Environmental Assessment Div.
Director: Bas Cleary
P.O. Box 8700

St. John's, NL
A1B 4J6

## Project : JNJ Bison Land Development

## Location: Robinsons

As requested, following this cover letter, is an Environmental Assessment Registration of the undertaking, JNJ Bison Land Development. The digital copy has been forwarded to Paul Rideout.

JNJ Bison Company is a proposed "gate to plate" wood bison farming operation. Meat production being the primary objective, with Agri-tourism being the secondary source of revenue. JNJ Bison will be family owned and operated by myself, with the assistance of family, friends and future employees. Passing the business down to one of my three sons, Jacob, Noah or Jaxon.

The first area to be developed will be 42 acres adjacent to the TCH. This will be sub-divided into three, 12 acre paddocks for rotational grazing. This will eliminate the need for storage or removal of manure. Manure will be distributed organically as the animals graze each paddock. With herd growth, the paddocks will be redistributed to accommodate the increased number of animals. This can be done by adjusting interior cross fences. Increasing paddock size from 12 acres to 24 acres, etc. Thirty percent will be left forested in each paddock, to provide natural shelter. The remaining 6 acres will house the handling/corral system and Norsteel prefab building (for stored forage). Second to be developed will be the remaining 45 acres. This will also be divided into 12 acre paddocks. An additional 49 acre parcel will be developed at a later date to allow future expansion.

A former agricultural grant in my community has recently been purchased through the Land Consolidation Program. I plan on applying for this land when it becomes available for forage production. This would be an excellent opportunity to offset my feed costs, bringing my operational cost down significantly. Hay making machinery can be purchased over the course of the next few years. In the short term, I do have equipment available to me, through the support of a few local farmers whom are friends and active livestock producers. Hay will be purchased locally at a cost of $\$ 3.00$ per square bale (50lb).

I hope the following documentation is sufficient in answering any questions. Please contact me at any time to discuss the application. I can be reached at (709) 2742066 or (709) 721 1037. Alternatively, I can be contacted via email at michelleyoung902@msn.com .

Respectfully,
Michelle Young

NAME OF UNDERTAKING: JNJ Bison Land Development

## PROPONENT :

(i) Name of Corporate Body: JNJ Bison Company
(ii) Address :

87 Main Road
Heatherton, NL AON 1MO
(iii) Chief Executive Officer :

Name: Michelle Dorothy Young
Official Title: Owner/Operator
Address: $\quad 87$ Main Road
Heatherton, NL
AON 1M0

Telephone No : Home (709) 2742066 Cell (709) 7211037
(iv) Principle Contact Person for purposes of environmental assessment :

Name: Michelle Dorothy Young
Official Title : Owner/Operator

Address: $\quad 87$ Main Road
Heatherton, NL
AON 1MO

Telephone No: Home (709) 2742066
Cell (709) 7211037

## THE UNDERTAKING :

(i) Name of the Undertaking:

JNJ Bison Land Development

## (ii) Purpose/Rationale/Need for the Undertaking :

Being a new entrant to the Agriculture industry, I currently do not own any significant land base on which to start my proposed "gate to plate" wood bison farming operation.

I've always had a strong interest in the Agriculture Industry, and my growing concern over the availability of quality, locally produced product, prompted my research into livestock production. Specifically, organic production. The bison business holds exciting possibilities and generates considerable interest and fascination. Blending perfectly with the lifestyle I choose to live and the foundation I wish to leave for my children. The quality, naturally raised meat reinforces the philosophy, " we are a part of nature and nature is a part of us ". Through extensive research into the Bison Industry and preliminary market research, there is reasonable demand for bison meat, both regionally and province wide. I have contracted a consultant to assist with further market development.

Living in a rural community, often limits employment opportunities and one has to be creative in coming up with solutions. Residing most of my life in the community of Heatherton, I want to start a unique, highly sustainable, agricultural business, that would also enhance and promote other local area businesses. Consequentially, the introduction of bison enhances the provinces Agriculture Industry, and will also contribute to conservation of the species, by establishing a new pool of wood bison genetics.

After much searching in the surrounding communities for a suitable site, I located two parcels of crown land, located off the TCH near Robinsons (Approx. 136 acres). Due to the nature of my proposal, I require significant land base to allow for future expansion, and in a location that would ensure the safety of both area residents and the bison.

Tourism should increase in the surrounding areas, with the unique nature of my operation. The site locations proximity to the TCH will attract tourists traveling along the highway.

Limited entry/access is equally appealing. The site is only accessible by the existing resource (farm) road via the TCH, with the exception of ATV/ski-doo access.

In addition, having the TCH easily accessible from the site, will make any transportation of the animals to and from the site, less stressful, ensuring organic standards are met. It would be the ideal route to the abattoir's provincially licensed facility, located in Loch Leven.

## DESCRIPTION OF THE UNDERTAKING :

## (i) Geographical Location :

Largest parcel ( $\mathbf{W}-\mathbf{1 4 0 8 0 4}$ ) is approximately 87 acres. Using the existing farm Road as the entry point, the boundaries are as follows : bounded on the NE (362m) by Crown, SW (435m) by the Farm Road, NW (991m) by Albert Brown grant, SE (752m) by TCH and Whalen/Gillam grants. Access to site via the existing Farm Road ( 435 m side). Former lease holder, Nicholas Piccott cleared almost all timber off this parcel. Gillam and Whalen grants appear to be unoccupied. Small abandoned house and scrapped vehicles on property.

The smaller parcel ( $\mathbf{W}$-140805) is approximately 49 acres, bounded on the NE (200m) by Crown, SW $(\mathbf{2 0 0 m})$ by the Farm Road, NW ( $\mathbf{1 0 0 0} \mathbf{m}$ ) by Gerald Benoit grant, SE ( $\mathbf{1 0 0 0 m}$ ) by Albert Brown grant. SW access to site via the existing Farm road ( 200 m side). There is a small (seasonal) cabin on the Beniot grant . Located on the the furthest SW corner adjacent the Farm Road. Moderately forested.

## PHOTO IN RELATION TO APPROXIMATE MEASUREMENTS



The Albert E Brown grant is situated between both parcels. To my knowledge there is no living relative aware of the existence of the grant. This parcel appears abandoned. No development on the property in quite some time. Plenty of mature trees standing. There is an over grown road adjacent to the NW 991 meter boundary of application 140804. I believe this is former development by Nicholas Piccott.

Only two seasonal businesses use the same access road. A Christmas Tree Farm owned by David Butt and Gale's U-Pick Strawberry Farm. They are located at the very end of the Farm Road (Approx. 4 kms ) John Wells also makes hay from a couple fields centrally located. I believe he has private access from a road built on privately owned land. There appears to be no conflict with either operation.

## (ii) Physical Features :

Former Agriculture lease left fallow. Predominantly alder growth, with small pockets of forested area. Most of the trees remaining will be left, to provide natural shelter. Trees will only thinned and cleared to accommodate natural pasture development. Ideal land for bison would have boulders, rocks, rugged areas, woods, and thickets, but the only requirements are adequate pasture and a water source. If you satisfy a bison's food and water requirements, it will stay within the fenced area. Water will be bought to the site temporarily and provided in troughs. It is my intent to apply for a small parcel of land within proximity of the site to build a residence. This will provide quick and easy access to the site should any problems arise. This will be the permanent source of water to the site.

No water bodies exist within the boundary of the application. Wildlife in the area include moose, coyote, and various other smaller mammals, however there is no anticipation that they will be affected by the activities of the farm.

A combination of $60^{\prime \prime}$ Sure Lock game fence and 3 strand, High tensile wire will be installed on 7 foot' posts, spaced 16 feet apart. The 3 strand HT will be energized by a solar unit. Alternatively, Alberta has developed specific fencing and management practices which could be utilized.

See Fencing Guidelines for Bison on Alberta Public Lands.
www.canadianbison.ca/producer/Resources/documents/BisonGuidelinesJune30 2006 Web.pdf

There will be a $30 \times 50 \times 12$ Norsteel prefab building erected, for storage of stockpiled or purchased forage. A handling/corral system will also be built. It will consist of a series of chutes (portable, stationary/squeeze), with raceways/alleys and holding pens for sorting the animals. The location where the handling/corral system and Norsteel building will be constructed, is approximately 4-6 acres, SW entry bounded by the existing Farm Road.

## CONCEPTUAL PHOTOGRAPH


(iii) Construction (if applicable) :

Proposed date of first physical construction related activity is Fall 2012. Any other date would be acceptable. It should take approximately 4-6 months to complete development.

The first area to be developed will be the six acres designated for the handling/corral system and Norsteel building. The second area will be the three ( 12 ac .) proposed paddocks. Those areas can then be tilled and seeded. Finally, the perimeter fence/boundary line will be cleared and installation of the first 42 acres of fence.

The Norsteel building will be assembled and the handling/corral system constructed, during times unsuitable for land development or fencing.

During construction, debris and garbage will be removed from the site regularly, and any equipment will be fueled off site. For any equipment that needs to be fueled on site, there will be appropriate spill clean up equipment. Operation of equipment will be done by experienced people reducing the risk of spills.

No conflict anticipated with road usage during construction. The 6 acre location designated to house the Norsteel building and handling/corral system, is also the point of entry. This should provide ample area to maneuver any machinery or offload supplies, without impeding flow of traffic on the Farm Road. Noise generated would be minimal. Most of the clearing will be done with power saws and brush clearing equipment.

## (iv) Operation :

JNJ Bison will be a family owned and operated by myself, with the assistance of family, friends and future employees. After the necessary infrastructure is in place, maintaining a foundation herd of 15 bison calves/yearlings, can be easily accomplished by myself, with the assistance of family members and friends.

Five heifer calves born from the 13 foundation herd will be kept in years four and five. Leaving 7 market ready animals. This will be reduced to 2 heifer calves in years six through ten. See attached production chart. It is estimated to have 33 breeding heifers by year 10, with 25 market ready animals. This works out to $15,375 \mathrm{lbs}$ of available meat converting to $\$ 146,350.00$ in revenue.

Currently, wood bison breeding stock can only be purchased in the western provinces. Animals will be transported in a specialized livestock trailer specifically for bison. Arrangements have been discussed with Steve Brandt of Steve's Livestock Transport based in Saskatchewan. They frequently move bison and have the expertise needed to make the journey across Canada.

Bison are very disease-resistant. However, they are susceptible to many bacterial and viral diseases, as well as parasites, that occur in cattle and other livestock species. Some of these diseases are brucellosis, tuberculosis, anthrax, hemorrhagic septicemia, malignant catarrhal fever. Malignant Catarrhal Fever (MCF) is the deadliest livestock disease to fear as a bison producer and is always fatal. Bison should not be handled, transported or located near sheep or pastured in close proximity as to avoid contact. It should be kept in mind when choosing to establish a herd. No sheep producers located near site location. Rarely do bison suffer external parasites such as lice or ticks. It almost always will be an internal parasite. Bison share the same parasites as cattle and are treated similarly (double vet recommended dose for cattle)

Bison traceability is an industry program initiated and established trace back system for the control and eradication of disease. The bison identification system is operated in conjunction with the Canadian Cattle Identification (CCIA) system. The CCIA manages data for the bison industry on its information system. All bison must be tagged before leaving their herd of origin and tags then retired upon death or export. White RFID tags with the specific numbers allocated for bison (300,000,000 to $304,999,999$ ) are available only through the Canadian Bison Association. I am currently a member of the Canadian Bison Association and can utilize member discounts.

Under the current Animal Heath \& Protection Act, bison are listed as "livestock". Previously, a permit from the Department of Natural Resources was required to import bison into the province. Currently no permit is required with that department and I have confirmed this with Chief Veterinary Officer, Dr. Hugh Whitney. Awaiting recommendations from Wayne Barney from the Department of Wildlife to address any concerns they may have. Preliminary contact indicates they do make provisions for the importing of bison, and would require a proposal ensuring adequate containment. Mr. Barney has been provided a copy of my proposal.

Bison producers are no longer required to do whole herd tuberculosis testing, and have been eligible for emergency financial assistance similar to that provided to the beef industry when facing disasters such as drought, BSE or anthrax outbreaks.

Raising bison is similar, but not identical, to raising beef cattle. Bison are larger, stronger, and more excitable than cattle and thus require special fencing and handling facilities. Bulls stand six feet tall and ten feet long, with the average animal weighing one ton. Bulls can breed beginning at 2 years and reach full maturity at 5 years. Cows are smaller, standing 5 feet tall and weighing 700 to 900 pounds. Breeding bulls will be replaced every two years to prevent inbreeding. As previously mentioned, I will be using a combination of woven and High Tensile wire to contain the animals. Paddocks have be designed to allow the same amount of pasture per bison, as is required for cattle in the area. Animals will be rotated every two to four weeks, depending on season and forage availability. Eliminating the need to remove or store manure, as it will be distributed organically.

Bison evolved on the North American plains and woodlands. They are better adapted to the Canadian climate than any other commercially raised grazing animal. Bison are winter hardy. They have that thick hair coat for a reason.

There are three major factors that affect a high breeding rate: proper nutrition, proper environment and proper genetics. Nature has dictated that unless all is well with the female, she will not breed. This safety mechanism ensures the species survival. Many domestic species will breed, even when stressed or malnourished. Bison will not. A female must be in good flesh and at ease in her environment before she will breed. She must be willing to gain weight. Feeding 2-3 weeks before the "rut" to ensure cows cycle.

Bison are polyestrous, meaning they have more than one estrous cycle per year. The "rut" usually lasts two months during summer/fall followed by a period of anestrous which occurs during the winter and early spring. The breeding season begins in August and continues into October, while the calving season begins in May and continues into July. With good management, cows can reproduce every year and can begin breeding at 2 years of age. The normal gestation period is 280 to 285 days.

They are extremely low maintenance and there are virtually no predators in the agricultural regions of Canada that pose a threat. Raising bison is recognized as a highly sustainable form of agriculture production. It requires fewer inputs than nearly any other form of agriculture and leaves a minimal footprint on the natural environment.

Bison are raised naturally without the use of growth hormones, stimulants, antibiotics or animal byproducts. Bison are naturally fed pasture grasses. They can receive supplemental forage (hay and silage) during extreme weather or during droughts when pastures are dry. Alfalfa pellets can be supplemented prior to entry into the market. Bison have a preference for fescue in a winter grazing program and prefer snow as a water source in Winter. Salt, micro and macro minerals are fed in the same amounts as for cattle in free form (dusters) or blocks. Local beef producers in the area allow 3 tonne hay/silage per adult for a winter feeding program. I plan on utilizing the same ration for bison. This will be purchased locally at $\$ 3.00 / 50 \mathrm{lb}$ bale.

Distressed bison must be dealt with humanely, effectively and promptly to prevent avoidable suffering. Sick, injured or disabled bison in severe distress must not be subjected to the additional distress of loading and transportation. These animals must be euthanized or slaughtered on the ranch. Shooting with a high-powered rifle is the recommended humane method of killing bison because of the thick hair coat and the heavy skull covering the brain. Safety precautions to protect other animals
and people are essential. Any person using a firearm must be licensed to do so in the particular jurisdiction ( I hold a valid FAC )

Most animals are ready for slaughter at between 20 and 30 months. However, it is the market that determines when the bison are finished. When demand for smaller carcasses is strong and they command higher prices, animals are sold earlier.

The locally owned and operated, provincially licensed slaughterhouse currently processes beef, pork, lamb and moose. Mr. Alley has agreed to process market ready animals. A portable squeeze chute will be used to control the animal and more permanent modifications can be made to the facility in the future to accommodate bison as the market increases. A bolt gun will be used to euthanize the animal while subdued in the squeeze chute. See letter from Wade Alley

I also considered undeveloped land in the Highlands. Due to road conditions and high cost involved in purchasing and bringing the land into production, I chose to seek out an alternative location. Heatherton Station Road was also an area of interest, but there was no land available privately. The site proximity to the community was also a concern. I decided to search else where. While inquiring about privately owned property on the Farm Road, I was made aware of the former agricultural crown land and made my application.

## (v) Occupations:

Occupations identified on the National Occupational Classification 2006 :

Major Group 84 - Workers in natural resources, agriculture and related production

843 Agriculture and horticulture workers 8431 General farm workers
8421 Chain saw and skidder operators

The expected duration of site development would be 4-6 months and the number of people required would be 2-4. It is hoped with the support of my Local Area Development Association, a JCP (Job Creation Partnership) could cover cost associated with labor. This would be an equal employment ( $50: 50$ ratio) opportunity. I would require $50 \%$ selected to have carpentry skills, and be physically fit. The undertaking can also be accomplished without the assistance of a JCP. I have been approved for Self Employment Assistance through Advanced Education and Skills. This will allow myself, with the assistance of family members, friends and community support, to complete land clearing and fencing.

## (vi) Project Related Documents :

- Environmental Assessment Registration
- Crown land map demonstrating approximate boundary measurements.
- Conceptual photograph of site location.
- Letter of support from Area Development Association (President - Rita Legge).
* ADA have been in support of my endeavor since last year. (July 2011)
- Letter of employment from MSW Farms.
- Letter of support from Loch Leven Slaughter House (Owner/Operator - Wade Alley).
- JNJ Bison Production Chart / JNJ Bison Feed Cost Chart
- Available Meat Chart / Bison Bull Meat Yield Chart
- Alberta Bison Guidelines to Fencing Public Lands
- 2 large scale Topographical Maps of proposed site location


## APPROVAL OF THE UNDERTAKING :

| Department of Environment and Conservation | Paul Rideout | (709) 7290834 |
| :--- | :--- | :--- |
| * Environmental Assessment, Certificate of Approval | Bas Cleary | (709) 7290673 | for Livestock Operation

Department of Environment and Conservation (Wildlife) Wayne Barney (709) 6372014

* Permit to Import

Department of Natural Resources (Agri-foods) Brydon Cooper (709)6862702

* Commercial Farm Plan submitted

Department of Natural Resources (Forestry) APPROVED (709)6463720

* Nothing required

Department of Natural Resources (Energy/Mines)

* mineral claim in area

Department of Tourism, Culture \& Rec (Htg)

* Nothing required

Department of Transportation \& Works

* In progress

Service NL

* In Progress

Department of Municipal Affairs

* In Progress

Nalcor Energy

* In Progress

APPROVED
(709) 7296408
w/Conditions
APPROVED
(709) 7292462

Terry O'Brian
(709) 6354128

Kimberly Halfyard (709) 6372230
Carla Hayes (709) 6372448
Jordan Gasior (709) 7294694

Jeana McGrath (709) 7371944
Jean (709) 7371944

## SCHEDULE :

Ideally the project would take place in the Fall of 2012. Assuming all approvals are in place, animals could be here within 12 months after site development. Because this is a new start-up, there has been no significant financial contribution towards the development of JNJ Bison, aside from various application fees. Any other start date is acceptable.

## FUNDING :

I have been approved for the Self Employment Assistance Program through Advanced Education and Skills. This will allow me the freedom to develop the site by providing me with an income for the next 52 weeks (conditional). I will be paying for my upcoming educational portion and travel to Alberta to gain hands on knowledge into organic livestock production. Adequate land base must be secured before I can proceed with any other sources of funding for capital purchases. Being a member of the newly formed Qalipu Mi'Kmaq First Nation, I can access \$99,999 for new business start up through Aboriginal Business Canada. Also available are loans through Ulnooweg, Business Development Bank of Canada, CBDC, FCC, Canadian Agricultural Loans Act and private investment to mention a few.

There is the Land Development Program, New Entrant, and New Farm Investment Program, to name a few available through the Department of Natural Resources, that could also be applied for. There are several viable options to cover capital costs. Securing crown land will eliminate the high cost of purchasing privately owned land, resulting in lower start-up costs.

To gain "work experience" in the bison industry, I have secured a 16 week work term with MSW Farms located in Central Alberta. The first eight weeks are scheduled for the end of September 2012, with an additional 8 weeks in the Spring of 2013. See attached letter of employment from MSW Farms.

Starting on September $5^{\text {th }} 2012$, I am also beginning my Certificate of Specialization in Organic Agriculture, offered through Nova Scotia Agricultural College. The first two programs offered through their distance education program are, "Transition to Organic Agriculture " Fall 2012 and "Organic Livestock Production" Winter 2013. I plan on taking the additional two courses required for certification when they become available.

Estimated costs associated with site development are estimated at approximately $\$ 70,250.00$ with approval of the applied for land base.

| Fencing | $\$ 17,500.00$ |
| :--- | :--- |
| Norsteel Building | $\$ 27,750.00$ |
| Handling/Corral system | $\$ 25,000.00$ |

Bay St. George South Area Development Association
P.O. Box 160, McKays, Newfoundland \& Labrador A0N 1G0

Telephone: (709)645-2850 Facsimile: (709)645-2554

Serving the communities of:

| Heatherton | Jeffreys <br> Robinsons <br> Cartyville |
| :--- | ---: |
| McKays | St. Fintans/Loch Leven |
| Highlands |  |

July 30, 2012

Michelle Young
Heatherton, NL
AON 1MO

Dear Ms. Young;

The Board of Directors are pleased to offer support for your proposed development of a Bison Farm. A Motion to this effect was duly Tabled, Seconded and Carried at our meeting of July $12^{\text {th }}, 2011$.

In order to move the initiative forward, please advise what avenue you wish us to take at this time.

Thank you for your time and attention.

Yours truly,

MSW Farms
RR 4
Ponoka, Ab
T4J 1R4

To whom it may concern,

MSW Farms is located in Central Alberta, North West of Ponoka. Our main business is located at legal land location NW 30-43-26-W4. Our farm operation involves about 1000 acres of pasture land and is based on Organic and Natural principals. We raise longhorn beef, bison, elk, chickens and pigs all on chemical free grass and forages, no antibiotics or growth hormones. We sell breeding stock all over the world as well as have a farm gate meat business. We market our meat from our on farm store location, local restaurants and stores as well as farmers markets.

We have offered Michelle Young the opportunity to gain work experience here on our farm operation. During her stay with us there would be animal handling and processing with all species, daily animal care and husbandry, business and marketing as well as general farm maintenance.

If you have any questions please feel free to contact us.

Mark \& Tina Stewart
Owners/Operators MSW Farms
(403)-783-0226

# Loch Leven Slaughter House 

General Delivery<br>St.David's, NL<br>AON 1X0

(709) 6452654

To whom it may concern

Loch Leven Slaughter House is owned/operated my myself, Wade Alley. It is a provincially licensed establishment, located in the community of Loch Leven. Currently I process beef, pork and lamb for my own market and that of other producers. Also processing wild game (moose, caribou, bear) seasonally. New markets are under development.

As with any operation, diversification and expansion play a key role. Michelle Young has approached me about her proposal to commercially raise bison, and asked if I would be interested in processing market ready animals for her. I have agreed to do so, with the necessary upgrades (holding pen, squeeze chute) in place before the animals are brought to my facility.

If you should have any further questions, I can be reached at 6452654 or 6492979.

Regards,

Wade Alley

## JNJ BISON CO. PRODUCTION CHART

| YEAR | BULLS | BREEDING HEIFERS | YEARLINGS | CALVES | TOTAL ANIMALS | MARKET |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| $\mathbf{1}$ | 2 | 13 | 0 | 0 | 15 | 0 |
| $\mathbf{2}$ | 2 | 13 | 0 | 12 | 27 | 0 |
| $\mathbf{3}$ | 2 | 13 | 12 | 12 | 39 | 0 |
| $\mathbf{4}$ | 2 | 18 | 12 | 17 | 49 | 2 |
| $\mathbf{5}$ | 2 | 23 | 17 | 21 | 63 | 7 |
| $\mathbf{6}$ | 2 | 25 | 21 | 23 | 71 | 7 |
| $\mathbf{7}$ | 2 | 27 | 23 | 25 | 77 | 17 |
| $\mathbf{8}$ | 2 | 29 | 25 | 27 | 83 | 21 |
| $\mathbf{9}$ | 3 | 31 | 27 | 29 | 90 | 25 |
| $\mathbf{1 0}$ | 3 | 33 | 29 | 31 | 96 | 25 |

## JNJ BISON CO. FEED COST CHART

| YEAR | ADULTS | YEARLINGS | CALVES | FEED | COST |
| :---: | :---: | :---: | :---: | :---: | ---: |
|  |  |  |  |  |  |
| $\mathbf{1}$ | $15(45)$ | 0 | 0 | 45 | $\$ 7,875.00$ |
| $\mathbf{2}$ | $15(45)$ | 0 | $12(12)$ | 57 | $\$ 9,975.00$ |
| $\mathbf{3}$ | $15(45)$ | $12(24)$ | $12(12)$ | 81 | $\$ 14,175.00$ |
| $\mathbf{4}$ | $20(60)$ | $12(24)$ | $17(17)$ | 101 | $\$ 17,675.00$ |
| $\mathbf{5}$ | $25(75)$ | $17(34)$ | $21(21)$ | 130 | $\$ 22,750.00$ |
| $\mathbf{6}$ | $27(81)$ | $21(42)$ | $23(23)$ | 146 | $\$ 25,550.00$ |
| $\mathbf{7}$ | $29(87)$ | $23(46)$ | $25(25)$ | 158 | $\$ 27,650.00$ |
| $\mathbf{8}$ | $31(93)$ | $25(50)$ | $27(27)$ | 170 | $\$ 29,750.00$ |
| $\mathbf{9}$ | $34(102)$ | $27(54)$ | $29(29)$ | 185 | $\$ 32,375.00$ |
| $\mathbf{1 0}$ | $36(108)$ | $29(58)$ | $31(31)$ | 197 | $\$ 34,475.00$ |

AVAILABLE MEAT CHART

| YEAR | MARKET ANIMALS | LBS. OF MEAT | DOLLAR VALUE |
| :---: | :---: | ---: | ---: |
|  |  | 0 | $\$ 0.00$ |
| $\mathbf{1}$ | 0 | 0 | $\$ 0.00$ |
| $\mathbf{2}$ | 0 | 1230 | $\$ 11,708.00$ |
| $\mathbf{3}$ | 2 | 4305 | $\$ 40,978.00$ |
| $\mathbf{4}$ | 7 | 4305 | $\$ 40,978.00$ |
| $\mathbf{5}$ | 7 | 10455 | $\$ 99,518.00$ |
| $\mathbf{6}$ | 17 | 11685 | $\$ 111,226.00$ |
| $\mathbf{7}$ | 19 | 12915 | $\$ 122,934.00$ |
| $\mathbf{8}$ | 21 | 15375 | $\$ 146,350.00$ |
| $\mathbf{9}$ | 25 | 15375 | $\$ 146,350.00$ |
| $\mathbf{1 0}$ | 25 |  |  |

BISON BULL CARCASS MEAT YEILD



DRAFT

## Legend

Streams
——Paved Road

- Contour Interval of 50
- Paved Road
- Resource Road
- Farm Road

Contour Interval

- Transmission Line
$\square$ Water
PWetland
$[-$ Application Boundary

Designed for Illustrative Purposes ONLY



DRAFT

| General Map Legend |  |
| :---: | :---: |
| - Streams | - Contour Interval of 50 |
| - Paved Road | - Contour Interval |
| Unpaved Road | \%. Foreshore Flats |
| - Resource Road | $\square$ Water |
| - Farm Road |  |
| - Transmission Line | Woodland |
|  | $\square$ Application Boundary |

Designed for llustrative Purposes ONLY.


