EXHIBIT B-13

MDEQ Well File No. 60076, for the Haystead 1-9

West Bay Exploration Company (WBEC), Haystead #9 SWD
(Permit #MI-079-2D-0010**)**

Administrative Record
Item # 38

March 15, 2013

DEQ MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - OFFICE OF GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO: ☒ DRILL ☐ DEEPEN ☐ CONVERT AND OPERATE A WELL

By authority of Part 615 or Part 625 of Act 451 PA 1994, as amended. Non-submission and/or falsification of this information may result in fines and/or imprisonment.

A 100064 issued

1a. Part 615 Supervisor of Wells: ☒ Oil and Gas ☐ Brine Disposal ☐ Hydrocarbon Storage ☐ Injection for Secondary Recovery

1b. Part 625 Mineral Wells: ☐ Waste Disposal ☐ Brine Production ☐ Processed brine disposal ☐ Storage ☐ Test, fee sched. on rev.

1c. Fee enclosed: ☐ Yes ☒ No, revision of application ☐ No, leg of horz drainhole

2. List all previous permit numbers

3. Fed. ID. No. (do not use SSN): 38-2348162

4. Conformance bond: ☒ Blanket ☐ Single well

5. ☐ Attached ☒ On file

6. Bond number: 08784181

7. Bond amount: 250,000

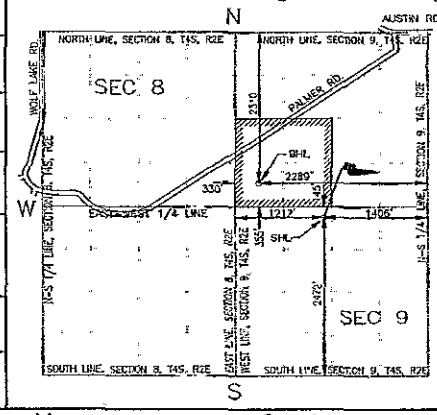
8. Applicant (name of permittee as bonded): West Bay Exploration Company

9. Address: 13685 South West Bay Shore Drive, Suite 200, Traverse City, MI 49684

Phone: (231) 946-0200

I authorize DEQ 4 additional days to process this application. ☒ Yes ☐ No

Locate well and outline drilling unit on section plat



10. Lease or well name (be as brief as possible): Haystead — Well number: 1-9

11. Surface owner: Harold and Harriet Haystead

12. Surface location: NE 1/4 of NW 1/4 of SW 1/4 of Sec 9 T4S R2E — Township: Norvell — County: Jackson

13. If directional, bottom hole location: SW 1/4 of SW 1/4 of NW 1/4 of Sec 9 T4S R2E — Township: Norvell — County: Jackson

14. The surface location for this well is 2472 feet from nearest (N/S) S section line AND 1212 feet from nearest (E/W) W section line

15. Is this a directional well? ☐ No ☒ Yes If yes, complete line15. The bottom hole location for this well is 2310 feet from nearest (N/S) N section line AND 330 feet from nearest (E/W) W section line

16. The bottom hole location (whether straight or directional) of this well is 355 feet from nearest (N/S) S drilling unit line AND 330 feet from nearest (E/W) W drilling unit line

17. Kind of tools: ☒ Rotary ☐ Cable ☐ Combination

18. Is sour oil or gas expected? ☒ No ☐ Yes ☐ H_2S Cont. plan enclosed

19. Base of lowest known fresh water aquifer: Formation Michigan Marshall Depth 280'

20. Intended total depth: MD 4928' TVD 4750'

21. Formation at total depth: Glenwood

22. Producing/injection formation(s): Trenton/Black River

23. Objective pool, field, or project: Napoleon/Norvell

24. PROPOSED DRILLING, CASING AND CEMENTING AND SEALING PROGRAM

HOLE			CASING			CEMENT			MUD	
Depth (MD)	Geol. Formation	Bit Dia.	O.D. Size	Wt/Ft Grade Condition	Depth (MD)	Sacks	T.O.C.	W.O.C	Wt.	Vis.
400'	Shale	14 ¾"	11 ¾"	42#/ft H-40 New	400'	300	Surf	12	8.4	80
2200'	Bass Isle	10 5/8"	8 5/6"	24#/ft J-55 New	2200'	700	Surf	12	8.5	36+
4928'	Glenwood	7 7/8"	51/2"	15.5#/ft J-55 New	4928	425	1500	24	10.2	30+

25. DETAIL CEMENTING PROGRAM. IDENTIFY ALL CEMENT CLASSES, ADDITIVES, AND VOLUMES (IN CU. FT.) FOR EACH CASING STRING.

SurfaceCsg AV=173 Cu Ft x2=346 cu ft-Lead 200 sx Lite (1.56 yield)=317 cu ft Tail=100 sx Class A (1.18 yield)=118 total 435

Intermediate Csg TD-2200' AV=462 cu ft Lead-500 sx Howco Lite Tail=200 sx Class A=1016 cu.ft.

Production/Injection 1st stage-75 sx Class A 2nd stage =250 sx Lite & 100 sx Class A

26. Send correspondence and permit to

Name West Bay Exploration Company E-mail anni@wbeco.net

Address PO Box 1203, Fowlerville, MI Phone (517) 223-4011

CERTIFICATION "I state that I am authorized by said applicant. This application was prepared under my supervision and direction. The facts stated herein are true, accurate and complete to the best of my knowledge."

Enclose permit fee of $300 for all Part 615 wells; $2,500 for a Part 625 waste disposal well; or $500 for a brine production, processed brine disposal, or storage well. Make checks payable to State of Michigan.

27. Application prepared by (print or type): Ann M Baker — Phone: (517) 223-4011

28. Signature: [signature] Date: 3/15/10

DEQ Cashier use only.

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OFFICE OF GEOLOGICAL SURVEY
PERMITS & BONDING UNIT

Office of Geological Survey Use Only

Permit number	API number	Date issued	Owner number
600076	21-075-600760	5-5-10	104

EQP 7200-1 (rev. 5/2007) SEE INSTRUCTIONS FOR MAILING ON REVERSE

DEQ

State of Michigan
Department of Environmental Quality
Geological and Land Management Division
P.O. Box 30256
Lansing, MI 48909-7756

PERMIT TO

☑ DRILL AND OPERATE ☐ DEEPEN AND OPERATE

GRANTED UNDER THE PROVISIONS OF
Part 615 Supervisor of Wells, Act 451, PA 1994, as amended

Violation of and/or non-compliance with the provisions of this act or its rules, instructions or orders of the supervisor, or these permit conditions may result in penalties. This permit includes as requirements all the operations and methods proposed by the applicant in the application to drill, unless rejected or altered by the DEQ. This permit is also subject to the general and specific conditions identified on this page and/or attached to it. Initiation of any work under this permit confirms the permittee's acceptance and agreement to comply with its terms and conditions.

PERMIT NO.	ISSUE DATE	EXPIRATION DATE
60076	5/5/2010	5/5/2012

WELL NAME AND NUMBER
HAYSTEAD 1-9

FORMATION AT TOTAL DEPTH	COMPLETION FORMATION
GLENWOOD	TRENTON-BLACK RIVER
PERMITTED TOTAL DEPTH (MEASURED)	PERMITTED TOTAL DEPTH (TVD)
4929 ft.	4750 ft.
TYPE OF PERMIT	API NUMBER
Oil/Gas Well	21-075-60076-00-00

ISSUED TO:
WEST BAY EXPLORATION CO
STE 200
13685 S WEST BAYSHORE DR
TRAVERSE CITY, MI 49684

LOCATION AND FOOTAGES: SHL: NE NW SW, SEC 9, 4S 2E, NORVELL TWP, JACKSON CO.
2472 FT. FROM S AND 1212 FT. FROM W SECTION LINE.

BHL: SW SW NW, SEC 9, 4S 2E, NORVELL TWP, JACKSON CO.
2310 FT. FROM N AND 330 FT. FROM W SECTION LINE.
355 FT. FROM S AND 330 FT. FROM W DRILLING UNIT LINE.

CASING AND SEALING REQUIREMENTS

HOLE DEPTH	HOLE DIA.	CASING O.D.	WT./FT.	GRADE	CONDITION	DEPTH (M.D.)	SACKS CMT	CEMENT TOP	MUD WT.
400'	14 3/4"	11 3/4"	42	H-40	NEW	400'	300	SURFACE	8.4
2200'	10 5/8"	8 5/8"	24	J-55	NEW	2200'	700	SURFACE	8.5
4929'	7 7/8"	5 1/2"	15.5	J-55	NEW	4929'	425	1500	10.2

SPECIFIC PERMIT CONDITIONS

1. Copies of all Electric logs run on this well shall be submitted to the Lansing Office of the Geological Survey on paper and electronic format. Log ASCII Standard (LAS) and Tag Image File Format (TIF) files shall be submitted on a compact disc. These files should be named using the well's permit number with the log type name.
2. Strip and save topsoil for later site restoration. Construct Earthen berms and employ siltation fencing as necessary to prevent off-site erosion and sedimentation.
3. A temporary water well for onsite freshwater is allowed. It shall not be used for drinking water and shall be plugged upon well completion.
4. Due to shallow groundater, a shallow temporary working pit may be installed or otherwise steel tanks are to be used to contain drilling fluids and cuttings. Contents to be solidified and hauled to Waste Management/McGill Road Landfill, Jackson. Area Geologist, Kristine Shmko (517) 373-9409 (o) or (517) 242-6847 (cell) shall be notified prior to water well installation, pit excavation, pit liner installation and pit encapsulation.

GENERAL PERMIT CONDITIONS

1. The permittee is required to give notice to public utilities in accordance with Act 53, PA 1974, M.C.L. 460.701-460.718.
2. This permit does not convey property rights in either real estate or material, neither does it authorize any injury to any public or personal property.
3. This permit does not preclude the necessity of obtaining other local, state, or federal permits which may apply to the drilling or operation of this well.
4. All trash and garbage shall be removed from the drill site at the completion of drilling, no garbage may be buried on site.
5. This permit allows a well containing hydrogen sulfide to be drilled and tested subject to the Hydrogen Sulfide Management Provisions of the Rules promulgated under Part 615, 1994 PA 451, as amended. Contact the Air Quality Division prior to producing a sour well to determine if an Air Quality Installation or Operation Permit is required.

OFFICE TO BE NOTIFIED PRIOR TO PREPARING LOCATION AND PRIOR TO MOVING IN DRILLING EQUIPMENT	PERMIT ISSUED FOR THE SUPERVISOR OF WELLS BY
Lansing (517) 241-1515	

EQ 7200 (Rev 12/02)

DEQ

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY – OFFICE OF GEOLOGICAL SURVEY

TRANSMITTAL AND FIELD REVIEW FOR PROPOSED WELL SITE

☒ Part 615 Supervisor of Wells, Act 451 PA 1994, as amended
☐ Part 625 Mineral Wells, Act 451 PA 1994, as amended

1a. Application number	1b. Revision	1c. Coordinator	1d. District/Field Office	1e. Date recvd	1f. Date sent	1g. Date due
A100064	☐ Yes ☐ No	Mark Snow	LANSING	4/9/2010	4/13/2010	5/9/2010

2a. Applicant	2b. Owner number
WEST BAY EXPLORATION	104

3a. Well name and number	3b. Previous permit numbers
HAYSTEAD 1-9	

4a. Surface location						Township	County
NE 1/4	NW 1/4	SW 1/4	Sec. 9	T 4S	R 2E	NORVELL	JACKSON

4b. Footages
2472 feet from S line of Section 1212 feet from W line of Section

5a. Surface Ownership ☒ Private ☐ State ☐ Federal | 5b. Mineral ownership ☒ Private ☐ State ☐ Federal

6a.	6b.	6c. Well site area local zoning
☐ Within Gas Storage Field ☐ Rule 413 applies Storage field name	☐ Contains H_2S Part 11 rules apply	☐ Res, date _____ see R407(3), 505,506 ☒ Other: AG.

7. Endangered species, state leases, or additional information
No state interests. Natural features matches for Fed/State Endangered - Indiana Bat, State Endangered - Kitten Tales and Ste Threatened - Leiburg's panic Grass. Mike Sanders at NFI notified. Pad will be shared with Haystead 3-9. Temp Pit and Temp water well. Added MD and TVD from Directional plan.

FIELD REVIEW AND RECOMMENDATIONS

8. Field review by: name and date	8a. Land use	8b. Cover type/density
K. Shimko, 4/19/10	Agricultural	Open field, no indication of a landing strip.

9. Topography - (slope, % grade) Access is relativley level. Pad slopes ~2% N. Surface drainage is predominently N.	10. Soil type and drainage, field tiles, etc. Brady Sandy Loam and Ormas-Spinks Complex. No drain tiles identified.	
11a. Area involved Drill pad 200' x 300' Acres 1.38 To share pad with Haystead 3-9.	11b. Is any area of the drill pad closer than 150' to a structure or water well? If yes, approval req. No	11c. Area involved Access road 1560' x 20' Acres 0.72

12 Are soil erosion and sedimentation control measures for well site, access, flowline, and surface facilities adequate? ☒ Yes ☐ No	Existing marsh/wetland features will be protected using earthen berms around the well site and SESC measures (silt fence) outside the limits of the well site and access route. Surface facility has not yet been determined.
13. Buildings, public roads, pipelines and power lines, private water wells within 600 feet and public water wells within 800 or 2,000'. Are all features shown on attached plat? ☐ Yes ☐ No	None. Proposed Haystead 3-9 is 85' SE of stake. Per Westshore Consulting 4/22/2010 letter, there is no landing strip, only cultivated field.
14. Type, direction and distance to surface waters, waterways, wet lands, flood plains, natural rivers within 1320 feet, and Great Lakes shorelines within1500 feet. Are all features shown on attached plat? ☒ Yes ☐ No	Unnamed tributary to Raisin River is 938' NE of stake. Marshy areas that drain to the tributary are 721' NE, 222' NE, and 654' SE of stake.
15. Nearby scenic, historical, recreational, environmentally sensitive, or critical dune areas, and threatened and endangered species within 1320 feet. Are all features shown on attached plat? ☐ Yes ☐ No	Natural Features hits - 4/24/10 Mike Sanders, Wildlife Division: Indiana Bat has been know to occur near the project area. Per Westshore Consulting 4/28/10 letter, the proposed well drilling pad and access road will not impact the Indiana Bat, Kittentails, or Leiburg's Panic Grass.
16. Is casing and sealing adequate? Conductor ☐ Yes ☐ No Surface ☒ Yes ☐ No Intermediate ☒ Yes ☐ No Production ☒ Yes ☐ No	Expected depth to base of fresh water 280' formation MI/Marshall Propose to set 400' of 11-3/4" csg into shale. CWS picked at 279' from Hilden 1-16. Sec 9 WWs range between 40'-181' in sandrock. 11-3/4" csg should be sufficient. 8-5/8" csg not 8-5/6" csg will be run. 5-1/2" csg details missing off EQP 7200-1, took TDs off directional plans.
17. Is Intermediate Casing Exception recommended? ☐ Yes ☒ No ☐ NA	
18. B.O.P. Program adequate? ☒ Yes ☐ No If certified tests required, give details.	

19. H2S, Part 11 rules apply? ☐ Yes ☒ No 4/12/10 Ray Vugrinovich, no H2S expected.
☐ Contingency plan reviewed and approved
☐ Deficiencies in contingency plan, specify
☐ Class IV, plan not required

Well location complies with Rule 1106(1), (2), Isolation Distances ☐Yes ☐No

Surface facility complies with Rule 506, Residential Areas ☐Yes ☐No ☐ Don't know, surface facility not identified.

20. Source of freshwater:
☐ Municipal source ☒ Temporary well ☐ Permanent well ☐ Other, specify
WW will be plugged upon final completion and not used for drinking water.

21. Drilling pit requirements
a. On-site in-ground pit allowed?
☒ Yes ☐ No
If no, specify disposition of mud and cuttings. Anticipated depth to GW 5' +/-. If GW depth allows, pit will be in-ground and used as a working pit/otherwise use steel tanks. Will solidify contents and haul cuttings to Waste Management/McGill Rd LF, Jackson.

b. Specific requirements?
☐ Yes ☒ No
If yes, specify requirements, such as location of pit on drill pad.

c. Remote pit will be used
☐ Yes ☒ No
If yes, identify location of remote pit.
Are all surface owner approvals and surveys filed? ☐ Yes ☐ No

d. Rule 407(3) applies
Zoned residential prior to 1/8/93?
☐ Yes ☒ No
If yes, is in-ground pit exception requested by applicant AND recommended by GLMD ☐ Yes ☐ No

e. Rule 407(7)(b) (iv) applies
Paint filter test required?
☐ Yes ☒ No
If yes, what is contingency for disposal of muds if they fail paint filter test?

f. Salt cuttings to be (give details)
☐ Removed for disposal
☐ Dissolved & removed
☒ None
Specify landfill
Specify disposal well or waste hauler

g. Area Geologist notification prior to:
☒ Yes ☐ No Pit excavation
☒ Yes ☐ No Pit liner installation
☒ Yes ☐ No Pit encapsulation

22. Is EIA for surface facilities included in application or described elsewhere?
☐ Yes ☒ No, R504 (4) applies
☐ No, less than 300' from well head
If no and greater than 300' from wellhead, does feasible location for surface facilities exist? ☒ Yes ☐ No

23. DEQ and/or DNR comments
Strip topsoil for later site restoration. Construct earthen perimeter berms.

24. Items continued and/or not covered above (attach additional sheets if needed)

25. Revision included (describe if applicable)
Per Westshore Consulting 4/22/10 letter, there is no landing strip, only cultivated field.
Per Westshore Consulting 4/28/10 letter, the proposed well drilling pad and access road will not impact the Indiana Bat, Kittentails, or Leiburg's Panic Grass.

26. Representative of permittee contacted regarding additional requirements? ☐ Yes ☒ No
Name Date Phone

27. Area geologist: recommend a permit: ☒ Yes ☐ No (provide reasons) ☐ Needs corrections or additional information ☐ Memo attached

Kristy Shimko (Signature) Geologist (Title) 5/4/10 (Date)

28. District Geologist: Recommend a permit: ☒ Yes ☐ No (provide reasons) ☐ Needs corrections or additional information ☐ Memo attached

Walter Danyluk (Signature) District Supervisor (Title) 4/23/2010 (Date)

DEQ MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - OFFICE OF GEOLOGICAL SURVEY

SURVEY RECORD OF WELL LOCATION

This information is required by authority of Part 615 Supervisor of Wells, or Part 625 Mineral Wells, of Act 451 PA 1994, as amended, in order to obtain a drilling permit.

Applicant: West Bay Exploration Company

Well name and number: Haystead 1-9

1a. Surface location: NE 1/4 of NW 1/4 of SW 1/4 of section 9 T 4S R 2E — Township: Norvell — County: Jackson

1b. If this is a directional well, bottom hole location will be: SW 1/4 of SW 1/4 of NW 1/4 of section 9 T 4S R 2E — Township: Norvell — County: Jackson

Instructions: Outline drilling unit for oil/gas wells (Part 615) or property boundary for mineral wells (Part 625) and spot well location on plat shown. Locate the well in two directions from the nearest section, quarter section, and unit (or property, Part 625) lines.

2. The surface location is

2472 ft. from nearest (N/S) S section line

1212 ft. from nearest (E/W) W section line

and

145 ft. from nearest (N/S) N quarter section line

1406 ft. from nearest (E/W) E quarter section line

3. Bottom hole will be (if directional)

2310 ft. from nearest (N/S) N section line

330 ft. from nearest (E/W) W section line

and

355 ft. from nearest (N/S) S quarter section line

2289 ft. from nearest (E/W) E quarter section line

4. Bottom hole will be (directional or straight)

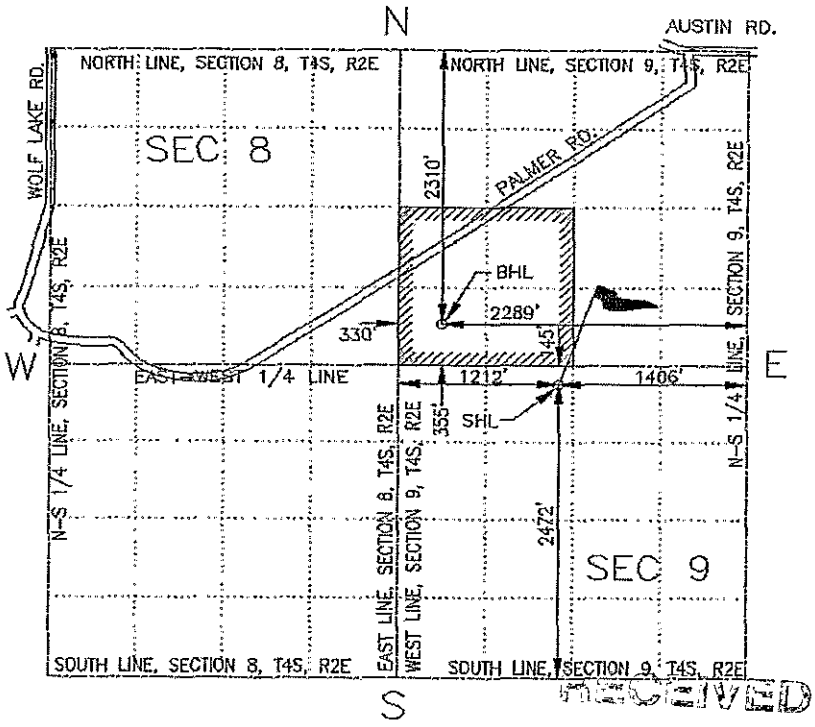
355 ft. from nearest (N/S) S drilling unit line

330 ft. from nearest (E/W) W drilling unit line

5. Show access to stake on plat and describe if it is not readily accessible. Go south on I-127 to M-50. Go east on M-50 8 miles to Village of Napoleon, continue east for 2.5 miles on Austin Road. Go south and west on Palmer Road for 0.8 miles to farm lane to south. Take farm lane south for 0.3 miles, then east on farm lane 0.25 miles to well site.

6. Zoning ☐ Residential, effective date _____
Initial date of residential zoning _____
☒ Other Agricultural

PLAT BELOW REPRESENTS ONE FULL SECTION (1 MILE SQUARE)



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ON SEPARATE PLAT OR PLOT PLAN, LOCATE, IDENTIFY AND SHOW DISTANCES TO:

A. All roads, power lines, buildings, residences, fresh water wells, and other man-made features, within 600 feet of the stake.

B. All lakes, streams, wetlands, drainage-ways, floodplains, environmentally sensitive areas, natural rivers, critical dune areas, and threatened or endangered species within 1320 feet of the stake.

C. All type I and IIa public water supply wells within 2000 feet and all type IIb and III public water supply wells within 800 feet of the well stake.

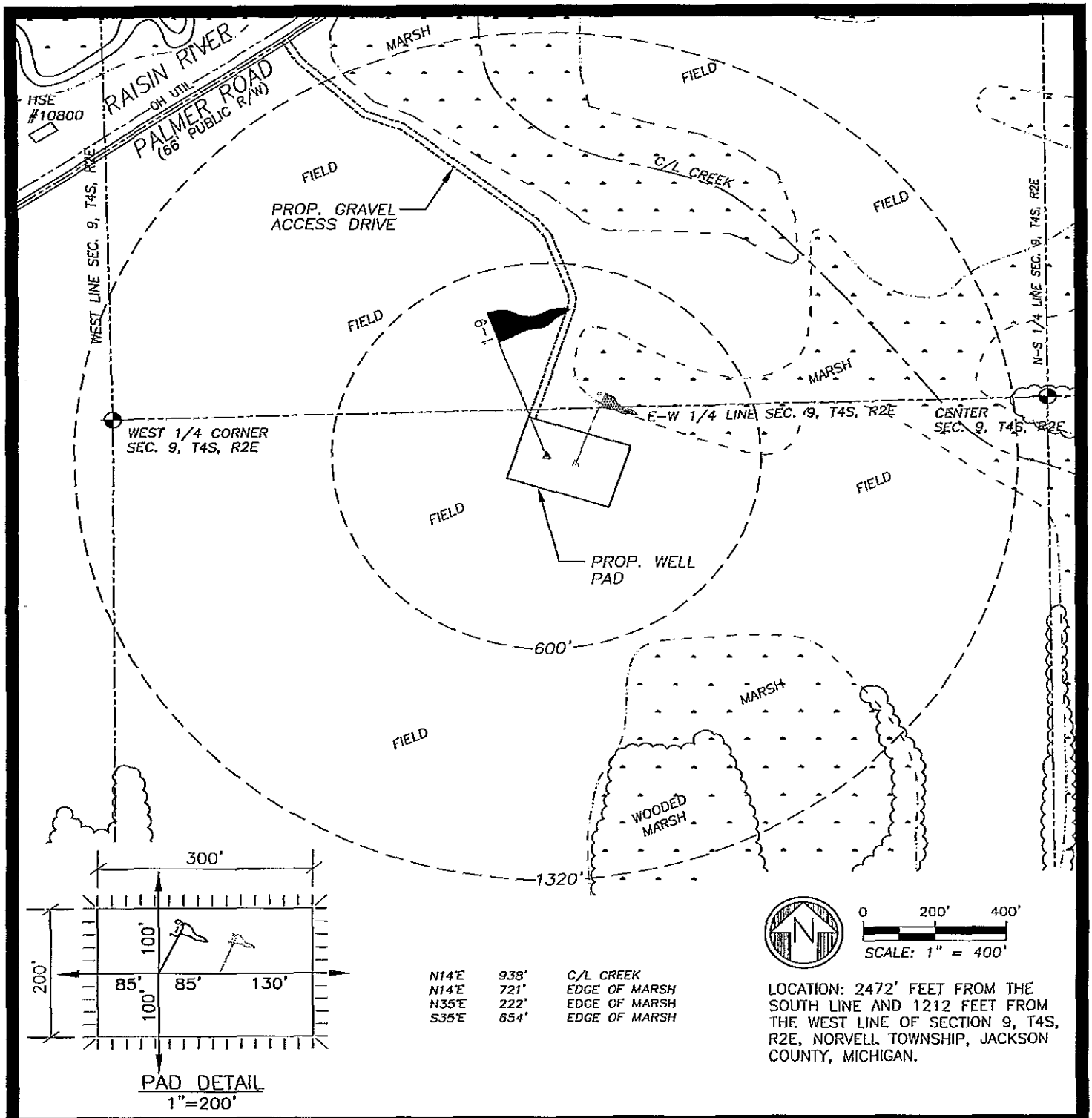
Name of individual who surveyed site	Company	Date of survey
Stephen V. Vallier, P.S.	Westshore Consulting	03/01/2010
Address: 2534 Black Creek Road, Muskegon, MI 49444		Phone: (231) 777-3447

I CERTIFY THE ABOVE INFORMATION IS COMPLETE AND ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Signature of licensed surveyor (affix seal) Stephen V. Vallier — Date 3/14/10

STATE OF MICHIGAN — Stephen V. Vallier — PROFESSIONAL SURVEYOR — No. 15081 — LICENSED PROFESSIONAL SURVEYOR

EQP 7200-2 (rev. 01/2005) ENCLOSE WITH APPLICATION TO DRILL OR DEEPEN



N14°E	938'	C/L CREEK
N14°E	721'	EDGE OF MARSH
N35°E	222'	EDGE OF MARSH
S35°E	654'	EDGE OF MARSH

LOCATION: 2472' FEET FROM THE SOUTH LINE AND 1212 FEET FROM THE WEST LINE OF SECTION 9, T4S, R2E, NORVELL TOWNSHIP, JACKSON COUNTY, MICHIGAN.

WESTSHORE CONSULTING
Engineers ■ Scientists ■ Surveyors ■ Planners
2534 Black Creek Road
Muskegon, MI 49444
Ph: (231) 777-3447
Fax: (231) 773-3453
E-mail: service@westshoreconsulting.com
Grand Haven, MI
Manistee, MI

WEST BAY EXPLORATION COMPANY
5555 Hogback Road
Fowlerville, MI 48836

SURVEY OF THE HAYSTEAD 1-9
LOCATED IN SECTION 9, T4S, R2E,
NORVELL TWP, JACKSON CO.

Checked:	SW
Date:	3/30/10
Drawn by:	WAV
Date:	3/30/10
File No.:	323/100
Figure:	1

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DEQ MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY – OFFICE OF GEOLOGICAL SURVEY

ENVIRONMENTAL IMPACT ASSESSMENT

Required for issuance of well permit pursuant to Part 615, 1994 PA 451, as amended. Falsification of this information may result in fines and/or imprisonment. Check all boxes and fill in all blanks which apply to this drilling application. Attach additional pages as necessary.

A. DESCRIPTION OF PROJECT

1. Applicant's name	Well name and number	Intended use of well
West Bay Exploration Company	Haystead 1-9	Exploratory

2. Mineral ownership, check each category of mineral owners in drilling unit or Antrim Uniform Spacing Plan

☒ Private ☐ State ☐ Federal ☐ Other, identify

3. Applicable spacing order and drilling unit size

☐ S.O. 14-9-94 N. Mich. Antrim, 80 acres
☐ S.O. 1-73 Niagaran, 80 acres
☐ R 324.301 General rule, 40 acres
☒ Field Spacing or Unitization Order (identify below)
☐ S.O. 3-3-95 S. Mich. Antrim, 40 acres
☐ S.O. 2-81 Oakland Co. Niagaran, 40 acres
☐ S.O. 1-86 P.D.C., 640 acres

Trenton Order 18-2007

☐ Antrim USP (identify name, number of acres, and number of drilled and permitted wells)

☐ Administrative exception requested per R324.303 (2). See instructions for applying for an administrative spacing exception
☐ Exception to spacing requested, petition for hearing filed
☐ Non-producing well, no drilling unit

4. Applicant's right to drill and produce

☒ Yes ☐ No Are all mineral interests in the drilling unit under lease and controlled by the applicant/permittee?
If no, ☐ petition filed for compulsory pooling **OR** ☐ certified efforts to obtain leases are attached (if allowed by spacing order)
☐ Not applicable, no drilling unit.
☒ Yes ☐ No Has applicant obtained all contractual rights needed to locate the well where it is proposed?
If no, ☐ what additional approvals are needed? _____

5. Special considerations

☐ Replacement well for permit no. _____ or ☐ Existing well pad
☐ Yes ☒ No Is well expected to encounter H_2S?
☐ Yes ☒ No Is well located in a city, township, or village with a population greater than 70,000?
☐ Other (describe) _____

B. IMPACTS AS A RESULT OF DRILLING

1. Access route dimensions

1560 feet x 20 feet / 43,560 = 0.72 acres.

Provide a detailed description of topography, drainage, soil type(s), direction and percentage of slopes, land cover and present land use for the access route while drilling. Identify route on attached plat. The topography of the ground surface along the access route is relatively level. Drainage is northerly for the first 1260 feet off Palmer and easterly for the last 300 feet. The route is open field. The land use is zoned agricultural. The soil type per the USDA Soil Survey is Brady Sandy Loam.

2. Well site dimensions

200 feet x 300 feet / 43,560 = 1.38 acres.

Provide a detailed description of topography, drainage, soil types(s), direction and percentage of slopes, land cover and present land use for the well site. Identify well site on attached plat The topography of the existing ground surface at the proposed well site slopes to the north at a grade of approximately 2%. The drainage is northerly to a low marshy area. The land use is zoned agricultural and the land cover is open field. The soil type per the USDA Soil Survey is Ormas-Spinks Complex.

3. Is well site located in residentially zoned area? ☐ Yes ☒ No If yes, R324.407(3) and R324.505 apply.

4. Are drain tiles present? ☐ Yes ☒ No If yes, identify where they exist on attached plat or project map. How will they be handled if they are encountered? .

5. Identify the distance and direction to all of the following, also identify on attached plat

a. All buildings, fresh water wells, public roads, power lines and other man-made features within 600' of the well site.
No man-made features exist within 600 feet of the proposed well.
The proposed Haystead 3-9 well will be 85 feet southeast of the Haystead 1-9 well.

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PERMITS & BONDING UNIT

b. All Type I and Type IIa public water supply wells within 2000' of the well site and all Type IIb and Type III public water wells within 800' of the well site No Type I, II or III public water supply wells were identified within the specified radii.

(Type I is a community water supply with year-round service ≥ 15 living units or ≥ 25 residents. Type II is a non-community water supply with ≥ 15 service connections or ≥ 25 individuals for not less than 60 days per year. Average daily water production: IIA ≥ 20,000 GPD IIB <20,000 GPD Type III is a public water supply which is neither type I or II.)

(Part B-5 continued)
c. Surface waters, floodplains, wetlands, natural rivers, critical dune areas, threatened or endangered species within 1320' and Great Lake shorelines within 1500' of the well site. An unnamed tributary to the Raisin River is located 938 feet northeasterly of the well. Marshy areas that drain to the tributary are located 721 feet northeast, 222 feet northeast, and 654 feet southeast of the proposed well. The USFWS indicates that the endangered Indiana Bat (Myotis sodalis) may occur in this area.

d. Describe the actions to be taken to mitigate impacts to any of the items identified in Part B-5 a-c above. The existing marsh/wetland features will be protected using earthen berms around the well site and strategic soil erosion and sedimentation control measures, such as geotextile silt fence and vegetation preservation outside the limits of the well site and access route. The well site and access route will fall in open fields, and there is no anticipated tree removal or activity that would affect Indiana Bat habitat.

6. Identify the source of fresh water used to drill this well

☐ "Permanent" water well, to be retained after final completion OR used for drinking water
(shall be drilled and installed pursuant to Part 127 of 1979 PA 368, as amended)
☒ "Temporary" water well, will be plugged upon final completion and not used for drinking water
(consult R 324.403 (2) for minimum construction requirements)
☐ Fresh water will be hauled from existing water well or municipal source (identify) _____
☐ No fresh water will be used in drilling this well

7. Pit location and handling and disposal of drill cuttings, muds and fluids

Anticipated depth to groundwater 5' +/- Method determined by Topographical Survey
☐ On site in-ground pit, anticipated dimensions: L _____ W _____ D _____
☐ Remote in-ground pit, anticipated dimensions: L _____ W _____ D _____
Attach approval of landowner and attach survey of remote pit location
☒ Well drilled below base of Detroit River Anhydrite. Describe how mud and cuttings pursuant to R324.407(7)(iv) will be handled.
Pit fluids below DRA disposed by _____ licensed liquid waste hauler **OR**
Pit fluids below DRA disposed at the _____ disposal well.
If drill cuttings & mud don't pass paint filter test, they will be disposed at _____ landfill.
☐ No salt cuttings **OR**
☒ Salt cuttings dissolved and disposed by Seller Tank Truck Service, Inc. licensed liquid waste hauler **OR**
☒ Salt cuttings hauled to Waste Management/McGill Road Landfill, Jackson landfill
☒ Temporary pit, cuttings and muds disposed at (identify) Waste Management/McGill Road Landfill, Jackson
☐ No in-ground pit, cuttings and muds disposed at (identify) _____
☒ Pit will be solidified.

C. IMPACTS AS A RESULT OF PRODUCTION

1. Kind of well ☒ exploratory ☐ development ☐ Other (describe) _____
☐ Antrim project **(submit separate project EIA, form EQP 7200-21, for access roads, flow lines, and surface facilities)**
where is project EIA found? _____ and complete C-2, omit C-3 and C-4

2. Location of surface facilities (Prior to construction, the District Geologist, pursuant to R324.1002, must also approve all surface facility secondary containment plans.)

☐ Greater than 300' from wellhead. Identify facility location on attached plat and complete C-3 and C-4.
☐ Less than 300' from wellhead. Identify facility location on attached plat, complete C-3, omit C-4
☐ Surface facility exists or was previously approved for construction and is known as _____
_____ complete C-3, omit C-4.
☒ Surface facility location was not determined for this **exploratory** well (omit C-3 and C-4). Submit a separate request for **Surface Facility Location Approval (form 7200-22)**, which includes a Facility Plan, Environmental Impact Assessment, and Soil Erosion and Sedimentation Control Plan, to District Geologist prior to construction pursuant to R324.504.

3. Flow Line Environmental Impact Assessment

☐ Identify flow line location and course from well to the surface facility on attached plat.
Flow line route dimensions _____ feet x _____ feet / 43,560 = _____ acres.
Describe the topography, drainage, soil type(s), direction and percentage of slopes, land cover and present land use along the flow line route

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PERMITS & BONDING UNIT

4. Surface Facility Environmental Impact Assessment

a. Dimensions of surface facility _____ feet x _____ feet / 43,560 = _____ acres
b. Describe the topography, drainage, soil type(s), direction and percentage of slopes, land cover, and present land use
1. Along access route to surface facility

Part C-4, continued

2. At surface facility site

c. Are surface facilities likely to receive oil or gas with H_2S concentration greater than 300 ppm? ☐ Yes ☐ No, if yes, R324.1106(2) applies.

d. Will surface facilities be located in residentially zoned area? ☐ Yes ☐ No, If yes, R324.506 may apply

e. Identify the distance and direction to all of the following, and identify on attached plat

1. Distance and direction to all buildings, fresh water wells, public roads, power lines and other man-made features within 600' of surface facility

2. Distance and direction to any surface waters, floodplains, wetlands, natural rivers, critical dune areas, and threatened or endangered species within 1320' and Great Lakes shorelines within 1500' of the surface facility site

3. Describe the actions to be taken to mitigate impacts to any of the items identified in Part C-4e 1 and 2 above.

4. Distance and direction to all Type I and Type IIa public water supply wells within 2000' of the surface facility site and all Type IIb and Type III wells within 800' of the surface facility

Type I is a community water supply with year-round service ≥ 15 living units or ≥ 25 residents. Type II is a non-community water supply with ≥ 15 service connections or ≥ 25 individuals for not less than 60 days per year. Average daily water production: IIA ≥ 20,000 GPD IIB <20,000 GPD Type III is a public water supply which is neither type I or II.

5. Method of brine disposal

☐ Dedicated flow line to disposal well_____, permit number _____

☒ Transported by tanker. ☐ Other _____

6. Method of transporting hydrocarbons past the point of sale

☐ Oil sold through transmission line

☒ Oil transported by tanker for sale

☐ Other _____

☐ Gas sold through transmission line

☒ Gas flared on site (production restrictions may apply)

D. MITIGATION OF IMPACTS FROM DRILLING AND/OR PRODUCTION

Describe additional measures to be taken to protect environmental and/or land use values Berms and erosion control measures will be used to protect the areas beyond the access route and pad location. Due to the remote location of this well, it is not anticipated that there will be a negative impact on residents and land use values. The well site berm will contain any accidential releases and control storm water, and the soil erosion plan will be followed. Hospital-type mufflers will be used to mitigate noise. All applicable environmental and safety requirements will be followed.

E. ADDITIONAL PERMITS

Identify additional permits to be sought None

F. SOIL EROSION AND SEDIMENTATION PLAN

Submit a soil erosion and sedimentation plan (form 7200-18) which addresses **each** well site, surface facility, and flow line route identified in this application. (Refer to requirements under Part 91, 1994 PA 451)

G. ALTERNATE WELL AND SURFACE FACILITY LOCATIONS

Were alternate surface locations considered for this well or surface facility?

☒ No, alternate sites did not seem necessary or more desirable

☐ Yes, the following locations were considered

Why were they rejected in favor of the proposed location?

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H. CERTIFICATION

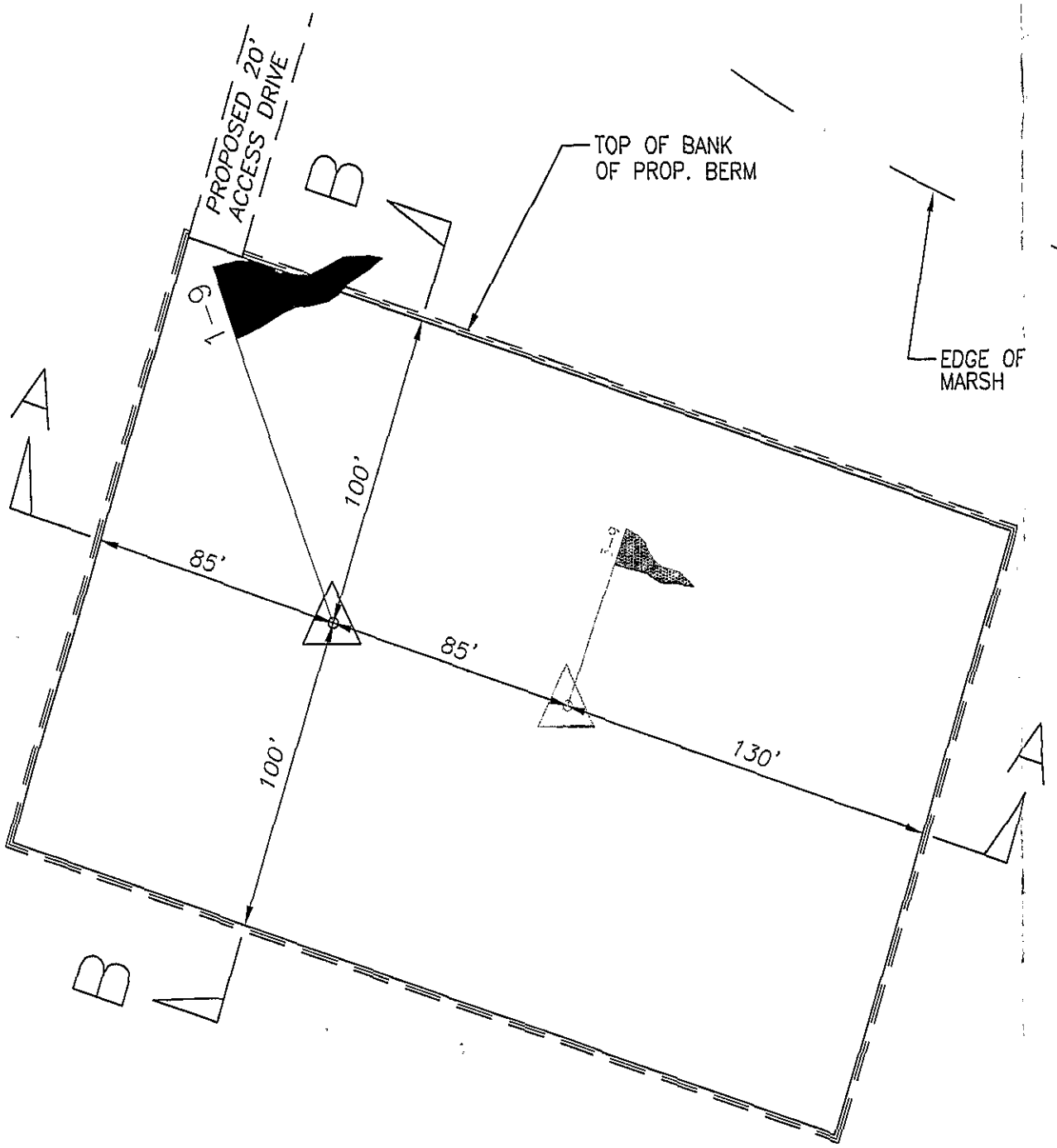
"I state that I am authorized by said applicant to prepare this document. It was prepared under my supervision and direction. The facts stated herein are true, accurate and complete to the best of my knowledge."

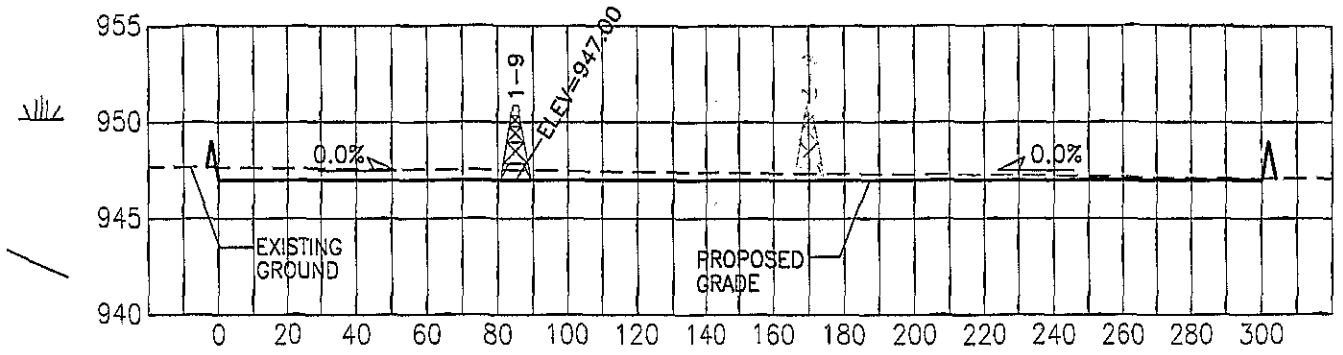
Wade A. VandenBosch, P.E. — Name and title (printed or typed)

Wade A. VandenBosch — Authorized Signature

4/15/10 — Date

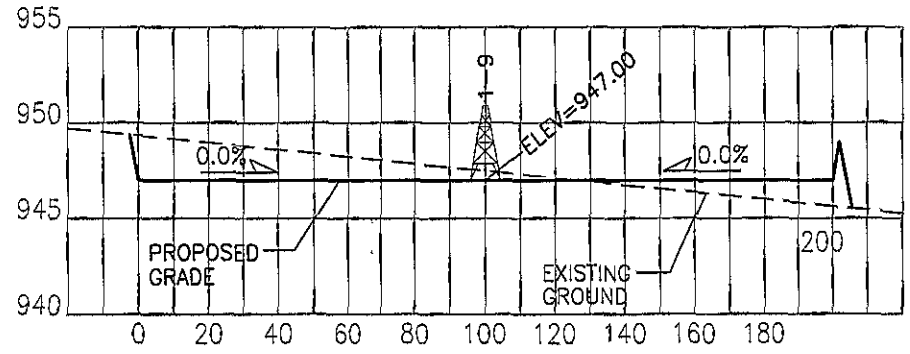
Enclose with *Application For Permit To Drill*





SECTION A-A

HOR SCALE: 1"=50'
VERT SCALE: 1"=10'



SECTION B-B

HOR SCALE: 1"=50'
VERT SCALE: 1"=10'

NORTH
0 25 50
SCALE: 1" = 50'

WESTSHORE CONSULTING
Engineers ■ Scientists ■ Surveyors
www.WestshoreConsulting.com
2534 Black Creek Road, Muskegon, MI 49444, (231) 777-3447
2508 Washington Avenue, Grand Haven, MI 49417, (616) 844-1260
238 Parkdale Avenue, Suite 2, Manistee, MI 49660, (231) 723-2202

WEST BAY EXPLORATION COMPANY
5555 Hogback Road
Fowlerville, MI 48836

HAYSTEAD 1-9
CROSS SECTIONS

Checked:	SVV
Date:	3/30/10
Drawn by:	WAV
Date:	3/30/10
File No.:	323/100
Figure:	2

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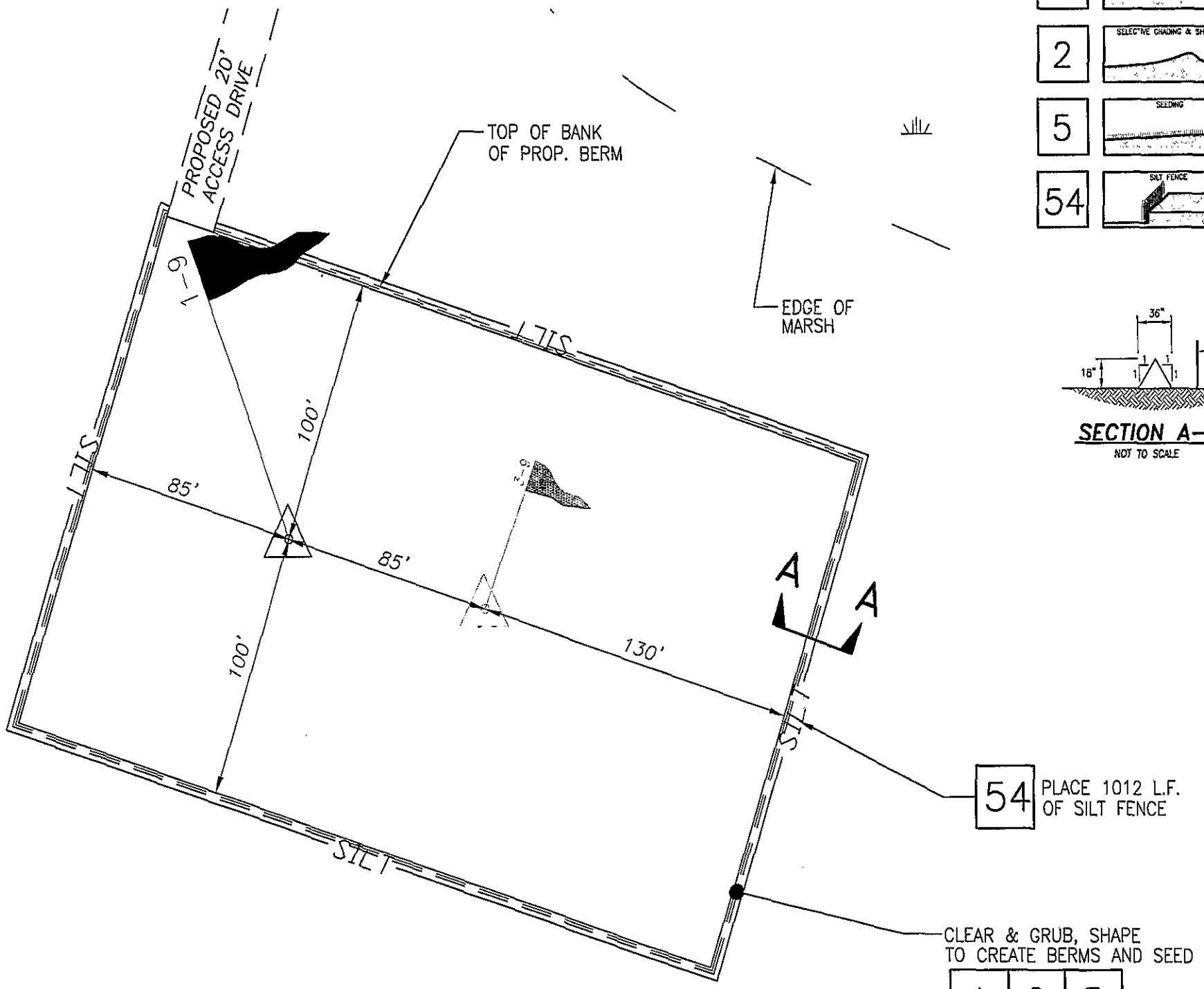
NORTH

0 25 50

SCALE: 1" = 50'



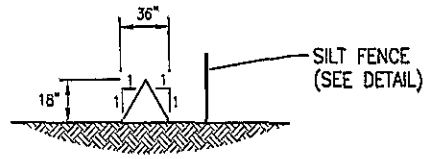
54 PLACE 1012 L.F. OF SILT FENCE

CLEAR & GRUB, SHAPE TO CREATE BERMS AND SEED

1 2 5

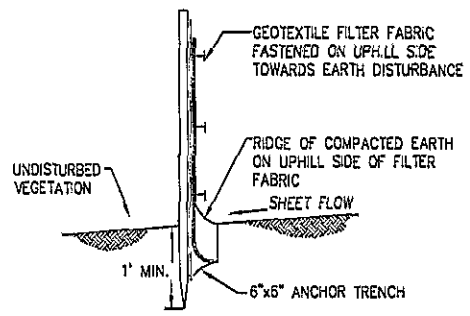
SOIL EROSION CONTROL MEASURES

KEY	DETAIL
1	STRIPPING & STOCKPILING TOPSOIL
2	SELECTIVE GRADING & SHAPING
5	SEEDING
54	SILT FENCE

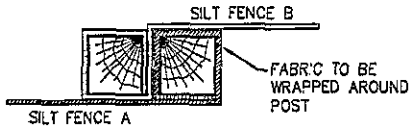


SECTION A–A

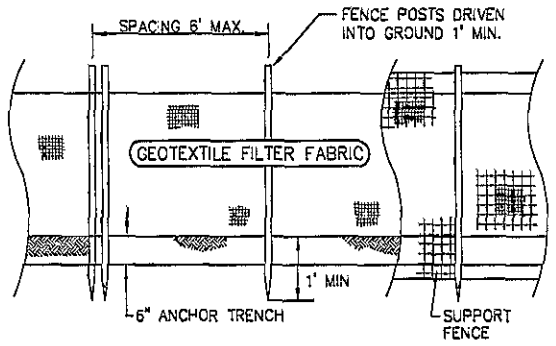
NOT TO SCALE

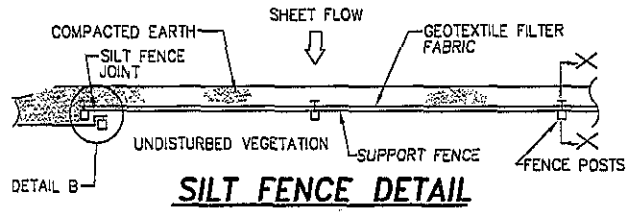


SECTION X-X



DETAIL B





SILT FENCE DETAIL

WESTSHORE CONSULTING
Engineers ■ Scientists ■ Surveyors

www.WestshoreConsulting.com

2534 Black Creek Road, Muskegon, MI 49444, (231) 777-3447
2508 Washington Avenue, Grand Haven, MI 49417, (616) 844-1260
238 Parkdale Avenue, Suite 2, Manistee, MI 49660, (231) 723-2202

WEST BAY EXPLORATION COMPANY
5555 Hogback Road
Fowlerville, MI 48836

HAYSTEAD 1-9
SOIL EROSION CONTROL

Checked:	SW
Date:	3/30/10
Drawn by:	WAV
Date:	3/30/10
File No.:	323-100
Figure:	3

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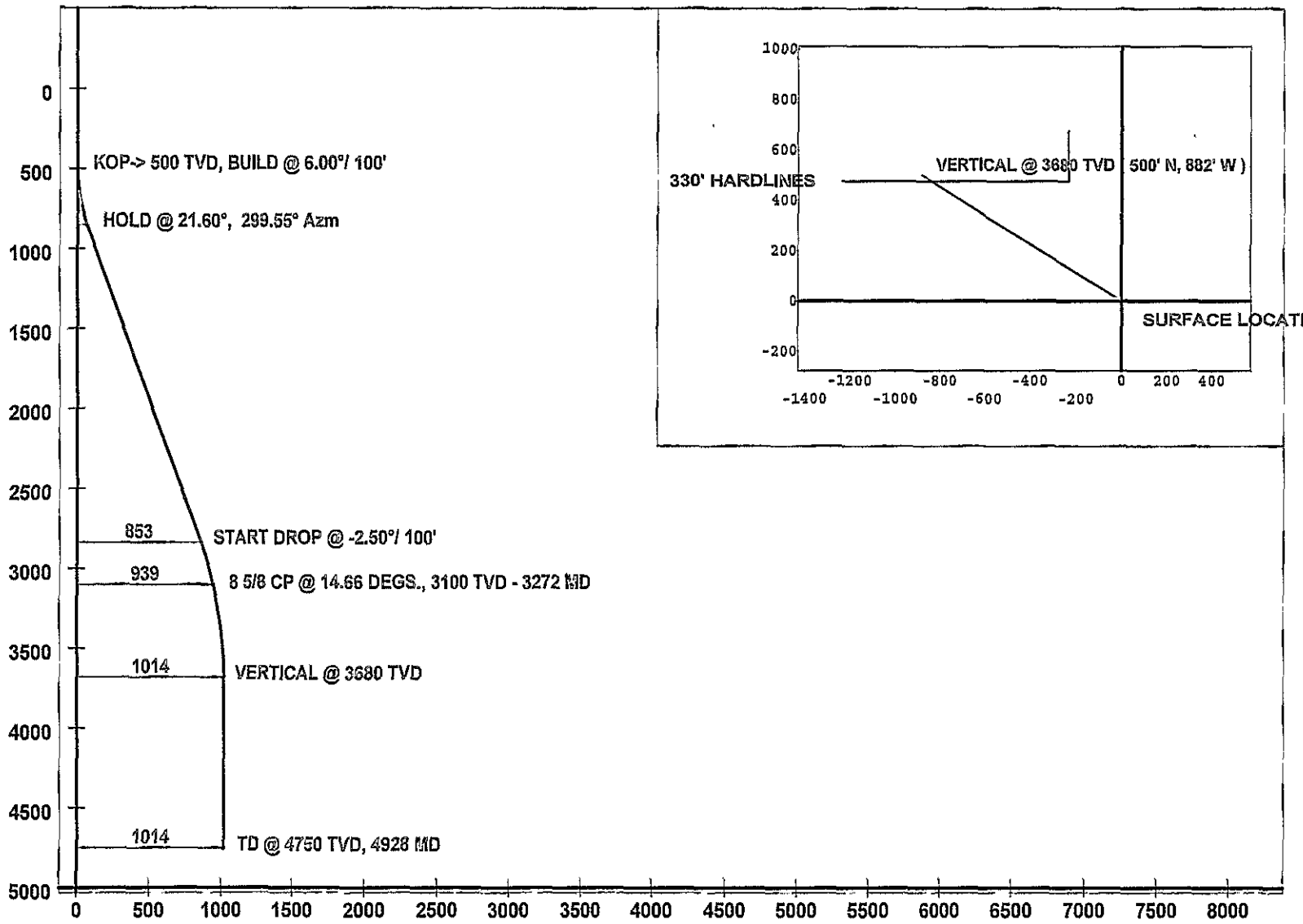
Company: WEST BAY EXPLORATION
Lease/Well: HAYSTEAD 1-9
Location: NORVELL TWP., JACKSON CO.
State/Country: MICHIGAN / USA
File name: C:\WINSERVE\PENDING\2010\HAYSTD19.SVY
Date/Time: 06-Apr-10 / 16:12

DDC
Directional Drilling Contractors, LLC.



Directional Drilling Contractors, LLC.

Job Number:
Company: WEST BAY EXPLORATION
Lease/Well: HAYSTEAD 1-9
Location: NORVELL TWP., JACKSON CO.
Rig Name:
RKB:
G.L. or M.S.L.:

State/Country: MICHIGAN / USA
Declination:
Grid:
File name: C:\WINSERVE\PENDING\2010\HAYSTD19.SVY
Date/Time: 06-Apr-10 / 16:16
Curve Name: HAYSTEAD 1-9

Directional Drilling Contractors
PROPOSAL REPORT

WINSERVE PROPOSAL REPORT
Minimum Curvature Method
Vertical Section Plane 299.55
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
KOP-> 500 TVD, BEGIN BUILD @ 6.00°/ 100'									
500.00	.00	.00	500.00	.00	.00	.00	.00	.00	.00
530.00	1.80	299.55	530.00	.23	-.41	.47	.47	299.55	6.00
560.00	3.60	299.55	559.96	.93	-1.64	1.88	1.88	299.55	6.00
590.00	5.40	299.55	589.87	2.09	-3.69	4.24	4.24	299.55	6.00
620.00	7.20	299.55	619.68	3.71	-6.55	7.53	7.53	299.55	6.00
650.00	9.00	299.55	649.38	5.80	-10.23	11.76	11.76	299.55	6.00
680.00	10.80	299.55	678.94	8.34	-14.71	16.91	16.91	299.55	6.00
710.00	12.60	299.55	708.31	11.34	-20.01	23.00	23.00	299.55	6.00
740.00	14.40	299.55	737.48	14.80	-26.10	30.00	30.00	299.55	6.00
770.00	16.20	299.55	766.42	18.70	-32.99	37.92	37.92	299.55	6.00
800.00	18.00	299.55	795.09	23.05	-40.66	46.74	46.74	299.55	6.00
830.00	19.80	299.55	823.47	27.84	-49.11	56.45	56.45	299.55	6.00
860.00	21.60	299.55	851.53	33.07	-58.34	67.06	67.06	299.55	6.00
HOLD @ 21.60°, 299.55° Azm									
860.01	21.60	299.55	851.55	33.07	-58.34	67.06	67.06	299.55	6.00
960.01	21.60	299.55	944.52	51.23	-90.37	103.88	103.88	299.55	.00
1060.01	21.60	299.55	1037.50	69.38	-122.39	140.69	140.69	299.55	.00
1160.01	21.60	299.55	1130.48	87.54	-154.42	177.51	177.51	299.55	.00
1260.01	21.60	299.55	1223.45	105.69	-186.44	214.32	214.32	299.55	.00
1360.01	21.60	299.55	1316.43	123.85	-218.47	251.13	251.13	299.55	.00
1460.01	21.60	299.55	1409.41	142.00	-250.50	287.95	287.95	299.55	.00

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
1560.01	21.60	299.55	1502.39	160.16	-282.52	324.76	324.76	299.55	.00
1660.01	21.60	299.55	1595.36	178.31	-314.55	361.57	361.57	299.55	.00
1760.01	21.60	299.55	1688.34	196.47	-346.57	398.39	398.39	299.55	.00
1860.01	21.60	299.55	1781.32	214.63	-378.60	435.20	435.20	299.55	.00
1960.01	21.60	299.55	1874.29	232.78	-410.62	472.02	472.02	299.55	.00
2060.01	21.60	299.55	1967.27	250.94	-442.65	508.83	508.83	299.55	.00
2160.01	21.60	299.55	2060.25	269.09	-474.68	545.64	545.64	299.55	.00
2260.01	21.60	299.55	2153.23	287.25	-506.70	582.46	582.46	299.55	.00
2360.01	21.60	299.55	2246.20	305.40	-538.73	619.27	619.27	299.55	.00
2460.01	21.60	299.55	2339.18	323.56	-570.75	656.08	656.08	299.55	.00
2560.01	21.60	299.55	2432.16	341.71	-602.78	692.90	692.90	299.55	.00
2660.01	21.60	299.55	2525.13	359.87	-634.80	729.71	729.71	299.55	.00
2760.01	21.60	299.55	2618.11	378.02	-666.83	766.53	766.53	299.55	.00
2860.01	21.60	299.55	2711.09	396.18	-698.86	803.34	803.34	299.55	.00
2960.01	21.60	299.55	2804.07	414.33	-730.88	840.15	840.15	299.55	.00
START DROP @ -2.50°/ 100', 2994 MD									
2994.67	21.60	299.55	2836.29	420.62	-741.98	852.91	852.91	299.55	.00
3024.67	20.85	299.55	2864.25	425.98	-751.43	863.77	863.77	299.55	2.50
3054.67	20.10	299.55	2892.36	431.16	-760.56	874.27	874.27	299.55	2.50
3084.67	19.35	299.55	2920.60	436.15	-769.37	884.39	884.39	299.55	2.50
3114.67	18.60	299.55	2948.97	440.96	-777.85	894.15	894.15	299.55	2.50
3144.67	17.85	299.55	2977.46	445.59	-786.02	903.53	903.53	299.55	2.50
3174.67	17.10	299.55	3006.08	450.03	-793.85	912.54	912.54	299.55	2.50
3204.67	16.35	299.55	3034.81	454.29	-801.36	921.17	921.17	299.55	2.50
3234.67	15.60	299.55	3063.65	458.36	-808.55	929.43	929.43	299.55	2.50
3264.67	14.85	299.55	3092.60	462.25	-815.40	937.31	937.31	299.55	2.50
8 5/8 CP @ 14.66 DEGS., 3100 TVD - 3272 MD									
3272.33	14.66	299.55	3100.00	463.21	-817.10	939.26	939.26	299.55	2.50
3294.67	14.10	299.55	3121.64	465.94	-821.93	944.81	944.81	299.55	2.50
3324.67	13.35	299.55	3150.79	469.45	-828.12	951.93	951.93	299.55	2.50
3354.67	12.60	299.55	3180.02	472.78	-833.98	958.66	958.66	299.55	2.50
3384.67	11.85	299.55	3209.34	475.91	-839.50	965.02	965.02	299.55	2.50
3414.67	11.10	299.55	3238.74	478.85	-844.70	970.99	970.99	299.55	2.50
3444.67	10.35	299.55	3268.21	481.61	-849.55	976.57	976.57	299.55	2.50
3474.67	9.60	299.55	3297.76	484.17	-854.07	981.77	981.77	299.55	2.50
3504.67	8.85	299.55	3327.37	486.54	-858.26	986.58	986.58	299.55	2.50
3534.67	8.10	299.55	3357.04	488.72	-862.11	991.00	991.00	299.55	2.50
3564.67	7.35	299.55	3386.77	490.71	-865.61	995.03	995.03	299.55	2.50
3594.67	6.60	299.55	3416.55	492.51	-868.78	998.67	998.67	299.55	2.50
3624.67	5.85	299.55	3446.37	494.11	-871.61	1001.93	1001.93	299.55	2.50
3654.67	5.10	299.55	3476.24	495.52	-874.10	1004.79	1004.79	299.55	2.50
3684.67	4.35	299.55	3506.13	496.74	-876.25	1007.26	1007.26	299.55	2.50

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
3714.67	3.60	299.55	3536.06	497.77	-878.06	1009.34	1009.34	299.55	2.50
3744.67	2.85	299.55	3566.01	498.60	-879.53	1011.03	1011.03	299.55	2.50
3774.67	2.10	299.55	3595.98	499.24	-880.66	1012.33	1012.33	299.55	2.50
3804.67	1.35	299.55	3625.97	499.69	-881.45	1013.23	1013.23	299.55	2.50
3834.67	.60	299.55	3655.97	499.94	-881.89	1013.74	1013.74	299.55	2.50
VERTICAL @ 3680 TVD									
3858.71	.00	299.55	3680.00	500.00	-882.00	1013.87	1013.87	299.55	2.50
3958.71	.00	299.55	3780.00	500.00	-882.00	1013.87	1013.87	299.55	.00
4058.71	.00	299.55	3880.00	500.00	-882.00	1013.87	1013.87	299.55	.00
4158.71	.00	299.55	3980.00	500.00	-882.00	1013.87	1013.87	299.55	.00
4258.71	.00	299.55	4080.00	500.00	-882.00	1013.87	1013.87	299.55	.00
4358.71	.00	299.55	4180.00	500.00	-882.00	1013.87	1013.87	299.55	.00
4458.71	.00	299.55	4280.00	500.00	-882.00	1013.87	1013.87	299.55	.00
4558.71	.00	299.55	4380.00	500.00	-882.00	1013.87	1013.87	299.55	.00
4658.71	.00	299.55	4480.00	500.00	-882.00	1013.87	1013.87	299.55	.00
4758.71	.00	299.55	4580.00	500.00	-882.00	1013.87	1013.87	299.55	.00
4858.71	.00	299.55	4680.00	500.00	-882.00	1013.87	1013.87	299.55	.00
TD @ 4750 TVD, 4928 MD									
4928.71	.00	299.55	4750.00	500.00	-882.00	1013.87	1013.87	299.55	.00

DEQ MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY – OFFICE OF GEOLOGICAL SURVEY

SOIL EROSION & SEDIMENTATION CONTROL PLAN

By authority of Part 91, and Part 615 or Part 625 of Act 451 PA 1994, as amended. Non-submission and/or falsification of this information may result in fines and/or imprisonment.

☒ Part 615 Oil/Gas Well ☐ Part 625 Mineral Well

1. Name and address of applicant
West Bay Exploration Company
13685 South West Bay Shore Drive, Suite 200
Traverse City, MI 49684
Phone: (231) 946-0200 Fax: (231) 946-8180

2. Well or project name:
Haystead 1-9

3. Well or project location:
Section(s) 9 T4S R2E

4. Name and address of County or local Enforcement Agent (CEA)
Jackson County Health Department
1715 Lansing Avenue, Suite 221
Jackson, MI 49202
Phone: (517) 788-4420 Fax: (517) 788-4373

5. Township
Norvell

6. County
Jackson

7. Date earth changes expected to start
April 2010

8. Date of expected completion
May 2010

9. Name and address of person responsible for earth change:
Tim Baker
West Bay Exploration Company
5555 Hogback Road, P.O. Box 1203
Fowlerville, MI 48836
Phone: (517) 223-4011 Fax: (517) 223-4020

10. Name and address of person responsible for maintenance:
Tim Baker
West Bay Exploration Company
5555 Hogback Road, P.O. Box 1203
Fowlerville, MI 48836
Phone: (517) 223-4011 Fax: (517) 223-4020

11. Send copies of supplemental plat required by Part 615, R 324.201(2)(b) or R 324.504(4), and this form and all attachments, to CEA.

Date sent to CEA March 31, 2010

EARTH CHANGE ACTIVITIES

12. Project description: (Project activities may be permitted sequentially.)

a. Number of well sites 1, 1.38 acres
b. Number of surface facility sites N/A, ____ acres
c. New access roads 1560 feet, 0.72 acres
d. Flow line(s) trenched in off well site* N/A feet, ____ acres
e. Flow line(s) plowed in off well site* N/A feet, ____ acres
*Contact CEA for fee schedule

13. Describe sites for which permits are being sought under Part 301 (Inland Lakes & Streams) None
Describe sites for which permits are being sought under Part 303 (Wetlands) None
List file numbers if known ____

14 Areas requiring control structures
Will earth changes occur in areas with slopes of 10% or greater; areas where runoff water is likely, such as runs greater than 500' of moderate slope (5% to 10%), narrow valley bottoms, etc.; areas within 500' of a lake or stream; or other areas where sedimentation to a wetland or drainage way may occur?

☒ Yes Attach detail map at scale of 1"=200' or larger, with contour lines at a minimum of 20' intervals OR percent slope descriptions.
Also indicate any of the following erosion control structures that will be utilized. Identify location on map and attach detail plan.
Indicate on plan whether erosion control structures are temporary or permanent.
☐ Diversions ☐ Culverts ☐ Sediment basins ☒ Silt fences ☐ Rip-rap ☒ Berms ☐ Check dams ☐ Other ____

☐ No

15. Site restoration
☒ Topsoil will be segregated from subsoil and stockpiled OR ☐ No topsoil on site
☒ Recontour and revegetate as soon as weather permits. Seed mix ____
☐ Describe other proposed methods of restoration ____

16. Application prepared by (name) Wade A. VandenBosch, P.E. Signature [signature] Date 3/31/10

FOR USE OF COUNTY OR LOCAL ENFORCING AGENT

INSTRUCTIONS TO COUNTY OR LOCAL ENFORCMENT AGENT: Return this form to the applicable field or district office of the Office of Geological Survey within 30 days of receipt. Explain reasons for recommendation or disapproval and conditions required for approval. Include copies of any revisions to the plan.

17. Comments

☐ Conducted on site inspection Date ____
☐ Inspected site with representative of applicant Date ____

18. ☐ Approved ☐ Disapproved

CEA signature ____ Date ____

WELLHEAD BLOWOUT CONTROL SYSTEM

Worksheet supplement for "Application for Permit to Drill or Deepen a Well

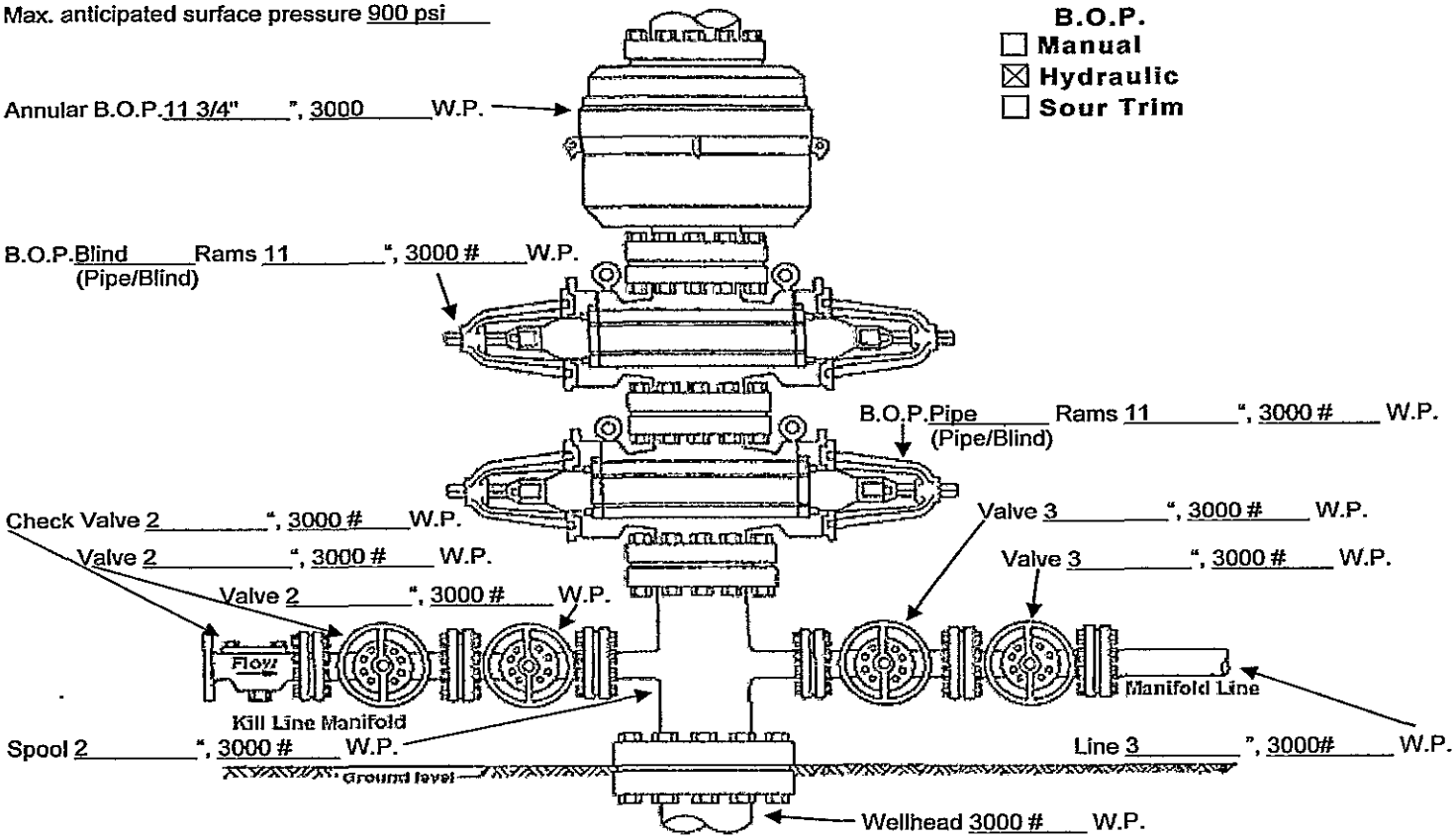
This information is required by authority of Part 615 Supervisor of Wells or Part 625 Mineral Wells, Act 451 PA 1994, as amended, in order to obtain a permit.

Applicant
West Bay Exploration Company
13685 South West Bay Shore, Suite #200
Traverse City, MI 49884

Well name and number
Haystead 1-9

Max. anticipated surface pressure 900 psi

B.O.P.
- ☐ **Manual**
- ☒ **Hydraulic**
- ☐ **Sour Trim**



Fill above blanks with applicable information. If not applicable, enter "N.A." or cross-out item shown.
Describe test pressures and procedure for conducting pressure test. Identify any exceptions to R324.406 being requested.

BOP Testing, Inspection, Training and Maintenance

BOP Testing Procedure

The Annular, double gate, HCR, Accumulator as well as all auxiliary equipment shall be tested when installed and every 14 days there after. We shall follow an overbearing program to protect all parties involved. BOP testing shall go as follows:

1. When the BOP is installed after running casing
   (a) Fill hole, close blind rams, close standpipe, open kill line master and control valves, open choke line master and control valves, open HCR, open master valve on panic line, open inward choke valves, open chokes, close panic line control valve and isolation valves for chokes. Do low pressure test (200-300 psi) for 5 min. Do high pressure test (1500psi) for 5 min. Record in Book
   (b) All following test will have same pressures and time limits
   (c) Bleed pressure off at pump and see if check valve closes and what pressure is left. Record in Book. Bleed off pressure
   (d) Close inward valves on chokes and master valve on panic line. Do low pressure test. Record. Do high pressure test and record. Bleed off
   (e) Open blind rams and RIH with BHA and drill pipe (no float), circulate out air
   (f) With the Kelly made up into string Close pipe rams, close master valve on kill and choke line, Disconnect kill line at check valve. Do low pressure test and record, do high pressure test and record, bleed off
   (g) With pipe rams still closed, open master valves on kill and choke lines, close control valves on kill and choke line, do low pressure test and record, close upper kelly cock and bleed off at pump, record and open upper kelly cock, do high pressure test and record, close upper Kelly cock and bleed off at pump and record. Open Kelly cock and bleed off
   (h) With pipe rams closed, kill and choke lines closed, do low pressure test and close standpipe trapping pressure, bleed off at pump and record. Same with high pressure test
   (i) Open pipe rams, close bag, close kill line, open control and master valves on choke line, close HCR valve, do low pressure test and record, do high pressure test and record, bleed off
   (j) Reconnect kill line and open both valves, install FOSV in drill pipe. Through kill line do low pressure test and record, do high pressure test and record, bleed off
   (k) Take off FOSV and install internal preventer, Through kill line do low pressure test and record, do high pressure test and record, bleed off
   (l) The auxiliary pump line valve will be tested every time as well as most other valves
   (m) Check all levels in accumulator and back up systems, Record in Book.

2. During normal operation every 14 days
   (a) Blind rams will be tested when out of the hole with a test plug
   (b) Pipe, bag and HCR will be tested while still inside the shoe on trip in the hole with a test plug
   (c) All low and high pressure test will be the same
   (d) All shall be recorded in Book

BOP Inspection and Actuation

All required BOP equipment shall be actuated periodically to ensure operational readiness. Following are the minimum frequencies.

1. Every 12 hour shift the following are to be performed:
   (a) Check the accumulator pressure
   (b) Check the pressure of the emergency back-up system
   (c) Check the hydraulic fluid level in the accumulator
   (d) Check air pressure to support system
   (e) Record all of the above in IADC Log Book and well Ledger

2. Every trip, but do not do twice in 24 hours
   (a) Function test pipe rams (when inside shoe)
   (b) Function test blind rams(when out of hole)
   (c) Operate all Kelly cocks
   (d) Check Drill pipe safety valve
   (e) Function test HCR valve
   (f) Record all of the above in IADC Log Book and well Ledger

3. Every 7 days or 1 week actuate the following:
   (a) Annular preventer
   (b) All gate valves in the choke and kill system
   (c) Inside BOP
   (d) Record all of the above in IADC Log Book and well Ledger

Crew Training and Drills

BOP Practice drills and training sessions shall be conducted at least once each week for each crew. These drills shall be performed with everyone on site to provide training for each crew member to ensure:

1. A clear understanding of the purpose and the method of operation of each preventer and all associated equipment
2. The ability to recognize the warning signs that accompany a kick
3. The crew shall be aware this is a shallow slim hole which reduces volume in the annulus and requires increased attention
4. A clear understanding of each crew members station and duties in the event of a kick while drilling, tripping or out of the hole
5. A clear understanding of the maximum allowable casing pressure (MACP) and the significance of the pressure for well conditions that exist at the time of the drill or training session

BOP Records Requirements

1. A record of all inspections and tests must be recorded in IADC Log book and well ledger
2. A record of all crew drills and training sessions must be kept in the IADC Log book and well ledger

BOP Maintenance Requirements

1. All equipment shall be maintained in accordance with the manufacturer's recommendations
2. All maintenance records shall be kept for the past three years

Shut-In Procedure Drilling and Tripping

Drilling

1. For a kick while drilling stop the rotary and sound the alarm
2. Pick up drill string until the Kelly saver sub clears the rotary table
3. Stop the pumps
4. Close the annular preventer
5. Confirm that all flow from the well is stopped. No flow should occur from the choke manifold, the bell nipple or back through the drill string
6. Open the HCR valve
7. Read and record SIDPP (shut in drill pipe pressure) SICP (shut in casing pressure) Allow to stabilize first
8. Read and record the pit level increase
9. Notify Supervisor

The primary advantage of a hard shut-in is that the kick influx is held to a small volume because the well is closed in more quickly.

Tripping

1. For a kick while tripping immediately .set the slips and sound the alarm
2. Install and make up the FOSV in the drill pipe. It should be open
3. Close the drill pipe safety valve
4. Open the HCR valve
5. Close the BOP
6. Close the choke
7. Confirm that all flow from the well has stopped
8. Pick up and make up the Kelly
9. Record SIDPP and SICP
10. Read and record pit level increase
11. Notify Supervisor

West Bay
Exploration
company

13685 S. West Bay Shore / Suite 200
Traverse City, MI 49684
231-946-0200 / Fax: 231-946-8180

5555 N. Hogback Road
Fowlerville, MI 48836
517-223-4011 / Fax: 517-223-4020

April 5, 2010

Mr. Harold and Mrs. Harriet Haystead
11451 Austin Road
Brooklyn, MI 49230

RE: Haystead #1-9
Haystead #2-9
Haystead #3-9

Dear Mr. & Mrs. Haystead:

Enclosed, please find copies of the Application(s) for Permit to Drill, filed by our company with the Department of Environmental Quality-Geological Survey Division. This is one of the first steps of the operational process, during the preparation to drill a well. During the permitting process, you may have several members of the Michigan Department of Environmental Quality, stop over, and walk and monitor the area where we are proposing to drill. They evaluate the drilling site, and carefully study the area that is being proposed, to insure it is the most fitting.

Once the permit is issued, we will be in contact with you, in regards to the actual timing of the drilling. Please, stay in touch with your land agent, or call us directly, if you have any questions or concerns regarding the drilling or any of the operations on your property.

West Bay Exploration also has a website that is helpful in answering many questions regarding oil and gas in Michigan, as well as a bit of our company background. www.westbayexploration.com

We are pleased to begin, and look forward to success with this project. Thank you so much for allowing us the opportunity to work as a team with you and your family.

Sincerely,

Ann M. Baker
Permits & Production
Operations Department
(517)223-4011 - phone
anni@wbeco.net – e mail

West Bay Exploration company

13685 S. West Bay Shore / Suite 200
Traverse City, MI 49684
231-946-0200 / Fax: 231-946-8180

5555 N. Hogback Road
Fowlerville, MI 48836
517-223-4011 / Fax: 517-223-4020

April 5, 2010

County of Jackson
County Clerk's Office
312 South Jackson Street
Jackson, MI 49201

RE: Haystead #1-9

To Whom It May Concern:

Enclosed, please find an Application for Permit to Drill, filed by our company with the Department of Environmental Quality-Geological Survey Division.

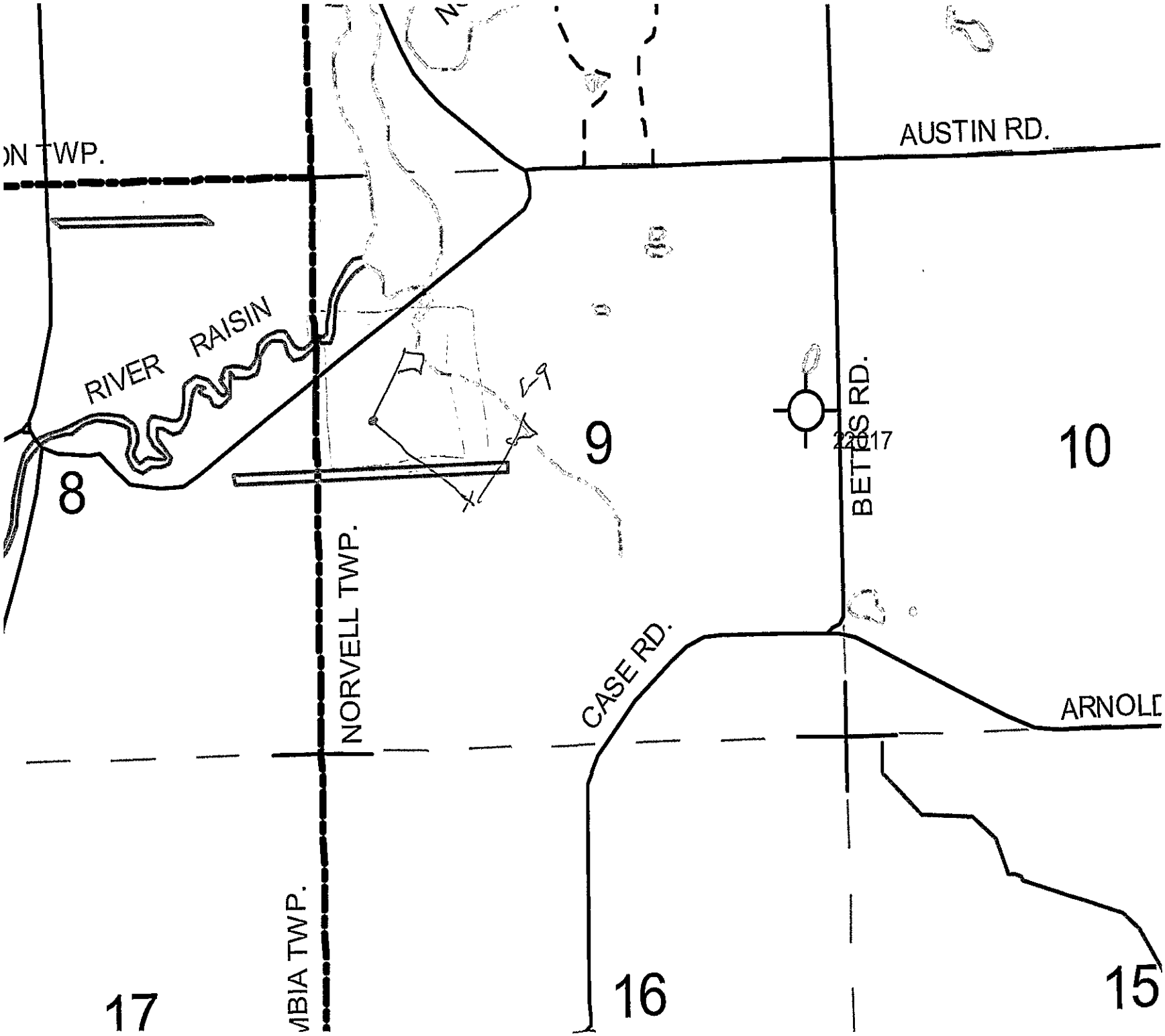
This letter serves as notification of our intent to drill the subject well in Jackson County in the near future.

Should you have any questions, please feel free to contact our office at (517)223-4011.

Sincerely,

Ann M. Baker

Ann M. Baker
Operations & Production
Department


ON TWP.
AUSTIN RD.
RIVER RAISIN
8
9
10
BETTS RD.
NORVELL TWP.
CASE RD.
ARNOLD
17
16
15

Spatial Location Lookup:

04S, 02E

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

New Search

Spatial Resources:

- SiteMap
- IMap
- Lat/Lon Search
- Aerial Imagery
- Live Search Maps
- Mapquest
- TerraServer-USA
- National Maps
- Digital Map Store

Spatial Data:

- Geographic Data Library
- Geography Network

Help

Spatial Interest Search

04S, 02E Section:9

Spatial Mapping Resources
Aerial Imagery Archive
MapQuest - Internet Mapping and Imagery
TopoZone - Internet Topographic Quads

CIWPIS Special Interests

Organization	Description	Comment
Land and Water Management	Watershed Council	RAISIN RIVER
MDA Environmental Stewardship	Farmlands - PA116	16429
Natural Heritage	Fed Endanger, State Endanger Animal	AMACC01100
Natural Heritage	State Endangered Plant	PDSCR09030
Natural Heritage	State Threatened Plant	PMPOA240K0
Remediation & Redevelopment	Part 201 Site ID	38000005

CIWPIS Permits

Permit Number	Applicant	Activity
00380003	John Brown	Dredging
94130401	Dale A & Laura Smith	Pond
95130149		Pond

Compliance Tracking

File Number	Waterbody	Complaint
95380003	wetland	Dredging a pond in a wetland area. On site 3/24 confirmed violation, wetland over 5 acres in size. Owner & is builder who is building a spec house and the pond also extends onto someone elses property, a Steve Lynn. I ordered c&d verbally that day. The builder subcontracted to the excavator to dig the pond. I said they would need to apply for an ATF. 4/21 - tx with Kendra Spielberg, PCU, she has atf application, needs 2 x-sections.

Drinking Water Supply Wells

Well ID	Well Owner	Well Depth
38000003132	FLETCHER, JOHN	85
38000003133	TOM WELCH (RICHARD FETTERMAN)	66
38000003134	RIVERVIEW ENTERPRISED	95
38000003135	TROLZ, GARY	160
38000003136	MORGAN, RICK	95
38000003137	HOFER, WILLIAM	57
38000003138	CHASE, GARY	[illegible]
38000003139	PULKA, DAVID	73
38000003140	LYNN, STEVE	60
38000008330	CHRIS COWAN	121

Snow, Mark (DNRE)

From: Ann Baker [anni@wbeco.net]

Sent: Wednesday, April 14, 2010 11:59 AM

To: Snow, Mark (DNRE)

Subject: Haystead 1-9

Good Morning;
(almost afternoon) I just received confirmation on your question regarding the spacing on the Haystead 1-9 well. Apparently, the 80 acre unit was considered, and this was what the surveyors did, per their instructions from the TC office. However, it IS supposed to be a 40, and we will get the survey reflecting that ASAP from West Shore Engineering. Thank you so much for bringing this to my attention. Again, trying to take a vacation can cause all sorts of havoc.....Thank you
Anni Baker
West Bay Exploration

WESTSHORE
CONSULTING
Engineers ▪ Scientists ▪ Surveyors

2534 Black Creek Road
Muskegon, Michigan 49444
Ph: (231) 777-3447
Fx: (231) 773-3453

250B Washington Avenue
Grand Haven, MI 49417
Ph: (616) 844-1260
Fx: (616) 844-1270

238 Parkdale Avenue, Suite 2
Manistee, Michigan 49660
Ph: (231) 723-2202
Fx: (231) 723-2291

April 22, 2010

Mr. Mark J. Snow
Michigan DNRE – OGS
P.O. Box 30256
Lansing, MI 48909

Re: West Bay Exploration Company, Haystead 1-9 & 3-9 Permit Applications

Dear Mr. Snow:

I have prepared this response regarding the possibility of an airplane landing strip being present in the vicinity of the proposed West Bay Exploration Company surface hole locations for the Haystead 1-9 and 3-9 well sites. Westshore Consulting has assisted in the preparation of these drilling permit applications and has accomplished inspections for various environmental, surveying and engineering aspects of the area.

The correspondence that you sent to West Bay included a USGS topographic map that showed an airplane landing strip. Westshore has reviewed the same map, *United States Geological Survey, 7.5 minute, Norvell Quadrangle*[1], and also notes that there is a landing strip shown. I have met with a number of individuals at Westshore who have confirmed that there is no visual evidence of an airplane landing strip in the location shown on the 1980 topographic map, or anywhere in the vicinity of the proposed surface hole locations for these two wells. I have attached some recent aerial photographs of the area, and these photographs clearly show cultivated fields and no evidence of a landing strip.

Please review this information and respond either to Ms. Anni Baker at West Bay or me if you require any additional documentation to eliminate the potential of a landing strip from being a concern for these proposed well site locations.

Sincerely,

WESTSHORE CONSULTING

Robert L. Schulz, C.P.G.
Vice President

RLS/jlg/323-100, -102

Aerial Maps

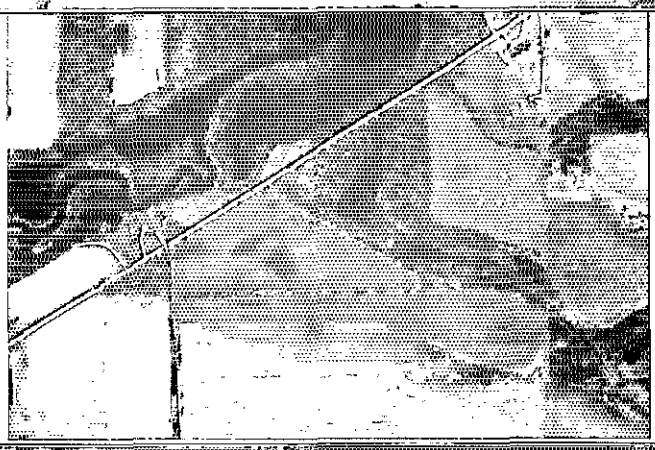
cc: Ms. Kristi Shimko, Michigan DNRE
Mr. Walter Danyluk, Michigan DNRE
Ms. Anni Baker, West Bay Exploration

[1] Topography by photogrammetric methods from aerial photographs taken 1975. Field checked 1976. Map edited 1980.

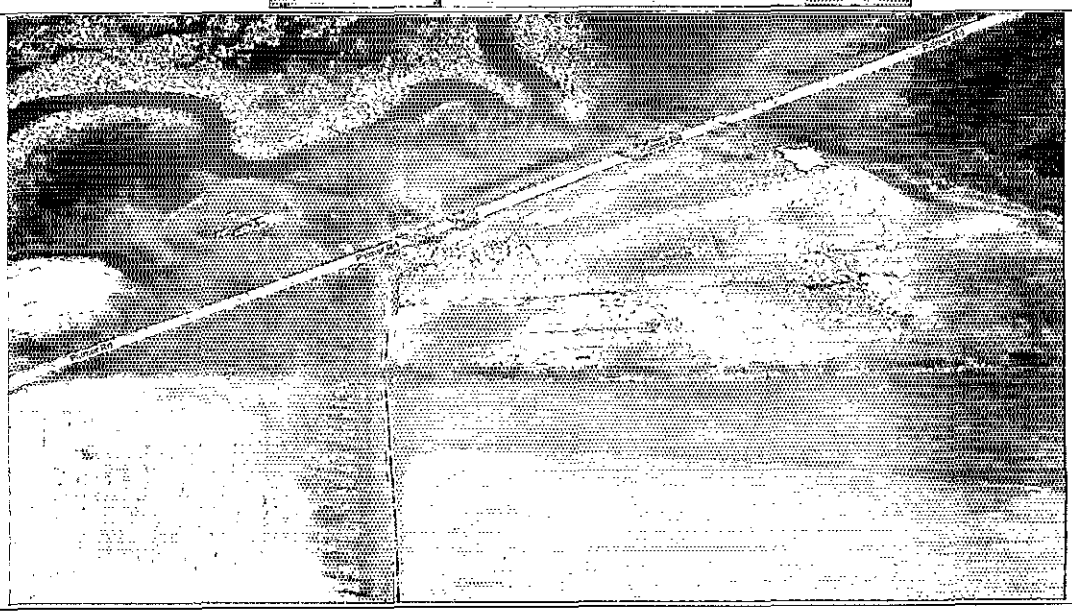
2007 Aerial – Jackson County GIS online maps

Landing Strip Area

1998 Aerial – Google Earth online maps



~2006/2007 Bird's Eye Aerial – Bing Maps, online – looking North



Section 9, T4S, R2E

Westshore Consulting 04/22/10

Wood, Kimberly (DNRE)

From: Wohlfert, Tyler (DNRE)
Sent: Thursday, April 15, 2010 11:36 AM
To: Wood, Kimberly (DNRE)
Subject: Log Dated 4/9 - Batch #'s 21854, 21855, & 21856

Payment Application:	STATE DEQ O AND G WELL 8008120928
Payment Status:	Payment Success
Confirmation Number:	10041538389893
Payment Date:	4/15/2010
Billing Address:	TIMOTHY L BAKER 13685 SW BAY SHORE SUITE 200 TRAVERSE CITY, MI 49684 (517) 223-4011
Payment Method:	Credit Card TIMOTHY L BAKER x0777 02/12
Payment Amount:	$300.00
Total Amount:	$300.00
Reference:	OGS-A100062
Payment Application:	STATE DEQ O AND G WELL 8008120928
Payment Status:	Payment Success
Confirmation Number:	10041538390181
Payment Date:	4/15/2010
Billing Address:	TIMOTHY L BAKER 13685 SW BAY SHORE SUITE 200 TRAVERSE CITY, MI 49684 (517) 223-4011
Payment Method:	Credit Card alt=MasterCard> TIMOTHY L BAKER x0777 02/12
Payment Amount:	$300.00
Total Amount:	$300.00
Reference:	OGS-A100063
Payment Application:	STATE DEQ O AND G WELL 8008120928
Payment Status:	Payment Success
Confirmation Number:	10041538390488
Payment Date:	4/15/2010
	TIMOTHY L BAKER

over →

4/15/2010 Sally

Billing Address:	13685 SW BAY SHORE SUITE 200 TRAVERSE CITY, MI 49684 (517) 223-4011
Payment Method:	Credit Card  TIMOTHY L BAKER x0777 02/12
Payment Amount:	$300.00
Total Amount:	$300.00
Reference:	OGS-A100064

West Bay Exploration company

13685 S. West Bay Shore / Suite 200
Traverse City, MI 49684
231-946-0200 / Fax: 231-946-8180

5555 N. Hogback Road
Fowlerville, MI 48836
517-223-4011 / Fax: 517-223-4020

April 15, 2010

Michigan DEQ
Geological Survey Division
ATTN: Mr. Mark Snow
PO Box 30256
Lansing, MI 48909

RE: Haystead 1-9

Dear Mr. Snow;

Enclosed, please find the updated permit application, and survey, revised to reflect a 40 acre drilling unit for this well. Thank you so much for bringing this to my attention.

If you have any further questions regarding this application, please feel free to contact us at 517-223-4011. Thanks

Sincerely,

Ann Baker

Ann M Baker
West Bay Exploration Co.

WESTSHORE CONSULTING
Engineers ■ Scientists ■ Surveyors

Observations Report

Prepared for: DNRE – Wildlife Division

Sent Via Email Only

April 28, 2010

Re: West Bay Exploration Company – Haystead 1-9, Haystead 2-9, and Haystead 3-9, T4S, R2E, Norvell Township, Jackson County

To: Ms. Lori Sargent, DNRE – Wildlife Division, sargentl@michigan.gov

West Bay Exploration Company (West Bay) is in the process of obtaining permission from the Michigan Department of Natural Resources and Environment (DNRE, formerly MDEQ) to drill exploratory oil and gas wells on a parcel of land in Jackson County, Michigan. Information provided in this report is intended to supplement oil drilling permit applications associated with the proposed Haystead 1-9, Haystead 2-9, and Haystead 3-9 drilling locations. Westshore Consulting (Westshore) has conducted surveying, civil engineering, and environmental studies to provide the data needed for the DNRE to process the applications to drill the exploratory wells. West Bay has submitted an Application for Permit to Drill and Operate a Well (EQP 7200-1), and the associated documents in support of these applications. DNRE staff have reviewed the application data and have determined that the proposed access roads and drilling pads may potentially impact the Federal or State protected Indiana Bat (*Myotis sodalist*), Kittentails (*Besseya bullii*), and Leiburg's Panic Grass (*Dichanthelium leibergii*). The following detail site observations made on April 14 and April 27, 2010.

Mr. Eric Johnson, Wetland Scientist and Mr. Tim DeMumbrum, Survey Crew Chief for Westshore performed these site assessments to locate or identify the potential habitat for the possible endangered or threatened species indicated above. The proposed well drilling pads and access road locations were staked at the time of assessment and observed to be located entirely within cultivated agricultural fields. Westshore did not identify Kittentails or Leiburg's Panic Grass within the proposed well pads or access roads. Observed soils located within and along the proposed Haystead 1-9 and Haystead 3-9 well drilling pad and access road were identified as poorly sorted, loamy silty sand. Observed soils located within and along the proposed Haystead 2-9 well drilling pad and access road were identified as poorly sorted, loamy clay. The observed landscape of the proposed well drilling pads and access roads was relatively flat with minor topographic changes and disturbed soils associated with agricultural practices. Trees were not identified within the proposed well drilling pads and access roads at any of the well sites.

Observations made within and along the proposed Haystead 1-9, Haystead 2-9 and Haystead 3-9 well drilling pads and access roads did not indicate the existence of the Kittentails (*Besseya bullii*) or Leiburg's Panic Grass (*Dichanthelium leibergii*), which generally exist and thrive in well drained Hillside Prairies associated with steep slopes, well drained Oak Forest openings, and Dry Sand Prairies. Recent and historic agricultural practices have resulted in a disturbed soil profile. The proposed site locations will not require tree removal to facilitate proposed activities. Westshore concludes that the construction of the proposed well drilling pads and access roads will not impact the Indiana Bat (*Myotis sodalist*), Kittentails (*Besseya bullii*) or Leiburg's Panic Grass (*Dichanthelium leibergii*).

WESTSHORE CONSULTING
Engineers ■ Scientists ■ Surveyors

Observations Report

Prepared for: DNRE – Wildlife Division

Sent Via Email Only

April 28, 2010

Re: West Bay Exploration Company – Haystead 1-9, Haystead 2-9, and Haystead 3-9, T4S, R2E, Norvell Township, Jackson County

Please contact Westshore with additional comments and questions regarding information provided within this report.

Sincerely,

WESTSHORE CONSULTING

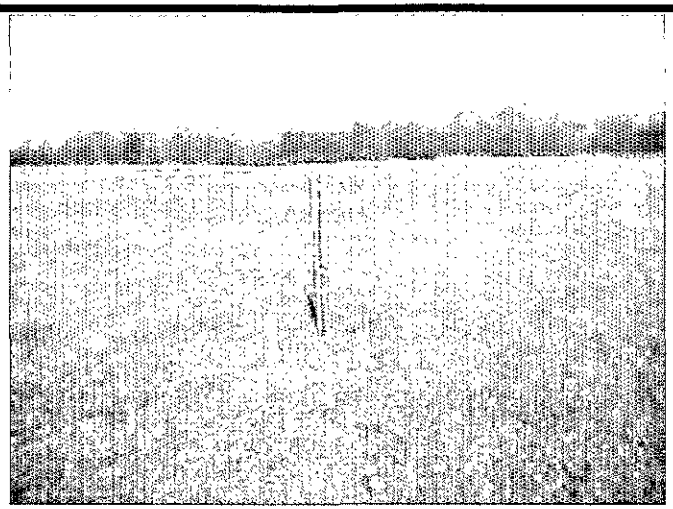
Eric R. Johnson
Wetland Specialist

Robert L. Schulz, C.P.G.
Vice President/Senior Geologist

Site Location Maps
Site Photographs

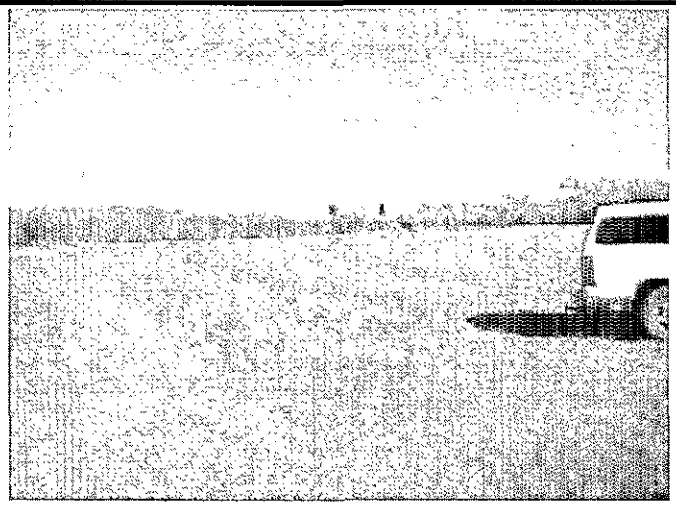
cc: Barbara_Hosler@fws.gov
snowm@michigan.gov
SandersM1@michigan.gov
jenningsj@michigan.gov
DANYLUKW@michigan.gov
SHIMKOK@michigan.gov
Tim Baker – West Bay Exploration - timb46@hotmail.com
Anni Baker – West Bay Exploration – anni@wbeco.net

Haystead 2-9 - Looking Southeast across Drilling Pad | 1



Haystead 2-9 - Drilling Pad | 2

Haystead 1-9 and Haystead 3-9 - Looking South across Drilling Pad | 3



Haystead 1-9 and Haystead 3-9 - Looking East across Drilling Pad | 4

Site: Haystead 1-9, Haystead 2-9 and Haystead 3-9, T4S, R2E, Norvell Township, Jackson County, Michigan

File No.: 323-100, -101, -102

Photos By: T. DeMumbrum

Client: West Bay Exploration Company

Date: 04/27/10

WESTSHORE CONSULTING
Engineers • Scientists • Surveyors

Muskegon, MI
(231) 777-3447

Grand Haven, MI
(616) 844-1260

Manistee, MI
(231) 920-5818

0 200 400

SCALE: 1" = 400'

WESTSHORE CONSULTING
Engineers ■ Scientists ■ Surveyors

2534 Black Creek Rd.
Muskegon, MI 49444
(231) 777-3447

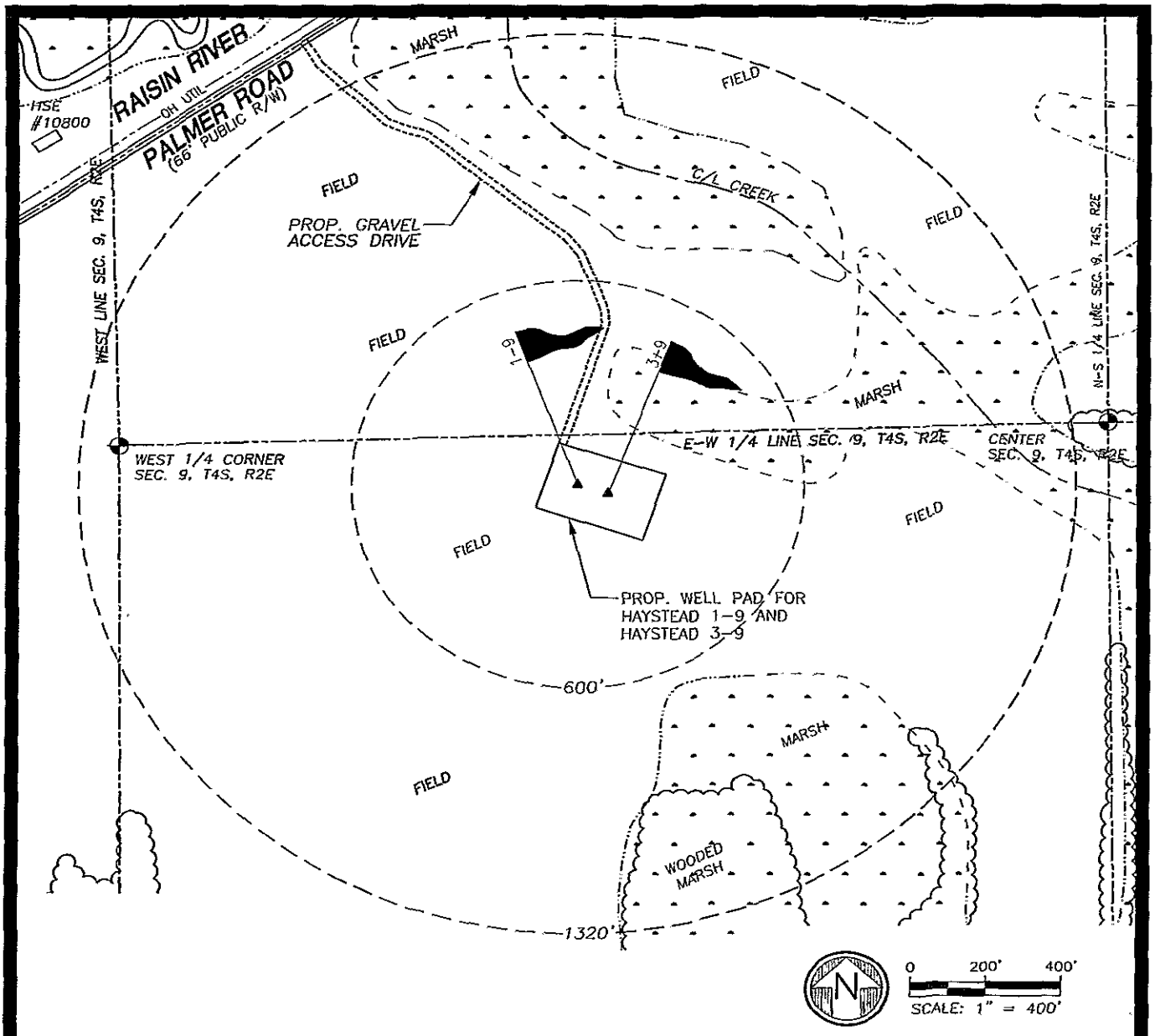
Checked:	RLS
Date:	04/29/10
Drawn by:	BJA
Date:	04/29/10
File No.:	323-98

West Bay Exploration Company
5555 Hogback Road
Fowlerville, MI 48836

Haystead Well and Drilling Unit Layout

FIGURE
1

C:\Land Projects 2004\323-098\dwg\323-98 HAYSTEAD LAYOUT.dwg 2/19/2010 11:59:17 AM EST



WESTSHORE CONSULTING
Engineers ■ Scientists ■ Surveyors ■ Planners
2534 Black Creek Road
Muskegon, MI 49444
Ph: (231) 777-3447
Fax: (231) 773-3453
E-mail: service@westshoreconsulting.com
Grand Haven, MI
Manistee, MI

WEST BAY EXPLORATION COMPANY
5555 Hogback Road
Fowlerville, MI 48836

SURVEY OF THE
HAYSTEAD 1-9 AND HAYSTEAD 3-9
LOCATED IN SECTION 9, T4S, R2E,
NORVELL TWP, JACKSON CO.

Checked:	ERJ
Date:	4/28/10
Drawn by:	BJA
Date:	4/28/10
File No.:	323/100
Figure:	1

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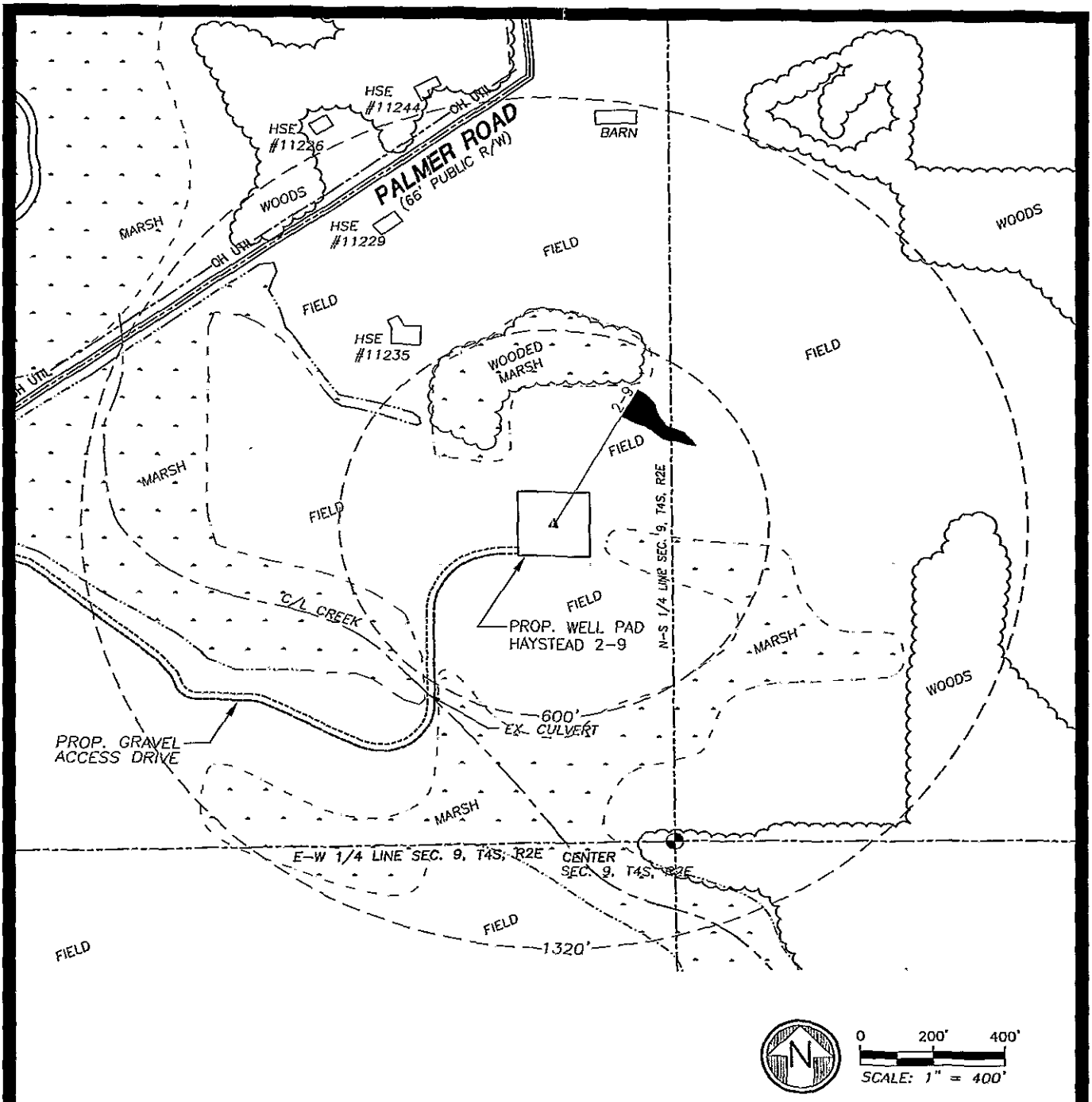

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5555 Hogback Road
Fowlerville, MI 48836

SURVEY OF THE
HAYSTEAD 2-9
LOCATED IN SECTION 9, T4S, R2E,
NORVELL TWP, JACKSON CO.

Checked:	ERJ
Date:	4/29/10
Drawn by:	BJA
Date:	4/29/10
File No.:	323/101
Figure:	2

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Snow, Mark (DNRE)

From: Sanders, Michael
Sent: Tuesday, May 04, 2010 11:17 AM
To: Snow, Mark (DNRE)
Cc: Barbara_Hosler@fws.gov; Shimko, Kristine (DNRE)
Subject: RE: West Bay Exploration, Haystead 1,2,3-9, A100062-4

Mark-

This response is on behalf of the DNRE Wildlife Division - Lansing office.

RE: West Bay Exploration, Haystead 1,2,3-9, A100062-4

After reviewing the Westshore Observation Report of April 28, 2010, there should be no impacts to known rare species or high quality natural communities.

Please let me know if you have questions or comments.

V/r,

Mike Sanders

>>> Snow, Mark (DNRE) 05/03/2010 9:00 AM >>>
Thanks Mike. West Bay ended up conducting a review of all three sites, and forwarded the information to Lori Sargent (SEE ATTACHED). I'll keep on eye out for a 'no effect' statement or otherwise.

Mark J. Snow
Permit Reviewer - Geologist
Department of Natural Resources and Environment Office of Geological Survey 517-241-1530 snowm@michigan.gov

Mailing: PO Box 30256, Lansing, MI 48909
Shipping: MDEQ-OGS, Constitution Hall, 1st Floor South
525 W. Allegan Street, Lansing, MI 48933 -----Original Message-----
From: Sanders, Michael
Sent: Friday, April 30, 2010 12:01 PM
To: Snow, Mark (DNRE)
Subject: RE: West Bay Exploration, Haystead 1,2,3-9, A100062-4

Mark,

From one lowly reviewer to another - let me look at the project again.

Thanks,

Mike

>>> Snow, Mark (DNRE) 04/28/2010 9:01 AM >>>
Mike
I apologize for the added confusion. The A100062, Haystead 3-9 permit application shares a well pad and has a surface hole location 85 feet away from the A100064, Haystead 1-9 permit application.

I am just a lowly permit reviewer, but I anticipate West Bay wondering why the
3-9 needs further review and the 1-9 (85 feet away does not).

Thanks.

Mark J. Snow
Permit Reviewer - Geologist

Department of Natural Resources and Environment Office of Geological Survey 517-241-1530 snowm@michigan.gov

Mailing: PO Box 30256, Lansing, MI 48909
Shipping: MDEQ-OGS, Constitution Hall, 1st Floor South
525 W. Allegan Street, Lansing, MI 48933

-----Original Message-----
From: Sanders, Michael
Sent: Tuesday, April 27, 2010 5:09 PM
To: Snow, Mark (DNRE)
Subject: RE: West Bay Exploration, Haystead 1,2,3-9, A100062-4

Mark,

Just A100062.

Mike

>>> Snow, Mark (DNRE) 04/26/10 10:38 AM >>>
Hi Mike
Just to clarify. The suitable habitat and additional information applies to all three locations or just A100062. Thanks.

Mark J. Snow
Permit Reviewer - Geologist
Department of Natural Resources and Environment Office of Geological Survey 517-241-1530 snowm@michigan.gov

Mailing: PO Box 30256, Lansing, MI 48909
Shipping: MDEQ-OGS, Constitution Hall, 1st Floor South
525 W. Allegan Street, Lansing, MI 48933

-----Original Message-----
From: Sanders, Michael
Sent: Saturday, April 24, 2010 6:07 PM
To: Snow, Mark (DNRE)
Cc: Barbara_Hosler@fws.gov; Duszynski, James (DNRE); Jennings, Jennifer (DNRE); Shimko, Kristine (DNRE); Tefertiller, Rex (DNRE)
Subject: Re: West Bay Exploration, Haystead 1,2,3-9, A100062-4

Hello-

This response is on behalf of the Michigan DNRE Wildlife Division - Lansing office.

Re: West Bay Exploration, Haystead 1,2,3-9, A100062-4

I have reviewed the three permit applications from West Bay Exploration for projects in Jackson County's Norvell Township. A search of the MNFI database revealed the following:

A100062 - I have reviewed West Bay Exploration Company's application for oil/gas exploration in Jackson County, Norvell Township, T4S R2E section 9.
The federal and state endangered Indiana bat (Myotis sodalis) has been known
to occur near the project area. Roost trees included American elm, slippery
elm, silver and red maple and red oak. Indiana bats migrate from their winter hibernation caves to summer breeding sites in a few of the eastern U.S.
states. This species forms colonies and forages in riparian and mature floodplain habitats. Nursery roost sites are usually located under loose bark or in hollows of trees near riparian habitat. Indiana bats typically avoid houses or other artificial structures. Foraging typically occurs over slow-moving, wooded streams and rivers as well as in the canopy of mature trees. Movements may also extend into the outer edge of the floodplain and to nearby solitary trees. A summer colony's foraging area usually encompasses a stretch of stream over a half-mile in length. Upland areas isolated from floodplains and nonwooded streams are generally avoided.

Females begin to leave the hibernacula in late March or early April, giving birth to a single offspring in June or early July. The females form nursery or maternity colonies, which may be as large as 100 individuals (including both females and young). Optimal sites may be used in successive years. Warm temperatures in early summer are crucial to the growth and success of each year's

progeny. Under normal conditions, the young are able to fly within one month after birth. By late August, most individuals have arrived at the hibernaculum. Indiana bats are most active during crepuscular and nighttime hours. Several studies indicate that Indiana bats may be dietary specialists.
Moths comprised 60% to 95% of their diet in Missouri.

Because suitable habitat (wooded areas near riparian and forested wetlands) appear to occur in the immediate area, clearance is needed from the DNRE Wildlife Division and U.S. Fish & Wildlife Service before project activities begin. Barb Hosler from the U.S. Fish & Wildlife Service has been cc:d on this response.

To obtain an evaluation for DNRE Wildlife Division project clearance, please provide at least one of the following to this office:

1. Description of the project area with regard to the species habitat type(s) described above. A recent photo of the project site and a map that shows habitat type(s) and location(s) of the proposed project will be necessary. This can be done by the landowner, other responsible party, or knowledgeable source (i.e. botanist, ecologist, biologist, experienced birder, etc.). This level of evaluation will only define the presence or absence of available habitat. If this office determines that there is no significant available habitat, the project may be cleared at this point. If potential habitat does exist, the next level of evaluation must be undertaken (see options 2 or 3 below).

OR

2. A statement from a knowledgeable source stating that suitable habitat is or is not present and why the project will not impact the species or habitat(s) identified above.

OR

3. Results from a complete and adequate survey by a knowledgeable source showing whether or not the above listed species are present in the affected project area. Guidelines for conducting surveys and a list of consultants who may be able to help conduct surveys can be accessed at:
http://www.michigan.gov/dnr/0,1607,7-153-10370_12141_12168-30516--,00.html
For additional information, including consultation with biologists, please contact Lori Sargent at the e-mail or phone number below.

Please provide information in writing to the mailing address or e-mail provided below.

Lori Sargent
Wildlife Division
Endangered Species Specialist
P.O. Box 30444
Lansing, MI 48909
517-373-9418
Fax 517-373-6705

A100063 and A100064 - No impacts anticipated to known rare species or high quality natural communities based on the information provided in the application.

Please let me know if you have questions or comments.

V/r,

Mike Sanders

>>> Snow, Mark (DNRE) 04/13/2010 4:39 PM >>>
Hi Mike

Attached are three permit applications in Jackson County, Norvell Twp. (4S 2E), Section 9. The spatial interest database indicates natural features matches for Fed/State Endangered - Indiana Bat, State Endangered - Kitten Tales and Ste Threatened - Leiburg's panic Grass. Each loaction is indicated as open land.

Please let Kristy and I know if these location may have an adverse impact on these species.

Thanks.

Mark J. Snow

Permit Reviewer - Geologist

Department of Natural Resources and Environment

Office of Geological Survey

517-241-1530

snowm@michigan.gov

Mailing: PO Box 30256, Lansing, MI 48909

Shipping: MDEQ-OGS, Constitution Hall, 1st Floor South

525 W. Allegan Street, Lansing, MI 48933

Snow, Mark (DNRE)

From: Shimko, Kristine (DNRE)

Sent: Tuesday, May 04, 2010 3:54 PM

To: Snow, Mark (DNRE)

Cc: Danyluk, Walter (DNRE)

Subject: Haystead 1-9, 2-9, 3-9: Applications A100062-64

Per Westshore Consulting 4/22/10 letter, there is no landing strip, only cultivated field.
Per Westshore Consulting 4/28/10 letter, the proposed well drilling pads and access roads will not impact the Indiana Bat, Kittentails, or Leiburg's Panic Grass.

I am satisified with the revisions. I updated the three field reviews. Walt is on AL until 5/12/10. I believe he would also be satisified with the revisions.

Kristy

PART 615 - DRILLING PERMIT APPLICATION FLOW SHEET

Application number A100064	Date application received 4-9-10	+ 5 days Date to send to field 4-14-10
Applicant West Bay Exploration Comp	Company No. 104	+ 25 days Adm complete 5-9-10
Well Name & No. Haystead 1-9	Revision date	+ 20 days Permit decision 5-29-10
☐ New Company ☒ Correct address and phone number ☐ State Surface Date e-mailed to FMFM	Pre-revision app no.	Days tolled New date for permit dec.

☐ Horizontal – no fee ☐ Drilling or Deepening ☐ Check #, Bank, City MC

INITIAL REVIEW

Reviewer: Mark Snow

☐ Admin complete application	☒ EQP 7200-1 ☒ EQP 7200-2 ☒ Supplemental plat ☒ BOP diagram ☒ Full drlng unit ☒ EIA ☒ Notice to landowner ☒ Directional plan ☒ Soil erosion ☒ Proper spacing ☒ Notice to Co Clerk ☐ ~~Inj. well supplements~~ ☐ ~~Antrim EIA~~ ☐ ~~H2S cont plan~~ ☒ Has surf rights ☒ Valid bond No. 08731081 ☒ Blanket ☐ Single ☐ Half
☒ Natural Features	☐ No match found ☒ Match found Program Fed/St. End. - Ind. Bat. St. End. → Kitten Tails ☐ Application activity entered Personnel contacted St. Meent. Loiberg's Panic Grass - M. Sanders Enfl
☒ Distribution	Area geologist: ☐ Cadillac ☐ Gaylord ☒ Lansing ☐ Livonia ☐ Bay City ☐ Kalamazoo District geologist: ☐ Cadillac ☒ Lansing Kristy Shimko ☐ Copy sent to local emergency coord ☐ City or Twp over 70,000 population ☐ Confidential, copy provided to PGP ☐ Application activities entered Date sent to field 4/13/2010

REVIEW FOR COMPLETE AND ACCURATE INFORMATION

Reviewer: Mark Snow

☒ Location	☐ 7200-1 deficiencies or conflicts ☐ 7200-2 deficiencies or conflicts ☒ Zoning Ag. Residential zoning date: ☐ Posted on map ☐ Special management area or wellhead protection zone
☐ Drilling Unit 80 A unit? Can be issued on a "40".	Well type: ☐ Oil/Gas ☐ Complete drilling unit ☐ Unleased interests ☐ General Rule ☐ S.O. 1-73 ☐ S.O. 1-86 ☐ Field spacing order ☐ (A) 14-9-94 ☐ USP Request ☐ Approved USP ☐ USP density ☐ 1320' Conflicts ☐ 303 (2) ☐ Administrative approval ☐ Hearing petition ☐ Spacing problems
☐ Injection wells N/A	Well type: ☐ BDW ☐ Gas storage ☐ Secondary recovery ☐ Supplemental survey, all producing/plugged wells within 1320' ☐ All records of wells within 1320' ☐ 7200-14 complete ☐ No migration of inj fluids into wells within area of review ☐ Inj pressure below fracture gradient ☐ Injection into a producing pool ☐ Deficiencies
☒ Ownership	☒ Private surface ☒ Private minerals ☐ State surface ☐ State minerals State lease number ☐ Federal surface ☐ Federal minerals ☐ Deficiencies
☒ H_2S	☒ Received H_2S Determination ☒ Sweet ☐ Sour, Class ☐ Contingency plan enclosed ☐ Deficiencies
☒ Casing & Sealing	☒ Rotary ☐ Combination ☐ Cable ☒ Surface adequate R 408 ☒ BOP adequate ☐ Proper hole/casing size R 410(4) ☐ Int csg S.O. 2-73 ☐ 30% exception ☐ Short int exception ☐ Through gas storage R 417 ☐ Notice to storage operator ☐ LS csg, meets R 410(3) ☐ Deficiencies
☒ EIA review Farm field.	Features < 1320': ☐ Wetland ☐ Endangered specie ☐ Natural river ☐ Critical dune ☐ Surface Water ☐ Floodplain ☐ Great Lake less than 1500' Man made features: ☐ Residence < 300' ☐ Private ww < 300' ☐ Public ww < 800 or 2000' ☐ Need additional information
☒ Reconcile Field & Lansing review	☐ Tolled, Date Reason ☐ Technical Deficiency, Date Reason ☒ Adm Complete, Date 5/5/2010 Reason ☒ Lansing staff recommend issuance Date 5/5/2010 ☐ Denial recommended to Division Chief Date ☐ Previously drilled wells at this surface location API# 11th, 12th digits

Shares pad w/ 3-9 85' away, temp pit & temp water well

West Bay Exploration company

13685 S. West Bay Shore / Suite 200
Traverse City, MI 49684
231-946-0200 / Fax: 231-946-8180

5555 N. Hogback Road
Fowlerville, MI 48836
517-223-4011 / Fax: 517-223-4020

May 28, 2010

Michigan DEQ
PO Box 30256
Lansing, MI 48909
ATTN: Mr. Mark Snow
Kristi Shimko

Dear Mr. Snow & Ms. Shimko:

Enclosed, please find revised copies of the Application for Permit to drill the Haystead 1-9, 2-9 & 3-9 wells. The intermediate casing string has been changed to reflect the desired 32#/ft weight, and longer lengths, as we would like to run it into the Clinton formation, as in some of the other area wells.

The revised Haystead #1-9 application, reflect s the actual depths for the surface, and intermediate casing, as well as the actual cement volumes used.

Thanks so much for all of your help with this, we appreciate it very much. If you have any questions regarding this or other matters, please call or e-mail us.

Sincerely,

Anni Baker
West Bay Exploration

DEQ MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - OFFICE OF GEOLOGICAL SURVEY

APPLICATION FOR PERMIT TO: ☒ DRILL ☐ DEEPEN ☐ CONVERT AND OPERATE A WELL

By authority of Part 615 or Part 625 of Act 451 PA 1994, as amended. Non-submission and/or falsification of this information may result in fines and/or imprisonment.

1a. Part 615 Supervisor of Wells: ☒ Oil and Gas ☐ Brine Disposal ☐ Hydrocarbon Storage ☐ Injection for Secondary Recovery

1b. Part 625 Mineral Wells: ☐ Waste Disposal ☐ Brine Production ☐ Processed brine disposal ☐ Storage ☐ Test, fee sched. on rev.

1c. Fee enclosed: ☐ Yes ☒ No, revision of application ☐ No, leg of horz drainhole

2. List all previous permit numbers: 60076

3. Fed. ID. No. (do not use SSN): 38-2348162

4. Conformance bond: ☒ Blanket ☐ Single well

5. ☐ Attached ☒ On file

6. Bond number: 08784181

7. Bond amount: 250,000

8. Applicant (name of permittee as bonded): West Bay Exploration Company

9. Address: 13685 South West Bay Shore Drive, Suite 200, Traverse City, MI 49684

Phone: (231) 946-0200

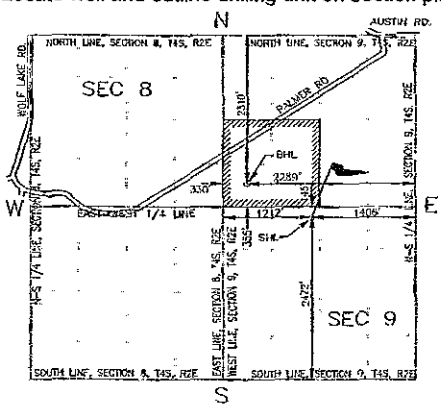
I authorize DEQ 4 additional days to process this application. ☒ Yes ☐ No

10. Lease or well name (be as brief as possible): Haystead

Well number: 1-9

11. Surface owner: Harold and Harriet Haystead

Locate well and outline drilling unit on section plat



12. Surface location: NE 1/4 of NW 1/4 of SW 1/4 of Sec 9 T4S R2E — Township: Norvell — County: Jackson

13. If directional, bottom hole location: SW 1/4 of SW 1/4 of NW 1/4 of Sec 9 T4S R2E — Township: Norvell — County: Jackson

14. The surface location for this well is 2472 feet from nearest (N/S) S section line AND 1212 feet from nearest (E/W) W section line

15. Is this a directional well? ☐ No ☒ Yes If yes, complete line15. The bottom hole location for this well is 2310 feet from nearest (N/S) N section line AND 330 feet from nearest (E/W) W section line

16. The bottom hole location (whether straight or directional) of this well is 355 feet from nearest (N/S) S drilling unit line AND 330 feet from nearest (E/W) W drilling unit line

17. Kind of tools: ☒ Rotary ☐ Cable ☐ Combination

18. Is sour oil or gas expected? ☒ No ☐ Yes ☐ H_2S Cont. plan enclosed

19. Base of lowest known fresh water aquifer: Formation Michigan Marshall Depth 280'

20. Intended total depth: MD 4928' TVD 4750'

21. Formation at total depth: Glenwood

22. Producing/injection formation(s): Trenton/Black River

23. Objective pool, field, or project: Napoleon/Norvell

24. PROPOSED DRILLING, CASING AND CEMENTING AND SEALING PROGRAM

HOLE			CASING			CEMENT			MUD	
Depth (MD)	Geol. Formation	Bit Dia.	O.D. Size	Wt/Ft Grade Condition	Depth (MD)	Sacks	T.O.C.	W.O.C	Wt.	Vis.
425	Shale	14 ¾"	11 ¾"	42#/ft H-40 New	425'	325	Surf	12	8.4	80
3340'	Clinton	10 5/8"	8 5/8"	32#/ft J-55 New	3340'	800	Surf	12	8.5	36+
4928'	Glenwood	7 7/8"	51/2"	15.5#/ft J-55 New	4928	425	1500	24	10.2	30+

25. DETAIL CEMENTING PROGRAM. IDENTIFY ALL CEMENT CLASSES, ADDITIVES, AND VOLUMES (IN CU. FT.) FOR EACH CASING STRING.

SurfaceCsg 175 sx 65/35/w3% CaCl & 150 sx Class A w 3% CaCl-40 Bbls return to surface, Plug down at 10 pm 5//20/10

Intermediate 600 sx 65/35/ 6% & 3% CaCl with LCMMM & 200 sx Class A w/3% CaCl, 40 Bbls return to surf, Plug down 4 pm 5/26/10

Production/Injection 1st stage-75 sx Class A 2nd stage =250 sx Lite & 100 sx Class A

26. Send correspondence and permit to

Name West Bay Exploration Company E-mail anni@wbeco.net

Address PO Box 1203, Fowlerville, MI Phone (517) 223-4011

CERTIFICATION "I state that I am authorized by said applicant. This application was prepared under my supervision and direction. The facts stated herein are true, accurate and complete to the best of my knowledge."

27. Application prepared by (print or type): Ann M Baker Phone: (517) 223-4011

28. Signature: Ann M Baker Date: 5/28/10

Enclose permit fee of $300 for all Part 615 wells; $2,500 for a Part 625 waste disposal well; or $500 for a brine production, processed brine disposal, or storage well. Make checks payable to State of Michigan.

DEQ Cashier use only.

Office of Geological Survey Use Only

Permit number	API number	Date issued	Owner number

RECEIVED JUN 02 2010 OFFICE OF GEOLOGICAL SURVEY PERMITS & BONDING UNIT

EQP 7200-1 (rev. 5/2007) SEE INSTRUCTIONS FOR MAILING ON REVERSE

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - OFFICE OF GEOLOGICAL SURVEY

WATER WELL RECORD
FOR OIL, GAS OR MINERAL WELL OPERATIONS

Required under authority of Part 615, Supervisor of Wells or Part 625 Mineral Wells, of Act 451 PA 1994, as amended. Non-submission and/or falsification of this information may result in fines and/or imprisonment.

☐ Part 615 Oil/Gas Well ☐ Part 625 Mineral Well

1. Name and address of permittee shown on oil/gas drilling permit
WEST BAY EXPLORATION CO,
STE. 200 - 13685 S. WEST BAYSHORE DR,
TRAVERSE CITY, MI. 49684

Name and address of water well drilling contractor(s)
KATZ WELL DRILLING INC.
1479-E. MICH. AVE.
BATTLE CREEK, MI. 49014

Well name and number on oil/gas or mineral well permit: HAYSTEAD 1-9

Permit number (if applicable): 60076

County: JACKSON | Township: NORVELL | Surface location: NE 1/4 NW 1/4 SW 1/4 Sec 9 T 4S R 2E

2. Formation description	Thickness of stratum	Depth to bottom of
0-9 SAND	9	9
9-17 GREY CLAY + GRAVEL	8	17
17-27 BROWN CLAY	10	27
27-120 SANDROCK	93	120
(use 2nd sheet if needed)		

3. Well depth ft. 120 | Date of completion 5-17-10

4. ☐ Cable tool ☒ Rotary ☐ Driven ☐ Dug ☐ Hollow rod ☐ Auger ☐ Jetted ☐ _____

5. CASING ☐ Steel ☐ Threaded Diameter ☒ Plastic ☒ Welded
5 in. to 51 ft. depth
_____ in. to _____ ft. depth
Grouted Drill-Hole Diameter
8 in. to 51 ft. depth
_____ in. to _____ ft. depth
Height above/below Surface 1 ft.
Weight 5DR21 lbs./ft
Drive Shoe ☒ Yes ☐ No ☐ Not installed
FORMATION PACKER

6. Screen
Type _____ Diameter _____
Slot/Gauze _____ Length _____
Set between _____ ft. and _____ ft.
Fittings ☐ K-Packer ☐ Lead Packer ☐ Bremer Check
☐ Blank above screen _____ ft. ☐ Other _____

7. Static Water Level
1 ft. below land surface. Flowing ☐ Yes _____ gpm

8. Water level while pumping (below land surface)
40 ft. after 1 hours at 200 GPM
_____ ft. after _____ hours at _____ GPM

9. Well Grouted ☒ Yes ☐ No
From 0 to 51 ft.
☐ Neat cement ☒ Bentonite ☐ Other
No. bags of ~~cement~~ 4 additives _____

10. Pump ☐ Not installed ☐ Pump installation only
Manufacturer's name MCDONALD
Model number 2150013 HP 5 Volts 230
Length of drop pipe 20 ft. capacity 75 G.P.M.
Type: ☒ Submersible ☐ Jet

11. Well Head Completion ☐ Pitless adapter ☐ Basement offset ☒ 12" above grade ☐ Approved pit

12. REMARKS (elevation, source of data, water quality, etc.)
LAT. 42.16560
LONG. 84.19353

RECEIVED
MAY 24 2010
OFFICE OF GEOLOGICAL SURVEY
PERMITS & BONDING UNIT

(Use a 2nd sheet for attach supplements if needed)

12. CERTIFICATION "I state that I am authorized by said owner. This report was prepared under my supervision and direction. The facts stated herein are true, accurate and complete to the best of my knowledge."

Name: KATZ WELL DRILLING INC. Registration if any: 13-1593
Address: 1479-E. MICH. AVE. BATTLE CREEK 49014
Signature: Mark McKeague date 5-17-10

Submit original and 3 copies within 30 days after water well completion.
Dist. Original; Permit File Copies: Groundwater, District

OFFICE OF GEOLOGICAL SURVEY
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES & ENVIRONMENT
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

REBECCA A. HUMPHRIES
DIRECTOR

June 2, 2010

Ms. Ann M Baker
West Bay Exploration Company
PO Box 1203
Fowlerville, MI 48836

Dear Ms. Baker

SUBJECT: **Permit Modification – Casing Modification 8 5/8" J55 - 24# to 32#**
Haystead 1-9 (PN 60076)
Haystead 2-9 (PN 60077)
Haystead 3-9 (PN 60078)

This letter serves as notice that the above referenced permits in Jackson County, Norvell Twp. (T4S R2E) have been modified, per your request, to allow an increase in the weight from the permitted 24# 8 5/8" J55 casing to 32# 8 5/8" J55.

Please attach this correspondence with the original laminated permits.

Sincerely,

Mark J. Snow
Permit Reviewer
Permits and Bonding Unit
Office of Geological Survey
517-241-1530

cc: Permit File
Kristy Shimko, DNRE Lansing District

Jennings, Jennifer (DNRE)

From: Shimko, Kristine (DNRE)
Sent: Tuesday, June 08, 2010 4:46 PM
To: Snow, Mark (DNRE); 'Ann Baker'; Jennings, Jennifer (DNRE)
Cc: 'Tim Baker'; 'Rick Slater'; Danyluk, Walter (DNRE)
Subject: RE: Landfill in Jackson County

I approve.

****

Kristy Shimko
Geologist
DNRE, Office of Geological Survey
Lansing District Office
(517) 373-9409

From: Snow, Mark (DNRE)
Sent: Tuesday, June 08, 2010 4:31 PM
To: 'Ann Baker'; Jennings, Jennifer (DNRE); Shimko, Kristine (DNRE)
Cc: Tim Baker; Rick Slater
Subject: RE: Landfill in Jackson County

Looks like Liberty Environmentalist Inc. is considered a Type III – industrial landfill. I see no reason why they WBE cannot take mud and cuttings to their location instead. OGS can simply document the change within the field notes for that well.

In that case no "formal' modification would be necessary.

The off-site disposal of mud and cuttings is handled on the field level. As such, please await a response from Kristy that she approves of this change. Thanks.

Mark J. Snow
Permit Reviewer - Geologist
Department of Natural Resources and Environment
Office of Geological Survey
517-241-1530
snowm@michigan.gov

From: Ann Baker [mailto:anni@wbeco.net]
Sent: Tuesday, June 08, 2010 4:08 PM
To: Snow, Mark (DNRE); Jennings, Jennifer (DNRE); Shimko, Kristine (DNRE)
Cc: Tim Baker; Rick Slater
Subject: Landfill in Jackson County

Good Afternoon all:

With the amount of drilling mud that West Bay is currently producing with the continued drilling in Jackson County, I have been searching for a more economical solution than the McGill Road Landfill operated by Waste Management. The prices for disposal have continued to rise over the past year, and they have been unwilling to work with us. We have set up an account with the Liberty Environmentalist landfill, located in Clark Lake on South Meridian Road, and would like to begin hauling cuttings there upon approval from the DEQ.

As the previously issued permits state disposal will take place at the McGill Road landfill, we are wondering if a "formal" modification is necessary, or will a letter or e- mail suffice?

The cost savings for West Bay is a substantial difference, and we would much rather support a local business if at all possible.

Anni Baker
West Bay Exploration

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - OFFICE OF GEOLOGICAL SURVEY

DEQ

APPLICATION TO:

☒ **CHANGE WELL STATUS OR**

☐ **PLUG AND ABANDON WELL**

Required by authority of Part 615 Supervisor of Wells or Part 625 Mineral Wells, of Act 451 PA 1994, as amended.Non-submission and/or falsification of this information may result in fines and/or imprisonment.

☒ Part 615 Oil or Gas Well ☐ Part 625 Mineral Well

Change of well status requested to:

☒ Plug back ☐ Perforate ☐ Temporarily abandon

☐ Convert to _____ ☐ Other _____

Last production/injection rate and type of fluid

Brief description of project

PLUG BACK FOR RE-DRILL

Permit number	Type of well
60076	Dry Hole

API number: 21-075-60076-00-00

Name and address of permittee:
WEST BAY EXPLORATION COMPANY
P.O. BOX 1203
FOWLERVILLE, MI 48836

Well name and number: HAYSTEAD 1-9

Well location: NE 1/4 of NW 1/4 of SW 1/4 Section 9 T 4S R 2E

Township	County
NORVELL	JACKSON

Date drilling completed	Date last produced/utilized
05/31/10	

Work to be done by: AES Rig #2

Starting date: 06/1/10

CASING AND CEMENTING RECORD

Hole dia	Casing dia & wt/ft	Depths set	Cement quantity, type, additives	Cement top	Perforations
N/A	16"	32'	Driven	N/A	
14-3/4"	11-3/4",42#,H-40	425'	175sx 65/35/6% gel + 150sx CLA, 3% CC to both	C/S	
10-5/8"	8-5/8", 32#, J-55	3340'	600sx 65/35/6% gel, 2% CC + 200sx CLA 3% CC	C/S	
7-7/8"		4804'			

Formation record (formation and depth of top, oil, gas and water shows, etc.):

Formation	Depth
Coldwater Shale	264'
Clinton	3278'
Trenton	4095'
Black River	4421'
Glenwood	4786'
RTD	4804'

Detail proposed procedures:

Circulate well. Plugs are to be set in a hole that is stabilized and static.
Through tbg spot cmt plugs as follows: 120 sxs CLA at 4200' and 125 sxs CLA at 3600' (kick plug).

Name/signature (authorized representative): Date:

FOR OFFICE OF GEOLOGICAL SURVEY USE ONLY

DEQ additional requirements:

☐ Yes ☐ No ☒ Not applicable Production tests to commence within 10 days of completion and to be filed

☐ Yes ☒ No Service company records are to be filed

Approved by DEQ:	Office:	Approval date:	Termination Date:
	Lansing District	6/1/10	

Submit original and three (3) copies of this application to the District Office within 60 days ofchange of well status.
Note: Three copies of Record of Well Plugging or Change of Well status (EQP 7200-8) and any requested service company records are to be filed within 60 days of completion at the District Office.

DEQ

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - OFFICE OF GEOLOGICAL SURVEY

RECORD OF WELL DRILLING OR DEEPENING

Required by authority of Part 615 Supervisor of Wells or Part 625 Mineral Wells, of Act 451 PA 1994, as amended. Non-submission and/or falsification of this information may result in fines and/or imprisonment.

Permit number/Deepening number: 60076

(Submit 3 copies within 60 days of drilling completion.)

API number: 021-075-60076-00-00

☒ Part 615 Oil/Gas Well ☐ Part 625 Mineral Well

Well name and number: Haystead 1-9

Name and address of permittee:
West Bay Exploration
13685 S. West Bay Shore Dr #200
Traverse City, MI 49684

Surface location: NE 1/4 of NW 1/4 of SW 1/4 Section 9 T4S R2E

Township: Norvell

County: Jackson

Footages: 2472 ft. from South line and 1212 ft. from West line of sec.

Name and address of drilling contractor:
Advanced Energy Services
PO Box 85
S. Boardman, MI 49680

Directionally drilled (check one): ☒ Yes ☐ No

Previous permit numbers: none

Subsurface location (if directionally drilled): SW1/4 of SW1/4 of NW 1/4 Section 9 T 4S R 2E

Township: Norvell

County: Jackson

Footages: 2310 ft. from North line and 330 ft. from West line of sec.

Date drilling began	Date drilling completed
5/20/10	5/31/10

Total depth of well	Formation at total depth
Driller 4804md Log 4804md	PDC

Elevations: K.B. 967.26 ft. R.F. 966.26 ft. R.T. ft. Grd 966.26 ft

Feet drilled - cable tools: from to

Feet drilled - rotary tools: from surf to 4804md

Casing, Casing Liners and Cementing, Operating Strings

Size	Where set	Cement	T.O.C.	Ft. pulled
11 3/4	425	175 Lite/150 A		
8 5/8	3340	600 Lite/200 A		
5 1/2	4572	1st 100 Flowsto		
		2nd 200 HalCem		

Water Fill Up (F.U.) or Lost Circulation (L.C.) (X)

Formation	F.U.	L.C.	Depth	Amount
no fluid loss				

Gross Pay Intervals

Formation	Oil or Gas	From	To
none			

All Other Oil and Gas Shows Observed or Logged

Formation	Oil or Gas	Depth	Where Observed (X) Sam-ples	Odor	Pits	Mud Line	Gas Log	Fill Up
Trenton	gas	4386						

Depth Correction

Depth	Correction

Deviation Survey

Run at	Degrees

Plugged Back

Yes	No	Depth

Geophysical / Mechanical Logs (list each type run)

Brand	Log types	Logged intervals
Baker Atlas	CNL/Density/GR	surf-TD

Notice: Report complete sample and formation record, coring record, and drill stem test information on reverse side.

CERTIFICATION "I state that I am authorized by said owner. This report was prepared under my supervision and direction. The facts stated herein are true, accurate and complete to the best of my knowledge."

Date	Name and title (print)	Signature
10/6/10	Trish Rising, Geologist	T. Rising

OCT 22 2010

Submit to: OFFICE OF GEOLOGICAL SURVEY,
MICHIGAN DEPT OF ENVIRONMENTAL QUALITY
PO BOX 30256, LANSING, MI 48909-7756

EQP 7200-5 (rev. 8/2004)

FORMATION RECORD

Attach additional sheets if necessary

API number	Permit number/Deepening number
	60076

Elevation used	Geologist name	Tops taken from
967.26	Trish Rising, West Bay Exploration	☐ Driller's log ☒ Sample log ☒ Electric log

Note: if well directionally drilled, add true vertical depth formation tops where appropriate

From	To	Formation (type, color, hardness)
surf	88	unconsolidated drift
88	271	Marshall/Coldwater Fm sandstone, siltstone and shale
271	1206	Coldwater Shale shale-blue/gry, vfxln, mhd
1206	1217	Sunbury Shale shale-brn/blk, silty, mhd, arg
1217	1283	Berea not observed
1283	1327	Bedford Shale not observed
1327	1524	Antrim Fm shale-drk brn/blk, mhd, org int.
1524	1563	Traverse Fm limestone and dolomite-drk brn/md brn to gray, dns
1563	1687	Traverse LS limestone-med/lt brn, vfxln, hrd
1687	1762	
1762	2165	Dundee Fm limestone-lt/med gray/brn, hrd
1848	1878	Detroit River Grp not observed
1878	2165	Detroit River Anhy not observed
2165	2352	Bois Blanc/Bass Island dolomite and cherty intervals-lt/med brn and white, dns, hrd
2352		Salina Grp
2686	2782	A2 not observed
2782	3270	Niagran limestone and dolomite-buff to bream colored, brn, arg intervals, vfxln, mhd
3270	3775	Clinton Fm dolomite with shaley intervals-drk gray grading to lt gry, dnx
3775	4095	Utica Fm shale-dr gry/blk, vfxln, hard
4095	4425	Trenton (3915-4245tvd) dolomite and limestone, lt/drk brn, vfxln, mhd, cln, scat ddo stn, pyr and foss
4425	4784	Black River Fm (4245-4604tvd) limestone, shale, gry/blk, vfxln mhd, arg, scat foss, tr dolomite
4784	4790	Glenwood (4604-4610tvd) shale and dolomite, bluish/green vfxln, soft, cln

From	To	Formation (type, color, hardness)

If well was cored, attach core description

DRILL STEM TEST DATA

4790	4804	PDC (4610-td) samples observed in circ samples at td; dolomite and shale	

LIST ATTACHMENTS

OFFICE OF GEOLOGICAL SURVEY USE ONLY

Reviewed by

Date of review

OCT 2 2 2010

DEQ

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY – OFFICE OF GEOLOGICAL SURVEY

RECORD OF WELL COMPLETION

By authority of Part 615 or Part 625 of Act 451 PA 1994, as amended. Non-submission and/or falsification of this information may result in fines and/or imprisonment.

(Submit 3 copies within 60 days of well completion.)
☒ Part 615 Oil/Gas Well ☐ Part 625 Mineral Well

Permit number/deepening permit no.	API number
60076	21-075-60076-00-00

Type of well (after completion): Oil & Gas

Well name & number: Haystead 1-9

Name and address of permittee:
West Bay Exploration
13685 S. West Bay Shore #200
Traverse City, MI 49684

Directionally drilled (check one)	Previous permit numbers	Total depth of well
☒ Yes ☐ No	none	M.D. 4804md T.V.D. 4610tvd

Surface location	Subsurface location (if directionally drilled)
NE ¼ of NW ¼ of SW ¼ Section 9 T 4S R 2E	SW ¼ of SW ¼ of NW ¼ Section 9 T 4S R 2E
Township: Norvell	Township: Norvell
County: Jackson	County: Jackson
Footages: North/South East/West	Footages: North/South East/West
2472 Ft. from South line and 1212 Ft. from West line of Sec.	2310 Ft. from North line and 330 Ft. from West line of Sec.

Part 615 - oil/gas wells			Part 625 - mineral wells		
Date well completed	Producing formation(s)	Injection formation(s)	Date of first injection	Disposal formation(s)	Solution formation(s)
not	none				

COMPLETION INTERVALS(S)

Date	Number holes	Perforation or open hole interval	Open	
			Yes	No
		not completed		

STIMULATION BY ACID OR FRACTURING

Date	Interval treated	Materials and amount used
	none	

PRODUCTION TEST DATA

Oil Bbls/day	Gravity °API	Condensate Bbls/day	Gas MCF/day	Water Bbls/day	H_2S Grains/100 ft^3.	B.H.P. and depth
0	-	0	0	0	0	-

CERTIFICATION "I state that I am authorized by said owner. This report was prepared under my supervision and direction. The facts stated herein are true, accurate and complete to the best of my knowledge."

Name and title (print or type)	Signature	Date
Trish Rising, Field Geologist	T. Rising	10/6/10

Submit to: OFFICE OF GEOLOGICAL SURVEY
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
PO BOX 30256
LANSING MI 48909-7756

OCT 22 2010

EQP 7130 (rev. 8/2004)

DEQ

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY - OFFICE OF GEOLOGICAL SURVEY

CERTIFICATION OF CASING AND SEALING OF SURFACE HOLE

Required by authority of Part 615 Supervisor of Wells or Part 625 Mineral Wells, of Act 451 PA 1994, as amended
Non-submission and/or falsification of this information may result in fines and/or imprisonment

Permit number: 60076

Well name: Haystead 1-9

Township: Norvell

County: Jackson

Surface location: Ne 1/4 of NW 1/4 of SW1/4 Section 9 T 4S R 2E

Name and address of permittee:
West Bay Exploration
13685 S. West Bay Shore Dr #200
Traverse City, MI 49684

Name and address of drilling contractor:
Advanced Energy Services
PO Box 85
S. Boardman, MI 49680

SURFACE HOLE

Hole diameter (Note reductions	Depth to bedrock	Base of specified aquifer (see permit)	Total depth of surface hole	Formation at surface casing seat	Date drilling completed
14 3/4	88	Marshall	425	Coldwater Shale	6/7/10

Narrative of unusual drilling circumstances or problems encountered
none

Name and address of geologist/mud logger
Trish Rising, Field Geolgist
12180 Ladd Rd
Brooklyn, MI
49230

Signature: T. Rising

Date: 10/19/10

SURFACE CASING

Casing O.D. (in)	Casing depth	Cement type and additives	Amount of cement (sacks)	Volume (bbls) Pumped	Volume (bbls) Returned to surface	Plug down date & time
11 3/4	425	Lite	175		40Bbls	10am 5/20/10
		Class A	150			

Narrative of problems encountered running or cementing casing. Note any cement fallback, grouting, or lost circulation zones.
none

I AM RESPONSIBLE FOR THIS REPORT. THE INFORMATION IS COMPLETE AND CORRECT.

Signature of permittee or company officer: T. Rising

Date

Submit the original and one copy, typewritten or legible printed, within 30 days after drilling is completed to:
OFFICE OF GEOLOGICAL SURVEY
MICHIGAN DEPT OF ENVIRONMENTAL QUALITY
PO BOX 30256
LANSING MI 48909-7756

OCT 2 2 2010

EQP 7200-12 (rev. 8/2004)

60076

Directional Drilling Contractors, LLC.

Job Number: DR100148
Company: WEST BAY EXPLORATION
Lease/Well: HAYSTEAD 1-9
Location: NORVELL TWP., JACKSON CO.
Rig Name: ADVANCED # 2
RKB:
G.L. or M.S.L.:

State/Country: MICHIGAN / USA
Declination: 6.36 degrees west
Grid:
File name: C:\WINSERVE\ASDRIL~1\2010\HAYSTD19.SVY
Date/Time: 02-Jun-10 / 11:34
Curve Name: HAYSTEAD 1-9 (as drilled)

Directional Drilling Contractors
SURVEY REPORT

WINSERVE SURVEY CALCULATIONS
Minimum Curvature Method
Vertical Section Plane 299.55
Vertical Section Referenced to Wellhead
Rectangular Coordinates Referenced to Wellhead

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
KOP - ASSUMED VERTICAL @ 500 MD									
500.00	.00	.00	500.00	.00	.00	.00	.00	.00	.00
545.00	3.80	303.40	544.97	.82	-1.25	1.49	1.49	303.40	8.44
577.00	5.20	307.60	576.87	2.29	-3.28	3.98	4.00	304.92	4.49
607.00	6.50	308.30	606.71	4.17	-5.69	7.01	7.05	306.25	4.34
638.00	8.20	309.00	637.45	6.65	-8.78	10.92	11.02	307.13	5.49
670.00	9.70	310.40	669.06	9.83	-12.61	15.82	15.99	307.95	4.74
701.00	11.20	310.40	699.55	13.48	-16.89	21.34	21.61	308.58	4.84
732.00	12.90	309.30	729.87	17.62	-21.86	27.71	28.08	308.87	5.53
763.00	14.90	309.00	759.96	22.32	-27.64	35.05	35.53	308.92	6.46
793.00	16.80	307.60	788.81	27.40	-34.07	43.15	43.72	308.80	6.46
824.00	18.70	305.10	818.34	32.99	-41.69	52.53	53.16	308.35	6.60
855.00	20.50	301.60	847.54	38.69	-50.38	62.91	63.52	307.52	6.93
886.00	21.30	298.40	876.50	44.21	-59.96	73.96	74.49	306.41	4.50
917.00	21.30	297.00	905.38	49.45	-69.93	85.22	85.64	305.27	1.64
948.00	21.50	296.70	934.25	54.55	-80.02	96.51	96.84	304.29	.74
978.00	21.50	296.70	962.16	59.49	-89.84	107.50	107.75	303.51	.00
1010.00	21.50	296.30	991.93	64.73	-100.34	119.21	119.40	302.83	.46
1071.00	21.90	296.00	1048.61	74.67	-120.58	141.72	141.83	301.77	.68
1132.00	22.00	294.60	1105.19	84.41	-141.19	164.46	164.50	300.87	.87
1194.00	21.40	297.00	1162.80	94.38	-161.83	187.33	187.34	300.25	1.73
1255.00	20.60	298.80	1219.74	104.60	-181.15	209.18	209.18	300.00	1.68

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
1316.00	21.00	299.10	1276.77	115.09	-200.11	230.84	230.84	299.90	.68
1347.00	21.10	298.80	1305.70	120.48	-209.85	241.97	241.98	299.86	.47
1378.00	20.90	298.80	1334.64	125.83	-219.59	253.08	253.08	299.81	.65
1409.00	21.60	299.90	1363.53	131.34	-229.38	264.32	264.32	299.79	2.60
1439.00	21.50	299.10	1391.44	136.76	-238.97	275.33	275.34	299.78	1.03
1470.00	22.10	299.50	1420.22	142.40	-249.01	286.85	286.85	299.76	1.99
1501.00	22.40	299.90	1448.91	148.21	-259.20	298.58	298.59	299.76	1.08
1531.00	22.50	299.10	1476.64	153.86	-269.17	310.04	310.04	299.75	1.07
1562.00	22.60	299.10	1505.27	159.64	-279.56	321.93	321.93	299.73	.32
1593.00	22.80	298.80	1533.87	165.43	-290.03	333.89	333.89	299.70	.75
1623.00	23.00	298.10	1561.50	170.99	-300.29	345.56	345.56	299.66	1.13
1654.00	22.90	297.40	1590.05	176.62	-310.99	357.64	357.64	299.59	.94
1685.00	21.40	297.70	1618.76	182.02	-321.35	369.32	369.32	299.53	4.85
1731.00	20.80	297.70	1661.67	189.72	-336.02	385.88	385.88	299.45	1.30
1792.00	20.60	300.20	1718.74	200.15	-354.88	407.43	407.43	299.42	1.49
1823.00	21.40	301.30	1747.68	205.83	-364.43	418.54	418.54	299.46	2.88
1853.00	21.80	301.30	1775.57	211.57	-373.86	429.58	429.58	299.51	1.33
1884.00	22.30	301.30	1804.30	217.62	-383.81	441.21	441.21	299.55	1.61
1915.00	22.30	300.20	1832.99	223.63	-393.92	452.97	452.97	299.58	1.35
1946.00	22.90	300.60	1861.61	229.66	-404.19	464.88	464.88	299.61	2.00
1976.00	23.00	299.50	1889.23	235.52	-414.32	476.58	476.58	299.62	1.47
2007.00	23.10	298.80	1917.76	241.43	-424.92	488.71	488.71	299.60	.94
2038.00	23.10	298.10	1946.27	247.22	-435.61	500.87	500.87	299.58	.89
2068.00	22.20	297.40	1973.96	252.60	-445.83	512.42	512.42	299.54	3.13
2099.00	21.90	297.40	2002.69	257.96	-456.17	524.05	524.05	299.49	.97
2130.00	21.00	297.40	2031.54	263.18	-466.23	535.38	535.38	299.44	2.90
2160.00	21.00	298.10	2059.55	268.18	-475.74	546.13	546.13	299.41	.84
2191.00	20.80	299.50	2088.51	273.51	-485.43	557.18	557.18	299.40	1.74
2222.00	21.00	299.90	2117.47	278.99	-495.04	568.24	568.24	299.40	.79
2253.00	21.40	299.90	2146.37	284.58	-504.76	579.45	579.45	299.41	1.29
2283.00	21.90	299.50	2174.26	290.06	-514.37	590.52	590.52	299.42	1.74
2314.00	22.20	299.10	2202.99	295.76	-524.52	602.16	602.16	299.42	1.08
2344.00	21.70	298.80	2230.81	301.18	-534.33	613.37	613.37	299.41	1.71
2375.00	21.60	298.40	2259.63	306.66	-544.38	624.81	624.81	299.39	.58
2406.00	21.50	298.10	2288.46	312.05	-554.41	636.19	636.19	299.37	.48
2437.00	20.80	298.40	2317.37	317.34	-564.26	647.37	647.38	299.35	2.28
2467.00	20.40	298.80	2345.45	322.39	-573.53	657.93	657.93	299.34	1.41
2498.00	20.40	300.60	2374.51	327.75	-582.91	668.73	668.73	299.35	2.02
2529.00	20.70	301.60	2403.54	333.37	-592.23	679.61	679.61	299.38	1.49
2559.00	21.40	302.30	2431.53	339.07	-601.37	690.37	690.37	299.42	2.48
2590.00	21.40	301.30	2460.40	345.03	-610.98	701.67	701.68	299.45	1.18
2621.00	21.20	300.60	2489.28	350.82	-620.64	712.93	712.93	299.48	1.04
2652.00	21.40	299.90	2518.16	356.50	-630.37	724.19	724.19	299.49	1.04
2682.00	21.80	299.90	2546.06	362.00	-639.94	735.24	735.24	299.50	1.33
2713.00	22.40	299.90	2574.78	367.81	-650.05	746.90	746.90	299.50	1.94

Measured Depth FT	Incl Angle Deg	Drift Direction Deg	True Vertical Depth	N-S FT	E-W FT	Vertical Section FT	CLOSURE Distance FT	CLOSURE Direction Deg	Dogleg Severity Deg/100
2744.00	23.00	299.50	2603.38	373.74	-660.44	758.86	758.86	299.51	2.00
2774.00	23.20	298.80	2630.97	379.47	-670.72	770.63	770.63	299.50	1.13
2805.00	23.40	298.40	2659.44	385.34	-681.49	782.89	782.89	299.49	.82
2836.00	23.70	298.80	2687.86	391.27	-692.36	795.27	795.28	299.47	1.10
2866.00	22.70	300.90	2715.43	397.15	-702.62	807.09	807.09	299.48	4.33
2897.00	21.90	301.60	2744.12	403.25	-712.67	818.85	818.85	299.50	2.72
2928.00	21.80	301.60	2772.89	409.30	-722.50	830.38	830.38	299.53	.32
2959.00	22.00	301.30	2801.65	415.33	-732.36	841.94	841.94	299.56	.74
2989.00	21.30	300.20	2829.54	420.99	-741.87	853.00	853.00	299.57	2.70
3020.00	20.90	298.80	2858.46	426.49	-751.59	864.16	864.16	299.57	2.08
3051.00	20.00	297.40	2887.50	431.59	-761.14	874.99	874.99	299.55	3.30
3081.00	19.30	296.70	2915.76	436.18	-770.12	885.06	885.06	299.53	2.46
3112.00	18.30	298.40	2945.10	440.80	-778.98	895.05	895.05	299.50	3.68
3143.00	17.80	299.50	2974.58	445.44	-787.39	904.65	904.65	299.50	1.95
3173.00	17.00	298.40	3003.20	449.79	-795.23	913.62	913.62	299.49	2.88
3204.00	16.40	298.40	3032.90	454.02	-803.07	922.53	922.53	299.48	1.94
3235.00	15.70	297.70	3062.69	458.06	-810.63	931.10	931.10	299.47	2.34
3265.00	15.10	297.70	3091.61	461.76	-817.69	939.06	939.06	299.45	2.00
3293.00	14.50	298.10	3118.68	465.10	-824.01	946.21	946.21	299.44	2.17
3374.00	12.70	299.90	3197.41	474.32	-840.67	965.25	965.25	299.43	2.28
3405.00	11.70	299.10	3227.71	477.55	-846.37	971.80	971.80	299.43	3.27
3436.00	10.60	299.90	3258.12	480.50	-851.59	977.80	977.80	299.43	3.58
3466.00	10.20	300.90	3287.63	483.24	-856.26	983.21	983.21	299.44	1.46
3497.00	9.80	302.00	3318.16	486.05	-860.86	988.59	988.59	299.45	1.43
3528.00	8.80	304.10	3348.75	488.77	-865.06	993.59	993.59	299.47	3.41
3558.00	7.80	302.30	3378.44	491.15	-868.68	997.91	997.91	299.48	3.44
3589.00	6.90	300.90	3409.18	493.23	-872.05	1001.87	1001.87	299.49	2.96
3620.00	6.10	300.20	3439.98	495.01	-875.08	1005.38	1005.38	299.50	2.59
3650.00	5.30	300.90	3469.83	496.53	-877.64	1008.36	1008.36	299.50	2.68
3681.00	4.70	302.00	3500.71	497.93	-879.95	1011.06	1011.06	299.50	1.96
3712.00	3.90	306.50	3531.63	499.23	-881.87	1013.38	1013.38	299.51	2.80
3743.00	2.90	313.60	3562.57	500.40	-883.29	1015.18	1015.18	299.53	3.49
3773.00	2.00	321.30	3592.54	501.33	-884.16	1016.41	1016.41	299.55	3.19
3804.00	1.10	330.10	3623.53	502.01	-884.65	1017.17	1017.17	299.57	2.99
3834.00	.40	36.50	3653.53	502.35	-884.73	1017.40	1017.40	299.59	3.36
3882.00	.40	36.50	3701.53	502.62	-884.53	1017.36	1017.36	299.61	.00
4794.00	.40	36.50	4613.51	507.74	-880.75	1016.59	1016.62	299.96	.00
PROJECTED TD @ 4804 MD									
4804.00	.40	36.50	4623.51	507.79	-880.70	1016.58	1016.61	299.97	.00

NOV 17 2010

TD 4929 4750 500 -882

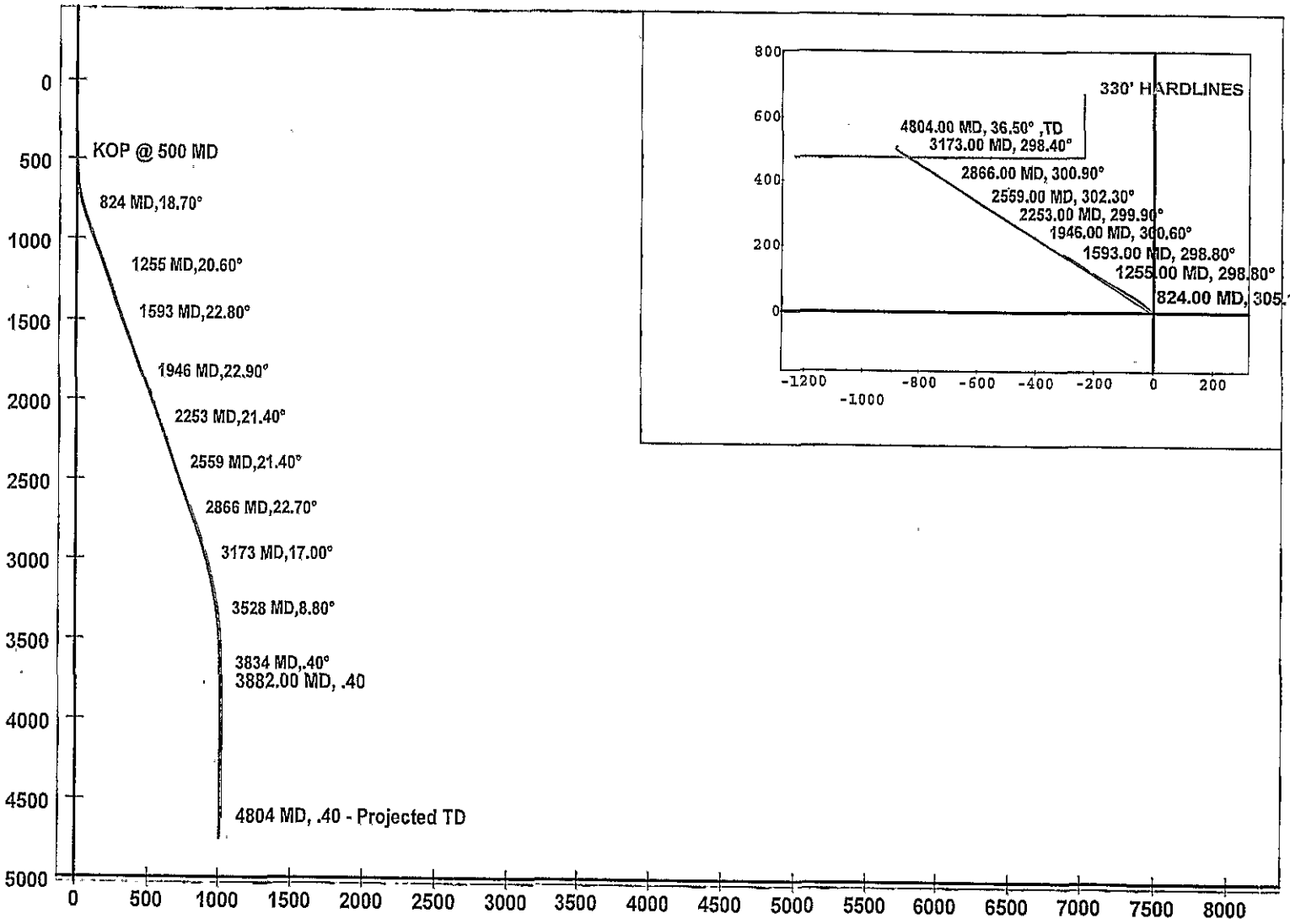
60016

Job Number: DR100148
Company: WEST BAY EXPLORATION
Lease/Well: HAYSTEAD 1-9
Location: NORVELL TWP., JACKSON CO.
Rig Name: ADVANCED # 2
State/Country: MICHIGAN / USA

Declination: 6.36 degrees west
File name: C:\WINSERVE\ASDRIL~1\2
Date/Time: June 02, 2010

DDC
Directional Drilling Contractors, LLC.

RECEIVED
NOV 17 2010



BOTTOM HOLE LOCATION CORRECTION

Permit 1000576 Well Type DH Date 12-6-10 Checked by: KR 10-07

Operator WEST BAY EXPLORATION

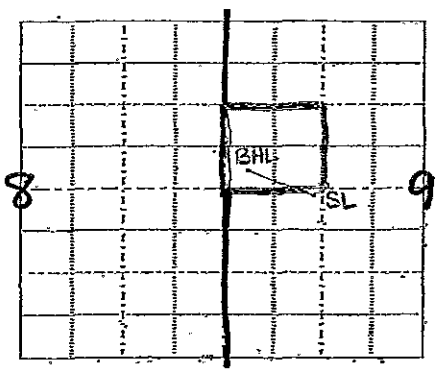
Well Name & Number HAYSTEAD 1-9

Surface Location NE ¼ NW ¼ SW ¼ Sec. 9 T. 4S R. 2E

NORVELL Township, JACKSON County

2472 ft. from the S line and 1212 ft. from the W line of the Sec.

Deepest Total Depth	True Vertical Depth	Rectangular Coordinates
4804'	4624'	508' N & 881' W



Bottom Hole Location at Reported Total Depth

SW ¼ SW ¼ NW ¼ Sec. 9

T. 4S R. 2E

NORVELL Township, JACKSON County

2302 ft. from the N line and 331 ft. from the W line of the Section and

363 ft. from the S line and 331 ft. from the W line of the drilling unit

	Measured Depth	True Vertical Depth	Rectangular Coordinates
Upper Perforations	_____	_____	_____ & _____
Lower Perforation	_____	_____	_____ & _____

Upper Perforations _____ ft. from the ___ line and _____ ft. from the ___ line of the Sec. and _____ ft. from the _____ line and _____ ft. from the ___ line of the drilling unit.

Lower Perforations _____ ft. from the ___ line and _____ ft. from the ___ line of the Sec. and _____ ft. from the ___ line and _____ ft. from the___ line of the drilling unit.