I am Larry L. Larson, retired Professional Engineer, a member of the Elks, and residing in Bismarck, ND, 58501. I serve as the Chairman of the Land and Minerals Committee of the North Dakota Elks Association (NDEA) and representing them at this hearing on the Wenck Study of the Missouri River Ordinary High Water Mark (OHWM), Case No. 26584. My remarks will pertain to only that area of the Missouri River that the NDEA owns mineral acreage.

The NDEA has submitted technical responses to the Department of Mineral Resources for the areas of interest in the Wenck report. The technical response was prepared by Cary Backstrand, RPE, and a member of the Land and Minerals Committee of the NDEA. Cary was the Chief of the Regulatory Section of the North Dakota State Engineer Office for 20 years. His duties included management of the State’s Sovereign Lands including leasing of the islands and determination of the OHWM. I will add the other members of the committee include another Registered Professional Engineer, a retired banker, and a mineral owner.

The mineral acres owned by the NDEA are located in Sections 22, 23, 26, 27, 30, and 31 of T153N, R98W and Section 36, T153N, R99W. These areas lie within the areas covered by Maps 9, 10, and 11 of the Wenck Report. These maps do not reflect the original Government Surveys or the Army Corp of Engineers Segment Maps (which are part of the report) used to purchase land for the areas to be flooded by Lake Sakakawea created by the construction of the Garrison Dam. The other issue addressed is the inclusion of the flood plains that do not meet the definition of the OHWM. We feel these are major errors in the Wenck Report in the area of the Missouri River the NDEA has a vested interest in as a mineral owner.

The desirable outcome for the sovereign lands boundary question is for the NDIC in approving the Wenck Report, results in oil companies releasing royalty payments from suspense. Unfortunately, that is unlikely to happen given the weaknesses in the current review. Mineral owners’ conveyance instruments contain legal descriptions based on Government Land Office surveys, the basis for land patents. The GLO survey needs to be geo-referenced to the OHWM delineation maps or photos. Further, uniformity in accretion/reliction methods will be needed to eliminate even more errors being created.

We support the technical comments submitted by the North Dakota Society of Professional Land Surveyors on the Wenck Report. It gives the technical side of the error of not recognizing the GLO Plats, the Segment Maps, and other data of the Corp of Engineers and other legal sources.

Respectfully,

Larry L. Larson, Chairman
NDEA Land and Minerals Committee
Comments and Concerns Regarding the Delineation of the OHWM

Our Mission Statement

• To unite all the professional land surveyors in the State of North Dakota.
• To elevate the standards of the surveying profession in the State of North Dakota.
• To establish basic minimum requirements for surveys.
• To assist in promoting legislation and education programs to improve the professional status of the land surveyor.
• To work in cooperation with local, county, state, and federal governments in our field of endeavor.
• To uphold a rigid code of ethics.
• To strive to improve our relations with our clients and the public by doing our work with precision and integrity.
• To maintain a good relationship between land surveyors and engineers.

Interest in the Report

• The NDPLS has no financial interest in the outcome of the report.
• The only concern is that the work performed complies with the rules, regulations, and accepted standards for land surveying.
Concerns with Tract Boundaries

- Additional sources of information
- Methods used to geo-reference the tract boundaries
- Refinements to the tract boundaries
- Recommendations

Additional Sources of Information

- General Land Office (GLO) Plats and Field Notes
- Corps Taking-Line Plats
- Well Plats
- Other Sources
Differences between shapefile and well plats
Concerns Regarding Acreages

- Legal Descriptions - no reference to the government lots
- Proper Partitioning of Accreted Lands
  - Proportionate Shoreline Method
  - Proportionate Acreage Method
  - Perpendicular Method
  - Extension of Property Line Method
  - Combination of Proportionate Shoreline and Perpendicular Method
- Must review GLO data to know the original shoreline and original lot areas
- Calculated acreages based on improper location of PLSS lines

How to Retrace Report?

- The end use of the data
  - How is a surveyor supposed to use the data to accurately locate the OHWM on the ground or on a plat?
Concerns Regarding Land Surveying Laws

• NDCC 47-02.2-04 – Plane Coordinates
  • Adequate reference to datum
  • Coordinates to be recorded in any public records need to be tied to ground control.
  • Coordinate values used in land descriptions to be certified by a duly registered land surveyor.

Concerns Regarding Land Surveying Laws

• NDCC 43-19.1-02.11 and NDCC 43-19.1-21
  • Report needs to be sealed and signed by the individual(s) in responsible charge of the project.
  • No surveyor appears to have been involved with the preparation and review of the report.

Concerns Regarding Land Surveying Laws

• NDCC 43-19.1-02.8 – The Definition of Land Surveying
  • NDSPLS believes that many of the items addressed in this report fall under the definition of land surveying and should be reviewed by a duly registered North Dakota land surveyor.
Questions?

Thank you

North Dakota Society of Professional Land Surveyors

Thank you
NORTHERN OIL AND GAS
COMMENT

INDUSTRIAL COMMISSION
STATE OF NORTH DAKOTA

DATE 6-26-18 CASE NO. 2058
Introduced By Swartzendruber/Imse
Exhibit
Identified By Swartzendruber/Imse
BEFORE THE INDUSTRIAL COMMISSION
OF THE STATE OF NORTH DAKOTA

IN THE MATTER OF A HEARING CALLED
ON A MOTION OF THE COMMISSION TO
CONSIDER PUBLIC COMMENTS ON THE
REVIEW OF THE DELINEATION OF THE
ORDINARY HIGH WATER MARK OF THE
USE ARMY CORP OF ENGINEERS SURVEY
SEGMENTS FROM THE NORTHERN
BOUNDARY OF THE FORT BERTHOLD
INDIAN RESERVATION TO THE SOUTHERN
BORDER OF SECTIONS 33 AND 34, TOWNSHIP
153 NORTH, RANGE 102 WEST

CAUSE NO. 26584

Public Comment of Northern Oil and Gas, Inc. ("Northern")
on the Ordinary High Water Mark of the Missouri River Bed Pre-Garrison Dam
for the Reach Extending Approximately 83 Miles Upstream of New Town, ND

Northern holds oil and gas leasehold interests from the State of North Dakota, Department of Trust Lands, covering all or a portion of the lands identified below and is therefore a party interested in these proceedings:

(1) T153N-R93W, NW ¼ and NE ¼ of Section 27; and

(2) T153N-R98W, SW ¼ of Section 12.

Northern intends to present its comments at the hearing held on June 26, 2018 through John P. Imse, RG, Principal Consultant at Environmental Resources Management (ERM) and its undersigned legal counsel. Mr. Imse’s CV is submitted herewith as Exhibit A.

Comment 1

Focus of Comment: T153N-R93W, NW ¼ and NE ¼ of Section 27

The current delineation of the Ordinary High Water Mark (OHWM) for the Missouri River bed at the above-referenced location, as presented in the Department of Mineral Resources (DMR) project report prepared by Wenck Associates, Inc. in their report dated 17 April 2018 (Wenck 2018), does not accurately reflect the technical data presented in Wenck 2018, does not accurately reflect the appraisal data for the area in question, and does not correctly apply land use exclusions. The delineation presented in Wenck 2018 is a result of an overly broad application of exclusions applied to the technical analysis, based on a narrow and incorrect application of North Dakota case law.
The available technical data, the appraisal information for the area in question, land use, and relevant case law in this context support, with clear and convincing evidence, maintaining the Department of Mineral Resources 2011 delineation of the OHWM in the above-referenced section.

**Basis for Comment:**

The Wenck 2018 analysis of the OHWM began with compilation and analysis of publicly available topographic data and river flow data for the channel prior to the impoundment filling. Those data were used to develop a model allowing the prediction of the water level for an approximate 2.5-year flood event throughout the studied reach. Wenck 2018 compared the predicted flood water level to the topographic data at each of nineteen (19) topographic cross-sections previously established across the Missouri River channel (Figure 8, Wenck 2018). Profile section 1567.2, as shown on the referenced Figure and on Map 2 of 18 in Wenck 2018, is immediately northwest of the referenced area. The topographic profile for cross-section 1567.2 presented with the model-derived 2.5 year flood water level are plotted on a figure titled “US ACE Section 1567.2”, as included in Appendix D to Wenck 2018. That figure illustrates that most of the land inside the bend in the Missouri River in that reach would have been inundated by each 2.5-year flood event. Those data and the model analysis are consistent with the findings of the prior DMR analysis (Bartlett & West 2011) in which the lands and vegetation in the above-referenced area were classified as “caused by backwater flooding” (Bartlett & West, 2011, Table page 7 of 9, ObjectIDs 325-329).

Wenck 2018 states that they also evaluated appraisal documents that were prepared by the US Army Corps of Engineers (USACE) prior to purchasing those lands for the impoundment of the Missouri River. Appraisal V 1928 (REF), submitted herewith as Exhibit B, was prepared for lands along the northern boundary of Section 27, referenced above, as well as lands in the adjacent and contiguous sections to the north, northeast, and east. The appraisal refers to the soil type on the tract as consistent with recent accretion (sandy clay loams and riverwash sands, similar to the above interpretations of the area as susceptible to flooding), and not suitable for commercial agriculture, but possibly suitable for occasional haying of native grasses or periodic grazing. The appraisal states that the referenced lands are “low level bottomlands.” The appraisal did note that two areas (apparently in separate locations) had been cleared for future use. The appraisal concludes, “This is a mediocre property, but when utilized in conjunction more dependable lands [emphasis added] it will provide summer grazing…” In other words, all or a vast majority of the surveyed acreage is not dependable for agricultural use and does not have substantial value independent of more productive contiguous tracts.

After identifying those areas that would have been inundated by the 2.5-year flood event, and in conjunction with reviewing the available appraisal documents, Wenck 2018 examined a series of aerial photos taken in 1951 to further refine the delineation of
the OHWM. Map 2 of 18 in Wenck 2018 presents their delineation of the OHWM relative to the earlier USACE determination covering the above-referenced portion of Section 27. A portion of the above-referenced area of interest is designated for inclusion below the OHWM - however, not to the extent that those areas were included within the 2011 DMR determination of the OHWM (Bartlett & West, 2011). No explanation for the difference is provided in Wenck 2018.

On examination of Map 2 of 18 in Wenck 2018, there are two small areas that appear white or reflective, one in the NE ¼ of the NW ¼ of Section 27, and the other in the NW ¼ of the NE ¼ of Section 27. These areas appear to be cleared of vegetation. Figure 1, attached, is a portion of the 1951 aerial photograph that was used as part of the base for Map 2 of 18, enlarged to focus on Section 27. The “cleared” areas discussed above are readily apparent. However, there is no indication of any pattern in the cleared areas that may indicate any type of agricultural cultivation. It is conceivable that these open areas are those mentioned in Appraisal V 1928, and are those areas that are only noted in the appraisal as sometimes suitable for grazing when used in conjunction with “more dependable lands”.

Attached as Figure 2 is the 1943 aerial photograph, also provided by DMR for use in developing Wenck 2018, enlarged to focus on the above referenced Section 27. As an example of un-sustained land use, there is a cleared area present in the NE ¼ of the NW ¼ of Section 27 that has reverted to overgrown conditions in the 1951 aerial photograph. The rectangular cleared area in the NW ¼ of the NE ¼ of Section 27 appears to be outlined in pencil and is larger and shaped differently than in 1951. As noted with respect to the 1951 aerial photograph, there are no crop patterns evident on the 1943 aerial photograph in the cleared areas that would indicate usage other than grazing. It also is important to note the flood channel with open water present in the SW ¼ of Section 22 – just to the north of the area in question. The channel orientation appears to line up with the rectangular cleared area in the NW ¼ of the NE ¼ of Section 27 – indicative of that cleared area likely serving as an outlet for floodwater from the areas to the north.

Figure 3, attached hereto, is a portion of the 1943 topographic map for the area covered by Figures 1 and 2. The pattern of the contour lines within the indicated area on Figure 3 clearly demonstrates that the cleared area visible at this location on the 1943 and 1951 aerial photos is in fact an outlet channel for floodwaters draining from the lands to the north. This cleared area would therefore be inundated during the 2.5 year flood event and would serve as a flow channel for drainage of floodwaters – compromising the ability of the land to support any “dependable” usage. That would also be consistent with the appraisal V 1928, discussed above, indicating the lands would be suitable for grazing only if used in conjunction with “more dependable lands” - grazing lands inundated less frequently would meet the description of “more dependable”.

3
Figure 4, attached, presents a comparison of the findings from Wenck 2018 to the delineation developed and relied upon by DMR (Bartlett & West 2011) since 2011 for the above-referenced portions of Section 27. There is no disagreement between the two studies regarding whether the area in question was subjected to frequent flooding. The same appraisal report, V 1928, was available to both sets of investigators. That leaves the only possible discrepancy as the interpretation of land use and its significance. Wenck 2018 categorically excludes “farmed and hayed areas” (Section 2.1 of Wenck 2018), without regard to whether the farming practices were grazing only, or where haying was of a lesser quality due to a preponderance of native grasses and frequent inundation. Wenck 2018 reportedly based this bright-line exclusion on a review of relevant case law.

The OHWM is defined as “that line below which the action of water is frequent enough to either prevent the growth of vegetation or to restrict its growth to predominantly wetland species.” N.D. Admin. Code. § 89-10-01-03.7. The North Dakota Supreme Court has said,

“High-water mark” means what its language imports – a water mark. It is co-ordinate with the limit of the bed of the water; and that only is to be considered the bed which the water occupies sufficiently long and continuously to wrest it from vegetation, and destroy its value for agricultural purposes. In some places, however, where the banks are low and flat, the water does not impress on the soil any well-defined line of demarcation between the bed and the banks.

In such cases the effect of the water upon vegetation must be the principal test in determining the location of high-water mark as a line between the riparian owner and the public. It is the point up to which the presence and action of the water is so continuous as to destroy the value of the land for agricultural purposes by preventing the growth of vegetation, constituting what may be termed an ordinary agricultural crop.

*State ex rel. Sprynczynatyk v. Mills*, 593 N.W. 2d 591 (1999), (citing 423 N.W. 2d at 144-45 *(quoting Rutten v. State*, 93 N.W. 2d 796,79 (N.D. 1958)(emphasis added)).

Thus, the principal test for determining the OHWM in situations like the current one is the productivity of the lands for “ordinary” agricultural crops (*i.e.*, grown regularly for commercial purposes). As N.D.C.C. § 61-33.1-03 states, “[l]ands having agricultural value capable of growing crops or hay, but not merely intermittent grazing or location of cattle, generally must be considered above the ordinary high water mark.” Conversely, lands not capable of “growing” crops due to frequent inundation or infertile soils are below the OHWM. Lands where the owners occasionally grazed cattle or cut hay when they were not flooded, without intentionally growing the crop, cannot be considered above the OHWM.
Wenck 2018 references In State ex rel Sprynczynatyk, 1999 ND 75. There, the North Dakota Supreme Court affirmed the Burleigh County District Court's determination of the OHWM. The lower court considered the following evidence in delineating the OWHM (generally centering around “agricultural usefulness,” as discussed below):

- Growing of crops on the property (i.e., seeding, tilling, irrigating, etc. – not “native” crops) (p. 7, at lines 6-7)
- Sandy gray soils/soil quality, soil stratification indicative of frequent flooding (p. 7, at lines 4-5)
- The location of upland plants and trees/tree lines (p. 7, at line 6)
- An inability to use the land dependably for productive purposes (p. 8, at lines 17-24)
- Whether the land is classified as floodplain (p. 7, at line 22)
- Whether the water table is close to the surface/whether the soils are often saturated (p. 7, at line 23)
- Difficulty in installing or maintaining fencing (p. 8, at line 21)
- An absence of usual “pasture grasses” (p. 8, at line 8)
- An absence of row crops (i.e., “ordinary” crops) (p. 8, at line 9)
- An inability to include the land in a farm plan or loan against it (p. 8, at line 27)
- Frequency of flooding (p. 7, at line 14)
- Remarkable elevation changes (p. 9, at line 7)

(All pinpoint cites are derived from Wenck Report, Appendix B: In State ex rel Sprynczynatyk, 1999 ND 75, (Memorandum Decision & Order))

Notably, the trial court in Sprynczynatyk said that occasional haying is insufficient to find that lands are above the OHWM. There, the evidence showed that the lands ultimately found to be below the OHWM were hayed at least one year. Similarly, grazing is not determinative. The court said, “The evidence indicates that the area immediately adjacent to Riverwood Drive on the west side was hayed one year, but that alone would not suffice to change the result. The term ‘ordinary agricultural crop’ . . . requires a greater showing . . . usefulness for livestock is not determinative of the issue [and] . . . one instance of haying” is insufficient. (Id. p. 8, at lines 21-23).

Simply put, the location of the OHWM is defined by agricultural usefulness. Agricultural usefulness is coordinate with “ordinary agricultural crop” which includes an element of commerciality. The term “ordinary agricultural crop” has been defined in the Code of Federal Regulations as

[A]ny agricultural product to which the land under consideration is generally adapted, and which would return a fair reward for the expense of
producing them. Ordinary agricultural crops do not include forest products but may include orchards and other plants which cannot be grown on the land without irrigation and from which a profitable crop may be harvested.


The Spryczynatyk court determined that the OHWM is “ambulatory”, and “is not determined as of a fixed date.” Spryczynatyk, p. 8, at line 20. The land must have “economic usefulness.” Id., p. 8 at line 18. Were the standard to be otherwise, any existence of haying (commercial or non-commercial) would be sufficient to find an agricultural purpose, the court would have ruled to the contrary.

Based on the legal standards cited above and the associated technical analysis, the evidence leads to a firm belief or conviction that the referenced lands are below the OWHM. Zundel v. Zundel, 278 N.W.2d 123 (1979). The only apparent difference between the DMR delineation in 2011 of the OHWM in the referenced portions of Section 27, and the delineation of the OHWM in the same area presented in Wenck 2018, is the overly broad land use exclusion applied by Wenck 2018 that is not supported by case law in this regard. Evidence of occasional haying or grazing is not sufficient. Therefore, the delineation of the OHWM in T153N-R93W, NW ¼ and NE ¼ of Section 27 should remain as determined by DMR in 2011 and as maintained by DMR since that time.

Comment 2

Focus of Comment: T153N-R98W, SW ¼ of Section 12

Basis for Comment:

As illustrated on Figure 5, the Wenck 2018 delineation of the OHWM in the above-referenced section differs from the prior DMR determination (Bartlett & West, 2011) of OHWM through that section. Wenck 2018 indicates on Map 9 of 18 that the OHWM was placed on the edge of the channel as it existed in 1951. This delineation differed from the USACE delineation due to movement of the channel during the years between 1943 (the date of photos used by USACE) and the 1951 aerial photos relied upon by Wenck 2018. The prior DMR determination (Bartlett & West, 2011) utilized the same 1951 aerial photos, and ObjectIDs 185 and 186 located along this reach contained the following qualifier when referring to the main channel: “old river channel above” (ObjectIDs 185 and 186, table page 3 of 9, Bartlett & West, 2011). Mr. Imse attempted to contact the DMR contractor for the 2011 delineation, Bartlett & West, to obtain clarification or supporting technical evidence for their determination. As of the date of this submittal, Bartlett & West has not responded to the inquiries. Given that Wenck 2018 did not consider the previous DMR determination in its analysis and delineation, resolution of this discrepancy will require input from the prior DMR contractor or the results of an independent analysis. Northern reserves its right to present evidence and
argument concerning the location of the riverbed for the above referenced lands based on additional information from Bartlett & West (or otherwise).

Comment 3

Procedural Comment

The process of implementing N.D. Cent. Code § 61-33.1-03 is an adjudicative proceeding. See N.D.C.C. § 28-32-01. The procedural statutes pertinent to adjudicative proceedings state:

To the extent necessary for full disclosure of all relevant facts and issues, the person presiding at the hearing shall afford to all parties and other persons allowed to participate the opportunity to respond, present evidence and argument, conduct cross-examination, and submit rebuttal evidence, except as restricted or conditioned by a grant of intervention or by a prehearing order.

N.D.C.C. § 28-32-35.

Northern, as a party holding over 142,250 net leasehold acres in the Williston Basin and over 3,700 Bakken/Three Forks wells, has a significant interest in responding to comments that potentially affect the location of the OHWM for river segments where Northern holds its interests. At this juncture, Northern’s comments necessarily address only those locations impacted by the Wencz 2018 report. Northern is concerned that it will not have an adequate opportunity to respond to comments of other parties which, if accepted, would result in significant acreage losses. The process to date in this cause provides only six (6) days to potentially address adverse comments. Northern respectfully submits that this is not adequate, and that the parties should be given a second opportunity to submit responsive comments to the NDIC after a reasonable time period, with a corresponding hearing for live presentation of the responsive comments. Northern believes that this is the only manner by which the statute referenced above (and due process) may be satisfied.

Northern is appreciative of the opportunity to submit these comments, and looks forward to presenting its evidence, argument and technical analysis to the NDIC.

Dated: June 20, 2018
By: Nick A. Swartzendruber
North Dakota Bar #06983
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Attorneys for Northern Oil and Gas, Inc.
EXHIBIT A
JOHN IMSE CV
(Expert Testimony)
John has experience focusing on the geologic and hydrogeologic evaluation of complex site settings (e.g., fractured bedrock, karstic bedrock, glacial sequences, alluvial sequence) to delineate potential sources of impact, to characterize the extent and severity of that impact, and to assess the fate and transport of that impact. John’s experience includes Merger & Acquisition projects, CERCLA and RCRA site project management, regulatory agency negotiation, state voluntary investigation/remediation programs, risk-based corrective action, private party allocation negotiations, litigation support, and expert witness testimony. Litigation support and Expert testimony includes NCP consistency, State regulatory consistency, insurance cost recovery, toxic tort, allocation of liability, appropriateness and effectiveness of remediation technologies, and state of the practice field data acquisition.

**Experience:** 35 years’ experience in chemical, manufacturing, mining, and oil and gas

**Email:** john.imse@erm.com

**LinkedIn:** https://www.linkedin.com/in/john-imse-6678b214/

**Education**
- M.S. Geology, Idaho State University, Pocatello, ID, 1979
- B.A. Geology, Lawrence University, Appleton, WI, 1976

**Professional Affiliations and Registrations**
- National Groundwater Association
- American Institute of Professional Geologists
- Registered Professional Geologist: Missouri, Wisconsin, Minnesota, Indiana, and Kansas

**Languages**
- English, native speaker

**Fields of Competence**
- Land pollution control
- Geologic and hydrogeologic evaluations
- NAPL
- CERCLA and RCRA

**Key Industry Sectors**
- Chemical
- Manufacturing
- Mining
- Oil and Gas
Key Projects

Site Permitting Experience

Utility-Scale Solar Project
Conducted a water demand and availability assessment for a planned solar facility in eastern Colorado located in a historically over-allocated water basin. Evaluated the following: permitting for a large volume water well; purchase of water from area agricultural water rights owners; and purchase of water from multiple municipal and county water owners/users. In all cases, analyzed various on-site storage facilities to accommodate the source of the water and the peak demands for water usage during site development and construction.

NEPA-compliant Environmental Assessment
Completed the assessment for a proposed wind power generating facility in northeastern Colorado, including water demand assessment; water rights purchases; geological/hydrogeological studies; wildlife and wildlife habitat surveys; and archaeological surveys. Site received finding of no significant impact from the U.S. Department of Energy mitigating the need for a complete environmental impact assessment.

Geologic/Geophysical Studies
Completed studies (site specific ground based and regional airborne investigations) to support a nuclear power plant siting efforts for private utility power plants proposed for the Hanford Reservation in Washington.

Geophysical Studies
Evaluated potential earthquake mechanisms and locations in the northeastern U.S. in support of licensing projects for multiple nuclear power plants.

Geologic Mapping
Mapped in the epicentral area for an earthquake swarm in New Brunswick, Canada to evaluate potential surface ruptures resulting from earthquake ground motions. This effort was part of a regional study evaluating the adequacy of design for nuclear power plants in the northeastern U.S.

Consultant/U.S. Nuclear Regulatory Commission
Evaluated proposed geologic waste repository sites in basalt, bedded salt, salt dome, and crystalline rock terranes.

Siting Project
Conducted activities for a New England utility to locate and test potential geologic ground electrode sites as a part of planning for the construction of power transmission lines from Canada to the U.S.

Hydropower Dam
Evaluated the potential low-head dam location in New York.

Slope Stability Evaluation Studies
Supported permit renewal for a pump storage power generation facility in western Massachusetts.

Litigation Support/Expert Testimony Experience

Private Party Litigation
Completed the site investigation, prepared the expert report, and provided expert testimony (NCP compliance and allocation) related to historical operations at a paint manufacturing facility in Indianapolis, IN. Identified the nature and extent of impact at the site. Focused on identifying, to the extent practicable, differences in site operations, product lines, and formulations between client and the former owner/operator. In the allocation portion of the project and testimony, focused on distinguishing relative contribution to the impact by the parties; the volume of waste released by the parties; variations in product lines and paint formulation as it would affect a determination of the toxicity of the waste released by the parties; and the degree of care exercised by the parties in conducting operations at the facility. Other factors weighed as a part of the allocation included years of ownership/operation and the...
relative degree of control and procedures implemented by the parties with respect to waste handling and management.

**Major Independent Natural Gas Producer**
Evaluated and assessed the categorical RCRA exemption for oil and gas exploration and production waste. Included a detailed analysis of the original basis for the exemption and the potential impact technically and financially, if USEPA were to remove that exemption.

**Natural Gas Industry Trade Association**
Provided expert review and comment on published documents relevant to development and production of natural gas from tight geologic formations.

**Civil Case Litigation Support/Expert Testimony**
Focused project work and expert testimony on design and implementation of sampling protocol as state of practice.

**Litigation Support/Expert Witness**
Supported a civil case representing property owner with respect to site contamination and remediation attributable to prior tenant of the property. Evaluated extent and magnitude of impact and the efficacy of the chosen environmental response action.

**Litigation Support/Insurance Cost Recovery**
Source of impact was catastrophic release of petroleum hydrocarbons as a result of explosion and fire at aboveground storage tank facility. Technical support for litigation included prediction of karst solution pathways in bedrock as part of evaluation of fate and transport of released hydrocarbons.

**Expert Witness/CERCLA Cost Recovery**
Served as expert witness in a case related to an industrial facility in Indiana. Focused testimony on fate and transport of chlorinated solvents in groundwater, potential for vapor intrusion of chlorinated solvents into structures resulting from the impacted groundwater, and an evaluation of prior investigations with respect to consistency with the National Contingency Plan.

**Expert Report/Testimony**
Served as expert witness in an insurance recovery case on behalf of industrial facility located in Joplin, Mo. Testimony included identification of insurable event as source of groundwater impact; evaluation of DNAPL migration through fractures in unconsolidated clay that were the result of dissolution of underlying bedrock; groundwater transport in fractured and karstic bedrock from source area to residential wells; and timing of the onset of impact.

**Litigation Support/Expert Testimony**
Supported and testified in a toxic tort case filed against client with a facility in Joplin, Mo. Included identification of source; fate and transport of the contaminants through fractured clays and karstic bedrock to residential well exposure points; timing of the onset of exposure; and magnitude of impact during the period of exposure.

**Expert Report/Testimony**
Reported and testified in a private party litigation related to the investigation and remediation of contamination resulting from historical operations at an electronics assembly plant in Milwaukee, WI. Focused on standard of care for investigation and remediation activities.

**Private Party Litigation**
Provided litigation support in a cast related to historical operations, waste management practices, investigations, and remediation at a research and development facility in North Carolina. Focused on standard of practice during prior site investigations and response actions, and allocation of responsibility for identified groundwater impact in a fractured bedrock aquifer. Case was settled prior to preparation of expert reports or testimony.
Fact Witness
Provided testimony as a fact witness in support of a former owner of an industrial facility in Chamblee, GA, regarding conditions at the site and the potential/likelihood that subsequent owner/operator was responsible for bulk of groundwater impact requiring corrective action. Client was successful in receiving federal court judgment allocating minor cost share for cleanup.

Mine and Mining Related Experience

Geomorphology Analysis
Served as the Lead Technical Investigator analysis for proposed expansion areas of an active coal mine operation in Montana. Analysis was a component of baseline studies required to allow the MDEQ to make a determination with respect to the presence or extent of alluvial valley floor (AVF) conditions within the proposed permit areas, as well as downstream from the boundaries of those permit areas.

Industrial Mineral Quarry Operation
Managed and led the investigation for an operation in Missouri. Retained in anticipation of litigation. Evaluated historical underground mining operations on the property using available maps of underground workings; the effect of surface water bodies, net annual infiltration, and groundwater discharge on the availability of groundwater in the mine for the quarry operations; and the possible impact of municipal water supply well (completed within historical underground mine) production on availability of groundwater beneath the quarry property.

Phosphate Mine
Managed and investigated the mine in southeast Idaho. Issues at the site included both surface water and groundwater impact attributable to closed portions of the mine, portions undergoing closure, and an active operating area. Evaluated surface water/groundwater interaction at the site and source(s) of impact. Developed potential response actions. Significant results of the effort were to determine the primary source of impact (waste rock piles) and recommended response, and to capture and utilize the reducing conditions within the groundwater system to take advantage of MNA.

Abandoned Mine
Evaluated the mine in southern Arizona. Retained by the owner to evaluate continued mineral processing on site by adjacent mine operator, identify and allocate groundwater impact between owned site and adjacent operating mine, and identify significant issues that may impact development of the property.

Groundwater Impact
Evaluated the impact attributed to historical mining and processing operations in the Tri-State Mining District of Oklahoma, Kansas, and Missouri. Assessed the impact potentially attributable to historical mining operations, and impact attributable to naturally occurring conditions in the regional lead-zinc mining district.

Superfund Site
Evaluated surface water and groundwater impact of a fractured rock setting in Joplin, MO. Assessed the impact (chemical and hydraulic) attributable to existing manufacturing facilities, historical mining and processing facilities, and naturally occurring conditions.

Potential Natural Resource Damages
Evaluated damages related to surface water and groundwater impacts attributable to mining and processing operations in the Viburnum Trend Lead Belt of southeastern Missouri.

Merger and Acquisition/Due Diligence

Midstream and Downstream Oil and Gas Client
As part of a merger of two midstream/downstream oil & gas companies, retained to assist the entities in establishing environmental reserves for the newly formed company. The assets evaluated for the process included 3 refineries, 3 storage terminals.
and approximately 350 miles of gathering and transmission pipelines.

**Underground Trona Mine**
On behalf of the eventual buyer, assessed the environmental conditions, including threatened and endangered species and surface water rights, for a large mine in southwest Wyoming.

**Due Diligence**
Managed a multi-site effort. As a part of a large merger, the two entities were required to divest 22 aluminum can manufacturing plants in Europe, South America, and the United States. Represented both parties in providing “Sellers” due diligence services as a part of the divestiture process.

**Natural Resource Damages Experience**

**Individual PRP**
Managed and investigated an individual PRP related to NRD claims resulting from an operating mine and smelter in the Viburnum Trend Lead Belt of southeastern Missouri.

**Natural Resource Damage Settlement**
Negotiated a settlement for a Superfund site located in southwestern Missouri. Negotiations were directly with Missouri DNR staff and eventual sign-off from Washington, D.C. Focused on loss of usage of groundwater resource. Analysis and negotiations incorporated prediction of onset of impact, statistical analysis of number of potential users over time, and existing background conditions in the aquifers of the region.

**NRD Analysis**
Investigated for an NRD analysis related to potential damages to groundwater in southwest Missouri, southeast Kansas, and northeast Oklahoma related to historical mining and smelting operations in the Tri-State Mining District. Incorporated loss of use for the groundwater and naturally occurring conditions in the regional lead-zinc mining district.

**Site Investigation/Remediation Experience**

**Remediation System Performance**
Evaluated the performance and interpreted site investigation data for a former manufacturing facility on Long Island. Retained by respondents responsible for off-site groundwater evaluation and remediation. Respondents completed the investigation and remediation, if necessary, under the oversight of New York State Department of Environmental Conservation and the Suffolk County Health Department.

**Redevelopment Project**
Managed and investigated the environmental due diligence activities and provided management planning support for a project at the former Fitzsimons Army Medical Center in Aurora, CO. In addition to completing necessary investigations and reviews to meet the requirements of All Appropriate Inquiry, assisted the client in developing a comprehensive GIS database for historical facilities on the property including buildings and all subsurface utilities. Established a secure web-hosted map server enabling client access to all current work product.

**Brownfield Redevelopment Site**
Managed and investigated a site in Denver, CO. Evaluated the facility, formerly used for manufacture of lead-acid batteries, drive belts, and luggage, for soil and groundwater contamination and the potential impact on redevelopment of the site for both residential and commercial uses. Assessed the extent of lead dust and asbestos in the structures, and the potential for volatile organic vapors within the structures resulting from groundwater impacted with chlorinated solvents.

**Environmental Due Diligence Review**
Reviewed compliance for multiple landfill and waste-transfer locations for a Colorado-based solid waste disposal company.

Exhibit A to Comment
Industrial Facility
Completed a comprehensive investigation of TCE and other volatiles in soils and groundwater for a facility in Joplin, MO. Contaminants of concern were chlorinated solvents, and DNAPL was present in the source area with subsequent migration of DNAPL through fractures in clay deposits to the underlying aquifer. Completed remedial investigation and feasibility study of the fractured bedrock aquifer supporting monitored natural attenuation as the proposed remedial response for the site.

SRP Investigation
Managed and completed the investigation at a specialty jewelry manufacturer in Illinois. Primary constituents were chlorinated solvents. Sampled ambient air in basements and confined spaces of residences to support a risk assessment to evaluate appropriate interim and final response actions.

Soil/Groundwater Impact Evaluation
Represented the seller in the evaluation at an industrial site in Iowa. Based on a risk-based corrective action analysis, the seller obtained a No Further Action letter from the Iowa DNR, enabling sale and redevelopment of the property.

Remedial Investigation/Feasibility Study (RI/FS)
Managed and investigated a site, located in Muskegon, MI, that was a former solvent recycling and incineration facility. Negotiated the Consent Order, implemented the soil and groundwater investigation, interpreted site investigation data, completed a risk assessment, developed feasible alternatives for remediation of the site, negotiated with MDEQ and USEPA for surface water/sediment studies, and provided a technical review (on behalf of the PRPs) for USEPA studies (conducted by staff from the Kerr Research Center in Ada, OK) regarding monitored natural attenuation.

Remedial Investigation
Implemented the investigation of an Oil NPL site in Lemont, IL. Soil and groundwater impact (PCBs, aromatic hydrocarbons, and chlorinated solvents) was a result of historical recycling and storage activities. LNAPL was present in the unconsolidated sediments beneath the site and extending off-site beneath adjacent residential/commercial properties. Dissolved phase impact was present in unconsolidated sediments and a fractured limestone aquifer. Assessed potential impact resulting from bedrock aquifer discharge to nearby surface water.

Primary PRP Representation
Represented for a farm site in Byron, IL. Evaluated removal activities conducted by the PRP and their beneficial effect on soil and groundwater conditions; characterized and assessed the impact from historical disposal operations conducted prior to PRP purchase; assisted legal counsel in preparation of case for divisibility of farm impact resulting from the adjacent NPL site; assisted legal counsel in preparation of documentation supporting innocent purchaser buyout for environmental liability at the site. Completed well installation and investigation of contaminant fate and transport in fractured bedrock.

Due Diligence Evaluation
During the course of an evaluation of an industrial facility in northern Illinois, discovered a burial location for drums and a former transport tanker for product and solvent wastes. Waste materials were primarily aromatic hydrocarbons. Investigated delineated extent of residual soil and groundwater impact subsequent to exhumation and off-site disposal of drums, tanker trailer, and contents. Designed and permitted groundwater extraction and discharge system (discharge without treatment to local POTW) with resultant receipt of no further remediation determination from the IEPA.

Industrial Facility
Investigated soil and groundwater impact providing the basis for identifying impact resulting from materials management/handling within a plant, as divisible from impact resulting from disposal practices in a former tail-race used to provide power for the
facility. Developed conceptual design and implemented containment remedy for historical disposal operations in tail-race.

Soil/Groundwater Impact
Investigated impact at a manufacturing operation in Nebraska. Identified occurrence of buried stream channel sediments within the unconsolidated glacial deposits at the site. The stream sediments served as preferential flow and migration pathways in the overburden. Analysis provided the basis for establishing source areas, as well as the basis for a determination of the extent of offsite impact.

Coke/Coking By-product Facility
Investigated the facility in Tennessee.

Manufacturing Operations
Evaluated the development of operations at the site (including U.S. ownership during WWII), and an assessment of waste handling practices. Demonstrated limits of groundwater impact in the fractured rock aquifer attributable to the facility. Determined that neither facility materials handling nor migration of materials in surface water/groundwater could produce observed impact in the nearby stream.

Chemical Plant Site Investigation
In anticipation of litigation, investigated a chemical plant in Louisiana. Client purchased the facility in bankruptcy and investigation served as baseline assessment and due diligence prior to start of operations. Focused activities on the adequacy of prior site characterization and establishing baseline conditions for liability and divisibility impact.

RCRA Facility Assessment
Assessed potential surface water and groundwater impacts at a former lead smelter in southwest Missouri. Potential surface water impact resulted from surface water entrainment of dust and smelting byproduct into adjacent streams. Groundwater impact in fractured/mined bedrock aquifer resulted from the leaching of elements from smelting byproduct.

Groundwater Impact
Evaluated the extent of impact at a manufacturing facility in Danville, Illinois. Primary contaminants of concern were chlorinated solvents. Began the investigation as a RCRA closure for an AST. Investigated groundwater impact off-site to evaluate potential impact to adjacent surface water, and to assess potential exposure on residential properties resulting from migration of vapors from groundwater to indoor air.

RCRA Facility Investigation
Investigated a secondary brass smelter in northern Illinois. Negotiated scope of work, completed RCRA facility investigation, negotiated corrective action with IEPA, and implemented corrective action, which was limited to paving the site to eliminate infiltration of precipitation and entrainment of particulates in surface run-off.

Munitions/Foundry Operation
Assisted the operation in Illinois in obtaining closure for RCRA surface water impoundment. Evaluated historical RCRA groundwater monitoring data, determined the source of apparent impact in the groundwater from unrelated site operations, and determined the lack of impact from the RCRA impoundment in question. Analysis served as the basis for obtaining RCRA closure for the unit.
EXHIBIT B
Appraisal Document
V-1928
South half of the Southeast quarter (SE\textsuperscript{2}SE\textsubscript{1}) of Section 22, Southwest quarter of the Southwest quarter (SW\textsuperscript{1}SW\textsubscript{2}) of Section 23, Northwest quarter of the Northwest quarter (NW\textsuperscript{1}NW\textsubscript{2}) of Section 26, Lots 1, 2, 3 and 4, of Section 27, all in Township 153 North, Range 93 West of the 5th P.M., plus accretions.
LOCATION, NEIGHBORHOOD, ETC. Subject tract is located 7 miles west from Sandhich, North Dakota (population 400) in a general farming community of small farmers of mixed nationalities. Main roads of graded dirt follow the Missouri Valley to Sandhich, the nearest market, shipping point, and location of churches and high school. Rural schools are located throughout the area, and R.P.D. routes serve farms and ranches. The area is characterized by both large and small farms, and by a few ranches which include a thousand or more acres of grazing land together with extensive acres of bottom cropland. The economy of the area combines the raising of cereal grains and fat livestock production of above average grade beef cattle. Farms are operated with tractor drawn power equipment. With a few exceptions, most sets of building improvements are below average and not indicative of the development or present prosperity of the area. lands of the area range from low level bottomlands of the Missouri flood plain to steeply rolling and rough uplands and level plateaus at an elevation of 175 to 250 feet above the flood plain. Soils of the flood plain vary in texture from fine sandy loams to silt clay loams of variable fertility and productive capacity. Soils of the uplands are mostly clay loams of variable texture utilized primarily for hay and pasture. The most desirable lands of the flood plain are usually utilized for alfalfa and cash crops, while poorly drained lands, valley slopes, and the uplands are used for feed crops, hay, and grazing. Dry farming, which incorporates summer fallow practice, is most common. Yields are variable, but have been excellent during the past ten years. Average carrying capacity of grazing lands is about 2.5 acres per A.B. month. Farm tenancy is about 20 per cent and usual terms are 1/4 crop delivered plus cash for improvements and pasture. Average rainfall is about 15 inches, of which major portion falls during the 4-month growing season. Cold winters, with snow and blizzards, are not uncommon.

CHARACTER, TOPOGRAPHY AND ADAPTABILITY: Drought is a major hazard in crop production, but recent years have been favorable to crops. Subject tract of 565.33 acres borders the Missouri River and includes approximately 395 acres of bottomland, the major portion which has accreted since the time of the General Land Office Survey. Soils of the bottomlands range from sandy clay loams to the riverwash sands of recent accretion. An estimated 30 acres have been adapted to cultivation and an additional area of 30 acres has been "brushed" in preparation for crop adaptation. Balance of the bottomland has a heavy cover of brush, willows and small trees with a few grassy mounds which could be cut for hay and some open grassy spots which afford fair grazing. The upland, approximately 170 acres, ranges from gently rolling to rough broken hills with steep ravines and steep slopes and is suitable only for grazing. The tract is fenced, but fences on the bottomlands are in poor condition. Yearlong water supply is available from springs and seeps. Buildings on the property are unoccupied and unhabitable and contribute very little to the value. This is a mediocre property, but when utilized in conjunction with more dependable lands it will provide summer grazing and adequate natural shelter for winter feed grounds and grazing.

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ACRES</th>
<th>LAND</th>
<th>IMPROVEMENTS</th>
<th>OTHER</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>1947</td>
<td>263.10</td>
<td>$968.00</td>
<td>$ -</td>
<td>$ -</td>
<td>$968.00</td>
</tr>
</tbody>
</table>

REMARKS RELATIVE TO ASSESSED VALUE: 1947 tax $54.10 on 263.10 acres G.I.C. Survey acreage.

Assessed value bears no relationship to the present market value of properties in this area.

Exhibit B to Comment
### Valuation of Land

<table>
<thead>
<tr>
<th>Present Use</th>
<th>Soil Type</th>
<th>Topography</th>
<th>Area</th>
<th>Unit Value</th>
<th>Total Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cropland (Bottom)</td>
<td>Sandy Clay</td>
<td>Undulating</td>
<td>30</td>
<td>$35.00</td>
<td>$1,050.00</td>
</tr>
<tr>
<td>&quot;Brushed&quot; Bottom - tillable</td>
<td>Sandy Clay</td>
<td>Undulating</td>
<td>30</td>
<td>$25.00</td>
<td>$750.00</td>
</tr>
<tr>
<td>Pasture (Upland)</td>
<td>Clay Loam</td>
<td>G. Rolling to Rough</td>
<td>170</td>
<td>$7.50</td>
<td>$1,275.00</td>
</tr>
<tr>
<td>Pasture (brush bottom and grassy swales)</td>
<td>Clay and Sandy Loams</td>
<td>Undulating</td>
<td>185</td>
<td>$7.50</td>
<td>$1,387.50</td>
</tr>
<tr>
<td>Pasture (brush and sandbar accretion area)</td>
<td>Loamy sand and sand</td>
<td>Level to Undulating</td>
<td>150.33</td>
<td>$2.00</td>
<td>$300.66</td>
</tr>
</tbody>
</table>

**Total** $4,763.16

### Valuation of Improvements

<table>
<thead>
<tr>
<th>Kind</th>
<th>Size</th>
<th>Construction</th>
<th>Roof</th>
<th>Foundation</th>
<th>Condition</th>
<th>Present Val.</th>
<th>Salvage Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Shack</td>
<td>14x26x7</td>
<td>Logs</td>
<td>Comp. &amp; Shgl.</td>
<td>None</td>
<td>V.Poor</td>
<td>$100.00</td>
<td>None</td>
</tr>
<tr>
<td>Addition</td>
<td>10x20-6</td>
<td>Logs</td>
<td>Shgl.</td>
<td>None</td>
<td>V.Poor</td>
<td>$100.00</td>
<td>None</td>
</tr>
<tr>
<td>Barn (calf)</td>
<td>12x24-12</td>
<td>Frame</td>
<td>Board</td>
<td>None</td>
<td>V.Poor</td>
<td>$25.00</td>
<td>None</td>
</tr>
<tr>
<td>Hen house</td>
<td>10x12-7</td>
<td>Concrete Walls &amp; Floor</td>
<td>Cottonwood &amp; Clay</td>
<td>Concrete Floor</td>
<td>Poor</td>
<td>$50.00</td>
<td>None</td>
</tr>
<tr>
<td>Toilet</td>
<td>4x4-6/7 Cotton</td>
<td>Board</td>
<td>None</td>
<td>V.Poor</td>
<td>$5.00</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

The buildings are for the most part constructed of cottonwood material except hen house. They are not habitable, have but little value and have no salvage value.

**Total** $180.00

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*Estimated contribution improvements to appraised market value of the property as a whole.*

**Exhibit B to Comment**
SALES AND OFFERS OF SALE OF NEARBY PROPERTIES

<table>
<thead>
<tr>
<th>GRANTS</th>
<th>GRANTOR</th>
<th>DATE</th>
<th>DEED</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Land Dept.</td>
<td>Stelson</td>
<td>5/22/50</td>
<td>Unrecorded</td>
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</table>

<table>
<thead>
<tr>
<th>ACRES OF AREA</th>
<th>ACTUAL CONSIDERATION</th>
<th>PRICE PER ACRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>240.00</td>
<td>$2500.00</td>
<td>$10.42</td>
</tr>
</tbody>
</table>

**COMPARISON OF ABOVE WITH PROPERTY APPRAISED**
The above tract consists of all upland pasture without improvements. It is fairly well located, gently to medium rolling in topography. It is fairly well grassed, affords fairly good grazing of average carrying capacity and is more desirable for season grazing than subject tract. No similar property has been sold to make a direct comparison with subject tract. Sales of somewhat similar lands in other areas were noted, and with appraisal experience of various types of lands were considered.

**GROWING CROPS**

<table>
<thead>
<tr>
<th>TYPE</th>
<th>ACRES</th>
<th>ESTIMATED YIELD PER ACRE</th>
<th>UNIT VALUE</th>
<th>NET CASH VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td></td>
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</tbody>
</table>

**APPRaisal OF TIMBER, MINERALS, ETC.**
No timber of merchantable value. No proof of existing minerals. Oil and gas rights may be reserved by owners and are therefore not considered in this appraisal.

**GENERAL REMARKS**
A mediocre property which has had little recognizable value until recent years when there has been an increased demand for all lands adaptable to any agricultural use. The subject tract if utilized in a unit relationship with other lands could provide abundant water, yearlong grazing in open winters, and winter quarters for shelter and feeding of livestock. This is a saleable and rentable property.

Exhibit B to Comment
TRACT MAP (WITH GRID)

Project symbol No. Garrison Dam - Reservoir Area  Tract No. Y-1926
Name of owner. Harrington Brothers  Date. 1 February 1951
Field work by. Jack Turnquist  Count. - Mountair
State - North Dakota  County - Mountair
Description of tract. South half of the Southeast quarter (SESE) of Section 22, Southwest quarter of the Southwest quarter (SWSW) of Section 23, Northwest quarter of the Northwest quarter (NW14) of Section 26, Lots 1, 2, 3 and 4, of Section 27, all in Township 153 North, Range 93 West of the 5th P.M., plus accretions.

CLASSES OF LAND
(Scale: 4 inches equals 1 mile)

I certify that this is an accurate map of Tract Y-1926 based on Survey, Deed Description and G.L.O. Records and shows this tract to contain 565.33 acres, more or less.

Name. Jack Turnquist
Title. Drafter
Date. 1 February 1951

Exhibit B to Comment
FIGURE 1
Figure 1
1951 Aerial Photo
T153N, R93W, Section 27
Public Comment
North Dakota Industrial
Commission Case
No.: 26584

Source: 1951 Aerial Photo from ND Landis Phase IV Data set; NAD 1983 StatePlane North Dakota North FIPS 3301 Feet
FIGURE 2
FIGURE 3
Figure 3
1943 Topographic Map
T153N, R93W, Section 27
Public Comment
North Dakota Industrial
Commission Case
No.: 25584

Source: 1943 Topographic Map from ND Lands Phase IV Data set; NAD 1983 StatePlane North Dakota North FIPS 3301 Feet

Legend
- County Boundary
- PLSS Township
- PLSS Section
- PLSS Quarter

Cleared Area Evident on 1943 and 1951 Aerials
ObjectIDs 185 and 186 Bartlett & West 2011
<table>
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<tr>
<th>ObjectID</th>
<th>Transact</th>
<th>Comment</th>
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**Page 7 of 5**

ObjectIDs 185 and 186 Bartlett & West 2011
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Good morning, my name is Jon C. Patch. I am here to provide comments to the commission on the Wenck Study of the Ordinary High Water Mark of the Historical Missouri River prior to the creation of Garrison Reservoir. I am a trained hydrogeologist and professional engineer and have worked in the field of hydrology for the past 36 years. I am currently the Director of the Water Appropriation Division of the North Dakota State Water Commission. I am here in a personal capacity and not as a representative of the Water Commission or Office of the State Engineer. I am representing the family of my recently passed mother, Lois Jean Wilkinson Patch, and the whole Wilkinson Clan, the descendants of my grandparents, J.T. and Evelyn Wilkinson.

My comments will be generally supportive of the work Wenck did and the methods they used to determine where the OHWM existed prior to the creation and flooding of man-made Lake Sakakawea. I do take exception with their reliance on language for OHWM determination that came about long after the lands were properly acquired and titles transferred to the USA using practices for OHWM determination that were accepted at the time and were unchallenged by the State of North Dakota until relatively recently.

But to start with the areas I'm in agreement with, I am very supportive of Wenck's development and use of a HEC-RAS model in estimating the pre-dam OHWM. Once a model is calibrated and validated the results are clear, logical, and unambiguous. The modeled water surface elevation makes logical sense and human error and bias are greatly reduced. Confidence in any model and the results of the simulations need to have real world data to compare against to calibrate the model and validate the assumptions. They had this data in the long term stream gage record from the USGS operated gage located on the Missouri River near Williston. The gage data provided a great statistical basis for the probabilistic recurrence interval (RI) used in the model. Wenck recommends using a flow recurrence interval of 2 years or a 50% chance of a stage level returning in any given year. That recurrence interval seems reasonable from a purely logical standpoint that land that is flooded more frequently than that would likely not be capable of being developed as farmland especially given that fact that these high flows usually occur in May and June as the flood waters from the snowmelt are peaking well after the time of planting.

The control of the model is excellent in that the Corps had developed pre-dam Missouri River cross sections that were used as the control sections in the model.

A key assumption in any hydraulic flow model is the choice of an appropriate Manning's n value. Wenck chose n=0.03 which falls right in line with typical values of gravelly to weedy earth channels and clean straight natural streams.
I would like to speak to the details and comment primarily on the results of the study in the area of the Wilkinson mineral property which is located in the S1/2 NW1/4 and the SW1/4 of Section 12, and the NW1/4 of Section 13, T153N-R102W.

For reference, the Wilkinson tract is shown on page 174 as HH 3190 and falls between the USACE Sections at river miles RM1650.3 and RM1655.8. The tract is about 1.5 miles upstream from RM1650.3 therefore it is estimated to be about 25% of the distance between the two cross-sections. The pre-dam gradient of the river between these two cross sections is about 1.2 ft/mile.

Page 219 and 220 of the Wenck report shows the modeled RI=2 yr, n=0.03 elevation of 1844.47' at RM1650.3 and 1850.89' at RM1655.8 putting the interpolated model results near the Wilkinson property at 1846.07'.

Nearly all of the Wilkinson property (HH 3190) falls between 1850-1851' elevation, a good four feet above the modeled historic (pre-dam) OHWM.

But, the coup-de-gras piece of evidence that puts to rest the notion that the Wilkinson property could possibly be below the OHWM at the time of the closing of Garrison Dam is an aerial photo taken in 1958 - years after the dam was closed but prior to its complete filling – that clearly shows the Wilkinson land was under cultivation and highly productive in growing ordinary agricultural crops. I'm enclosing a newspaper clipping that refers to the Wilkinson property.

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[Newspaper clip included]

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1940 02 21
I concur with Wenck’s concluding remarks where they state “The OHWM analysis will focus more on aerial photography interpretation, geomorphic interaction of the channel and overbank and land use practices. Where farming practices are successfully employed yet fall below the anticipated 2-year flood elevation, such areas are withdrawn from consideration as below the OHWM.” The photographic evidence from both 1951 and 1958, as well as the modeled water level elevations confirm the Wilkinson acres are above the historic OHWM of the Missouri River.

I would also like to add into the record a topographic survey the Corps did in 1943 (sheet 3 and Sheet 7) that clearly show the elevation of the Wilkinson property to be above the pre-dam OHWM. I’d like to point out the physiographic feature they mapped – a wetland or marsh that occurs along Painted Woods Creek as it traverses across the bottomlands prior to its reforming into a defined watercourse and emptying into the Missouri River over a mile downstream.
Also, the 1901 General Land Office (GLO) plots which established the original meets and bounds of the current public land survey system we use to define property boundaries to this day. There, again, the surveyors would make note of prominent physiographic features and mapped the aforementioned wetland/marsh that existed at the time.

I point out this marsh because later OHWM delineators used it as a faux OHWM of the Missouri River, solely based on their unreasonable reliance of using vegetative indicators of the OHWM. This was done for the Phase I survey, an OHWM delineation ordered by the State Land Board and State Engineer in 2009.

The point of disagreement have with the Wenck report is their statement on page 222 that "An OHWM analysis requires determining the flood event that leaves a line below which the action of water is frequent enough either to prevent the growth of vegetation or to restrict its growth to
predominantly wetland species.’ ”

The directive from the legislature in NDCC 61-33.1-03(1) states:

The corps survey must be considered the presumptive determination of the ordinary high water mark of the historical Missouri riverbed channel, subject only to the review process under this section and judicial review as provided in this chapter.

Since the review that Wenck undertook was called for by that same legislation, they should’ve also used the criterion of 61-33.1-03(3)(d) that states: “Land where the high and continuous presence of water has destroyed its value for agricultural purposes, including hay land, generally must be considered within the ordinary high water mark. The value for agricultural purposes is destroyed at the level where significant, major, and substantial terrestrial vegetation ends or ceases to grow. Lands having agricultural value capable of growing crops or hay, but not merely intermittent grazing or location of cattle, generally must be considered above the ordinary high water mark”

Or, the Corps definition of OHWM:

33 CFR 329.11(a)(1)

The “ordinary high water mark” on non-tidal rivers is the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris; or other appropriate means that consider the characteristics of the surrounding areas.

In the above definition, I draw your attention to the words “destruction of terrestrial vegetation.” This is a common theme in other states that use the OHWM to determine state title of sovereign lands. North Dakota does not have the OHWM defined in statute. The current definition is defined by the agency in administrative code (NDAC 89-10). The language in admin code apparently comes from the Sprynczynatyk vs. Mills case where case-law from other states was quoted in the Court’s decision. The NDAC definition uses the term “restrict its growth to predominantly wetland species”. There is a huge difference between destruction of terrestrial vegetation and restrict its growth to predominantly wetland species.

The whole paradigm of OHWM delineation in North Dakota has shifted from one based in hydrology and hydraulics to one of botany and biology. In North Dakota, it’s not about finding the ordinary high watermark, rather, the ordinary high vegetative mark. They fall back into the mantra of we must use the vegetative species as the primary indicators. It’s as if the vegetation is no longer the “indicator”, it has become the “subject” of the investigation. It appears as though in their minds, the goal is to find the 50-50 line between terrestrial and aquatic plant species and in doing so, you have met the criterion of predominantly wetland species. But, by doing that, they’ve copped out on looking at all the other necessary things like, hydrology (which includes hydrogeology), geomorphology, and the visual inspection for the presence of a “mark”
as the name imports. The state developed guidelines for the delineation of the OHWM which they now feel is the bible for OHWM delineation in the state. But, it seems they have abandoned the general guidelines published in the “North Dakota Sovereign Land Management Plan” that states on page 8:

**General Guidelines for Ordinary High Water Mark Delineations**
The above definitions do provide some guidance for ordinary high water mark delineations in North Dakota, wherein the courts determined that hydrology and impacts upon the soil are the primary indicators, followed by vegetative impacts. But, beyond those definitions, the State of North Dakota does not have a specific set of standards or guidelines established for ordinary high water mark delineations.

http://www.swc.nd.gov/pdfs/sovereign_land_management.pdf

So, it appears the North Dakota Sovereign Land Management Plan directly contradicts the ND State Engineer Ordinary High Water Mark Delineation Guidelines where vegetation rules!

The SE OHWM guidelines stand on very shaky ground and are highly subject to multiple interpretations. For instance, in the Wilkinson lawsuit, an affidavit was filed that states the SE guidelines demand that an OHWM delineation must be done “on the ground”. This simply isn’t true. Nowhere in the SE guidelines do the words “on the ground” appear. Moreover, the affidavit stated that “The Phase II Investigation did not involve an on-the-ground analysis as required by the Delineation Guidelines. The SE did not participate in this project and would not consider this a determination of the OHWM for either the time prior to creation of Lake Sakakawea or currently.”

However, that statement directly contradicts a December, 2014 letter sent to the BLM and signed by Todd Sando, SE and Lance Gaebe, Land Commissioner that stated:

> In 2009, North Dakota initiated an Ordinary High Water Mark (OHWM) survey of the river channel of the Missouri River. Under present day, Lake Sakakawea, the historic channel, was determined based upon high resolution aerial photography from 1958, just prior to these lands being flooded from the construction of Garrison Dam. The survey was conducted using the OSE’s January 2007 Ordinary High Water Mark Delineation Guidelines, a document developed to provide a scientific repeatable process for delineating the OHWM of the state’s waterbodies.

https://www.dropbox.com/s/9jcrxz60dvx8f67/2014%20sando%20gaebe%20letter.pdf?dl=0

Getting back to the state’s reliance on using the vegetative indicators and finding the 50-50 line between upland and aquatic plant species, let me give you a real world example of the idiotic outcomes that will result when that method is applied without a sound basis or understanding of hydrology and hydraulics.

The Wilkinson acres and many others were swallowed up by the State of North Dakota based on that misinterpretation of the OHWM by the contractors and subcontractors that were acting under the direct guidance and consultation of the State Engineers office and the Land Department.
They unduly relied on finding a 50-50 line and blatantly ignored obvious indications that their 50-50 points were not OHWM marks of the Missouri River. The shoddy work would be laughable if the consequences weren’t so serious. It has cost my family hundreds of thousands of dollars in out-of-pocket legal and expert fees, let alone the forgone royalties from the minerals we own.

By allowing botanists and biologists to run the show at the land department and State Engineers office, and contracted surveyors who do not understand hydrology and hydraulics at the consulting firm, you end up with these sort of results:

- Ordinary high water marks on a wetland along a non-navigable tributary over a mile away from the Missouri River.
- Ordinary high water marks that are feet higher downstream along the same bank of the river. Tell me, how does that logically happen?
- Ordinary High Water Marks that are up to seven plus feet different on points located on opposite banks of the river directly across from one another. Again, how is that logically possible?
- Ordinary High Water Marks that are established “on-the-ground” using vegetative indicators but done in late November when there isn’t a green blade or leaf to be found anywhere in North Dakota.

https://www.dropbox.com/s/w61ahemn8eqwnm7/Phase_1_silliness.pdf?dl=0


With the advancements in remote sensing – LiDAR, historic and recent annual aerial photography availability, real-time monitoring technology, LandSat, UAVs (drones), and many new technologies to come, it’s time we update the guidelines for OHWM delineation and put a proper definition in statute.

Thank You and I’m more than willing to stand for questions.
Recommend Correction to Account for More Recent Aerial Information
Recommend Correction to Account for Frequently Flooded Accretion
Recommend Correction to Account for Active Meandering (Erosion)
The opposite applies to the 1943 photos. They are limited due to fact they are older; they were taken shortly after a significant flood event (168,000 cfs on March 31, see USGS data in Appendix C and ref. 4) that eroded much of the floodplain and washed out the OHWM; and the vegetation has less leaves for photo interpretation given the early spring date. There are significant other data that make the 1943 set useful as a secondary reference. Many of the 1943 photos have notes and delineated farmed areas on them that appear to match those found in the USACE appraisal documents at Riverdale. This information helped confirm appraisal data. They are also helpful in determining the progression of farming in the floodplain area when compared with the 1951 data set.

Comparison of the river banks between 1943 and 1951 shows significant movement of the meander bends. This is the reason for a significant portion of the recommended OHWM modifications in this analysis.

The flooded area determined by the flow modeling and 1943 topographic maps as described above was reviewed in detail on the 1951 aerial photos. The OHWM was delineated as "that line below which the action of water is frequent enough either to prevent the growth of vegetation or to restrict its growth to predominantly wetland species". A stereoscope was used with overlapping aerial photos to better see three-dimensional landforms such as swales and to determine high and low areas.

Farmed and hayed areas were designated as above the OHWM. Accreted lands above the line which restrict vegetation to predominantly wetland species were also designated above the OHWM. Areas of low-lying and flat lands where the OHWM was impracticable to determine due to inconclusive aerial photography or inconclusive vegetation analysis was presumed to be above the OHWM.

5.5 APPRAISAL DOCUMENTS

Appraisal documents were prepared by the USACE to purchase easements prior to the construction of the dam. These documents often provide tables of acreages and maps that identify and delineate various land uses and even vegetation and soils for a particular property or tract. The value of the easement is determined from these land uses. The appraisal documents, especially the maps, provided excellent information to support the delineation of farmed areas that were not readily identifiable in some aerial photos.

5.6 REVIEW

The OHWM delineation was reviewed at various times during the process by geomorphologists, river engineers, wetland scientists with aerial photo interpretation expertise, and legal experts.

5.7 CONSIDERATION OF ERROR

The OHWM was carefully delineated with available information. As with every process there are sources of error. The primary sources for this work include the following:

- Aerial photo geo-referencing – See Section 4.1 for efforts made to minimize errors.

April 2018
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It should also be noted that the 1943 aerial photos were likely used to create the USGS 1943 topographic maps. The river bank in the maps was used by the USACE in establishing the property boundary along the river. This is the presumptive determination of the OHWM as stated in North Dakota Century Code chapter 61-33-1-03 para 1 (see Appendix A).

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<td>80,200&lt;sup&gt;6&lt;/sup&gt;</td>
</tr>
<tr>
<td>1965</td>
<td>Jun. 16, 1965</td>
<td>13.82&lt;sup&gt;2&lt;/sup&gt;</td>
<td>107,000&lt;sup&gt;1.2,3,6,8&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Peak Gage-Height Qualification Codes:

- 1 -- Gage height affected by backwater
- 2 -- Gage height not the maximum for the year

Peak Streamflow Qualification Codes:

- 1 -- Discharge is a Maximum Daily Average
- 2 -- Discharge is an Estimate
- 3 -- Discharge affected by Dam Failure
- 5 -- Discharge affected to unknown degree by Regulation or Diversion
- 6 -- Discharge affected by Regulation or Diversion
- 8 -- Discharge actually greater than indicated value
Wenck Survey
Tracts

(aka Whitetail Wave LLC Tracts)

<table>
<thead>
<tr>
<th>Tract Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>154N096W27SESW</td>
</tr>
<tr>
<td>154N096W27SWSE</td>
</tr>
<tr>
<td>154N096W27SWSW</td>
</tr>
</tbody>
</table>

(aka Lot 8)

INDUSTRIAL COMMISSION
STATE OF NORTH DAKOTA

DATE 6.26.18 CASE NO. 26584
Introduced By Lonneyn White
Exhibit 1
Identified By Lonneyn White
June 20, 2018

VIA Email: brkadrmas@nd.gov

North Dakota Industrial Commission-
Department of Mineral Resources
Oil and Gas Division
Attn: B R Kadrmas
1016 E. Calgary Ave.
Bismarck, ND 58503-5512

Re: NDIC-The Dept of Mineral Resources
June 26, 2018 Special Hearing Regarding The Wenck OHWM Survey

To the Department of Mineral Resources:

As per the North Dakota Industrial Commission Docket for Hearing Notice dated for Tuesday, June 26, 2018 @ 9:00 a.m., regarding delineation of the ordinary high water mark ("OHWM") received by the Commission on April 17, 2018, from Wenck Associates, Inc. ("Wenck"), I wish to submit the following comments.

I’m Lonney H. White, Jr., Sole Member of Whitetail Wave LLC ("Whitetail"), a Montana Limited Liability Company, who is a mineral owner under certain tracts of lands covered under Wenck’s delineation of OHWM, received by the Commission on April 17, 2018 ("Wenck Survey"). The record title chain to mineral interest acquired by Whitetail ties back to H. B. Mendenhall and Carrie E. Mendenhall, the previous owners at the time of United States of America’s taking of surface.  (See Attachment 1, Judgment On Declaration of Taking, dated 8/15/1953) (See Attachment 2, Y 2282 Appraisal Docs)

For the purpose of this hearing and so that I may be able to more fully understand the Wenck Survey, as it applies specifically to three (3) tracts under which Whitetail owns a mineral interest, I request that you provide me with some additional help, information and consideration, either directly or through Wenck.

For your reference, see below a table that sets out information obtained from Wenck Survey-Table 2a OHWM Delineation Results, covering my three (3) Tracts. In addition to the six (6)
columns contain therein, I added columns 2 & 5 set out in red for reference and discussion purposes herein:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wenck Survey Tracts (aka Whitetail Wave LLC Tracts)</td>
<td>Corps Segment Map Y Above OHWM (acres)</td>
<td>USACE Survey (acres)</td>
<td>USACE Survey Below OHWM (acres)</td>
<td>USACE Survey Above OHWM (acres)</td>
<td>Project Area Below OHWM (acres)</td>
<td>Project Area Above OHWM (acres)</td>
<td>Net Change (acres)</td>
</tr>
<tr>
<td>154N096W27S ESW</td>
<td>21.20</td>
<td>21.90</td>
<td>1.90</td>
<td>20.00</td>
<td>4.50</td>
<td>17.40</td>
<td>2.60</td>
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<tr>
<td>154N096W27S WSE</td>
<td>27.10</td>
<td>26.60</td>
<td>2.10</td>
<td>24.50</td>
<td>4.20</td>
<td>22.40</td>
<td>2.10</td>
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<tr>
<td>154N096W27S WSW (aka Lot 8)</td>
<td>20.72</td>
<td>19.80</td>
<td>1.90</td>
<td>17.90</td>
<td>3.10</td>
<td>16.70</td>
<td>1.20</td>
</tr>
<tr>
<td>TOTAL</td>
<td>69.02</td>
<td>68.30</td>
<td>5.90</td>
<td>62.40</td>
<td>11.80</td>
<td>56.50</td>
<td>5.90</td>
</tr>
</tbody>
</table>

See # 11 below for breakout of 12.52 acres

| TOTAL | 69.02 | | | | | | 56.50 | 12.52 |

My request for help, information and consideration is as follows:

1. Regarding Column 2 & 3, can you explain why Column 3, USACE Survey was used and not Column 2, Corps Segment Map Y Survey? (See Attachment 3, Corps Segment Map Y Survey)

2. Regarding Column 3, can you provide me with a PDF Copy of the USACE Survey Plat used in Wenck Survey?

3. Regarding Column 3, are the USACE Survey points taken from work done under Column 2, Corps Segment Map Y Survey?

4. Regarding Table 2a Column 3, 4, 5, 6, 7 & 8, how were the areas computed and can you provide me with PDF Copies that highlights any and all details or documents specifically used in calculating the areas set out for each of my three tracts listed in Column 1?

5. Regarding Column 2 & 3, can you provide me with a PDF Copy of the Corps Segment Map Y with an overlay of the USACE survey, as well as overlays of the acreage amounts set out in Columns 4 through 7?

6. As a follow up to Question 4, regarding Column 1 Tracts specifically, what is the percentage of error in the calculations used to determine the acreage amounts set out in Columns 3 through 8?
7. Regarding Wenck Survey OHWM Delineation Maps 1-18, more specifically Map 6 of 18 that covers my Tracts set out in Column 1, please explain the georeferencing issues that are evident on Map 6 of 18. **(See Attachment 4, Wenck Survey OHWM Delineation Map 6 of 18)**

8. Did the Wenck Survey use, in any way, the Bartlett & West Phase II Survey ("Phase II Survey") and if not, why and if so, can you explain when and how it was used and why the Wenck Survey shows less Above OHWM Acres and more Below OHWM Acres than the Phase II Survey, covering my Tracts set out in Column 1? **(See Attachment 5, Bartlett & West Plats. Be advised, Whitetail has overlaid its tracts to one of the 3 attached Bartlett & West Plats)**

9. Regarding Column 1, please provide me with the metes and bounds legal description, for each of the three Tracts for the area laying Above the OHWM? If metes and bounds description cannot be provided, please explain why.

10. Regarding Column 1, please provide me with the metes and bounds legal description, for each of the three Tracts for the area laying Below the OHWM? If metes and bounds description cannot be provided, please explain why.

11. As a Owner under the three tracts in Column 1, I argue that Column 2 Corps Segment Map Y Survey should have been used as the starting point, or ground ZERO of the Wenck Survey due to distortions and georeferencing errors. By using Column 3, USACE Survey, containing 68.30 acres instead of Column 2, Corps Segment Map Y Survey, containing 69.02 acres, it appears as though I lose 0.72 acres (69.02 - 68.30 = 0.72). Additionally it appears that I lose 5.90 acres to OHWM, using certain USACE Survey data considered under Column 4, plus an additional 5.90 acres using certain other Survey data considered under Column 6. By not using the Column 2, Corps Segment Map Y Survey, I actually lose a net total of 12.52 acres to OHWM, rather than the Winck Survey 5.90 net loss acres set out in Column 8 (0.72 + 5.90 + 5.90 = 12.52). Considering the above, can you please account for each of the acreage amounts that total the net 12.52 acres lost to the OHWM by providing me with details of any and all things considered that are specific to said acres?

12. Regarding Column 1 Tracts specifically, can you explain reasons why the Wenck Survey is right and the Corps Segment Map Y Survey is wrong? Why doesn’t the Corps Segment Map Y Survey areas match those of the Wenck report Table 2a? Did the Wenck Survey take into account the Supplemental Plats by the USACE? In providing explanation, please consider that certain Response Letter, dated March 23, 2016 from Aden L. Seidlitz, Acting State Director of the United States Department of the Interior, Montana Bureau of Land Management to Mr. Lance D. Gaebe, Commissioner of the University and School Lands, ND Dept of Trust Lands and Mr. Todd Sands, State Engineer, ND State Water Commission, wherein, among other things, Mr. Seidlitz concludes

"...The COE Segment Maps are firmly grounded in guidance, methodology, and contemporaneous field investigations of the land prior to the effects of flooding. These Segment Maps are the most comprehensive evidence of the OHWM prior to the artificial
rising to create Lake Sakakawea. The Segment Maps were the basis for millions of dollars of appropriated funds being spent to acquire displaced uplands and were generated with determinations from in-the-field investigations by BLM, and involved from the BLM and ND SLD, and have gone uncontested for over 60 years.

Moreover, the BLM's Branch of Cadastral Survey Performed a quality check prior to incorporating them into the Supplemental Plats. The COE Segment Maps were overlaid onto aerial photography and evaluated for OHWM determination and riparian movement effects on land title. Miniscule differences were identified due to difference in dates of aerial photography compared to the dates of the field investigations and the constant movement of rivers. In these areas, deference was given to the Segment Maps due to the field-based reports and techniques and the fact that chain of land title was based upon them and were determined to have been executed in accordance with federal guidelines..." (See Attachment 6, Response Letter, dated March 23, 2016 from Aden L. Seidlitz, Acting State Director of the United States Department of the Interior, Montana Bureau of Land Management)

13. Further to Item 12 above, please be informed that I have had discussions with Cadastral Surveyors, Josh and Blaise with the United States Department of the Interior, Montana Bureau of Land Management, Billings Office, regarding the Wenck Survey, as it relates to my tracts. All discussions and information was provided to me as helpful information and not as a decision by the BLM. Through discussions with Josh and Blaise I have reached my own conclusion, as follows:

This is my short analysis of the area in and around my Tracts. This is not a final opinion or decision. But rather a quick analysis to help Wenck identify differences between the Segment Map, Supplemental Plats and Wenck Survey.

**Conclusion**

- This area has a definable OHWM and the same feature (bank) was used by the COE Segment Map, verified by BLM Supplemental Plats, and Wencks Survey. The discrepancy lies in georeferencing Discrepancy/differences.

**The Discrepancy/Difference**
The difference between the Wenck Survey and BLM's determination is between 80 and 170 feet. The difference between Wenck's OHWM and its georeferenced Segment Map is 0-120 feet. See below PDF - Lonney1 - The Black line is BLM's Segment Map OHWM, Pink is where Wenck says Segment Map is. Blue is their OHWM.

Another point is that the Wenck survey gave no indication that BLM Black line was its representation of the OHWM prior to the lake.

The Cause of the Discrepancy/Difference

The Wenck Survey says that their georeferencing average error was 48.5 feet. In BLM's Supplemental Plat reports they acknowledge some distortions of 100 feet, with most being around 30 ft. I would think that any line within 48.5 would become the presumptive OHWM.... I would expect that this area would be in the realm of having a 30-75 feet difference considering we definitely identified the same bank, and this is all the better a georeferencing process of old photos in a flooded river plain can achieve.

However, this area definitely has greater error, which explains why there is a greater difference than expected (120-170 feet). Look at PDF - Lonney1 again, notice on the South boundary of the SWSW and SESW that there is an occupation that is approximately 100 feet South of the used GCDB section line.

This same offset is evident in the adjacent sections, indicating that there is around 100 feet of distortion in the georeferencing of this photo (over twice the
stated average). Once this error is corrected we have a difference of 20-70 which is what we would expect and should warrant acceptance of the Segment Map/BLM Supplemental Plat.

This is the problem with ONLY georeferencing old photos compared to current photos a mile away from the original river (which is what Wenck did). Wenck's procedure in doing this is very valid to start, however after that is complete, they should have evaluated things such as local control on a photo to adjust the section lines to. This local control is the BEST EVIDENCE of the section line. When one line that does not match up with the rest probably doesn't warrant adjustment, but when multiple visible lines of occupation show a 100 ft. distortion, that needs to be addressed by re-georeferencing to get the photo best overlaid on the section lines.

14. In addition to owning an interest in Column 1 Tracts, I own an interest in Section 34, T154N-R96W, not covered by the Wenck Survey. With the completion of the Wenck Survey, was there ever a possibility that the OHWM travelled into Section 34, T154N-R96W? Is Section 34, T154N-R96W at risk to being taken or acquired by the State?

15. Was there any evidence on any of the information utilized in the Wenck Survey or previously by the State that created the possibility that the OHWM travelled into Section 34, T154N-R96W?

16. Why didn't the State accomplish the delineation of the OHWM when it claimed the island just north of Column 1 Tracts? *(See Attachment 3, Corps Segment Map Y Survey), (See Attachment 4, Wenck Survey OHWM Delineation Map 6 of 18)*

17. Regarding Wenck Survey Power Points, was full consideration given to each of the points of interest that I have highlighted in yellow, as the same applies specifically to my three Tract? Regarding the highlighted Overall Results, I request that additional numbers be added to provide for the Corps Segment Map Y Survey area. This should give a more accurate overview between actual survey areas. *(See Attachment 8, Partial Copy of Wenck Survey Power Points)*

**OVERALL RESULTS**
(from River Mile 1482 to 1553.5).

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>USACE OHWM</td>
<td>16,687</td>
</tr>
<tr>
<td>Project OHWM</td>
<td>27,089</td>
</tr>
<tr>
<td>Total increase in OHWM</td>
<td>10,402 acres</td>
</tr>
<tr>
<td>Total increase in OHWM</td>
<td>162%</td>
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</table>
Thank you in advance for your help and assistance regarding the above matter. Please don't hesitate to contact me if you have any question or if anything further is need. It's my hope that upon further review and consideration given to the above, the Wenck Survey will be amended so as to utilize the Corps Segment Map Y Survey when determining the OHWM, as it relates to my tracts.

Regards,

_Lonney H. White, Jr._

Whitetail Wave LLC
Lonney H. White, Jr., Sole Member

w/Attachments
Attachment 1
Judgment On Declaration of Taking
IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NORTH DAKOTA
SOUTHWESTERN DIVISION

UNITED STATES OF AMERICA,

Plaintiff,

vs.

3,059.66 acres of land, more or less,
Situata in McKenzie County, State of
North Dakota; Harry H. Mendenhall, et al.,
and Unknown Owners,

Defendants.

Civil No. 2639.

JUDGMENT ON DECLARATION
OF TAKING

This day comes the Plaintif in the above-entitled cause, the United States
of America, by Harry Losskowski, Assistant United States Attorney for the District
of North Dakota, and moves the Court to enter Judgment vesting title in the United
States of America in fee simple, subject to existing easements for public roads and
highways, public utilities, railroads and pipe lines, and the reservations of
minerals to the land owners specifically set forth in paragraph three of the
Declaration of Taking herein, in and to the property hereinafter described and
described in the Declaration of Taking, as well as the Complaint herein.

Thereupon the Court proceeded to hear and pass upon said Motion, Complaint
and Declaration of Taking, and finds as follows:

First- That each and all of the allegations in the Complaint and the Declaration
of Taking are true; and that the United States of America is entitled to acquire
property by eminent domain for the purposes set out and prayed in said Complaint.

Second - That a Complaint in condemnation was filed in the above-entitled
action at the request of the Secretary of the Army, the authority empowered by law
to acquire the lands described in the Complaint, under instructions from the
Attorney General of the United States, the person authorized by law to direct the
institution of such condemnation proceedings.

Third- That in said Complaint and Declaration of Taking a statement of the
authority under which the public use for which said lands are taken is set out, and
that the Secretary of the Army is the person authorized and empowered by law to
acquire lands such as are described in the Complaint, which is in pursuance of and
under the authority of the provisions of the Act of Congress approved February 26,
1931 (46 Stat. 1121, 40 U.S.C. Sec. 258a) and Acts supplementary to and amendatory
thereof; the Acts of Congress approved April 24, 1888 (25 Stat. 94, 33 U.S.C. 591);
March 1, 1917 (39 Stat. 968, 33 U.S.C. 701); December 22, 1944 (Public Law 534,
73rd Congress, Second Session); also under the Civil Functions Appropriation Act,195
approved October 24, 1951 (Public Law 203, 82nd Congress); and that the public use
for which said lands are taken is in connection with the construction and establish-
ment of a project known as the Garrison Dam and Reservoir Project, the purpose of
which is to adequately provide flood control in the basin of the Missouri River for
the use and benefit of the public generally and for such other uses as may be auth-
orized by Congress or by Executive Order.

Fourth—That a proper description of the lands sought to be taken sufficient
for the identification thereof is set out in said Declaration of Taking.

Fifth—A statement of the estate or interest in said lands taken for said
public use is set out in the Declaration of Taking.

Sixth—A plat showing the lands taken is set out.

Seventh—A statement is contained in said Declaration of Taking to the effect
that the estimated amount of compensation for the taking of the property described
therein, in the opinion of the Secretary of the Army, will probably be within any
limits prescribed by Congress on the price to be paid therefor.

Fifth—A statement is contained in said Declaration of Taking of the sum of
money estimated by the acquiring authority to be just compensation for all of the
lands to be taken thereunder, together with all buildings and improvements thereon
and appurtenances thereto, which is a total of $_____, and said sum
has been deposited in the Registry of this Court.

And the Court having considered the Complaint in condemnation herein as it
relates to the hereinafter described lands, Declaration of Taking, and the statutes
in such case made and provided, and it appearing to the Court that the United
States of America was and is entitled to take said described property and have
title thereto vested in it pursuant to law, it is, therefore, considered by the
Court, and it is the

ORDER AND JUDGMENT of the Court that title to the hereinafter described lands
vested in the United States of America upon the filing of the Declaration of Taking
herein and the deposit in the Registry of the Court of the sum of $_____, and
the estate taken is the fee simple title, subject to existing easements for
public roads and highways, public utilities, railroads and pipe lines and reserving,
however, to the owner of the land or the owner of any interest therein, including
third party lessees, their heirs, successors and assigns, all oil and gas rights
therein, on or under said described lands, with full rights of ingress and egress
for exploration, development, production and removal of oil and gas; upon condition
that the oil and gas rights so reserved are subordinated to the right of the United
States to flood and submerge the said lands permanently or intermittently in the

-2-
construction, operation and maintenance of the Garrison Dam and Reservoir, and that any exploration or development of such rights shall be subject to federal or state laws with respect to pollution of waters of the reservoir; provided further that the District Engineer, Corps of Engineers, Garrison District, or his duly authorized representative shall approve in furtherance of the exploration and/or development of such reserved interests, the type of any structure and/or appurtenances thereto now existing or to be erected in connection with such exploration and/or development, said structures and/or appurtenances thereto not to be of a material determined to create flammable debris.

IT IS FURTHER ORDERED that leave be and is hereby granted the United States of America to take immediate possession of all of the tracts of land in this action, to the extent of the interest to be acquired by the United States of America and proceed with such public works thereon as have been authorized by Congress.

The lands taken herein are situated in the County of Williams, State of North Dakota, and are described in Exhibit "A", attached hereto and made a part hereof.

This case is held open for such other and further orders, judgments and decrees as may be held necessary in the premises.

Dated this _____ day of _____, 1953.

CHARLES J. VOGEL
Judge, U. S. District Court.
The following, described lands situate in Jackson County, North Dakota, are more particularly described as follows:

TRACT NO. 1-2282 - Lot 1 of Section 25, Lot 7, South half of the Southeast quarter (SE 1/4), Southwest quarter of the Southwest quarter (SW 1/4) of Section 26, Lot 6 and those portions of the Southwest quarter of the Southeast quarter (SE 1/4), and the Southwest quarter of the Southeast quarter (SW 1/4) of Section 27 lying South of the Missouri River, Southeast quarter (SE 1/4), South half of the Northeast quarter (SE 1/4) of Section 28, all in Township 154 North, Range 50 East of the 5th P.M., containing 1800.51 acres, more or less.

TRACT NO. 1-2284 - Lot 8, Northeast quarter of the Southwest quarter (NE 1/4) of Section 26, and also those portions of Northwest quarter of the Southeast quarter (NE 1/4) of Section 26, and northeast quarter of Southwest quarter (NE 1/4) of Section 28, all in Township 154 North, Range 50 East of the Missouri River, all in Township 154 North, Range 50 East of the 5th P.M., containing 157.63 acres, more or less.

TRACT NO. 1-2285 - Lot 6 of Section 25 in Township 154 North, Range 50 West of the 5th P.M., containing 157.63 acres, more or less.

TRACT NO. 2-2345 - Lots 4, 5, and 9 of Section 31 in Township 154 North, Range 50 East of the 5th P.M., containing 150.96 acres, more or less.

TRACT NO. 2-2346 - North half of Lot 4 of Section 5, north half of Lot 1 in Section 6 in Township 153 North, Range 37 West of the 5th P.M., containing 35.86 acres, more or less.

TRACT NO. 2-2347 - South half of the Northeast quarter (SE 1/4), Northwest quarter (NW 1/4) of Section 31, Southwest quarter of the Northeast quarter (SW 1/4), North half of the Southeast quarter (SE 1/4) of Section 31 in Township 154 North, Range 37 West of the 5th P.M., containing 360.16 acres, more or less.

TRACT NO. 2-2357 - Lots 4, 5, 6, and 7, Southeast quarter of the Northwest quarter (SE 1/4) of Section 1 in Township 153 North, Range 37 West of the 5th P.M., containing 154.90 acres, more or less.

TRACT NO. 2-2358 - East half of the southeast quarter (SE 1/4), South half of the Northwest quarter (NW 1/4) of Section 32 in Township 154 North, Range 37 West of the 5th P.M., containing 160.00 acres, more or less.

TRACT NO. 2-2359 - Lot 1 of Section 26, Lots 5, 6, 7, and 8 of Section 26, Lots 7 and 8 of Section 30, that portion of the northeast quarter of the Northwest quarter (NW 1/4) lying South of the Missouri River, northeast quarter of the southeast quarter (SE 1/4) of Section 31 in Township 154 North, Range 37 West of the 5th P.M., containing 298.44 acres, more or less.

TRACT NO. 2-2367 - Southwest quarter of the Northeast quarter (SW 1/4), Southeast quarter of the Southwest quarter (SE 1/4) of Section 1 in Township 153 North, Range 37 West of the 5th P.M., containing 157.00 acres, more or less.

TRACT NO. 2-2370 - Lot 3 of Section 4 in Township 153 North, Range 37 West of the 5th P.M., containing 29.97 acres, more or less.

EXHIBIT "A"
IN TESTIMONY WHEREOF I have hereunto set my hand and affixed the seal of said Court, at Fargo, in said District, this 17th day of August, A. D. 1953.

Beatrice A. McMichael

By: Eula J. Balderson, Deputy

Document No. 1401275
Attachment 2
Y 2282 Appraisal Docs.
Approved Supplement

Appraisal of Interest in Gas and Oil Rights

Treaty No. 12284

Date of Claim (Surface) October 24, 1984

Acres 10.75

Acre which can be drilled out from surface locations by vertical drilling methods under 120 acre spacing pattern

Acre which cannot be drilled out from surface locations by vertical drilling methods under 60 acre spacing pattern

A. Impairment of Royalty Interest in Gas and Oil Rights:

<table>
<thead>
<tr>
<th>Acres</th>
<th>Mineral Acres</th>
<th>Total Mineral Value</th>
<th>% of Impairment</th>
<th>Total Amount of Impairment</th>
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<tbody>
<tr>
<td>157.63</td>
<td>75.47</td>
<td>2070</td>
<td>2364</td>
<td></td>
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</tbody>
</table>

Recommended Compensation for Impairment of Royalty Interest -- $ 2364

B. Impairment of Leasehold Interest in Gas and Oil Rights:

<table>
<thead>
<tr>
<th>Acres</th>
<th>Impairment Per Acre</th>
<th>Amount of Impairment</th>
</tr>
</thead>
</table>

Recommended Compensation for Impairment of Leasehold Interest -- $ --

C. Total of Impairment: Royalty and Leasehold -- $ --

Remarks:

1. Gas reserves on this acre have been greatly depleted since time of taking acreage in August, 1936.

2. The amounts above indicated are believed to be the impairment which results to the value of the gas and oil interests in this tract when such interests are reserved to owners and subordinated to the Government's right to flood permanently or intermittently. The amounts determined as impairment are substantiated by the best information available and by the opinions and recommendations provided by experts following study of the impairment problem. I certify that I have no present or intended future interest in this property.

Date of Valuation 7 Aug 1936

Date of Report 22 May 1936

Appraiser

N.A. FUSI 230 23 MAR 55 (Tentative)
APPRAISAL REPORT

REVISION APPEAL

PROPERTY OF: H. E. Mendenhall and Carrie E. Mendenhall

ADDRESS: Charlon, North Dakota

LAND DESCRIPTION: Owner Supervised (H. Jellessed, Charlon, North Dakota, does farming on part)

Tract No. Y-2222

Lot 5 of Section 25, Lot 7, South half of the Southeast quarter (SSE4), Southwest quarter of the Southwest quarter (SW4W4) of Section 26, Lot 3 and those portions of the Southwest quarter of the Southeast quarter (SW4SE2), and the Southeast quarter of the Southwest quarter (SE4SW4) of Section 27 lying South of the Missouri River, Southeast quarter (SE2), South half of the Northeast quarter (SN4NE2), Northwest quarter of the Northeast quarter (NW4NE4) of Section 34, North half (N2), North half of the South half (N2S2), Southwest quarter of the Southwest quarter (SW4SW4) of Section 35 all in Township 154 North, Range 96 West of the 5th P.M., plus accretions. Also Lot 4 of Section 2, Lots 1 and 2 of Section 3 in Township 153 North, Range 96 West of the 5th P.M.

Tract No. Y-2224

Lot 8, Northeast quarter of the Southwest quarter (NE4SW4) of Section 26, and also those portions of Northwest quarter of the Southwest quarter (NW4SW4) of Section 26, and Northeast quarter of the Southeast quarter (NE4SE2) of Section 27, lying South and East of the Missouri River, all in Township 154 North, Range 96 West of the 5th P.M., plus accretions.

2/24/53

AREA (Acres) 1,358.14

TOTAL PRESENT MARKET VALUE $146,600.00

APPRaisal VALUATION

VALUE OF GROWING CROPS: SIEVENANCE DAMAGES $ None

DATE Reappraised 2/20/53

8 August 1951

APPRaiser

L. W. Pippin

CHIEF, APPEAL BRANCH
TRACT MAP (WITH GRID)

Project symbol no.  Harrison Res. - Reservoir Area
Tract no. Y-006

Name of owner:  Carrie E. Landers

Field work by:  Jack Tharp

Date:  6 November 1950

Description of tract:

State - North Dakota
County -シメティ
Lot 6, Northwest Quarter of the Southeast quarter (SE SW) of Section 26, and
also those sections of Northwest quarter of the Southeast quarter (SW NE) of
Section 26, and Northeast quarter of the Southeast quarter (NE SE) of Section

47, lying south of west of the Leopold River, all in Township 124 North, Range
26 West of the 5th P.M., plus accretions.

CLASSES OF LAND

Crop land:  [Diagram showing crop land]

Forest land:  [Diagram showing forest land]

Grades of each class of land must be shown on the map proper.

Name of any other class of land involved:

I certify that this is an accurate map of Tract Y-006

Surveyor:  Jack Tharp

Date:  6 November 1950

Indicate whether map is based on General Land Office records, aerial survey, deed description or actual survey.
Appended Supplement

Impairment of Interest in Gas and Oil Rights

Treaty No. 1284

Date of Owner (Surface)  January 1, 1953

Acreage which can be drilled out from owner's location by vertical drilling methods under 40 acre spacing pattern

Acreage which cannot be drilled out from owner's location by vertical drilling methods under 40 acre spacing pattern

A. Impairment of Royalty Interest in Gas and Oil Rights:

<table>
<thead>
<tr>
<th>Acreage</th>
<th>Mineral Acres</th>
<th>Total Mineral Acres</th>
<th>Est. % of Total</th>
<th>Total Amount of Impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>157.63</td>
<td>75%</td>
<td>207.65</td>
<td></td>
<td>2364.25</td>
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</tbody>
</table>

Recommended Compensation for Impairment of Royalty Interest --- $ 2364.25

B. Impairment of Leasehold Interest in Gas and Oil Rights:

<table>
<thead>
<tr>
<th>Acreage</th>
<th>Impairment Per Acre</th>
<th>Amount of Impairment</th>
</tr>
</thead>
</table>

Recommended Compensation for Impairment of Leasehold Interest --- $

C. Total of Impairment: Royalty and Leasehold --- $

Remarks:

D. The amounts above indicated are believed to be the impairment which results to the extent that the gas and oil interests in this tract when such interests are reserved to owners and subordinated to the government's right to flood permanently or intermittently. The amounts determined as impairment are substantiated by the best information available and by the opinions and recommendations provided by experts following study of the impairment problem. I certify that I have no present or intended future interest in this property.

Date of Valuation  July 1, 1953

Date of Report  May 22, 1953

Appraiser

NOS PUB 230  23 JUL 55 (Tentative)
Tract No. Y-2282

Lot 5 of Section 25, Lot 7, South half of the Southeast quarter (S\textsuperscript{2}SW\textsuperscript{4}) of Section 26, Lot 3 and those portions of the Southwest quarter of the Southeast quarter (S\textsuperscript{2}SW\textsuperscript{4}) and the Southeast quarter of the Southwest quarter (SW\textsuperscript{3}SE\textsuperscript{4}) of Section 27 lying South of the Missouri River, South half of the Northwest quarter (NW\textsuperscript{2}NE\textsuperscript{4}) of Section 34, North half (N\textsuperscript{2}) of the South half (S\textsuperscript{2}SE\textsuperscript{4}) of Section 35, all in Township 154 North, Range 96 West of the 5th P.M., plus accretions. Also Lot 4 of Section 2, Lots 1 and 2 of Section 3 in Township 153 North, Range 96 West of the 5th P.M.

Tract No. Y-2284

Lot 8, Northeast quarter of the Southwest quarter (NW\textsuperscript{2}SW\textsuperscript{4}) of Section 26, and also those portions of Northwest quarter of the Southwest quarter (NW\textsuperscript{2}SW\textsuperscript{4}) of Section 26, and Northeast quarter of the Southeast quarter (NE\textsuperscript{2}SE\textsuperscript{4}) of Section 27, lying South and East of the Missouri River, all in Township 154 North, Range 96 West of the 5th P.M., plus accretions.
See Attached Sheets

CHARACTER, TOPOGRAPHY AND ADAPTABILITY

See Attached Sheet

<table>
<thead>
<tr>
<th>YEAR</th>
<th>ACRES</th>
<th>LAND</th>
<th>IMPROVEMENTS</th>
<th>OTHER</th>
<th>TOTAL</th>
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<td>1948</td>
<td>1437.12</td>
<td>$2078</td>
<td>$--</td>
<td>$--</td>
<td>$2078</td>
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REMARKS RELATIVE TO ASSESSED VALUE

1948 tax $124.24

Assessed valuation bears no relation to present market values in this area.
Location, Neighborhood, Etc.

This tract is 33 miles Northwest from Sanish, North Dakota, on a reasonably good earth surfaced township road which also serves as a daily mail route. Subject tract is nine miles Northwest from Charlon rural school and 10 miles Northwest from rural Lutheran Church. There is no FSA or telephone service on this tract.

This area is characterized by general farms, which combine the raising of cereal grains and flax with the production of above average beef cattle. Farms are both large and small along with a few ranches which includes a thousand or more acres of grazing land together with extensive acreages of bottom land. Farm operations are with tractor drawn power equipment. With few exceptions, the building improvements are below average mostly due to the high rate of tenancy in this immediate area. Farm buildings of resident owner operators are modest but very suitable. Lands of the area range from low level bottomlands of the Missouri flood plain to steeply rolling rough uplands and level plateaus which range in elevation from 180–200 feet above the flood plain. Soils of the flood plain vary in texture from fine sandy loams to silty clay loams of variable fertility and productive capacity. Soils of the uplands are mostly clay loams of variable texture utilized primarily for hay and grazing purposes. The most desirable lands of the flood plain are utilized for alfalfa and cash grains, while poorly drained phases of the flood plain, valley slopes and the uplands are used for feed crops, hay and grazing. Dry land farming which incorporates summer fallow practice is most common. Yields are variable, but have been excellent the past ten years. Average carrying capacity of grazing land is about 2.5 acres per a.u. month. Farm tenancy is about 25 per cent and the usual terms are 1/4 crop delivered and cash for improvements and pasture. Average rainfall is about 15 inches, with the major portion falling during the 1/3 month growing season. Drought is a major hazard in crop production and cold winters with snow and blizzard conditions present some hazard in stock production.

Character, Topography and Adaptability

Subject tract incorporates 157.63 acres of land title of which is vested in name of Carrie E. Hendenhall, wife of H. E. Hendenhall, and 1203.02 acres vested in name of H. E. Hendenhall. The above acreage plus 460 acres of leased grazing land makes up a contiguous well balanced farm unit. The owner carries and cares for from 30–100 head of cattle and supervises the cropping operations which are carried on by H. Jellesed, Charlson, North Dakota, a neighbor, on a share rent basis.

The 340 acres of cropland is all located on the Missouri River flood plain. 75 acres are used for production of alfalfa and the balance for the production of feed grains and cash crops. The balance of the tract 1020 acres and the 460 acres leased are used for grazing with some native hay being cut in years of more abundant production.

The cropland soil is clay and silty clay loam, a well drained soil which requires specialized handling, but yields abundantly even in years of sub-normal rainfall. 100 acres of this bottomland cropland is a nearly levelblock very well located in relation to the buildings and feed lots. 200 acres of the cropland has a topography which is level to undulating except for a few drainage depressions, which do aid surface drainage without materially affecting tillage operations. This portion of the cropland while comparable in production to the above mentioned 100
acres, lies away some distance from the farmstead and in irregular non-contiguous fields which lessens the operational efficiency.

Approximately 400 acres of this tract is bottomland tree and brush pasture which provides along with crop residues very good grazing and shelter during the bad weather seasons of the year. The tree cover is predominately hardwood growth, with a few scattered cottonwoods and some shrubs and brush. The tree cover is open canopied and a reasonably good cover of tall grasses, sweet clover, bromus and Canada wild rye and bluestems is present. Considerable edible browse is also available. Stock water can be found at frequent intervals all along the bottom. No special water development efforts were viewed in the bottom pasture. In addition to the above acreage, 60 acres of more dense tree and brush pasture is located in the Northwest corner of the tract. While this acreage is not quite as well adapted to grazing it provides the needed poast and pole replacements for the unit. The post and pole stock in this portion of the tract has been given consideration in the overall land price as virtually no market for posts and poles exist locally.

The soils of the bottomland pasture range from poorly drained phases of silt and silt clay loams of light sandy loams of accreted lands. The topography is level to undulating being cut occasionally by drainage depressions.

For summer pasture, this tract has 520 acres, plus a rented 460 acres of upland pasture. Topography of this portion is rolling to steep with large level plateaus at an elevation of 100-150 feet above the flood plain floor. The soils are predominantly clay loams rather thin and occasionally some stones. This upland pasture shows good management and it carries a very good stand of upland grasses, grama, western wheat, needle and thread, and edible sedges. The owner has two springs developed in this area which along with drainage water found in the draws through out the pasture provides a very good distribution of stock water. The draws which bisect this pasture acreage are for the most part gentle and carry a fairly good cover of grass and a spotted cover of tree growth which offers protection to stock. The tract is fenced around the perimeter and the only crossfences are between owned and leased tracts. Consideration for the value of the fence has been given in the overall value of the farm.

The balance of the tract is a 25 acre farmstead and feed lot. The farmstead has a good location, it is protected from the wind and snow on the North, West and East by a shelter belt of mixed hardwoods. It is situated about 20 rods from the township road. The feed lot covers about 15 acres, very good protection from wind and snow is provided by a dense growth of hardwoods. A spring is available right in the feed area and provides excellent water throughout the year.

The buildings on this tract are above average and some new construction, enlargement and repair have been carried on during the past 10-12 years, which have brought about a well balanced building situation. The owner started farming by purchasing a headquarter unit in 1921 during the later 1920's enlarged it some and finally rounded out his unit in 1944, by the purchase of 160 acres lying within his holdings.
## Valuation of Improvements

<table>
<thead>
<tr>
<th>Kind</th>
<th>Size</th>
<th>Construction</th>
<th>Roof</th>
<th>Foundation</th>
<th>Cond.</th>
<th>Present Value</th>
<th>Salvage Value</th>
</tr>
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<tbody>
<tr>
<td>Dwelling Addition</td>
<td>24x32-8</td>
<td>Frame</td>
<td>Shingles</td>
<td>Concrete</td>
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<td>$1,000.00</td>
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<tr>
<td></td>
<td>12x16-8</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bunk House</td>
<td>16x22-7/8</td>
<td>Frame</td>
<td>Cedar Shingles</td>
<td>Concrete</td>
<td>Fair</td>
<td>725.00</td>
<td>75.00</td>
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<tr>
<td></td>
<td></td>
<td>Stucco</td>
<td></td>
<td></td>
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<tr>
<td>Log House</td>
<td>13x23x6</td>
<td>Log</td>
<td>Boards - None</td>
<td>Roll Roofing</td>
<td>Poor</td>
<td>100.00</td>
<td>---</td>
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<td>Toilet</td>
<td>4x6x6</td>
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<td>Coal Shed</td>
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<td>Boards</td>
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<td>Roll Roofing</td>
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<td>75.00</td>
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<td>Root Cellar</td>
<td>9x12-7</td>
<td>Dirt Walls</td>
<td>Plank and Pole Straw</td>
<td>(Dirt Floor)</td>
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<td>Grain Bin</td>
<td>10x12-7/9</td>
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<td>Machine Shed</td>
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<td>100.00</td>
</tr>
<tr>
<td>Grain Bin</td>
<td>10x14x7/9</td>
<td>Frame</td>
<td>Roll Roofing</td>
<td>Concrete</td>
<td>Poor</td>
<td>75.00</td>
<td>15.00</td>
</tr>
<tr>
<td>2 Grain Bins</td>
<td>1,000 bu. cap. Steel Metal</td>
<td>Scoria</td>
<td>Base</td>
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<td>14x16x8</td>
<td>Frame</td>
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<td>Fair</td>
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<td>Hog House Addition</td>
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<td>25.00</td>
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<tr>
<td></td>
<td>10x14x6/9</td>
<td>Frame</td>
<td>Roll Roofing</td>
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<td>Poor</td>
<td></td>
<td></td>
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<tr>
<td>Shop</td>
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<td>Roll Roofing</td>
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<td>Garage</td>
<td>16x24-8</td>
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<td>Good</td>
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<td>150.00</td>
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<tr>
<td>Ice House</td>
<td>14x14-6</td>
<td>Log</td>
<td>Roof Beds.</td>
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<td>25.00</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>and paper</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Windcharger and 16 batteries</td>
<td>1/4 steel post - 30 ft. tower</td>
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<td></td>
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<td>300.00</td>
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<td>Windmill - Lindsay Brothers - 30 ft. 1/4 post tower 3 ft. wheel</td>
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<td></td>
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<td>75.00</td>
<td>25.00</td>
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<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td><strong>$12,000.00</strong></td>
<td>$2,135.00</td>
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</tbody>
</table>
COMPARISON OF ABOVE WITH PROPERTY APPRAISED

1. Above tract composed of 150 acres of level to undulating silty clay cropland; 10 acres of creek bottom; access fairly good, however, no buildings or fences. 2. 310 acres of cropland (clay loam), undulating to gently rolling topography, well improved and good access. 3. Upland grazing land with good cover of native grasses and sedges. Topography is rolling to steep. Soils-clay and clay loam. No improvements. Water is available but not well situated for maximum utilization. Subject tract cropland very similar in soil type and topography to #1 above, further it is tied with sufficient upland grazing land to form a suitable diversified unit. Subject

GROWING CROPS

<table>
<thead>
<tr>
<th>TYPE</th>
<th>ACRES</th>
<th>ESTIMATED YIELD PER ACRE</th>
<th>UNIT VALUE</th>
<th>GROSS MARKET VALUE</th>
<th>COSTS TO NATURE, HARVEST &amp; MARKET</th>
<th>NET CASH VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>$</td>
<td>$</td>
<td>$</td>
<td>$</td>
</tr>
</tbody>
</table>

tract croplands similar in productive capacity and development but not as to exact type and access is inferior to #2 above. Subject tract upland grazing land similar in type and topography to #3, however, it is fenced, has good stock water development and is tied in with a good feed producing base. Adequate buildings are situated on subject tract. Consideration has been given the increase in land values since dates of above sales.

APPRAISAL OF TIMBER, MINERALS, ETC.

Timber on tract consists of mixed hardwood which has potential for posts and poles, however, market for such products is restrained and affects value adversely. Consideration has been given the wood products in the overall land value. No consideration has been given in this appraisal to the value of mineral rights except as such value may have been reflected in recent sales of comparable properties where fee simple title without mineral reservation has been conveyed.

GENERAL REMARKS (Discus principal factors affecting conclusions)

Desirability and saleability of this tract is good. Access is fair. This unit while not large is well balanced with better than average producing capacity from both cereal grain and grass producing standpoints. It is reasonably well improved and is well adapted to its present use.
<table>
<thead>
<tr>
<th>PRESENT USE</th>
<th>TYPE</th>
<th>TOPOGRAPHY</th>
<th>AREA</th>
<th>UNIT VALUE</th>
<th>TOTAL VALUE</th>
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<tbody>
<tr>
<td>Bottom Cropland</td>
<td>Silty Clay</td>
<td>Level</td>
<td>100</td>
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<td>6,000.00</td>
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<td>Heavy Clay</td>
<td>Undulating</td>
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<td></td>
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<tr>
<td></td>
<td>Sandy Clay</td>
<td>Level</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Loam</td>
<td>Rolling to</td>
<td>515</td>
<td>15.00</td>
<td>7,725.00</td>
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<tr>
<td>Upland Pasture</td>
<td>Clay and</td>
<td>Rolling to</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Clay Loams</td>
<td>Steep</td>
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<tr>
<td>Bottom tree and brush</td>
<td>Clay and</td>
<td>Level to Und.</td>
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<tr>
<td>Pasture</td>
<td>Clay Loams</td>
<td>Level to Und.</td>
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<tr>
<td>Sandbar</td>
<td>Riverwash</td>
<td>Level to</td>
<td>19.98</td>
<td>5.00</td>
<td>99.90</td>
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<td></td>
<td></td>
<td>Rummocky</td>
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<tr>
<td>Feed Lot &amp; Bldg. site</td>
<td>Clay</td>
<td>Level to Und.</td>
<td>20</td>
<td>50.00</td>
<td>1,000.00</td>
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<td>Tract No. Y-2284</td>
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<tr>
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<td>Level to Und.</td>
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<td>Bottom Tree &amp; Brush Past</td>
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<td>2,312.60</td>
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<tr>
<td>Sandbar</td>
<td>Riverwash</td>
<td>Level to</td>
<td>5</td>
<td>5.00</td>
<td>25.00</td>
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<tr>
<td></td>
<td></td>
<td>Rummocky</td>
<td></td>
<td></td>
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1,358.14 TOTAL $34,600.45

**VALUATION OF IMPROVEMENTS**

<table>
<thead>
<tr>
<th>KIND</th>
<th>SIZE</th>
<th>CONSTRUCTION</th>
<th>ROOF</th>
<th>FOUNDATION</th>
<th>CONDITION</th>
<th>PRESENT VAL.*</th>
<th>SALVAGE VALUE</th>
<th>$</th>
<th>$</th>
</tr>
</thead>
</table>

See Attached Sheet

*Estimated contributions improvements to appraised market value of the property as a whole.

EM  FORM 241 (Cont')

1 Jan 46
Appraisal Supplement
Impairment of Interest in Gas and Oil Rights

Tract No. 2282

Name of Owner (Surface) A.B. Mendenhall

Top., Rge., (Tract Map Attached) Acres 1,260.57

Acres which can be drilled out from onshore locations by vertical
drilling methods under 40 acre spacing pattern ____________

Acres which cannot be drilled out from onshore locations by vertical
drilling methods under 40 acre spacing pattern ____________

A. Impairment of Royalty Interest in Gas and Oil Rights:

<table>
<thead>
<tr>
<th>Acres</th>
<th>Mineral Acre</th>
<th>Total Mineral Acre Value</th>
<th>Est. % of Impairment</th>
<th>Total Amount of Impairment</th>
</tr>
</thead>
<tbody>
<tr>
<td>238.36</td>
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<td>10%</td>
<td>$1191.50</td>
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<tr>
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<td>10%</td>
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<td>189.02</td>
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<td>10%</td>
<td>1200.00</td>
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Recommended Compensation for Impairment of Royalty Interest -- $13,100.00

B. Impairment of Leasehold Interest in Gas and Oil Rights:

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<tr>
<th>Acres</th>
<th>Impairment Per Acre</th>
<th>Amount of Impairment</th>
</tr>
</thead>
</table>

Recommended Compensation for Impairment of Leasehold Interest -- $________

C. Total of Impairment: Royalty and Leasehold -- $________

Remarks:

See map attached. Subordination could be released from
petitions filed. This would result in an approximately 1,500
acres to the point. This report superseded all previous dated
reports. Coverage estimates concerning impairment.

D. The amounts above indicated are believed to be the impairment which results
to the value of the gas and oil interests in this tract when such interests are
reserved to owners and subordinated to the Government's right to flood permanently
or intermittently. The amounts determined as impairment are substantiated by
the best information available and by the opinions and recommendations provided
by experts following study of the impairment problem. I certify that I have no
present or intended future interest in this property.

Date of Valuation Aug 53

Date of Report 22 May 1956

Appraiser

MRG FORM 230 23 MAR 55 (Tentative)
IN THE COUNTY COURT OF WILLIAMS COUNTY, STATE OF NORTH DAKOTA.

IN THE MATTER OF THE ESTATE OF CARRIE E. MENDENHALL, DECEASED.

PERSONAL REPRESENTATIVE DEED OF DISTRIBUTION

This indenture made this 2nd day of April, 1981, by and between John D. French, Personal Representative of the estate of Carrie E. Mendenhall, deceased, whose post office address is P.O. Drawer 7, Ronan, Montana 59864, hereinafter referred to as Grantor, and the following named eleven separate parties, as tenants in common, hereinafter referred to as Grantees, to-wit:

Merle Jones and Bertha Jones, husband and wife, as joint tenants with right of survivorship

Thomas Tipton and Ruby Tipton, husband and wife, as joint tenants with right of survivorship

Len Humble and Hazel Humble, husband and wife, as joint tenants with right of survivorship

Kirk Mendenhall

Ward Mendenhall

Robert Boucher

Thomas Boucher

Mrs. Jo Mendenhall

St. Luke Community Hospital, a Non-Profit Corporation

Bethel Lutheran Home for the Aged, a Non-Profit Corporation

Montana Children's Home and Hospital

WITNESSETH:

WHEREAS, Grantor is the duly appointed and acting personal representative of the estate of Carrie E. Mendenhall, deceased, having been appointed and issued Letters Testamentary by the County Court in and for Williams County, North Dakota, on the 9th Day of July, 1980, and

WHEREAS, Grantor, as the personal representative of said estate, has the power and authority pursuant to Chapter 30.1-16 N.D.C.C. to sell, transfer, and convey the real and personal property of said decedent; and

WHEREAS, under the provisions of the Last Will and Testament of Carrie E. Mendenhall, the Grantees named above are entitled to distribution of the real estate hereinafter described, as tenants in common.

NOW, THEREFORE, in accordance with the provisions of the Last Will and Testament of Carrie E. Mendenhall, deceased, Grantor does hereby grant, convey, transfer and assign to the Grantees, named above as tenants in common, free and clear of all liens and encumbrances, all of that certain real property in the Counties designated in the State of North Dakota, described more fully as follows, to-wit:

SEE SCHEDULE "A" ATTACHED AND MADE A PART HEREOF FOR A DETAILED DESCRIPTION AND THE INTERESTS CONVEYED HERIN.

WITNESS, the hand of the Grantor as of the day and year first above written.

John D. French, Personal Representative
EXHIBIT "A"

IN THE MATTER OF THE ESTATE OF CARRIE E. MENDENHALL, DECEASED

A. Undivided 1/3 interest in all of the oil, gas and all other minerals in and under the following described premises:

McKenzie County, North Dakota
Township 151 North, Range 104 West
Section 27: Lot 2, NW\frac{3}{4}NE\frac{1}{4} (84.10 acres)

B. Undivided 1/4 interest in and to all of the oil, gas and other minerals in and under the following described premises:

Williams County, North Dakota
Township 154 North, Range 95 West
Section 20: E\frac{3}{4}, S\frac{1}{2}NW\frac{1}{4}, NE\frac{1}{4}NW\frac{3}{4}
Section 21: W\frac{1}{4}S\frac{1}{4}, SE\frac{1}{4}SE\frac{1}{4}
Section 22: SE\frac{1}{2}SW\frac{1}{4}
Section 29: NE\frac{1}{4}

C. Undivided 1/4 interest in and to all of the oil, gas and other minerals in and under

Township 154 North, Range 95 West
Section 17: SE\frac{1}{2}SW\frac{1}{4}
Section 18: W\frac{1}{4}SE\frac{1}{4}, SE\frac{1}{4}SE\frac{1}{4}

D. Undivided 1/4 interest in and to all of the oil, gas and other minerals in and under

Township 154 North, Range 95 West
Section 22: NW\frac{1}{4}

E. All of the oil, gas and other minerals in and under the following described premises

McKenzie County, North Dakota
Township 154 North, Range 96 West
Section 26: SW\frac{1}{4}SE\frac{1}{4}
Section 35: SE\frac{1}{4}NW\frac{1}{4}, W\frac{1}{4}NE\frac{1}{4}, SE\frac{1}{4}NE\frac{1}{4}

F. All of the oil, gas and other minerals in and under that may be produced from the following described property, subject however, to prior assignments of oil and gas royalty totaling 9.75%, to-wit:

McKenzie County, North Dakota
Township 154 North, Range 96 West
Section 25: Lot 5 and accretions thereto
Section 26: SE\frac{1}{4}SE\frac{1}{4}, and Lot 7 and accretions thereto
Section 35: NE\frac{1}{4}NE\frac{1}{4}, N\frac{1}{2}SE\frac{1}{4}, N\frac{1}{2}SW\frac{1}{4}, SW\frac{1}{4}SW\frac{1}{4}
Section 34: W\frac{1}{4}SE\frac{1}{4}, SE\frac{1}{4}SE\frac{1}{4}, S\frac{1}{4}NE\frac{1}{4}
Section 27: SW\frac{1}{2}SE\frac{1}{2}

G. All of the oil and gas in and under that may be produced from the following described property, subject however to prior assignments of oil and gas royalty totaling 9.75%, to-wit:

Township 153 North, Range 96 West
Section 2: Lot 4
Section 3: Lots 1 and 2

H. An undivided 1/12th of the 1% royalty of all of the oil and gas in and under that may be produced from the following described lands, to-wit:

McKenzie County, North Dakota
Township 153 North, Range 96 West
Section 3: S\frac{1}{2}NW\frac{1}{4}, Lots 3 & 4
Section 4: Lots 1, 2, 3, 4, SNE\(^{1}\), W\(^{1}\)SE\(^{1}\), NE\(^{1}\)SW\(^{1}\) and W\(^{1}\)SE\(^{1}\)
Section 5: E\(^{1}\)SW\(^{1}\), S\(^{1}\), E\(^{1}\)SE\(^{1}\)
Section 7: S\(^{1}\)NI\(^{1}\), NE\(^{1}\)SE\(^{1}\)
Section 8: NE\(^{1}\)NE\(^{1}\), N\(^{1}\), N\(^{1}\)SW\(^{1}\)
Section 9: NW\(^{1}\)NE\(^{1}\), NW\(^{1}\)NW\(^{1}\)

Township 154 North, Range 36 West:
Section 28: Lots 9, 10, 11, 12
Section 29: Lots 13 & 14
Section 32: All
Section 33: All
Section 34: SW\(^{1}\)

1. 100% interest in the oil and gas in and under and that may be produced from
the following described property, subject however to prior assignments of oil
and gas royalty totaling 9.75%:
McKenzie County, North Dakota
Township 154 North, Range 36 West
Section 24: NE\(^{1}\)SE\(^{1}\)
Section 25: W\(^{1}\)NW\(^{1}\) and NE\(^{1}\)NW\(^{1}\)
Section 26: SW\(^{1}\)NW\(^{1}\)
Section 27: Lots 8 and SE\(^{1}\)SW\(^{1}\)

1. An undivided 1% royalty of all oil and gas saved and that may be produced
from the following described lands, to-wit:
McKenzie County, North Dakota
Township 154 North, Range 36 West
Section 24: NE\(^{1}\)
McKenzie County, North Dakota
Township 152 North, Range 35 West
Section 6: Lot 4

McKenzie County, North Dakota
Township 153 North, Range 35 West:
Section 19: Lots 3, 4, NE\(^{1}\)SW\(^{1}\)
Section 20: SE\(^{1}\)
Section 30: Lot 1

McKenzie County, North Dakota
Township 153 North, Range 36 West:
Section 24: NE\(^{1}\)

Recording Fee $11.00
Attachment 3
Corps Segment Map Y Survey

(or what Whitetail Wave LLC would argue—should be considered ground Zero Survey)
Attachment 4
Wenck Survey OHWM Delineation Map 6 of 18
Attachment 5
Bartlett & West Phase II Survey Plats
Parcel Y2250 (888.66 acres) was included as "sovereign land" in Task Order #2, however Y2250 was acquired by the COE from the State.

**LEGEND**

- Missouri Riverbed between OHWM's as determined in ND Task Order #2.
- Land above the OHWM as determined in ND Task Order #2.
Parcel 1
Whitetail's Mineral Tracts prior to OHWM delineation
(115.10 acres+)

Parcel 2
(46.08 acres +, as per Segment Y Survey Plat)

Parcel 1a
(Parcel 1, except Parcel 2)
(69.02 acres +)

Parcel 3
(8.96 acres +, as per Bartlett & West Phase II Survey)
Attachment 6

Response Letter, dated March 23, 2016 from Aden L. Seidlitz, Acting State Director of the United States Department of the Interior, Montana Bureau of Land Management to Mr. Lance D. Gaebe, Commissioner of the University and School Lands, ND Dept of Trust Lands and Mr. Todd Sands, State Engineer, ND State Water Commission
CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Mr. Lance D. Gaebe
Commissioner of University and School Lands
North Dakota Department of Trust Lands
P.O. Box 5523
Bismarck, ND 58506-5523

Mr. Todd Sando
State Engineer
North Dakota State Water Commission
900 East Boulevard Ave.
Bismarck, ND 58505-0850

Dear Messrs. Gaebe and Sando:

We are in receipt of your statement of reasons received on December 10, 2014, supporting the two letters of intent to protest the official filing of Supplemental Plats by the Branch of Cadastral Survey. The letters of intent to protest were received on August 6, 2014, from the North Dakota Department of Trust Lands and August 7, 2014, from the Office of the State Engineer (OSE).

In your statement of reasons, you assert two reasons why the Bureau of Land Management (BLM) should not officially file the Supplemental Plats, approved April 9, 2014, and May 8, 2014, representing the geographic limits of the Public Domain interests. Your reasons are:

1) The BLM’s Supplemental Plats should utilize the Ordinary High Water Mark (OHWM) survey initiated by North Dakota in 2009 that follows the OSE’s 2007 guidelines; and
2) The Army Corp of Engineer’s (COE) Acquisition Segment Maps (Segment Maps), upon which the Supplemental Plats are based, are not an accurate reflection of the OHWM.

The State of North Dakota’s (State) OHWM delineation, as depicted on Enclosure 1, claims approximately 1,140 acres of Public Domain1 subsurface estate and 896 acres of Public Domain surface estate on the Supplemental Plats to be State sovereign land. In addition, the State also claims approximately 2,637 acres of fee subsurface estate and 2,881 acres of COE-acquired surface estate as State sovereign land, which are not addressed on the Supplemental Plats.

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1 For clarification, Public Domain interests in the State of North Dakota refer to land interests (surface and subsurface) where title has never left the Federal Government.
Your protest points are focused on the location of the OHWM line, depicted on the Supplemental Plats, which is the boundary between upland ownership and State riverbed title under the Equal Footing Doctrine.

**Riverbed Title Under the Equal Footing Doctrine**

Your protest concerns riverbed title and not public trust issues. This distinction is important because it controls the source of law to be applied in defining the OHWM. A recent United States Supreme Court decision distinguishes the two in *PPL Montana, LLC v. Montana* 132 S. Ct. 1215, 1235 (2012):

> "Under accepted rules of federalism, the States retain residual power to determine the scope of the public trust over waters within their borders, while federal law determines riverbed title under the equal-footing doctrine."

Thus, federal law determines riverbed title under the equal footing doctrine. The following leading federal court cases provide the controlling definitions of the OHWM.

In *Howard v. Ingersoll*, 54 U.S. 381, ___ (1851), the United States Supreme Court's ruling focused on a line impressed upon the bank by the action of water as the primary indicator of the OHWM and marking the permanent bed of the river. The court also found that the bed of a river does not encompass lands outside of the banks that are subject to periodic overflow nor does it include those lands that are viable for agriculture or grazing:

> "It neither takes in overflowed land beyond the bank, nor includes swamps or low grounds liable to be overflowed, but reclaimable for meadows or agriculture, or which, being to low for reclamation, though not always covered with water, may be used for cattle to range upon, as natural or uninclosed pasture. 54 U.S. at 415-16."

The concurring opinions provide more clarification and established the importance of an examination of vegetation that separates the riverbed from upland, and help provide basis for subsequent federal court case definitions.

Approximately 50 years later, the Eighth Circuit reiterated *Howard v. Ingersoll* in slightly different wording:

> "The bed of the river is that soil so usually covered by water that it is wrested from vegetation . . . and does not extend to or include that upon which grasses, shrubs, and trees grow, though covered by the great annual rises."

*Harrison v. Fite*, 148 F. 781, 783 (8th Cir.1906).

A more recent federal district court case addressed the OHWM of a lake but lends guidance that transitional marshlands are not enough evidence for inclusion within the OHWM:

> "At most the evidence shows that the dike stands on property that has historically served as marshland for Lake Harney periodically absorbing the lake's high waters"
and periodically serving as productive agricultural land for its owners. This is not enough to infer that the dike stands below the ordinary high water mark the point at which the bed of the lake ends and the fast lands begin."

*United States v. Cameron*, 466 F. Supp. 1099, 1114 (M.D. Fla. 1978)

And, finally, *United States v. Claridge*, 416 F. 2d 933, 934 (9th Cir. 1969) references the definition in *Howard v. Ingersoll* and calls for a natural feature and further explains that the OHWM does not include the floodplain from bluff to bluff due to spring floods:

"The ordinary high water mark of a river is a natural physical characteristic placed upon the lands by the action of the river. It is placed there, as the name implies, from the ordinary flow of the river and does not extend to the peak flow or flood stage so as to include overflow on the flood plain, nor is it confined to the lowest stages of the river flow."

The BLM’s Manual of Surveying Instructions, 2009 (Manual) has interpreted these leading cases on OHWM and summarized them into a contemporary definition of the OHWM for the surveyor in section 3-164:

"For inland waters, the OHWM normally used is the line below which the water impresses on the soil by covering it for sufficient periods to deprive it of terrestrial vegetation, and the soil loses its value for agriculture, including the grazing of livestock."

The Manual provides guidance in section 3-167 on locating the OHWM by utilizing the vegetation examination:

"A small pocket of an aquatic type plant growing in low places not in the riverbed is also not an indicator of the OHWM and does not indicate that the OHWM should be moved toward upland to include that pocket of aquatics. It is the most water-ward location of the terrestrial species that is determinative."

Rivers and OHWMs have been moving on the earth’s surface for thousands of years and remnants of those movements are evidenced on virtually every aerial photo. However, we concern ourselves with the date on which rights were established, such as date of statehood and subsequent river movements for riverbed title under the Equal Footing Doctrine and entry dates for patents. The original surveys by the General Land Office classified upland of the Public Domain for patenting and created survey plats; generating the first representation of all of the rights within a township in relationship to one another. Since you are not challenging the validity of the original surveys, in this case we concern ourselves with the location of the OHWM prior to the artificial rising of the Missouri River to form Lake Sakakawea.²

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² Serving as background timeline information, the construction of Garrison Dam was authorized by the Flood Waters Control Act of 1946 and caused the artificial rising of the Missouri River to form Lake Sakakawea. Construction began in 1946 with reservoir filling initiated in December of 1953 and reaching minimum operating pool on August 7, 1955. [http://www.mwo.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/2034/Article/87634/garrison-project-statistics.aspx](http://www.mwo.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/2034/Article/87634/garrison-project-statistics.aspx)
To resolve your protest, we will address locating the line of ordinary high water, both legally and factually. It must be accepted that the OHWM along a river is an ambulatory boundary that migrates through the normal actions of accretion and erosion and has moved since rights were bounded by it. While we agree there will be some differences in location based on dates of aerial photography and dates of field work due to accretion and erosion, it appears that your OHWM guidelines do not comport with federal law and cannot be used to determine riverbed title under the Equal Footing Doctrine.

**Discussion of State Reason No. 1**

**A) OSE’s OHWM Delineation Guidelines of 2007**

The BLM’s Branch of Cadastral Survey has reviewed the OSE’s OHWM Delineation Guidelines of 2007 and finds it mostly in conformity with the federal definition except for defining grazing of livestock and certain agriculture as being below the OHWM, as outlined in the Final Technical Report for the OHWM Investigation for the Missouri River Under Lake Sakakawea which states:

“Areas below the OHWM may have vegetation suitable for grazing but wetland vegetation capable of being grazed is not an ‘ordinary agricultural crop.’”

Another complicated area included the low lying hayfields. For this study, the term “field” refers to hayed or moved areas, and does not imply that the area has been cultivated or seeded. Farming practices along the river during drier, low water periods often extended into the lower floodplain areas, closer to the water’s edge. These “fields” may be cut for hay, or cultivated for a short time, but rapid colonization of wetland species on these hay fields likely occurred when the wetter period and subsequent higher water levels returned.”

The grazing statement is in direct contradiction to the **Howard v. Ingersoll** reference of natural or uninclosed pasture and the **Manual** definition of OHWM. **United States v. Cameron** references marshland that periodically absorbs the high waters and periodically serves as productive agriculture which was directly tied to the grazing of livestock and was found not enough to infer the lands were below the OHWM.

The hay field statement is in direct contradiction to the **Howard v. Ingersoll** reference to lands liable to overflow but reclaimable for meadows or agriculture. It also contradicts **Harrison v. Fite** in that the bed does not extend to land which grasses grow although covered by rises in the water. The implication is that the land can ordinarily be utilized for agriculture, even though the remnants of water in low areas of the floodplain caused by rises in the river allow for pockets of aquatic vegetation to grow periodically, which is also addressed in the aforementioned cases.
Cultivation and seeding are not prerequisites for *productive agriculture*\(^3\) which would thereby exclude *natural or uninclosed*\(^4\) pasture suitable for grazing or natural grass haying. Specifically the upland extends towards the river to the lowest extent of upland vegetation and not the landward extent of aquatic vegetation.

These deviations from the Federal definition of OHWM allow the State’s delineation of OHWM, which is visually represented on Enclosure 2 hatched in blue and overlaid on the 1958 aerial photo, to impermissibly encompass upland with terrestrial vegetation, hay fields, and cultivated fields.

Likewise, the State’s OHWM delineation, depicted on Enclosure 3 hatched in blue and overlaid onto the 1952 aerial photo, spans from *bluff to bluff*\(^5\) taking in uplands temporarily overflowed by *fresheats*\(^6\) which is in direct contradiction to all Federal case law and moreover, the State’s delineation, which does not reference utilizing the 1952 aerial photo follows the extent of water on the 1952 photo very closely. But, this photo is a representation of one of the highest recorded flows, which is not characterized as “ordinary.” The date of the aerial photo, April 5, 1952, has been correlated to United States Geological Survey (USGS) flow data obtained at: [http://waterdata.usgs.gov/usa/nwis/inventory/?site_no=06330000&agency_cd=USGS](http://waterdata.usgs.gov/usa/nwis/inventory/?site_no=06330000&agency_cd=USGS). Thirty-seven years of flow data from 1928-1965 shows that only 21 days had higher flows than the aerial photo date (April 5, 1952), of which 4 days were also in 1952. Enclosure 4a is the mean daily discharges for 1952; 4b is the highest daily means from 1928-1965; 4c is a graph of the 37 year discharges.

Therefore, BLM believes the State’s OHWM delineation is skewed due to the aforementioned deviations from the Federal definition of OHWM and residual flood waters from an extraordinary event onto the floodplain. The State’s OHWM delineation depicts the riverbed to be three times the width of the General Land Office’s originally surveyed meanders. Originally surveyed meanders are typically landward of the actual OHWM, and while it is acknowledged that OHWMs move laterally, no evidence shows why the riverbed has widened, up to triple in size, to encompass lands classified as upland in the original survey.

The sheer width of the State’s OHWM delineation, as depicted on Enclosure 1, clearly shows that it ignores the natural physical characteristic\(^7\) of the OHWM which is a natural object\(^8\) and extends *beyond the banks*\(^6\) to encompass significant portions of the floodplain. Thus, BLM’s Supplemental Plats should not utilize North Dakota’s 2009 OHWM survey.

**B) Chain of Title**

At the meeting on July 22, 2014, in Bismarck, ND, Josh Alexander, BLM’s Acting Chief Cadastral Surveyor for public lands in North Dakota, specifically asked if the State’s OHWM delineation was to determine surface rights, subsurface rights, or both. The verbal response was...

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\(^3\) United States v. Cameron, 466 F. Supp. 1099 (M.D. Fla. 1978)
\(^4\) Howard v. Ingersoll, 54 U.S. 381 (1851)
\(^5\) United States v. Claridge, 416 F. 2d 933 (9th Cir.1969)
\(^6\) United States v. Harrell, 926 F.2d 1036 (11th Cir. 1991)
\(^7\) United States v. Claridge, 416 F. 2d 933 (9th Cir.1969)
\(^8\) Howard v. Ingersoll, 54 U.S. 381 (1851)
that it determined the boundary of State Sovereign land encompassing both surface and subsurface rights.

But, the State’s delineation did not consider previous conveyances, as evidenced by chain of title research. Enclosures 5a, 5b, and 5c are the State’s OHWM delineation, which is hatched in blue and overlaid onto the COE Segment maps, in which the State’s delineation encompasses:

1) 188.66 acre island, Y2250 (Enclosure 5a)
2) 228 acres within Y2289 (Enclosure 5b)
3) 71.07 acres within Z2382 (Enclosure 5c)

These parcels were conveyed to the United States by the State as upland (see Enclosure 6 for conveyance documents). The magnitude of acquisitions by the COE clearly shows the intent was to purchase displaced uplands. The chain of title clearly shows that the State agreeably conveyed upland and islands, which is now being depicted and claimed as riverbed. An island must exist above the OHWM to be considered an island; otherwise it is a part of the bed (sandbar). At the time of the conveyance, an OHWM determination was made to facilitate the conveyance of the island and the upland. These conveyances were for upland surface only. The State’s new OHWM delineation must omit these areas as they have previously been classified as upland, not below the OHWM, and are not part of surface Sovereign Lands of the State. Thus, BLM’s Supplemental Plats should not utilize North Dakota’s 2009 OHWM survey.

C) Sovereign Lands

In its protest, the State is utilizing its delineation as a basis for claim to sovereign land and to require mineral lease and royalty payments from oil and gas operators. However, prior to viewing the delineations at https://land.nd.gov/minerals/mineralapps/OHWM2/OHWM2Disclaimer.aspx, there is a caveat:

"The work completed under this contract is to delineate the ordinary high water mark (OHWM) and is not a final legal determination as to whether any specific property is "sovereign land.""

Thus, it is unclear how much weight to give to the State’s OHWM delineation even though the State’s Statement of Reasons iners that we should honor it wholly. Instead, BLM’s Supplemental Plats are without limitation and provide the better evidence of riverbed title.

For the foregoing reasons, the State’s first protest point is denied.

Discussion of State Reason No. 2

A) BLM Field Investigations Prior to Flooding

The COE Segment Maps were the basis for land title acquisition by the COE for those upland lands that would be affected by the artificial rising of the Missouri River to create Lake Sakakawea. The Segment Maps depict the Missouri River OHWM and are the most
comprehensive evidence of the Missouri River OHWM just prior to the formation of Lake Sakakawea.

To determine what lands were classified as public lands, the COE engaged BLM's Branch of Cadastral Engineering (now Branch of Cadastral Survey) to execute field investigations prior to flooding. BLM surveyors were guided by Special Instructions dated October 24, 1952 (Enclosure 7). Importantly, there is no evidence that the State of North Dakota raised concerns about the Special Instructions or subsequent acquisitions.

The Special Instructions stated the following regarding the lot or legal subdivision listed:

"Ascertain whether any or all of it is above mean high water at the present time

If it is found to be above water at present, determine whether any or all of it has been in existence above mean high water continuously since the original survey was made

Show what part of the tract has been in existence since the date of the original survey

If the land has been entirely washed away and has re-appeared, determine the date it was submerged and when it re-appeared

If accretion to a tract of public domain land has formed, show the extent of such accretion

If substantial accretion appears to have formed in front of riparian privately-owned lands prior to the date of entry, show the extent of such accretion and the date a substantial amount had formed in front of the original tract

Where changes have taken place in the river channel, determine whether the change was due to avulsive action, or to the slow and imperceptible process of reliction and accretion

To determine the above facts, you will study all plats, charts, maps, aerial photographs and records found that may have a bearing on the case at hand. You will determine the age of timber growing on the land and obtain such other information as is available including the interviewing of old settlers who may be familiar with the river changes at those places."

BLM officers were operating under the BLM's Manual of Surveying Instructions, 1947 (1947 Manual), and the term "mean high water" for inland waters carries the same determination principles and conformance to law as the OHWM, as evidenced by guidelines in the 1947 Manual.

The BLM conducted extensive field investigations to determine what lands existed above the OHWM, made a determination on river movement, its effect on land title, and compiled this information in an investigative report. These reports were utilized to determine public lands above the OHWM, addressing both accretion and erosion to public lands. Those determinations
were depicted on the Segment Maps. In other words, the COE Segment maps are based on BLM field work, analysis, and standard practices. See Enclosures 8, 9, and 10 for the progression from BLM field investigation report map (8) to Segment Map (9) to Supplemental Plat (10), all of which depict the same findings from the field investigations.

B) North Dakota State Lands Department (SLD)'s Previous OHWM Delineation

1) Land acquisition documents show that SLD participated in the COE survey process.

A conveyance document in Enclosure 6 infers that the SLD performed an OHWM determination prior to the conveyance. The last page of Enclosure 6 states:

"The above is based on Survey Report furnished by the State School Land Department."

The SLD Survey Report was requested by the BLM's Branch of Cadastral Survey. However, its whereabouts are unknown and remains unfurnished. But, based on the subsequent conveyance, the referenced SLD Survey Report likely made a determination that Y2250 was an island existing above the OHWM, thereby necessitating the need for purchase by the COE as uplands that would be displaced by the artificial rising of the Missouri River to create Lake Sakakawea.

Although the Final Technical Report for the OHWM Investigation for the Missouri River Under Lake Sakakawea states that the SLD was unaware of any previous OHWM determinations, we believe that the land acquisition documents establish that the SLD participated in the OHWM determinations upon which the COE segment maps are based.

2) Documents show that SLD participated in the condemnation process for uplands.

To further outline the SLD's involvement and conclude that the State was aware of upland acquisitions, we obtained correspondence documents (Enclosure 11) showing that SLD and COE deliberations led to a formal and friendly condemnation process, which was followed by the SLD and the COE.

Despite legislation being passed to convey State lands without mineral reservation, the condemnation process was instituted due to the reluctance of then SLD Commissioner, John O. Lyngstad. Mr. Lyngstad was reluctant to sell State lands and supported the condemnation process for fear of political repercussions of selling State land. Mr. Lyngstad relays his reluctance by predicting accusations from farmers that they would be willing to pay the State more money than was being offered by the Federal Government. It is certain that farmers would not be willing to pay for these uplands if they were not productive for agriculture indicating the lands existed as upland above the OHWM. The State's OHWM delineation incorrectly classifies these same uplands as riverbed.

Revisit Enclosure 6 showing the execution of this process whereby the COE sent appraisals for displaced state uplands asking for consideration by the Board of University and School Lands, execution by the Land Commissioner, and condemnation.
C) Appraisals

Full appraisals were conducted for acquisition of displaced uplands to justify and provide basis for the expenditure of appropriated funds. These appraisals quantify upland area and quantity the uses of the upland, including agricultural production, timber, brush, etc. While utilized for appraisal values, these quantifications provide significant documentation with regard to the acquired displaced uplands, depicted on the COE Segment maps, existing above the OHWM. See Enclosure 12, which is the same area as Enclosure 2 showing the State’s OHWM delineation encompassing brush and productive agriculture as identified by the land appraisal. The State’s delineation does not follow Federal case law or OHWM definitions with the inclusion of these uplands.

For the reasons outlined above, we reject the State’s assertion that the COE Segment Maps are not an accurate reflection of the OHWM. The OHWM was established by BLM-led field investigations using Special Instructions that were not disputed by the State. In fact, there is ample evidence showing that the SLD participated in the establishment of the OHWM determination. The second protest point is denied.

Conclusion

The COE Segment Maps are firmly grounded in guidance, methodology, and contemporaneous field investigations of the land prior to the effects of flooding. These Segment Maps are the most comprehensive evidence of the OHWM prior to the artificial rising to create Lake Sakakawea. The Segment Maps were the basis for millions of dollars of appropriated funds being spent to acquire displaced uplands and were generated with determinations from in-the-field investigations by BLM, and involvement from the BLM and ND SLD, and have gone uncontested for over 60 years.

Moreover, the BLM’s Branch of Cadastral Survey performed a quality check prior to incorporating them into the Supplemental Plats. The COE Segment Maps were overlaid onto aerial photography and evaluated for OHWM determination and riparian movement effects on land title. Miniscule differences were identified due to difference in dates of aerial photography compared to the dates of the field investigations and the constant movement of rivers. In these areas, deference was given to the Segment Maps due to the field-based reports and techniques and the fact that chain of land title was based upon them and were determined to have been executed in accordance with federal guidelines.

Based on the aforementioned analysis, the BLM finds the State’s OHWM delineation:

1) does not comply with the federal definition of the OHWM
2) does not honor chain of title or previous involvement with the COE
3) is an overreaching delineation that impairs:
   a) the mineral rights of private owners as vested from original patents from the Federal Government
   b) the Federal Government’s acquired rights in land, and
   c) the rights of all in the Public Domain interests in land.
Your protest to the official filing of plats of survey posted in the Federal Register on July 8, 2014, is hereby dismissed. The Supplemental Plats shall be officially filed in this office.

You have the right to appeal this decision to the Office of Hearings and Appeals, Office of the Secretary, U.S. Department of the Interior, Board of Land Appeals (Board), in accordance with the regulations contained in 43 CFR Part 4 and the enclosed Form 1842-1 (Enclosure 13). In taking an appeal, there must be strict compliance with the regulations. If you choose to appeal, a notice of appeal must be filed in this office within thirty (30) days of receipt of this letter for transmittal to the Board. If your notice of appeal does not include a statement of reasons, one must be filed with the Board within thirty (30) days after the notice of appeal was filed. A copy of your notice of appeal and any statement of reasons, written arguments, or briefs, must also be served upon the Office of the Solicitor, Rocky Mountain Region, 2021 Fourth Avenue N., Suite 112, Billings MT 59101. Service must be accomplished within fifteen (15) days after filing in order to be in compliance with appeal regulations.

As provided by 43 CFR Part 4, you have the right to petition the Office of Hearings and Appeals to stay implementation of the decision; however, you must show standing and present reasons for requesting a stay of the decision that address your interests and the manner by which they would be harmed. A petition for stay of a decision pending appeal shall show sufficient justification based on the following standards: (1) The relative harm to the parties if the stay is granted or denied; (2) The likelihood of the appellant’s success on the merits; (3) The likelihood of immediate and irreparable harm if the stay is not granted; and (4) Whether the public interest favors granting the stay. Should you choose to file one, your stay request must accompany your notice of appeal. A notice of appeal with petition for stay must be served upon the Board, Regional Solicitor, and adverse parties at the same time such documents are served on the deciding official at this office. The person signing the notice of appeal has the responsibility of proving eligibility to represent the appellant before the Board under its regulations at 43 CFR 1.3.

Sincerely,

[Signature]

Aden L. Seidtitz
Acting State Director

13 Enclosures
1- Overall comparison of OHWM delineations in protested area
2- OHWM comparison overlaid onto 1958 aerial photography
3- OHWM comparison overlaid onto 1952 flood aerial photography
4- USGS flow data
5- State OHWM delineation overlaid onto Segment Maps
6- State land conveyance correspondence and execution documents
7- BLM Special Instructions
8- BLM field investigation report map
9- Portion of Segment Map
10- Portion of BLM Supplemental Plat
11- COE and S.D correspondence
12- Land appraisal map
13- Form 1842-1

cc: Karan Dunnigan
Office of the Solicitor
Billings, MT
Attachment 7

Various copies of State correspondence regarding States claim to island north of Column 1 Tracts

ALSO

a copy of recorded Certificate as to Title of Island, wherein State claims ownership.
Mr. John Lyngstad  
State Land Commissioner  
Minnarck, North Dakota  

Dear Mr. Lyngstad:  

Tract map tracings provided by your office covering islands in the Missouri River are herewith returned and in accordance with your verbal suggestion two copies each of multilith prints from the tracings are also inclosed for your convenience.

Attention will be given by this office to the inclusion of these islands for acquisition by the Government if they are found to be within the proposed Garrison Reservoir.

FOR THE DISTRICT ENGINEER:

Very truly yours,

Roy Drey  
Chief, Real Estate Division

5 Inc. (in trip)  
Tract Maps

ENCLOSURE 6

Mr. John O. Lyngstad  
State Land Commissioner  
Bismarck, North Dakota

Dear Mr. Lyngstad:

Appraisals have been completed on additional lands, reputedly owned by the State of North Dakota, needed for the Garrison Reservoir. Pertinent information concerning them is as follows:

<table>
<thead>
<tr>
<th>Tract No.</th>
<th>Acres</th>
<th>Appraised Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>W-2050</td>
<td>1111.15</td>
<td>$13,000.00</td>
</tr>
<tr>
<td>X-2130</td>
<td>521.60</td>
<td>3,000.00</td>
</tr>
<tr>
<td>Y-2250</td>
<td>183.56</td>
<td>950.00</td>
</tr>
<tr>
<td>Y-2289</td>
<td>355.24</td>
<td>9,500.00</td>
</tr>
<tr>
<td>Z-2313</td>
<td>120.00</td>
<td>1,200.00</td>
</tr>
<tr>
<td>Z-2381</td>
<td>153.64</td>
<td>2,600.00</td>
</tr>
<tr>
<td>Z-2382</td>
<td>320.00</td>
<td>3,050.00</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td><strong>3,270.49</strong></td>
<td><strong>$33,300.00</strong></td>
</tr>
</tbody>
</table>

My office may now acquire title to land for the Garrison Reservoir subject to reservation of oil and gas rights by the owners. The only restrictions that are imposed in the reservation are the subordination of the oil and gas rights to the right of the United States to flood the land for the Garrison Reservoir, compliance with Federal and State laws on water pollution, and approval by the District Engineer, Garrison District, of the type of structures and appurtenances to assure their being constructed of a material that would not create floatable debris.

An option to purchase the fee simple title to the above-listed tracts, subject to the oil and gas reservation, is inclosed in quintuple for your consideration. It will be appreciated if you will give the option your early consideration and sign and return four executed copies to my office. As previously requested by you, the option will be used as a stipulation in Court and title will be passed by judicial order rather than by deed.

Very truly yours,

3 Inds
1. Option (in quint)
2. Tract map

R. J. B. PAGE  
Lt. Col., Corps of Engineers  
District Engineer
January 12, 1952

Lt. Colonel R. J. B. Page  
Corps of Engineers  
Box 300  
Ft. Lincoln  
Bismarck, North Dakota

Dear Colonel Page:

We acknowledge receipt of your letter of January 11 enclosing options to seven tracts of land which you desire to secure in connection with the Garrison Reservoir.

The options will be presented to the Board of University and School Lands at its next regular meeting which will be held on or about January 31.

Yours very truly,

[Signature]

[Name]
Land Commissioner

[JUL:eg]

BUY "DAKOTA MAID" FLOUR
1 February 1952

Lt. Col. R. J. B. Page
District Engineer, Garrison District
Corps of Engineers
Attn: Real Estate Division
Riverdale, North Dakota

Re: MROPC (Tracts Nos. W-2050,
X-2180, Y-2250, Y-2260,
2-2313, 2-2331, 2-2382)

Dear Sir:

We are returning four copies of the options for the purchase of land sent to us in your letters of January 11 and January 24, which have been approved by the Board of University and School Lands, and executed by the Land Commissioner.

Trusting you will find the same satisfactory, I am,

Yours very truly,

[Signature]

JOHN O. LYNGSTAD
Land Commissioner

JOL/cso

Enclosures (4)
IN THE UNITED STATES DISTRICT COURT
CO. THE DISTRICT OF NORTH DAKOTA
NORTHWEST DIVISION

UNITED STATES OF AMERICA, )

Plaintiff, )

vs. )

4,131.66 Acres of Land, More or )
Less, in Mountains, McKenzie )
and Williams Counties, North Dakota; )
State of North Dakota, et al )

Defendants, )

TO THE HONORABLE,
THE UNITED STATES DISTRICT COURT:

1. Frank Pace, Jr., Secretary of the Army of

The United States do hereby declare th:

1. (a) The lands hereinafter described are taken under and in accordance
with the Act of Congress approved February 26, 1931 (46 Stat. 1231, 40 U. S. C., Sec. 258a) and acts supplementary and amendatory thereof, and under the
94, 33 U. S. C. Sec. 591); March 1, 1917 (39 Stat. 945, 43 U. S. C., Sec. 706);
June 22, 1946, (Public Law 934, 79th Congress, Second Session), also under
the Civil Functions Appropriation Act, 1952, approved October 24, 1951 (Public
Law 208, 82nd Congress), which act appropriated funds for such purposes.

(b) The public uses for which lands are taken are as follows: The
said lands are necessary adequately to provide for Flood Control in the
Missouri River Basin and for uses incident thereto. The said lands have been
selected by me for acquisition by the United States for use in connection with
the construction and establishment of the "Riparian Dam and Reservoir, North
Dakota," and for such other uses as may be authorized by Congress or by Executive
Order.

2. Detailed descriptions of the lands being taken are set forth in
Schedule "A" attached hereto, and are incorporated hereof, and are descriptions of
the same lands described in the complaint in the above entitled cause.

3. The estate taken for said public uses is the fee simple title thereto,
subject to existing easements for public roads and highways, public utilities,
railroads and pipeline and reserves, however, to the owner of the land or
the owner of any interest therein, including third party lessees, their heirs,
successors and assigns, all oil and gas rights therein, on or under said
described lands, with full rights of ingress and egress for exploration, development, production and removal of oil and gas, upon condition that the oil and gas rights so reserved are subordinated to the right of the United States to flood and submerge the said lands permanently or in part entirely in the construction operation and maintenance of the Garrison Dam and Reservoir, and that any exploration or development of such rights shall be subject to federal or state laws with respect to pollution of waters of the reservoir, provided further that the District Engineer, Corps of Engineers, Garrison District, or his duly authorized representative shall approve in furtherance of the exploration and/or development of such reserved interests, the type of any structure and/or appurtenances thereto now existing or to be erected or constructed in connection with such exploration and/or development, said structure and/or appurtenances thereto not to be of a material determined to create floatable debris.

4. Plans showing the lands taken are annexed hereto as Schedule "A" and made a part hereof.

1. The sum estimated by us as just compensation for said lands, with all buildings and improvements thereon, and all appurtenances thereto, except where specifically reserved to the owners, and including any and all interests hereby taken in said lands, is set forth in Schedule "A" herein, which sum I cause to be deposited herein with the Registry or Land Court for the use and benefit of the persons entitled thereto. I am of the opinion that the ultimate sale for said lands probably will be within any limits prescribed by law as the price to be paid therefor.

IN WITNESS WHEREOF, the plaintiff, by its Secretary of the Army thereto authorized, has caused this declaration to be signed in its name by said

Frank Pace, Jr., Secretary of the Army, this the day of July, A.D. 1952, in the City of Washington, District of Columbia.

(Signed) Frank Pace, Jr., Secretary of the Army
The land which is the subject matter of this declaration of taking aggreg-ates 4,183.66 acres, more or less, situated in the counties of Bountrall, McKenzie and Williams, State of North Dakota. Descriptions of the land are as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parcel &quot;A&quot; - An island lying in the Missouri River consisting of parts of:</td>
<td>1,056.50</td>
</tr>
<tr>
<td>- Lots 3, 4, and 5, Southwest quarter of the Southeast quarter (SW¼S½),</td>
<td></td>
</tr>
<tr>
<td>- Southwest quarter (SW½), of Section 11, Lot 8, West half of the Southeast</td>
<td></td>
</tr>
<tr>
<td>- Quarter (SW½) of Section 11, All in Township 153 North, Range 94 West</td>
<td></td>
</tr>
<tr>
<td>- Said islands containing 121.30 acres, more or less, and the plats thereof</td>
<td></td>
</tr>
<tr>
<td>- being on file in McKenzie County, North Dakota.</td>
<td></td>
</tr>
</tbody>
</table>

**Estimated Compensation:** $625.00

**Name of Purported Owner:**
State of North Dakota

**Address of Purported Owner:**
Bismarck, North Dakota

---

**Schedule A**

<table>
<thead>
<tr>
<th>Description</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parcel &quot;B&quot; - A small island lying in the Missouri River consisting of part of</td>
<td></td>
</tr>
<tr>
<td>- the North half of the Southwest quarter (SW½) of Section 11, All in</td>
<td></td>
</tr>
<tr>
<td>- Township 153 North, Range 94 West, Said islands containing 121.30 acres,</td>
<td></td>
</tr>
<tr>
<td>- more or less, and the plats thereof being on file in McKenzie County,</td>
<td></td>
</tr>
<tr>
<td>- North Dakota.</td>
<td></td>
</tr>
</tbody>
</table>

**Estimated Compensation:** $1,030.00

**Name of Purported Owner:**
State of North Dakota

**Address of Purported Owner:**
Bismarck, North Dakota

---

**Schedule B**

<table>
<thead>
<tr>
<th>Description</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parcel &quot;C&quot; - An island lying in the Missouri River consisting of parts of:</td>
<td></td>
</tr>
<tr>
<td>- Lots 3, 4, and 5, Southwest quarter of the Southeast quarter (SW¼S½),</td>
<td></td>
</tr>
<tr>
<td>- Southwest quarter (SW½), of Section 11, Lot 8, West half of the Southeast</td>
<td></td>
</tr>
<tr>
<td>- Quarter (SW½) of Section 11, All in Township 153 North, Range 94 West</td>
<td></td>
</tr>
<tr>
<td>- Said islands containing 121.30 acres, more or less, and the plats thereof</td>
<td></td>
</tr>
<tr>
<td>- being on file in McKenzie County, North Dakota.</td>
<td></td>
</tr>
</tbody>
</table>

**Estimated Compensation:** $13,000.00

**Name of Purported Owner:**
State of North Dakota

**Address of Purported Owner:**
Bismarck, North Dakota

---

**Schedule C**

<table>
<thead>
<tr>
<th>Description</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parcel &quot;D&quot; - An island lying in the Missouri River consisting of parts of:</td>
<td></td>
</tr>
<tr>
<td>- Lots 3, 4, and 5, Southwest quarter of the Southeast quarter (SW¼S½),</td>
<td></td>
</tr>
<tr>
<td>- Southwest quarter (SW½), of Section 11, Lot 8, West half of the Southeast</td>
<td></td>
</tr>
<tr>
<td>- Quarter (SW½) of Section 11, All in Township 153 North, Range 94 West</td>
<td></td>
</tr>
<tr>
<td>- Said islands containing 121.30 acres, more or less, and the plats thereof</td>
<td></td>
</tr>
<tr>
<td>- being on file in McKenzie County, North Dakota.</td>
<td></td>
</tr>
</tbody>
</table>

**Estimated Compensation:** $13,000.00

**Name of Purported Owner:**
State of North Dakota

**Address of Purported Owner:**
Bismarck, North Dakota

---
An island lying in the Missouri River consisting of parts of: 
Southeast quarter (SE\textsuperscript{1}) of Section 25 in Township 154 North, Range 95 West, Lot 5 of Section 28, Southwest quarter (SW\textsuperscript{1}) of Section 27, Northeast quarter (NE\textsuperscript{1}) of Section 26, Northwest quarter (NW\textsuperscript{1}) of Section 30, and West half of the Southwest quarter (WSW\textsuperscript{1}) of Section 28, in Township 154 North, Range 95 West, situate in Williams County, North Dakota, containing 756.80 acres, more or less, and the plat thereof being on file in Williams County, North Dakota.

<table>
<thead>
<tr>
<th>Name of Purported Owner:</th>
<th>State of North Dakota</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address of Purported Owner:</td>
<td>Bismarck, North Dakota</td>
</tr>
<tr>
<td>Estimated Compensation:</td>
<td>$33,000.00</td>
</tr>
</tbody>
</table>

An island lying in the Missouri River consisting of parts of: Lots 6, 7, and 8, Northeast quarter of the Southeast quarter (SESE\textsuperscript{1}), Southwest quarter of the Southwest quarter (SWSW\textsuperscript{1}), East half of the Northeast quarter (NE\textsuperscript{1}), and West half of the Southeast quarter (SE\textsuperscript{1}) of Section 31, in Township 154 North, Range 96 West of the 5th P.M., situate in McKenzie County, North Dakota, containing 188.60 acres, more or less, and the plat thereof being on file in McKenzie County, North Dakota.

<table>
<thead>
<tr>
<th>Name of Purported Owner:</th>
<th>State of North Dakota</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address of Purported Owner:</td>
<td>Bismarck, North Dakota</td>
</tr>
<tr>
<td>Estimated Compensation:</td>
<td>$105,000.00</td>
</tr>
</tbody>
</table>

An island lying in the Missouri River consisting of parts of: Lots 1, 2 and 3, West half of the Northeast quarter (NW\textsuperscript{1}), West half of the Southwest quarter (SW\textsuperscript{1}), South half of the Southeast quarter (SE\textsuperscript{1}), and North half of the Southeast quarter (SE\textsuperscript{1}) of Section 32, in Township 154 North, Range 97 West of the 5th P.M., situate in Williams County, North Dakota, containing 855.56 acres, more or less.

<table>
<thead>
<tr>
<th>Name of Purported Owner:</th>
<th>State of North Dakota</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address of Purported Owner:</td>
<td>Bismarck, North Dakota</td>
</tr>
<tr>
<td>Estimated Compensation:</td>
<td>$22,500.00</td>
</tr>
</tbody>
</table>

Southwest quarter of the Southeast quarter (SE\textsuperscript{1}), East half of the Northeast quarter (NE\textsuperscript{1}), and West half of the Northwest quarter (NW\textsuperscript{1}) of Section 29, in Township 154 North, Range 97 West of the 5th P.M., situate in Williams County, North Dakota, containing 120.00 acres, more or less.

<table>
<thead>
<tr>
<th>Name of Purported Owner:</th>
<th>State of North Dakota</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address of Purported Owner:</td>
<td>Bismarck, North Dakota</td>
</tr>
<tr>
<td>Estimated Compensation:</td>
<td>$1,200.00</td>
</tr>
</tbody>
</table>

That portion of an island lying in the Missouri River consisting of parts of: Lots 5, 4 and 3, North half of the Southeast quarter (SE\textsuperscript{1}), Southwest quarter of the Northeast quarter (SW\textsuperscript{1}), and Northwest quarter of the Northwest quarter (NW\textsuperscript{1}) of Section 28, in Township 154 North, Range 97 West of the 5th P.M., situate in Williams County, North Dakota, containing 76.80 acres, more or less, and the plat thereof being on file in Williams County, North Dakota.

<table>
<thead>
<tr>
<th>Name of Purported Owner:</th>
<th>State of North Dakota</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address of Purported Owner:</td>
<td>Bismarck, North Dakota</td>
</tr>
<tr>
<td>Estimated Compensation:</td>
<td>$50.00</td>
</tr>
</tbody>
</table>
TRACT NO. Z-2324

That portion of an island lying in the Missouri River consisting of parts of: West half of the Northeast quarter (SE¼NW¼), East half of the Northwest quarter (SEQNW¼), Southwest quarter of the Northwest quarter (SEQNW¼), North half of the Southwest quarter (SEQNW¼), Southwest quarter of the Southwest quarter (SEQNW¼) of Section 36 in Township 154 North, Range 98 West of the 5th P.M., Said island containing 31.20 acres, more or less, and the plat thereof being on file in Williams County, North Dakota.

Name of Purported Owner: State of North Dakota
Address of Purported Owner: Bismarck, North Dakota
Estimated Compensation: $500.00

TRACT NO. Z-2331

Lots 3, 4 and 6, the Southeast quarter of the Southeast quarter (SEQSE¼) and those portions of the Northeast quarter of the Southeast quarter (SEQNE¼) and of the Southwest quarter of the Southeast quarter (SEQSE¼) lying south and east of the Missouri River, all in Section 36, Township 154 North, Range 98 West of the 5th P.M., situate in McKenzie County, North Dakota, containing 153.64 acres, more or less.

Name of Purported Owner: State of North Dakota
Address of Purported Owner: Bismarck, North Dakota
Estimated Compensation: $6,000.00

TRACT NO. Z-2341

Parcel "A" - That portion of the South half of the Northwest quarter (SW¼NW¼) of Section 27 lying South and East of the Missouri River.
Parcel "B" - That portion of the Northwest quarter of the Northeast quarter (NE¼NE¼) of Section 27 lying South and East of the Missouri River. All in Township 154 North, Range 97 West of the 5th P.M., situate in McKenzie County, North Dakota, containing 33.39 acres, more or less.

Name of Purported Owners: O. P. Warren and Thomas "C" Leach
Address of Purported Owners: 619 South Warren, Tulsa, Oklahoma
Estimated Compensation: $300.00

TRACT NO. Z-2342

Northwest quarter (NE¼), Northeast quarter (NE¼) of Section 36 in Township 154 North, Range 97 West of the 5th P.M., situate in McKenzie County, North Dakota, containing 350.00 acres, more or less.

Name of Purported Owner: State of North Dakota
Address of Purported Owner: Bismarck, North Dakota
Estimated Compensation: $3,200.00

TRACT NO. Z-2403

West half of the Southwest quarter (SW¼), Lots 5 and 6 of Section 2 in Township 153 North, Range 96 West of the 5th P.M., plus accretions, situate in Williams County, North Dakota, containing 176.60 acres, more or less.

Name of Purported Owner: Clinton French
Address of Purported Owner: Spring, North Dakota
Estimated Compensation: $18,000.00
TRACT NO. AA-2417

Southeast quarter of the Southeast quarter (SE\(\text{SE}_2\)) of Section 19, South half of the Southwest quarter (\(\text{SW}_1\)) of Section 20 in Township 153 North, Range 98 West of the 5th P.
\(\text{K.},\) situate in Williams County, North Dakota, containing 160.00 acres, more or less.

Name of Purported Owner: J. G. Lundstrom and Frank C. Lundstrom
Address of Purported Owners: Williston, North Dakota
Estimated Compensation: $6,300.00

TRACT NO. AA-2418

Northwest quarter (NW\(\text{Q}\)), Northwest quarter of the Southwest quarter (NW\(\text{Q},\text{SW}_1\)) of Section 29 in Township 153 North, Range 98 West of the 5th P.
\(\text{K.},\) situate in Williams County, North Dakota, containing 200.00 acres, more or less.

Name of Purported Owner: Asa P. Scroock
Address of Purported Owner: Williston, North Dakota
Estimated Compensation: $10,600.00

The gross sum estimated to be just compensation for the lands hereby taken is $62,575.00.
An island lying in the Missouri River consisting of parts of: Lot 8, 7 and 6, Northeast quarter of the Southwest quarter (NE\(^2\)SW\(^2\)), Southwest quarter of the Southwest quarter (SW\(^2\)SW\(^2\)), East half of the Southwest quarter (SE\(^2\)SW\(^2\)) of Section 27, Lots 8, 7 and 6, North half of the Southeast quarter (NE\(^2\)SE\(^2\)), Southwest quarter of the Southeast quarter (SW\(^2\)SE\(^2\)), North half of the Southwest quarter (NE\(^2\)SW\(^2\)) of Section 28, All in Township 164 North, Range 90 West of the 15th P.M. The above is based on Survey report furnished by the State Survey Department.

I certify that this is an accurate map of Tract X-2260 based on field notes, Rode & Aerial Survey (1949), which shows this tract to contain 183.86 acres, more or less.

Name: Mary Jackson

Date: 24 August 1961

This indicates whether map is based on General Land Office records, aerial survey, deed description or actual survey.
MAP SHOWING Area of an Island in the Missouri River lying in Sections 27 and 28 in Township 16 North and Range 66 West of P.M. in McKenzie County, North Dakota.

Garrison Dam - Reservoir Area

<table>
<thead>
<tr>
<th>Section</th>
<th>Township</th>
<th>Range</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>NE 1/4</td>
<td>27</td>
<td>116</td>
<td>9.66</td>
</tr>
<tr>
<td>Lot 6</td>
<td>26</td>
<td>116</td>
<td>15.52</td>
</tr>
<tr>
<td>NE 1/4</td>
<td>27</td>
<td>116</td>
<td>0.12</td>
</tr>
<tr>
<td>Lot 7</td>
<td>27</td>
<td>116</td>
<td>15.62</td>
</tr>
<tr>
<td>NE 1/4</td>
<td>27</td>
<td>116</td>
<td>16.52</td>
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<tr>
<td>Lot 8</td>
<td>27</td>
<td>116</td>
<td>17.57</td>
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<tr>
<td>NE 1/4</td>
<td>27</td>
<td>116</td>
<td>16.16</td>
</tr>
<tr>
<td>Lot 9</td>
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<td>116</td>
<td>1.37</td>
</tr>
<tr>
<td>NE 1/4</td>
<td>28</td>
<td>116</td>
<td>13.11</td>
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<tr>
<td>Lot 10</td>
<td>28</td>
<td>116</td>
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<td>28</td>
<td>116</td>
<td>7.19</td>
</tr>
<tr>
<td>Lot 6</td>
<td>28</td>
<td>116</td>
<td>2.33</td>
</tr>
<tr>
<td>NE 1/4</td>
<td>28</td>
<td>116</td>
<td>11.20</td>
</tr>
<tr>
<td>N 1/4</td>
<td>28</td>
<td>116</td>
<td>7.19</td>
</tr>
</tbody>
</table>

Trust to contain 135.56 Acres More or Less.

The above is based on General Land Office records and aerial survey made in 1945.

Certified Correct
L. S. Ekstrand
County Engineer, McKenzie County, North Dakota

CERTIFICATE AS TO TITLE OF ISLAND
LYING IN MISSOURI RIVER

State of North Dakota
County of Burleigh

I, the undersigned, John O. Lyngstad, the duly appointed, qualified and acting Commissioner of University and School Lands of the State of North Dakota, hereby certify that the Island lying in the Missouri River, consisting of a part of Sections 27 and 28 in Township 16 North, of Range 66 West, and of the area of approximately 135.56 acres, and shown on the annexed plat, certified by L. S. Ekstrand, County Surveyor of McKenzie County, North Dakota, in July, 1951, with the accompanying data as to the area of said Island, is the property of the State of North Dakota and a part of the permanent school fund of said State by virtue of the law as stated in the case of State vs. Loy, 7 N. D. 182, 20 NW 2d 668, and Section 14 of the North Dakota Revised Code of 1945.

Dated the 16th day of August, 1951.

John O. Lyngstad
Commissioner of University and School Lands of the State of North Dakota.

Filed for record on the 16th day of Aug., A. D. 1951 at 3:00 p.m. at P. M. and was recorded in Book 32 of Deeds on Page 131.

R. E. Raddatz, Register of Deeds.
Attachment 8

Partial Copy of Wenck Survey Power Points
PROJECT SCOPE AND PURPOSE

- OHWM analysis of historic Missouri River bed under what is now Lake Sakakawea.
- Initiated by State Legislation for reviewing the delineation of state-owned land.
  - Presumptive determination is the US Army Corps of Engineers (USACE) survey.
  
  **Goal** – Determine if clear and convincing evidence is present that the USACE survey does not accurately represent the OHWM of the historic Missouri riverbed per state law.
OHWM DEFINITION
Based on State case law:
The OHWM is the point at which the presence of action of the water is so continuous as to destroy the value of the land for agricultural purposes, including hay lands.

DATA COMPILATION
- State provided data – digital copies of aerial photography, USACE survey, and topography.
- USACE – historical records (appraisal documents) at Riverdale office, cross sections and details from Omaha office.
- USGS – flow records.
- Research case law.
LEGAL RESEARCH – State Case Law

- Existing law focuses on delineating the OHWM of current waterbodies.
- Aerial photographs can provide evidence of the change in land characteristic.
- ACCRETIONS: to be sovereign, accretions must be from natural causes and on the bank of the river above the OHWM.
- Lack of cropping history or hay harvest that is more than intermittent frequency.
- Soil types or classifications that are unusable for any productive purpose.
- Vertical changes in elevation coupled with a change from wetland to terrestrial vegetation.

LEGAL RESEARCH
CLEAR & CONVINCING STANDARD

- 61-33.1-03(1) directs that the presumed OHWM is the Army Corps survey completed for surface rights acquisition and supplemental plats created by the branch of cadastral survey of the BLM.
- 61-33.1-03(3) – the review must determine whether clear and convincing evidence establishes that a portion of the Corps survey does not reasonably reflect the OHWM of the historical Missouri riverbed channel under state law.
LEGAL RESEARCH
CLEAR & CONVINCING STANDARD (continued)

- Clear & convincing evidence – the evidence must be such that the trier of fact is reasonably satisfied with the facts the evidence tends to prove as to be led to a firm belief or conviction. Zundel v. Zundel, 278 N.W.2d 123, 130 (N.D. 1979).
- The "clear & convincing evidence" requires less evidence than that required to meet the standard of "beyond a reasonable doubt." Id.

DATA ANALYSIS

- Analyze Corps survey data with river flow data, hydraulic model, geo-referenced aerial photography, topography, and identify discrepancies.
- Document areas where clear and convincing evidence exists based on OHWM definition and legal interpretation.
DATA PROCESSING

- Geo-referencing aerial photography.
- Geo-referencing improvements of the USACE survey.
- Modeling river elevations for frequent flood events (USGS flow data and USACE cross sections).

DELINEATION METHODOLOGY

- Topographic information with flow levels from modeling.
- Aerial photo interpretation.
- Appraisal documents.
OVERALL RESULTS
(from River Mile 1482 to 1553.5).

<table>
<thead>
<tr>
<th>Description</th>
<th>Acres</th>
</tr>
</thead>
<tbody>
<tr>
<td>USACE OHWM</td>
<td>16,687</td>
</tr>
<tr>
<td>Project OHWM</td>
<td>27,089</td>
</tr>
<tr>
<td>Total increase in OHWM</td>
<td>10,402</td>
</tr>
<tr>
<td>Total increase in OHWM</td>
<td>162%</td>
</tr>
</tbody>
</table>
TO: ND Department of Mineral Resources

Although the Wenck Survey appears to have utilized more resources that provided better data than the earlier survey, we believe mineral owners are still losing more minerals than necessary.

My cousin visited the Corps office in Riverdale, North Dakota, but was not able to find a "final" appraisal regarding the purchase of land from my family for the Garrison Diversion Project of which my family retained the mineral interests under. Currently, a portion of my family’s minerals interests fall under the mineral dispute due to the ordinary high water mark.

I find it disheartening that due to the oil activity over the past few years, the State decided that it needs to determine the high water mark now, after the river bottoms have been flooded for 50+ years due to the Garrison Diversion Project. The high water mark should have been determined at the time the Corps did its original survey so that any discrepancies could have been visually resolved at that time, along with input from the then landowner. I am of the opinion that the Corps original survey should be considered to be the ordinary high water mark survey.

Attached in PDF format are letters from four of my family members. These letters are firsthand accounts of how my father used the river bottom land for his career of ranching and that there was not flooding issues that disrupted my father’s yearly ranching operation on the bottom lands.

Thank you for allowing written comments, as well as oral testimony, on this matter.

LaRae A. Thomas

(Minerals in dispute located in Truax Township, Williams County, ND.)
DATE: June 18, 2018

TO: Department of Mineral Resources – ND Industrial Commission

FROM: Donna R. Sneva – eye witness testimony

In discussion with my family, I am in disagreement with the Wenck Survey covering lands referred to as The Bottom Land, in Truax Township, Williams County, North Dakota, specifically Map 9 of the Wenck Survey.

My father had an alfalfa field located in Section 23, Township 153 North, Range 98 West. The south end of this field had a cut bank which was adjacent to the river. This bank was approximately ten feet or more and the field did not flood.

My siblings and I walked the trees which consisted of cotton wood trees, willow trees, and brush for the hunters in our family, wherein you would come across several clearings of lush grass throughout.

I have no recollection from my childhood of The Bottom Land ever flooding, except in 1961 due to the Garrison Diversion Project.

Our father utilized The Bottom Land every single year until the flooding for the Garrison Diversion Project for farming, haying, and grazing. The Wenck Survey for The Bottom Land contradicts what actually happened. The Bottom Land was productive every year and was the main source of my father’s ranching operation.

I, as well as my family, disagree with the Wenck Survey Table 2a as it pertains to the following:

153N098W14NENE
153N098W22NENE
153N098W23SENW
153N098W23SWNE
153N098W23SWNW

I would ask that the Wenck Survey be reexamined as their survey lists lands as “flooded land”, however, that did not occur during my father’s use of The Bottom Land prior to the Garrison Diversion Project.

Donna R. Sneva
1202 – 1st Avenue East
Williston, ND 58801
DATE: June 19, 2018

TO: Department of Mineral Resources – ND Industrial Commission

FROM: Virginia D. Rindahl – eye witness testimony

I am in disagreement with the Wenck Survey covering lands referred to as The Bottom Land, in Truax Township, Williams County, North Dakota, specifically Map 9 of the Wenck Survey. I was raised in this area along with my siblings and can attest first hand that The Bottom Land was the main source of my dad’s ranching operation. The Bottom Land was productive every single year up until the flooding for the Garrison Diversion Project. My dad, Jay V. Thomas, hayed an alfalfa field located in the Section 22 and 23, Township 153 North, Range 98 West. The field went to the river’s edge where there was a ledge of approximately 10 feet or more of a drop down to the river. During my years growing up, this land was always utilized.

My dad had grain fields which were farmed every year. There were hay meadows adjacent to the willows, which were cut every year for cow feed.

After all the crops were in and the hay put up, the cattle grazed all the land out to the river’s edge up and down all the accretion land.

The Wenck Survey is suggesting the high water mark represented in blue on Map 9 contains more acreage than the original Corps survey represented by the black line. This difference per the Wenck Survey is 121.5 acres. These acres were useable every year until the Garrison Diversion Project flooding started. What allows this large variation from the original Corps survey?

The Wenck Survey is also suggesting that the high water mark is different from the original Corps survey by 6.2 acres as stated in “Table 2a” as 153N098W22NENE with a net change of 6.8 acres. This is land was where our father’s alfalfa field was located and at the south end of the field there was a high bank.

My siblings and I question why this large variation from the original Corps survey? I can personally attest, as well as my sisters, to the fact that this all of this land was useable as my dad utilized it every year of his ranching career up until the Garrison Diversion Project flooding.

Virginia D. Rindahl
24444 Longhorn Trail
Ramah, CO 80832
DATE: June 19, 2018

TO: Department of Mineral Resources – ND Industrial Commission

FROM: Carol Kay Moen – eye witness testimony

I have had some discussions with my family members regarding the recent Wenck High Water Mark Survey. In review of certain items in the Wenck Survey, I do not understand why on Map 9 of the Wenck Survey that the willows bordering the north and east side of the land (herein referred to as The Bottom Land) are listed as flooded lands. My family lived and worked The Bottom Land. I am very familiar with this land as I grew up there. Around 1941 my father began his ranching career utilizing The Bottom Land. My father raised feed grains of barley and oats every year. He cut alfalfa for hay every year, sometimes two cuttings per year. The south end of this alfalfa field went to the edge of a river bank where it was an approximate ten foot drop, if not more. This field was identified by the Corps survey as AA2405 and as AA2411. Per the Wenck Survey Table 2a it is described as follows:

153N098W22NENE
153N098W23SENW
153N098W23SWNE
153N098W23SWNW

Every year our father hayed the grass meadows for feed for his cows.

Once the crops were harvested and the hay removed, my father’s cattle were released into The Bottom Land to graze the hay meadows, including in and around the willow trees where a lot of fine grass grew.

During my childhood, my sisters, Virginia D. Rindahl and Donna R. Sneva, and I rode horseback all over The Bottom Land and were never forbidden from any area due to flooding.

Our father was able to use The Bottom Land every single year for farming, haying, and grazing from approximately 1941 up until the Garrison Diversion Project flooding which occurred in 1961. The Bottom Land was productive every year and was the main source of my father’s ranching operation. As time and money allowed, my father cleared brush and trees for fields to expand his ranching operation.

I, as well as my siblings, question the Wenck Survey. The Wenck Survey is suggesting that the high water mark is as represented by a blue line on Map 9,
containing more acreage than the original Corps survey represented by the black line pertaining to land identified as Tracts Nos. AA-2410 and AA-2467B. This difference is approximately 121.5 acres. These acres were useable every year until the Garrison Diversion Project flooding.

The Wenck Survey is also suggesting that the high water mark is different from the original Corps survey by 6.2 acres as stated in “Table 2a” as 153N098W22NENE with a net change of 6.8 acres. This is land was where our father’s alfalfa field was located and at the south end of the field there was a high bank where it was approximately a 10 foot drop down to the river.

What allows this large variation from the original Corps survey? I can personally attest to the fact that this all of this land was useable as my father utilized it every year of his ranching career up until the Garrison Diversion Project flooding.

I would ask that the Wenck Survey be reexamined as their survey lists lands as “flooded land” when in fact my father used all these Bottom Lands every year for his ranching operation prior to the Garrison Diversion Project flooding.

Carol Kay Moen
5427 – 134th Avenue NW
Williston, ND 58801
DATE: June 19, 2018
TO: Department of Mineral Resources – ND Industrial Commission
FROM: LETTER OF WILLIAM K. THOMAS CONCERNING THE WENCK STUDY AND THE TAKING OF MINERALS BY THE STATE OF NORTH DAKOTA

1. The Final Order of Decree, Civil Case Number 3157, recorded in Williams County, North Dakota, as Document Number 266118 on March 20, 1958 identifies Tracts Nos. AA-2410 and AA-2467B as "unsurveyed accretion in front of Lot 7, Section 11; unsurveyed accretion in front of lots 2, 3, and 7, Section 14; and unsurveyed accretion in front of Lots 2 and 3, Section 23, all in Township 153 North, Range 98 West of the 5th P.M. containing 531.20 acres, more or less."

2. The Wenck report, in Table 2a, identifies 153N098W14NENE, total acres 535.1, USACE Survey below OHWM 3.7 acres = 535.1 minus 3.7 equals 531.40 acres. I contend the land described in paragraphs 1 and 2 are the same lands.

3. According to the Wenck report 2.0 Ordinary High Water Mark Definition, Subsection 2.1 b, "Subsection 3 of section 61-33-01 and section 47-06-05, which provide all accretions are presumed to be above the ordinary high water mark and are not sovereign land."

4. In visiting with my cousins Virginia Rindahl and Carol Kay Moen, who lived and worked in these lands commonly referred to as The Bottoms, no portion of these lands were frequently flooded, certainly not as regularly as the Wenck report suggests. Their father, Jay V. Thomas, had hayfields and small grain fields in the Bottoms and used it as his winter pastureland. He was in the process of clearing more land of brush, trees, and willows to expand his fields and had purchased a tracked crawler tractor (bulldozer) to enhance his efforts.

5. Richard Hanson, whose Grandmother, Laura King, had homesteaded in a portion of sections 11 and 14, told of haying a portion of the bottoms when he was a teenager. The flooding in the Bottoms that Richard said he remembered was caused by excessive rainfall or infrequent ice jams. The Kings lived in the Bottoms for a time, but also had a homestead on Long Creek several miles away and only cut hay there after they moved to their other homestead.

6. The vegetation in the Bottoms, along with hayfields and croplands, also contained many species of trees, some of which were logged by my grandfather O. A. Bjella in the 1930s. My cousins also remembered there were wild grapes growing there,
and I remember the plums that grew wild there; my father and I used to fish off the bank above the river. Richard Hanson recalled rose bushes growing there, too.

7. This accreted land, the Bottoms, was not all crop and hayfields, but given time there would have been much more of it cultivated – it was a process hampered by limited time and resources. The Wenck report suggests taking nearly one-fourth of the mineral acres – 121.5 more than the Corps. Survey – as sovereign lands. Losing this highly productive land to the Garrison project had a very adverse effect on the land owners but at least their minerals were reserved to them, until now. We can't go back and look at the riverbank to see exactly what kind of riverbank and vegetation was there in 1958 so I ask that the presumption mentioned in paragraph 3 above be honored. Based on eyewitness reports of people that lived there and worked there I contend the Wenck report is wrong.

William K. Thomas
1906 – 4th Avenue East
Williston, ND 58801
IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NORTH DAKOTA
NORTHEASTERN DIVISION

UNIVERS STATES OF AMERICA,
Plaintiff,


-vs-

6,223.08 Acres of Land, More or Less,
in McKenzie, Mountrail and Williams
Counties, North Dakota; Carl Froholm,
et al., and Unknown Owners,
Defendants,


FINAL ORDER OF CONDEMNATION

(Plots Nos. AA-2440 and AA-24672,
MR-2520, Parcel "A", "B", and "C",
and MR-2560B)

It appearing to the Court in the above-entitled action that the Plaintiff
herein, the United States of America, has deposited in the Registry of this
Court for the use of the persons entitled thereto the amount of the award for
the taking of the lands and premises hereinafter described by the Plaintiff
herein, in accordance with the terms of the Judgments of this Court entered on
February 3, 1958, and March 6, 1958;

IT IS HEREBY ORDERED AND ADJUDGED that the tracts of land hereinafter
described be, and they are, hereby condemned for the uses and purposes which
may be necessary or desirable in connection with the Garrison Dam and Reservoir
Project, and for such other uses and purposes as may be authorized by Congress
or by executive order; and

IT IS FURTHER ORDERED AND ADJUDGED that the United States of America is
now the owner of the lands described herein, and the estate taken in the fee
simple title thereto, subject to existing easements for public roads and high-
ways, public utilities, railroads and pipelines, and reserving, however, to the
owners of the land or the owners of any interest therein, including third party
lessees, their heirs, successors and assigns, all oil and gas rights therein,
on or under said lands, with full rights of ingress and egress for exploration,
development, production and removal of oil and gas; upon condition that the oil
and gas rights so reserved are subordinated to the right of the United States
to flood and submerge said lands permanently or intermittently in the construc-
It appearing to the Court in the above-entitled action that the Plaintiff herein, the United States of America, has deposited in the Registry of this Court for the use of the persons entitled thereto the amount of the award for the taking of the lands and premises heretofore described by the Plaintiff herein, in accordance with the terms of the Judgments of this Court entered on February 3, 1956, and March 6, 1953;

IT IS HEREBY ORDERED AND ADJUDGED that the tracts of land heretofore described be, and they are, hereby condemned for the uses and purposes which may be necessary or desirable in connection with the Garrison Dam and Reservoir Project, and for such other uses and purposes as may be authorized by Congress or by executive order; and

IT IS FURTHER ORDERED AND ADJUDGED that the United States of America is now the owner of the lands described herein, and the estate taken is the fee simple title thereto, subject to existing easements for public roads and highways, public utilities, railroads and pipelines, and reserving, however, to the owners of the land or the owners of any interest therein, including third party lessees, their heirs, successors and assigns, all oil and gas rights therein, on or under said lands, with full rights of ingress and egress for exploration, development, production and removal of oil and gas; upon condition that the oil and gas rights so reserved are subordinated to the right of the United States to flood and submerge said lands permanently or intermittently in the construction, operation and maintenance of the Garrison Dam and Reservoir, and that any exploration or development of such rights shall be subject to federal or state laws with respect to pollution of waters of the reservoir; provided further that the District Engineer, Corps of Engineers, Garrison District, or his duly
authorized representative shall approve in furtherance of the exploration and/or development of such reserved interests, the type of any structure and/or appurtenances thereto now existing or to be erected or constructed in connection with such exploration and/or development, said structures and/or appurtenances thereto not to be of a material determined to create floatable debris.

The lands referred to in the foregoing order of condemnation are situated in Williams County, North Dakota, and are more specifically described as follows:

TRACTS NOS. AA-2410 and AA-24678 - Unsurveyed accretion in front of Lot 7, Section 11; unsurveyed accretion in front of Lots 2, 3, 6 and 7, Section 11; and unsurveyed accretion in front of Lots 2 and 3, Section 23; all in Township 153 North, Range 99 West of the 5th P.M., containing 53.08 acres, more or less.

TRACT NO. BB-2520 - Parcel A: Unsurveyed accretion in front of Lot 7, Section 23; unsurveyed accretion in front of Lots 3 and 4, Section 23; unsurveyed accretion in front of Lot 7, Section 27; all in Township 153 North, Range 99 West of the 5th P.M., containing 60.00 acres, more or less.

Parcel B: Unsurveyed accretion in front of Lot 2, Section 25, Township 153 North, Range 99 West of the 5th P.M., containing 11.00 acres, more or less (1.90 acres of this parcel as described in the complaint herein having been dismissed from the action by Court Order entered March 6, 1958).

Parcel C: Unsurveyed accretion in front of Lots 2, 3, 4 and 7, Section 25; unsurveyed accretion in front of Lot 7, Section 25; all in Township 153 North, Range 99 West of the 5th P.M., containing 59.00 acres, more or less.

Tracts Nos. BB-2515 and BB-2520D were described as one parcel of land in the complaint in this proceeding, and thereafter Tract No. BB-2515 was dismissed from this action by Court Order entered March 6, 1958, leaving only the land described as Tract No. BB-2520D, which is described as follows:

TRACT NO. BB-2520D - Lots 2, 3 and 6, that portion of the Southwest quarter of the Northeast quarter (SW\textsuperscript{1/4}NE\textsuperscript{1/4}) which lies north of the Missouri River and that portion of the Northwest quarter of the Northeast quarter (NW\textsuperscript{1/4}NE\textsuperscript{1/4}) which lies south and west of the right bank of the most easterly abandoned channel of the Missouri River, in Section 35, Township 153 North, Range 99 West of the 5th P.M. Also those portions of the Southeast quarter of the Southwest quarter (SW\textsuperscript{1/4}SW\textsuperscript{1/4}) and of the Southwest quarter of the Southwest quarter (SW\textsuperscript{1/4}SW\textsuperscript{1/4}) which lie south and west of the right bank of the most easterly abandoned channel of said Missouri River, in Section 25, Township and Range aforesaid. Also that portion of the West half of the Southwest quarter (SW\textsuperscript{1/2}SW\textsuperscript{1/4}) of Section 25, Township and Range aforesaid, which is bounded and described as follows: Beginning at the intersection of the south boundary line of said
TRACTS Nos. AA-2410 and AA-24578 - Unsurveyed accretion in front of Lot 7, Section 11; unsurveyed accretion in front of Lots 2, 3, 6 and 7, Section 14; and unsurveyed accretion in front of Lots 2 and 3, Section 23; all in Township 153 North, Range 99 West of the 5th P.M., containing 531.20 acres, more or less.

TRACT NO. BB-2520 - Parcel A: Unsurveyed accretion in front of Lot 1, Section 22; unsurveyed accretion in front of Lots 3 and 4, Section 23; unsurveyed accretion in front of Lot 1, Section 27; all in Township 153 North, Range 99 West of the 5th P.M., containing 60.60 acres, more or less.

Parcel B: Unsurveyed accretion in front of Lot 2, Section 26; Township 153 North, Range 99 West of the 5th P.M., containing 11.60 acres, more or less (1.80 acres of this parcel as described in the Complaint herein being dismissed from the action by Court Order entered March 6, 1958).

Parcel C: Unsurveyed accretion in front of Lots 2, 3, 4 and 7, Section 23; unsurveyed accretion in front of Lot 4, Section 24; all in Township 153 North, Range 99 West of the 5th P.M., containing 69.50 acres, more or less.

Tracts Nos. BB-2515 and BB-2520 were described as one parcel of land in the Complaint in this proceeding, and thereafter Tract No. BB-2515 was dismissed from this action by Court Order entered March 6, 1958, leaving only the land described as Tract No. BB-2520, which is described as follows:

TRACT NO. BB-2520 - Lots 2, 3 and 6, that portion of the Southwest quarter of the Northeast quarter (SW\(\frac{1}{4}\) NE\(\frac{1}{4}\)) which lies north of the Missouri River and that portion of the Northwest quarter of the Northeast quarter (NW\(\frac{1}{4}\) NE\(\frac{1}{4}\)) which lies south and west of the right bank of the most easterly abandoned channel of the Missouri River, in Section 36, Township 153 North, Range 99 West of the 5th P.M. Also those portions of the Southeast quarter of the Southwest quarter (SE\(\frac{1}{2}\) SW\(\frac{1}{2}\)) and of the Southwest quarter of the Southeast quarter (SW\(\frac{1}{2}\) SE\(\frac{1}{2}\)) which lies south and west of the right bank of the most easterly abandoned channel of said Missouri River, in Section 25, Township and Range aforesaid. Also that portion of the West half of the Southwest quarter (W\(\frac{1}{2}\) SW\(\frac{1}{2}\)) of Section 25, Township and Range aforesaid, which is bounded and described as follows: Beginning at the intersection of the south boundary line of said Section 25 and the west sixteenth line thereof, thence west along said boundary line a distance of 247.5 feet, more or less, to the former right bank of the Missouri River as the same traversed said Section 25 in the year 1836, according to the official plat of the public land survey, thence northwesterly along the meandered line of said former right river bank a distance of 200 feet, more or less, to the southwesterly bank of the Lake known as Jesse Lake, thence southwesterly along said lake bank a distance of 1400 feet.
more or less, to a point thereon which is intersected by the west sixteenth line of said Section 25, thence south along said sixteenth line a distance of 1150 feet, more or less, to the point of beginning, containing 217.12 acres, more or less.

Dated this 12th day of March, 1958.

GEORGE J. REGAN
Judge, United States District Court

United States District Court
FOR THE
District of North Dakota

UNITED STATES OF AMERICA
DISTRICT OF NORTH DAKOTA

I, Della J. Holt, Clerk of the United States District Court for the District of North Dakota, do hereby certify that I have carefully compared the foregoing copy with the original thereof which is in my possession as such Clerk and that such copy is a correct transcript from such original.

Final Order of Condemnation in the matter of United States of America, Plaintiff, vs. 6.223.36 Acres of Land, More or Less, in McKenzie, Mountrail and Williams Counties, North Dakota; Carl Froholm, et al., and Unknown Owners, Defendants, as to Tracts Nos. 64-2410 and 64-24679, BS-2520, Parcels "A", "B" and "C", and BS-2520I Civil No. 3157.
United States District Court
FOR THE
District of North Dakota

UNITED STATES OF AMERICA
DISTRICT OF NORTH DAKOTA

I, _______________ Della I. Holt _______________, Clerk of the United States District Court for the District of North Dakota, do hereby certify that I have carefully compared the foregoing copy with the original thereof which is in my possession as such Clerk and that such copy is a correct transcript from such original. Final Order of Condemnation in the matter of United States of America, Plaintiff, vs. 6,223.03 Acres of Land, More or Less, in McKenzie, Mountrail and Williams Counties, North Dakota; Carl Froholm, et al., and Unknown Owners, Defendants, as to Tracts Nos. A-2410 and A-2467B, BB-2520, Parcels "A", "B", and "C", and BB-2520D) Civil No. 3157.

IN TESTIMONY WHEREOF I have hereunto set my hand and affixed the seal of said Court, at Bismarck, in said District, this 12th day of March, A. D. 1958.

_______________ Della I. Holt _______________, Clerk

By _______________ Deputy
OFFICE OF REGISTER OF DEEDS
County of Williams, N. D.

I hereby certify that the within instrument was filed in this state for record the 20th day of March, A. D. 1958, at 4:10 o'clock P.M., and was authenticated in book 1309, page 493.

[Signature]
Register of Deeds
Deputy

Recording Fee $2.00
TRANSFER FEE $.25

Ken Pringle
Minot
Bethany,

Please find attached a copy of my testimony from this morning’s hearing. I have several oil and gas leases for the Jay Thomas Family that I’ll send you later today. I mistakenly omitted those from what I gave you at the hearing. Any questions please let me know. Thanks,

Josh

Sent from my iPhone

Begin forwarded message:

From: "Joshua A. Swanson" <jswanson@vogellaw.com>
Date: June 25, 2018 at 10:58:01 PM CDT
To: Joshua Swanson <joshua.a.swanson@gmail.com>
Subject: Automatic reply: JAS comments Wenck Report

I will be out of the office for a hearing the afternoon of Monday June 25 and Tuesday June 26. I will be checking my e-mail periodically and responding when able. If this is an emergency, please contact my assistant, Karen Haugen, at 701.237.6983. Thanks, and have a great day!

Josh

This message has been scanned for malware by Websense. www.websense.com
Sorry, I don’t think I sent this with my last email.

Josh

This message has been scanned for malware by Websense. www.websense.com
Joshua Swanson Comments on Wenck Survey
June 26, 2018


** Introduce exhibits for Thomas family – aerial maps verifying the Thomas’s claims that the property was used for agricultural purposes before Garrison Dam, condemnation order from US District Court, and segment map from Corps of Engineers identifying the Property in the condemnation order that was acquired by the federal government for the Garrison project, and oil and gas leases.

** thank Wenck for their work, we can appreciate the work they have done while still calling into question parts of the report – particularly when certain parts open the report and its adoption to constitutional jeopardy.

** Where the Wenck report follows the Segment Maps used by the USACE to acquire property for the Garrison project, the Wenck report stands pat against constitutional infirmity and challenge.

** Respectfully, however, there is a flaw in the Wenck Report. If unaddressed, this flaw invites litigation, and there will be litigation. There is a constitutional defect in the report.

** Despite the clear and unambiguous decision from the North Dakota Supreme Court in the Wilkinson case, the report sanctions the unconstitutional taking of 10,402 mineral acres – acres that were reserved in private mineral owners when the United States acquired the property in question for the Garrison project in the 1950s.

** This includes mineral acres belonging to the Thomas family that were reserved in them through a condemnation order issued by the United States District Court for the District of North Dakota in 1958 – an Order that the Wenck report cannot modify with its declaration that based on more current aerial information, now somehow belongs to the State of North Dakota despite the fact the federal court’s order provides that the United States owns this land subject only to the oil and gas interests being reserved in the Thomas’s predecessors.
** I've read through the nearly **1,500 pages** of public comments submitted to this body, and the situation of the Thomas family is not unique. Others are telling this body, STOP!!, think this through, and get it right.

** In the 223 pages of Wenck’s report, nowhere do they address this clear violation of the United States Constitution’s Fifth Amendment and Article I, § 16 of the North Dakota Constitution that declares private property shall not be taken for public use without just compensation.

** If this body goes along with Wenck’s recommendation and transfers the oil and gas rights under those 10,402 acres that the United States acquired for the Garrison project based on the USACE’s original survey and Segment Maps, YOU are sanctioning an unconstitutional taking – and are walking us right into more litigation.

** There is but a single reference to the Wilkinson decision, and that reference INEXPICABLY MAKES NO MENTION OF THE MOST CRITICAL COMPONENT ON THE ENTIRE DECISION.

** The Supreme Court has decided this issue, the State cannot claim these 10,402 acres without there being an unconstitutional taking of the like we saw in the Wilkinson decision. The State cannot claim any mineral acres that were reserved in private landowners when the US acquired the property via deed or condemnation for the Garrison project.

** I direct your attention to ¶¶ 22 – 25 of the Wilkinson decision →

[¶22] The Fifth Amendment of the United States Constitution declares private property shall not "be taken for public use, without just compensation." U.S. Const. Amend. V. Article I, § 16 of the North Dakota Constitution also declares that "[p]rivate property shall not be taken or damaged for public use without just compensation having been first made to, or paid into court for the owner . . . ."

[¶24] If the district court determines the State owns the minerals, the plaintiffs will be deprived of the mineral interests. The federal government compensated the plaintiffs for the surface property, but the plaintiffs have not been compensated for the mineral interests. The plaintiffs are entitled to compensation if the government's actions result in a "taking" of the mineral interests. See Arkansas Game & Fish Comm'n v. United States, 568 U.S. 23, 31-34 (2012) (stating permanent physical occupation of property authorized by
government is a taking, and government-induced flooding can constitute a
taking); Tarrant Reg'l Water Dist. v. Gragg, 43 S.W.3d 609, 620-21 (Tex. Ct.
App. 2001) (holding flooding of property will be considered a taking if the
flooding after the construction of a reservoir was greater than it previously had
been).

[¶25] The district court erred in determining there was no taking because the
plaintiffs leased the minerals during the period before the State claimed
ownership of the mineral interests.

** United States Court of Claims, Cotton Land Co. v. United States (1948) → “As we
have said, the Government built its public improvement [a damn and resulting
reservoir]. The plaintiffs lost their land. The loss resulted from the improvement. We
hold that the plaintiffs are entitled, under the Constitution, to be compensated.”

** More recently, in 2012, the SCOTUS held in Arkansas Game & Fish Com’n v.
United States, that: “When the government physically takes possession of an interest
in property for some public purpose, it has a categorical duty to compensate the
former owner.” ** THIS IS THE BEDROCK PROTECTION OF THE FIFTH
AMENDMENT PROTECTIONS FROM GOV’T INTRUSION ONTO OUR
PRIVATE PROPERTY. It is in the Bill of Rights – that most sacrosanct list of
guarantees to our liberties and freedoms deserving of the highest protection under our
Constitution.

** That is precisely the situation with any acres the State attempts to claim that were reserved
in private minerals when the US acquired the property for the Garrison Project.

** Likewise, the March 2016 Report from the United States Department of Interior, Bureau of
Land Management – provided as an exhibit to the Wilkinson, Lynch and Greenstar Resources
letters – the United States has already rejected the State’s attempt to redraw the OHWM line
as the Wenck report does.

** Redrawing the OHWM in a manner that differs from the OHWM shown in the Segment
Maps is NO DIFFERENT than Bartlett & West’s prior survey. Read this report. Then read it
again. Read the Wilkinson decision. Think this through. Don’t make the same mistake a
second time – this question was decided in Wilkinson.

** First page of the United States Report – the State of North Dakota has already argued to the
US BLM that, “The Army Corps of Engineers (COE) Acquisition Segment Maps upon which the
Supplemental Plats are based, are not an accurate reflection of the OHWM.” Last sentence of
second page presents the issue: “In this case we concern ourselves with the location of the OHWM prior to the artificial rising of the Missouri River to form Lake Sakakawea. To resolve your protest, we will address locating the line of OHWM, both legally and factually.”

** THE STATE OF ND LOST THAT ARGUMENT –WILL THE STATE NOW ATTEMPT TO RELITIGATE THAT SAME QUESTION ALREADY DECIDED ONLY TWO YEARS AFTER THE FACT?

** The United States has said the Segment Maps are the most accurate reflection of the OHWM. Quote comment letters at page 2.

The State cannot modify the Segment Maps and change ownership of minerals that were reserved in private mineral owners – via warrant deed or condemnation order – when the US acquired the property for the Garrison Project. That issue was decided in Wilkinson. If the State does so, open the checkbook because, as the Supreme Court held in ¶ 24, the mineral owners will be entitled to compensation as a matter of law under the Fifth Amendment of the US Constitution and Art. I, § 16 of the ND Constitution.

** Fortunately – WE have the opportunity to get this right. THIS CAN BE REFECTIFIED BEFORE ANY ADDITIONAL LAWSUITS ARE FILED. If this body adopts the Wenck report as is, you are ensuring litigation as sure as the waves rolling across the surface of Lake Sakakawea.
Bethany,

Good morning. Please find attached two PDFs of oil and gas leases to supplement the testimony I provided for the Jay V. Thomas Family, which includes the following individuals who submitted comment letters to the State: (1) LaRae Thomas; (2) Donna Sneva; (3) Virginia Rindahl; and (4) Carol Kay Moen.

I provided several exhibits for them after my testimony yesterday, including aerial maps of their property showing it was used for agricultural purposes as stated in their comment letters prior to the closure of Garrison Dam, the condemnation order from the United States District Court, and the Segment Map for their property done by the United States Army Corps of Engineers.

If you have any questions, please let me know. Thanks,

Joshua A. Swanson | Attorney

218 NP Avenue
P.O. Box 1389 | Fargo, ND 58107-1389
Tel: 701.237.6983 | Fax: 701.476.7676 | TF: 800.677.5024
e-mail | vogellaw.com | bio
OIL AND GAS LEASE

AGREEMENT, made and entered into the 14th day of September, 2009, by and between Terry N. Thomas and LaRae A. Thomas as Trustees for the Jay V. Thomas Family Trust, whose post office address is 1814 2nd Ave. E., Williston, ND 58801, hereinafter called Lessee (whether one or more) and North Plains Energy, LLC, whose post office address is 1888 Sherman St., Suite 375, Denver, CO 80203, hereinafter called Lesantor.

WITNESSETH, That the Lessee, for and in consideration of Ten and more ($10.00+) DOLLARS cash in hand paid, the receipt of which is hereby acknowledged, and the covenants and agreements hereinafter contained, has agreed, promised, bound and will, and by these presents does grant, demise, lease and let exclusively unto the said Lessee, the land hereinafter described, with the exclusive right for the purpose of mining, exploring by geophysical methods and other methods, and operating for and producing therefore oil and gas of whatsoever nature or kind, with rights of way and easements for laying pipe lines, and erection of structures thereon to produce, save and take care of said products, all that certain tract of land situated in the County of Williams, State of North Dakota described as follows, to-wit:

Township 153 North, Range 98 West of the 5th P.M.
Section 2: Lots 1(41.10), 2(40.06), 3(40.07), 4(26.60), 8%NW
Section 3: Lots 1(40.06), 2(40.02), 3(39.98), 4(39.94), 8%NW, 5%SE
Section 4: Lots 1(39.92), 2(39.94), 8%SE, 5%SW
Section 6: N%, N%W
Section 10: Lot 7(29.40), SW%NW, SW
Section 15: 4.025 acres in SE%NE, more fully described in Book 84, Page 93
Section 22: NE%NW
Section 23: Lots 2(26.85), 3(26.40), NW

Township 154 North, Range 98 West of the 5th P.M.
Section 29: E%SE
Section 32: NW%NW, SW%SW, SE%, E%NW
Section 33: NW%, NE%NE, 5%NW, N%SW, SE%SE
Section 34: All

*See Exhibit "A" attached hereto and made a part hereof.

and containing 8,390.355 acres, more or less.

1. It is agreed that this lease shall remain in force for a term of three (3) years from this date and as long thereafter as oil or gas of whatever nature or kind is produced from said leased premises or on acreage pooled therewith, or drilling operations are conducted as hereinafter provided. As the expiration of the primary term of this lease, oil or gas is not being produced on the leased premises or on acreage pooled therewith but Lessee is then engaged in drilling or reworking operations thereon, then this lease shall continue to force so long as operations are being continuously prosecuted on the leased premises or on an acreage pool therewith, and operations shall be considered to be continuously prosecuted if not more than ninety (90) days shall elapse between the completion or abandonment of one well and the beginning of operations for the drilling of a subsequent well. Where discovery of oil or gas on said lease or on acreage pooled therewith, the production thereof shall cease from any cause after the primary term, this lease shall not terminate if Lessee commences additional drilling or reworking operations within ninety (90) days from the date of cessation of production or from date of completion of any hole. If oil or gas shall be discovered and produced as a result of such operations as or after the expiration of the primary term of this lease, this lease shall continue in force so long as oil or gas is produced from the leased premises or on acreage pooled therewith.

2. This is a PAID-UP LEASE. In consideration of the down cash payment, Lessee agrees that Lessee shall not be obligated, except as otherwise provided herein, to commence or continue any operations during the primary term. Lessee may at any time during or after the primary term surrender this lease as to all or any portion of said land and as to any streets or rights-of-way by delivering to Lessee or by filing for record a release or release, and as to all or any portion of the land hereinafter described, acquiring as for acreage surrendered.

3. In consideration of the premises the said Leasors covenant and agree:

1st. To deliver to the credit of Lessee, free of cost in the pipe line to which Lessee may connect wells on said land, the equal three sixteenths (3/16th) part of all oil produced and saved from the leased premises.

2nd. To pay Lessee three sixteenths (3/16th) of the gross proceeds of each gross receipt payable quarterly, for gas from each well after gas only is found, and the same is being used off the premises and is used in the manufacture of gasoline a royalty of three sixteenths (3/16th), payable monthly at the prevailing market rate for gas.

3rd. To pay lessee for gas produced from any well or wells on said land and used in the manufacture of gas or gasoline, or other products a royalty of three sixteenths (3/16th) of the gross receipt, at the rate of the well, payable monthly at the prevailing market rate.

4. Where gas is not capable of producing gas is not sold or used, Lessee may pay or tender as royalty to the royalty owners One Dollar per thousand cubic feet of gas sold and delivered at the wellhead. In any event, the above rates may be reduced at the discretion of Lessee and at any time by written notice. In the event the Lessee is required to pay a higher royalty for gas produced from the well, Lessee shall deduct 10% from the royalty paid for gas produced from the well.

5. If said Lessee owns a lease interest in the above described land, the rights and interests for single conveyance, then the royalties (including any shift-in-gas royalty) herein provided for shall be paid the said Lessee only in the proportion which Lessee's interest bears to the whole and undivided.

6. Lessee shall have the right to use, free of cost, gas, oil and water produced on said land for the Lessee's operations thereon, except delivery of water from wells or ponds of Lessee.

7. Lessee shall bury Lessee's pipelines below plow depth.

8. No well shall be drilled nearer than 500 feet to the house or barn now on said premises without written consent of the Lessee.

9. Lessee shall pay for damages caused by Lessee's operations on said land.

10. Lessee shall have the right during the term of this lease or within six (6) months of cessation of production or from termination of this lease whichever occurs last, to remove all machinery and fixtures placed on said premises, including the right to cut or remove casing.

11. The rights of Lessee and Lessee hereunder may be assigned in whole or in part. No change in ownership of Lessee's interest (by assignment or otherwise) shall bind Lessee or Lessee hereunder to any other than the assignee or assignees and to the extent of any interest assigned, unless Lessee shall have agreed in writing to assign such interest.

12. Lessee, as its option, hereby given the right and power at any time and from time to time as a returning right, either before or after production or at any time or for any part of the land described hereunder or to any one or more of the lessees hereunder, to place and use the leasehold created over the Interest Areas covered by this lease with other lease, lease or leases in the immediate vicinity for the production of oil and gas, separately or in connection with other leases or with this lease.
for the production of either, when in Lessee's judgment it is necessary or advisable to do so, and irrespective of whether authority similar to this exists with respect to such other land, lease or leases. Likewise, units previously formed to include formations not producing oil or gas, may be referred to include such non-producing formations. The forming or reuniting of any unit shall be accomplished by Lessee executing and filing of record a declaratory determination of such unification or reformation, which declaration shall describe the unit. Any unit may include land upon which a well has theretofore been completed or upon which operations for drilling hereafter theretofore been commenced. Production, drilling or reworking operations or a well existing for want of market anywhere on a unit, such existence or a part of this lease shall be treated as if it were production, drilling or reworking operations or a well owned in for want of a market under this lease. In lieu of the royalties evidenced by the term "fractional interests," for the purpose herein referred to, the term "fractional interest" shall be defined, indicating such fractional interest to be paid to Lessee or its assigns. Lessee shall receive an amount equal to the percentage interest of Lessee. The said unit shall be that portion of the unit production that the total number of barrels were covered by this lease and included in the unit before the total number of surface acres in such unit. In addition to the foregoing, lessee shall have the right to utilize, pool, or combine all or any part of the described lands as to one or more of the formations thereunder with other lands in the same general area by entering into a cooperative or unit plan of development or operation approved by any governmental authority and, from time to time, with like approval, to modify, change or terminate any such plan or agreement and, in such event, to extend the boundaries of such cooperative or unit plan of development or operation and, particularly, all drilling and development requirements of this lease, express or implied, shall be satisfied by compliance with the drilling and development requirements of such plan or agreement. Any such extension shall not terminate or expire during the life of such plan or agreement. In the event that all described lands or any part thereof, shall hereafter be operated under any such cooperative or unit plan of development or operation wherein the production thereof is allocated to different portions of the field covered by said plan, then the production allocated to any particular tract of land shall, for the purpose of computing the royalties to be paid hereunder to Lessee, be regarded as having been produced from the particular tract of land in which it is situated and not to any other tract of land, and the royalty payments to be made hereunder to Lessee shall be based upon production only as so allocated. Lessee shall formally express Lessee's consent to any cooperative or unit plan of development or operation adopted by Lessee and approved by any governmental agency by executing the same upon request of Lessee.

13. All express or implied covenants of this lease shall be subject to all Federal and State Laws, Executive Orders, Rules and Regulations and the lease shall not be invalidated, in whole or in part, nor Lessee held liable in damages, for failure to comply therewith. If compliance is prevented by, or if such failure is the result of, any such law, order, rule, regulation, war, act of God, strike, fire, explosion, flood, or any other cause reasonably beyond the control of Lessee.

14. Lessee hereby agrees that the Lessee shall have the right at any time to redeem for Lessee, by payment, any mortgage, taxes or other liens on the above described lands, in the event of default of payment by Lessee, and be subrogated to the rights of the holder thereof, and the undersigned Lessees, for themselves and their heirs, successors and assigns, hereby surrender and release all right of dower and homestead in the premises described herein, forever as said right of dower and homestead may in any way affect the purpose for which this lease is made, as recited herein.

15. Should any one or more of the parties heretofore named as Lessee fail to execute this lease, it shall nevertheless be binding upon all such parties who do execute it as Lessee. The word "Lessee," as used in this lease, shall mean any one or more or all of the parties who execute this lease as Lessee. All the provisions of this lease shall be binding on the heirs, successors and assigns of Lessee and Lessee.

IN WITNESS WHEREOF, this instrument is executed as of the date first above written.

[Signature]
Terry N. Thomas, Trustee

STATE OF NORTH DAKOTA
COUNTY OF Williams

On this 22nd day of September 2009 before me personally appeared Terry N. Thomas, Trustee, known to me to be the person who is described in and who executed the within instrument as party of the first part, and acknowledged to me that he/she executed the same.

My Commission expires: April 10, 2015

[Signature]
CARRIE LAMBERG
Notary Public
State of North Dakota
My Commission Expires April 10, 2015

[Signature]
LaRae A. Thomas, Trustee

STATE OF NORTH DAKOTA
COUNTY OF Ward

On this 16th day of September 2009 before me personally appeared LaRae A. Thomas, Trustee, known to me to be the person who is described in and who executed the within instrument as party of the first part, and acknowledged to me that he/she executed the same.

My Commission expires: October 25, 2011

[Signature]
RUTH HEADRICK
Notary Public
State of North Dakota
My Commission Expires October 25, 2011

674099
Page: 3 of 4
9/28/2009 2:38 PM
OGL $26.00
WILLIAMS COUNTY, ND
Exhibit "A"

Attached to and made a part of that certain oil and gas lease dated September 14, 2009, by and between Terry N. Thomas and LaRae A. Thomas as Trustees for the Jay V. Thomas Family Trust, whose post office address is 1814 2nd Ave. E., Williston, ND 58801, as Lessee, whether one or more, and North Plains Energy, LLC of 1888 Sherman St., Suite 375, Denver, CO 80203, as Lessor, covering all that certain tract of land situated in the County of Williams, State of North Dakota, to wit:

Township 153 North, Range 98 West of the 5th P.M.
Section 2: Lots 1(41.10), 2(40.06), 3(40.07), 4(26.60), S%NW
Section 3: Lots 1(40.06), 2(40.02), 3(39.98), 4(39.94), S%N%, S%
Section 4: Lots 1(39.92), 2(39.94), S%NE%, SE%, E%SW
Section 10: N%, N%8%
Section 14: Lot 7(29.40), SW%NW%, SW%
Section 15: 4,025 acres in SE%NE%, more fully described in Book 84, Page 93
Section 22: NE%NE%
Section 23: Lots 2(26.85), 3(22.40), NW%

Township 154 North, Range 98 West of the 5th P.M.
Section 29: E%SE%
Section 32: S%NW%, N%SW%, SE%, E%NE%
Section 33: NW%, NE%NE%, S%NE%, N%S%, SE%SE%
Section 34: All

Notwithstanding the provisions of this lease to the contrary:
(a) This lease shall terminate at the end of the primary term as to all of the leased premises except those stratigraphic zones included within a production or spacing unit prescribed by law or administrative authority, any well which is located a well producing or capable of producing oil and or gas, unless lease is then engaged in drilling or reworking operations in accordance with the provisions of this lease. In the event the Lessee is engaged in said drilling or reworking operations at the expiration of the primary term, the lease shall remain in full force and effect as to all the leased premises so long as a continuous drilling program is maintained whereby not more than one hundred twenty days (120) days shall elapse from the completion or abandonment of one well to the commencement of another well. Upon failure to maintain said continuous drilling program, this lease shall then automatically terminate as to such nonproductive part of the lease premises as provided above. Notwithstanding the termination of a portion or portions of this lease, so long as any portion of the lease remains in force and effect, Lessee shall continue to have rights of ingress and egress over all of the Leased Premises originally described on this lease for all purposes granted by this lease held by production. For the purpose of this Paragraph (a), the stratigraphic zone extending from the top of the Bakken Formation to the base of the Three Fork Shauk formation shall be deemed to be one formation and perforated zone of a producing well bore(s) or horizontal leg(s) within that formation shall hold the entire formation and Lessee obligation pursuant to this Paragraph 51 shall be to release formation 100 feet above the Bakken and 100 feet below the Three Fork Shauk.

(b) The right to pool or unitize is limited to the drilling or spacing unit established by the State oil and gas regulatory commission. Production from a well producing oil and/or gas from a unit, which contains a part of the lease premises shall be considered production under the lease.

(c) Notwithstanding the provisions of this lease to the contrary, or apparently to the contrary, the right to shut-in a well capable of producing gas provided in this lease shall not continue for a period beyond two (2) years after such well is shut-in, and then only as to the acreage in the spacing unit for that gas well; moreover, no gas well shall be deemed shut-in, for purposes of lease extension, unless that gas well is capable of producing gas in commercial quantities; provided, however, that the right to maintain this lease by virtue of the shut-in status of a well which is capable of producing oil or gas shall recur upon each occasion that a well is shut-in, but in such case for a period not in excess of two (2) consecutive years during the secondary term.

(d) If Lessee assigns all or part of this lease, both assignor and assignee shall remain subject to the terms of this agreement including but not limited to any implied covenants of exploration, development and protection from drainage until the Lessee is provided with a copy of the assignment which shows the mailing address of the assignee, excepting, however, responsibility for environmental damage as hereafter provided shall not be avoided by any assignment with or without furnishing copies thereof, if such damage was caused by Lessee.

(e) Provisions of any State surface owner protection compensation laws, such as North Dakota Century Code Chapter 38-11.1 shall apply.

(f) Where the lease requires the Lessee to commence additional drilling or reworking operations, it is also required that such drilling or reworking operations be diligently prosecuted.

(g) If, during the term of this lease, an oil and/or gas well is completed on a drilling or spacing unit in which the Lessee has no interest and which is adjacent or tangent to any property covered by this lease within a drilling or spacing unit which is without an offset well, Lessee agrees to commence drilling operations on such property within six months of 1) completion or 2) the release of information from a "tight hole" status, or release the stratigraphic zone in which said oil and/or gas well is completed in the adjacent or tangent drilling unit or spacing unit described in this paragraph.

(h) Production under terms of this lease is intended to be paying production under which the income from production exceeds expenses allocated to such production by the operator unless otherwise agreed in writing by the parties.

(i) This lease shall not apply to coal bed methane.
(g) Leesee agrees that all royalties accruing under this lease (including those paid in kind) shall be paid without deduction for the costs of producing, gathering, storing, separating, treating, dehydrating, compression, processing, transporting, marketing, depreciation, risk-capital charges and other post-production charges making the oil, gas and other products produced thereunder marketable and ready for sale or use.

(h) Nothing in this Exhibit is intended to relieve the Leesee from any implied covenants or from any obligation to act as a reasonable prudent operator, giving due regard to the interests of the Lessor.

(i) The Leesee undertakes to and does hereby agree to defend, hold harmless and indemnify Lessor, their successors, heirs or assigns, from any and all liability, costs and attorneys' fees the Lessor may suffer as a result of claims, demands, costs or judgments against Lessor arising out of any environmental damage caused by the Leesee on this lease or Leesee's noncompliance with any environmental law, order, administrative law or rule, adopted or promulgated by the State of North Dakota or the United States of America, or any board, agency or commission of either.

(j) Salt water disposal wells shall only be constructed and utilized with the express written permission of Lessor. No salt water from sources other than Lessor's wells may be disposed of in any salt water disposal well on Lessor's property without payment to and express written permission of Lessor. Salt water disposal wells shall be maintained and utilized in compliance with North Dakota law.

(k) In the event of any inconsistencies between the provisions of this Exhibit A and the provisions of the Lease, the provisions of Exhibit A shall control.

(l) Option to Extend: As to any lands covered by this lease which are not being held by the provisions of this lease, Leesee is hereby given the option to extend the primary term of this lease as to all or part of the lands leased for an additional two (2) years from the expiration of the original primary term. This option may be exercised by Leesee at any time during the last year of the original primary term by paying the sum of $150.00 per net mineral acre to Lessor or to Lessor's credit in any depository bank designated in writing by Lessor. This payment shall be based upon the number of net mineral acres then covered by this lease, and all of the provisions of this lease relating to payment of shut-in royalties shall apply equally to this payment including, but not limited to, the provisions regarding changes in ownership. Should this option be exercised as herein provided, it shall be considered for all purposes as though this lease originally provided for a primary term of five (5) years. In the event this lease is being maintained by any provision hereof at the expiration of the original primary term, Leesee shall have a period of thirty (30) days from the date this lease ceases to be so maintained within which to exercise this option.

Dated this 11th day of September, 2009

[Signature]
LaRaee A. Thomas, Co-Trustee

Dated this 12th day of September, 2009

[Signature]
Terry N. Thomas, Co-Trustee
March 1, 2011

Terry Thomas & LaRae Thomas, Trustees for the
Jay V. Thomas Family Trust
1814 2nd Ave. E.
Williston, ND 58801

RE: Oil and Gas Lease
All mineral interests not claimed by the State of North Dakota in and under
the following described lands, to-wit:
Tracts Nos. AA-2410 and AA2467B of the Final Order of Condemnation by the
United States of America as recorded in Book 130, Page 493 consisting of unsurveyed
accretions in front of the following described lands, to-wit:
Township 153 North, Range 98 West of the 5th P.M.
Section 11: Lot 7
Section 13: Acres within the W½ considered part of Tract Number AA2467B
Section 14: Lots 2, 3, 6, 7
Section 23: Lots 2, 3
Section 24: Acres within the NW¼NW¼ considered part of Tract Number AA2467B
Counties of McKenzie and Williams, State of North Dakota

Dear Terry and LaRae,

On behalf of North Plains Energy, I am pleased to offer you this oil and gas lease for your
interest in the above described lands.

I am enclosing two copies of an oil and gas lease, a W-9 form and a Stipulation of Interest.

There is some confusion as to the ownership of these minerals both due to the mineral claim by
the State of North Dakota and the difficulty of dividing the minerals based on the Judgment and
Declaration of Taking for the Garrison Dam. At this time North Plains Energy is offering to
lease only those mineral acres not claimed by the State of North Dakota. We are also
requesting that all heirs of Elsie Bjella and Laura King sign a Stipulation of Interest to define
ownership from this point forward.

Please sign and have notarized, one copy of the lease and one copy of the Stipulation of Interest
and return to me along with the completed W-9 form. Only one trustee needs to sign the W-9,
and you only need to return the signature page of the Stipulation of Interest. Once I have your
completed documents and the processing is completed, North Plains will issue you a check for
$75,662.04.

If you have any questions, please contact me and I will do my best to answer them.

Terms of Lease: $1,200.00/acre......3 years......20% royalty.
Net acres owned: 63.0517 x $1,200.00 = $75,662.04

Sincerely on behalf of NORTH PLAINS ENERGY, LLC
RE: Oil and Gas Lease

All mineral interests not claimed by the State of North Dakota in and under the following described lands, to-wit:

Tracts Nos. AA-2410 and AA2467B of the Final Order of Condemnation by the United States of America as recorded in Book 130, Page 493 consisting of unsurveyed accretions in front of the following described lands, to-wit:

Township 153 North, Range 98 West of the 5th P.M.
Section 11: Lot 7
Section 13: Acres within the W½ considered part of Tract Number AA2467B
Section 14: Lots 2, 3, 6, 7
Section 23: Lots 2, 3
Section 24: Acres within the NW¼NW¼ considered part of Tract Number AA2467B

Counties of McKenzie and Williams, State of North Dakota

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I am enclosing two copies of an oil and gas lease, a W-9 form and a Stipulation of Interest.

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Please sign and have notarized, one copy of the lease and one copy of the Stipulation of Interest and return to me along with the completed W-9 form. Only one trustee needs to sign the W-9, and you only need to return the signature page of the Stipulation of Interest. Once I have your completed documents and the processing is completed, North Plains will issue you a check for $75,662.04.

If you have any questions, please contact me and I will do my best to answer them.

Terms of Lease: $1,200.00/acre.....3 years.....20% royalty.
Net acres owned: 63.0517 x $1,200.00 = $75,662.04

Sincerely on behalf of NORTH PLAINS ENERGY, LLC

[Signature]

Phil Jore, Landman
1310 - 22nd St. W.
Williston, ND 58801
701-572-3939
OIL AND GAS LEASE

AGREEMENT, Made and entered into the 1st day of March, 2011, by and between Terry N. Thomas and LaRae A. Thomas as Trustees for the Jay V. Thomas Family Trust, whose post office address is 1814 2nd Ave. E., Williston, ND 58801, hereinafter called Lessor (whether one or more) and North Plains Energy, LLC., whose post office address is 1888 Sherman St., Suite 375, Denver, CO 80203, hereinafter called Lessee:

WITNESSETH, That the Lessor, for and in consideration of Ten and more ($10.00+) DOLLARS cash in hand paid, the receipt of which is hereby acknowledged, and the covenants and agreements hereinafter contained, has granted, demised, leased and let, and by these presents does grant, demise, lease and let exclusively unto the said Lessee, the land hereinafter described, with the exclusive right for the purpose of mining, exploring by geophysical and other methods, and operating for and producing therefrom oil and all gas of whatsoever nature or kind, with rights of way and easements for laying pipe lines, and erecting structures necessary for the production of said products, all that certain tract of land situated in the County of Williams and McKenzie, State of North Dakota described as follows, to-wit:

All mineral interests not claimed by the State of North Dakota in and under the following described lands, to-wit:

Tracts Nos. AA-2410 and AA2467B of the Final Order of Condemnation by the United States of America as recorded in Book 130, Page 493 consisting of unsurveyed accretions in front of the following described lands, to-wit:

Township 153 North, Range 98 West of the 5th P.M.
Section 11: Lot 7
Section 13: Acres within the W½ considered part of Tract Number AA2467B
Section 14: Lots 2, 3, 6, 7
Section 23: Lots 2, 3
Section 24: Acres within the NW¼ NW¼ considered part of Tract Number AA2467B

and containing 531.20 acres, more or less.

*In addition to the land described above, Lessor hereby grants, leases, and lets exclusively unto Lessee, to the same extent as if specifically described, lands which are owned or claimed by Lessee by one of the following reasons: (1) all lands and rights acquired or retained by Lessee by avulsion, secession, reliction or otherwise as the result of a change in the boundaries or centerline of any river or stream traversing or adjoining the lands described above; (2) all riparian lands and rights which are or may be incident, appurtenant, related or attributed to Lessee in any lake, stream or river traversing or adjoining the lands described above by virtue of Lessee’s ownership of the land described above; (3) all strips of land adjacent or contiguous to the lands described above owned or acquired by Lessee through adverse possession or other similar statutes of the state which the lands are located.

1. It is agreed that this lease shall remain in force for a term of three (3) years from this date and as long thereafter as oil or gas of whatsoever nature or kind is produced from said leased premises or on acreage pooled therewith, or drilling operations are continued as hereinafter provided. If, at the expiration of the primary term of this lease, oil or gas is not being produced on the leased premises or on acreage pooled therewith, but Lessee is then engaged in drilling or reworking operations thereon, then this lease shall continue in force so long as operations are being continuously prosecuted on the leased premises or on acreage pooled therewith; and operations shall be considered to be continuously prosecuted if not more than ninety (90) days shall elapse between the completion or abandonment of one well and the beginning of operations for the drilling of a subsequent well. If after discovery of oil or gas on said land or on acreage pooled therewith, the production thereof should cease from any cause after the primary term, this lease shall not terminate if Lessee commences additional drilling or reworking operations within ninety (90) days from the date of cessation of production or from date of completion of dry hole. If oil or gas shall be discovered and produced as a result of such operations at or after the expiration of the primary term of this lease, this lease shall continue in force so long as oil or gas is produced from the lease premises or on acreage pooled therewith.

2. This is a PAID-UP LEASE. In consideration of the down cash payment, Lessee agrees that Lessor shall not be obligated, except as otherwise provided herein, to commence or continue any operations during the primary term. Lessee may at any time or times during or after the primary term surrender this lease as to all or any portion of said land and as to any strata or stratum by delivering to Lessor or by filing for record a release or releases, and be relieved of all obligation theretofore accruing as the acreage surrendered.

3. In consideration of the premises the said Lessee covenants and agrees:

1st. To deliver to the credit of Lessor, free of cost in the pipe line to which Lessee may connect wells on said land, the equal twenty percent (20%) part of all oil produced and saved from the leased premises.

2nd. To pay Lessee twenty percent (20%) of the gross proceeds each year, payable quarterly, for the gas from each well where gas only is found, while the same is being used on the premises and if used in the manufacture of gasoline a royalty of twenty percent (20%), payable monthly at the prevailing market rate for gas.

3rd. To pay Lessee for gas produced from any well well and used on the premises or in the manufacture of gasoline or any other product a royalty of twenty percent (20%) of the proceeds, at the mouth of the well, payable monthly at the prevailing market rate.

4. Where gas from a well capable of producing gas is not sold or used, Lessee may pay or tender as royalty to the royalty owners One Dollar per acre per gross royalty acre retained hereunder, such payment or tender to be made on or before the anniversary date of this lease next ensuing after the expiration of 90 days from the date such well is shut in and thereafter on or before the anniversary date of this lease during the period such well is shut in. If such payment or tender is made, it will be considered that gas is being produced within the meaning of this lease.
All mineral interests not claimed by the State of North Dakota in and under the following described lands, to-wit:

Tracts Nos. AA-2410 and AA2467B of the Final Order of Condemnation by the United States of America as recorded in Book 130, Page 493 consisting of unsurveyed accretions in front of the following described lands, to-wit:

**Township 153 North, Range 98 West of the 5th P.M.**
**Section 11:** Lot 7
**Section 13:** Acres within the W½ considered part of Tract Number AA2467B
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**Section 23:** Lots 2, 3
**Section 24:** Acres within the NW¼ NW¼ considered part of Tract Number AA2467B

and containing 531.20 acres, more or less.

In addition to the land described above, lessor hereby grants, leases, and lets exclusively unto lessee, to the same extent as if specifically described, lands which are owned or claimed by lessor by one of the following means: (1) all lands and rights acquired or retained by lessor by avulsion, accretion, reliction or otherwise as the result of a change in the boundaries or centerline of any river or stream traversing or adjoining the lands described above; (2) all riparian lands and rights which are or may be incident, appurtenant, related or attributed to lessor in any lake, stream or river traversing or adjoining the lands described above by virtue of lessor’s ownership of the land described above (3) all strips of land adjacent or contiguous to the lands described above owned or acquired by lessor through adverse possession or other similar statutes of the state which the lands are located.

1. It is agreed that this lease shall remain in force for a term of three (3) years from this date and as long thereafter as oil or gas of whatsoever nature or kind is produced from said leased premises or on acreage pooled therewith, or drilling operations are continued as hereinafter provided. If, at the expiration of the primary term of this lease, oil or gas is not being produced on the leased premises or on acreage pooled therewith or drilling is then engaged in drilling or reworking operations thereon, then this lease shall be automatically renewed, as hereinafter provided. If, at the expiration of the primary term of this lease, oil or gas is not being produced on the leased premises or on acreage pooled therewith and operations are being continuously prosecuted on the leased premises or on acreage pooled therewith; and operations are to be continuously prosecuted if no more than ninety (90) days shall elapse between the completion or abandonment of one well and the beginning of operations for the drilling of a subsequent well, if after discovery of oil or gas on said land or on acreage pooled therewith, the production thereof should cease from any cause after the primary term, this lease shall terminate at the end of the primary term of this lease, unless lessor commences additional drilling or reworking operations within ninety (90) days from the date of cessation of production or from date of completion of dry hole. If oil or gas is discovered and produced and if after the expiration of the primary term of this lease, this lease shall continue in force so long as oil or gas is produced from the lease premises or on acreage pooled therewith.

2. This is a PAID-UP LEASE. In consideration of the down cash payment, lessor agrees that lessee shall not be obligated, except as otherwise provided herein, to commence or continue any operations during the primary term. Lessee may at any time or times during or after the primary term, surrender this lease as to all or any portion of said land and as to any strata or stratum by delivering to lessor or by filing with record a release or releases, and be relieved of all obligations hereafter accruing as the acreage surrendered.

3. In consideration of the premises the said lessor covenants and agrees:
   1st. To deliver to the credit of lessor, free of cost, in the pipe line to which lessor may connect wells on said land, the equal twenty percent (20%) of all oil produced and saved from the leased premises.
   2nd. To pay lessor twenty percent (20%) of the gross proceeds each year, payable quarterly, for the gas from each well where gas only is found, while the same is being sold off the premises and if sold in the manufacture of gasoline a royalty of twenty percent (20%), payable monthly at the prevailing market rate for gas.
   3rd. To pay lessor gas produced from any oil well and used off the premises or in the manufacture of gasoline or any other product a royalty of twenty percent (20%) of the proceeds, at the mouth of the well, payable monthly at the prevailing market rate.

4. Where gas from a well capable of producing gas is not sold or used, lessee may pay or tender as royalty to the royalty owners One Dollar per year per net royalty acre retained hereunder, such payment or tender to be made on or before the anniversary date of this lease next ensuing after the expiration of 90 days from the date such well is shut in and thereafter on or before the anniversary date of this lease during the period such well is shut in. If such payment or tender is made, it will be considered that gas is being produced within the meaning of this lease.

5. If said lessor owns less interest in the above described land than the entire and undivided fee simple estate therein, then the royalties (including any shut-in gas royalty) herein provided for shall be paid the said lessor only in the proportion which lessor’s interest bears to the whole and undivided fee.

6. Lessee shall have the right to use, free of cost, gas, oil and water produced on said land for the Lessee’s operations thereon, except surface water from wells or ponds of lessor.

7. Lessee shall bury lessor’s pipelines below plow depth.

8. No well shall be drilled nearer than 500 feet to the house or barn now on said premises without written consent of the lessor.

9. Lessee shall pay for damages caused by Lessee’s operations on said land.

10. Lessee shall have the right during the term of this lease or within 6 months of cessation of production or from termination of this lease, whichever occurs last, to remove all machinery and fixtures placed on said premises, including the right to draw and remove casing.

The rights of lessor and lessee hereunder may be assigned in whole or part. No change in ownership of lessor’s interest (by assignment or otherwise) shall be binding on lessee until lessee has been furnished with notice, consisting of certified copies of all recorded instruments or documents and other documentation necessary to establish a complete chain of title from lessor, and then only with respect to payments thereafter made. No other kind of notice whether actual or constructive, shall be binding on lessee. No present or future division of lessor’s ownership as to different portions
or parcels of said land shall operate to enlarge the obligations or diminish the rights of Lessee and all Lessee's operations may be conducted without regard to any such division. If all or any part of this lease is assigned, no leaseholder owner shall be liable for any act or omission of any other leaseholder owner.

12. Lessee, at its option, is hereby given the right and power at any time and from time to time as a recapping right, either before or after production, as to all or any part of the land described herein and as to any one or more of the formations hereunder, to pool or utilize the leasehold estate and the mineral estate covered by this lease with other land, lease or leases in the immediate vicinity for the production of oil and gas, or separately for the production of either, when in Lessee's judgment it is necessary or advisable to do so, and irrespective of whether authority similar to this exists with respect to such other land, lease or leases. Likewise, units previously formed to include formations not producing oil or gas, may be reformed to include such non-producing formation. The forming or reformating of any unit shall be accomplished by Lessee executing and filing of record a declaration of such unitization or reformation, which declaration shall describe the unit. Any unit may include land upon which a well has therefor been completed or upon which operations for drilling have therefor been commenced. Production, drilling or reworking operations or a well shut in for want of market anywhere on a unit which includes all or a part of this lease shall be treated as if it were production, drilling or reworking operations or a well shut in for want of market under this lease. In lieu of the royalties elsewhere herein specified, inducing shut-in gas royalties, Lessee shall receive an amount produced from the unit so pooled royalties only on the portion of such production allocated to this lease; such allocation shall be that proportion of the unit production that the total number of surface acres covered by this lease and included in the unit bears to the total number of surface acres in such unit. In addition to the foregoing, Lessee shall have the right to utilize, pool, or combine all or any part of the above described lands as to one or more of the formations hereunder with other lands in the same general area by entering into a cooperative or unit plan of development or operation approved by any governmental authority and, from time to time, with like approval, to modify, change or terminate any such plan or agreement and, in such event, the terms, conditions, and provisions of this lease shall be deemed modified to conform to the terms, conditions, and provisions of such approved cooperative or unit plan of development of operation and, particularly, all drilling and development requirements of this lease, express or implied, shall be satisfied by compliance with the drilling and development requirements of such plan or agreement and this lease shall not terminate or expire during the life of such plan or agreement. In the event that said above described lands or any part thereof, shall hereafter be operated under any such cooperative or unit plan of development or operation whereby the production therefrom is allocated to different portions of the land covered by said plan, then the production allocated to any particular tract of land shall, for the purpose of computing the royalties to be paid hereunder to Lessee, be regarded as having been produced from the particular tract of land to which it is allocated and not to any other tract of land; and the royalty payee to be made hereunder to Lessee shall be based upon production only as so allocated. Lessee shall formally express Lessee's consent to any cooperative or unit plan of development or operation adopted by Lessee and approved by any governmental agency by executing the same upon request of Lessee.

13. All express or implied covenants of this lease shall be subject to all Federal and State Laws, Executive Orders, Rules and Regulations, and this lease shall not be terminated, in whole or in part, nor Lessee held liable for damages, for failure to comply therewith, if compliance is prevented by, or if such failure is the result of, any such law, order, rule, regulation, war, act of God, strike, fire, explosion, flood, or any other cause reasonably beyond the control of Lessee.

14. Lessee hereby warrants and agrees to defend the title to the lands herein described, and agrees that the Lessee shall have the right at any time to redeem for Lessee, by payment, any mortgages, taxes or other liens on the above described lands, in the event of default of payment by Lessee, and be subrogated to the rights of the holder thereof, and the underrun Lessee, for themselves and their heirs, successors and assigns, hereby surrender and release all right of dower and homestead in the premises described herein, insofar as said right of dower and homestead may in any way affect the purposes for which this lease is made, as recited herein.

15. Should any one or more of the parties heretofore named as Lessee fail to execute this lease, it shall nevertheless be binding upon all such parties who do execute it as Lessee. The word “Lessee,” as used in this lease, shall mean any one or more of all the parties who execute this lease as Lessee. All the provisions of this lease shall be binding on the heirs, successors and assigns of Lessee and Lessee.

IN WITNESS WHEREOF, this instrument is executed as of the date first above written.

[Signature]
Terry N. Thomas, Trustee

STATE OF NORTH DAKOTA
COUNTY OF Williams

On this 2nd day of March, 2011 before me personally appeared Terry N. Thomas, Trustee, known to me to be the person who is described in and who executed the within instrument as party of the first part, and acknowledged to me that he/she executed the same.

My Commission expires: 2/11/17

[Signature]
Kari Kringen
Notary Public
State of North Dakota
My Commission Expires Feb 11, 2017

[Signature]
LaRae A. Thomas, Trustee

STATE OF NORTH DAKOTA
COUNTY OF Williams

On this 4th day of March, 2011 before me personally appeared LaRae A. Thomas, Trustee, known to me to be the person who is described in and who executed the within instrument as party of the first part, and acknowledged to me that he/she executed the same.

My Commission expires: 2/11/17

[Signature]
Kari Kringen
Notary Public
State of North Dakota
My Commission Expires Feb 11, 2017
or underground operation and, particularly, all drilling and development requirements of such lease, express or implied, shall be satisfied by compliance with the drilling and development requirements of such plan or agreement and this lease shall not terminate or expire during the life of such plan or agreement. In the event that said above described lands or any part thereof, shall hereafter be operated under any such sublease or sublease or leases, the production thereby allocated to any particular tract of land shall, for the purpose of computing the royalties to be paid hereunder to Lessee, be regarded as having been produced from the particular tract of land to which it is allocated and not to any other tract of land, and the royalty payments hereunder shall be based upon production only as so allocated. Lessee shall hereunder pay to any co-lessee or sublessee, under such sublease or subleases, the royalty or any other interest hereunder, beyond the control of Lessee.

13. All express or implied covenants of this lease shall be subject to all Federal and State laws, Executive Orders, Rules and Regulations and the lease shall not be terminated, in whole or in part, nor Lessee held liable in damages, for failure to proceed therewith, if completion is prevented by, or if such failure is the result of, any such law, order, rule, regulation, war, act of God, strikes, fire, explosion, flood, or any other cause reasonably beyond the control of Lessee.

14. Lessor hereby warrants and agrees to defend to the title to the lands herein described, and agrees that the Lessee shall have the right at any time to redeem, by payment, any mortgages, taxes or other liens on the above described lands, in the event of default of payment by Lessee, and be subrogated to the rights of the holder thereof, and the undersigned Lessee, for themselves and their heirs, successors and assigns, hereby surrender and release all right of dower and homestead in the premises described herein, instead as said right of dower and homestead may in any way affect the purposes for which this lease is made, as required herein.

15. Should any one or more of the parties heretofore named as Lessee fail to execute this lease, it shall nevertheless be binding upon all such parties who do execute it as Lessee. The word "Lessee", as used in this lease, shall mean any one or more of all of the parties who execute this lease as Lessee. All the provisions of this lease shall be binding on the heirs, successors and assigns of Lessee.

IN WITNESS WHEREOF, this instrument is executed as of the date first above written.

Terry N. Thomas, Trustee
STATE OF NORTH DAKOTA
COUNTY OF Williams

On this 4th day of March, 2011 before me personally appeared Terry N. Thomas, Trustee, known to me to be the person who is described in and who executed the within instrument as party of the first part, and acknowledged to me that he/she executed the same.

My Commission expires: 2/11/17

Kari Kriegen
Notary Public

LaRae A. Thomas, Trustee
STATE OF NORTH DAKOTA
COUNTY OF Williams

On this 4th day of March, 2011 before me personally appeared LaRae A. Thomas, Trustee, known to me to be the person who is described in and who executed the within instrument as party of the first part, and acknowledged to me that he/she executed the same.

My Commission expires: 2/11/17

Kari Kriegen
Notary Public
Attached to and made a part of that certain oil and gas lease dated March 1, 2011, by and between Terry N. Thomas and LaRae A. Thomas as Trustees for the Jay V. Thomas Family Trust, whose post office address is 1814 2nd Ave. E., Williston, ND 58801, as Lessor, whether one or more, and North Plains Energy, LLC of 1888 Sherman St., Suite 375, Denver, CO 80203, as Lessee, covering all that certain tract of land situated in the Counties of Williams and McKenzie, State of North Dakota, to-wit:

All mineral interests not claimed by the State of North Dakota in and under the following described lands, to-wit:

Tracts Nos. AA-2410 and AA2467B of the Final Order of Condemnation by the United States of America as recorded in Book 130, Page 493 consisting of unsurveyed accretions in front of the following described lands, to-wit:

Section 11: Lot 7
Section 13: Acres within the W½ considered part of Tract Number AA2467B
Section 14: Lots 2, 3, 6, 7
Section 23: Lots 2, 3
Section 24: Acres within the NW¼NW¼ considered part of Tract Number AA2467B

Notwithstanding the provisions of this lease to the contrary:

(a) This lease shall terminate at the end of the primary term as to all of the leased premises except those stratigraphic zones included within a production or spacing unit prescribed by law or administrative authority on which is located a well producing or capable of producing oil and or gas, unless lessee is then engaged in drilling or reworking operations in accordance with the provisions of this lease. In the event that lessee is engaged in said drilling or reworking operations at the expiration of the primary term, the lease shall remain in full force and effect as to all the leased premises so long as a continuous drilling program is maintained whereby not more than one hundred twenty days (120) shall elapse from the completion or abandonment of one well to the commencement of another well. Upon failure to maintain said continuous drilling program, this lease shall then automatically terminate as to such nonproductive part of the lease premises as provided above.

Notwithstanding the termination of a portion or portions of this lease, so long as any portion of the lease remains in force and effect, Lessee shall continue to have rights of ingress and egress over all of the Leased Premises originally described on this lease for all purposes granted by this lease held by production. For the purpose of this Paragraph (a), the stratigraphic zone extending from the top of the Bakken Formation to the base of the Three Fork Sanish formation shall be deemed to be one formation and perforated zone of a producing well bore(s) or horizontal leg(s) within that formation will hold the entire formation and Lessee obligation pursuant to this Paragraph (a) shall be to release formation 100 feet above the Bakken and 100 feet below the Three Fork Sanish.
(b) The right to pool or unitize is limited to the drilling or spacing unit established by the state oil and gas regulatory commission. Production from a well producing oil and/or gas from a unit, which contains a part of the lease premises shall be considered production under the lease.

(c) Notwithstanding the provisions of this lease to the contrary, or apparently to the contrary, the right to shut-in a well capable only of producing gas provided in this lease shall not continue for a period beyond two (2) years after such well is shut-in, and then only as to the acreage in the spacing unit for that gas well; moreover, no gas well shall be deemed shut-in, for purposes of lease extension, unless that gas well is capable of producing gas in commercial quantities; provided, however, that the right to maintain this lease by virtue of the shut-in status of a well which is capable of producing oil or gas shall recur upon each occasion that a well is shut-in, but in each case for a period not in excess of two (2) consecutive years during the secondary term.

(d) If Lessee assigns all or part of this lease, both assignor and assignee shall remain subject to the terms of this agreement including but not limited to any implied covenants of exploration, development and protection from drainage until the Lessor is provided with a copy of the assignment which shows the mailing address of the assignee, excepting, however, responsibility for environmental damage as hereinafter provided shall not be avoided by any assignment with or without furnishing copies thereof, if such damage was caused by Lessee.

(e) Provisions of any State surface owner protection compensation laws, such as North Dakota Century Code Chapter 38-11.1 shall apply.

(f) Where the lease requires the Lessee to commence additional drilling or reworking operations, it is also required that such drilling or reworking operations be diligently prosecuted.

(g) If, during the term of this lease, an oil and/or gas well is completed on a drilling or spacing unit in which the Lessor has no interest and which is adjacent or tangent to any property covered by this lease within a drilling or spacing unit which is without an offset well, Lessee agrees to commence drilling operations on such property within six months of 1) completion or 2) the release of information from a "tight hole" status, or release the stratigraphic zone in which said oil and/or gas well is completed in the adjacent or tangent drilling unit or spacing unit described in this paragraph.

(h) Production under terms of this lease is intended to be paying production under which the income from production exceeds expenses allocated to such production by the operator unless otherwise agreed in writing by the parties.

(i) This lease shall not apply to coal bed methane.

(j) Lessee agrees that all royalties accruing under this lease (including those paid in kind) shall be paid without deduction for the costs of producing, gathering, storing, separating, treating, dehydrating, compression, processing, transporting, marketing, depreciation, risk-capital charges and other post-production charges making the oil, gas and other products produced thereunder marketable and ready for sale or use.
(l) Nothing in this Exhibit is intended to relieve the Lessee from any implied covenants or from any obligation to act as a reasonable prudent operator, giving due regard to the interests of the Lessor.

(m) The Lessee undertakes to and does hereby agree to defend, hold harmless and indemnify Lessor, their successors, heirs or assigns, from any and all liability, costs and attorneys' fees the Lessor may suffer as a result of claims, demands, costs or judgments against Lessor arising out of any environmental damage caused by the Lessee on this lease or Lessee's noncompliance with any environmental law, order, administrative law or rule, adopted or promulgated by the State of North Dakota or the United States of America, or any board, agency or commission of either.

(m) Salt water disposal wells shall only be constructed and utilized with the express written permission of Lessor. No salt water from sources other than Lessor's wells may be disposed of in any salt water disposal well on Lessor's property without payment to and express written permission of Lessor. Salt water disposal wells shall be maintained and utilized in compliance with North Dakota law.

(n) In the event of any inconsistencies between the provisions of this Exhibit A and the provisions of the Lease, the provisions of Exhibit A shall control.

Dated this 4th day of March, 2011

[Signature]
Terry N. Thomas, Trustee

Dated this 4th day of March, 2011

[Signature]
LaRae A. Thomas, Trustee
March 30, 2011

Jay V. Thomas Family Trust
Terry N. Thomas and LaRae A. Thomas, Trustees
1814 2nd Ave. E.
Williston, ND 58801

RE: Township 153 North, Range 98 West
Tracts AA-2410, AA2467B, consisting of unsurveyed accretions in front of the
following described lands, to-wit:
Section 11: Lot 7
Section 13: Acres in W2 considered part of Tract Number AA2467B
Section 14: Lots 2, 3, 6, 7
Section 23: Lots 2, 3
Section 24: Acres in NWNE considered part of Tract Number AA2467B
Williams County, North Dakota

Dear Jay V. Thomas Family Trust:

Pursuant to the oil and gas lease dated March 1, 2011 that you signed with our company,
enclosed please find our check number 33152 in the amount of $75,662.04 for the lease bonus
payment covering the above described lands. Our lease purchase report indicates that you own
63.0517 net acres within the subject area, and North Plains has agreed to pay $1,200.00 per net
acre for the lease. The term of our lease will be 3 years, and the Royalty Interest will be 20.00%
of the oil and gas proceeds therefrom.

Thank you and should you have any questions please contact me at anytime.

Sincerely,

NORTH PLAINS ENERGY, LLC

Cassandra M. Graebing
Land Assistant

Enclosure
June 26, 2018

Lynn Helms  
North Dakota Industrial Commission  
600 East Boulevard Avenue, Dept. 405  
Bismarck, ND 58505-0840

RE: Ordinary High Water Mark of the Missouri River Bed as Prepared by Wenck

Dear Mr. Helms:

Thank you for the opportunity to provide comments on the Ordinary High Water Mark of the Missouri River Bed review prepared by Wenck Associates, Inc. ("Wenck").

Overview

The North Dakota Constitution and Century Code designate the Board of University and School Lands ("Board") as the governing body for a grant of land received at statehood for the benefit of education and certain institutions. The land, the proceeds, and investments are managed in several permanent trusts, including the Common Schools Trust Fund, for the benefit of the institutions for which the land was granted.

According to state statute, the Board also manages state-owned minerals and the oil, gas and related hydrocarbons within the beds of the State’s navigable waters. On behalf of the State, the Board oversees the Strategic Investment and Improvements Fund ("SIIF") which receives the revenues from sovereign minerals. The Board has had this management responsibility since at least 1977.

I am here today to provide comment on the Ordinary High Water Mark of the Missouri River Bed review as prepared by Wenck ("Review") presented to the North Dakota Industrial Commission ("NDIC") on April 17, 2018 regarding the ordinary high water mark ("OHWM") of the historical Missouri riverbed channel review required by N.D.C.C. ch. 61-33.1.

The Department of Trust Lands ("Department") will not comment on the OHWM definition provided in the Review, data compilation methods, methodology, legal research conducted to determine clear and convincing evidence standards, or other technical comments relating to the specific boundary delineations. The Department’s comments will focus on the usability of the Review for purposes of “implementing any acreage adjustments, lease bonus and royalty refunds, and payment demands as may be necessary relating to state-issued oil and gas leases”, N.D.C.C. § 61-33.1-04(2)(a), specifically: (1) public domain tracts; (2) omitted data and variables; and (3) alignment of data.
Public Domain Tracts

N.D.C.C. § 61-33.1-06 states:

Notwithstanding any provision of this chapter to the contrary, the ordinary high water mark of the historical Missouri riverbed channel abutting nonpatented public domain lands owned by the United States must be determined by the branch of cadastral study of the United States bureau of land management in accordance with federal law.

Of the estimated 7,300 nonpatented public domain acres, N.D.C.C. § 61-33.1-06 defers determination of ownership of public domain tracts to the federal government. The Department’s interpretation of N.D.C.C. § 61-33.1-06 is that the OHWM of the historical Missouri riverbed channel abutting the public domain tracts was to have been established at statehood or by the Supplemental Plats conducted by “the branch of cadastral study of the United States bureau of land management.” These Supplemental Plats state they were prepared for the purpose of delineating the boundaries of public domain oil and gas interests in determining the acreage of the areas affected by the movement of the Missouri River prior to the artificial flooding of Lake Sakakawea.

The Department’s initial analysis of the Review, which included comparison to the Supplemental Plats, determined Wenck: (1) did not identify in its OHWM Delineation Results Tables 2a and 2b (“Tables”) which tracts are deemed public domain, and (2) delineated the OHWM through public domain tracts, thus affecting the State’s total estimated acreage presented in the Review. Examples of the OHWM delineated through public domain tracts are as follows:

T153- R99 Sec. 34; T152-R99 Sec. 6 – Exhibit A
T153-R98 Sec. 11 – Exhibit B
T153-R98 Sec. 21 & 28 – Exhibit C

Omitted Data and Variables

Through the Department’s initial analysis of the Review, it appears data is missing from the Tables which may lead to invalid conclusions.

The Department is missing relevant river acreage data. The rows of the Tables titled BLM River Corridor appear to provide an overall acreage for the riverbed, but do not identify the acreage for specific quarter-quarter sections. The Review does not fully allocate acreages above or below the OHWM; thus preventing the Department from calculating the number of acres within each section. For the Department to implement acreage adjustments as required under the N.D.C.C. ch. 61-33.1, the Department will need this data, whether the data is provided by Wenck or it is necessary for the Department to contract with an independent engineering firm to provide this data. The Department will also need accretion data attributable to riparian or upland landowners within each quarter-quarter section. Without this data, the Board cannot accurately “implement any acreage adjustments, lease bonus and royalty refunds, and payment demands as may be necessary relating to state-issued oil and gas leases.” N.D.C.C. § 61-33.1-04(2)(a).
Examples of areas with missing data include:

T153-R99 Sec. 27 – Exhibit D
T154-R96 Sec. 25 – Exhibit E

Alignment of Data

Significant Digit-Decimal Point

The Department requests the columns of the Tables be brought out to at least two decimal points, to mirror how land is denoted in the Bureau of Land Management Master Title Plats (“Master Title Plats”) or PLSS. Currently, the Tables only provide one decimal point and that rounding of acreage could result in a significant acreage change for the State and fee owners. Without the additional information, the Department would be forced to make assumptions on acreage adjustment.

Total Acres - Tables 2a and 2b

The Department requests additional information regarding Wenck’s determination of “Total Acres” as presented in the second column of the Tables, as that information is not clearly defined in the Review. In many instances, it appears acreage in a quarter-quarter has increased or decreased with no explanation of where that acreage went or was added from. The Department would also seek additional information regarding the acreage depicted throughout the Tables as it is not congruent with the Master Title Plats by which the Department and industry’s spacing unit boundaries have been derived.

Legal Descriptions

Many of the legal descriptions of the tracts of land along the historical Missouri riverbed channel are incorrectly labeled. The Review seems to disregard pre-established government lots that were created per the original Master Title Plats. Instead, in many instances, the Review refers to government lots by their location within the section.

Furthermore, the Review protracts quarter-quarters both in riparian areas and through accreted lands. This is erroneous and does not protect the interests of the upland mineral owners, both in terms of their rights to the shoreline and patented area. Examples of possible inaccurate legal descriptions are:

T153-R93W Sec. 20 – Exhibit F
T153-R93W Sec. 26– Exhibit G
T153-R94W Sec. 3 & 4; T154-R93 Sec. 34 – Exhibit H
T153-R99 Sec. 36 – Exhibit I

Conclusion

The Department recognizes and appreciates the significant work of Wenck and the NDIC to produce the Review and recognizes it as the initial step in the process; however, additional work is needed by either Wenck or an independent engineering firm to provide the Department with the necessary data to “implement any acreage adjustments, lease bonus and royalty refunds, and payment demands as may be necessary relating to state-issued oil and gas leases”. N.D.C.C. § 61-33.1-04(2)(a). Finally,
the Department reserves the right to raise additional issues or concerns with the Wenck Review as further information is provided and/or additional analysis is conducted.

Sincerely,

Jodi Smith
Commissioner of University and School Lands