Form 3160-3
(August 2007)

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No. UTU-80907

6. If Indian, Allotee or Tribe Name N/A

1a. Type of work: ☑ DRILL ☐ REENTER

7. If Unit or CA Agreement, Name and No. Wolverine Federal Unit

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

8. Lease Name and Well No. Providence Federal 24-3

2. Name of Operator Wolverine Gas and Oil Company of Utah, LLC

9. API Well No. 43-039-36043

3a. Address 1140 N Centennial Park Drive, Richfield, Utah 84701

3b. Phone No. (include area code) 435-896-1943

10. Field and Pool, or Exploratory Unnamed, Navajo

4. Location of Well (Report location clearly and in accordance with any State requirements.*)
At surface 159' FSL, 1444' FWL, being in SE4SW4 Sec 13
At proposed prod. zone 900' FNL, 1900' FWL, being in NE4NW4 Sec 24

11. Sec., T. R. M. or Blk. and Survey or Area Section 13, T20S, R1E, SLB&M

14. Distance in miles and direction from nearest town or post office* 4.25 miles Southwest of Mayfield, Utah

12. County or Parish Sanpete

13. State UT

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 1160 feet

16. No. of acres in lease 1,040

17. Spacing Unit dedicated to this well 40 acres

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1,880 feet

19. Proposed Depth 13,400' (TVD)

20. BLM/BIA Bond No. on file BLM WY 3329

21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5,643.80' GR

22. Approximate date work will start* 02/15/2008

23. Estimated duration 90 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature Charlie Irons — Name (Printed/Typed) Charlie Irons — Date 11/06/2008

Title Senior Landman

Approved by (Signature) — Name (Printed/Typed) BRADLEY G. HILL — Date 11-18-08

Title — Office ENVIRONMENTAL MANAGER

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)

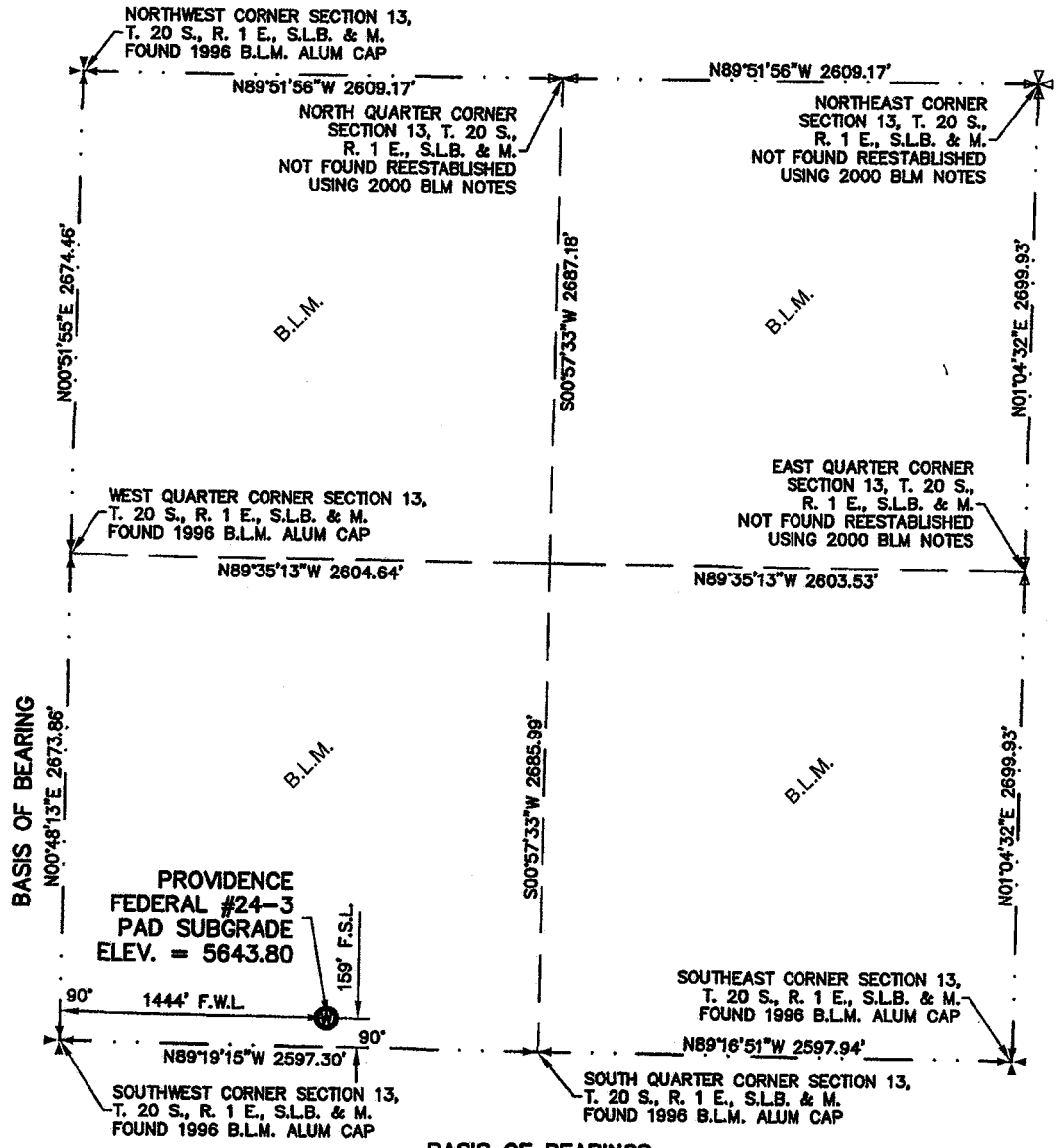
Surf
434738X
4323794Y
39.062672
-111.754321

BHL
434872X
4323470Y
39.059758
-111.752732

Federal Approval of this Action is Necessary

RECEIVED
NOV 12 2008
DIV OF OIL, GAS & MINING

Section 13, T.20 S., R.1 E., S.L.B. & M.



BASIS OF BEARINGS

BASIS OF BEARING USED WAS N00°48'13"E BETWEEN THE SOUTHWEST CORNER AND THE WEST QUARTER CORNER OF SECTION 13, T.20 S., R.1 E., S.L.B. & M.

WELL COORDINATES: LATITUDE = 39°03'45.8895" (39.082747083) NAD 83 – UTM ZONE 12N NAD27 N 14185688.34
LONGITUDE = –111°45'17.6825" (–111.754911806) NAD 83 – UTM ZONE 12N NAD27 E 1426348.68

PROJECT

Wolverine Gas & Oil Company of Utah, L.L.C.

WELL LOCATION, LOCATED AS SHOWN IN THE S.W. 1/4 OF SECTION 13, T.20 S., R.1 E., S.L.B. & M. SANPETE COUNTY, UTAH

N

LEGEND

= SECTION CORNERS LOCATED
= QUARTER SECTION CORNERS LOCATED
= PROPOSED WELL HEAD

NOTE: THE PURPOSE OF THIS SURVEY WAS TO PLAT THE PROVIDENCE FEDERAL #24–3 LOCATION LOCATED IN THE S.W. 1/4 OF SECTION 13, T.20 S., R.1 E., S.L.B. & M, SANPETE COUNTY, UTAH.

BASIS OF ELEVATION

ELEVATION BASED ON N.A.V.D. 88

1000' 500' 0' 1000'
SCALE

CERTIFICATE

THIS IS TO CERTIFY THAT THIS PLAT WAS PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS MADE BY ME OR UNDER MY SUPERVISION, AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

PROFESSIONAL LAND SURVEYOR TREVOR ROY GADD No. 343639 STATE OF UTAH

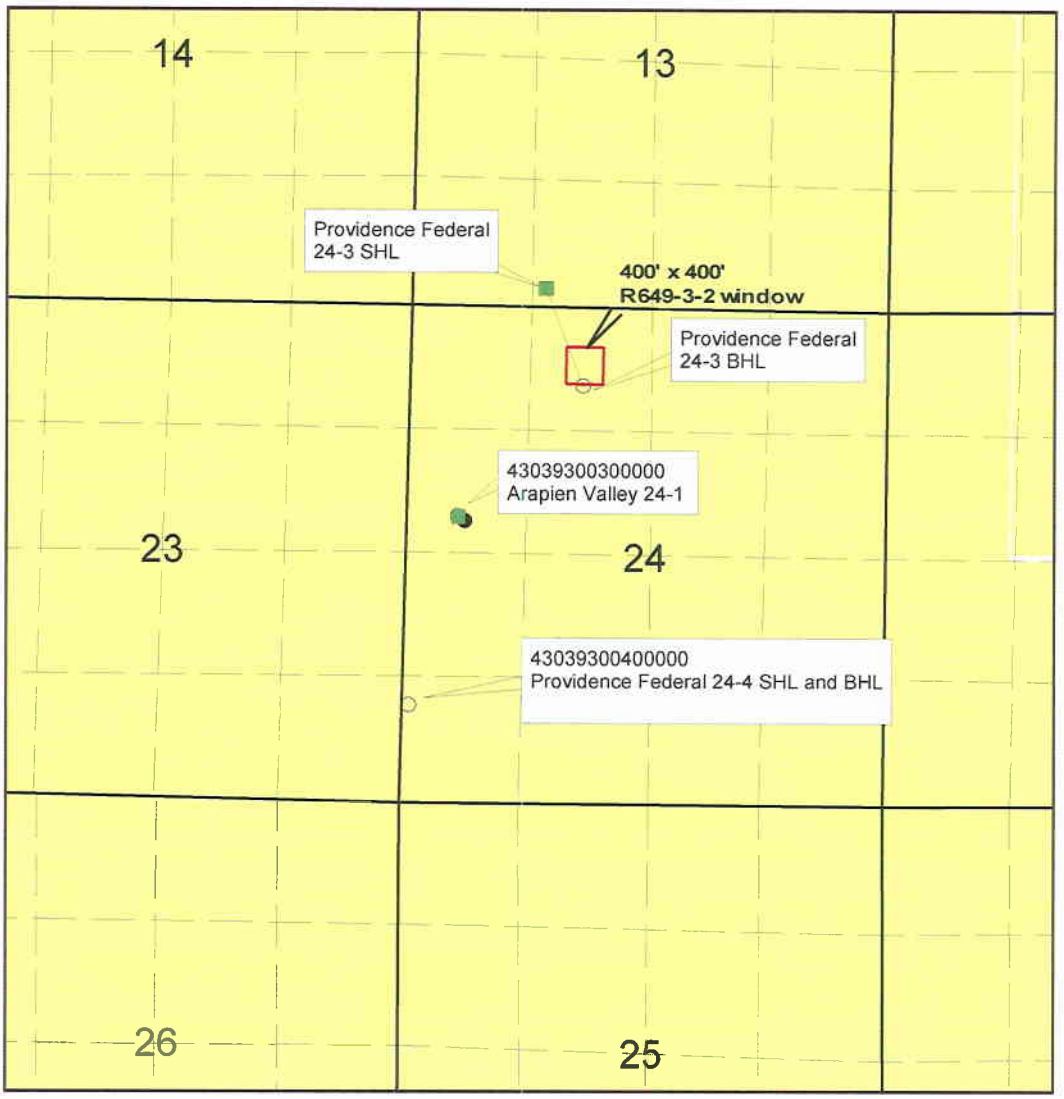
TREVOR R. GADD, L.S. #343639 10/20/08 DATE

Jones & DeMille Engineering
1535 South 100 West – Richfield, Utah 84701
Phone (435) 896–8266
Fax (435) 896–8268
www.jonesanddemille.com

Well Location Plat for

Wolverine Gas & Oil Company of Utah, L.L.C.

DESIGNED	SURVEYED	CHECKED	DRAWN	PROJECT NO.	SHEET NO.
–	J.G.C.	T.R.G.	T.W.G.	0802–037	1
DATE 10/07/2008	DWG.NAME 24–3_WELL–LOC		SCALE 1"=1000'		



Providence Federal 24-3 Well Location

SHL: 1444' FWL, 159' FSL, Sec. 13, T20S, R1E, Sanpete Co., UT
BHL: 1900' FWL, 900' FNL, Sec. 24, T20S, R1E, Sanpete Co., UT

Wolverine Lease

Proposed SHL

Proposed BHL

1 inch = 2000 feet

660 0 660 1320 1980 ft

WOLVERINE GAS & OIL Company of Utah, LLC
(Operator)
Energy Exploration in Partnership with the Environment

ONE RIVERFRONT PLAZA
55 CAMPAU, N.W.
GRAND RAPIDS, MI 49503-2616
(616) 458-1150

Exception Location and Ownership Plat
(R649-3-2)

Date: 11/4/2008

Author: Mark Lutz
Filename: Document in: mjl Arapien Valley Well Development.gmp

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC

Energy Exploration in Partnership with the Environment

November 6, 2008

Diana Mason
Permitting—Petroleum Technician
Utah Division of Oil, Gas and Mining
P.O. Box 145801
Salt Lake City, Utah 84114-5801

Re: Application for Permit to Drill - Wolverine Gas and Oil Company of Utah, LLC
Providence Federal 24-3
Surface Hole Location: SE/4 SW/4, Section 13, T20S, R1E, SLB&M
Bottom Hole Location: NE/4 NW/4, Section 24, T20S, R1E, SLB&M
Sanpete County, Utah

Dear Mrs. Mason:

Wolverine Gas and Oil Company of Utah, LLC (Wolverine) hereby submits a copy of an *Application for Permit to Drill* (APD) for the referenced well. Included with this APD is the following supplemental information:

- R649-3-2 Exception Plat showing proposed BHL;
- R649-3-11 Directional Drilling Application Plat showing proposed BHL;
- BLM Surface Use Plan of Operations;
- Survey Plat;
- Drilling Plan, BOPE Diagram, and Directional Plan;
- H2S Drilling Operations Plan;
- Location Layout and Pad Cross-Sections drawings;
- Vicinity Map;

The Mayfield Irrigation Company (User Number 63-3234) will be the source for water during drilling and completion operations on this proposed well. The surface at the planned drill site is administered by the Bureau of Land Management.

The proposed location is within 460' of a drilling unit boundary, so a request for exception to spacing (R649-3-2) is hereby requested for the well based on restrictive topography relative to and the need to drill at an optimum structural location. Wolverine is the only owner and operator within 460' of the proposed well location.

Wolverine Gas and Oil Company of Utah, LLC
1140 N Centennial Park Drive, Richfield, Utah 84701. Phone: 435-896-1943, Fax: 435-893-2134

This letter and the accompanying plats are also intended to serve as an application for directionally drilling the well per R649-3-11. Wolverine is the owner of all oil and gas within 460 feet from all points long the intended wellbore for the well. Information relating to R649-3-11 is as follows:

Operator: Wolverine Gas and Oil Company of Utah, LLC

Address: 1140 N Centennial Park Drive
Richfield, Utah 84701

Well: Providence Federal 24-3

Field: Unnamed

Reservoir: Navajo

County: Sanpete

Reason: Restrictive topography and to minimize surface impact

Please accept this letter as Wolverine's written request for confidential treatment of all information contained in and relating to this application and proposed well.

Thank you for consideration of this application. Please feel free to contact me or Paul Spiering of this office if you have any questions or need additional information.

Sincerely,

Charlie Irons

Charlie Irons
Senior Landman

Wolverine Gas and Oil Company of Utah, LLC
1140 N Centennial Park Drive. Richfield, Utah 84701. Phone: 435-896-1943, Fax: 435-893-2134

SURFACE USE PLAN OF OPERATIONS

For inclusion with Application for Permit to Drill

Name of Operator: Wolverine Gas and Oil Company of Utah, LLC
Address: 1140 N Centennial Park Drive
Richfield, Utah 84701

Well Location: **Providence Federal 24-3**
SHL: 159' FSL & 1444' FWL, Section 13, T20S, R1E, SLB&M
BHL: 900' FNL & 1900' FWL, Section 24, T20S, R1E, SLB&M
Sanpete County, Utah

Access Road Location: Existing lease road for previously drilled 24-1 well crosses private land in Section 19-T20S-R2E and Sections 24 & 25-T20S-R1E; said lease road crosses BLM land in Section 24 and a portion of Section 23. A new lease road will be constructed across portions of Section 24 & 23 to well location in Section 13.

State surface use is not required for construction and drilling of the referenced well. BLM is the surface owner at the drill pad site, the bottom hole location and the new-construction portion of the access road. Federal surface use is being requested with the associated Application for Permit to Drill (APD) through the BLM – Richfield Field Office.

The dirt contractor will be provided with an approved copy of the Surface Use Plan of Operations and Conditions of Approval before initiating construction.

Existing Roads:
The vicinity map attached to the APD shows the proposed well pad location and its proximity to the town of Mayfield, Utah. From Mayfield, travel south on county road (Southfield Road) approximately 4 miles to the lease road turnoff. Rig traffic however will access the well from the south, as was done for drilling the Providence Federal 24-1. From Salina, travel north on US 89, under Utah Department of Transportation (UDOT) maintenance about 4 miles to Willow Creek Road (a gravel county road), follow easterly about 4 miles to Southfield Road (a gravel county road), thence northerly about 4 miles to the existing lease road, thence to the well as described below.

All existing roads will be maintained and kept in good repair during all phases of operation. Vehicle operators will obey posted speed restrictions and observe safe speeds commensurate with road and weather conditions.

Access Roads to be Constructed and Reconstructed:
Proposed access will require the construction of a new road, approximately 3,700 feet in length, from a point near the existing 24-1 well pad to the proposed 13-1 location, as shown on the vicinity map. An upgrade to certain portions of the existing lease road is proposed on private land. No surfacing materials for any of that construction will come from Federal lands. Vehicular travel will be limited to the approved existing access road and the new lease road. The operator will be responsible for all maintenance of the access road including drainage structures.

Location of Existing Wells within a one-mile radius :

Well	Type/status	Surface Location	Bottom Hole Location
Providence Fed 24-1	Undergoing completion & testing	SW4-NW4 Section 24	SW4-NW4 Section 24
Providence Fed 24-4	Site under construction	SW4-SW4 Section 24	SW4-SW4 Section 24

Location of Planned Wells:
The operator has an approved permit for the proposed Providence Federal 24-2, to be drilled from the same drill pad

as the previously drilled 24-1. Due to the unanticipated amount of equipment required for testing the 24-1 well, it is not possible that the drill pad will accommodate both the necessary testing facilities for the 24-1 and a drilling rig for the 24-2 at the same time. The present plan is to submit an APD in the near future for a Providence Federal 24-2A well with a surface location on a separate pad to the south of the 24-1 pad.
The operator also has an approved permit for the Providence Federal 24-4 located in the SW4SW4 of Section 24, which site is presently under construction.
Concurrently with this application Wolverine is submitting an APD for the Providence Federal 13-1 well, to be drilled from the same pad as the subject well, the Providence Federal 24-3.

Location of Existing and/or Proposed Facilities if Well is Productive:
(a) On well pad –A temporary testing facility is anticipated on this location for the completion and testing of the well. The facility will be surrounded by a dike of sufficient capacity to contain the storage capacity of the largest tank. All loading lines and valves will be located inside the dike surrounding the tank battery.
(b) Off well pad –Several options are being considered for a more permanent processing facility for production from what the operator hopes to be an oil and gas field. The location and design of such a facility is contingent on whether the proposed well and future wells are capable of producing oil, gas or both oil and gas. In the event the facility is to be located on BLM land the Operator will submit a facility plan under Sundry Notice for approval at such time as production requirements are known.

Location and Type of Water Supply (Rivers, Creeks, Lakes, Ponds and Wells):
The Operator has leased water rights from a shareholder of Mayfield Irrigation Company (Water Right #63-3234), under Order for Temporary Change of Water dated 10-6-2008. Water will be piped to the reserve pit from an irrigation riser in Section 19-T20S-R2E, under prior agreement with the landowner. Should additional water sources be necessary they will be properly permitted through the State of Utah – Division of Water Rights. The BLM will be notified of any changes in water supply.

Construction Materials:
In the event the existing well pad needs additional surface material, imported granular borrow from an approved source will be applied. No construction materials will be removed from federal lands.

Methods for Handling Waste Disposal:
The reserve pit will be used to contain waste mud and drill cuttings, which will be buried onsite. All borehole fluids and salts will be contained in the reserve pit. The pit will be lined with 12 mil thickness plastic nylon reinforced liner material. No trash, scrap pipe, etc. that could puncture the liner will be disposed of in the pit. A minimum 2-foot freeboard will be maintained in the pit at all times during the drilling and completion operations. After evaporation of fluids, back-fill of sub-soil and compaction to prevent settling will occur within 90 days of cessation of pit use. If necessary, any remaining fluids will be pumped out of the pit and transported off site to an approved disposal facility.

No chemicals subject to reporting under SARA Title III (hazardous materials) in an amount greater than 10,000 pounds will be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completion of the well. Furthermore, no extremely hazardous substances, as defined in 40 CFR 355, in threshold planning quantities, will be used, produced, stored, transported, or disposed of in association with the drilling, testing, or completion of the well.

Wastewater will not be discharged on the surface at this site and the drilling of the well will not require a wastewater management plan.

Produced fluids from the well other than water will be stored in a test tank until such time as hookup to production facilities can be made. Any spills of oil, gas, salt water or other fluids will be cleaned up and removed.

All rubbish and debris will be kept in containers on the well site, and will be hauled to an approved disposal site upon completion of drilling operations and as needed during such operations. There will be no chemical disposal of any type.

Self-contained, portable toilets will be used for human waste, and the waste will be disposed at an approved human waste disposal facility. Sanitation will comply with local and state regulations.

Ancillary Facilities:
Ancillary facilities are described above under *Location of Existing and/or Proposed Facilities if Well is Productive.* Garbage containers and portable toilets are the only other ancillary facilities proposed in this application.

Well Site Layout:
The Location Layout Drawings attached to the APD show the proposed well surface, the location of the reserve pit and access road onto the pad, turnaround areas, parking areas, office facilities, soil material stockpiles, and the orientation of the rig with respect to the pad and other facilities. Pad Section Sheets in said attachment show cuts and fills required for construction, and their relationship to topography. As detailed above under *Methods for Handling Waste Disposal*, the reserve pit will be lined and appropriate measures will be taken to prevent leakage. The pit will be fenced on three sides during drilling operations, and the fourth side will be immediately fenced following drilling and completion of the well.

The pad design is consistent with BLM specifications.

All surface activities will be supervised by a qualified, responsible company representative who is aware of the terms and conditions of the APD and specifications in the approved plans.

All cut and fill slopes will be such that stability can be maintained for the life of the activity.

A diversion ditch will be constructed as shown along the south side of the well pad to prevent surface waters from entering the well site area.

The stockpiled topsoil (first 6 inches or maximum available) will be stored on the southeast end of the pad. All topsoil will be stockpiled for reclamation in such a way as to prevent soil loss and contamination. The topsoil berm and edges of the access road will be seeded in the first Fall after construction.

The flare pit will be located more than 150 feet from the well.

Plans for Reclamation of the Surface:
Interim Reclamation: In the event production is established the Operator will perform interim reclamation of the site. Interim reclamation will consist of reclamation of the reserve pit and reclamation of that portion of the well pad not needed for ongoing operations. After evaporation of fluids, the pit will be back-filled with sub-soil and/or rock and compacted to prevent settling. The pit area will be surfaced with granular borrow to render it a usable part of the well pad. All portions of the pad no longer necessary for well workover, testing or treating will be contoured to match the surrounding terrain to the best extent practical, and seeded as prescribed by the BLM.

Final Reclamation: At such time that all production ceases from the proposed well and other wells drilled from the same pad, and the wells have been plugged and abandoned, the Operator will perform final reclamation of the site. Final reclamation will consist of replacing spoil into the cut areas in a manner that will return the impacted area to its original contour and condition, to the greatest extent practicable, and blending same with undisturbed land to establish a natural-looking contour. Topsoil will be redistributed and all disturbed land will be seeded per BLM requirements.

During the life of the project and until the site is released from liability for reclamation, the project will be inspected at least annually for noxious weeds. If invasive noxious weeds are found, the weeds will be treated to eliminate further reproduction, and treatment shall continue until the weeds have been eradicated. If noxious weeds are found, the BLM will be notified of their occurrence.

Surface Ownership:
The surface of the well pad and the newly constructed portion of the access road are federally owned and administered by BLM.

Other Information:
Western Land Services has completed a Class III Cultural Resource Inventory of the well pad area and new portion of access road. Two copies of the Survey Report have been submitted to the Richfield Field Office of the Bureau of Land Management; one for the BLM and one for the Utah State Historic Preservation Office (SHPO).

Western Land Services will be preparing the NEPA document for the Providence Federal 24-3 as directed by the AO.

No stream alteration or drainage crossings are involved that require additional State or Federal approval.

A paleontological clearance is not required since suitable formations do not exist within the project area.

All permanent structures constructed or installed will be painted non-reflective Carlsbad Cavern Tan, unless otherwise directed by the AO. All facilities will be painted within six months of installation. Facilities that are required to comply with Occupational Safety and Health Act (OSHA) shall be excluded.

Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I, or someone under my direct supervision, have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 6th day of November, 2008.

Signature: Charlie Irons

Charlie Irons

Position Title: Senior Landman

Address: Wolverine Gas and Oil Company of Utah, LLC
1140 N Centennial Park Drive
Richfield, Utah 84701

Telephone: 435-896-1943

Field representative (same as above signatory)

Charlie Irons

Address: 1140 N Centennial Park Drive
Richfield, Utah 84701

Telephone: 435-896-1943

Agents not directly employed by the operator must submit a letter from the operator authorizing that agent to act or file this application on their behalf.

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC

DRILLING PLAN

Providence Federal 24-3
SE/4 SW/4 Section 13, Township 20 South, Range 1 East, S.L.B.&M.
Sanpete County, Utah

Plan Summary:

It is planned to drill this confidential exploratory well as a deviated bore hole in accordance with the enclosed directional drilling plan. The well will be drilled to a depth of 13,500' to test the Navajo 1, Kaibab and Navajo 2 formations. Well path deviation caused by subsurface geologic irregularities is expected to be the primary drilling concern in this area. No abnormal pressure is anticipated. The presence of Hydrogen Sulfide gas in concentrations greater than 100 PPM is anticipated in the Kaibab Formation and deeper, and an H2S contingency plan to be in effect before drilling below the Moenkopi at +/-11,400' compliments this drilling plan.

The planned location is as follows:

Surface Hole Location:	159' FSL, 1444' FWL, Section 13, T20S, R1E, S.L.B. & M.
Bottom Hole Location:	900' FNL, 1900' FWL, Section 24, T20S, R1E, S.L.B. & M.

Conductor casing will be set at approximately 120 feet and cemented to surface. A 17-1/2" hole will be drilled to 2000' where 13-3/8" surface casing will be set and cemented to surface. A 12-1/4" hole will be drilled into the Twin Creek 1 to approximately 9000' where the well will be logged and 9-5/8" casing will be set and cemented. Then, an 8-1/2" hole will be drilled to 13,500'. The well will be logged and if significant porosity and hydrocarbon shows are encountered in the Kaibab or Navajo 2 formations, 5-1/2" production casing will be set and cemented at TD. If deeper formations do not appear productive, the lower portion of the hole will be abandoned as required by the BLM and 5-1/2" production casing will be set and cemented as necessary to production test the Navajo1 formation.

Drilling activities at this well are expected to commence as early as December 15, 2008 if regulatory approvals are attained.

Well Name: Providence Federal 24-3

Surface Location: 159' FSL, 1444' FWL, SE/4 SW/4 Section 13, T20S, R01E, S.L.B. & M. Sanpete County, Utah

TD Bottom-Hole Location: 900' FNL, 1900' FWL, NE/4 NW/4 Section 24, T20S, R01E, S.L.B. & M. Sanpete County, Utah

Elevations: 5644' (Est. Graded Elevation) 5670' (Est. KB)

I. Geology:

Tops of important geologic markers and anticipated water, oil, gas, and mineral content are as follows:

Formation	TVD Interval (KB)	MD Interval (KB)	Contents	Pressure Gradient
Arapien	26' – 8574'	26' – 8673'		
Twin Creek 1	8574' – 8878'	8673' – 8977'		
Navajo 1	8878' – 10305'	8977' – 10404'	O/G/W	0.44 psi/ft
Chinle	10305' – 10715'	10404' – 10814'		
Shinarump	10715' - 10769'	10814' – 10868'		
Moenkopi	10769' – 11360'	10868' – 11459'		
Shnabkaib	11360' – 11668'	11459' – 11767'		
Sinbad	11668' – 11924'	11767' – 12023'		
Black Dragon	11924' – 12078'	12023' – 12177'		
Kaibab	12078' – 12295'	12177' – 12394'	O/G/W	0.44 psi/ft
Thrust Fault	12295'	12394'		
Twin Creek 2	12295' – 12538'	12394' – 12637'		
Navajo 2	12538' - 13400'	12637' - 13500'	O/G/W	0.44 psi/ft
Total Depth	13,400'	13,500'		

II. Well Control:

The contracted drilling rig has a 10M BOP system but conditions only require a 5M BOP system. BOPE will be in place and tested as a 5M system prior to drilling out the surface casing shoe. See attached schematic of BOPE.

A. The BOPE will as a minimum include the following:

Wellhead Equipment (5M Min.):

BOPE Item	Flange Size and Rating
Annular Preventer	13-5/8" 5M
Double Rams (5" Pipe - top, Blind - bottom)	13-5/8" 10M
Drilling Spool w/ 2 side outlets (4" Choke Line, 4" Kill Line)	13-5/8" 10M x 13-5/8" 10M
Single Ram (Pipe)	13-5/8" 10M
Spacer Spool	13-5/8" 10M x 13-5/8" 10M
Casing Spool (Multi-Bowl)	13-5/8" 10M x 13-5/8" 5M
Casing Head (13-5/8" SOW, w/ two 2-1/16" SSO's)	13-5/8" 5M

Auxiliary Equipment (5M minimum):

BOPE Item
Choke Line with 2 valves (3" minimum)
Kill Line with 2 valves and one check valve (2" minimum)
2 Chokes with one remotely controlled at a location readily accessible to the driller
Upper and lower kelly cock valves with handles
Safety Valves to fit all drill string connections in use
Inside BOP or float sub
Pressure gauge on choke manifold
Fill-up line above the uppermost preventer
Wear bushing in casing head

B. **Choke manifold** will be functionally equipped and sized at a minimum as shown on the attached diagram. All chokes will be straight lines, or use tee blocks or be targeted with running tees if there are turns, and all choke lines will be anchored. All valves (except chokes) in the kill line choke manifold and choke line will be full opening and allow straight through flow.

C. **System accumulator** will have sufficient capacity to open the hydraulically-controlled gate valve and close all rams plus the annular preventer (3 ram system will have added 50 percent safety factor to compensate for any fluid loss in the control system or preventers) and retain a minimum pressure of 200 psi above pre-charge on the closing manifold without use of the closing unit pumps. The fluid reservoir capacity shall be double the usable fluid volume of the accumulator system capacity and the fluid level of the reservoir shall be maintained at the manufacturer's recommendations. The accumulator will have two (2) independent power sources available to close the preventers. Nitrogen bottles may be one of those sources, and if so, will have charge maintained per manufacturer's specifications.

D. **Accumulator pre-charge pressure test** will be conducted prior to connecting the closing unit to the BOP stack and at least once every 6 months. The accumulator pressure will be corrected if the measured precharge pressure is found to be above or below the maximum or minimum specified limits. Only nitrogen gas will be used to precharge.

E. **Power for the closing unit pumps** will be available to the unit at all times so that the pumps will automatically start when the closing valve manifold pressure has decreased to the pre-set level.

F. **Accumulator pump capacity** will be such that, with the accumulator system isolated from service, the pumps will be capable of opening the hydraulically-operated gate valve (if so equipped), plus closing the annular preventer on the smallest size drill pipe to be used within 2 minutes, and retaining a minimum of 200 psi above the specified accumulator pre-charge pressure.

G. **Locking devices**, either manual (i.e., hand wheels) or automatic, will be installed on the ram type preventers. A valve will be installed in the closing line as close as possible to the annular preventer to act as a locking device. This valve shall be maintained in the open position and shall be closed only when the power source for the accumulator system is inoperative.

H. **Remote controls** will be readily accessible to the driller and will be capable of both opening and closing all preventers. Master controls shall be at the accumulator and shall be capable of opening and closing all preventers and the choke line valve.

I. **Well control equipment testing** will be performed using clear water when the equipment is initially installed, whenever any seal subject to test pressure is broken, following related repairs, and as a minimum, every 30-day interval. The tests will apply to all related well control equipment.

Ram type preventers and associated equipment will be isolated and tested to 5000 psi. The annular preventer will be tested to 2500 psi. Pressure shall be maintained for at least 10 minutes or until requirements of test are met, whichever is longer, for all tests. A casing head valve will be open below the test plug during testing of the BOP stack. Valves will be tested from the working pressure side with all down-stream valves open. Kill line valves will be tested with the check valve held open or the ball removed.

Pipe and blind rams will be activated each trip, but not more than once a day. The annular preventers will be functionally operated at least weekly. A pit level drill will be conducted weekly for each crew. All BOPE drills and tests will be recorded in the IADC driller's log.

III. Casing and Cementing:

A. Casing Program (all new casing):

Hole Size	Casing Size	Weight	Grade	Connection	Coupling Diameter	Setting Depth
30"	24"		Conductor			0' - 120' GL
17.50"	13.375"	68.0	J-55	BTC	14.375"	0' - 2000' KB
12.25"	9.625"	53.5	HCL-80	LTC	10.625"	0' - 7000' KB
12.25"	9.625"	53.5	HCP-110	LTC	10.625"	7000' – 9000' KB
8.5"	5.500"	20.0	L-80	LTC & BTC	6.050"	0' - 13,500' KB

	Surface	Intermediate	Production
Casing O. D. (in)	13.375	9.625	5.500
Casing Grade	J-55	HCP-110 & HCL-80	L-80
Weight of Pipe (lbs/ft)	68.0	53.5	20.0
Connection	BTC	LTC	LTC & BTC
Top Setting Depth - MD (ft)	0	0	0
Top Setting Depth - TVD (ft)	0	0	0
Bottom Setting Depth - MD (ft)	2000	9000	13500
Bottom Setting Depth - TVD (ft)	2000	8901	13401
Maximum Mud Weight - Inside (ppg)	9.0	10.6	9.0
Maximum Mud Weight - Outside (ppg)	9.0	10.6	9.0
Design Cement Top - TVD (ft)	0	1500	5500
Design Cement Top - MD (ft)	0	1500	5500
Max. Hydrostatic Inside w/ Dry Outside (psi)	936	4906	6272
Casing Burst Rating (psi)	3450	10900	9190
Burst Safety Factor (1.10 Minimum)	**3.69**	**2.22**	**1.47**
Max. Hydrostatic Outside w/ Dry Inside (psi)	936	4906	6272
Collapse Rating	1950	10520	8830
Collapse Safety Factor (1.125 Minimum)	**2.08**	**2.14**	**1.41**
Casing Weight in Air 1000 lbs	136.0	481.5	270.0
Body Yield 1000 lbs	1069	1244	466
Joint Strength 1000 lbs	1140	1062	524
Tension Safety Factor (1.70 Minimum)	**7.86**	**2.21**	**1.73**

Casing with adequate burst, collapse, and tension rating may be substituted for any of the planned casing sizes depending on availability and actual conditions.

B. Cementing Program

Casing Size	Cement Slurry	Quantity (sks)	Density (ppg)	Yield (ft^3/sk)
13.375"	Lead: CBM Lite	375	10.5	4.12
	Tail: Premium Plus	450	15.6	1.19
9.625"	Lead: Extended cement	290	11.0	3.33
	Tail: 50:50 Poz:Premium	1560	14.4	1.28
5.500"	Stg 1: 50:50 Poz:Premium with Silica	445	12.5	1.87
	Stg 2: 50:50 Poz: Premium	770	14.4	1.28

Surface Casing: 13-3/8" surface casing will be cemented from setting depth (2000') to surface and topped out with premium cement if necessary. Hardware will include a guide shoe, float collar, top plug, and a minimum of one centralizer per joint on the bottom three (3) casing joints. Water or other preflush fluid pumped ahead of the slurry will separate cement from the drilling fluids.

Intermediate Casing: 9-5/8" intermediate casing will be cemented from setting depth (9000') to 1500' (into the 13-3/8" casing shoe at 2000'). Slurry volume will be based on calipered hole size plus a minimum of 25% excess. Hardware will include a guide shoe, float collar, top plug, and centralizers on bottom and as needed across any pay zones. The cement will be an extended (light) lead to cover from 1500' to 4000' and a 50:50 poz:premium cement tail to cover from 4000' to 9000'. Water and preflush fluid pumped ahead of the slurry will separate cement from the drilling fluids.

Production Casing: 5-1/2" production casing will be run and cemented in two stages from a setting depth of 13,500' to 5500' using a stage tool located at a depth of 9600'. A minimum of 20 percent silica will be added to the cement slurry if bottom-hole temperature exceeds 230 °F. Slurry volumes will be based on calipered hole size plus 20% excess. Hardware will include a guide shoe, float collar, top plug, stage tool, opening plug, closing plug, and centralizers as needed across pay zones. The first stage cement will be 50:50 poz:premium with silica to cover from 13,500' to 10,500', and the second stage cement will be 50:50 poz:premium cement to cover from 9600' to 5500'. Water and preflush fluid pumped ahead of the slurry will separate cement from the drilling fluids.

Other: - The BLM will be notified at least twenty-four hours prior to running and cementing the surface, intermediate, and production casing strings.

Actual cement slurries for all casing will be based on final service company recommendations.

The size, weight, grade, type of thread, number of joints, and footage of all casing run will be recorded in the driller's log. The amount and type of all cement pumped will be recorded in the driller's log.

Adequate time will be allowed before drilling out for the cement at the casing shoe to achieve a minimum 500-psi compressive strength.

All casing strings will be tested to 1500 psi before drilling out and if pressure declines by more than 10 percent in 30 minutes, corrective action will be taken.

Before drilling more than 20 feet of new hole below each casing string, a pressure integrity test of the casing shoe will be performed to a minimum of the mud weight equivalent anticipated to control the pore pressure to the next casing depth or at total depth of the well.

IV. Mud Program:

Depth	Mud Weight (ppg)	Mud Type	Viscosity	Fluid Loss
0 – 2000'	8.4 – 9.4	Fresh Water	26 - 40	N/C to 20 cc
2000' – 9000'	10.0 - 10.5	Salt Mud	32 - 50	N/C to 10 cc
9000' – 13500'	8.6 – 9.1	LSND Polymer	35 - 45	8 – 10 cc

A. After mudding up, slow pump rates will be taken daily and recorded in the driller's log.

B. Visual mud monitoring equipment will be in place to detect volume changes indicating loss or gain of circulating fluid volume.

C. Abnormal pressures are not anticipated. In the event such pressures are to be anticipated, electronic/mechanical mud monitoring equipment will be in place and include as a minimum; pit volume totalizer (PVT); stroke counter; and flow sensor.

D. A mud test will be performed every 24 hours after mudding up to determine, as applicable: density, viscosity, gel strength, filtrate, and pH.

E. The 10M BOPE system is not required for conditions on this well and use of the trip tank is not anticipated.

F. Gas detecting equipment will be installed in the mud return system, and hydrocarbon gas shall be monitored for pore pressure changes. The presence of Hydrogen Sulfide gas may be encountered and an H2S contingency plan is included herewith.

G. The need to vent combustible or noncombustible gas is not expected. If needed, a flare system designed to gather and burn all gas will be available. The flare line discharge will be located more than 100 feet from the well head and it will be positioned downwind of the prevailing wind direction. The flare line will have straight lines unless turns are targeted with running tees and it will be anchored. The flare system will have an effective method for ignition.

H. Abnormal pressure is not expected. If abnormal pressure is to be anticipated, a mud-gas separator (gas buster) will be installed and operable beginning at a point at least 500 feet above any anticipated hydrocarbon zone of interest.

V. Evaluation:

A. Mud Log: A mud logging unit will be in operation from surface casing depth to TD. Samples will be caught, cleaned, bagged, and marked as required.

B. Drill Stem Tests: No DST's are expected.

C. Coring: No whole coring is planned. Rotary side-wall cores may be taken at select intervals in conjunction with open-hole logging operations.

D. Wireline Logs: Wireline logs will be run as hole conditions allow from total depth to surface casing to assist in determining lithology and potential for hydrocarbon recovery. The logging tools will at a minimum survey resistivity, gamma radiation, and sonic velocity.

VI. Expected Bottom-Hole Pressure and Abnormal Conditions:

A. Hydrogen Sulfide: Hydrogen Sulfide (H_2S) gas may exist in concentrations over 100 ppm in the deeper geologic formations to be penetrated by this well, and the H2S contingency plan will be in effect at 11,400'

B. Pressure: No abnormally pressured zones are expected in this well. The pressure gradient for all potentially productive formations is expected to be approximately 0.44 psi/ft.

C. Temperature: No abnormally high temperatures are expected. Bottom-hole temperature is expected to be approximately 270 °F.

end

H2S Drilling Operations Plan

Wolverine Gas and Oil Company of Utah, LLC

Providence Federal 24-3

Section 13
Township 20S - Range 01E
Sanpete Co, Utah

GL Elevation: 5644 feet

Wolverine
One Riverfront Plaza
55 Campau, NW
Grand Rapids, Michigan 49503-2616

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Introduction

The following is a H2S contingency plan for the Providence Federal 24-3 (PF 24-3) well. It is designed for personnel working on this project to follow in case of an accidental release of hydrogen sulfide during drilling or completion operations. For the plan to be effective, all personnel must review and be familiar with onsite duties as well as the safety equipment involved.

The purpose of this plan is to act as a guideline for personnel working on the wellsite in the event of a sudden release of hydrogen sulfide. All personnel working on the wellsite as well as service personnel that may travel to location on an unscheduled basis must be familiar with this program. The cooperation and participation of all personnel involved at the wellsite is necessary for this plan to be effective.

Directions

Driving directions to location:

From the town of Mayfield in Sanpete County, go approximately 4 miles south on the county road, turn right and go on the lease road for approximately 2 miles southwesterly and then another 1.3 miles northerly to the drill site.

I. Duties & Responsibilities

In order to assure proper execution of the contingency plan, it is essential that one person be responsible for and in complete charge of implementing the procedures outlined in this plan. The order of responsibility will be as follows:

1. Wolverine supervisor on location - if unable to perform his/ her duties;

2. Alternate Wolverine representative - if unable to perform his/ her duties;

3. Rig Supervisor/Toolpusher - if unable to perform his/her duties;

4. Safety consultant representative - if available.

A. All Personnel

1. Always be alert for possible H2S alarms - both audible and visual.

2. Be familiar with location of Safe Briefing Areas (SBA) and protective breathing equipment.

3. Develop "wind awareness". Be aware of prevailing wind direction as well as nearby uphill areas should there be no wind.

4. Familiarize yourself with nearest escape routes for safe evacuation.

5. Should H2S alarm sound, DON'T PANIC - remain calm and follow instructions of person in charge.

6. If the H2S alarms sound:
   a. Essential personnel shall don the appropriate respiratory protective equipment and follow safety procedures. They will continue to wear respiratory protective equipment until the area is deemed safe (H2S concentration less than 10 PPM).
   b. Non-essential personnel shall evacuate to the appropriate safe briefing area using escape-breathing systems. They are to wait there for further instructions from the Wolverine foreman or the designated person in charge.
   c. Initiate rescue protocol if necessary and following training procedures.

B. Wellsite Supervisor

1. The Wellsite Supervisor will confirm that all personnel on location at any time are trained in H2S safety and aware of above list of duties.

2. The Wellsite Supervisor will ensure that all personnel observe all safety and emergency procedures.

3. The Wellsite Supervisor will make an effort to keep the number of personnel on location to a minimum and to ensure that only essential personnel are on location during critical operations.

4. Should an extreme danger condition exist, the Wellsite Supervisor will:
   a. Assess the situation and advise all personnel by appropriate means of communication.
   b. Be responsible for determining that the extreme danger condition is warranted and have the red flag posted at location entrance.
   c. Go to safe briefing area. Give clear instructions relative to hazard on location and actions for personnel to follow.
   d. Notify company and regulatory groups of current situation as required per company policy and regulatory protocol. Follow appropriate procedures for emergency services notification.
   e. Proceed to well and supervise operations with rig supervisor. Take action to control and reduce the H2S hazard.
   f. Ensure that essential personnel are properly protected with supplied air breathing equipment and that non-essential personnel are in a "poison gas free" area.
   g. Authorize evacuation of any persons/residents in area surrounding the well location.
   h. Commence any ignition procedures if ignition criteria are met.

C. Rig Supervisor/Toolpusher

1. If the Wellsite Supervisor is unable to perform his/her duties and an alternate Wolverine representative is also unable or unavailable to perform his/her duties, the rig supervisor will assume command of wellsite operations and all responsibilities listed above for Wellsite Supervisor.

2. The Rig Supervisor will ensure that all rig personnel are properly trained to work in H2S environment, fully understand the purpose of H2S alarms, and know actions to take when alarms activate. He/She will ensure that all crew personnel understand the buddy system, safe briefing areas, and individual duties as well as emergency evacuation procedures.

3. Should any extreme danger operational condition arise, the Rig Supervisor shall assist the Wellsite Supervisor by:

   a. Proceeding to the rig floor and assist in supervising rig operations.

   b. Ensuring that only essential working personnel remain in hazardous areas.

   c. Ensuring that all crewmembers that remain in hazardous area, wear respiratory protective equipment until notified that area is "clear" of any toxic gases.

   d. Assigning rig crewmember or other service representative to block entrance to location. No unauthorized personnel are to be allowed entry to location.

   e. Helping to determine hazardous "danger zones" on location using portable detection equipment, and positioning electric fans to move gas in any high concentration areas.

D. Safety Consultant

1. During normal operations (no H2S present), the safety consultant will be responsible for the following:
   a. Ensuring that all wellsite safety equipment is in place and operational.
   b. Ensuring that all wellsite personnel are familiar with location safety layout and operation of all safety equipment.
   c. Assisting the Wellsite Supervisor in performing weekly H2S drills for location personnel.

2. When an operational condition is classified as extreme danger, the safety consultant will be responsible for the following:
   a. Accounting for all wellsite personnel.
   b. Assessing any injuries and directing first aid measures.
   c. Ensuring that all safety and monitoring equipment are functioning properly and available.
   d. Monitoring the safety of wellsite personnel.
   e. Maintaining close communication with the Wellsite Supervisor.
   f. Being prepared to assist Wellsite Supervisor with support for rig crew or other personnel using breathing equipment.
   g. Being prepared to assist the Wellsite Supervisor with emergency procedures including possible well ignition.
   h. Being prepared to assist with evacuation of any area residents or other personnel in the immediate area.

E. Drilling Manager

1. The Wolverine Drilling Manager will be responsible for notifying and maintaining contact with the company Production Manager and/or other company supervisory personnel as required.

2. Maintaining communication with the Wellsite Supervisor and providing any other assistance that might be required.

3. Travelling to wellsite if appropriate

4. Assisting Wellsite Supervisor with all other notifications – including both company and regulatory.

II. Well Location Layout

A. Location

1. An attached well site diagrams depict location and rig orientation, prevailing wind direction, terrain of surrounding area, location of briefing areas, access roads (including secondary egress), location of flare lines and pits, location of caution/danger signs, and location of wind indicators.
2. If practical, the drilling rig will be situated to allow for the prevailing winds to blow across the rig toward the circulation tanks or at right angles to the lines from the BOP stack to the circulation tanks or as near this configuration as possible.
3. If practical, there will be 2 roads from location with one at each end of location or as dictated by prevailing winds and terrain. If an alternate road is not practical, a clearly marked footpath to a safe area will be provided. The auxiliary escape route will be kept available and passable at all times so that a shift in wind direction will not prevent escape from the location if an emergency should occur.
4. The entrance(s) to the location will be designed to be barricaded if necessary because of a hydrogen sulfide emergency condition.
5. A minimum of 2 safe briefing areas (SBA) will be designated for assembly of personnel during emergency conditions. These will be located at least 150 feet from the wellbore and in such a location that at least one area will be upwind of the well at all times. Upon recognition of an emergency situation, all personnel will be trained to assemble at the designated briefing area for instructions.
6. Smoking areas will be established and smoking will be allowed only at those established smoking areas.
7. Reliable 24-hour telephone communications will be available at the wellsite supervisor's office.
8. The drilling rig will have a continuous electronic H2S detection system that will be located to detect the presence of hydrogen sulfide in areas where it is most likely to appear on site. The sensor head locations will be: 1) rig floor by driller's console, 2) substructure area near the bell nipple, 3) the shale shaker, 4) the mud mixing area. Additional sensors will be positioned at the discretion of the drilling foreman. At least 1 light and 1 siren will be placed on the rig to indicate the presence of hydrogen sulfide. The light and siren will be strategically placed to be visible to all personnel on the drill site.
9. Equipment to indicate wind direction will be installed at prominent locations and will be visible at all times during drilling operations. At least 2 wind direction indicators (i.e. windsocks) will be placed at separate elevations (i.e. near ground level and rig floor height). At least 1 wind direction indicator will be clearly visible from all principal working areas at all times so that wind direction can be easily determined. In addition, a wind direction indicator will be provided at each of the two briefing areas if the other wind direction indicators on location are not visible from the briefing areas.

10. Operational danger or caution sign(s) will be displayed along all controlled accesses to the site. The sign(s) will legible and large enough to be read by all persons entering the wellsite and be placed a minimum of 200 feet but not more than 500 feet from the wellsite and at a location which allows vehicles to turn around at a safe distance prior to reaching the site.

11. Protective safety equipment will be available for all essential personnel. There will be five 30-minute SCBA and five air line breathing units with emergency escape cylinders located at the drilling floor or dog house, one SCBA and air line unit will be located in the derrick (for derrick man), one 30-minute SCBA per person will be located by the quarters of all personnel on location, and 30-minute SCBA and escape units will be distributed as needed near the shaker, mud tanks, and any other area where escape from an H2S contaminated area could be difficult. A safety trailer containing the compressed breathing air will be located near the well site and air lines will be run from the safety trailer to where the air line breathing units are located.

III. Safety Procedures

A. Training

When this plan is in effect, all personnel who come onto the location must be properly trained in hydrogen sulfide, nitrogen, and oxygen deficient atmospheres safety. The personnel shall carry documentation with them indicating that the training has occurred within the previous 12 months. All training will comply with federal and state regulatory guidelines. There will be a training session that reviews this site specific H2S plan and the H2S PPP (if applicable) for all personnel in each work crew on location. Training will also include weekly H2S and well control drills. All training sessions and drills are to be recorded in the driller's log, as well as in the safety trailer logbook.

Training topics shall include at a minimum:

1. Hazards and characteristics of hydrogen sulfide, nitrogen, and oxygen deficient atmospheres and symptoms of exposure to these gases.
2. Proper use, care and limitations of respiratory protective equipment with hands-on practice.
3. Use of both fixed and portable toxic gas detection equipment.
4. Work practices to reduce chances for toxic gas exposure and procedures for confined space.
5. First aid for toxic gas exposure and resuscitation equipment.
6. The buddy system.
7. Emergency evacuation procedures.
8. A review of the contingency plan for the well.

B. Operating Conditions

A three color- flag warning system will be used to notify personnel approaching the drill site as to operating conditions on the wellsite. This system is in compliance with BLM Onshore Order 6 and follows industry standards.

Green Flag - Potential Danger

Yellow Flag - Moderate Danger

Red Flag- Extreme Danger - Do not approach if red flag is flying.

A red warning flag will be displayed when H2S is detected in excess of 10 ppm at any detection point.

The operational danger or caution signs located near the entrance to the location will be painted a high visibility red, black and white, or yellow with black lettering. They will be legible and large enough to be read by all persons entering the wellsite and will read "DANGER – POISON GAS – HYDROGEN SULFIDE" and in small lettering "Do not approach if Red Flag is Flying".

All sign(s) and, when appropriate, flag(s) will be visible to all personnel approaching the location under normal lighting and weather conditions.

Location access will be monitored and controlled during "non-routine" operations such as perforating, pressurized pumping, and well testing of potential H2S bearing formations. The number of personnel on location will be restricted to "essential" personnel only

C. Warning System Response and Evacuation Plan

When H2S is detected in excess of 10 ppm at any detection point indicating that an extreme danger condition exists, all non-essential personnel will be moved to a safe area and essential personnel (i.e., those necessary to maintain control of the well) shall don a pressure-demand type protective breathing apparatus. Once accomplished, operations may proceed.

There are no permanent residents or areas frequented by the public within a 1-mile radius of the drill site. The prevailing wind is from the southwest.

If an H2S emergency situation arises, the Wellsite Supervisor will contact local authorities to authorize and work in coordination with them to evacuate and restrict non-essential personnel from areas near the wellsite where H2S concentration levels could potentially exceed 10 ppm. All associated regulatory agencies will then be notified as soon as possible.

D. Emergency Rescue Procedures

Well site personnel should not attempt emergency rescues unless they have been properly trained. A trained person who discovers another person overcome by hydrogen sulfide **should not attempt to rescue without donning the proper breathing equipment.** When making an emergency rescue always use the following procedures:

1. Don rescue breathing equipment before attempting to rescue someone.
2. Remove the victim from the contaminated area to an area free of toxic gas by traveling upwind or cross wind. Be certain that you are in a safe area before removing your breathing equipment.
3. If the victim is not breathing, initiate mouth-to-mouth resuscitation immediately. Follow CPR guidelines and replace mouth-to-mouth with a bag mask resuscitator if available.
4. Treat the victim for shock, keeping the victim warm and calm. Never leave the victim alone.
5. Any personnel who experience hydrogen sulfide exposure must be taken to a hospital for examination and their supervisor notified of the incident.
6. Their supervisor shall follow the company Emergency Preparedness plan.

IV. H2S Safety Equipment on Well Location

Item	Amount	Description
1.	1	Safety trailer with a cascade system of 10-300 cu. ft bottles of compressed breathing air complete with high-pressure regulators.
2.	At least 1000 ft.	Low-pressure airline equipped with Hanson locking fittings. This airline will be rigged up with manifolds to supply breathing air to the rig floor, substructure, derrick, shale shaker area, and mud mixing areas. Three high-pressure refill hoses will be attached to cascade systems for cylinder refill.
3.	Twelve (12)	30-minute self-contained breathing apparatuses (SCBA).
4.	Twelve (12)	Airline units with emergency escape cylinders.
5.	One (1)	4-channel continuous electronic H2S monitors with audible and visual alarms. The set points for these alarms are 10 ppm for the low alarm and 15 ppm for the high alarm.
6.	Two (2)	Portable hand operated pump type detection units with tubes for hydrogen sulfide and sulfur dioxide.
7.	One (1)	Oxygen resuscitator with spare oxygen cylinder.
8.	One (1)	Trauma first aid kit.
9.	One (1)	Stokes stretcher and one (1) KED
10.	Four (4)	Windsocks.
11.	At least one (1)	Well condition sign with 3 flag system.
12.	Two (2)	Safe Briefing Area (SBA) signs.
13.	One (1)	Fire blanket.
14.	One (1)	Set air splints.
15.	Two (2)	Electric explosion proof fans.
16.	One (1)	Bullhorn and chalk board.
17.	Three (3)	300 cu. ft. air bottles for the safe briefing area.
18.	Two (2)	30# fire extinguishers.
19.	Six (6)	Battery powered voice microphones for communication when wearing air masks.
20.	One (1)	Battery powered combustible gas meter.

V. Operating Procedures and Equipment

1. If zones containing in excess of 100 ppm of H2S gas are encountered while drilling with air, gas, mist, other non-mud circulating mediums for aerated mud, the well will be killed with a water-based mud and mud will be used thereafter as the circulating medium for continued drilling.
2. A flare system will be designed and installed to safely gather and burn H2S-bearing gas and it will be equipped with a suitable and safe means of ignition. If noncombustible gas is to be flared, the system will have a supplemental fuel to maintain ignition.
3. Flare lines will be located as far from the operating site as feasible and in a manner to compensate for wind changes. The flare line(s) mouth(s) will be located not less than 150 feet from the wellbore. Flare lines will be straight unless targeted with running tees.
4. If SO2 is to be released as a result of flaring of H2S, portable SO2 detection equipment will be available for checking the SO2 level in the flare impact area. If the flare impact area reaches a sustained ambient threshold level of 2 ppm or greater of SO2 in air and includes any occupied residence, school, church, park, or place of business, or other area where the public could reasonably be expected to frequent, the PPP will be implemented.
5. The choke manifold included as a component of the well control system will have at least one remote controlled choke with controls readily accessible to the drilling or other authorized personnel.
6. A rotating head will be installed and operable.
7. A mud-gas separator will be rigged up and manifolded to the choke and flare system.
8. The drilling mud will be a water-based system maintained with a pH of 10 or greater. Corrosion inhibitor additives will be in the mud. Sufficient scavenger chemicals will be available on location and will be used to scavenge or neutralize any H2S in the drilling fluid. Mud weight will be maintained as needed to control pressure in any formations encountered.
9. All equipment that has potential for exposure to H2S will be suitable for H2S service. The casing head and spools, blowout preventer assembly, rotating head, kill lines, choke, choke manifold and lines, valves, mud-gas separator and other related equipment will have metallurgical standards conforming to NACE MR0175/ISO 15156. Elastomers, packing, and similar inner parts exposed to H2S will be resistant at the maximum anticipated temperature of exposure. Drill strings, surface casing, intermediate casing, and BOP shear rams are exempt from these requirements.
10. All respiratory protective, H2S detection, and other needed safety equipment will be in place and ready for use, and all rig crews and other service personnel will be trained in its use when this plan is effective.

11. There will be a continuous electronic H2S detection system that will automatically activate visible and audible alarms if hydrogen sulfide is detected. The visible light will activate if 10 ppm H2S is present. The audible siren will activate if 15 ppm H2S or higher concentration is present. There will be at least four H2S sensors in place on the drilling rig. Additional alarm lights & sirens may be added to ensure that all personnel on the drill site are able to notice the alarms at any time. All H2S detection equipment will be calibrated as recommended by the manufacturer and calibration records will be maintained on location.

12. Both 30-minute self-contained breathing apparatuses (SCBA) and workline units with escape cylinders will be available on location. There will be sufficient numbers of this supplied air breathing equipment on location to ensure that all personnel on location have equipment available to them. All respiratory protective equipment will use nose cups to prevent fogging in temperatures below 32°F. Spectacle kits will be available for personnel that require corrective lenses when working under mask.

13. Electronic voice-microphones will be available for essential personnel to use when working under mask to facilitate communication.

14. Additional breathing equipment will be provided for non routine operations that require additional service personnel on the well location to ensure that all personnel on the well location have a dedicated supplied air respirator.

15. Electric explosion-proof ventilating fans (bug blowers) will be available to provide air movement in enclosed areas where gas might accumulate.

16. Any drill stem test performed on any formation potentially containing H2S will be done with a minimal number of personnel at the drilling site as necessary to safely operate the test equipment. Any such drill-stem test will be conducted only during daylight hours and will be a closed chamber test with no fluids allowed to flow from surface.

17. Any production testing of an H2S bearing formation will be done with proper wellhead and other equipment in place to allow a controlled test through separation equipment and flare as needed. Any such test would be conducted with monitoring and warning devises in place and proper safety equipment available.

VI. Well Ignition Procedures

If it should become apparent that an uncontrolled release of hydrogen sulfide to the atmosphere might endanger the health and safety of the public or well site personnel, the Wolverine Wellsite Supervisor will make a decision to ignite the well. The following procedure should be followed before attempting to ignite the well.

A. Ignition equipment - The following equipment will be available for on-site for use by the ignition team.

1. Two 12 gauge flare guns with flare shells
2. Two 500 ft. Fire resistant retrieval ropes
3. One portable combustible gas meter
4. Self contained breathing apparatus (SCBA) for each member of the ignition team.
5. One backup vehicle with communication equipment

B. Ignition Procedures

1. The Wellsite Supervisor will ensure that well site personnel are evacuated to a safe area upwind of the well bore prior to any ignition action.
2. The Wellsite Supervisor and a designated partner "buddy" backed up by well site safety personnel will comprise the ignition team. All team members will be wearing 30 minute SCBAs.
3. The backup crew will be positioned near a radio-equipped vehicle at a safe distance from the sour gas release. They will standby to rescue the actual team igniting the well.
4. The partner of the ignition team will carry a combustible gas/ hydrogen sulfide meter to continuously monitor the area in which they are working and define the perimeter of the gas cloud.
5. The Wellsite Supervisor will carry the flare gun and shells.
6. The ignition team will determine the hazardous area and establish safe working perimeters. Once this is identified the team will proceed upwind of the leak and fire into the area with flare gun. If trouble is encountered in trying to light the leak, retry to ignite by firing the flare shells at 45 and 90 angles to the gas source, but DO NOT approach closer to the leak.
7. After ignition, monitor for sulfur dioxide and work with the support group to restrict access to the contaminated area.

VII. Residents – Public in Radius of Exposure

There are no permanent residents within a 1-mile radius of the well site and the 100 PPM and 500 PPM radii of exposure for this well based on offset well parameters of 2.0 MMCFD flow rate and 0.1% H2S content are less than 2000' and 1000', respectively. The surrounding area is federally and privately owned and maintained. This land may be used for recreational purposes including hunting and recreational vehicles any time during the drilling or completion of this well.

VIII. Emergency Phone Directory

A. Wolverine Gas and Oil Company of Utah, LLC

Bill Donovan (Drilling Wellsite Supervisor – Wolverine)	rig	435-361-3268
Tony Cook (Production Foreman – Wolverine)	office	435-896-2956
	cell	435-201-1622
	truck	435-201-2871
Ed Higuera (Operations Manager – Wolverine)	office	616-458-1150
Pete Toups (Operations Manager – SST Drilling)	office	307-235-3529
	cell	307-262-4465

B. Emergency Services Phone List

1. Sevier Valley Medical Center - Richfield, UT ..... 435 - 896-8271
2. Gunnison Valley Hospital, Sanpete County ..... 435 - 528-7246
3. Ambulance Services – Sevier County, UT ..... 911 or 435-896-6471
4. Ambulance Services – Sanpete County, UT ..... 911 or 435-835-2191
5. Sheriff Department - Sevier County, UT ..... 911 or 435-896-6471
6. Sheriff Department – Sanpete County, UT ..... 911 or 435-835-2191
7. Highway Patrol - Utah ..... 800 - 222-0038
8. Fire Department - Sevier County ..... 911 or 435-896-6471
9. Al McKee, BLM – Salt Lake City, UT (cell phone) 801- 828-7498
10. Utah Division Oil, Gas & Mining - Salt Lake City, UT 801- 538-5277
11. Medical Helicopter - Air Med- Salt Lake City, UT ..... 800 - 453-0120
12. Utah OSHA (Mark LeBlanc) 801- 530-6862
13. Sevier Valley Medical Center - Richfield, UT 435-896-8271

IX. Reference Material for Hydrogen Sulfide and Sulfur Dioxide

If gas should be produced, it could be a mixture of Carbon Dioxide, Hydrogen Sulfide, and Methane.

TOXICITY OF VARIOUS GASES

Common Name	Chemical Formula	Specific Gravity of Air=1	1 Threshold Limit	2 Hazardous Limit	3 Lethal Concern
Hydrogen Cyanide	HCN	0.94	10 ppm	150 ppm/hr	300 ppm
Hydrogen Sulfide	H_2S	1.18	10 ppm	250 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21	2 ppm	--------	1,000 ppm
Chloride	CL_1	2.45	1 ppm	4 ppm/hr	1,000 ppm
Carbon Monoxide	CO	0.97	50 ppm	400 ppm/hr	1,000 ppm
Carbon Dioxide	CO_2	1.52	5,000 ppm	5%	10%
Methane	CH_4	0.55	90,000 ppm	Combustible Above 5% in Air	-------

1. **Threshold** = Concentration at which it is believed that all workers may repeatedly be exposed, day after day, without adverse side effects.

2. **Hazardous** = Concentration that may cause death.

3. **Lethal** = Concentration that will cause death with short-term exposure.

HYDROGEN SULFIDE

GENERAL PROPERTIES

Hydrogen Sulfide itself is a colorless and transparent gas and is flammable. It is heavier than air and, hence, may accumulate in low places.

Although the slightest presence of H2S in the air is normally detectable by its characteristic "Rotten Egg"odor, it is dangerous to rely on the odor as a means of detecting excessive concentrations because the sense of smell is rapidly lost allowing lethal concentrations to be accumulated without warning. The following table indicates the poisonous nature of Hydrogen Sulfide, which is more toxic than Carbon Monoxide.

COMMON NAMES: Sour Gas, Rotten Egg Gas, Sulphurated Hydrogen, Hydrogen sulfide, Stink Damp, H2S, Acid Gas, Sweet Gas*

PHYSICAL-CHEMICAL PROPERTIES

Chemical Formula H2S

1. Specific Gravity (Air = 1.000).....1.193 (@ 77°F)

2. Color.....None

3. Odor .....Compared to Rotten Eggs

4. Odor Threshold.....0.13 part of 1 ppm

5. Corrosivity.....Reacts with metals, plastics, tissues and nerves.

6. Solubility in Water.....4.0 to 1 in H2O @ 32°F
2.6 to 1 in H2O @ 68°F

7. Effects on Humans.....Olfactory nerves, respiratory nerves, irritates sensitive membranes in eyes, nose, and throat.

8. Vapor Pressure.....19.6 atmospheres at 25°C

9. Explosive Limits.....4.3% to 46% by volume in air.

*** H2S is a sweet tasting Gas, but often the word "tasting" is left out.**

10. Ignition Temperature.....18°F (Burns with a pale blue flame)

11. Molecular Weight.....34.08

12. Conversion Factors..... 1 mg/1 of air = 717 ppm (at 25°C and 760 mm HG). 1 ppm = 0.00139 mg/1 of air.

13. pH.....3 in water

INDUSTRIAL OCCURRENCES

Hydrogen Sulfide exposures occur in certain processes in the petroleum industry, chemical plants, chemical laboratories, sulfur and gypsum mines, viscose rayon and rubber industries, tanneries, and in the manufacture of some chemicals, dyes, and pigments. It may be encountered in excavations in the swampy or filled ground. It is produced when sulfur-containing organic matter decomposes, and it can therefore be found in sewage or organic-waste treatment plants. A common sewer gas, it may find its way into utility manhole, particularly dangerous when encountered in tanks, vessels, and other enclosed spaces.

TOXIC PROPERTIES

Hydrogen Sulfide is an extremely toxic and irritating gas. Free Hydrogen Sulfide in the blood reduces its oxygen carrying capacity, thereby depressing the nervous system. Sufficiently high concentrations can cause blockage of the phrenic nerve, resulting in immediate collapse and death due to respiratory failure and asphyxiation.

Because Hydrogen Sulfide is oxidized quite rapidly to sulfates in the body, no permanent after effects occur in cases of recovery from acute exposures unless oxygen deprivation of the nervous system is prolonged. However, in cases of acute exposures, there is always the possibility that pulmonary edema may develop. It is also reported that symptoms such as nervousness, dry nonproductive coughing, nausea, headache, and insomnia, lasting up to about 3 days have occurred after acute exposures to Hydrogen Sulfide.

At low concentrations the predominant effect of Hydrogen Sulfide is on the eyes and respiratory tract. Eye irritation, conjunctivitis, pain, lacrimation, keratitis, and photophobia may persist for several days. Respiratory tract symptoms include coughing, painful breathing, and pain in the nose and throat.

There is no evidence that repeated exposures to Hydrogen Sulfide results in accumulative or systemic poisoning. Effects such as eye irritation, respiratory tract irritation, slow pulse rate, lassitude, digestive disturbances, and cold sweats may occur, but these symptoms disappear in a relatively short time after removal from the exposure. Repeated exposure to Hydrogen Sulfide does not appear to cause any increase or decrease in susceptibility to this gas.

The paralytic effect of Hydrogen Sulfide on the olfactory nerve is probably the most significant property of the gas. This paralysis may create a false sense of security. A worker can be overcome after the typical rotten-egg odor has disappeared. Rather than the characteristic Hydrogen Sulfide odor, some victims of sudden acute overexposure have reported a brief sickeningly sweet odor just prior to unconsciousness.

Subjective olfactory responses to various concentrations of Hydrogen Sulfide may be summarized as follows:

0.02 ppm	No odor
0.13 ppm	Minimal perceptible odor
0.77 ppm	Faint, but readily perceptible odor
4.60 ppm	Easily detectable, moderate odor
27.0 ppm	Strong, unpleasant odor, but not intolerable

Physiological responses to various concentrations of Hydrogen Sulfide have been reported as follows:

10 ppm	Beginning eye irritation
50-100 ppm	Slight conjunctivitis and respiratory tract irritation after 1 hour exposure
100 ppm	Coughing, eye irritation, loss of sense of smell after 2-15 minutes. Altered respiration, pain in the eyes, and drowsiness after 15-30 minutes, followed by throat irritation after 1 hour. Several hours[1] exposure results in gradual increase in severity of these symptoms and death may occur within the next 48 hours
200-300 ppm	Marked conjunctivitis and respiratory tract irritation after 1 hour exposure
500-700 ppm	Loss of consciousness and possibly death in 30 minutes
700 ppm	Rapid unconsciousness, cessation of respiration, and death
1000-2000 ppm	Unconsciousness at once, with early cessation of respiration and death in a few minutes. Death may occur even if individual is removed to fresh air at once.

ACCEPTABLE CONCENTRATIONS

ACCEPTABLE EIGHT-HOUR TIME-WEIGHTED AVERAGE

To avoid discomfort, the Time-Weighted average concentration of Hydrogen Sulfide shall not exceed 10 ppm.

ACCEPTABLE CEILING CONCENTRATION

The acceptable concentration for protection of health for an eight-hour, f ive-day week shall be 20 ppm. Fluctuations are to occur below this concentration.

ACCEPTABLE MAXIMUM FOR PEAKS ABOVE ACCEPTABLE BASE LINE FOR CONTINUOUS EXPOSURE

A single-peak concentration not exceeding 50 ppm for a maximum of 10 minutes is allowable provided that the daily time-weighted average is not exceeded.

H_2S EQUIVALENTS

Parts per Million	Percents	Grains per 100 cu. Ft.
1	0.0001	0.055
10	0.001	0.55
18	0.0018	1.0
100	0.01	5.5
1000	0.1	55.5
10000	1.0	555.5

Grains per 100 cu. Ft. = % by volume Mole 636.4
1% by volume = 10,000 ppm

SULFUR DIOXIDE

Sulfur Dioxide (SO2) is a colorless, transparent gas and is non-flammable.

Sulfur Dioxide is produced during the burning of H2S. Although SO2 is heavier than air, it will be picked up by a breeze and carried downwind at elevated temperatures. While Sulfur Dioxide is extremely irritating to the eyes and mucous membranes of the upper respiratory tract, it has exceptionally good warning powers in this respect.

CONCENTRATIONS		EFFECTS
$\%SO_2$	ppm	
0.0002	2	Safe for eight (8) hour exposure
0.0005	5	Pungent odor - normally a person can detect SO_2 in this range.
0.0012	12	Throat irritation, coughing, constriction of the chest, tearing and smarting of the eyes.
0.015	150	So irritating that it can only be endured for a few minutes.
0.05	500	Causes a sense of suffocation, even with the first breath.

PHYSICAL PROPERTIES AND CHARACTERISTICS

Chemical Formula ..... SO_2

1. Specific Gravity 2.212

2. Color ..... None

3. Flammable ..... No

4. Odor ..... Characteristic, pungent, gives ample warning of its presence.

5. Corrosivity ..... Dry---not corrosive to ordinary metals.
Wet---corrosive to most common metals.

6. Allowable Concentrations ..... 2 ppm (ACGIH and OSHA)

7. Effects on Humans ..... Irritates eyes, throat and upper respiratory system

TOXIC PROPERTIES

Sulfur Dioxide is an irritating gas in its vapor form and the odor is so intensely irritating that concentrations of 3 to 5 parts per million in the air are readily detectable by the normal person. In higher concentrations, the severely irritating effect of the gas makes it unlikely that any person would be able to remain in a Sulfur Dioxide contaminated atmosphere unless they were unconscious or trapped.

Sulfur Dioxide gas is intensely irritating to the eyes, throat, and upper respiratory system. Inhalation of this gas in concentrations of 8 to 12 parts per million in air causes throat irritation, coughing, constriction of the chest, tearing and smarting of the eyes. 150 parts per million is so extremely irritating that it can be endured only for a few minutes. 500 parts per million is so acutely irritating to the upper respiratory tract that it causes a sense of suffocation, even with the first breath.

Out of numerous reported exposures to Sulfur Dioxide, there are few references that would indicate pneumonia as an after effect.

WOLVERINE GAS & OIL COMPANY

Location: UTAH
Field: Sanpete County
Facility: SEC.13-T20S-R1W

Slot: Wolverine Federal 24-3 159'FNL & 1444'FWL
Well: Wolverine Federal 24-3
Wellbore: Wolverine Federal 24-3

BAKER HUGHES INTEQ

Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	26.00	0.000	114.600	26.00	0.00	0.00	0.00	0.00
End of Tangent	2100.00	0.000	114.600	2100.00	0.00	0.00	0.00	0.00
End of Build (XS)	2616.69	10.334	114.600	2613.89	-19.34	42.25	2.00	46.47
End of Tangent (XS)	8382.43	10.334	114.600	8286.11	-449.89	982.64	0.00	1080.73
Drop (XS)	8899.12	0.000	114.600	8800.00	-469.23	1024.89	2.00	1127.20
End of Tangent (XS)	13488.12	0.000	114.600	13389.00	-469.23	1024.89	0.00	1127.20

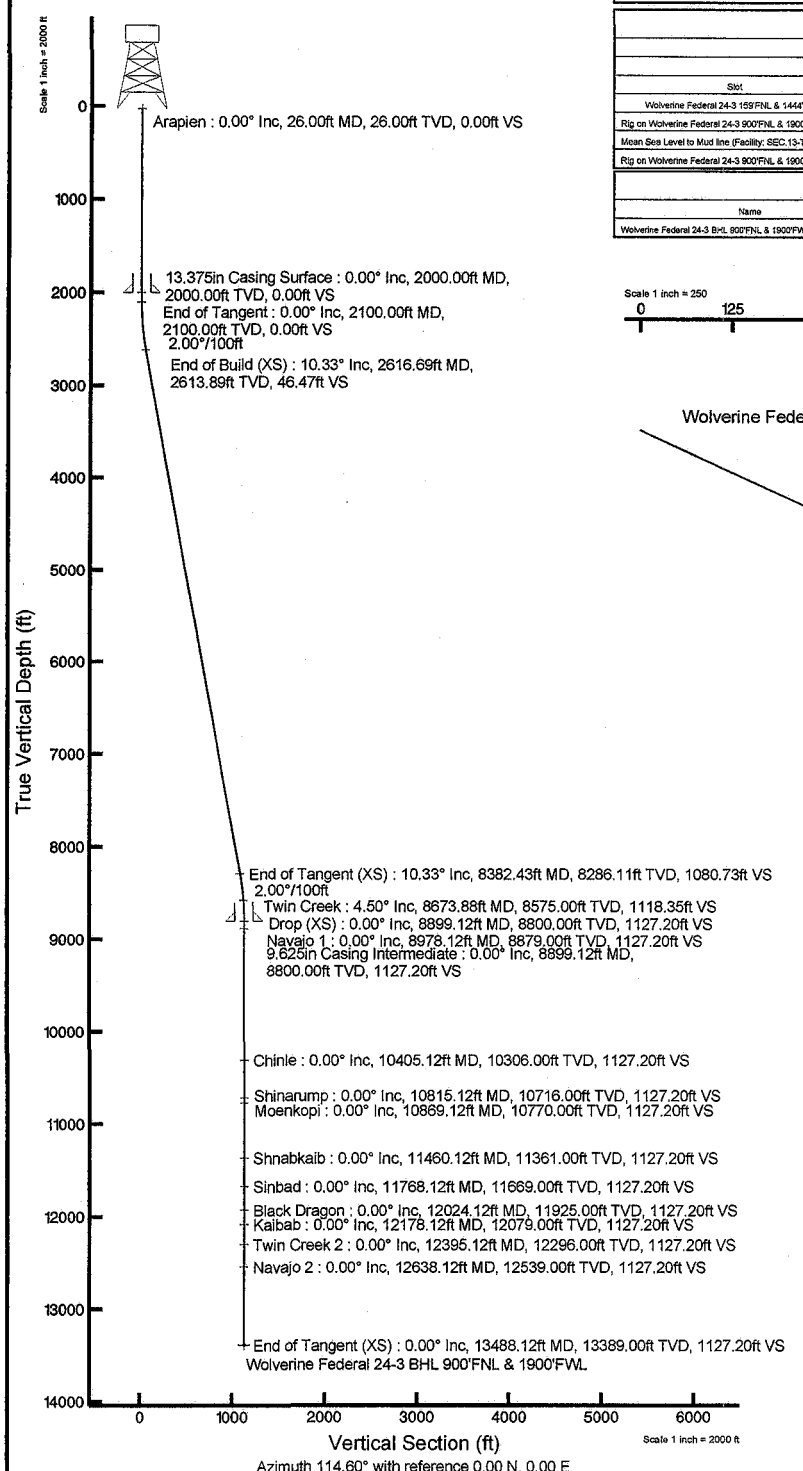
Plot reference wellpath is Wolverine Federal 24-3 Rev A.0	
True vertical depths are referenced to Rig on Wolverine Federal 24-3 900'FNL & 1900'FWL (RT)	Grid System: NAD83 / Lambert Utah State Planes, Central Zone (4302), US feet
Measured depths are referenced to Rig on Wolverine Federal 24-3 900'FNL & 1900'FWL (RT)	North Reference: True north
Rig on Wolverine Federal 24-3 900'FNL & 1900'FWL (RT) to Mean Sea Level: 5696 feet	Scale: True distance
Mean Sea Level to Mud line (Facility: SEC.13-T20S-R1W): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: buscnat on 11/5/2008

Location Information

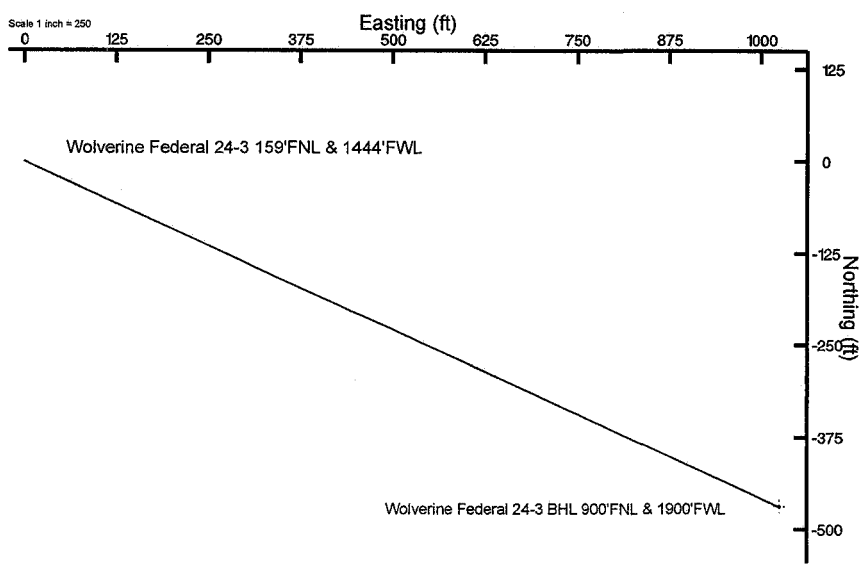
Facility Name			Grid East (USft)	Grid North (USft)	Latitude	Longitude
SEC.13-T20S-R1W			1568049.882	6827453.482	39°03'45.902"N	111°45'17.480"W
Slot	Local N (ft)	Local E (ft)	Grid East (USft)	Grid North (USft)	Latitude	Longitude
Wolverine Federal 24-3 159'FNL & 1444'FWL	-1.32	-15.95	1568033.930	6827452.212	39°03'45.889"N	111°45'17.683"W
Rig on Wolverine Federal 24-3 900'FNL & 1900'FWL (RT) to Mud line (Facility: SEC.13-T20S-R1W)					5696ft	
Mean Sea Level to Mud line (Facility: SEC.13-T20S-R1W)					0ft	
Rig on Wolverine Federal 24-3 900'FNL & 1900'FWL (RT) to Mean Sea Level					5696ft	

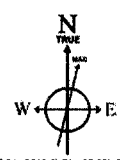
Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (USft)	Grid North (USft)	Latitude	Longitude
Wolverine Federal 24-3 BHL 900'FNL & 1900'FWL	13488.12	13389.00	-469.23	1024.89	1569057.47	6826980.07	39°03'41.251"N	111°45'04.689"W



Azimuth 114.60° with reference 0.00 N, 0.00 E





BGGM (1945.0 to 2010.0) Dip: 65.30° Field: 52152 nT
Magnetic North is 12.38 degrees East of True North (at 10/29/2008)

To correct azimuth from Magnetic to True add 12.38 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 12.38 = 102.38

Planned Wellpath Report

Wolverine Federal 24-3 Rev A.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine Federal 24-3 159'FNL & 1444'FWL**
Area	**UTAH**	Well	**Wolverine Federal 24-3**
Field	**Sanpete County**	Wellbore	**Wolverine Federal 24-3**
Facility	**SEC.13-T20S-R1W**		

REPORT SETUP INFORMATION			
Projection System	**NAD83 / Lambert Utah State Planes, Central Zone (4302), US feet**	Software System	**WellArchitect® 2.0**
North Reference	**True**	User	**Buscnat**
Scale	**0.999989**	Report Generated	**11/5/2008 at 4:17:58 PM**
Convergence at slot	**0.16° West**	Database/Source file	**WellArchitect_Denver/Wolverine_Federal_24-3.xml**

WELLPATH LOCATION	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[USft]**	**Northing[USft]**	**Latitude**	**Longitude**
Slot Location	-1.32	-15.95	1568033.93	6827452.21	**39°03'45.889"N**	**111°45'17.683"W**
Facility Reference Pt			1568049.88	6827453.48	**39°03'45.902"N**	**111°45'17.480"W**
Field Reference Pt			24417444.36	21144318.11	**39°15'02.016"N**	**11°30'02.016"W**

WELLPATH DATUM			
Calculation method	**Minimum curvature**	Rig on Wolverine Federal 24-3 900'FNL & 1900'FWL (RT) to Facility Vertical Datum	**5696.00ft**
Horizontal Reference Pt	**Slot**	Rig on Wolverine Federal 24-3 900'FNL & 1900'FWL (RT) to Mean Sea Level	**5696.00ft**
Vertical Reference Pt	**Rig on Wolverine Federal 24-3 900'FNL & 1900'FWL (RT)**	Facility Vertical Datum to Mud Line (Facility)	**0.00ft**
MD Reference Pt	**Rig on Wolverine Federal 24-3 900'FNL & 1900'FWL (RT)**	Section Origin	**N 0.00, E**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**114.60°**

Planned Wellpath Report

Wolverine Federal 24-3 Rev A.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Federal 24-3 159'FNL & 1444'FWL
Area	UTAH	Well	Wolverine Federal 24-3
Field	Sanpete County	Wellbore	Wolverine Federal 24-3
Facility	SEC.13-T20S-R1W		

WELLPATH DATA (141 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
0.00†	0.000	114.600	0.00	0.00	0.00	0.00	0.00
26.00	0.000	114.600	26.00	0.00	0.00	0.00	0.00
126.00†	0.000	114.600	126.00	0.00	0.00	0.00	0.00
226.00†	0.000	114.600	226.00	0.00	0.00	0.00	0.00
326.00†	0.000	114.600	326.00	0.00	0.00	0.00	0.00
426.00†	0.000	114.600	426.00	0.00	0.00	0.00	0.00
526.00†	0.000	114.600	526.00	0.00	0.00	0.00	0.00
626.00†	0.000	114.600	626.00	0.00	0.00	0.00	0.00
726.00†	0.000	114.600	726.00	0.00	0.00	0.00	0.00
826.00†	0.000	114.600	826.00	0.00	0.00	0.00	0.00
926.00†	0.000	114.600	926.00	0.00	0.00	0.00	0.00
1026.00†	0.000	114.600	1026.00	0.00	0.00	0.00	0.00
1126.00†	0.000	114.600	1126.00	0.00	0.00	0.00	0.00
1226.00†	0.000	114.600	1226.00	0.00	0.00	0.00	0.00
1326.00†	0.000	114.600	1326.00	0.00	0.00	0.00	0.00
1426.00†	0.000	114.600	1426.00	0.00	0.00	0.00	0.00
1526.00†	0.000	114.600	1526.00	0.00	0.00	0.00	0.00
1626.00†	0.000	114.600	1626.00	0.00	0.00	0.00	0.00
1726.00†	0.000	114.600	1726.00	0.00	0.00	0.00	0.00
1826.00†	0.000	114.600	1826.00	0.00	0.00	0.00	0.00
1926.00†	0.000	114.600	1926.00	0.00	0.00	0.00	0.00
2026.00†	0.000	114.600	2026.00	0.00	0.00	0.00	0.00
2100.00	0.000	114.600	2100.00	0.00	0.00	0.00	0.00
2126.00†	0.520	114.600	2126.00	0.12	-0.05	0.11	2.00
2226.00†	2.520	114.600	2225.96	2.77	-1.15	2.52	2.00
2326.00†	4.520	114.600	2325.77	8.91	-3.71	8.10	2.00
2426.00†	6.520	114.600	2425.30	18.53	-7.71	16.85	2.00
2526.00†	8.520	114.600	2524.43	31.62	-13.16	28.75	2.00
2616.69	10.334	114.600	2613.89	46.47	-19.34	42.25	2.00
2626.00†	10.334	114.600	2623.05	48.14	-20.04	43.77	0.00

Planned Wellpath Report

Wolverine Federal 24-3 Rev A.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Federal 24-3 159'FNL & 1444'FWL
Area	UTAH	Well	Wolverine Federal 24-3
Field	Sanpete County	Wellbore	Wolverine Federal 24-3
Facility	SEC.13-T20S-R1W		

WELLPATH DATA (141 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
2726.00†	10.334	114.600	2721.43	66.08	-27.51	60.08	0.00
2826.00†	10.334	114.600	2819.81	84.01	-34.97	76.39	0.00
2926.00†	10.334	114.600	2918.19	101.95	-42.44	92.70	0.00
3026.00†	10.334	114.600	3016.56	119.89	-49.91	109.01	0.00
3126.00†	10.334	114.600	3114.94	137.83	-57.38	125.32	0.00
3226.00†	10.334	114.600	3213.32	155.77	-64.84	141.63	0.00
3326.00†	10.334	114.600	3311.70	173.71	-72.31	157.94	0.00
3426.00†	10.334	114.600	3410.08	191.64	-79.78	174.25	0.00
3526.00†	10.334	114.600	3508.45	209.58	-87.24	190.56	0.00
3626.00†	10.334	114.600	3606.83	227.52	-94.71	206.87	0.00
3726.00†	10.334	114.600	3705.21	245.46	-102.18	223.18	0.00
3826.00†	10.334	114.600	3803.59	263.40	-109.65	239.49	0.00
3926.00†	10.334	114.600	3901.97	281.33	-117.11	255.80	0.00
4026.00†	10.334	114.600	4000.34	299.27	-124.58	272.11	0.00
4126.00†	10.334	114.600	4098.72	317.21	-132.05	288.42	0.00
4226.00†	10.334	114.600	4197.10	335.15	-139.52	304.73	0.00
4326.00†	10.334	114.600	4295.48	353.09	-146.98	321.04	0.00
4426.00†	10.334	114.600	4393.86	371.02	-154.45	337.35	0.00
4526.00†	10.334	114.600	4492.23	388.96	-161.92	353.66	0.00
4626.00†	10.334	114.600	4590.61	406.90	-169.38	369.97	0.00
4726.00†	10.334	114.600	4688.99	424.84	-176.85	386.28	0.00
4826.00†	10.334	114.600	4787.37	442.78	-184.32	402.59	0.00
4926.00†	10.334	114.600	4885.75	460.71	-191.79	418.90	0.00
5026.00†	10.334	114.600	4984.12	478.65	-199.25	435.21	0.00
5126.00†	10.334	114.600	5082.50	496.59	-206.72	451.52	0.00
5226.00†	10.334	114.600	5180.88	514.53	-214.19	467.83	0.00
5326.00†	10.334	114.600	5279.26	532.47	-221.66	484.14	0.00
5426.00†	10.334	114.600	5377.64	550.41	-229.12	500.45	0.00
5526.00†	10.334	114.600	5476.01	568.34	-236.59	516.76	0.00
5626.00†	10.334	114.600	5574.39	586.28	-244.06	533.07	0.00

Planned Wellpath Report

Wolverine Federal 24-3 Rev A.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Federal 24-3 159'FNL & 1444'FWL
Area	UTAH	Well	Wolverine Federal 24-3
Field	Sanpete County	Wellbore	Wolverine Federal 24-3
Facility	SEC.13-T20S-R1W		

WELLPATH DATA (141 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
5726.00†	10.334	114.600	5672.77	604.22	-251.52	549.38	0.00
5826.00†	10.334	114.600	5771.15	622.16	-258.99	565.69	0.00
5926.00†	10.334	114.600	5869.53	640.10	-266.46	582.00	0.00
6026.00†	10.334	114.600	5967.90	658.03	-273.93	598.31	0.00
6126.00†	10.334	114.600	6066.28	675.97	-281.39	614.62	0.00
6226.00†	10.334	114.600	6164.66	693.91	-288.86	630.93	0.00
6326.00†	10.334	114.600	6263.04	711.85	-296.33	647.24	0.00
6426.00†	10.334	114.600	6361.42	729.79	-303.80	663.55	0.00
6526.00†	10.334	114.600	6459.79	747.72	-311.26	679.86	0.00
6626.00†	10.334	114.600	6558.17	765.66	-318.73	696.17	0.00
6726.00†	10.334	114.600	6656.55	783.60	-326.20	712.48	0.00
6826.00†	10.334	114.600	6754.93	801.54	-333.67	728.79	0.00
6926.00†	10.334	114.600	6853.30	819.48	-341.13	745.10	0.00
7026.00†	10.334	114.600	6951.68	837.41	-348.60	761.41	0.00
7126.00†	10.334	114.600	7050.06	855.35	-356.07	777.72	0.00
7226.00†	10.334	114.600	7148.44	873.29	-363.53	794.03	0.00
7326.00†	10.334	114.600	7246.82	891.23	-371.00	810.34	0.00
7426.00†	10.334	114.600	7345.19	909.17	-378.47	826.65	0.00
7526.00†	10.334	114.600	7443.57	927.11	-385.94	842.96	0.00
7626.00†	10.334	114.600	7541.95	945.04	-393.40	859.27	0.00
7726.00†	10.334	114.600	7640.33	962.98	-400.87	875.58	0.00
7826.00†	10.334	114.600	7738.71	980.92	-408.34	891.89	0.00
7926.00†	10.334	114.600	7837.08	998.86	-415.81	908.20	0.00
8026.00†	10.334	114.600	7935.46	1016.80	-423.27	924.51	0.00
8126.00†	10.334	114.600	8033.84	1034.73	-430.74	940.82	0.00
8226.00†	10.334	114.600	8132.22	1052.67	-438.21	957.13	0.00
8326.00†	10.334	114.600	8230.60	1070.61	-445.67	973.44	0.00
8382.43	10.334	114.600	8286.11	1080.73	-449.89	982.64	0.00
8426.00†	9.462	114.600	8329.03	1088.22	-453.01	989.45	2.00
8526.00†	7.462	114.600	8427.94	1102.94	-459.13	1002.83	2.00

Planned Wellpath Report

Wolverine Federal 24-3 Rev A.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Federal 24-3 159'FNL & 1444'FWL
Area	UTAH	Well	Wolverine Federal 24-3
Field	Sanpete County	Wellbore	Wolverine Federal 24-3
Facility	SEC.13-T20S-R1W		

WELLPATH DATA (141 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
8626.00†	5.462	114.600	8527.30	1114.19	-463.82	1013.06	2.00
8726.00†	3.462	114.600	8626.99	1121.97	-467.05	1020.14	2.00
8826.00†	1.462	114.600	8726.89	1126.27	-468.84	1024.04	2.00
8899.12	0.000	114.600	8800.00	1127.20	-469.23	1024.89	2.00
8926.00†	0.000	114.600	8826.88	1127.20	-469.23	1024.89	0.00
9026.00†	0.000	114.600	8926.88	1127.20	-469.23	1024.89	0.00
9126.00†	0.000	114.600	9026.88	1127.20	-469.23	1024.89	0.00
9226.00†	0.000	114.600	9126.88	1127.20	-469.23	1024.89	0.00
9326.00†	0.000	114.600	9226.88	1127.20	-469.23	1024.89	0.00
9426.00†	0.000	114.600	9326.88	1127.20	-469.23	1024.89	0.00
9526.00†	0.000	114.600	9426.88	1127.20	-469.23	1024.89	0.00
9626.00†	0.000	114.600	9526.88	1127.20	-469.23	1024.89	0.00
9726.00†	0.000	114.600	9626.88	1127.20	-469.23	1024.89	0.00
9826.00†	0.000	114.600	9726.88	1127.20	-469.23	1024.89	0.00
9926.00†	0.000	114.600	9826.88	1127.20	-469.23	1024.89	0.00
10026.00†	0.000	114.600	9926.88	1127.20	-469.23	1024.89	0.00
10126.00†	0.000	114.600	10026.88	1127.20	-469.23	1024.89	0.00
10226.00†	0.000	114.600	10126.88	1127.20	-469.23	1024.89	0.00
10326.00†	0.000	114.600	10226.88	1127.20	-469.23	1024.89	0.00
10426.00†	0.000	114.600	10326.88	1127.20	-469.23	1024.89	0.00
10526.00†	0.000	114.600	10426.88	1127.20	-469.23	1024.89	0.00
10626.00†	0.000	114.600	10526.88	1127.20	-469.23	1024.89	0.00
10726.00†	0.000	114.600	10626.88	1127.20	-469.23	1024.89	0.00
10826.00†	0.000	114.600	10726.88	1127.20	-469.23	1024.89	0.00
10926.00†	0.000	114.600	10826.88	1127.20	-469.23	1024.89	0.00
11026.00†	0.000	114.600	10926.88	1127.20	-469.23	1024.89	0.00
11126.00†	0.000	114.600	11026.88	1127.20	-469.23	1024.89	0.00
11226.00†	0.000	114.600	11126.88	1127.20	-469.23	1024.89	0.00
11326.00†	0.000	114.600	11226.88	1127.20	-469.23	1024.89	0.00
11426.00†	0.000	114.600	11326.88	1127.20	-469.23	1024.89	0.00

Planned Wellpath Report

Wolverine Federal 24-3 Rev A.0

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Federal 24-3 159'FNL & 1444'FWL
Area	UTAH	Well	Wolverine Federal 24-3
Field	Sanpete County	Wellbore	Wolverine Federal 24-3
Facility	SEC.13-T20S-R1W		

WELLPATH DATA (141 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
11526.00†	0.000	114.600	11426.88	1127.20	-469.23	1024.89	0.00
11626.00†	0.000	114.600	11526.88	1127.20	-469.23	1024.89	0.00
11726.00†	0.000	114.600	11626.88	1127.20	-469.23	1024.89	0.00
11826.00†	0.000	114.600	11726.88	1127.20	-469.23	1024.89	0.00
11926.00†	0.000	114.600	11826.88	1127.20	-469.23	1024.89	0.00
12026.00†	0.000	114.600	11926.88	1127.20	-469.23	1024.89	0.00
12126.00†	0.000	114.600	12026.88	1127.20	-469.23	1024.89	0.00
12226.00†	0.000	114.600	12126.88	1127.20	-469.23	1024.89	0.00
12326.00†	0.000	114.600	12226.88	1127.20	-469.23	1024.89	0.00
12426.00†	0.000	114.600	12326.88	1127.20	-469.23	1024.89	0.00
12526.00†	0.000	114.600	12426.88	1127.20	-469.23	1024.89	0.00
12626.00†	0.000	114.600	12526.88	1127.20	-469.23	1024.89	0.00
12726.00†	0.000	114.600	12626.88	1127.20	-469.23	1024.89	0.00
12826.00†	0.000	114.600	12726.88	1127.20	-469.23	1024.89	0.00
12926.00†	0.000	114.600	12826.88	1127.20	-469.23	1024.89	0.00
13026.00†	0.000	114.600	12926.88	1127.20	-469.23	1024.89	0.00
13126.00†	0.000	114.600	13026.88	1127.20	-469.23	1024.89	0.00
13226.00†	0.000	114.600	13126.88	1127.20	-469.23	1024.89	0.00
13326.00†	0.000	114.600	13226.88	1127.20	-469.23	1024.89	0.00
13426.00†	0.000	114.600	13326.88	1127.20	-469.23	1024.89	0.00
13488.12	0.000	114.600	13389.00[1]	1127.20	-469.23	1024.89	0.00

HOLE & CASING SECTIONS Ref Wellbore: Wolverine Federal 24-3 Ref Wellpath: Wolverine Federal 24-3 Rev A.0

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing Intermediate	26.00	8899.12	8873.12	26.00	8800.00	0.00	0.00	-469.23	1024.89
13.375in Casing Surface	26.00	2000.00	1974.00	26.00	2000.00	0.00	0.00	0.00	0.00
12.25in Open Hole	26.00	8899.12	8873.12	26.00	8800.00	0.00	0.00	-469.23	1024.89

Planned Wellpath Report

Wolverine Federal 24-3 Rev A.0

BAKER HUGHES
INTEQ

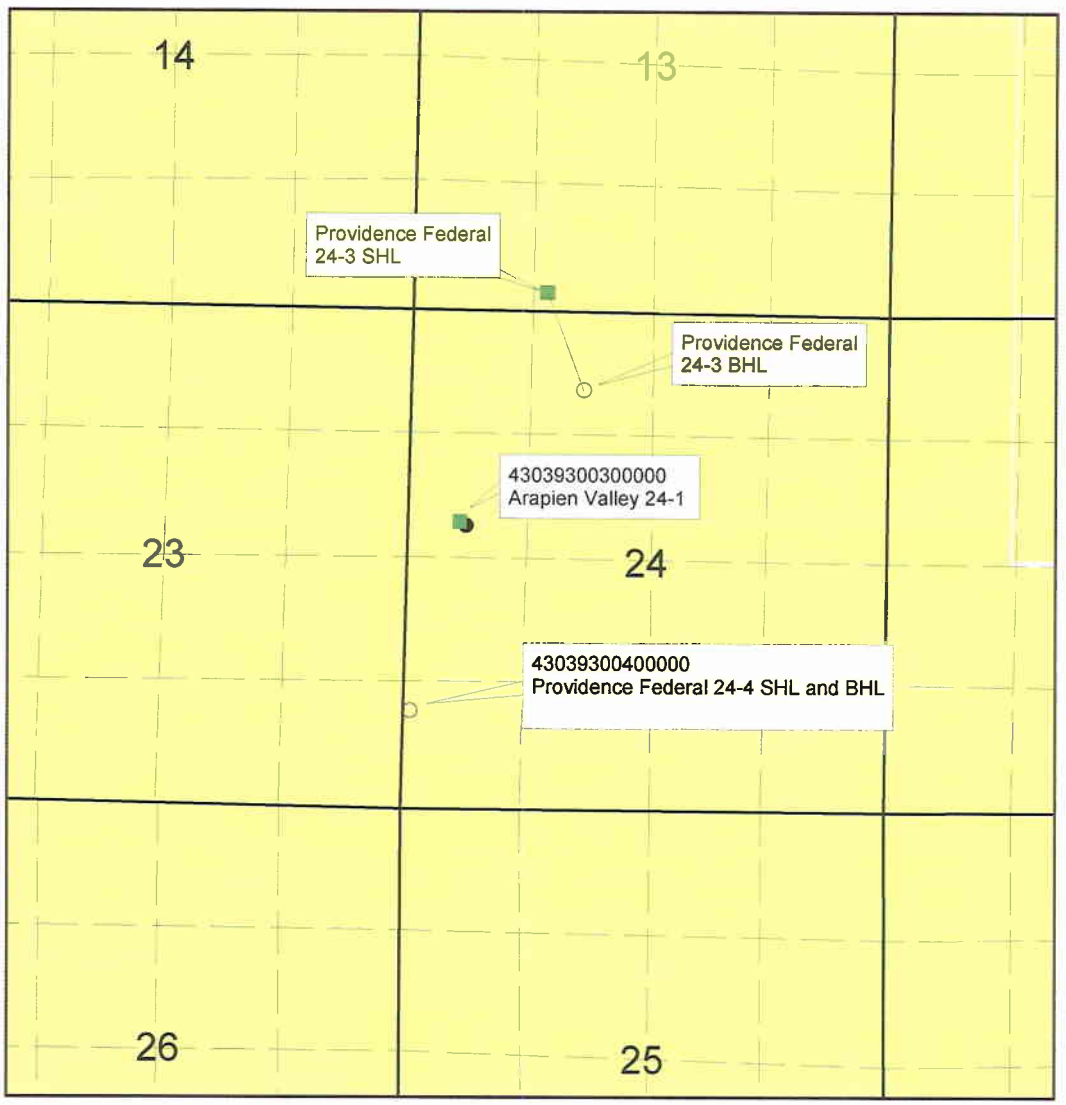
REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Federal 24-3 159'FNL & 1444'FWL
Area	UTAH	Well	Wolverine Federal 24-3
Field	Sanpete County	Wellbore	Wolverine Federal 24-3
Facility	SEC.13-T20S-R1W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
1) Wolverine Federal 24-3 BHL 900'FNL & 1900'FWL	13488.12	13389.00	-469.23	1024.89	1569057.47	6826980.07	39°03'41.251"N	111°45'04.689"W	point

SURVEY PROGRAM Ref Wellbore: Wolverine Federal 24-3 Ref Wellpath: Wolverine Federal 24-3 Rev A.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
5696.00	13488.12	MTC (Collar, post-2000) (Standard)		Wolverine Federal 24-3



Providence Federal 24-3 Well Location

SHL: 1444' FWL, 159' FSL, Sec. 13, T20S, R1E, Sanpete Co., UT
BHL: 1900' FWL, 900' FNL, Sec. 24, T20S, R1E, Sanpete Co., UT

Wolverine Lease

Proposed SHL
Proposed BHL

1 inch = 2000 feet

660 0 660 1320 1980 ft

WOLVERINE GAS & OIL Company of Utah, LLC
(Operator)
Energy Exploration in Partnership with the Environment

ONE RIVERFRONT PLAZA
55 CAMPAU, N.W.
GRAND RAPIDS, MI 49503-2616
(616) 458-1150

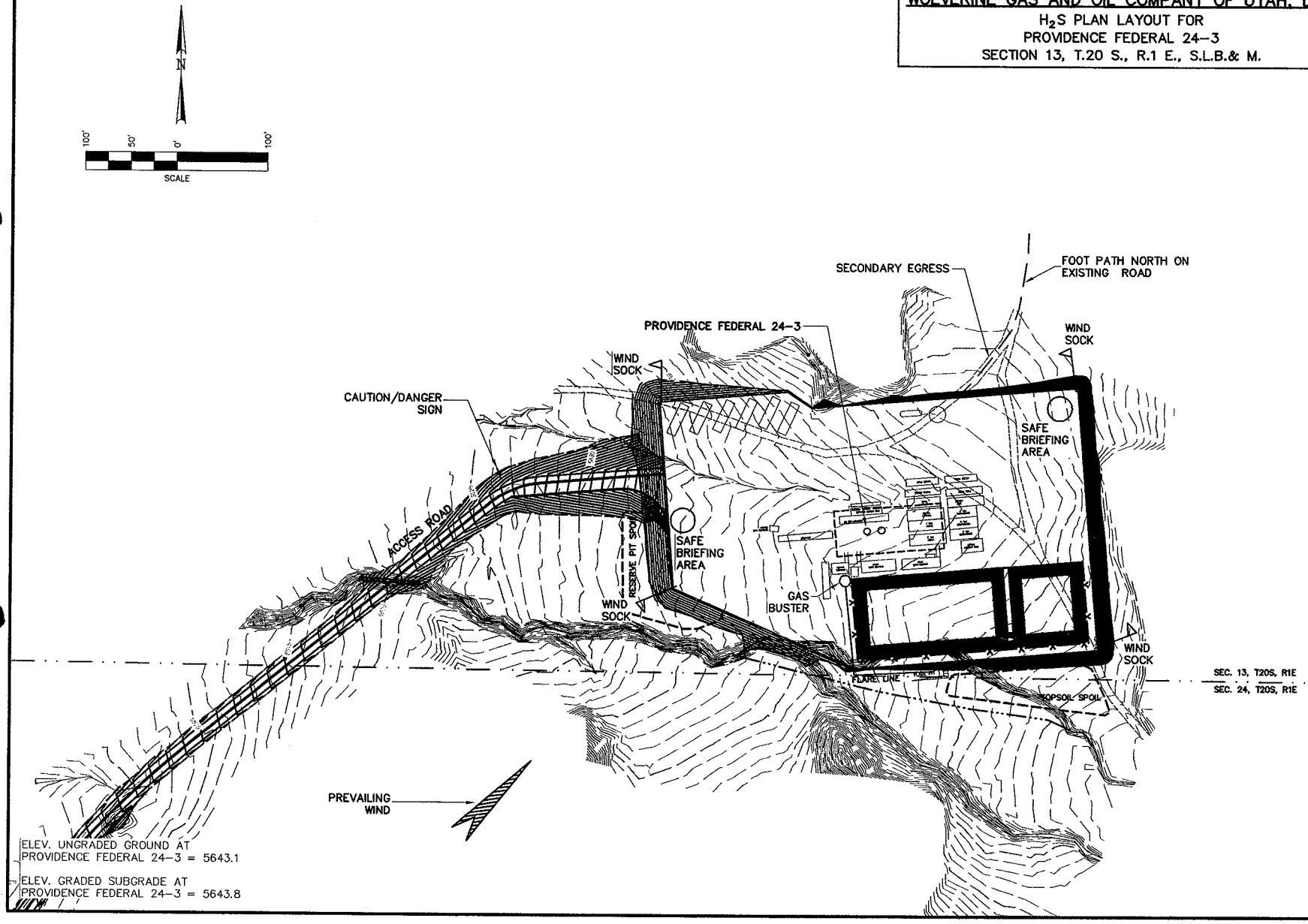
Directional Drilling Application Plat
(R649-3-11)

Date: 11/4/2008

Author:
Filename: Document in: mjl Arapien Valley Well Development.gmp

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC.

H_2S PLAN LAYOUT FOR
PROVIDENCE FEDERAL 24–3
SECTION 13, T.20 S., R.1 E., S.L.B.& M.



ELEV. UNGRADED GROUND AT PROVIDENCE FEDERAL 24–3 = 5643.1

ELEV. GRADED SUBGRADE AT PROVIDENCE FEDERAL 24–3 = 5643.8

NO.	DATE	REVISIONS	REMARKS
		REVISION PER CLIENT COMMENTS	PROJECT REVIEW
		ORIGINAL SUBMISSION FOR AUTHORIZATION	

SCALE: 1"=100'
DWG NAME: H2S1
SHT SET: PROVIDENCE
DWG CREATED: 09/19/2008
PEN TBL: MAKE-A-PRELIM
LAST UPDATE: 10/9/2008

Jones & DeMille Engineering
1485 S. 950 E., Provo, Utah 84606
Phone: (801) 818-4756 Fax: (801) 818-4758
www.jonesanddemille.com

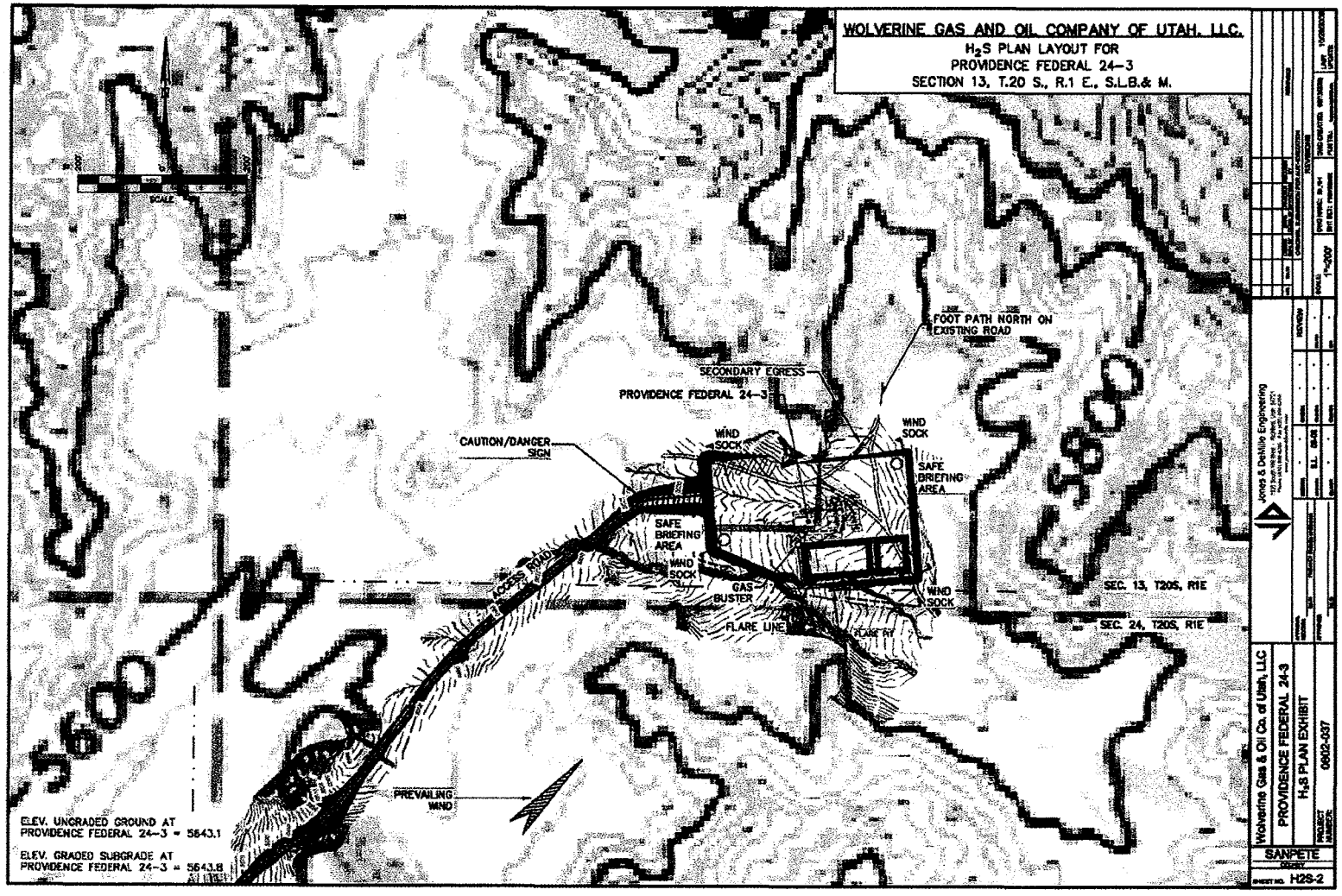
REVIEW
DRAWN: . CHECK: . DATE: .
DRAWN: B.L. 06-08 CHECK: . BY: .
DRAWN: . CHECK: .

APPROVAL RECOMMC DATE
PROJECT DESIGN ENGINEER
APPROVED DATE

Wolverine Gas & Oil Co. of Utah, LLC
PROVIDENCE FEDERAL 24-3
H_2S PLAN EXHIBIT
PROJECT NUMBER: 0802-037

SANPETE
COUNTY

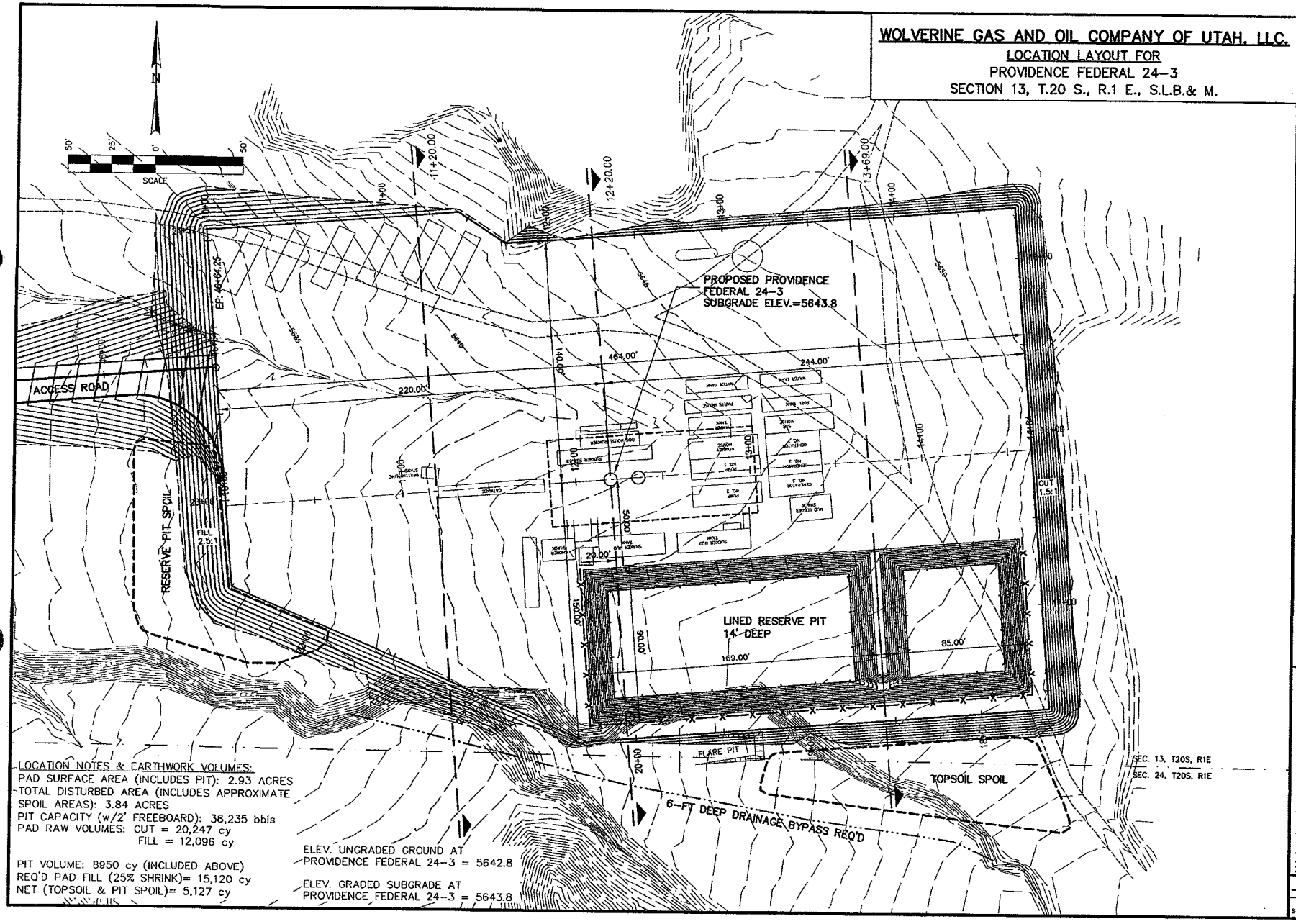
SHEET NO. H2S_1



PF 24-3 v1r1 2008.11.03

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC.

LOCATION LAYOUT FOR
PROVIDENCE FEDERAL 24-3
SECTION 13, T.20 S., R.1 E., S.L.B.& M.



LOCATION NOTES & EARTHWORK VOLUMES:
PAD SURFACE AREA (INCLUDES PIT): 2.93 ACRES
TOTAL DISTURBED AREA (INCLUDES APPROXIMATE SPOIL AREAS): 3.84 ACRES
PIT CAPACITY (w/2' FREEBOARD): 36,235 bbls
PAD RAW VOLUMES: CUT = 20,247 cy
FILL = 12,096 cy

PIT VOLUME: 8950 cy (INCLUDED ABOVE)
REQ'D PAD FILL (25% SHRINK)= 15,120 cy
NET (TOPSOIL & PIT SPOIL)= 5,127 cy

ELEV. UNGRADED GROUND AT PROVIDENCE FEDERAL 24-3 = 5642.8

ELEV. GRADED SUBGRADE AT PROVIDENCE FEDERAL 24-3 = 5643.8

NO.	DATE	DRAWN BY: BRL	CHECKED BY: DCRS	PROJECT ENGINEER: RCT	REMARKS
					ORIGINAL SUBMISSION FOR AUTHORIZATION

REVISIONS

SCALE: 1:50
DWG NAME: 10_01-1
SHT SET: PROVIDENCE
DWG CREATED: 08/13/2008
PEN TBL: Intelli-dr200.ctb
LAST UPDATE: 10/02/2008

Jones & DeMille Engineering
1555 South 100 West - Richfield, Utah 84701
Phone (435) 896-8266 Fax (435) 896-4266
www.jdmengineering.com

REVIEW
DATE:
BY:

DESIGN: CHECK:
DRAWN: B.L. 08-08 CHECK:
CHKD: CHECK:

APPROVAL RECOMM: DATE: PROJECT DESIGN ENGINEER
APPROVED: DATE

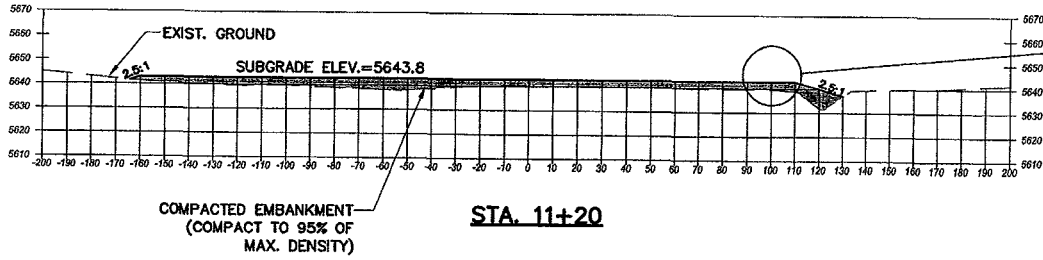
Wolverine Gas & Oil Co. of Utah, LLC
PROVIDENCE FEDERAL 24-3
LOCATION LAYOUT
PROJECT NUMBER: 0802-037

SANPETE
COUNTY
SHEET NO. SP-01

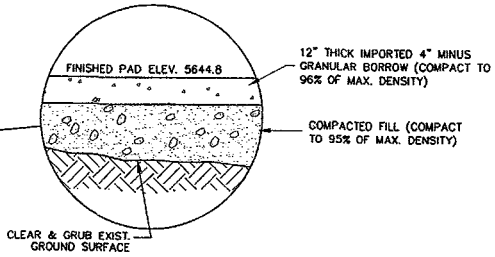
WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC.

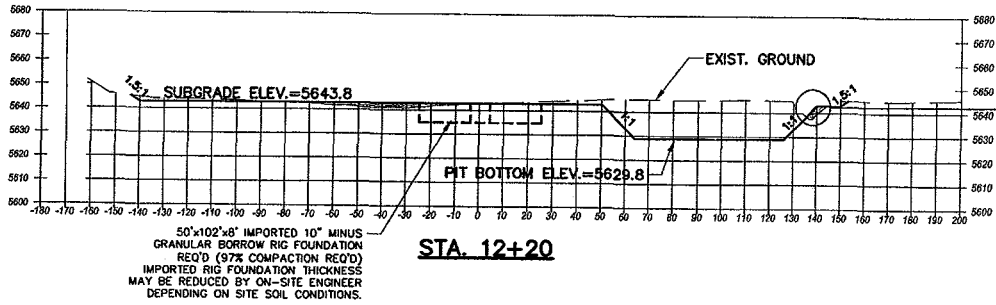
CROSS SECTIONS FOR
PROVIDENCE FEDERAL 24–3
SECTION 13, T.20 S., R.1 E., S.L.B.& M.

SCALE: 50' 25' 0' 50'

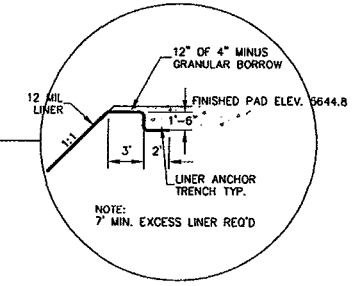


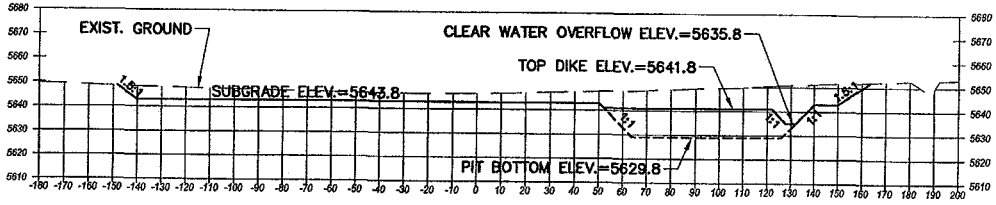
STA. 11+20





STA. 12+20





STA. 13+69

NO.	DATE	REVISION	REMARKS

REVISIONS

ORIGINAL SUBMISSION FOR AUTHORIZATION

DWG NAME: 10-24-1 | SHT SET: PROVIDENCE | DWG CREATED: 09/13/2008 | PEN TBL: 4inch-42000.ctb | LAST UPDATE: 10/09/2008

SCALE: 1:50

Jones & DeMille Engineering
1535 South 100 West - Richfield, Utah 84701
Phone (435) 896-8266 Fax (435) 896-8268
www.jonesanddemille.com

DESIGN: . CHECK: . REVIEW

DRAWN: B.L. 06-08 CHECK: . DATE: .

QUANT: . CHECK: . BY: .

APPROVAL RECOMM: . DATE: . PROJECT DESIGN ENGINEER

APPROVED: . DATE: .

Wolverine Gas & Oil Co. of Utah, LLC

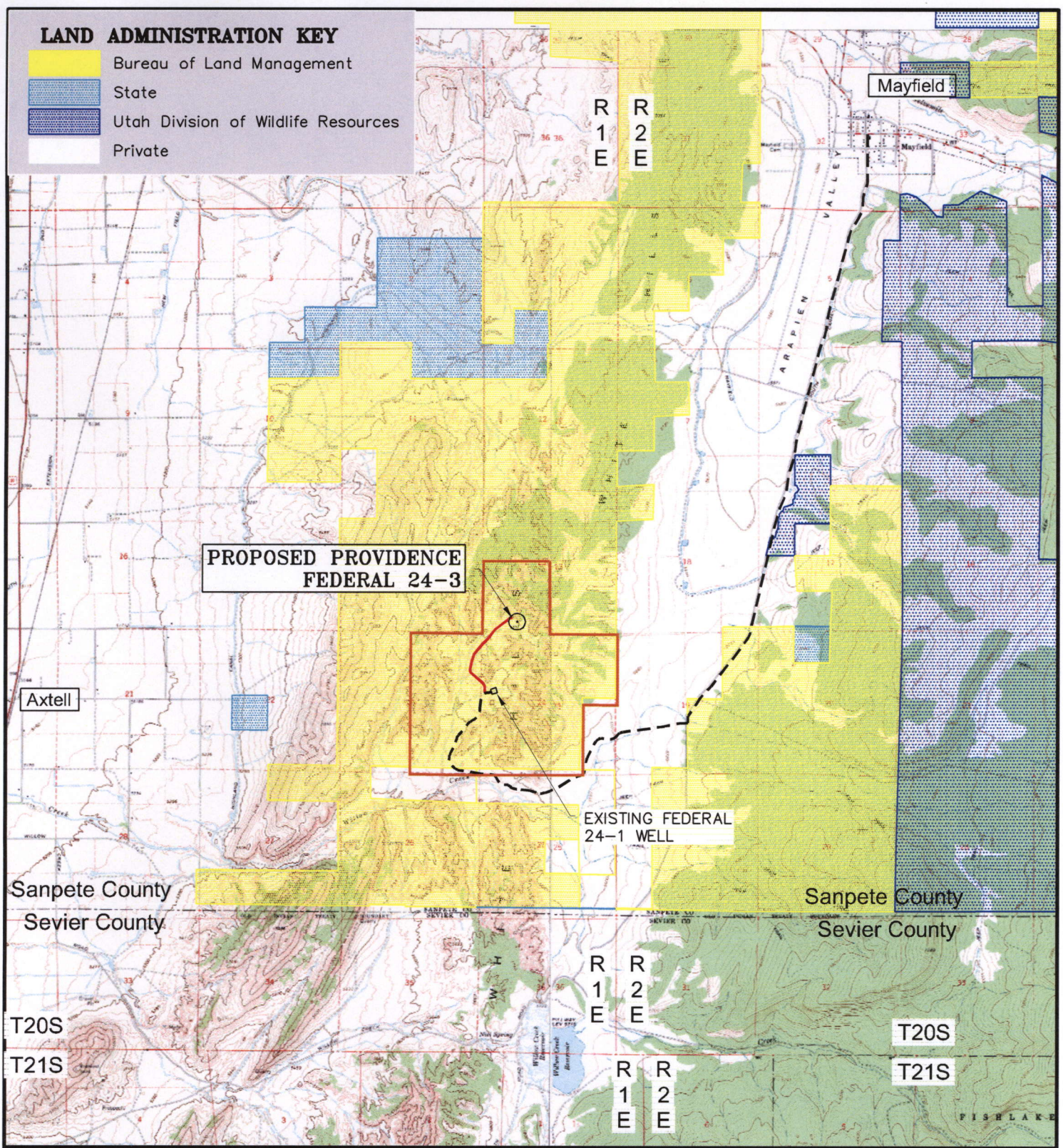
PROVIDENCE FEDERAL 24-3

CROSS-SECTIONS

PROJECT NUMBER: 0802-037

SANPETE COUNTY

SHEET NO. CS-01



LEGEND

PROPOSED LOCATION

UTU-80907 LEASE BOUNDARY

EXISTING ROADWAY

NEW ROADWAY

Providence Federal 24-3
Section 13, T.20 S., R.1 E., S.L.B. & M.
159' FSL 1444' FWL

Jones & DeMille Engineering
1535 South 100 West - Richfield, Utah 84701
Phone (435) 896-8266 Fax (435) 896-8268
www.jonesanddemille.com

N

SCALE: 1"=5000'

Wolverine Gas & Oil Co. of Utah, LLC

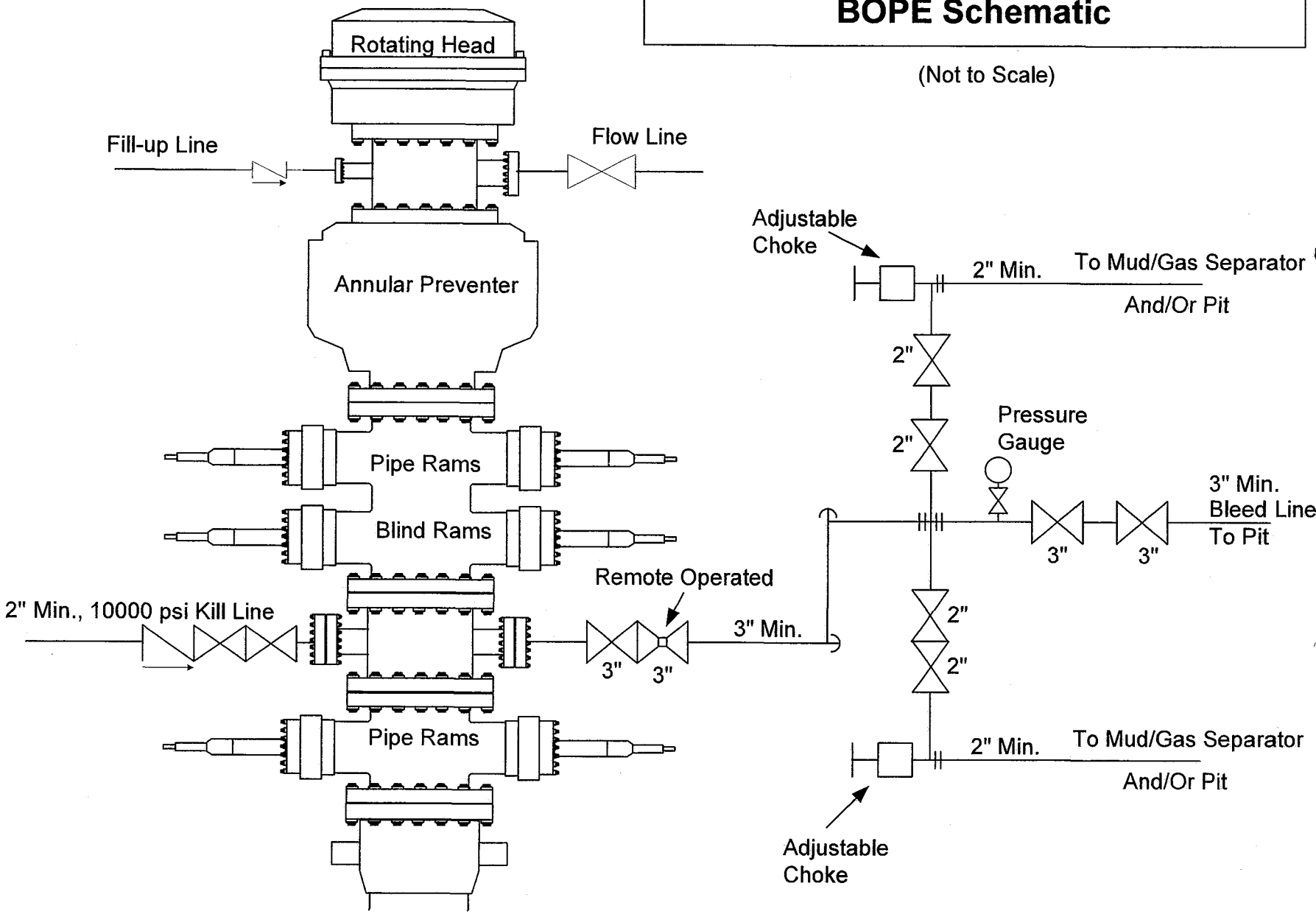
Providence Federal 24-3

Vicinity Map

DRAWN: L.G. 08-08	PEN TBL: _1stndrd-hp2800.ctb	PROJECT: 0802-037	SHEET: 1
CHECK: D.H.R. 08-08	FILE: VIC_24-3	LAST UPDATE: 10/13/2008	

Providence Federal 24-3
BOPE Schematic

(Not to Scale)



WORKSHEET

APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 11/12/2008

API NO. ASSIGNED: 43-039-30043

WELL NAME: PROVIDENCE 24-3

OPERATOR: WOLVERINE GAS & OIL CO (N1655)

PHONE NUMBER: 435-896-1943

CONTACT: CHARLIE IRONS

PROPOSED LOCATION:

SESW 13 200S 010E

SURFACE: 0159 FSL 1444 FWL

NENW BOTTOM: 0900 FNL 1900 FWL Sec 24

COUNTY: SANPETE

LATITUDE: 39.06267 LONGITUDE: -111.7543

UTM SURF EASTINGS: 434738 NORTHINGS: 4323794

FIELD NAME: WILDCAT (1)

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: 1 - Federal

LEASE NUMBER: UTU-80907

SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: NAVA

COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

✓ Plat

✓ Bond: Fed[1] Ind[] Sta[] Fee[]
(No. WY 3329)

N Potash (Y/N)

N Oil Shale 190-5 (B) or 190-3 or 190-13

✓ Water Permit
(No. 63-3234)

N RDCC Review (Y/N)
(Date:)

N/A Fee Surf Agreement (Y/N)

N/A Intent to Commingle (Y/N)

LOCATION AND SITING:

____ R649-2-3.

Unit: WOLVERINE ok

____ R649-3-2. General

Siting: 460 From Qtr/Qtr & 920' Between Wells

____ R649-3-3. Exception

____ Drilling Unit

Board Cause No:

Eff Date:

Siting:

✓ R649-3-11. Directional Drill

COMMENTS:

STIPULATIONS: 1- Federal Approval
2- Spacing Stip

API Number: 4303930043

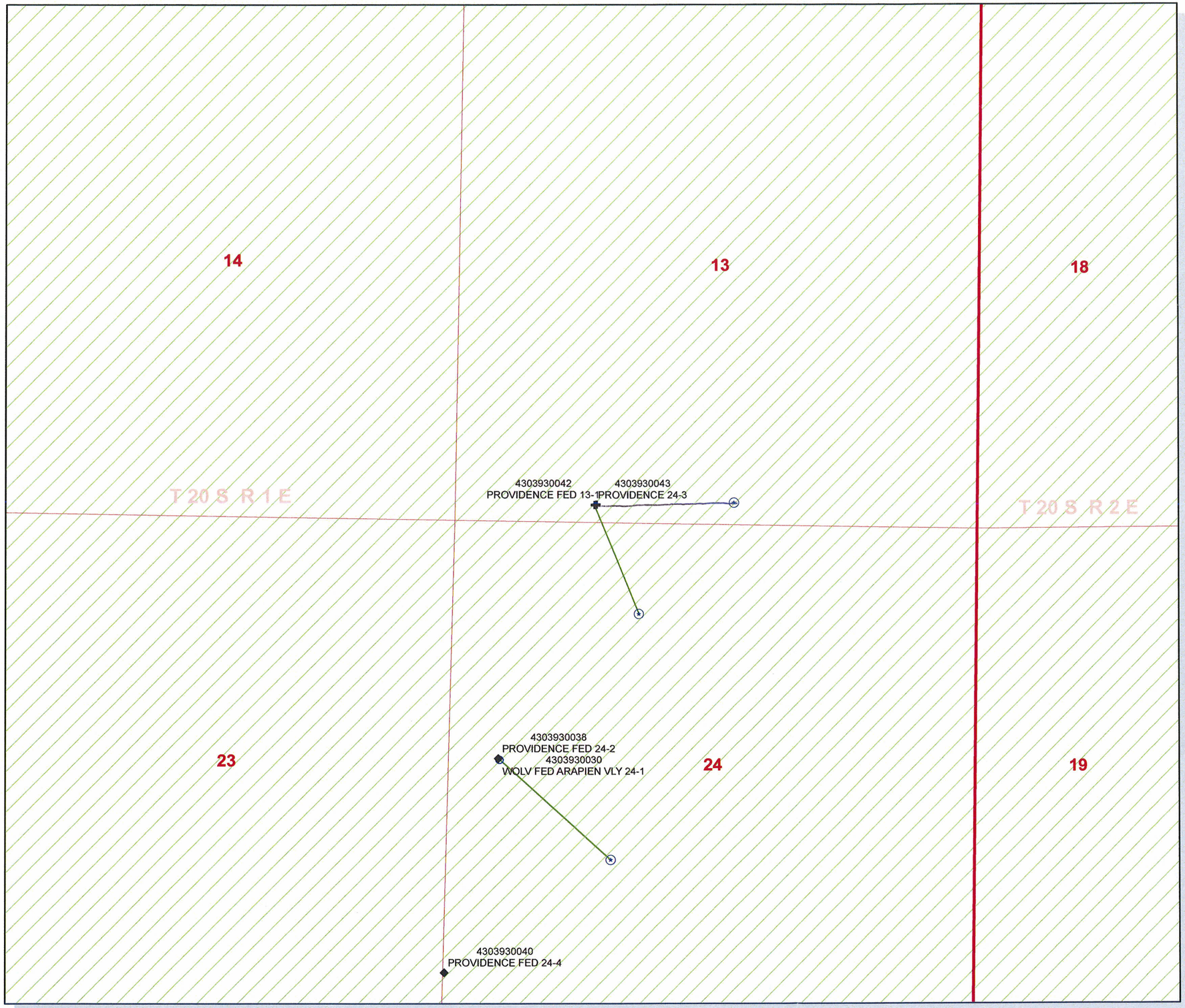
Well Name: PROVIDENCE 24-3

Township 20.0 S Range 01.0 E Section 13

Meridian: SLBM

Operator: WOLVERINE GAS & OIL CO UT

Map Prepared:
Map Produced by Diana Mason



Units

STATUS
- ACTIVE
- EXPLORATORY
- GAS STORAGE
- NF PP OIL
- NF SECONDARY
- PI OIL
- PP GAS
- PP GEOTHERML
- PP OIL
- SECONDARY
- TERMINATED

Fields

STATUS
- ACTIVE
- COMBINED
- Sections
- Township

Wells Query Events
- <all other values>

GIS_STAT_TYPE
- <Null>
- APD
- DRL
- GI
- GS
- LA
- NEW
- OPS
- PA
- PGW
- POW
- RET
- SGW
- SOW
- TA
- TW
- WD
- WI
- WS

1,300 650 0 1,300 Feet

1:12,000

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

November 18, 2008

Wolverine Gas & Oil Company of Utah, LLC
1140 N Centennial Park Drive
Richfield, UT 84701

Re: Providence 24-3 Well, Surface Location 159' FSL, 1444' FWL, SE SW, Sec. 13, T. 20 South, R. 1 East, Bottom Location 900' FNL, 1900' FWL, NE NW, Sec. 24, T. 20 South, R. 1 East, Sanpete County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann.§ 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-039-30043.

Sincerely,

Gil Hunt
Associate Director

pab
Enclosures

cc: Sanpete County Assessor
Bureau of Land Management, Utah State Office

1594 West North Temple, Suite 1210, PO Box 145801, Salt Lake City, UT 84114-5801
telephone (801) 538-5340 • facsimile (801) 359-3940 • TTY (801) 538-7458 • *www.ogm.utah.gov*

UTAH DNR OIL, GAS & MINING

Operator: Wolverine Gas & Oil Company of Utah, LLC
Well Name & Number Providence 24-3
API Number: 43-039-30043
Lease: UTU-80907

Surface Location:	SE SW	**Sec.** 13	**T.** 20 South	**R.** 1 East
Bottom Location:	NE NW	**Sec.** 24	**T.** 20 South	**R.** 1 East

Conditions of Approval

1. **General**
   Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

2. **Notification Requirements**
   Notify the Division within 24 hours of spudding the well.
   - Contact Carol Daniels at (801) 538-5284

   Notify the Division prior to commencing operations to plug and abandon the well.
   - Contact Dustin Doucet at (801) 538-5281 (801) 733-0983 home

3. **Reporting Requirements**
   All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.

5. In accordance with Utah Admin. R.649-3-11, Directional Drilling, the operator shall submit a complete angular deviation and directional survey report to the Division within 30 days following completion of the well.

6. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.

RECEIVED

Form 3160-3
(August 2007)

NOV - 6 2008

FORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Richfield BLM Field Office

APPLICATION FOR PERMIT TO DRILL OR REENTER

CONFIDENTIAL

5. Lease Serial No. UTU-80907

6. If Indian, Allotee or Tribe Name N/A

7. If Unit or CA Agreement, Name and No. Wolverine Federal Unit

8. Lease Name and Well No. Providence Federal 24-3

9. API Well No. 43 039 30043

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone

2. Name of Operator Wolverine Gas and Oil Company of Utah, LLC

3a. Address 1140 N Centennial Park Drive, Richfield, Utah 84701

3b. Phone No. (include area code) 435-896-1943

10. Field and Pool, or Exploratory Unnamed, Navajo

4. Location of Well (Report location clearly and in accordance with any State requirements.*)
At surface 159' FSL, 1444' FWL, being in SE4SW4 Sec 13
At proposed prod. zone 900' FNL, 1900' FWL, being in NE4NW4 Sec 24

11. Sec., T. R. M. or Blk. and Survey or Area Section ~~24~~ 13, T20S, R1E, SLB&M

12. County or Parish Sanpete

13. State UT

14. Distance in miles and direction from nearest town or post office* 4.25 miles Southwest of Mayfield, Utah

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any) 1160 feet

16. No. of acres in lease 1,040

17. Spacing Unit dedicated to this well 40 acres

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 1,880 feet

19. Proposed Depth 13,400' (TVD)

20. BLM/BIA Bond No. on file BLM WY 3320

21. Elevations (Show whether DF, KDB, RT, GL, etc.) 5,643.80' GR

22. Approximate date work will start* 02/15/2008

23. Estimated duration 90 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).
4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature Charlie Irons — Name (Printed/Typed) Charlie Irons — Date 11/06/2008

Title Senior Landman

Approved by (Signature) Wayne A. Wetzel — Name (Printed/Typed) WAYNE A. WETZEL — Date 2-3-09

Title ASSOC. FIELD OFFICE MANAGER — Office RICHFIELD FIELD OFFICE

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached. **Conditions of Approval Attached**

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

*(Instructions on page 2)

RECEIVED
FEB 05 2009
DIV. OF OIL, GAS & MINING

CONDITIONS OF APPROVAL

Company:	Wolverine Gas and Oil Company of Utah, LLC.
Well No:	**Providence Federal #24-3**
Location:	SFC: SE¼ SW¼ Sec 13, T. 20 S., R. 1 E. SLB&M BHL: NE¼ NW¼ Sec 24, T. 20 S., R. 1 E. SLB&M Sanpete County, Utah
Lease No:	UTU-80907 Wolverine Unit

I. Please Note:

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR parts 3100, 3160 and 3180), lease/agreement terms, Onshore Oil and Gas Orders, Notice to Lessee's, and this approved plan of operation.

A copy of the approved application and these conditions shall be maintained on location during all construction and drilling operations. Deviation from the approved plan without prior approval is not allowed.

The operator is fully responsible for the actions of his subcontractors.

Operators have the responsibility to assure that activities authorized by this permit are conducted in a manner that complies with other applicable Federal, State, and local laws and regulations.

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

This Application for Permit to Drill (APD) shall be valid for two years from the date of approval, provided the lease does not expire. If activities have not commenced by the end of the two-year period, the APD shall be returned to the operator without prejudice. Should the operator still desire to drill the well, a new APD must be submitted to this office. Upon written request by the operator, a one-time **two year** extension to this time period may be granted by the Authorized Officer (AO).

Failure to comply with the provisions of this permit, including applicable regulations, stipulations, and/or approval conditions, will be considered a violation subject to the enforcement provisions of 43 CFR Subpart 3163.

If fill materials are needed to maintain roads or well sites, proper permits must be obtained from the appropriate surface owner. On BLM administered lands, the use of materials shall conform to 43 CFR §3610.2-3.

II. Required Notifications:

The operator and contractor shall contact the BLM, Richfield Field Office - **(435) 896-1520**, at least 48 hours prior to commencement of access and site construction or reclamation activities. (Contact: **Bert Hart**).

The operator shall contact the BLM, Utah State Office, Branch of Fluid Minerals, **(801) 539-4045**, FAX (801) 539-4200, at least 24 hours prior to the following operations (Contact: **Al McKee**):

- spudding (including dry hole digger or rig hole rigs);
- running and cementing all casing strings;
- pressure testing of BOPE or any casing string.
- pressure integrity test (mud weight equivalency test) of each casing shoe.

In the case of newly drilled dry holes, and in any emergency situation, after hour authorization may be obtained by contacting the following individuals, in the order listed:

Utah State Office, BLM, Branch of Fluid Minerals

Al McKee Petroleum Engineer	(801) 572-6911 (Home) (801) 828-7498 (Cell)
Larry Denny I&E Coordinator	(801) 865-2337 (Cell) (801) 928-9570 (Cell) (801) 539-4048 (Office) larry_denny@blm.gov

If unable to reach any of the above individuals, please call the following:

Bert Hart Natural Resource Specialist	**(435) 979-7134 (Home)**

III. Conditions of Approval:

A. Drilling Plan - The drilling plan of the Application for Permit to Drill will be supplemented as follows:

1. Onshore Order No. 2, *Drilling Operations*, requires that all formations containing usable quality water (less than 10,000 ppm TDS) be protected via cement. If encountered while drilling, usable quality water would require protection by bring the cement at least ±100' above the usable quality water zone.

2. No variances were requested nor approved from the minimum standards of Order Nos. 2 and 6.

3. After running and cementing the 9-5/8" intermediate casing, a cement bond log, cement evaluation tool, or equivalent shall be run to determine cement top and quality. Results will be reported to BLM, attn: Al McKee. Any necessary remedial operations will be conducted prior to drilling out of the shoe.

4. Daily drilling and completion progress reports shall be submitted to the Utah State Office on a weekly basis, and shall include daily mud reports.

5. The authorized officer shall be notified when operations are 500 feet above or 3 days before (whichever is earlier) drilling the first formation expected to contain Hydrogen Sulfide (H_2S).

6. A copy of the Drilling Operations Plan (DOP) shall be available during operations at the wellsite beginning 500 feet above or 3 days before (whichever is earlier) drilling the first formation expected to contain H_2S.

7. If an alternative road is not practical, a clearly marked footpath flagged to a safe area is acceptable (OO#6.III.C.2.a).

8. H_2S DOP and Public Protection Plan (PPP), if necessary, shall be reviewed by the operator on an annual basis and copy of any necessary revisions shall be submitted to the authorized officer upon request. The DOP and/or PPP will also be reviewed during any operator changes. The BLM will be notified when this review has been completed.

9. Operations authorized by this permit shall not be suspended for more than 30 days without prior approval of the Authorized Officer (AO). All conditions of this approval shall be applicable during any operations conducted with a replacement/completion rig.

10. Two copies of all logs, and a single copy of core descriptions, core analyses, drill stem tests, well-test data, geologic summaries, sample descriptions, and all other surveys or data obtained and compiled during the drilling and/or completion operations shall be submitted to the BLM, Utah State Office, Branch of Fluid Minerals, at P.O. Box 45155, Salt Lake City, Utah, 84145-0155.

11. Gas produced from this well may not be vented or flared beyond an initial authorized test period of 30 days or 50 MMCF following its completion, whichever comes first, without the prior written approval of the authorized officer. Should gas be vented or flared without approval beyond the authorized test period, the operator may be directed to shut-in the well until

the gas can be captured or approval to continue venting or flaring as uneconomic is granted and the operator shall be required to compensate the lessor for the portion of the gas vented or flared without approval which is determined to have been avoidably lost.

12. Section 102 (b) (3) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations at Title 43 CFR 3162.4-1 (c), requires that "not later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160-5, or orally to be followed by a letter or sundry notice, of the date on which such production has begun or resumed."

    The date on which production is begun or resumed will be construed for oil wells as the date on which liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which liquid hydrocarbons are first produced into a permanent storage facility, whichever occurs first; and, for gas wells as the date on which associated liquid hydrocarbons are first sold or shipped from a temporary storage facility, such as a test tank, and for which a run ticket is required to be generated or, the date on which gas is first measured through permanent metering facilities, whichever occurs first.

    If you fail to comply with this requirement in the manner and time allowed, you shall be liable for a civil penalty of up to $10,000 per violation for each day such violation continues, not to exceed a maximum of 20 days. See Section 109 (c) (3) of the Federal Oil and Gas Royalty Management Act of 1982 and the implementing regulations at Title 43 CFR 3162.4-1 (c) and 3163.2 (e) (2).

B. **Surface Use Plan of Operations -** The surface use plan of operations for the Application for Permit to Drill will be supplemented as follows....

1. Any cultural resources be unearthed, surface-disturbing activities will be re-routed to avoid or halted until the cultural sites/artifacts can be evaluated for significance, and a mitigation/salvage plan be formulated. These actions will successfully mitigate possible impacts to cultural resources such that a detailed analysis will not be not required.

2. All materials brought in from off site for road or pad construction will come from a pit free of invasive, non-native species.

3. All Federal and State laws will be followed regarding use, storage and disposal of hazardous materials and solid wastes. The areas will be kept clean and free of litter and utilizing appropriate human waste facilities will be used during the operation. Waste and these facilities will be removed from the site and properly disposed of upon completion of the project. Any petroleum spills will be cleaned-up in accordance with State and Federal laws and regulations. Trash will be contained in a portable, self-contained trash cage and hauled to a sanitary landfill.

4. The Applicant has committed to monitoring and treating any noxious weeds along the right-of-way, and the well site. All equipment will be power washed to reduce the potential of introducing new weed species into the area. All berms, drill pad slopes, and spoils pile will be seeded the first fall after the disturbance is made to keep weeds from invading the disturbed sites.

5. Topsoil will be collected and piled and used in the final rehabilitation process. All of the seed will be mixed together, and will either be drill seeded or hydro mulched.

RECOMMENDED SEED MIXTURE

Plant Species	Pounds/Acre
1) Hycrest Crested Wheatgrass	1.0
2) Luna Pubescent Wheatgrass	1.0
3) Bozoisky Russin Wildryes	2.0
4) Magnar Great Basin Wildrye	1.5
5) Covar Sheep Fescue	1.0
6) Wyoming Big Sagebrush	1.0
7) Penstemon eatonii	0.5
8) Penstemon palmeri	0.5
9) Yellow Sweetclover	1.0
10) Appar Lewis Flax	1.5
11) Common Sunflower	2.0
12) Delar Small Burnet	2.0
13) Forage Kochia	1.0
TOTAL	16.0

Hydro mulching rate will be 16 pounds per acre. Seed certification tags will be presented to the BLM.

If the area is drill seeded then a small tractor equipped with a farm drill will be used. Seeding rate will be 8 pounds per acre. Areas not drilled will be hydro mulched.

All of the seeding will be done in middle to late fall (October/November) to prevent premature sprouting and subsequent winter killing of the forb species, due to late summer/early fall precipitation combined with warm soil temperatures

6. If any vertebrate fossils are observed during construction all work will cease until consultation with the BLM has been completed.

7. The reserve pit will be fenced on three sides during drilling and on the fourth side when the drill rig is removed from the site.

8. All junk, debris, or other foreign material must be removed before initiating any dirt work to restore the location. The fence around the reserve pit will be maintained in good repair during the drilling operations and will be completed by constructing the fourth side while the pit is drying. It will remain in place until the pit is completely dry and the site restoration begins.

9. Site reclamation will include:

   - Removing any road base material or concert that may have been added to the access road or pad;
   - Re-contouring the access road and well pad to approximate natural contours and conditions, to the extent practicable; evenly redistributing stockpiled topsoil over the re-contoured areas, the cut and fill slopes, and all other disturbed areas;
   - Scarifying of all disturbed areas (including the access road) and re-contoured areas prior to seeding, by use of a disk or harrow, to provide for a slightly roughened surface condition capable of collecting precipitation and holding surface water to promote seed germination.
   - Cut and fill slopes will be stabilized, stockpiles, and other disturbances will be seeded for re-growth of vegetation to stabilize slopes and to reduce erosion
   - If the fluids in the reserve pit have not evaporated within 90 days, the fluids will be pumped from the pit and disposed of in accordance with applicable BLM regulations. The reserve pit and that portion of the location and access road not needed for production or production facilities will be reclaimed. All stockpiled topsoil, in proportion the area being reclaimed, will be used in reclaiming areas without an on-going operation.
   - If the reserve pit has adequate capacity, any mineral materials that may have been used will be buried in the reserve pit, provided that the mineral materials are not contaminated by oil or other waste materials. Culverts will be removed from the site. If they are salvageable they will be used in other construction projects. If not, they will be disposed in a landfill. The cellar (six foot diameter concrete structure or culvert) from the base of the drill rig will be removed from the site and disposed in a landfill, or with

the approval of the Authorized Officer may be broken down into small pieces and buried during the re-contouring on the site.

- During the life of the project, until the site is released from liability for reclamation, the project will be inspected at least annually for noxious weeds. If invasive noxious weeds are found, the weeds will be treated to eliminate further reproduction (spread), and treatment will continue until the weeds have been eradicated. If noxious weeds are found, the BLM will be notified of their occurrence.
- Any soils contaminated from oil spills will be disposed of in an approved landfill.
- Any accumulation of hydrocarbons in the reserve pit will be removed and recovered for sale unless it is determined by the Authorized Officer to be waste oil. All waste oil will be disposed of properly at approved facilities.
- For reclamation, the polyurethane liner in the reserve pit, which is exposed above the cuttings, will be cut, removed from the site, and disposed in an approved landfill. The reserve pit will be backfilled to slightly above grade to allow for settling of the unconsolidated fill material.
- All equipment and vehicles will be confined to the access roads and well pad.
- All permanent structures, including pumping units, constructed or installed will be painted a flat, non-reflective color, as described on page 40 of the Gold Book (Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development, 4th Edition 2007). Prior to painting permanent structures, the operator will submit a Sundry Notice for approval of a color proposed by the applicant. Permanent structures are defined as being on location for six months or longer. Facilities that must conform to a color standard required Occupational Safety and Health Act (OSHA) may not conform to the Gold Book standards.

10. Fire suppression equipment will be available to suppress any wildfires caused by construction or related activities. In the event of a wildfire, the Richfield Interagency Fire Center will be notified at (435-896-8404).

11. Any facilities in an existing right-of-way that are damaged as a result of the oil and gas construction, operation, maintenance, or termination shall be repaired or replaced to the same condition as existed prior to the damage. Any costs for such damage or repair shall be the total responsibility of the Applicant.

12. All borehole fluids must be contained in the reserve pit. All appropriate measures must be taken to prevent leakage into the substratum or onto the surface. All appropriate measures must be taken to prevent overflow, and a minimum of 2 feet of freeboard must be maintained in the reserve pit.

13. If the flare pit is constructed by fill embankment, a keyway or core trench 10 to 12 feet wide shall be excavated to a minimum depth of 2 to 3 feet below the original ground level. The core of the embankment must be constructed with water-impervious material.

14. Erosion control and re-vegetation measures shall be implemented to insure that the lands disturbed by construction and maintenance activities will be restored to a stable, productive, and aesthetically acceptable condition.

API Well No: 43039300430000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-80907

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: WOLVERINE

1. TYPE OF WELL: Oil Well

8. WELL NAME and NUMBER: PROVIDENCE 24-3

2. NAME OF OPERATOR: WOLVERINE GAS & OIL COMPANY OF UTAH, LLC

9. API NUMBER: 43039300430000

3. ADDRESS OF OPERATOR: One Riverfront Plaza 55 Campau NW, Grand Rapids, MI, 49503

PHONE NUMBER: 616 458-1150 Ext

9. FIELD and POOL or WILDCAT: WILDCAT

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0159 FSL 1444 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESW Section: 13 Township: 20.0S Range: 01.0E Meridian: S

COUNTY: SANPETE

STATE: UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 11/18/2009	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Request for one year extension of permit, effective 11/18/2009.

Approved by the Utah Division of Oil, Gas and Mining

Date: September 22, 2009

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Charles Irons	435 896-1943	Senior Landman
SIGNATURE		**DATE**
N/A		9/16/2009

RECEIVED September 16, 2009

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43039300430000

API: 43039300430000
Well Name: PROVIDENCE 24-3
Location: 0159 FSL 1444 FWL QTR SESW SEC 13 TWNP 200S RNG 010E MER S
Company Permit Issued to: WOLVERINE GAS & OIL COMPANY OF UTAH, LLC
Date Original Permit Issued: 11/18/2008

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Approved by the Utah Division of Oil, Gas and Mining

Signature: Charles Irons **Date:** 9/16/2009
Title: Senior Landman **Representing:** WOLVERINE GAS & OIL COMPANY OF UTAH, LLC

Date: September 22, 2009

By:

RECEIVED September 16, 2009

API Well No: 43039300430000

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

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9. API NUMBER: 43039300430000

3. ADDRESS OF OPERATOR: One Riverfront Plaza 55 Campau NW, Grand Rapids, MI, 49503

PHONE NUMBER: 616 458-1150 Ext

9. FIELD and POOL or WILDCAT: PROVIDENCE

4. LOCATION OF WELL
FOOTAGES AT SURFACE:
0159 FSL 1444 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:
Qtr/Qtr: SESW Section: 13 Township: 20.0S Range: 01.0E Meridian: S

COUNTY: SANPETE

STATE: UTAH

11.
CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
✓ NOTICE OF INTENT Approximate date work will start: 11/18/2010	☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
	☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
	☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ SUBSEQUENT REPORT Date of Work Completion:	☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
	☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
	☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ SPUD REPORT Date of Spud:	☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
	☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ DRILLING REPORT Report Date:	☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	✓ APD EXTENSION
	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Request for one year extension of permit, effective 11/18/2010.

Approved by the Utah Division of Oil, Gas and Mining

Date: September 09, 2010

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Charles Irons	435 896-1943	Senior Landman

SIGNATURE	DATE
N/A	9/7/2010

RECEIVED September 07, 2010

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43039300430000

API: 43039300430000
Well Name: PROVIDENCE 24-3
Location: 0159 FSL 1444 FWL QTR SESW SEC 13 TWNP 200S RNG 010E MER S
Company Permit Issued to: WOLVERINE GAS & OIL COMPANY OF UTAH, LLC
Date Original Permit Issued: 11/18/2008

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision. Following is a checklist of some items related to the application, which should be verified.

- **If located on private land, has the ownership changed, if so, has the surface agreement been updated?** ○ **Yes** ◉ **No**
- **Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location?** ○ **Yes** ◉ **No**
- **Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well?** ○ **Yes** ◉ **No**
- **Have there been any changes to the access route including ownership, or rightof- way, which could affect the proposed location?** ○ **Yes** ◉ **No**
- **Has the approved source of water for drilling changed?** ○ **Yes** ◉ **No**
- **Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation?** ○ **Yes** ◉ **No**
- **Is bonding still in place, which covers this proposed well?** ◉ **Yes** ○ **No**

Approved by the Utah Division of Oil, Gas and Mining

Signature: Charles Irons **Date:** 9/7/2010
Title: Senior Landman **Representing:** WOLVERINE GAS & OIL COMPANY OF UTAH, LLC

Date: September 09, 2010

By:

RECEIVED September 07, 2010

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING

FORM 9

5.LEASE DESIGNATION AND SERIAL NUMBER: UTU-80907

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: WOLVERINE

1. TYPE OF WELL Oil Well

8. WELL NAME and NUMBER: PROVIDENCE 24-3

2. NAME OF OPERATOR: WOLVERINE GAS & OIL COMPANY OF UTAH, LLC

9. API NUMBER: 43039300430000

3. ADDRESS OF OPERATOR: One Riverfront Plaza 55 Campau NW, Grand Rapids, MI, 49503

PHONE NUMBER: 616 458-1150 Ext

9. FIELD and POOL or WILDCAT: PROVIDENCE

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0159 FSL 1444 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: SESW Section: 13 Township: 20.0S Range: 01.0E Meridian: S

COUNTY: SANPETE

STATE: UTAH

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	☐ WILDCAT WELL DETERMINATION	☐ OTHER	OTHER:

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

Request for one year extension of permit, effective 11/18/2011.

Approved by the Utah Division of Oil, Gas and Mining

Date: 09/19/2011

By:

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Charles Irons	435 896-1943	Senior Landman

SIGNATURE	DATE
N/A	9/14/2011

RECEIVED Sep. 14, 2011

The Utah Division of Oil, Gas, and Mining

- State of Utah
- Department of Natural Resources

Electronic Permitting System - Sundry Notices

Request for Permit Extension Validation Well Number 43039300430000

API: 43039300430000
Well Name: PROVIDENCE 24-3
Location: 0159 FSL 1444 FWL QTR SESW SEC 13 TWNP 200S RNG 010E MER S
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Signature: Charles Irons **Date:** 9/14/2011
Title: Senior Landman **Representing:** WOLVERINE GAS & OIL COMPANY OF UTAH, LLC

RECEIVED Sep. 14, 2011

GARY R. HERBERT
Governor
GREGORY S. BELL
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES
MICHAEL R. STYLER
Executive Director
Division of Oil, Gas and Mining
JOHN R. BAZA
Division Director

January 9, 2013

Charlie Irons
Wolverine Operating Company of Utah, LLC
1140 N. Centennial Park Dr.
Richfield, UT 84701

Re: APD Rescinded – Providence 24-3, Sec. 13 T. 20S, R. 1E
Sanpete County, Utah API No. 43-039-30043

Dear Mr. Irons:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on November 18, 2008. On September 22, 2009, September 9, 2010 and September 19, 2011 the Division granted a one-year APD extension. On January 8, 2013, you requested that the division rescind the state approved APD. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective January 8, 2013.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason
Environmental Scientist

cc: Well File
Bureau of Land Management, Richfield Office