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Comments by Rolland E. Kidder, President
Kidder Exploration, Inc.
Hearing on the Draft Environmental Impact Statement
Held by the New York State Department
of Environmental Conservation
Jamestown, NY, June 15, 1988

Kidder Exploration, Inc. is an independent natural gas drilling company located here in Jamestown, NY. We are pleased that after many years of work we now have a Draft Environmental Impact Statement (DEIS) and hope that it, or a variation of it, will be adopted by the Department in the days ahead.

The New York Independent Oil and Gas Association (IOGA) of which we are a member created a special committee to deal with the technical aspects of this document. I would instead like to briefly comment on some overall policy matters which are reflected in this proposal.

State Primacy on Regulation

First of all, the DEIS recognizes that the Department of Environmental Conservation is to be the lead agency in regulating the oil and gas industry in New York. It is vital for the health of our industry that state primacy in the regulation of our industry continue.

All major oil and gas producing states have provided statewide regulation for this industry. In Texas (the largest oil and gas producing state) this regulatory control was given in the 1930's to the Texas Railroad Commission. That Commission was at that time the only major regulatory body in the state and regulation of the oil and gas business was deemed necessary. In New York State that regulatory control has been given, more correctly, to an environmental agency--the DEC. You control by the permit process not only the proper spacing of wells, but the proper environmental procedures for drilling and completing these wells.

It is absolutely essential that in this day and age of more and more laws and regulations being imposed by more and more governmental agencies--that there be one agency responsible for the regulation and control of oil and gas drilling. The "Balkanization" of governmental control would bring to a screeching halt an industry that is already reeling from the worst economics it has seen since World War II.

Rec'd AT
Hearing
Jamestown - 7 PM
15 JUNE 88

CR-88

If anyone wonders exactly how many considerations are involved in granting a permit--I would refer them to page 8-3 of the DEIS. I count thirteen and that probably doesn't include everything. This illustrates why it is imperative that producers be able to work with one governmental agency when it comes to drilling permits.

In two areas of the DEIS, I would recommend an improvement in the lead agency status.

KEI-1

(1) Historic and Archaeological Determinations:

The law now requires the New York State Department of Parks and Recreation to determine whether or not a site is of archaeological or historic interest. If such a determination is made, a producer must conduct a study that usually costs \$1,000-\$1,500 to complete. More serious, however, are the delays that can occur in the process of waiting for approval. We would recommend that some type of interagency agreement be entered into between the DEC and Parks and Recreation in order to let the Division of Minerals act as the agent for approval or disapproval of historic and archaeological permits. We would also recommend that the map (known as the so-called "bone map") be improved so that it is more site specific; and that it be revised from time-to-time when historic artifacts are not discovered after a digging study has been completed.

KEI-2

(2) Secondly, we would recommend that within the DEC procedures be altered so that wetland determinations can be coordinated through the Division of Minerals. Although the experience with delay has not been a major problem, we believe it would make more sense to have a one-stop-shopping approach whereby we could submit our wetland permit applications to the Division of Minerals along with our other permit requests.

Balancing the Interests

Our other general comment on the DEIS, focuses on the area of the "balancing of interests." We believe that overall the document does that and takes into consideration the multitude of environmental concerns the Department must deal with as well as recognizing the realities we as businessmen must live with in drilling for oil and natural gas. That balance must be continued.

For example, there is the often misunderstood issue of brine disposal. Many people do not realize that oil and gas come from sedimentary rocks deep in the earth that were at one time associated with marine environments. 400 million years ago Chautauqua County was underwater--salt water. The sediments of that environment--deltic and coastal barrier bar--are now being drilled 4000 feet down. The decomposed fossil life from those ancient times is trapped in the rock and we produce it as natural gas.

KEI-1

There has never been any question that the Department of Environmental Conservation will remain the lead agency for oil and gas regulation in the State. The Department's Division of Mineral Resources and the Office of Parks, Recreation, and Historic Preservation (OPRHP) worked together to establish special procedures for dealing with oil and gas drilling permit applications. These special procedures, which were implemented by OPRHP in 1984, resulted in shortening the average turnaround time for archeological reviews to a few days. It should be noted that a survey of operators conducted by the DMN in 1986 revealed that only a small number of operators who waited for determinations from OPRHP were actually required to conduct archeological investigations. Most companies who conducted investigations did so of their own accord in order to avoid possible delays. As previously stated, OPRHP feels it is necessary to restrict access to their archeological maps. Modifications to these maps, and the archeological review requirements, are outside DEC's jurisdiction.

KEI-2

The Division of Mineral Resources does not have the necessary technical expertise to make wetland determinations. Whenever permits from different Divisions within the Department are required, the Division of Regulatory Affairs (DRA) is the designated coordinator.

Natural gas is the cleanest burning fuel in the world--it is absolutely non-polluting. However, as these rock reservoirs decline in pressure--that old sea water starts coming in to these wells. It is not a toxic waste--millions of people swim in it everyday on the beaches of New Jersey, Long Island and Florida. However, it must be disposed of properly and economically.

We hope that the DEC continues to keep this in mind. We need to dispose of this by-product properly, but its disposal is a growing economic burden in the industry and we must keep this overhead cost under control--especially when prices of natural gas are one-half what they were four years ago.

It is the old story again--"there is no free lunch." If people want to continue consuming the most pollution-free fuel in the world, then we are going to have to continue to find ways to economically and safely dispose of this ancient seawater. That is what we mean by the need for government to continue "balancing the interests."

KEI-3

Another example of this need is illustrated in our concern with the criteria which could be used by the Department in making wetland permit determinations. We are pleased with the mitigation approach we see on page 8-50 of this document. It is not cheap to drill in wetlands. Marifia paper, bank-run gravel, three acre duck ponds--are not cheap. We do not choose to drill in wetlands unless geologic potential or spacing requirements make that a necessary business decision.

However, in most cases, where it is done--we believe that environmental impacts can be minimized or mitigated in wetland environments. We need to balance the need for a clean, domestically produced fuel with the need to protect the environment. This again is what we call "balancing the interests", and we hope it is something the Department will keep its eye on as you adopt this and other regulations in the future.

Again, we appreciate your coming to the western New York natural gas "patch" to hold this hearing. We believe that as the natural gas business has grown in New York State so has the state's ability to properly regulate this industry improved. We do not seek to be exempt from regulation, but we do seek a regulatory scheme which recognizes the unique problems and characteristics of our industry.

KEI-3

The Department supports a "balancing of interests" and also believes that the environmental impacts of resource development can be minimized and mitigated in wetland and other sensitive environments.

William J. Plants
51 South Shore
Cuba, New York 14727

June 15, 1988

Gentlemen:

My comments on the GEIS
will be brief.

This instrument is confusing,
discommuniting, self contradicting and
a question: it's being legal.

William J. Plants

Rec'd at Hearings
6/16/88
Wellsville
1 PM

WJP-1

The GEIS was prepared in order to meet the legal requirements of the State Environmental Quality Review Act (SEQRA). We need specific examples of the portions of the GEIS the commentator finds confusing, discriminatory, and self contradictory to address these concerns.

WJP-1

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REBUTTAL
TO
GEIS

John J. Malbone, Jr., President
Louis J. Malbone, Vice-President
Don E. Goodson, Supervisor of Field Operations

*Received AT HEARING
in Wellsville 6/16/88
7 PM
SB*

CR-92



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Recent changes in the Public Service Commission's (PSC) gas pipeline safety code (16 NYCRR part 255) also discourage the placement of wells less than 150 feet from a residence. Gathering lines installed closer than that to an existing residence or place of public assembly must comply with more expensive increased transmission line standards. The discrepancy between DEC's requirement of 100 feet between wells and homes and PSC's 150 foot restriction for gas gathering lines connected to such wells provides further reason for increasing the magnitude of DEC's surface restriction. * It is recommended the DEC's siting restriction be increased to 150 feet for private dwellings and provide them protection equal to that for public buildings. *

URH-1

COMMENTS:

Set back on this should not be any different than what National Fuel Gas has on all their distribution systems. Old lines should be "Grand Fathered". New lines should have same siting criteria as National Fuel Gas.

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URH-1 The referenced paragraph is referring to a proposed 150-foot setback from existing residences to new wells.



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Although Department staff are aware of the importance of protecting public safety, there is a chance that the above mentioned siting concerns have been overlooked on occasion because existing procedural requirements do not take them into account. * The existing regulations do not require that the plats accompanying each permit application show the proposed location of pits, access roads, tanks, etc., as survey of these items is not required, but it is recommended the proposed location of the above drill site details be sketched on the plat accompanying each permit application. *

URH-2

COMMENTS:

O.K. If free hand sketch by operator is accepted, or separate on site document.

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b. Longer-Term Noise and Visual Impacts - After the well is drilled, the extent of the subsequent activities at the site that could cause visual or noise related disturbances to surrounding areas will depend largely on whether the well is a producer or a dry hole. If it is a dry hole, the site will be reclaimed. This will involve some final use of, and noise from, construction equipment, resulting in a temporary

URH-2

As stated, a hand sketch would be acceptable. Support for this proposed requirement is noted.



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increase in noise impacts. Although no timetable exists for site reclamation, pits must be reclaimed within 45 days after the cessation of drilling operations. * A site reclamation timetable of 45 days is suggested for future regulations. * Extensions can be granted by the Regional Minerals Manager for reasonable cause, such as seasonal weather conditions.

URH-3

COMMENTS:

Rough Backfill OK - 45 days- But longer time must be required for final Restoration and seeding, 180 days. Weather such as rain fall and snow does not lend itself to comply to such a regulation.

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Another weakness in this surface restriction stems from its exclusive focus on well siting. Under the present regulations, mud pits and reserve pits can be dug directly next to surface waters, although this is very unlikely because they must be adjacent to the well. Pits must have an impermeable lining and be large enough to contain all fluids. In spite of these precautions, accidental leaking and overflow has occurred. Storage tanks, oil-water separation ponds and other potential sources of pollution can also be sited directly next to surface waters under existing

URH-3

Weather conditions should not delay site reclamation six months. A site reclamation extension for good cause will be granted by the Regional Minerals Manager.



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regulations. Although Department staff often place conditions on permits or give instructions to operators limiting the siting of these facilities, the topic should be addressed on a more consistent basis. * It is recommended the minimum siting restriction on the proximity of wells and associated production facilities to permanent surface bodies of water be increased to 150 feet. * A waiver of this and most other siting and spacing restrictions can be given following the exception request, public notice and hearing procedures detailed in 6NYCRR Part 553.

URH-4

COMMENTS:

Way too much - 100 foot - less if waiver is requested and a public hearing on things such as a stream waiver should not be required, as in Pennsylvania, a stream encroachment permit is granted by the Department after an on site inspection. No public hearings are run.

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Department staff are aware of the importance of springs and often protect them through conditions on permits. * It is recommended the surface water setback restriction be applied to springs which are used for a domestic water supply. *

URH-5

COMMENTS:

150 feet too much (75 feet in this case)

URH-4 We agree that a strict 150 foot siting restriction may cause hardship. We have decided to recommend that the distance of 150 foot proximity be a flag on the revised EAF triggering closer permit review to determine whether special precautions are necessary.

URH-5 Other industry commentators have agreed with this proposal. Reasonable alternatives to proposed regulations will be considered during the rulemaking process.



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a. Surface Municipal Water Supplies - Approximately one-fourth of the municipal systems in the State are supplied by surface waters. These municipal reservoirs are protected by the same minimum setback requirements that apply to all surface water bodies. However, the existing 50 foot well setback requirement may not provide adequate back-up protection for surface waters in case of an accident. In addition, no regulatory restrictions exist on the placement of pits, tanks, or other potential sources of pollution directly next to surface waters. Department staff are aware of the importance of municipal water supplies and place conditions on the permit to restrict the siting of oil and gas facilities. * It is recommended the minimum siting restriction on the proximity of wells and associated production facilities to surface municipal water supplies be increased to 150 feet. *

URH-6

COMMENTS:

Should be 100 feet. Siting meaning the edge of the drill location cannot come within 100 feet (as in PA) from the water supply, without Dept. waiver

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URH-6

Setback restrictions from the drillsite will be considered during rulemaking. It also has been decided that the distance of 150 feet will be a flag in EAF for closer permit review.



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Although private water wells considered individually are of less significance than municipal wells, they are equally sensitive to groundwater pollution. In fact, they may be more vulnerable to pollution problems because there are no standard statewide water well construction requirements. Water well casings are not always grouted and extended above ground. Thus they can serve as a vertical collection conduit for surface pollution. In addition, the ground surface surrounding water wells is not always built up to drain surface waters away from the well. * For these reasons, a 150 foot setback from private water wells is recommended unless the water well owner approves a smaller setback. Additionally, the plat accompanying the drilling application should show the location of all private water wells of public record within 1,000 feet of the wellsite. *

URH-7

COMMENTS:

We feel 500 foot is adequate protection of private water supply

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Although no formal policy exists, Department staff generally discourage on site trash burial and recommend that it be taken to a landfill. When trash has been buried on site, the burial depth has sometimes been too shallow to prevent damage to plow blades and/or re-emergence of the trash at the surface through frost action (NYS Dept.

URH-7

It would in an operators best interest to determine the location and pre-drilling water quality of all private water wells within 1,000 feet, but this may be difficult to determine under some circumstances. We have decided to recommend that the operator be required to only show the location of all private water wells within 660 feet of the wellbore.

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of Agriculture and Markets, 1982a). * Because of complaints concerning burial of trash and pit liners which have a tendency to work their way back to the surface and interfere with farm operations, it is recommended the permit holder be required to have landowner approval to bury either trash or the drilling pit liner. *

URH-8

COMMENTS:

NO Not for pit liners, trash O.K.. We have not had any complaints on this subject from any of our land owners.

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Damage to plow blades has also occurred when they collided with casing left in the ground. * The Department recommends that the well casing must be cut down below plow depth during plugging and abandonment in agricultural areas. The safe buffer depth is now specified as 4 feet below the surface of the ground. *

URH-9

COMMENTS:

O.K.

URH-8 Specification for pit liner burial procedures may be an alternate method of addressing the problem. However, trash burial, depending on the regulations of the local municipality, is usually illegal.

URH-9 Support for this proposal is noted.

CR-99



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URH-10 Support for this proposal is noted.

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Another major concern in the agricultural community is restoration of the natural soil profile. During access road and well site construction, the land is usually stripped to bedrock or the hardpan clay zone to avoid erosion and sedimentation problems and provide adequate support for heavy equipment. The topsoil that is removed should be stockpiled for later use. Mixing of topsoil with the subsoil below it during either site clearing or restoration will seriously hinder crop production (NYS Dept. of Agriculture and Markets, 1982a). The Seneca County Soil and Water Conservation District has estimated the reduced crop yields may be expected for 20 years or more when the topsoil location is reversed with the subsoil and buried below the plant root zone (Cool, 1982, person communication #14). * Therefore, it is recommended that topsoil stockpiling and redistribution during sit reclamation be required in all agricultural areas. Additional measures such as paraplowing where compaction has occurred are also recommended. *

URH-10

COMMENTS:

O.K.



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Tanks on well site locations generally range in size from 12 to 200 barrels (one oil field barrel = 42 gallons). The only significant difference between oil and brine tanks is that the latter are usually lined to prevent salt water corrosion. The Dept. does require that oil holding tanks in primary aquifer areas be surrounded by a dike capable of retaining 1 1/2 times the capacity of the tank. The dikes are usually formed of compacted earth and may also be lined with an impermeable material. * It is suggested the regulations be amended to require dikes around all oil storage tanks in the future, regardless of their location.

*

URH-11

COMMENTS:

O.K.

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Prior to the commencement of drilling operations, a person who has been issued a drilling permit must notify by certified mail any local government and any landowner whose surface rights will be affected by

URH-11 Support for this proposal is noted.



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drilling operations [ECL 23.0305-13]. This notification is required to those whose property may be potentially affected by drilling activity and so that local jurisdictions are aware of activity taking place in their area. * This notification should be required at least five business days prior to the beginning of drilling operations and local jurisdictions should be notified through the clerk of the county, city or town, and village whose land will be physically affected. *

URH-12

COMMENTS:

Change to three or two business days. Phone call O.K.

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DEC must be notified in writing or by telegram prior to starting actual drilling operations under the current regulatory program [6NYCRR Part 554.2]. This provision is necessary so that the Department is aware of, and can monitor activity provided for in the permit as necessary. * It is recommended that these regulations be revised so that notification take place a minimum of 24 hours in advance by telephone. *

URH-13

COMMENTS:

O.K.

URH-12 Notification of commencement of drilling operations via a phone call to local governments and/or surface rights owners is not a reasonable alternative. Using certified mail protects the operator in the event an affected party claims to have not been notified. Reasonable alternatives to DEC proposals with respect to how far in advance notification is required will be considered during the rulemaking process.

URH-13 Support for this proposed requirement is noted.



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URH-14 Support for this proposed requirement is noted.

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The permit must be prominently posted at the drill site and the permit expires if drilling operations do not begin within 180 days [6NYCRR Part 552.3(c)]. * It is recommended that this regulation be revised so the 180 day time period can be extended to 12 months. *

URH-14

COMMENTS:

O.K.

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Precautionary measures for the drill site would include proper lighting for working at night, and prohibition of flame heaters in doghouses or out buildings. Drill sites need to have no-smoking area designations and fire and explosion protection equipment. Firefighting equipment needs to be on hand. DEC currently requires a blowout prevention plan from all operators in the Bass Island trend.



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Responsibilities of individual employees in such an event are to be posted in the doghouse. In addition, the local fire department must be called in the event of a blowout. * It is also recommended that operators make regular operating tests of blowout preventor and conduct kick response training in order to be prepared in the case of an accident. Where blowout preventor are require, they should be actuated and tested with rig air or another approved method before drilling out the shoe of the surface casing. *

URH-15

COMMENTS:

What is their definition of a Blowout.

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New regulations require that any loss or spill[ill of oil or gas from pipelines and gathering lines, receiving tanks, storage tanks or receiving or storage receptacles must be reported to the DEC's Division of Water, Bureau of Spill prevention and Response. Their Hot Line phone number is 1-800-457-7362. * The Division of Mineral Resources will retain jurisdiction over spills and leaks at the wellhead. The appropriate Regional Minerals office should be notified immediately of any wellhead leak of more than one barrel of oil. It is also recommended that



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the Department's regulations reinforce further the need to conduct safe operations by stating that the owner or operator must perform all operations in a safe and workmanlike manner and must maintain all equipment in a safe conditional for the health and safety of all persons and for the protection of the well, lease, or unit and associated facilities. Additional language for the regulations should direct the owner or operator to immediately take all necessary precautions to control, remove or otherwise correct any health, safety, environmental, or fire hazard and only personnel who are trained and competent to drill and operate wells be used in well drilling operations. Oil and gas well drillers must be registered in New York State. *

URH-16 Responsibilities and provisions for drilling and completion safety standards can be addressed in the written contract between the operator and subcontractor. However, DEC holds the well operator ultimately responsible for assuring that drilling and associated activities are conducted in an environmentally safe manner.

URH-16

COMMENTS:

I don't like this because here the operator becomes liable for drilling subcontractor safety standards - or - completion subcontractors. Should contain equipment liability clause.

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Most operators run surface casing in their wells. However, current regulations allow them to eliminate the surface casing if the production casing is cemented from total depth to the top of the well in areas where the pressure characteristics of the subsurface formations have been reasonably well established by prior drilling experience [6NYCRR 554.4(a)]. With the exception of the Bass Island trend, which wasn't discovered until 1981, the producing formations in New York State are

CR-105



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URH-17 As a practical matter, surface casing requirements are rarely waived.

generally well known and have low formation pressures. Therefore, surface casing can be omitted from many wells under the existing regulations. However, as a practical matter this is rarely done because the surface casing is required for freshwater protection and well control. * It is recommended this practice be restricted to areas where it has been proven no subsurface pressures or freshwaters exist. *

URH-17

COMMENTS:

O.K.

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During the BOP test the surface casing is also pressure tested to 1,000 psi. Although the surface casing must be able to withstand 1,800 psi, pressure testing of casing prior to installation is not a requirement. The Completion Report, Notice of Intention to Plug and Abandon, and the Plugging Report that operators submit to the Department should contain information on the casing's grade and weight which directly affects its pressure rating. * Inclusion of such information on drilling permit applications forms which are being revised, will allow Division of Mineral Resources (DMR) staff to review the adequacy of the casing program ahead of time and require changes if needed. *



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URH-18 Support noted. The drilling permit application form has already been revised.

URH-19 When intermediate casing is used, provisions for alternate cementing requirements on the production casing are given in the cementing and casing guidelines.

URH-18

COMMENTS:

O.K.

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1. Annular Pressure

* Because of high annular pressures exhibited by many wells drilled in the Jamestown Aquifer area and the difficulty of monitoring annular pressures, it is proposed that all future oil and gas wells in primary and principal aquifers be cemented from total depth to the surface. *

URH-19

COMMENTS:

I am against this if a good surface string and primary string (2) Strings are already cemented to surface. If you cement in the Bass Island string, then your stuck when you want to go for the medina, (except drilling out with a 3 1/2" bit)



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Sometimes an extensive testing program is conducted prior to completing a well to production. This is especially true for wildcat wells. As many as 20 or 30 zone tests may be conducted on a wildcat well. The testing and evaluation time may take several months and may involve alternate stimulation and testing. Flaring may also be allowed upon approval of the Regional Minerals Manager. * It is recommended that notification of the Regional DMN manager be required prior to any significant changes or time extensions of the originally proposed well testing program, and approval of revisions to the permanent wellbore configuration (casing and cement) proposed in the drilling permit application is required. *

URH-20

COMMENTS:

Or acting Regional DMN - too often they're on vacation when you need them and everyone else passes the buck.

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A major part of the form is the "Record of the Formations

URH-20 Any operator who has evidence of inadequate response from an acting manager should provide documentation and file a formal complaint.



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Penetrated". it shows the name and depth of the rock formations encountered in drilling the well. If the exact formation names are not know, rock descriptions are given. Room is also included on the form for reporting: 1) the depth at which any shows of oil or gas were encounter, 2) any measurements or estimates of their volume, 3) the depths at which any quantities of fresh, salt water or sulphur water were found and 4) if possible, an estimate of the producing capacity of these zones. This information has been so rarely included on the Completion Form, that DEC is considering additional regulations to ensure compliance. * As part of the aquifer permit conditions, the operator must keep a record of all water producing zones and report them on the Completion Form. This information is now required throughout the State. * The information is needed to make sure freshwater producing zones have been adequately protected and it may also be helpful in solving any future problems that might develop with the well.

URH-21

COMMENTS:

How are you going to do this when drilling surface on Mud?

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* Because of non-compliance by oil and gas operators in furnishing

URH-21 Water zones can usually be detected when drilling with mud if attention is paid to the mud returns and mud properties.



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all the information requested in the Well Drilling and Completion Report (form 85-15-7), it is suggested that enforcement action be taken not only for submission of a fraudulent or false report but also for the repeated submission of an incomplete report which does not have all the information requested. * Completion Reports are now being returned for missing information.

URH-22

COMMENTS:

I recommend that they print an information sheet on how they want each information item entry completed. Enforcement action should not be taken against operators submitting incomplete reports unless they are chronic or persistent offenders and have received warning letters from DEC.

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* It is recommended that a condition be added to drilling permits limiting the angle of the drilling blow-back pit walls to less than 45 degrees when appropriate as determined from the pre-drilling site inspection. * This requirement would greatly decrease the chances for pit wall collapse except in areas where pits are excavated in unconsolidated sediments. Once a pit wall collapses it is usually impossible to repair the liner. There can be disadvantages, however. A

URH-22 The commentator's suggestion has merit and will be recommended to the appropriate Department personnel.

URH-23 See response to I-291 and I-293.



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pit with slanted walls needs a larger area than one with vertical walls and this will necessitate a larger drilling pit and site. In addition, the increased ease of fitting a liner to the slanted surfaces may be offset by the difficulties in handling a larger liner. Availability of a large one piece liner may also be a problem. (See 9.H.3)

URH-23

COMMENTS:

This is going to far in meddling with the operators decisions. One large piece liner would be a terrific expense.

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Waste fluids are often discharged under pressure and the impact can dislodge or rip the liner. Such problems can be lessened if the operator submerges the flow or discharge line below the surface of the pit fluids. However, if frac fluids under high pressure are discharged to a pit, a submerged discharge line may tear or dislodge the liner. Additionally, many drilling contractors monitor the wells drilling progress by observing flow line returns. * Orienting the pit longitudinally to the flow line or installing a flow line baffle or placing heavy canvas or a plywood sheet at the point of impact can significantly reduce damage. Tanks or beveled pits may be required to contain frac blow-back. It is recommended



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that one or more of these actions be taken. * Liners can also be punctured by trash and debris thrown into the pit. If Department Staff notice trash in the pit during a site inspection, they require the operator to remove it.

URH-24

COMMENTS:

If it is probable that the trash may cut the liner.

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Although it is not currently regulated by the Department, liner thickness is one of the major factors in whether it becomes torn during use. Ideally, all liners should be made of Hypalon, PVC or an equivalent plastic and meet certain minimum thickness and strength criteria. Liners currently used in New York State are as thin as 6 mil, but liner thickness is only one criteria of overall strength. See Table 9.1 for a comparison between New York State's proposed standards and the standards specified in other states. * The Department suggests that these minimum standards for pit liners be required by regulation. * Pit standards, like all other proposed standards, can and will be changed with evolving technology.

COMMENTS:

URH-24

A drilling pit is not a trash can, nor is a well location a landfill. It is not unreasonable for DMN to require that trash not be thrown into the drilling pit, or that what is thrown in be removed. The probability of trash damaging the pit liner is not the only reason DEC staff would order it removed. Some trash is of high toxicity, and disposal of such trash in the drilling pit may be in violation of the other state and federal hazardous waste laws.

URH-25 See response to ENG-36.



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URH-25

"Not over 10 mil" due to cost.

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The Department's existing regulations requiring a 50' buffer between wells and surface water bodies also provides some protection to surface waters. Although the existing regulations do not address the siting of storage tanks and other possible sources of oil pollution, DEC staff has the authority place restrictions on these well site facilities through permit conditions. For example, operators are required to install dikes around all oil storage tanks. The diked area around these tanks must have sufficient capacity to retain a minimum of 1 1/2 times the tank volume. * If an operator consistently has a problem with tank leakage or overflow, the Department can apply special permit conditions requiring the tank to be equipped with fluid level controls which will actuate an automatic shutdown of wells producing into the tank and prevent tank overflow. Fluid level monitoring and an automatic shut-down system may be specified as a permit condition or mitigation of a potential hazard in environmentally sensitive areas. * These controls can prevent spills if the truck that empties the tank is delayed by impassable roads or other causes.



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URH-26

COMMENTS:

Should read "in aquifers" - "environmentally sensitive areas" gives them too broad an authority or descretion.

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Produced Brine - Brines produced in association with oil in western New York contain sodium, chloride and roughly the same types of heavy metals found in gas field brines. Small amounts of benzene, xylene and toluene may also be present in oilfield production brines. The production brines are typically disposed of by direct discharge under a SPDES permit or road spreading under a part 364 Waste Haulers permit. * A suggested revision to permit requirements, in primary and principal aquifer areas is to require operators to have an approved brine disposal plan prior to drilling a well. *

URH-27

COMMENTS:

Such a plan can be on file with DEC in a blanket generic form in order to avoid unnecessary duplication of administrative paper work.

URH-26 There are many other environmentally sensitive areas in addition to aquifers. The Department would not impose special automatic shut-down or fluid control systems on a new facility except in an environmentally sensitive area. See response to I-319.

URH-27 Reasonable alternative proposals will be considered during the rulemaking process.



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Though provisions exist under the current regulatory program [6NYCRR Part 556.8] to require a notice of intention for other operations such as deepening plug back and conversion operations, the requirement has been ignored to some extent because of confusion with regard to interpretation of the exclusions given to any work conducted in the existing production zone. It is critical that the Department have accurate records of the existing conditions of all wells under its regulatory authority. * For this reason, it is recommended that a notice of intention and a permit be required from the Department for any operation that will in any manner alter the casing, permanent configuration, or designated use and status of a well. It is not the intention of this recommendation to require a permit for routine well servicing. Notification and possible permit will be required for the following actions:

- perforate casing in a previously unperforated interval for the purpose of production, injection, testing, observation or cementing
- 1.....-redrill or deepen any well
- mill out or remove casing or liner
- 2.....-run and cement casing or tubing
- drill out any type of permanent plug
- 3.....-run an set a inner string of casing or liner



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- 4.....-run and cement an inner string of casing, liner or tubing
-set any type of permanent plug (bridge, cement, sand, gravel, get,
etc)
- 5.....-repair damaged casing by means of cementing, placing a casing
patch, swaging, etc. *

URH-28

COMMENTS:

1. OK as long as no extra permit fee is assessed per redrill or only for depth difference in event of deepening. Permitting impromptu is delaysome.
2. Should not have to have permit fee to run tubing or to cement casing previously packed off.
3. Should not need permit to set a liner or inner string not previously contemplated.
4. Ditto
5. Should not need permit to make casing repair

PERMITTING TO EXCESS IS JUST AN EXCUSE TO GENERATE FEES.

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Once the well is plugged, the site must be reclaimed by removing equipment and grading the surface to match the surrounding areas. * In

URH-28

The only activity in this listing which requires a permit and fee is deepening, as currently provided for under [ECL 23-1903(1)(b)]. It was not our intention to require permits and fees for the other listed activities, but merely to require notification and approval of the Regional Minerals office.

URH-29 Support for this proposed requirement is noted.



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agricultural areas, the casing must be cut off below plow depth (approximately 4 feet). The topsoil cover must be replaced and the site must be seeded to re-establish vegetation. *

URH-29

COMMENTS:

O.K.

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C. MUDDING THE HOLE

The combination of properly placed cement plugs and mud in the well bore can be a more effective method of permanently abandoning a well than a rigid column of cement from total depth to the surface which could develop a microannulus with hydration and time. A natural bentonite mud is the best mud for abandonment because it has good gel-shear strength. It also is less likely to separate with time and leave a water column suspended above the mud or "gel" solids. * It is recommended all portions of the hole not plugged with cement be filled with a clay base mud with a minimum density of 8.65 ppg and a gel-shear strength (10 min.) of 15.3 to 23.5 lbs/100 sq. feet. Exceptions to this requirement will be reviewed on a field area basis. *

URH-30 Support for this proposed requirement is noted.



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URH-30

COMMENTS:

O.K.

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E. ADDITIONAL PLUGGING REQUIREMENTS

Sometimes casing is recovered from the well before abandonment. When casing is to be recovered, the top of cementing the annular space is determined by running a cement bond log or some other free point indicator such as a strain gauge. Once the top of cement has been determined, the casing is cut above that depth and removed from the hole. Then either a bridge plug is set (mechanical method) or a cement plug is pumped in (pump and plug method). If the pump and plug method is used, the operator is required to run an extra quantity of cement to compensate for possible loss of cement in the casing-hole or casing-casing annular space below the cut. * Unless the operator can document conditions such as a major lost circulation zone, extreme corrosion or partial casing collapse, etc., which would make uncemented surface casing recovery inadvisable, an attempt must be made to recover uncemented casing. In the event uncemented casing cannot be recovered from the hole, it must be



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perforated or ripped and have cement squeezed or placed into the annular space. *

URH-31

COMMENT:
OK

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b. Shut in Wells - Current regulations only address the temporary shut-in of wells capable of being produced on a commercial basis. * It is recommended that the temporary shut-in regulations be amended to include all wells regardless of commercial potential. *

URH-32

COMMENTS: Wells that are being slowly drilled or are started in the fall and resumed in the spring should have 90 days before going through temporary abandonment.

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URH-31 Support for this proposed requirement is noted.

URH-32 Reasonable alternative proposals will be considered during the rulemaking process.



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F. SUGGESTED FUTURE PLUGGING REGULATIONS

The effectiveness of a cement plug in preventing fluid migration is influenced by: 1) the condition of the mud or drilling fluid in the hole; 2) the volume of water used in mixing the cement and the type of cement and; 3) the technique used for placing the plug. Unfortunately, it is common for cement plugs to not set properly because of contamination by mud or gas while the cement is wet. The most common problem affecting cement plug integrity is the quantity of water used to make up the cement slurry. Excess mix water and the incorporation and infiltration of mud or other substances in the cement affects setting properties, and can result in a cement plug which lacks integrity. Gas migrating up through the plug while it is wet can also create a path for future fluid migration after the plug is set. Dehydration, or normal water loss by the cement as it sets can result in micro-annular channels.

* Therefore, it is recommended that the plugging requirements for wells be amended. The Notice of Intention to Plug and Abandon must be submitted to the Department with the complete proposed abandonment procedure. The proposed abandonment procedure will be reviewed before a permit is issued. Special conditions above and beyond the following proposed regulatory requirements may be required by the Department should special circumstances warrant it.

In areas where the environment will not be further compromised (Compelling justification, e.g. old oil field areas where hundreds of wells are located on which there are no records), an operator may petition



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URH-33 Provisions for obtaining verbal approval during ongoing operations exist in the current regulations (6NYCRR Part 555.4(c)), and there is no intention to eliminate these provisions.

for an exception to the proposed plugging and abandonment requirements.
For an exception to be granted, it would have to be demonstrated that no existing residence or freshwater aquifers would be impacted. *

URH-33

COMMENTS:

I have a problem with them taking time to reviewing abandonment procedures issuing plugging after a several day review. It used to be that we could plug wells while the rig was over the hole- rather than have to book a separate service rig.

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Because downhole conditions are different in the shallow depleted sands (i.e., formations with extremely low pressure and fluid content) of the old oilfields and in the deeper gas and Bass Island formations, different abandonment requirements are proposed. In addition, the operator is given several options for proper abandonment of a well. Many of these options will allow cement plugs of shorter length if the operator will guarantee the location of the plug by tagging the plug location for a DEC witness. Shorter plug lengths and other abandonment options are proposed for the old oil field areas in order to allow these wells to be abandoned with the equipment such as dump bailers and A-frame hoists that



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these operators currently use. It is hoped more wells will be plugged under these requirements than if the plugging requirements necessitated the use of a larger rig and service companies which could require large expenditures for access roads that might cost more than the actual well plugging costs. * The DEC may require that the location and/or hardness of any plug be checked by re-entering the well and tagging it. * Plugs of primary concern to the DEC are the critical producing zone plug and the freshwater protection or surface casing shoe plug.

URH-34

COMMENTS:

I have a problem with this—they should be satisfied that plugs are correct by having:

1. an inspection of job
2. Current samples- after well is plugged operator should have no

further liabilities.

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After plugging the surface casing stub, any water bearing or fluid loss zones in the remainder of the hole must be sealed with cement, and all interplug intervals filled with gel. * A minimum of 15 feet of cement is required at the surface in all oil oil wells. *

URH-35

COMMENTS:

OK

URH-34 See response to ENG-42.

URH-35 Support for this proposal is noted.



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URH-36 Support for this proposal is noted.

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g. Surface Plugging Requirements - * It is recommended that the minimum length of the surface plug in gas wells be extended from 15 feet to 50 feet. *

URH-36

COMMENTS:

OK

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9. Surface Plugs

* Minimum cement plug lengths shall be as follows:

- a) Oil Wells - 15 feet



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URH-37 Support for this proposal is noted.

b) Gas Wells - 50 feet *

URH-37

COMMENTS:

OK

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5. Lake Erie Leasing

Although the lands beneath Lake Erie have proven gas potential, as evidenced by Canadian production, current low gas prices make the exploration and development of gas reserves uneconomic at this time. There has been low industry interest in Lake Erie not only because of the low gas prices, but because of the projected expense of operations under the anticipated environmental requirements. It is unlikely that a state lease sale for Lake Erie will be held in the near future unless economic conditions change dramatically. When drilling in lake Erie becomes economically feasible, prior to any initiation of the leasing program, a public involvement process would be conducted to address the environmental impacts. Any subsequent exploration would be regulated and monitored to avoid damage and contamination to the environment. Other offshore State



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lands in Lake Ontario and the Atlantic coast are unlikely to become available for leasing.

URH-38

COMMENTS:

SHOULD ALLOW NON-DRILLING LEASING FOR POOLING WITH SHORELINE PROPERTY.

URH-38 This proposal has merit and will be suggested to the appropriate Department personnel.