1/4	80	Federal W-149512	0.00%	8.700%	$0.1360838
44 North	61 West	26	E1/2NW1/4 **(Note 3)**	80	Federal W-149512	0.00%	8.700%	$0.1360838
44 North	61 West	26	SE1/4SE1/4 **(Note 3)**	40	Federal W-149512	0.00%	8.700%	$0.1360838
				7440				
					Note 1: Excl 13.77 ac in RR ROW WYW0119068			
					Note 2: Excl 23.87 ac in RR ROW WYW0119068			
					Note 3: Excl 14.23 ac in RR ROW WYW0119068			

Appendix B - Well List in LAK Ranch Field, Weston County, Wyoming

API No.	Well	Township	Range	Section	Qtr Qtr	Elevation	Spud Date	TD	Td Form	Well Class	Status	Status Date
49-045-06888	LAK RANCH 2	44N	61W	1	SW SE	4300 KB	05/30/1958	NEWCASTLE	571	STRAT	PA	06/03/1958
49-045-22915	LAK RANCH 1-1	44N	61W	1	SW SE	4292	11/04/1997	SKULL CREEK	460	OIL	SI	02/28/2002
49-045-22937	LAK 12-13	44N	61W	12	NW NE	4275	09/08/1984	NEWCASTLE	1100	STRAT	SR	02/15/2002
49-045-22494	LAK RANCH FEE 12-8	44N	61W	12	NE NW	4257	05/19/1985	NEWCASTLE	1360	MONITOR	TA	01/01/2004
49-045-22495	LAK RANCH FEE 12-5	44N	61W	12	NE NW	4256	05/13/1985	NEWCASTLE	1120	INJECTOR	SI	01/01/2004
49-045-22107	LAK RANCH-FEE 3-12	44N	61W	12	NE NW	4267	02/12/1982	NEWCASTLE	1175	INJECTOR	SI	01/01/2004
49-045-22921	LAK RANCH 12-10	44N	61W	12	NW NE	4286	11/13/1997	NEWCASTLE	1000	STRAT	SR	02/15/2002
49-045-22922	LAK RANCH 12-9	44N	61W	12	NW NE	4283	11/15/1997	NEWCASTLE	1000	STRAT	SR	02/15/2002
49-045-22923	LAK RANCH 12-11	44N	61W	12	NW NE	4285		NEWCASTLE	1100	STRAT	SR	02/15/2002
49-045-22924	LAK RANCH 12-12	44N	61W	12	NW NE	4291		NEWCASTLE	900	STRAT	EP	NA
49-045-22933	DEREK H 1-P	44N	61W	12	NW NE	4284	06/23/2000	NEWCASTLE	3213	OIL	PR	01/01/2004
49-045-22934	DEREK H 2-I	44N	61W	12	NW NE	4284	07/14/2000	NEWCASTLE	3210	INJECTOR	AI	01/01/2004
49-045-09302	LAK RANCH FEE 12-7	44N	61W	12	SE NE	4259	02/06/1965	NEWCASTLE	1804	MONITOR	SI	01/01/2004
49-045-21936	LAK RANCH FEE 1-12	44N	61W	12	NE NE	4286	02/19/1982	NEWCASTLE	1202	MONITOR	SI	01/01/2004
49-045-06774	LAK RANCH FEE 12-6	44N	61W	12	SE NE	4260	01/03/1965	NEWCASTLE	2017	OIL	SI	01/01/2004
49-045-06710	LAKE 1	44N	61W	12	SE SW	4257	09/20/1953	NEWCASTLE	2289	OIL	PA	09/26/1953
49-045-22507	LAK RANCH 12-9	44N	61W	12	NE SW	4250	06/03/1985	SKULL CREEK	2080	OIL	PA	03/04/1993
49-045-22302	LAK RANCH 4-12	44N	61W	12	NE NW	4257	12/13/1983	NEWCASTLE	1290	INJECTOR	SI	01/01/2004
49-045-06731	LAK RANCH 1	44N	61W	12	SW SW	4212	12/13/1955	MINNELUSA	4559	OIL	PA	12/13/1956
49-045-21893	LAK 2-12	44N	61W	12	NE NW	4250?	03/14/1982	NEWCASTLE	1071	OIL	SI	01/01/2204
49-045-20795	LAK-RANCH 1	44N	61W	12	SE SE	4310 KB	08.14/1974	NEWCASTLE	2032	OIL	PA	09/14/1974
49-045-06674	L B HANSEN 1	44N	61W	13	NE NW	4250TS	11/04/1939	LAKOTA	3568		PA	03/31/1940
49-045-22508	LAK RANCH-FEE 24-2	44N	61W	24	SE NW	4160	05/28/1985	SKULL CREEK	1655	OIL	PA	03/04/1993
49-045-06317	LAK RANCH-FEE 2	44N	61W	24	NE SE	4276RB	01/13/1965		1010	OIL	PA	02/03/1965
49-045-21894	LAK RANCH-FEE 24-1	44N	61W	24	SE SE	4199		NEWCASTLE	925	OIL	SI	01/01/2004
49-045-06187	LAK RANCH 1	44N	61W	25	NE SE			NEWCASTLE		OIL	PA	
49-045-22936	LAK 7-1	44N	60W	7	NE NW	4279		NEWCASTLE	1100	STRAT	EP	09/07/2001
49-045-06583	LAK RANCH 3	44N	60W	18	NW NW	4339 RB	01/25/1965	NEWCASTLE	1249	OIL	PA	01/28/1965
49-045-21932	LAK RANCH-FEE 18-2	44N	60W	18	SE SW	4262	10/15/1982	SKULL CREEK	526	WS	SI	01/01/2004
NA	PARRENT #1	44N	60W	19	NW NW	4250e	07/1957	NEWCASTLE			PA	
NA	PARRENT #2	44N	60W	19	NW NW	4250e	07/1957	NEWCASTLE			PA	
NA	PARRENT #3	44N	60W	19	NW NW	4250e	07/1957	NEWCASTLE			PA	
NA	PARRENT #4	44N	60W	19	NW NW	4250e	07/1957	NEWCASTLE			PA	

Appendix C - Reservoir Completion Data, LAK Ranch Field, Weston County, Wyoming

Well	Twp	Rge	Sec	Qtr Qtr	Completed Interval ft		Log Interval ft.	ASL top struct. ft	Gross Sand ft	Net Pay Thick. ft.	Log Porosity %	Core Porosity %	Avg. Porosity %	Water Saturation %	Permeability md	Res. Temp deg F	Cum. Produced oil, bbls	Cum. Produced wtr, bbls	Cum. Injection wtr, bbls
Cove LAK 7-1	44N	60W	1	NW NW		Channel	1074	3205	60	14	22			36					
										20	25			34					
LAK RANCH 2	44N	61W	1	SW SE															
LAK RANCH 1-1	44N	61W	1	SW SE		Marine	353-370			15	17								
						Alluvial	406-434			28	15	8.2-29.6			2-5315				
LAK 7-1 (Cove)	44N	60W	7	NW NW		Channel	1074	3205		34	24			35					
LAK 12-13	44N	61W	12	NW NE		1052		3224	34	24	18			38					
LAK RANCH FEE 12-8	44N	61W	12	NE NW	1220-1238												159	34006	
						1270		2989		4	12								
LAK RANCH FEE 12-5	44N	61W	12	NE NW	1018-1036		1016	3242		24	22			28	1000		4492	424847	28120
					978-984														
LAK RANCH-FEE 3-12	44N	61W	12	NE NW	1054-1074		1053-1071			18		20.5-22.8	21.9	25.4	124-508	68	1177	246265	48192
(Mapco 12-3)						*1094*	1095-1107	*3180*		3(6.5jb)		18.1-22.8	20	33.9	121-800				
LAK RANCH 12-10	44N	61W	12	NW NE		Marine	740-753			13	17								
						Alluvial	779-803	3506		20	16.5								
Log/core interval comparison						Alluvial	797-801			4	17.2	21.4			945-2196				
LAK RANCH 12-9	44N	61W	12	NW NE		Marine	890-906			15	14			65					
						Alluvial	928-986	3355	56	50	18			49					
Log/core interval comparison						Alluvial	949-974			25	20.7	27.3			440-1069				
LAK RANCH 12-11	44N	61W	12	NW NE		Marine				shale									
						Alluvial	894-946	3393	48	32	16	14.8		56					
LAK RANCH 12-12	44N	61W	12	NW NE															
DEREK H 1-P	44N	61W	12	NW NE													5337	191482	
DEREK H 2-I	44N	61W	12	NW NE															193096
LAK RANCH FEE 12-7	44N	61W	12	SE NE	1650-1661		1648-1662			12		18.4-24.9	22.5	34	55-2246		2934	396266	
(Conoco #5)					1707-1721	*1704*	1706-1733	2562		15	26	20.4-32.9	25.2	30.7/44	35-2827				
LAK RANCH FEE 1-12	44N	61W	12	NE NE			1107-1114			7		15.3-20.3	17	15.4	52-693				
(Mapco 12-1)					1135-1155	Channel	1135-1141	3124	44	30	14	19.7-26.7	22.8	?	256-2126		381	58412	
							1147-1155				22			45					
							1158-1175			0		16.8-25.5	22.5	47.5	26-1316				
LAK RANCH FEE 12-6	44N	61W	12	SE NE		*1693*	1632-1650	2574		8	21.5			35-60		80			
(Conoco #4)					1700-1710		1696-1710			10		19-25.5	23.4	35.2	26-976		4025	296340	
LAKE 1(Steele 1-1)	44N	61W	12	SE SW		Channel	2180	2077		6+						94			
LAK RANCH 12-9	44N	61W	12	NE SW															
LAK RANCH 4-12	44N	61W	12	NE NW	1164-1174		1186	3077		21	18			49		67			1806824
					1186-1214														
LAK RANCH 1(Coronadc	44N	61W	12	SW SW		Channel	2198	2023		25						93			
LAK 2-12	44N	61W	12	NE NW		*990*	975-985	3262	*32*	10	na			40					
(Mapco 12-2)					994-1010		991-1015			15		19.9-25.3	22	24.9	148-763		6550	473799	
					1022-1028	*1022*	1021-1029	3230	*11*	8		14.9-23.9	21.1	26.3	661-1238				
LAK-RANCH 1(Clinton C	44N	61W	12	SE SE															
L B HANSEN 1	44N	61W	13	NE NW															
LAK RANCH 3	44N	60W	18	NW NW															
(Conoco #3)																			
LAK RANCH-FEE 18-2	44N	60W	18	SE SW			407-448			cored interv.		9.9-23.6							
(Mapco 18-1)																			
LAK RANCH-FEE 24-2	44N	61W	24	SE NW		1558		2604	32										
LAK RANCH-FEE 2	44N	61W	24	NE SE			934-1008			gross int.									
(Conoco #2)																			
LAK RANCH-FEE 24-1	44N	61W	24	SE SE	832-843		833-843		30			18.9-23.8	21.9	69.9	121		1204	7291	
(Mapco 24-1)							862-895					15.7-18.8	17.4	84	41				
Conoco #1	44N	61W	25	SW NE			1293-1276			gross int.									
PARRENT #1(Injection)	44N	60W	19	NW NW			303-306			perf'd int.									
PARRENT #1	44N	60W	19	NW NW															
PARRENT #2	44N	60W	19	NW NW															
PARRENT #3	44N	60W	19	NW NW															
														CUM WTR				2128708	2076232