



**WOLVERINE GAS AND OIL COMPANY  
OF UTAH, LLC**

*Energy Exploration in Partnership with the Environment*

January 18, 2008

Mr. Gil Hunt  
Utah Division of Oil, Gas and Mining  
P.O. Box 145801  
Salt Lake City, Utah 84114-5801

Re: Applications for Permits to Drill - Wolverine Gas and Oil Company of Utah, LLC  
**Wolverine Federal 19-2, Wolverine Federal 20-4, Wolverine Federal 20-2,  
Wolverine State 20-3, and Wolverine State 17-10  
Covenant Field, D Pad, NE/4 NW/4, Section 20, T23S, R1W, SLB&M  
Sevier County, Utah**

Dear Mr. Hunt:

Wolverine Gas and Oil Company of Utah, LLC (Wolverine) hereby submits two copies of an *Application for Permit to Drill* (APD) for each of the five referenced wells. These five wells will be directionally drilled from the same pad, referred to as D Pad in the Covenant Field. Included with these APDs is the following supplemental information:

- R649-3-2 Exception Plat for the Wolverine Federal 19-2;
- R649-3-11 Directional Drilling Application Plat for each well;
- BLM Surface Use Plan of Operations;
- Survey Plat for each well;
- Drilling Plan, BOPE Diagram, and Directional Plan for each well;
- Location Layout and Pad Cross-Sections for each well;
- Vicinity Map showing Land Administration for each well.

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DIV. OF OIL, GAS & MINING

Kings Meadow Ranches, LLC (User Number 63-2529) 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 Wolverine Federal 19-2 well is located 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 geology and restrictive topography. Wolverine is the only owner and operator within 460' of the proposed well location.

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

Operator: Wolverine Gas and Oil Company of Utah, LLC

Address: One Riverfront Plaza  
55 Campau, N.W.  
Grand Rapids, MI 49503-2616

Wells: Wolverine Federal 19-2, Wolverine Federal 20-4, Wolverine Federal 20-2,  
Wolverine State 20-3, and Wolverine State 17-10

Field: Covenant

Reservoir: Navajo

County: Sevier

Reason: Inaccessible terrain and to minimize surface impact.

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

Thank you for consideration of this application. Please feel free to contact myself or Ed Higuera of this office if you have any questions or need additional information.

Sincerely,



Ellis M. Peterson  
Senior Production Engineer  
Wolverine Gas and Oil

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

5. Lease Serial No. <b>BLM UTU-73528</b>	
6. If Indian, Allottee or Tribe Name N/A	
7. If Unit or CA Agreement, Name and No. <b>Wolverine Federal Unit</b>	
8. Lease Name and Well No. <b>Wolverine Federal 20-2</b>	
9. API Well No. <b>43041-30056</b>	
10. Field and Pool, or Exploratory <b>Covenant Field Navajo</b>	
11. Sec., T. R. M. or Blk. and Survey or Area <b>Section 20, T23S, R1W, SLB&amp;M</b>	
12. County or Parish <b>Sevier</b>	13. State <b>UT</b>
14. Distance in miles and direction from nearest town or post office* <b>4 miles southeast of Sigurd, Utah</b>	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) <b>641</b>	16. No. of acres in lease <b>8236</b>
	17. Spacing Unit dedicated to this well <b>40 acres</b>
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>1170</b>	19. Proposed Depth <b>7360' MD, 6700' TVD</b>
	20. BLM/BIA Bond No. on file <b>BLM WY3329</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>5866' GL, 5892' KB</b>	22. Approximate date work will start* <b>05/15/2008</b>
	23. Estimated duration <b>40 days</b>
24. Attachments	

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

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

25. Signature <i>Edward A. Higuera</i>	Name (Printed/Typed) <b>Edward A. Higuera</b>	Date <b>01/18/2008</b>
Title <b>Manager - Development</b>		
Approved by (Signature) <i>Bradley G. Hill</i>	Name (Printed/Typed) <b>BRADLEY G. HILL</b>	Date <b>01-31-08</b>
Title <b>ENVIRONMENTAL MANAGER</b>		

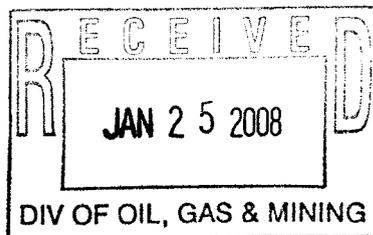
Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

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.

\*(Instructions on page 2)

Surf  
418976 X  
4294191 X  
38.794619  
- 111.932977

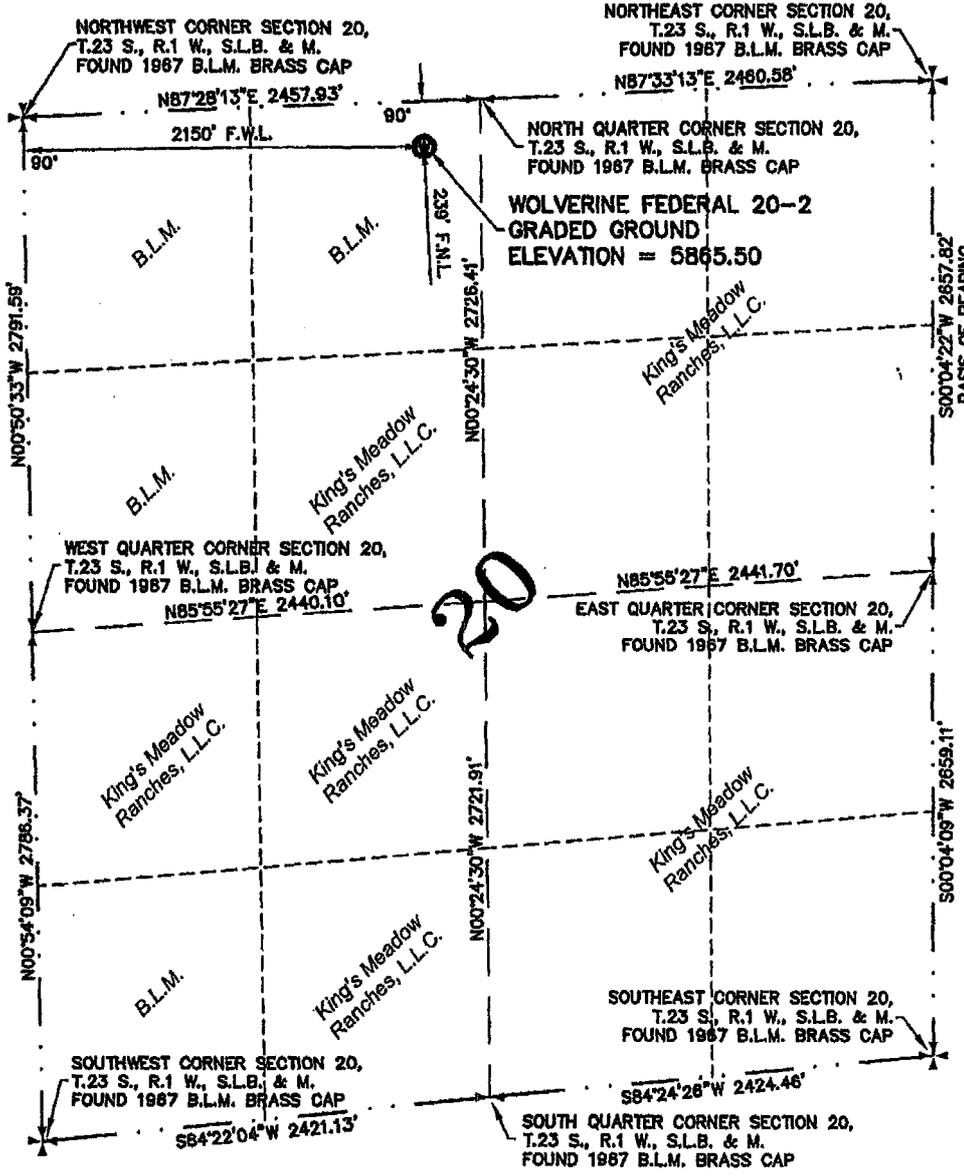
Federal Approval of this  
Action is Necessary



BHL 418497X  
4293624Y  
38.789460  
- 111.938428

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# Section 20, T.23 S., R.1 W., S.L.B. & M.



### BASIS OF BEARINGS

BASIS OF BEARING USED WAS S00°04'22"W BETWEEN THE NORTHEAST CORNER AND THE EAST QUARTER CORNER OF SECTION 20, T.23 S., R.1 W., S.L.B. & M.  
WELL COORDINATES: LATITUDE: 38°47'40.5369" (38.794593583) NAD 83  
LONGITUDE: -111°56'01.8061" (-111.933835028) NAD 83

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

WELL LOCATION, LOCATED AS SHOWN IN THE N.E. 1/4 OF THE N.W. 1/4 OF SECTION 20, T.23 S., R.1 W., S.L.B. & M. SEVER COUNTY, UTAH

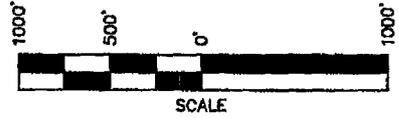
### LEGEND

- ✚ = SECTION CORNERS (LOCATED)
- ⊕ = QUARTER SECTION CORNERS (LOCATED)
- ⊙ = PROPOSED WELL HEAD

NOTE: THE PURPOSE OF THIS SURVEY WAS TO PLAT THE WOLVERINE FEDERAL 20-2 WELL LOCATION. LOCATED IN THE N.E. 1/4 OF THE N.W. 1/4 OF SECTION 20, T.23 S., R.1 W., S.L.B. & M., SEVER COUNTY, UTAH.

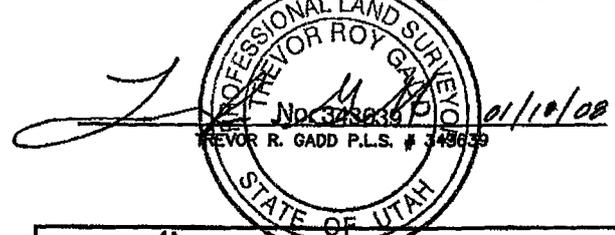
### BASIS OF ELEVATION

ELEVATION BASED ON THE U.S.G.S. BENCH MARK T-30 LOCATED IN THE S.W. 1/4 OF SECTION 17, T.23 S., R.1 W., S.L.B. & M.



### 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.

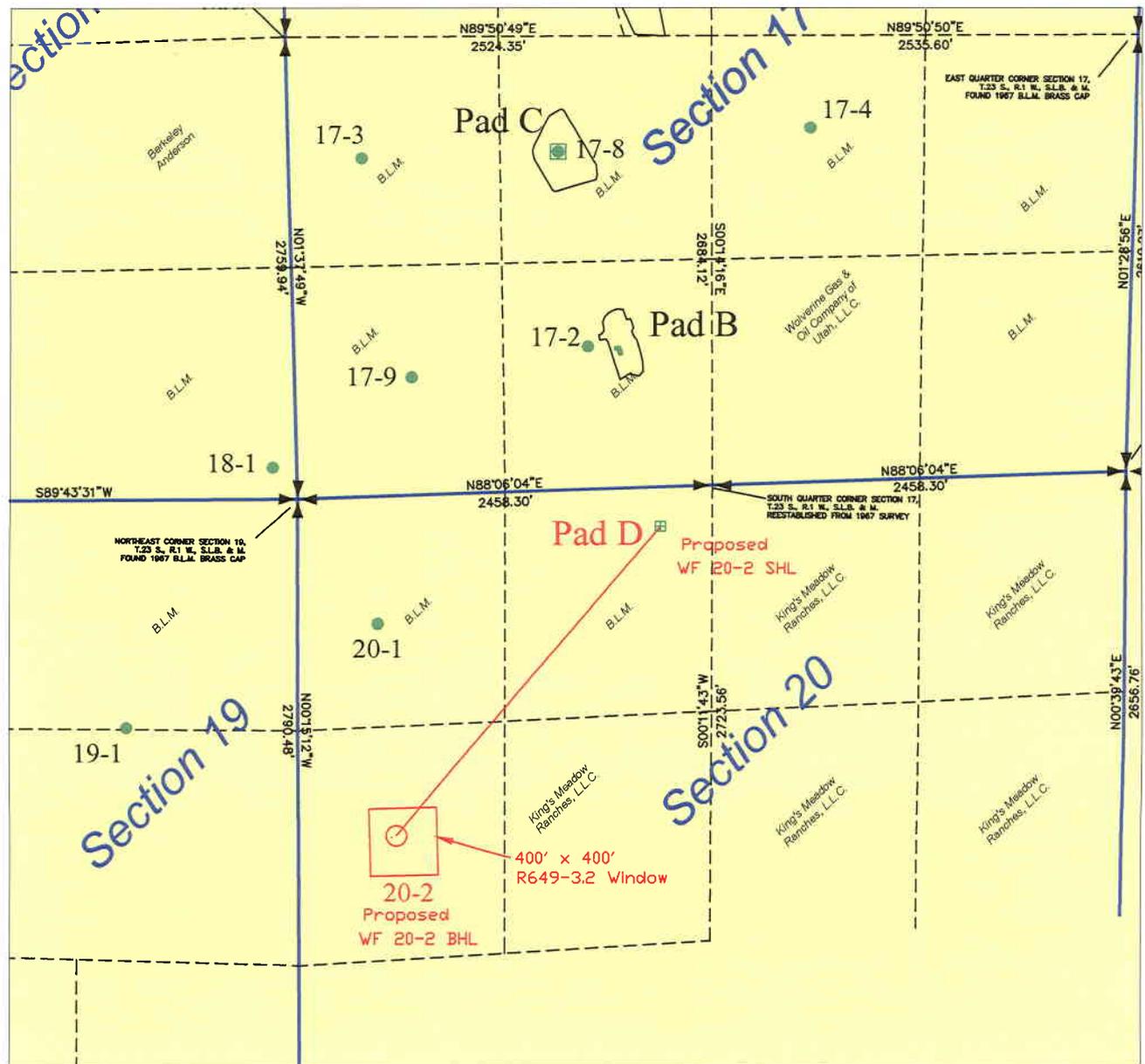


**Jones & Demille Engineering**  
1635 South 100 West - Richfield, Utah 84701  
Phone (435) 896-8266  
Fax (435) 896-8268  
www.jonesanddemille.com

## Well Location Plat for Wolverine Gas & Oil Company of Utah, L.L.C.

DESIGNED	SURVEYED	CHECKED	DRAWN	PROJECT NO.	SHEET NO.
-	K.D.B.	T.R.G.	T.W.G.	0703-201	1
DATE		BNS NAME	SCALE		
01/08/08		WELL_LOC	1"=1000'		

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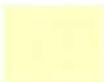


## Wolverine Federal 20-2 Well Location

SHL: 239' FNL, 2150' FWL, NE1/4 NW1/4 Sec. 20 T23S R1W  
 BHL: 2037' FNL, 579' FWL, SW1/4 NW1/4 Sec. 20 T23S R1W

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Wolverine Lease



Wolverine Gas and Oil Corporation

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)  
 T23S, R1W  
 Sevier County, UT

SCALE: 1:12,000

FNAME: covenant\_field.dwg

DATE: 01/08/2008

SHEET

REV

# WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC

## DRILLING PLAN

### Wolverine Federal 20-2 NE/4 NW/4 Section 20, Township 23 South, Range 1 West, S.L.B & M. Sevier County, Utah

#### Plan Summary:

It is planned to drill this confidential development well as a directional bore hole due to surface topography constraints and in accordance with the enclosed directional drilling plan. The well will be drilled to a measured depth of 7360' (6700' TVD) to test the upper thrust of the Twin Creek and Navajo 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 planned location is as follows:

Surface Location:	239' FNL, 2150' FWL, Section 20, T23S, R1W, S.L.B. & M.
Bottom Hole Location @ Navajo 1 target	2037' FNL, 579' FWL, Section 20, T23S, R1W, S.L.B. & M.
Bottom Hole Location @ total depth	2037' FNL, 579' FWL, Section 20, T23S, R1W, S.L.B. & M.

Conductor casing will be set at approximately 80 feet and cemented to surface. A 12-1/4" hole will be drilled vertically to approximately 1000' and then deviated at 2 degrees per 100' build rate to 20 degrees hole angle at 2025' (2000' TVD) at which time 9-5/8" surface casing will be set and cemented to surface. An 8-3/4" hole will be drilled at approximately 36 degrees from vertical to approximately 5100' MD, then allowed to drop to vertical to penetrate the Twin Creek and Navajo formations to a well total depth of 7360' (6700' TVD). The well will be logged and 7" production casing will be set and cemented to 1500' (9-5/8" csg shoe @ 2025').

Drilling activities at this well are expected to commence in June 2008.

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**Well Name:** Wolverine Federal 20-2

**Surface Location:** 239' FNL, 2150' FWL  
 NE/4 NW/4 Section 20, T23S, R1W, S.L.B. & M.  
 Sevier County, Utah

**TD Bottom-Hole Location:** 2037' FNL, 579' FWL; Sec 20, T23S, R1W, S.L.B. & M

**Elevations (est):** 5866' GL, 5892' KB

**I. Geology:**

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

<b>Formation</b>	<b>TVD Interval (KB)</b>	<b>MD Interval (KB)</b>	<b>Contents</b>	<b>Pressure Gradient</b>
Arapien	26' – 5881'	26' – 6541'		
Twin Creek 1	5881' – 6211'	6541' – 6871'	Oil & water	0.46 psi/ft
Navajo 1	6211' – 6700'	6871' – 7360'	Oil & water	0.46 psi/ft
Total Depth	6700'	7360'		

**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.):

<b>BOPE Item</b>	<b>Flange Size and Rating</b>
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
DSA	13-5/8" 10M x 11" – 5M
Casing Head (9-5/8" SOW w/ two 2-1/16" SSO's)	11" 5M

Auxiliary Equipment (5M Min.):

<b>BOPE Item</b>
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 choke lines will be straight lines unless turns have tee blocks or are targeted with running tees, 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			80' GL
12.25"	9.625"	36.0	J55	STC	10.625"	2025' kb
8.750"	7.000"	26.0	HCL-80	LTC	7.656"	TD-4000'kb
	7.000"	23.0	HCL-80	LTC	7.656"	4000'- surf

	Surface	Intermediate	Production
Casing O. D. (in)	9.625	None	7.0
Casing Grade	J-55		HCL-80
Weight of Pipe (lbs/ft)	36.0		23 & 26
Connection	STC		LTC
Top Setting Depth - MD (ft)	0		0
Top Setting Depth - TVD (ft)	0		0
Bottom Setting Depth - MD (ft)	2025		7360
Bottom Setting Depth - TVD (ft)	2000		6700
Maximum Mud Weight - Inside (ppg)	9.2		8.4
Maximum Mud Weight - Outside (ppg)	9.2		10.5
Design Cement Top - MD (ft)	0		1500
Design Cement Top - TVD (ft)	0		1500
Max. Hydrostatic Inside w/ Dry Outside (psi)	957		2927
Casing Burst Rating (psi)	3520		7240
<b>Burst Safety Factor (1.10 Minimum)</b>	<b>3.68</b>		<b>2.47</b>
Max. Hydrostatic Outside w/ Dry Inside (psi)	957		3658
Collapse Rating	2020		6830
<b>Collapse Safety Factor (1.125 Minimum)</b>	<b>2.11</b>		<b>1.87</b>
Casing Weight in Air (kips)	72.9		179.4
Body Yield (kips)	564.0		532.0
Joint Strength (kips)	453.0		435.0
<b>Tension Safety Factor (1.80 Minimum)</b>	<b>6.21</b>		<b>2.42</b>

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

B. Cementing Program

<u>Casing Size</u>	<u>Cement Slurry</u>	<u>Quantity (sks)</u>	<u>Density (ppg)</u>	<u>Yield (ft<sup>3</sup>/sk)</u>
9.625"	Lead: CBM Lite	225	10.5	4.12
	Tail: Premium Plus	275	15.6	1.19
7.000"	Lead: Elastiseal™ N2 foamed	420	10.0	NA
	Tail: Elastiseal™ non-foamed	175	14.35	1.45

Surface: 9-5/8" surface casing will be cemented from setting depth (2025' MD) 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: none

Production: 7" production casing will be cemented in one stage from setting depth (7360') to 1500' (at least 500' into the 9-5/8" casing) using a foamed cement lead and non-foamed tail across the producing interval. A minimum of 20 percent silica will be added to the cement slurry if bottom-hole temperature exceeds 230 °F. Slurry volume will be based on calipered hole size plus 20% excess. Hardware will include a guide shoe, float collar, top plug, and centralizers as needed across any pay zones. 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 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:**

<u>Depth</u>	<u>Mud Weight (ppg)</u>	<u>Mud Type</u>	<u>Viscosity</u>	<u>Fluid Loss</u>
0 – 2025'	8.4 – 9.2	Fresh Water	26 – 50	N/C to 12 cc
2025' – 7360'	9.2 – 10.5	Salt Mud	36 – 50	N/C to 8 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, filtration, 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 is not expected.
- 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 a depth of approximately 2025 feet to TD. Samples will be caught, cleaned, bagged, and marked as required.
- B. Drill Stem Tests: There are no DST planned.
- C. Coring: There are no cores planned.
- 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.

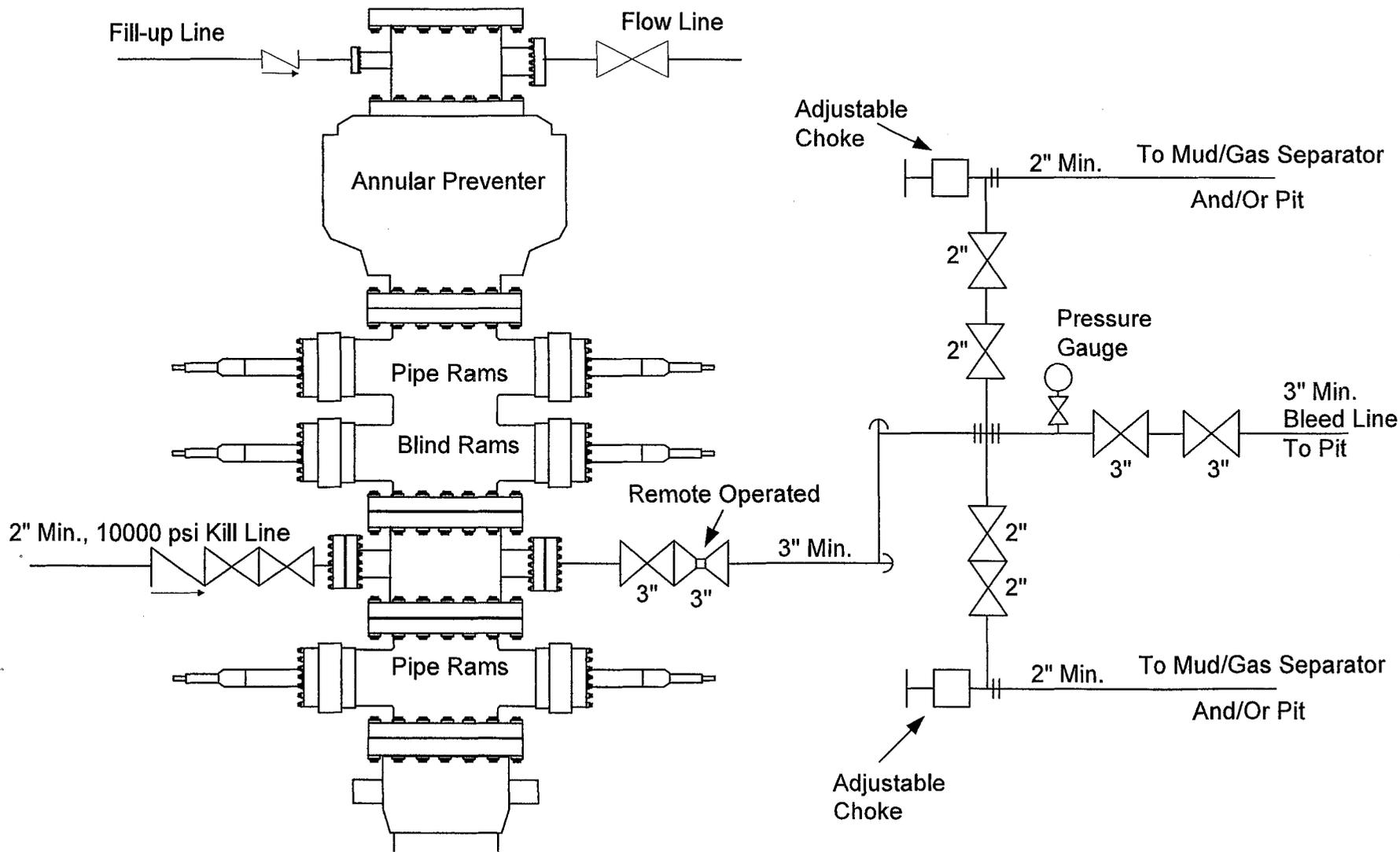
**VI. Expected Bottom-Hole Pressure and Abnormal Conditions:**

- A. Hydrogen Sulfide: Hydrogen Sulfide (H<sub>2</sub>S) gas is not expected in the geologic formations to be penetrated by this well.
- B. Pressure: No abnormally pressured zones are expected in this well. The pressure gradient for all potentially productive formations is expected to be approximately 0.46 psi/ft.
- C. Temperature: Bottom-hole temperature at TD is expected to be approximately 190 °F.

end

**Wolverine Gas and Oil Company of Utah, LLC  
Covenant Field D1 Pad Well  
BOPE Schematic**

(Not to Scale)



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# WOLVERINE GAS & OIL COMPANY

Location: UTAH Slot: Wolverine Federal 20-2 239°FNL & 2150°FWL  
 Field: SEVIER COUNTY Well: Wolverine Federal 20-2  
 Facility: SEC.20-T23S-R1W Wellbore: Wolverine Federal 20-2 PWB

Plot reference wellpath is Wolverine Federal 20-2 PWB	
True vertical depths are referenced to Rig on Wolverine Federal 20-2 239°FNL & 2150°FWL (RT)	Grid System: NAD83 / Lambert Utah State Planes, Central Zone (4302), US feet
Measured depths are referenced to Rig on Wolverine Federal 20-2 239°FNL & 2150°FWL (RT)	North Reference: True north
Rig on Wolverine Federal 20-2 239°FNL & 2150°FWL (RT) to Mean Sea Level: 5891 feet	Scale: True distance
Mean Sea Level to Mud line (Facility - SEC.20-T23S-R1W): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: Suzanne Thompson on 1/7/2008

### Location Information

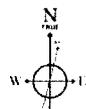
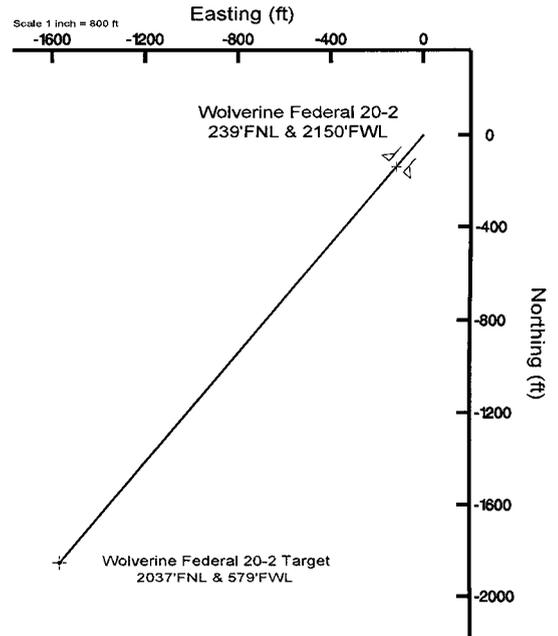
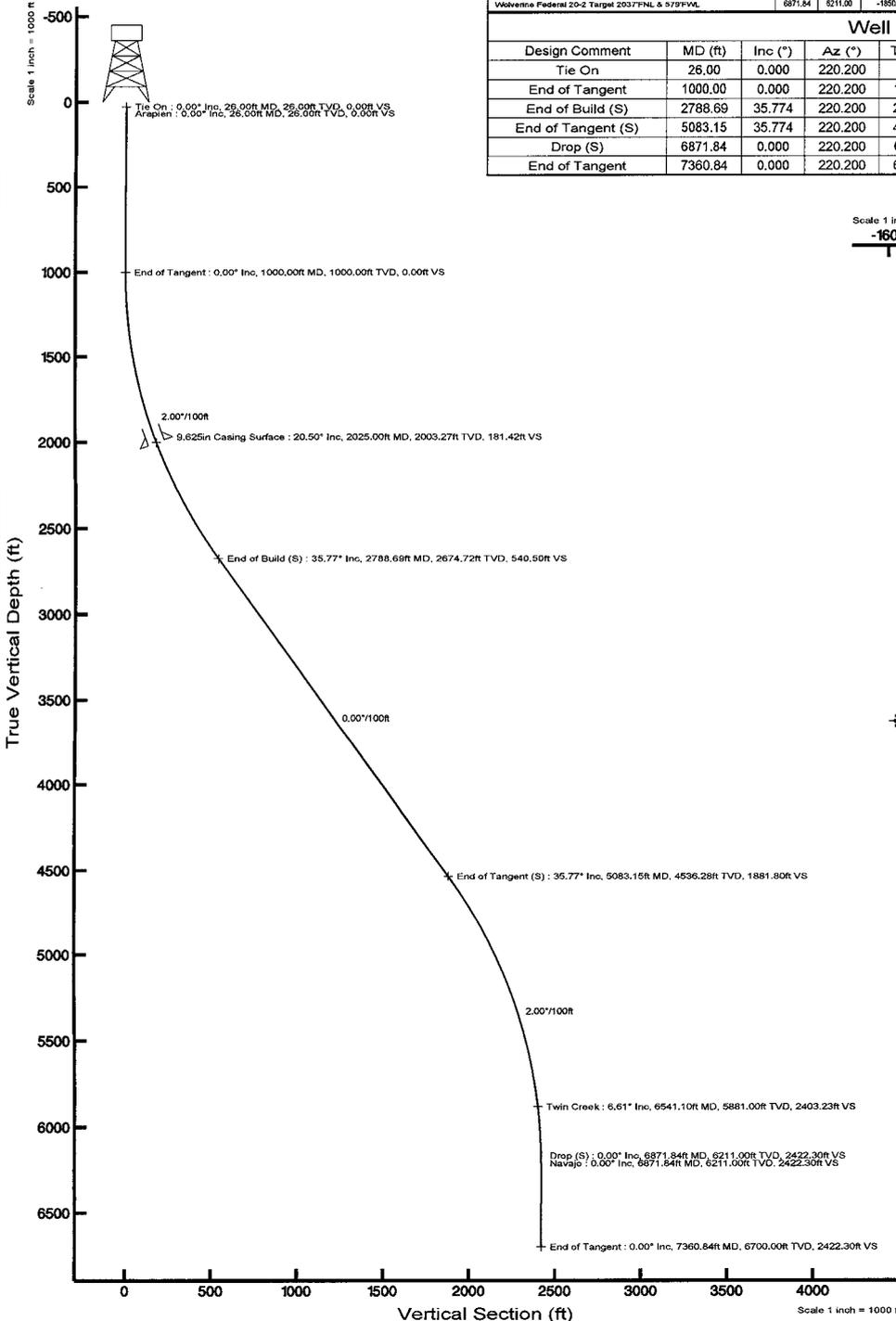
Facility Name		Grid East (USF)	Grid North (USF)	Latitude	Longitude	
SEC.20-T23S-R1W		1516740.440	6730025.867	38° 47' 40.989"N	111° 56' 01.992"W	
Slot	Local N (ft)	Local E (ft)	Grid East (USF)	Grid North (USF)	Latitude	Longitude
Wolverine Federal 20-2 239°FNL & 2150°FWL	-45.70	14.88	1516754.898	6729960.095	38° 47' 40.537"N	111° 56' 01.806"W
Rig on Wolverine Federal 20-2 239°FNL & 2150°FWL (RT) to Mud line (Facility - SEC.20-T23S-R1W)				5891ft		
Mean Sea Level to Mud line (Facility - SEC.20-T23S-R1W)				0ft		
Rig on Wolverine Federal 20-2 239°FNL & 2150°FWL (RT) to Mean Sea Level				5891ft		

### Targets

Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (USF)	Grid North (USF)	Latitude	Longitude
Wolverine Federal 20-2 Target 2037°FNL & 579°FWL	6871.84	6211.00	-1850.14	-1563.49	1515182.35	6729137.45	38° 47' 22.249"N	111° 56' 21.552"W

### 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	220.200	26.00	0.00	0.00	0.00	0.00
End of Tangent	1000.00	0.000	220.200	1000.00	0.00	0.00	0.00	0.00
End of Build (S)	2788.69	35.774	220.200	2674.72	-412.83	-348.87	2.00	540.50
End of Tangent (S)	5083.15	35.774	220.200	4536.28	-1437.32	-1214.63	0.00	1881.80
Drop (S)	6871.84	0.000	220.200	6211.00	-1850.14	-1563.49	2.00	2422.30
End of Tangent	7360.84	0.000	220.200	6700.00	-1850.14	-1563.49	0.00	2422.30



BGGM (1945.0 to 2005.0) Dp: 64.46° Field: 51694.ft  
 Magnetic North is 12.25 degrees East of True North (M 01.0408)

To correct azimuth from Magnetic to True add 12.25 degrees

CONFIDENTIAL

# Planned Wellpath Report

Wolverine Federal 20-2 PWP

Page 1 of 4



**INTEQ**

## REFERENCE WELLPATH IDENTIFICATION

Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Federal 20-2 239'FNL & 2150'FWL
Area	UTAH	Well	Wolverine Federal 20-2
Field	SEVIER COUNTY	Wellbore	Wolverine Federal 20-2 PWB
Facility	SEC.20-T23S-R1W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Utah State Planes, Central Zone (4302), US feet	Software System	WellArchitect™ 1.2
North Reference	True	User	Suzanne Thompson
Scale	1.00006	Report Generated	01/07/08 at 15:42:05
Wellbore last revised	01/04/08	Database/Source file	WA_Denver/Wolverine_F

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North [feet]	East [feet]	Easting [US feet]	Northing [US feet]	Latitude [°]	Longitude [°]
Slot Location	-45.70	14.68	1516754.90	6729980.10	38 47 40.537N	111 56 01.806W
Facility Reference Pt			1516740.44	6730025.87	38 47 40.989N	111 56 01.992W
Field Reference Pt			1516134.37	6732217.32	38 48 02.619N	111 56 09.781W

## WELLPATH DATUM

Calculation method	Minimum curvature	Rig on Wolverine Federal 20-2 239'FNL & 2150'FWL (RT) to Facility Vertical Datum	5891.0
Horizontal Reference Pt	Slot	Rig on Wolverine Federal 20-2 239'FNL & 2150'FWL (RT) to Mean Sea Level	5891.0
Vertical Reference Pt	Rig on Wolverine Federal 20-2 239'FNL & 2150'FWL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00
MD Reference Pt	Rig on Wolverine Federal 20-2 239'FNL & 2150'FWL (RT)	Section Origin	N 0.00
Field Vertical Reference	Mean Sea Level	Section Azimuth	220.20

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# Planned Wellpath Report

Wolverine Federal 20-2 PWP

Page 2 of 4



INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Federal 20-2 239'FNL & 2150'FWL
Area	UTAH	Well	Wolverine Federal 20-2
Field	SEVIER COUNTY	Wellbore	Wolverine Federal 20-2 PWB
Facility	SEC.20-T23S-R1W		

## WELLPATH DATA (80 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
0.00†	0.000	220.200	0.00	0.00	0.00	0.00	0.00
26.00	0.000	220.200	26.00	0.00	0.00	0.00	0.00
126.00†	0.000	0.000	126.00	0.00	0.00	0.00	0.00
226.00†	0.000	0.000	226.00	0.00	0.00	0.00	0.00
326.00†	0.000	0.000	326.00	0.00	0.00	0.00	0.00
426.00†	0.000	0.000	426.00	0.00	0.00	0.00	0.00
526.00†	0.000	0.000	526.00	0.00	0.00	0.00	0.00
626.00†	0.000	0.000	626.00	0.00	0.00	0.00	0.00
726.00†	0.000	0.000	726.00	0.00	0.00	0.00	0.00
826.00†	0.000	0.000	826.00	0.00	0.00	0.00	0.00
926.00†	0.000	0.000	926.00	0.00	0.00	0.00	0.00
1000.00	0.000	220.200	1000.00	0.00	0.00	0.00	0.00
1026.00†	0.520	220.200	1026.00	0.12	-0.09	-0.08	2.00
1126.00†	2.520	220.200	1125.96	2.77	-2.12	-1.79	2.00
1226.00†	4.520	220.200	1225.77	8.91	-6.81	-5.75	2.00
1326.00†	6.520	220.200	1325.30	18.53	-14.15	-11.96	2.00
1426.00†	8.520	220.200	1424.43	31.62	-24.15	-20.41	2.00
1526.00†	10.520	220.200	1523.05	48.15	-36.78	-31.08	2.00
1626.00†	12.520	220.200	1621.03	68.12	-52.03	-43.97	2.00
1726.00†	14.520	220.200	1718.25	91.50	-69.89	-59.06	2.00
1826.00†	16.520	220.200	1814.60	118.26	-90.32	-76.33	2.00
1926.00†	18.520	220.200	1909.96	148.36	-113.32	-95.76	2.00
2026.00†	20.520	220.200	2004.21	181.77	-138.84	-117.33	2.00
2126.00†	22.520	220.200	2097.23	218.45	-166.85	-141.00	2.00
2226.00†	24.520	220.200	2188.92	258.36	-197.33	-166.76	2.00
2326.00†	26.520	220.200	2279.16	301.44	-230.24	-194.56	2.00
2426.00†	28.520	220.200	2367.84	347.64	-265.53	-224.39	2.00
2526.00†	30.520	220.200	2454.85	396.91	-303.16	-256.19	2.00
2626.00†	32.520	220.200	2540.09	449.19	-343.09	-289.93	2.00
2726.00†	34.520	220.200	2623.46	504.41	-385.26	-325.57	2.00
2788.69	35.774	220.200	2674.72	540.50	-412.83	-348.87	2.00
2826.00†	35.774	220.200	2704.99	562.31	-429.49	-362.95	0.00
2926.00†	35.774	220.200	2786.12	620.77	-474.14	-400.68	0.00
3026.00†	35.774	220.200	2867.25	679.22	-518.79	-438.41	0.00
3126.00†	35.774	220.200	2948.39	737.68	-563.44	-476.14	0.00
3226.00†	35.774	220.200	3029.52	796.14	-608.09	-513.88	0.00
3326.00†	35.774	220.200	3110.65	854.60	-652.74	-551.61	0.00
3426.00†	35.774	220.200	3191.79	913.06	-697.39	-589.34	0.00
3526.00†	35.774	220.200	3272.92	971.52	-742.04	-627.07	0.00
3626.00†	35.774	220.200	3354.05	1029.98	-786.69	-664.81	0.00

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# Planned Wellpath Report

Wolverine Federal 20-2 PWP

Page 3 of 4



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Federal 20-2 239'FNL & 2150'FWL
Area	UTAH	Well	Wolverine Federal 20-2
Field	SEVIER COUNTY	Wellbore	Wolverine Federal 20-2 PWB
Facility	SEC.20-T23S-RIW		

WELLPATH DATA (80 stations) † = interpolated/extrapolated station							
MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
3726.00†	35.774	220.200	3435.19	1088.43	-831.34	-702.54	0.00
3826.00†	35.774	220.200	3516.32	1146.89	-875.99	-740.27	0.00
3926.00†	35.774	220.200	3597.45	1205.35	-920.64	-778.00	0.00
4026.00†	35.774	220.200	3678.59	1263.81	-965.29	-815.74	0.00
4126.00†	35.774	220.200	3759.72	1322.27	-1009.94	-853.47	0.00
4226.00†	35.774	220.200	3840.85	1380.73	-1054.59	-891.20	0.00
4326.00†	35.774	220.200	3921.99	1439.19	-1099.24	-928.93	0.00
4426.00†	35.774	220.200	4003.12	1497.65	-1143.90	-966.67	0.00
4526.00†	35.774	220.200	4084.25	1556.10	-1188.55	-1004.40	0.00
4626.00†	35.774	220.200	4165.39	1614.56	-1233.20	-1042.13	0.00
4726.00†	35.774	220.200	4246.52	1673.02	-1277.85	-1079.86	0.00
4826.00†	35.774	220.200	4327.65	1731.48	-1322.50	-1117.60	0.00
4926.00†	35.774	220.200	4408.78	1789.94	-1367.15	-1155.33	0.00
5026.00†	35.774	220.200	4489.92	1848.40	-1411.80	-1193.06	0.00
5083.15	35.774	220.200	4536.28	1881.80	-1437.32	-1214.63	0.00
5126.00†	34.917	220.200	4571.24	1906.59	-1456.25	-1230.63	2.00
5226.00†	32.917	220.200	4654.22	1962.39	-1498.87	-1266.64	2.00
5326.00†	30.917	220.200	4739.10	2015.26	-1539.24	-1300.76	2.00
5426.00†	28.917	220.200	4825.77	2065.13	-1577.34	-1332.95	2.00
5526.00†	26.917	220.200	4914.12	2111.94	-1613.09	-1363.17	2.00
5626.00†	24.917	220.200	5004.06	2155.65	-1646.48	-1391.38	2.00
5726.00†	22.917	220.200	5095.47	2196.19	-1677.44	-1417.55	2.00
5826.00†	20.917	220.200	5188.24	2233.51	-1705.95	-1441.64	2.00
5926.00†	18.917	220.200	5282.25	2267.57	-1731.96	-1463.62	2.00
6026.00†	16.917	220.200	5377.40	2298.34	-1755.46	-1483.48	2.00
6126.00†	14.917	220.200	5473.56	2325.76	-1776.41	-1501.18	2.00
6226.00†	12.917	220.200	5570.62	2349.81	-1794.78	-1516.70	2.00
6326.00†	10.917	220.200	5668.46	2370.46	-1810.55	-1530.03	2.00
6426.00†	8.917	220.200	5766.96	2387.68	-1823.70	-1541.15	2.00
6526.00†	6.917	220.200	5866.00	2401.45	-1834.22	-1550.03	2.00
6626.00†	4.917	220.200	5965.47	2411.76	-1842.09	-1556.69	2.00
6726.00†	2.917	220.200	6065.23	2418.59	-1847.31	-1561.10	2.00
6826.00†	0.917	220.200	6165.17	2421.93	-1849.86	-1563.26	2.00
6871.84	0.000	220.200	6211.00 <sup>†</sup>	2422.30	-1850.14	-1563.49	2.00
6926.00†	0.000	0.000	6265.16	2422.30	-1850.14	-1563.49	0.00
7026.00†	0.000	0.000	6365.16	2422.30	-1850.14	-1563.49	0.00
7126.00†	0.000	0.000	6465.16	2422.30	-1850.14	-1563.49	0.00
7226.00†	0.000	0.000	6565.16	2422.30	-1850.14	-1563.49	0.00
7326.00†	0.000	0.000	6665.16	2422.30	-1850.14	-1563.49	0.00
7360.84	0.000	220.200	6700.00	2422.30	-1850.14	-1563.49	0.00

HOLE & CASING SECTIONS

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**Ref Wellbore: Wolverine Federal 20-2 PWB      Ref Wellpath: Wolverine Federal 20-2 PWP**

<b>String/Diameter</b>	<b>Start MD [feet]</b>	<b>End MD [feet]</b>	<b>Interval [feet]</b>	<b>Start TVD [feet]</b>	<b>End TVD [feet]</b>	<b>Start N/S [feet]</b>	<b>Start E/W [feet]</b>	<b>End N/S [feet]</b>	<b>End E/W [feet]</b>
9.625in Casing Surface	26.00	2025.00	1999.00	26.00	2003.27	0.00	0.00	-138.57	-117.10

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# Planned Wellpath Report

Wolverine Federal 20-2 PWP

Page 4 of 4



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Federal 20-2 239'FNL & 2150'FWL
Area	UTAH	Well	Wolverine Federal 20-2
Field	SEVIER COUNTY	Wellbore	Wolverine Federal 20-2 PWB
Facility	SEC.20-T23S-R1W		

TARGETS									
Name	MD [feet]	TVD [feet]	North [feet]	East [feet]	Grid East [us survey feet]	Grid North [us survey feet]	Latitude [°]	Longitude [°]	Shape
1) Wolverine Federal 20-2 Target 2037'FNL & 579'FWL	6871.84	6211.00	-1850.14	-1563.49	1515182.36	6728137.45	38 47 22.249N	111 56 21.552W	point

SURVEY PROGRAM Ref Wellbore: Wolverine Federal 20-2 PWB Ref Wellpath: Wolverine Federal 20-2 PWP				
Start MD [feet]	End MD [feet]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	7360.84	MTC (Collar, pre-2000) (Standard)		Wolverine Federal 20-2 PWB

WELLPATH COMMENTS				
MD [feet]	Inclination [degrees]	Azimuth [degrees]	TVD [feet]	Comment
26.00	0.000	220.200	26.00	Arapien
6541.10	6.615	220.200	5881.00	Twin Creek
6871.84	0.000	220.200	6211.00	Navajo

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**LOCATION CORRECTED EARTHWORK VOLUMES**

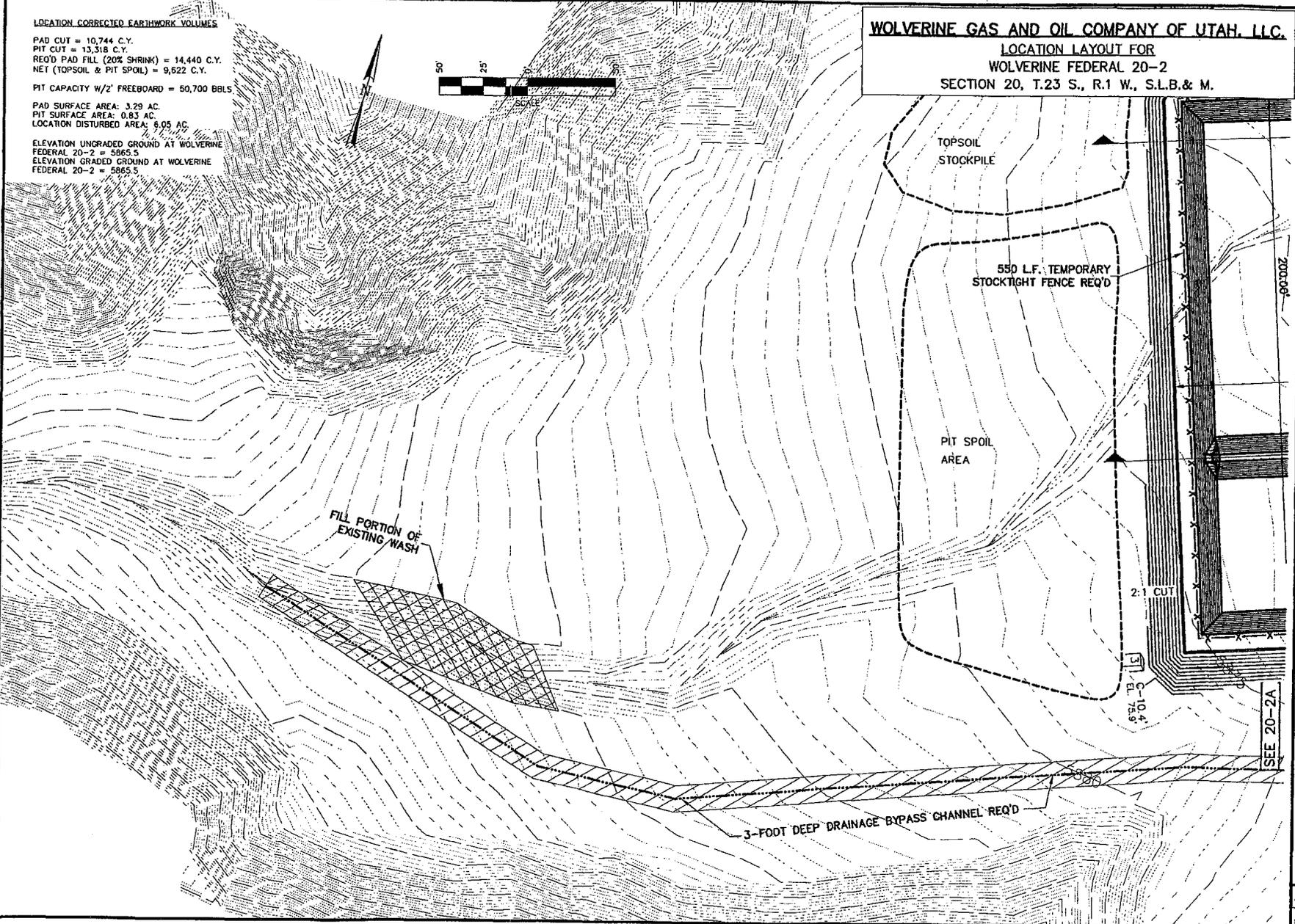
PAD CUT = 10,744 C.Y.  
 PIT CUT = 13,318 C.Y.  
 REQ'D PAD FILL (20% SHRINK) = 14,440 C.Y.  
 NET (TOPSOIL & PIT SPOIL) = 9,622 C.Y.  
 PIT CAPACITY W/2' FREEBOARD = 50,700 BBLs

PAD SURFACE AREA: 3.29 AC.  
 PIT SURFACE AREA: 0.83 AC.  
 LOCATION DISTURBED AREA: 6.05 AC.

ELEVATION UNGRADED GROUND AT WOLVERINE  
 FEDERAL 20-2 = 5865.5  
 ELEVATION GRADED GROUND AT WOLVERINE  
 FEDERAL 20-2 = 5865.5



**WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC.**  
**LOCATION LAYOUT FOR**  
**WOLVERINE FEDERAL 20-2**  
**SECTION 20, T.23 S., R.1 W., S.L.B. & M.**



FILL PORTION OF  
 EXISTING WASH

TOPSOIL  
 STOCKPILE

550 L.F. TEMPORARY  
 STOCKTIGHT FENCE REQ'D

PIT SPOIL  
 AREA

2:1 CUT

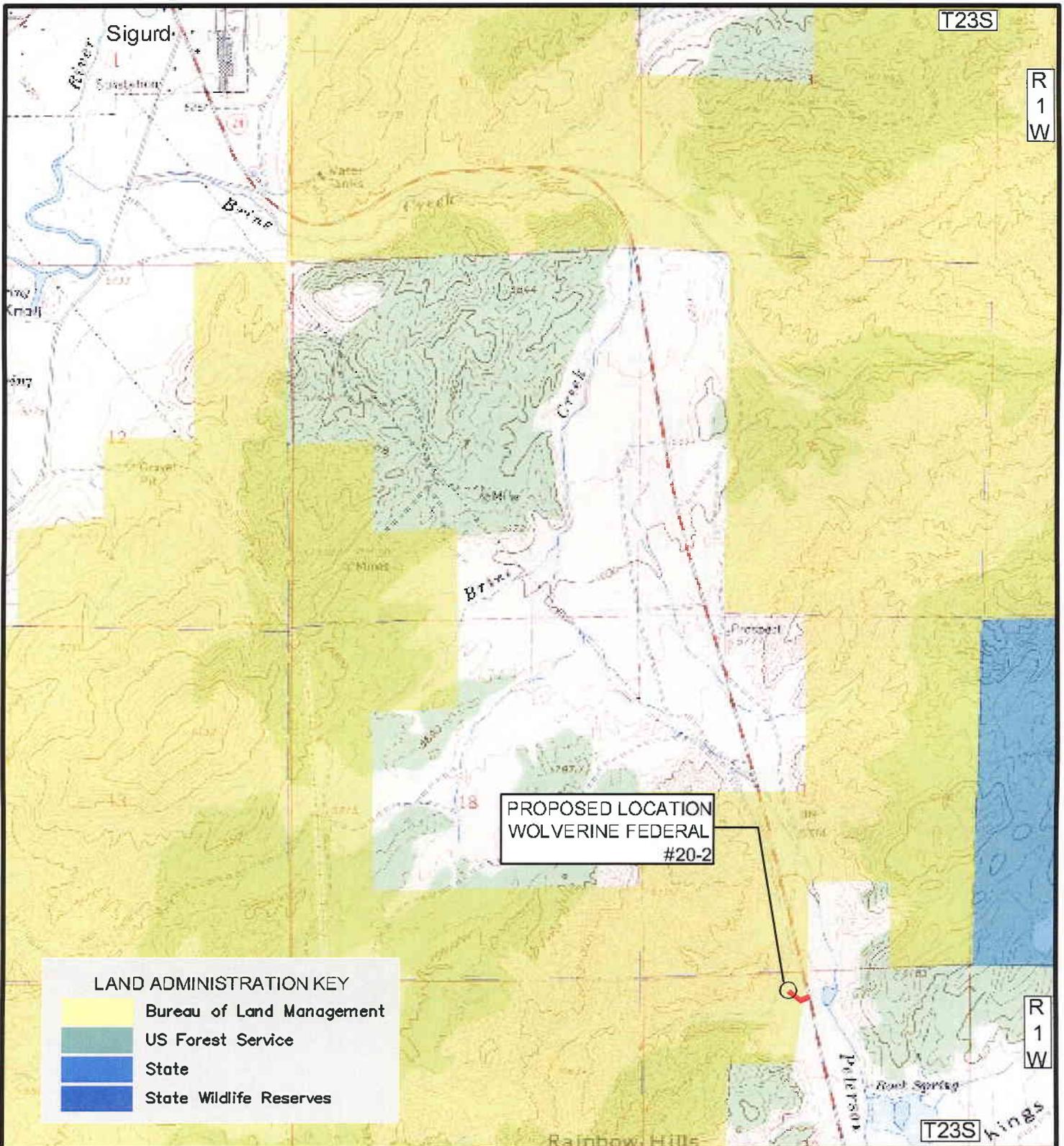
3-FOOT DEEP DRAINAGE BYPASS CHANNEL REQ'D

SEE 20-2A

Jones & DeMille Engineering 1000 W. 1000 S. P.O. Box 1430 Provo, UT 84602-1430 www.jonesanddelle.com		REVIEW DATE: 04-07 BY:
ORIGINAL SUBMISSION FOR AUTHORIZATION DATE: 04-07 BY:	REVISIONS NO. DATE DESCRIPTION 1 04-07	DWG NAME: A05 SHEET SET: 01 OF 02 SCALE: 1"=50' DATE: 11/17/2009 DRAWN BY:
APPROVED DATE: 04-07 BY:	CHECKED DATE: 04-07 BY:	PROJECT DESIGN NUMBER 0703-201
Wolverine Gas & Oil Co. of Utah LLC FEDERAL 20-2 COUNTY: SEVIER		SHEET NO. 20-2B

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PROPOSED LOCATION  
WOLVERINE FEDERAL  
#20-2

**LAND ADMINISTRATION KEY**

	Bureau of Land Management
	US Forest Service
	State
	State Wildlife Reserves

**LEGEND**

	PROPOSED LOCATION		NEW ROADWAY
	EXISTING PRIVATE ROAD		EXISTING COUNTY ROAD
			NEEDING UPGRADE

Wolverine Federal #20-2  
Section 20, T.23 S., R.1 W., S.L.B. & M.  
2150' F.W.L. 239' F.N.L.



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



SCALE: 1:2000

Wolverine Federal #20-2		FIGURE
Vicinity Map		
Wolverine Gas & Oil Company of Utah, LLC		
DRAWN: B.L. 01-08	PEN TBL: _1eindrd-hp2800.cb	PROJECT: 0703-201
CHECK: D.R. 01-08	FILE: VICINITY	LAST UPDATE: 1/17/2008
		SHEET: 20-2

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**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 01/25/2008

API NO. ASSIGNED: 43-041-30056

WELL NAME: WOLVERINE FED 20-2  
 OPERATOR: WOLVERINE GAS & OIL CO ( N1655 )  
 CONTACT: EDWARD HIGUERA

PHONE NUMBER: 616-458-1150

PROPOSED LOCATION:

*SWNW*

NENW 20 230S 010W  
 SURFACE: 0239 FNL 2150 FWL  
 BOTTOM: 2037 FNL 0579 FWL  
 COUNTY: SEVIER  
 LATITUDE: 38.79462 LONGITUDE: -111.9330  
 UTM SURF EASTINGS: 418976 NORTHINGS: 4294191  
 FIELD NAME: COVENANT ( 492 )

INSPECT LOCATN BY: / /		
Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: 1 - Federal  
 LEASE NUMBER: UTU-73528  
 SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: NAVA  
 COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Fed[1] Ind[] Sta[] Fee[]  
(No. WY3329 )
- Potash (Y/N)
- Oil Shale 190-5 (B) or 190-3 or 190-13
- Water Permit  
(No. 63-2529 )
- RDCC Review (Y/N)  
(Date: \_\_\_\_\_ )
- Fee Surf Agreement (Y/N)
- Intent to Commingle (Y/N)

LOCATION AND SITING:

- R649-2-3.
- Unit: WOLVERINE
- 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

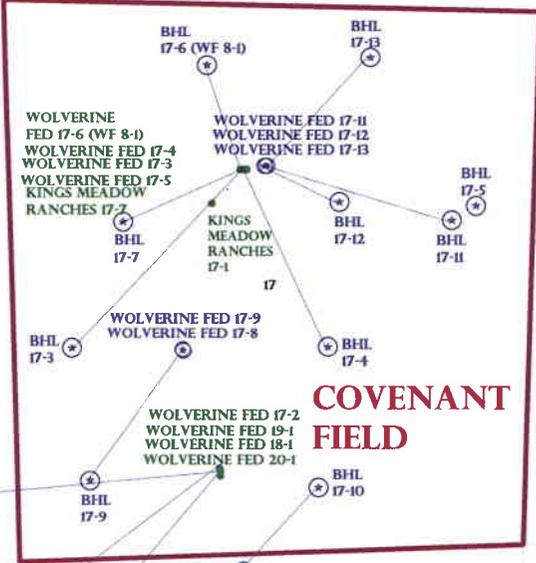
COMMENTS: \_\_\_\_\_

STIPULATIONS: \_\_\_\_\_

*1. Elected Approval*  
*2. Spacing Strip*

SWD-1

T23S R1W



**COVENANT FIELD**

**WOLVERINE UNIT**

OPERATOR: WOLVERINE G&O CO (N1655)

SEC: 20 T.23S R.1W

FIELD: COVENANT (492)

COUNTY: SEVIER

SPACING: R649-3-11 / DIRECTIONAL DRILLING

Field Status	
	ABANDONED
	ACTIVE
	COMBINED
	INACTIVE
	PROPOSED
	STORAGE
	TERMINATED

Unit Status	
	EXPLORATORY
	GAS STORAGE
	NF PP OIL
	NF SECONDARY
	PENDING
	PI OIL
	PP GAS
	PP GEOTHERML
	PP OIL
	SECONDARY
	TERMINATED

Wells Status	
	GAS INJECTION
	GAS STORAGE
	LOCATION ABANDONED
	NEW LOCATION
	PLUGGED & ABANDONED
	PRODUCING GAS
	PRODUCING OIL
	SHUT-IN GAS
	SHUT-IN OIL
	TEMP. ABANDONED
	TEST WELL
	WATER INJECTION
	WATER SUPPLY
	WATER DISPOSAL
	DRILLING



OIL, GAS & MINING



PREPARED BY: DIANA MASON  
DATE: 30-JANUARY-2008



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

January 31, 2008

Wolverine Gas and Oil Company of Utah, LLC  
55 Campau, NW  
Grand Rapids, MI 49503-2616

Re: Wolverine Federal 20-2 Well, Surface Location 239' FNL, 2150' FWL, NE NW, Sec. 20, T. 23 South, R. 1 West, Bottom Location 2037' FNL, 579' FWL, SW NW, Sec. 20, T. 23 South, R. 1 West, Sevier 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 43-041-30056.

Sincerely,

Gil Hunt  
Associate Director

pab  
Enclosures

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

Operator: Wolverine Gas and Oil Company of Utah, LLC  
Well Name & Number Wolverine Federal 20-2  
API Number: 43-041-30056  
Lease: UTU-73528

Surface Location: NE NW      Sec. 20      T. 23 South      R. 1 West  
Bottom Location: NE NW      Sec. 20      T. 23 South      R. 1 West

### 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.

**CONFIDENTIAL**

**DIVISION OF OIL, GAS AND MINING**

***SPUDDING INFORMATION***

Name of Company: Wolverine Gas & Oil Co UT

Well Name: Wolverine Fed 20-2

API No: 43-041-30056 Lease Type: Federal

Section 20 Township 23S Range 01W County Sevier

Drilling Contractor Pete Martin Rig # Rathole

**SPUDDED:**

Date 6-25-08

Time 8:00 AM

How Dry

***Drilling will Commence:*** \_\_\_\_\_

Reported by Steve Hash

Telephone # 918-629-9801

Date 7-01-08 Signed RM

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

FORM 6

**ENTITY ACTION FORM**

Operator: Wolverine Gas and Oil Company of Utah, LLC Operator Account Number: N 1655  
 Address: 55 Campau NW, One Riverfront Plaza  
city Grand Rapids  
state MI zip 49503-2616 Phone Number: (616) 458-1150

Well 1

API Number	Well Name		QQ	Sec	Twp	Rng	County
4304130056	Wolverine Federal 20-2		NENW	20	23S	1W	Sevier
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
B	99999	13995	6/25/2008		7/15/08		
Comments: <u>NAVA</u> BHL SW NW Sec 20 T23S R1W Sevier Co							<b>CONFIDENTIAL</b>

Well 2

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
Comments: 							

Well 3

API Number	Well Name		QQ	Sec	Twp	Rng	County
Action Code	Current Entity Number	New Entity Number	Spud Date		Entity Assignment Effective Date		
Comments: 							

**ACTION CODES:**

- A - Establish new entity for new well (single well only)
- B - Add new well to existing entity (group or unit well)
- C - Re-assign well from one existing entity to another existing entity
- D - Re-assign well from one existing entity to a new entity
- E - Other (Explain in 'comments' section)

Steven R Hash - Consulting Engineer

Name (Please Print)

*Steven R. Hash*

Signature

EXACT (918) 599-9400

7/14/2008

Title

Date

**RECEIVED**

JUL 14 2008

DIV. OF OIL, GAS & MINING

**EXACT Engineering, Inc.**

20 East Fifth St., Suite 310, Tulsa, OK 74103

www.exactengineering.com

(918) 599-9400 • (918) 599-9401 (fax)

Steven R. Hash, P.E.  
Registered Professional Engineer  
stevehash@exactengineering.com

December 31, 2008

**CONFIDENTIAL**

Mr. Al McKee  
Bureau of Land Management  
Utah State Office  
P.O. Box 45155  
Salt Lake City, UT 84145-0155

Mr. Dustin Doucet  
Utah Division of Oil, Gas & Mining  
1594 West North Temple, Suite 1210  
Salt Lake City, UT 84114-5801

Re: Drilling Update final - **Wolverine Federal 20-2 (Covenant Field)**  
Sec 20 T23S R01W, Sevier Co, UT API# 43-041-30056

Gentlemen,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please note the following drilling activity for the subject well from Jun 24 to Nov 19, 2008. The report dates shown are for the 24-hr day (midnight to midnight).

June 24, 2008

Set & cemented 120' of 20in conductor csg – UDOGM spud date 6/24/2008. Wait on rig

Nov 3, 2008

Resume drlg, drld 12-1/4" hole from 146' to 990'; MW 8.5ppg, VIS 37, FL nc; Svy @ 804' – incl .44, Az 280.79

Nov 4, 2008

Drilled from 990' to 2024'; MW 9.5ppg, VIS 39, FL nc; Svy @ 1956' – incl 18.72, Az 219.27

Nov 5, 2008

Run 54 jts 9-5/8" 36ppf K55 csg, set at 2024' TD. Cmtd with 355 sx Varicem (11ppg, 3.48cfps, 22gps) tailed with 350 sc Premium G (15.8ppg, 1.17cfps, 5gps). Displace with 153 bbl brine water, circ 80 bbls slurry to pit, floats held, cmt at surface. WOC. Weld on csg head

Nov 6, 2008

Drill float & 8-3/4" hole to 2095'. Test csg seat to 10.2 ppg.

Nov 7, 2008

Drill from 2095' to 3006', MW 10.2, VIS 36, FL 9.0; Svy 2916' incl 33.7 Az 225.6

Nov 8, 2008

Drill from 3006' to 4069', MW 10.2, VIS 38, FL 13.0; Svy 4040' Incl 40.8, Az 221.97

Nov 9, 2008

Drill from 4069' to 4745', MW 10.5, VIS 42, FL 14.0; Svy 4696' Incl 40.69 Az 216.11

Nov 10, 2008

Drill from 4745' to 5489', Bit trip @ 5085', MW 10.5, VIS 43, FL 14.0; Svy 5445' Incl 27.51 Az 223.84

Nov 11, 2008

Drill from 5489' to 6419', MW 10.5, VIS 46, FL 12.8; Svy 6380' Incl 10.9 Az 216.81

**RECEIVED**

**JAN 05 2009**

**DIV. OF OIL, GAS & MINING**

Petroleum Consulting, Property Management & Field Services  
complete well design, construction & management, drilling, completion, production, pipelines, appraisals,  
due diligence, acquisitions, procedures, field supervision

Nov 12, 2008

Drill from 6419' to 6764', Bit trip at 6759', MW 10.6, VIS 48, FL 4.0; Svy 6661 Incl 5.54 Az 224.19

Nov 13, 2008

Drill from 6764' to 6895', trip for mud motor at 6764', MW 10.7, VIS 47, FL 4.0; Svy 6848' Incl .28 Az 176.22

Nov 14, 2008

Drill from 6895' to 7012', bit trip at 7000', MW 10.6, VIS 46, FL 4.0; Svy 6942' Incl .53 Az 160.91

Nov 15, 2008

Drill from 7012' to 7312', MW 10.5, VIS 47, FL 4.0; Svy 7223' Incl .70 Az 164.07

Nov 16, 2008

Drill from 7312' to 7465' TD, MW 10.6, VIS 47, FL 4.0; Svy 7465' Incl .27, Az 291.48

Nov 17, 2008

Run electric logs, TIH w/ bit

Nov 18, 2008

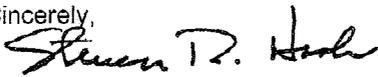
POOH, run 193 jts 7 inch N80 & HCL80 casing to 7465' with stage tool at 6728', circ and cond mud

Nov 19, 2008

Cement stage 1 with 210 sx 50:50 POZ (14.4ppg, 1.27cfps, 5.48gps), displace with 26 BW & 252 bbls mud, OK  
Open stage tool, circ 5 hrs, cement stage 2 with 130 sx Varicem (11ppg, 3.53cfps, 22.4gps) tailed with 640 sx  
Class G Premium (15.8ppg, 1.25cfps, 5.31gps), good circ, JC 4pm, WOC, set slips, cut off csg, RR 24:00 11/19

We respectfully request that the enclosed information remain confidential.

Sincerely,



Steven R. Hash, P.E.  
Petroleum Engineering Consultant

Copies: via email to: Wolverine Gas & Oil Co of Utah, LLC: Edward Higuera, Helene Bardolph  
EXACT Engineering, Inc. well file

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

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		5. LEASE DESIGNATION AND SERIAL NUMBER: <b>UTU-73528</b>
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: <b>N/A</b>
1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		7. UNIT or CA AGREEMENT NAME: <b>Wolverine Federal Unit</b>
2. NAME OF OPERATOR: <b>Wolverine Gas and Oil Company of Utah, LLC</b>		8. WELL NAME and NUMBER: <b>Wolverine Federal 20-2</b>
3. ADDRESS OF OPERATOR: <b>55 Campau NW</b> CITY <b>Grand Rapids</b> STATE <b>MI</b> ZIP <b>49503-2616</b>		9. API NUMBER: <b>4304130056</b>
		10. FIELD AND POOL, OR WILDCAT: <b>Covenant Field, Navajo</b>
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>239' FNL, 2150' FWL</b>		COUNTY: <b>Sevier</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: <b>NENW 20 23S 1W S</b>		STATE: <b>UTAH</b>

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate)  Approximate date work will start: _____  <input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only)  Date of work completion: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <b>Status Report</b>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

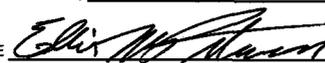
**CONTINUED CONFIDENTIAL STATUS REQUESTED**

The Wolverine Federal 20-2 is one of five wells being drilled from a single drilling pad. After drilling to a total depth of 7465' on 11/16/08 and running logs, 7" casing was run and cemented in place at TD. The drilling rig was skidded to the Wolverine State 20-3 on 11/19/08 and operations on Wolverine Federal 20-2 remain suspended until all drilling activities on the drilling pad are completed.

**RECEIVED**

**JAN 08 2009**

**DIV. OF OIL, GAS & MINING**

NAME (PLEASE PRINT) <u>Ellis M. Peterson</u>	TITLE <u>Sr. Production Engineer</u>
SIGNATURE <u></u>	DATE <u>1/2/2009</u>

(This space for State use only)

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

5. LEASE DESIGNATION AND SERIAL NUMBER:
UTU-73528

SUNDRY NOTICES AND REPORTS ON WELLS

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
N/A

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.

7. UNIT or CA AGREEMENT NAME:
Wolverine Federal Unit

1. TYPE OF WELL
OIL WELL [checked] GAS WELL [ ] OTHER [ ]

8. WELL NAME and NUMBER:
Wolverine Federal 20-2

2. NAME OF OPERATOR:
Wolverine Gas and Oil Company of Utah, LLC

9. API NUMBER:
4304130056

3. ADDRESS OF OPERATOR:
55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616 PHONE NUMBER: (616) 458-1150

10. FIELD AND POOL, OR WILDCAT:
Covenant Field, Navajo

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 239' FNL, 2150' FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 20 23S 1W S

COUNTY: Sevier

STATE: UTAH

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

Table with columns: TYPE OF SUBMISSION, TYPE OF ACTION. Includes checkboxes for NOTICE OF INTENT, SUBSEQUENT REPORT, and various actions like ACIDIZE, DEEPEN, REPERFORATE CURRENT FORMATION, etc.

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

CONTINUED CONFIDENTIAL STATUS REQUESTED

The Wolverine Federal 20-2 is one of five wells being drilled from a single drilling pad. After drilling to a total depth of 7465' on 11/16/08 and running logs, 7" casing was run and cemented in place at TD. The drilling rig was skidded to the Wolverine State 20-3 on 11/19/08 and operations on Wolverine Federal 20-2 remain suspended until a completion rig can be moved in and the Wolverine Federal 19-2 has been completed.

NAME (PLEASE PRINT) Ellis M. Peterson
SIGNATURE [Signature]

TITLE Sr. Production Engineer
DATE 1/28/2009

(This space for State use only)

RECEIVED
FEB 04 2009
DIV. OF OIL, GAS & MINING

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

**CONFIDENTIAL**

FORM 9

<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		3. LEASE DESIGNATION AND SERIAL NUMBER: UTU-73528
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: N/A
1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		7. UNIT or CA AGREEMENT NAME: Wolverine Federal Unit
2. NAME OF OPERATOR: Wolverine Gas and Oil Company of Utah, LLC		8. WELL NAME and NUMBER: Wolverine Federal 20-2
3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616		9. API NUMBER: 4304130056
4. LOCATION OF WELL FOOTAGES AT SURFACE: 239' FNL, 2150' FWL COUNTY: Sevier QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 20 23S 1W S STATE: UTAH		10. FIELD AND POOL, OR WILDCAT: Covenant Field, Navajo

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA			
TYPE OF SUBMISSION	TYPE OF ACTION		
<input type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
<input checked="" type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Status Report</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

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

**CONTINUED CONFIDENTIAL STATUS REQUESTED**

The Wolverine Federal 20-2 is one of five wells being drilled from a single drilling pad. After drilling to a total depth of 7465' on 11/16/08 and running logs, 7" casing was run and cemented in place at TD. The drilling rig was skidded to the Wolverine State 20-3 on 11/19/08 and operations on Wolverine Federal 20-2 remain suspended until a completion rig can be moved in and the Wolverine Federal 19-2 has been completed.

NAME (PLEASE PRINT) Ellis M. Peterson TITLE Sr. Production Engineer  
SIGNATURE  DATE 2/27/2009

(This space for State use only)

**RECEIVED**  
**MAR 05 2009**  
DIV. OF OIL, GAS & MINING

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.

5. LEASE DESIGNATION AND SERIAL NUMBER:  
UTU-73528

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:  
N/A

7. UNIT or CA AGREEMENT NAME:  
Wolverine Federal Unit

8. WELL NAME and NUMBER:  
Wolverine Federal 20-2

9. API NUMBER:  
4304130056

1. TYPE OF WELL OIL WELL  GAS WELL  OTHER \_\_\_\_\_

2. NAME OF OPERATOR:  
Wolverine Gas and Oil Company of Utah, LLC

3. ADDRESS OF OPERATOR: 55 Campau NW CITY Grand Rapids STATE MI ZIP 49503-2616 PHONE NUMBER: (616) 458-1150

10. FIELD AND POOL, OR WILDCAT:  
Covenant Field, Navajo

4. LOCATION OF WELL FOOTAGES AT SURFACE: 239' FNL, 2150' FWL COUNTY: Sevier

QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: NENW 20 23S 1W S STATE: UTAH

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

Table with columns: TYPE OF SUBMISSION, TYPE OF ACTION. Includes checkboxes for NOTICE OF INTENT, SUBSEQUENT REPORT, and various actions like ACIDIZE, DEEPEN, REPERFORATE CURRENT FORMATION, etc.

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

CONTINUED CONFIDENTIAL STATUS REQUESTED

The Wolverine Federal 20-2 is one of five wells being drilled from a single drilling pad. Drilling operations were completed 11/19/08. A coiled tubing unit was used to drill out the stage collar and a completion unit rigged up on the well on 3/21/2009. A CBL was run and the Navajo was perforated at 7088' - 7102' with 6 spf. After swab testing, an RBP was set at 7081' and the Navajo was perforated at 7071' - 7077', 7048' - 7063', and 7040' - 7044'. After swab testing, the RBP was pulled and production equipment is currently being run in the well.

NAME (PLEASE PRINT) Ellis M. Peterson TITLE Sr. Production Engineer  
SIGNATURE [Signature] DATE 3/27/2009

(This space for State use only)

**CONFIDENTIAL**

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

5. Lease Serial No.  
**UTU-73528**

6. If Indian, Allottee or Tribe Name  
**NA**

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

8. Well Name and No.  
**Wolverine Federal 20-2**

9. API Well No.  
**43-041-30056**

10. Field and Pool, or Exploratory Area  
**Covenant Field Navajo**

11. County or Parish, State  
**Sevier County, Utah**

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well  
 Oil Well  Gas Well  Other

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

3a. Address  
**55 Campau NW, Grand Rapids, Michigan 49503-2616**

3b. Phone No. (include area code)  
**616-458-1150**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**188' FNL, 2128' FWL (NE/4 NW/4), Section 20, T23S, R1W, SLB&M**

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <b>Correct Well</b>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	<b>Location</b>
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

**This well was resurveyed subsequent to drilling and the surface location was found to vary from that originally permitted.**

**The permitted and actual as-drilled surface locations for the Wolverine Federal 20-2 are as follows:**

**Permitted Surface Location: 239' FNL, 2150' FWL, NE/4 NW/4, Section 20, T23S, R1W, SLB&M**

**Actual Surface Location: 188' FNL, 2128' FWL, NE/4 NW/4, Section 20, T23S, R1W, SLB&M**

**A new survey plat for the well is included herewith.**

418969x 38.794750  
42942064 -111.933061

**COPY SENT TO OPERATOR**

Date: 5.13.2009

Initials: KS

**RECEIVED**

**MAY 05 2009**

**DIV. OF OIL, GAS & MINING**

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

**Ellis Peterson**

Title **Sr. Production Engineer**

Signature

*Ellis Peterson*

Date

**04/29/2009**

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

*Bradley G. Hill*

Title

**BRADLEY G. HILL**  
**ENVIRONMENTAL MANAGER**  
Office

Date

**05-11-09**

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

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.

(Instructions on page 2)

**COPY**





**WOLVERINE GAS AND OIL COMPANY  
OF UTAH, LLC**

*Energy Exploration in Partnership with the Environment*

April 29, 2009

Mr. Stan Andersen  
Fluid Minerals Group  
Bureau of Land Management  
Richfield Field Office  
150 East 900 North  
Richfield, Utah 84701

Re: Sundry Notices - Wolverine Gas and Oil Company of Utah, LLC  
**Wolverine Federal 19-2**  
**Wolverine Federal 20-2**  
**Wolverine Federal 20-4**  
**Wolverine State 17-10**  
**Wolverine State 20-3**

Dear Mr. Andersen:

Wolverine Gas and Oil Company of Utah, LLC respectfully submits the enclosed Sundry Notices (Form 3160-5) for the subject wells.

Please accept this letter as Wolverine's written request for continued confidential treatment of all information relating to these wells.

Sincerely,

Ellis M. Peterson  
Senior Production Engineer  
Wolverine Gas and Oil

**RECEIVED**

**MAY 05 2009**

**DIV. OF OIL, GAS & MINING**

Cc w/ attachments: Gil Hunt, UDOGM

**COPY**

**CONFIDENTIAL**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

FORM APPROVED  
OMB NO. 1004-0137  
Expires: March 31, 2007

5. Lease Serial No. **UTU-73528**

6. If Indian, Allottee or Tribe Name **N.A.**

7. Unit or CA Agreement Name and No. **Wolverine Federal Unit**

8. Lease Name and Well No. **Wolverine Federal 20-2**

9. AFI Well No. **4304130056**

10. Field and Pool, or Exploratory **Covenant Field, Navajo**

11. Sec., T., R., M., on Block and Survey or Area **20, T23S, R1W, NENW, SLB&M**

12. County or Parish **Sevier** 13. State **UT**

14. Date Spudded **11/03/2008** 15. Date T.D. Reached **11/16/2008** 16. Date Completed **04/04/2009**  
 D & A  Ready to Prod.

17. Elevations (DF, RKB, RT, GL)\* **5892' KB, 5866' GL**

18. Total Depth: MD **7465'** 19. Plug Back T.D.: MD **7371'** 20. Depth Bridge Plug Set: MD  
TVD **6771'** TVD **6677'**

21. Type Electric & Other Mechanical Logs Run (Submit copy of each) **DLL/MSFL/GR, SDL/DSN/GR, XRFI, FWS, CBL**

22. Was well cored?  No  Yes (Submit analysis)  
Was DST run?  No  Yes (Submit report)  
Directional Survey?  No  Yes (Submit copy)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
30.0"	20"	0.25 wall	Surface	146		Prem	31	Surface	
12.25"	9.675 J	36.0	Surface	2024		355 VariCem	220	Surf. (CIRC)	
"	"	"				350 Prem G	73		
8.75"	7" N80	26.0	Surface	7465	6729	210 50:50 poz	48		
"	"	"				130 VariCem	82	730 (CBL)	
"	"	"				640 Prem G	142		

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2 7/8	6494							

25. Producing Intervals

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) Navajo	7040	7102	7040-7044, 7048-7063	0.40"	84	Open - Producing
B)			7071-7077, 7088-7102	0.40"	120	Open - Producing
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, etc.

Depth Interval	Amount and Type of Material

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
03/29/2009	04/04/2009	24	→	657	Tr	369	40		ESP
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→	657	Tr	369		Producing Oil Well	

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	
			→						

\*(See instructions and spaces for additional data on page 2)

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**MAY 18 2009**

**DIV. OF OIL, GAS & MINING**

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28b. Production - Interval C

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

**Vented**

30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top
					Meas. Depth
Navajo 1	6793		Oil and Water	Arapien Twin Creek 1 Navajo 1	Surface 6634 6793

32. Additional remarks (include plugging procedure):

33. Indicate which items have been attached by placing a check in the appropriate boxes:

- Electrical/Mechanical Logs (1 full set req'd.)    
  Geologic Report    
  DST Report    
  Directional Survey  
 Sundry Notice for plugging and cement verification    
  Core Analysis    
  Other:

34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions)\*

Name (please print) Ellis Peterson

Title Sr. Production Engineer

Signature Ellis Peterson

Digitally signed by Ellis Peterson  
DN: cn=Ellis Peterson, o=New Mexico Oil and Gas Corp., email=ellis.peterson@nmcog.com, c=US  
Date: 2009.06.05 15:26:11 -0500

Date 05/06/2009

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.

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(Form 3160-4, page 2)



# Actual Wellpath Report

Wolverine Federal 20-2 AWB\_awp

Page 1 of 5



INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Federal 20-2 188'FNL & 2128'FWL
Area	UTAH	Well	Wolverine Federal 20-2
Field	SEVIER COUNTY	Wellbore	Wolverine Federal 20-2 AWB
Facility	SEC.20-T23S-R1W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Utah State Planes, Central Zone (4302), feet	Software System	WellArchitect® 2.0
North Reference	True	User	Buscnat
Scale	1.00006	Report Generated	4/29/2009 at 4:23:04 PM
Convergence at slot	0.28° West	Database/Source file	WellArchitect_Denver/Wolverine_Federal_20-2_AWB.

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[ft]	Northing[ft]	Latitude	Longitude
Slot Location	-45.09	16.53	1516734.31	6730044.45	38°47'41.039"N	111°56'02.108"W
Facility Reference Pt			1516717.99	6730089.62	38°47'41.484"N	111°56'02.316"W
Field Reference Pt			1516137.40	6732230.79	38°48'02.619"N	111°56'09.781"W

## WELLPATH DATUM

Calculation method	Minimum curvature	SST 58 (RT) to Facility Vertical Datum	5892.70ft
Horizontal Reference Pt	Slot	SST 58 (RT) to Mean Sea Level	5892.70ft
Vertical Reference Pt	SST 58 (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	SST 58 (RT)	Section Origin	N 0.00, E 0.00
Field Vertical Reference	Mean Sea Level	Section Azimuth	219.01°



# Actual Wellpath Report

Wolverine Federal 20-2 AWB\_ awp

Page 2 of 5



## REFERENCE WELLPATH IDENTIFICATION

Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Federal 20-2 188'FNL & 2128'FWL
Area	UTAH	Well	Wolverine Federal 20-2
Field	SEVIER COUNTY	Wellbore	Wolverine Federal 20-2 AWB
Facility	SEC.20-T23S-R1W		

## WELLPATH DATA (83 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
0.00†	0.000	228.000	0.00	0.00	0.00	0.00	0
26.00	0.000	228.000	26.00	0.00	0.00	0.00	0
160.00	0.620	228.000	160.00	0.72	-0.49	-0.54	0
254.00	0.790	145.440	253.99	1.40	-1.36	-0.55	1
346.00	1.050	184.470	345.98	2.28	-2.72	-0.26	0
438.00	1.760	211.890	437.95	4.37	-4.76	-1.07	1
530.00	0.880	212.240	529.93	6.48	-6.56	-2.19	0
621.00	0.530	217.620	620.92	7.59	-7.48	-2.82	0
713.00	1.490	209.780	712.91	9.20	-8.86	-3.67	1
804.00	0.440	280.790	803.89	10.53	-9.82	-4.60	1
895.00	0.970	290.370	894.89	10.94	-9.49	-5.67	0
990.00	1.050	286.420	989.87	11.53	-8.96	-7.26	0
1082.00	1.410	284.560	1081.85	12.32	-8.44	-9.16	0
1175.00	2.110	250.210	1174.81	14.26	-8.73	-11.88	1
1269.00	5.190	231.930	1268.61	19.89	-11.94	-16.86	3
1363.00	7.910	225.250	1361.99	30.46	-19.11	-24.80	3
1457.00	10.020	223.140	1454.84	45.05	-29.64	-34.99	2
1550.00	13.180	221.380	1545.92	63.72	-43.50	-47.53	3
1644.00	16.350	219.620	1636.81	87.66	-61.74	-63.06	3
1737.00	17.580	217.860	1725.76	114.79	-82.91	-80.02	1
1831.00	17.400	217.510	1815.42	143.04	-105.27	-97.29	0
1925.00	18.630	218.220	1904.81	172.10	-128.21	-115.14	1
1956.00	18.720	219.270	1934.17	182.03	-135.95	-121.35	1
2075.00	17.750	219.270	2047.20	219.26	-164.78	-144.92	0
2164.00	17.840	219.970	2131.94	246.46	-185.73	-162.27	0
2261.00	17.230	217.860	2224.43	275.68	-208.46	-180.63	0
2355.00	16.520	211.180	2314.39	302.84	-230.89	-196.10	2
2448.00	19.750	215.750	2402.76	331.64	-254.96	-212.13	3
2542.00	24.170	216.460	2489.92	366.74	-283.34	-232.85	4
2635.00	25.660	218.570	2574.27	405.90	-314.40	-256.72	1



# Actual Wellpath Report

Wolverine Federal 20-2 AWB\_awp

Page 3 of 5



## REFERENCE WELLPATH IDENTIFICATION

Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Federal 20-2 188'FNL & 2128'FWL
Area	UTAH	Well	Wolverine Federal 20-2
Field	SEVIER COUNTY	Wellbore	Wolverine Federal 20-2 AWB
Facility	SEC.20-T23S-R1W		

## WELLPATH DATA (83 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
2729.00	26.190	222.790	2658.81	446.95	-345.54	-283.51	2
2823.00	28.880	225.250	2742.16	490.22	-376.75	-313.73	3
2916.00	33.750	225.600	2821.59	538.24	-410.66	-348.15	5
3010.00	36.390	225.600	2898.52	591.89	-448.44	-386.74	2
3107.00	40.000	225.000	2974.74	651.50	-490.63	-429.36	3
3197.00	40.780	223.140	3043.29	709.58	-532.53	-469.91	1
3291.00	40.750	218.990	3114.50	770.89	-578.79	-510.21	2
3384.00	40.790	215.780	3184.94	831.58	-627.03	-547.07	2
3478.00	40.610	216.810	3256.20	892.81	-676.43	-583.36	C
3572.00	40.580	219.700	3327.59	953.96	-724.46	-621.22	2
3666.00	40.560	222.000	3398.99	1015.05	-770.69	-661.20	1
3759.00	40.760	220.870	3469.54	1075.59	-816.12	-701.30	C
3853.00	40.720	221.150	3540.77	1136.90	-862.41	-741.55	C
3947.00	40.880	221.200	3611.92	1198.28	-908.65	-781.99	C
4040.00	40.800	221.970	3682.28	1259.03	-954.14	-822.36	C
4134.00	41.000	221.250	3753.33	1320.51	-1000.15	-863.23	C
4228.00	40.980	220.900	3824.29	1382.13	-1046.63	-903.74	C
4321.00	40.780	218.930	3894.60	1442.98	-1093.31	-942.79	1
4415.00	40.610	220.680	3965.88	1504.26	-1140.39	-982.02	1
4509.00	40.870	220.320	4037.10	1565.59	-1187.04	-1021.86	C
4602.00	40.690	216.460	4107.53	1626.30	-1234.63	-1059.57	2
4696.00	40.690	216.110	4178.81	1687.52	-1284.03	-1095.84	C
4789.00	38.700	217.250	4250.36	1746.86	-1331.67	-1131.31	2
4883.00	36.740	219.270	4324.72	1804.36	-1376.83	-1166.90	2
4977.00	36.630	219.540	4400.10	1860.51	-1420.23	-1202.55	C
5070.00	34.540	221.730	4475.73	1914.60	-1461.30	-1237.76	2
5164.00	32.340	220.320	4554.17	1966.36	-1500.37	-1271.77	2
5259.00	30.500	221.730	4635.24	2015.85	-1537.73	-1304.27	2
5351.00	28.830	221.730	4715.17	2061.33	-1571.71	-1334.57	1
5445.00	27.510	223.840	4798.04	2105.60	-1604.29	-1364.70	1



# Actual Wellpath Report

Wolverine Federal 20-2 AWB\_awp

Page 4 of 5



## REFERENCE WELLPATH IDENTIFICATION

Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Federal 20-2 188'FNL & 2128'FWL
Area	UTAH	Well	Wolverine Federal 20-2
Field	SEVIER COUNTY	Wellbore	Wolverine Federal 20-2 AWB
Facility	SEC.20-T23S-R1W		

## WELLPATH DATA (83 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
5538.00	24.320	223.460	4881.68	2146.11	-1633.69	-1392.75	3
5632.00	21.750	220.630	4968.18	2182.82	-1660.96	-1417.41	2
5726.00	19.910	216.650	5056.04	2216.23	-1687.02	-1438.31	2
5819.00	18.480	212.920	5143.87	2246.71	-1712.10	-1455.78	2
5913.00	16.520	213.290	5233.51	2274.82	-1735.78	-1471.21	2
6006.00	13.540	216.810	5323.32	2298.86	-1755.56	-1484.99	3
6099.00	11.250	220.680	5414.15	2318.81	-1771.15	-1497.43	2
6193.00	10.840	227.340	5506.41	2336.73	-1784.10	-1509.91	1
6287.00	10.810	227.710	5598.74	2354.19	-1796.02	-1522.93	C
6380.00	10.900	216.810	5690.08	2371.59	-1808.93	-1534.65	2
6474.00	11.070	216.840	5782.36	2389.49	-1823.27	-1545.39	C
6568.00	9.400	230.170	5874.88	2406.05	-1835.41	-1556.70	3
6661.00	5.540	224.190	5967.07	2417.97	-1843.50	-1565.66	4
6755.00	1.050	181.300	6060.90	2423.18	-1847.61	-1568.84	5
6848.00	0.280	176.220	6153.89	2424.02	-1848.69	-1568.85	C
6942.00	0.530	160.910	6247.89	2424.41	-1849.33	-1568.69	C
7036.00	0.180	115.560	6341.89	2424.61	-1849.81	-1568.42	C
7129.00	0.090	252.670	6434.89	2424.64	-1849.89	-1568.35	C
7223.00	0.700	164.070	6528.88	2425.03	-1850.46	-1568.27	C
7316.00	0.260	299.420	6621.88	2425.39	-1850.91	-1568.29	C
7410.00	0.260	213.350	6715.88	2425.64	-1850.98	-1568.60	C
7420.00	0.350	267.790	6725.88	2425.68	-1851.00	-1568.64	2
7465.00†	0.270	291.482	6770.88	2425.80	-1850.97	-1568.88	C



# Actual Wellpath Report

Wolverine Federal 20-2 AWB\_awp

Page 5 of 5



## REFERENCE WELLPATH IDENTIFICATION

Operator	WOLVERINE GAS & OIL COMPANY	Slot	Wolverine Federal 20-2 188'FNL & 2128'FWL
Area	UTAH	Well	Wolverine Federal 20-2
Field	SEVIER COUNTY	Wellbore	Wolverine Federal 20-2 AWB
Facility	SEC.20-T23S-R1W		

## HOLE & CASING SECTIONS

Ref Wellbore: Wolverine Federal 20-2 AWB      Ref Wellpath: Wolverine Federal 20-2 AWB\_awp

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]
20in Conductor	0.00	120.00	120.00	0.00	120.00	0.00	0.00	-0.24	-0.24
9.625in Casing Surface	26.00	1998.00	1972.00	26.00	1973.99	0.00	0.00	-146.30	-129.30

## TARGETS

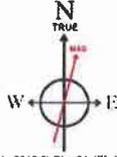
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [ft]	Grid North [ft]	Latitude	Longitude	Sh
Wolverine Federal 20-2 Target 1986'FNL & 601'FWL		6066.00	-1900.92	-1539.62	1515185.38	6728150.90	38°47'22.249"N	111°56'21.552"W	po

## WELLPATH COMPOSITION      Ref Wellbore: Wolverine Federal 20-2 AWB      Ref Wellpath: Wolverine Federal 20-2 AWB\_awp

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	7420.00	MTC (Collar, post-2000) (Standard)	BHI MWD 160-7420	Wolverine Federal 20-2 AWB
7420.00	7465.00	Blind Drilling (std)	Projection to bit	Wolverine Federal 20-2 AWB



Scale 1 inch = 450  
 Easting (ft)  
 -1800 -1575 -1350 -1125 -900 -675 -450 -225 0 225



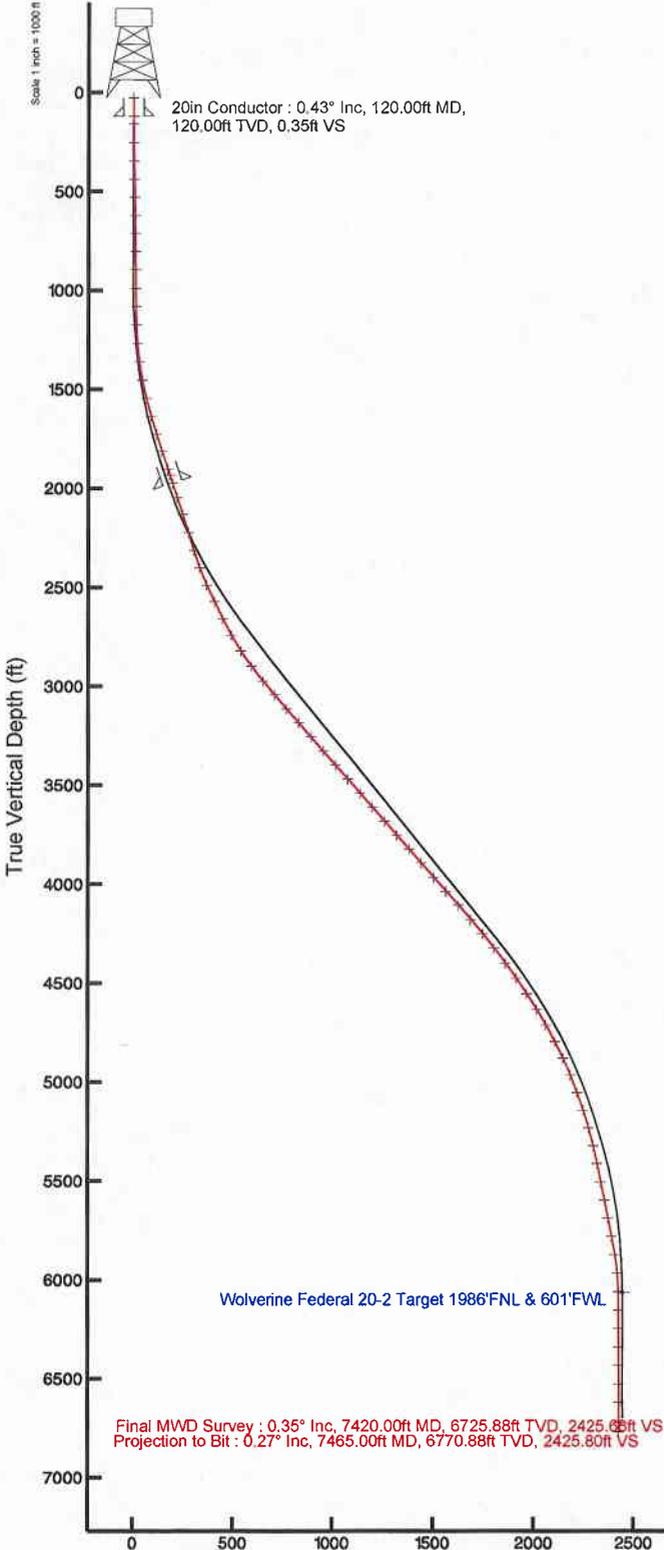
BGGM (1945.0 to 2010.0) Dip: 64.47° Field: 51577.4 nT  
 Magnetic North is 12.18 degrees East of True North (at 12/29/2008)

To correct azimuth from Magnetic to True add 12.18 degrees  
 For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 12.18 = 102.18

Wolverine Federal 20-2 188°FNL & 2128°FWL  
 20in Conductor : 120.00ft TVD, 0.24ft S, 0.27R W

9.625in Casing Surface : 1973.99ft TVD, 146.30ft S, 129.81ft W

Final MWD Survey : 6725.88ft TVD, 1851.00ft S, 1568.64ft W  
 Projection to Bit : 6770.88ft TVD, 1850.97ft S, 1568.88ft W  
 Wolverine Federal 20-2 Target 1986°FNL & 601°FWL



20in Conductor : 0.43° Inc, 120.00ft MD,  
 120.00ft TVD, 0.35ft VS

Wolverine Federal 20-2 Target 1986°FNL & 601°FWL

Final MWD Survey : 0.35° Inc, 7420.00ft MD, 6725.88ft TVD, 2425.60ft VS  
 Projection to Bit : 0.27° Inc, 7465.00ft MD, 6770.88ft TVD, 2425.80ft VS

## WOLVERINE GAS & OIL COMPANY

Location: UTAH Slot: Wolverine Federal 20-2 188°FNL & 2128°FWL  
 Field: SEVIER COUNTY Well: Wolverine Federal 20-2  
 Facility: SEC 20-T23S-R1W Wellbore: Wolverine Federal 20-2 PWB

### 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	219.005	26.00	0.00	0.00	0.00	0.00
End of Tangent	1000.00	0.000	219.005	1000.00	0.00	0.00	0.00	0.00
Build (3)	2934.46	38.690	219.005	2790.78	-488.55	-385.70	2.00	628.70
End of Tangent (S)	4836.27	38.690	219.005	4275.22	-1412.37	-1143.92	0.00	1817.5
Drop (S)	6770.76	0.000	219.005	6066.00	-1900.92	-1539.62	2.00	2446.2
End of Tangent	7404.76	0.000	219.005	6700.00	-1900.92	-1539.62	0.00	2446.2

### Location Information

Facility Name	Grid East (ft)	Grid North (ft)	Latitude	Longitude		
SEC 20-T23S-R1W	1816740.410	8730019.337	38°47'40.000N	111°56'01.000W		
Site	Local N (ft)	Local E (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude
Wolverine Federal 20-2 188°FNL & 2128°FWL	5.00	-6.10	1816734.305	8730014.411	38°47'41.000N	111°56'02.100W
Rig on Wolverine Federal 20-2 537 58 to Multiline (Facility: SEC 20-T23S-R1W)			6802.76			
Mean Sea Level to Multiline (Facility: SEC 20-T23S-R1W)			0.00			
Rig on Wolverine Federal 20-2 537 58 to Mean Sea Level			6802.76			

RSD reference weight is Wolverine Federal 20-2 188°FNL & 2128°FWL  
 True vertical depths are referenced to Rig on Wolverine Federal 20-2 537 58  
 Measured depths are referenced to Rig on Wolverine Federal 20-2 537 58  
 Rig on Wolverine Federal 20-2 537 58 to Mean Sea Level: 6802.76 feet  
 Mean Sea Level to Multiline (Facility: SEC 20-T23S-R1W): 0 feet  
 Coordinates are in feet referenced to Blat  
 Grid System: NAD83 / Lambert Utah State Plane, Central Zone (4302), feet  
 North Reference: True (GPN)  
 Scale: True Distance  
 Depths are in feet  
 Created by: Geoplot on 4/20/2009



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160 - 3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well  
 Oil Well  Gas Well  Other

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

3a. Address  
**55 Campau NW, Grand Rapids, Michigan 49503-2616**

3b. Phone No. (include area code)  
**616-458-1150**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**188' FNL, 2128' FWL (NE/4 NW/4), Section 20, T23S, R1W, SLB&M**

5. Lease Serial No.  
**UTU-73528**

6. If Indian, Allottee or Tribe Name  
**NA**

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

8. Well Name and No.  
**Wolverine Federal 20-2**

9. API Well No.  
**43-041-30056**

10. Field and Pool, or Exploratory Area  
**Covenant Field Navajo**

11. County or Parish, State  
**Sevier County, Utah**

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input checked="" type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input checked="" type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input checked="" type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
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	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomplate in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

**Wolverine Gas & Oil Company of Utah LLC completed a workover on the Wolverine Federal 20-2 on June 17, 2011. The well was perforated below the producing interval in the Lower Navajo and a CICR was set to squeeze cement behind pipe to curtail water production due to channeling. All existing perforations were squeezed and the cement plug along with the CICR was drilled out. A CBL was run indicating improved cement bond behind pipe and the workover continued as planned. The intervals at 7040' - 7044' and 7048' - 7063' were re-perforated 3 spf and a RBP was set at 7068' to isolate the squeezed perforations. 1500 gallons of 7-1/2% FE HCL acid with 50 buoyant balls were pumped and a break with ball action was observed during the treatment. An ESP with a y-tool was run and the well was put back on production. Initial rates were comparable to the pre-workover rates of 100 BOPD & 1500 BWP. Production logging indicated channeling comparable to pre-workover analysis.**

See attached WBD and Activity Report for additional details.

**RECEIVED**

**OCT 07 2011**

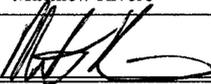
**DIV. OF OIL, GAS & MINING**

14. I hereby certify that the foregoing is true and correct  
 Name (Printed/Typed)

**Matthew Rivers**

Title **Production Engineer**

Signature



Date

**10/03/2011**

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by _____	Title _____	Date _____
Conditions of approval, if any, are attached. Approval of this notice 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.		
Office _____		

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.

(Instructions on page 2)

**CONFIDENTIAL**



Covenant Field  
Federal 20-2  
API# 43-041-30032

SE/SW Sec 17, T23N, R1W  
Sevier County, Utah

- 6/3/2011 MIRUSU  
Plan to POOH with ESP then RIH with bit and casing scraper.
- 6/4/2011 ND wellhead, NU BOP's. RU cable spoolers, POOH with downhole pump. PU & RIH with 6 1/8" bit and 7" casing scraper to PBTD @ 7371', picked up 2', RU pump lines and reverse circulated with 270 bbls of fresh water, RD pump lines, pulled out laying down 30 joints then finished pulling out of hole with bit and scraper. SWIFN  
Plan to perforate squeeze holes at 7118'-7120' then TIH with CICR
- 6/5/2011 Opened well, RU wireline unit, perforated 7118'-7120' with the following:  
Titan Part # EXP 3325-321T  
25 gram charges  
.41 entry hole  
45.16" penetration  
4" EXP gun loaded 6 spf on 60 deg phasing.  
PU & RIH with 7" 26# CICR and set at 7114', RD & released wireline unit. PU cement stinger and tripped in hole with 227 joints of 2 7/8" tubing and stung into retainer. RU pump lines and established circulation with 15 bbls of fresh water behind pipe at 2 bpm with 100 psi, RD pump equipment, RU cementing manifold and flow back lines, RU cementing equipment and pumped cement squeeze as follows:  
Pump 5 Bbl FW spacer  
Pump 75 sks (15.4 Bbls) of cement  
Pumped 24.4 Bbls of fresh water at 3 bpm.  
Displaced cement at ¼ BPM into lower perf set and behind pipe with 4.0 Bbls of fresh water.  
Unsting from CICR and pull up 154' and let remaining cement fall out of tubing  
Reverse out with 65 bbls fresh water.  
Pressured up on tubing to 1034 psi using 1 bbl of fresh water, shut down.  
Pressure held for 15 minutes.  
Bled pressure off to 500 psi, unhooked pump lines, picked up one joint, SWIFN  
Plan to leave pressure on well overnight then POOH with tubing and cement stinger, PU bit and drill collars and trip in to cement top.
- 6/6/2011 Opened well, 400 psi tubing, released pressure, POOH with tubing and cement stinger, PU & RIH with 6 1/8" bit, bit sub, 10- 4 3/4" drill collars, crossover & tubing to 6900'. SWIFN  
Plan to drill out cement and CICR tomorrow.
- 6/7/2011 Opened well, RU power swivel and tagged cement top at 6967', drilled out cement and CICR, tagged PBTD at 7371', RU pump lines and reverse circulated hole clean with 270 bbls of 4% KCL water, RD pump lines and pulled out of hole to 6900'. SWIFN  
Plan to pressure test casing, finish pulling out of hole and lay down drill collars then round trip bit and scraper.
- 6/8/2011 Opened well, finished tripping out of hole with tubing and drill collars, picked up 6 1/8" bit and 7" casing scraper and TIH to PBTD, POOH with tubing and laid down bit and casing scraper. SWIFN  
Plan to run cement bond log.
- 6/9/2011 RU Schlumberger wireline and run a cement bond log from 7371' to 5266' RD and released wireline unit.

TIH with tubing to 4000', RU swab equipment, swabbed fluid level down to 2500', POOH with tubing. SWIFN  
Plan to perforate 7040'-7044' & 7048'-7063' on Tuesday 6/14/11

6/10/2011

Rig crew on days off

6/11/2011

Rig crew on days off

6/12/2011

Rig crew on days off

6/13/2011

Rig crew on days off

6/14/2011

Opened well, RU wireline unit, run a temperature log from 7371' (PBTD) to 2500', RU perforating equipment and perforated 7040'- 7044' & 7048'-7063' with the following:

Titan Part # EXP 3325-321T

25 gram charges

.41 entry hole

45.16" penetration

4" EXP gun loaded 3 spf on 120 deg phasing.

RD and released wireline unit, picked up and run in hole with 7" RBP, retrieving head, 6' sub, 7" HD Packer 4' sub, 1 stand, SN and tubing to surface. Set RBP at 7068', released off plug then set packer at 6959'. RU pump lines and pressure tested packer to 1000 psi for 15 minutes, released pressure to 500 psi, RU swab equipment and made 9 swab runs recovering 111 bbls of water & 18 bbls of oil with an average fluid level of 5700' from surface. See 6-14 Swab report for details.

Plan to pump acid into perf intervals 7040'-7044' & 7048'-7063' then swab back for rate and clean up.

6/15/2011

Opened well, 0 psi, RU Halliburton acid equipment, opened bypass on packer and pumped 11.9 bbls of 7.5% HCL acid followed by 11.9 bbls of 7.5% acid with 50 buoyant balls (one per 10 gallons) followed by 11.9 bbls of 7.5% acid, closed bypass on packer then pumped 2.4 bbls of 7.5% acid then displaced with with 60 bbls of 4% KCL water. Shut well in for 5,10,15. See 6-15 Acid job tab for pressure graph.

Max pressure 2975 psi

Average pressure 2500 psi

Pump rate started at 0.7 bpm then increased to 3 bpm @ ~2000 psi at the end of the job.

ISIP 1177

5 Min 0 psi

RD and released pump equipment, RU swab equipment and made 3 runs to release ball sealers then reverse circulated with 15 bbl of 4% KCL water. Continued swabbing, made 17 runs recovering 16 bbls of oil and 170 bbls of water with an average fluid level of 1100' and a rate of ~100 bopd, 900 bwpd. SWIFN

See 6-15 Swab report for details.

Plan to continue swabbing

6/16/2011

Opened well, 0 psi tubing, RU swab equipment, made 13 runs recovering 19 bbls oil, 98 bbls water with a fluid level of 1100' from surface and a rate of ~100 bopd, 900 bwpd. RD swab equipment, released packer & RBP, POOH with tubing laying down packer and plug. RIH with one stand, SWIFN.

Plan to install a pump tomorrow.

6/17/2011

Supervisor:

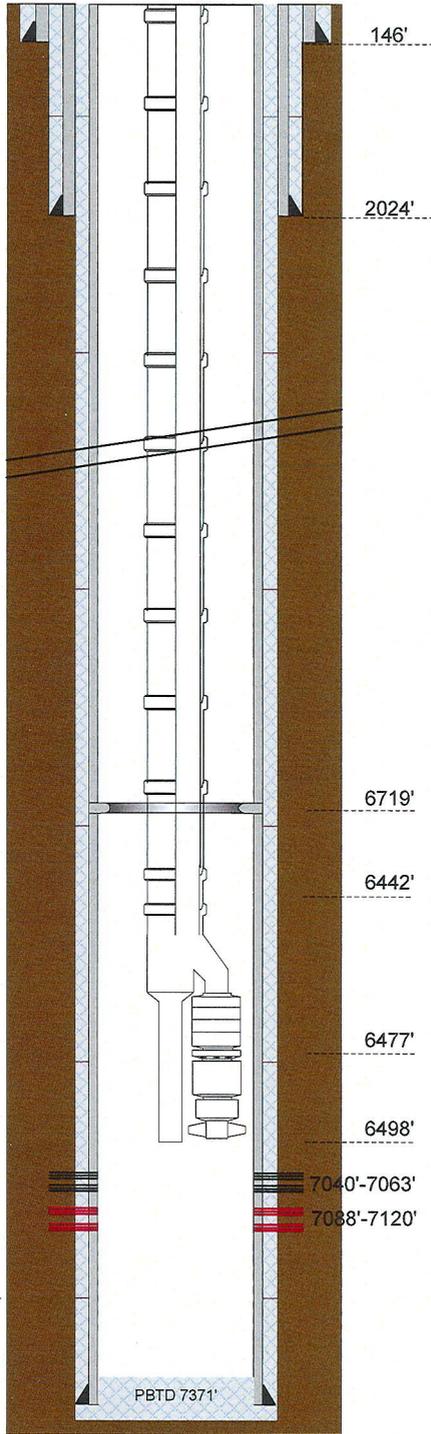
*Tony E. Cook*

Rig Operator:



**Wolverine Federal 20-2**  
**API # 43-041-30056**  
**Covenant Field**  
**Section 20, T23S, R1W**  
**Sevier County, Utah**

Ground Elevation: 5,866'  
 KB Elevation: 5,892'



TD = 7465' MD (6771' TVD)

**(Not to Scale)**

**Deviated Well**

Surface: 188' FNL 2128' FWL, NE NW, 20-23S-1W  
 Top of Pay (6793' MD): 1968' FNL, 508' FWL, SW NW, 20-23S-1W  
 Total Depth (7465' MD): 1968' FNL, 508' FWL, SW NW, 20-23S-1W

**Conductor Casing (06/24/08)**

Size: 20", 0.25" wall  
 Depth Landed: 146' KB  
 Cement Data: Cemented to surface 16 yds redi-mix

**Surface Casing (11/05/08)**

Size/Wt/Grade: 9-5/8", 36#, K-55, STC, 8rd  
 Depth Landed: 2024' KB  
 Cement Data: 355 sks VeriCem (11.0 ppg, 3.48 cf/sk), 350 sks Premium G (15.8 ppg, 1.17 cf/sk)

**Production Casing (11/19/08)**

Size/Wt/Grade: 7", 26.0#, N-80/HCL-80, LTC, 8rd  
 Properties: 7240 psi burst, 6.151" drift, 6.276" ID, 0.0382 Bbl/ft capacity  
 Depth Landed: 7465' KB  
 Stage Collar: 6719' KB  
 Cement Data: Stage 1 - 210 sks 50/50 Prem Poz (14.4 ppg, 1.27 cf/sk)  
 Stage 2 Lead - 130 sks Varicem (11.0 ppg, 3.53 cf/sk)  
 Tail - 640 sks Premium "G" (15.8 ppg, 1.25 cf/sk)

**Navajo Perforations**

7040'- 7044' MD (6346' - 6350' TVD), 4' 12 holes (06/14/11)  
 7048'- 7063' MD (6354' - 6369' TVD), 15' 45 holes (06/14/11)  
 7088'- 7102' MD (6394' - 6408' TVD), 14' 84 holes (06/05/11) Squeezed  
 7118'- 7120' MD (6424' - 6426' TVD), 2' 12 holes (06/05/11) Squeeze holes

Mid-Perf = 7052' MD (6358' TVD), 19' M (19.0' TV), 67 holes

**Tubing (06/17/11)** (see Page 2 for details)

End of BHA - 6498' WLM (6498' TVD)  
 Centinel - 6493' WLM (5801' TVD)  
 Y-Tool - 6444' WLM (5753' TVD)  
 Pump intake - 6477' WLM (5785' TVD)  
 Seating Nipple - 6442' WLM (5751' TVD)

**PBTD**

(06/08/11) 7371' MD WLM  
 (03/22/08) 7371' MD (6677' TVD) wireline (CBL) tag  
 (11/19/08) Float collar at 7390'



**Wolverine Federal 20-2**  
**API # 43-041-30056**  
**Covenant Field**  
**Section 20, T23S, R1W**  
**Sevier County, Utah**

**Tubing Detail (6/17/11)**

	26.00	KB
	-3.00	Landed above GL
205	6423.75	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	6.21	Sub - 2-7/8", 6.5#, L-80, EUE, 8rd
1	1.10	Seating nipple - 2-7/8", EUE, 8rd, 2.25" ID cup type (6442' MD, 5751' TVD)
1	0.77	X-over, 2-7/8" x 2-3/8", EUE, 8rd
1	2.54	Y-Tool, Weatherford 2-1/2"x 1-1/2" Fish @ (6444' MD, 5753'TVD)
1	10.04	Sub - 2-3/8", 4.7#, N-80, EUE, 8rd
1	20.99	Pump w/ Intake – Centrilift P18, Model 400PMSSD, 116 stage, 4.00' OD
1	6.10	Seal – Model FSB3DB H6 FER SSCV SB/SB PFSA HL 4.00" OD
1	9.68	Motor – Centrilift 450 MSP 63 HP 4.50" OD
1	4.10	Downhole pressure sensor, Centinel III (6493' MD, 5801' TVD)
1	1.18	Centralizer, 2-3/8" x 5.75", 4-bladed
	-11.00	Wireline correction
<hr/>		
	6498.46'	

**Note:** No check or drain valve in this well.  
 Blanking plug in Y-Tool has a 7/8" OD catch rod  
 Tubing capacity = 0.00579 Bbl/ft, Burst = 10570 psi, Joint Yield = 144960 lbs

**Directional Data:**

<u>MD</u>	<u>TVD</u>	<u>Incl.</u>	<u>MD</u>	<u>TVD</u>	<u>Incl.</u>
500	500	1.2	4000	3652	40.8
750	750	1.1	4500	4030	40.8
1000	1000	1.1	5000	4419	36.1
1250	1250	4.6	5500	4848	25.6
1500	1497	11.5	6000	5318	13.7
2000	1976	18.4	6500	5808	10.6
2500	2451	22.2	7000	6306	0.3
3000	2890	36.1	7465	6771	0.3
3500	3273	40.6			

**Stimulation:**

06/15/11: 7040'-7044' & 7048'-7063' w/ 1500 gallons 7-1/2% FE HCL acid and 50 balls @ 3 BPM ATP =  
 2400 psi FTP = 1950 psi

**Wellhead Information:**

- Tubing head flange is 7-1/16", 5M with a 2-7/8" EUE 8rd top connection.

**Notes:**

Surface Location: Latitude = 38° 47' 41.0386", Longitude = -111° 56' 02.1076" NAD 83  
 (4/7/09): Available Logs: DLL/MSFL, SDL/DSN, FWS, XRMI, CBL

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. <b>UTU-73528</b>
2. Name of Operator <b>Wolverine Gas and Oil Company of Utah, LLC</b>		6. If Indian, Allottee or Tribe Name <b>NA</b>
3a. Address <b>55 Campau NW, Grand Rapids, Michigan 49503-2616</b>	3b. Phone No. (include area code) <b>616-458-1150</b>	7. If Unit or CA/Agreement, Name and/or No. <b>Wolverine Federal Unit</b>
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) <b>188' FNL, 2128' FWL (NE/4 NW/4), Section 20, T23S, R1W, SLB&amp;M</b>		8. Well Name and No. <b>Wolverine Federal 20-2</b>
		9. API Well No. <b>43-041-30056</b>
		10. Field and Pool, or Exploratory Area <b>Covenant Field Navajo</b>
		11. County or Parish, State <b>Sevier County, Utah</b>

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
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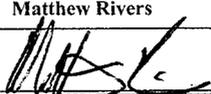
**RECEIVED**  
**OCT 18 2011**

**OCT 7 2011**

**Richfield BLM Field Office**

**DIV. OF OIL, GAS & MINING**

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed) <b>Matthew Rivers</b>	Title <b>Production Engineer</b>
Signature 	Date <b>10/03/2011</b>

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by _____	Title _____	Date _____
Conditions of approval, if any, are attached. Approval of this notice 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.		
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(Instructions on page 2)

*Summary # 12 SLA00045*

**Accepted For Record Purposes**

**CONFIDENTIAL**



Covenant Field  
Federal 20-2  
API# 43-041-30032

SE/SW Sec 17, T23N, R1W  
Sevier County, Utah

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ISIP 1177

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6/17/2011

Supervisor:

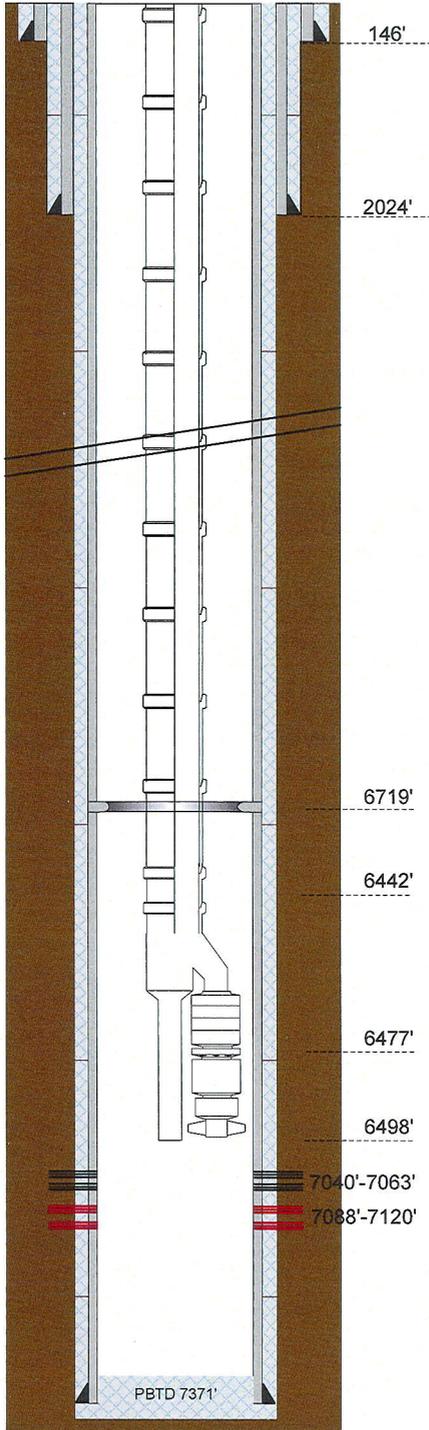
*Tony E. Cook*

Rig Operator:



**Wolverine Federal 20-2**  
**API # 43-041-30056**  
**Covenant Field**  
**Section 20, T23S, R1W**  
**Sevier County, Utah**

Ground Elevation: 5,866'  
 KB Elevation: 5,892'



TD = 7465' MD (6771' TVD)

**(Not to Scale)**

**Deviated Well**

Surface: 188' FNL 2128' FWL, NE NW, 20-23S-1W  
 Top of Pay (6793' MD): 1968' FNL, 508' FWL, SW NW, 20-23S-1W  
 Total Depth (7465' MD): 1968' FNL, 508' FWL, SW NW, 20-23S-1W

**Conductor Casing (06/24/08)**

Size: 20", 0.25" wall  
 Depth Landed: 146' KB  
 Cement Data: Cemented to surface 16 yds redi-mix

**Surface Casing (11/05/08)**

Size/Wt/Grade: 9-5/8", 36#, K-55, STC, 8rd  
 Depth Landed: 2024' KB  
 Cement Data: 355 sks VeriCem (11.0 ppg, 3.48 cf/sk), 350 sks Premium G (15.8 ppg, 1.17 cf/sk)

**Production Casing (11/19/08)**

Size/Wt/Grade: 7", 26.0#, N-80/HCL-80, LTC, 8rd  
 Properties: 7240 psi burst, 6.151" drift, 6.276" ID, 0.0382 Bbl/ft capacity  
 Depth Landed: 7465' KB  
 Stage Collar: 6719' KB  
 Cement Data: Stage 1 - 210 sks 50/50 Prem Poz (14.4 ppg, 1.27 cf/sk)  
 Stage 2 Lead - 130 sks Varicem (11.0 ppg, 3.53 cf/sk)  
 Tail - 640 sks Premium "G" (15.8 ppg, 1.25 cf/sk)

**Navajo Perforations**

7040'-7044' MD (6346' - 6350' TVD), 4' 12 holes (06/14/11)  
 7048'-7063' MD (6354' - 6369' TVD), 15' 45 holes (06/14/11)  
 7088'-7102' MD (6394' - 6408' TVD), 14' 84 holes (06/05/11) Squeezed  
 7118'-7120' MD (6424' - 6426' TVD), 2' 12 holes (06/05/11) Squeeze holes

Mid-Perf = 7052' MD (6358' TVD), 19' M (19.0' TV), 67 holes

**Tubing (06/17/11)** (see Page 2 for details)

End of BHA - 6498' WLM (6498' TVD)  
 Centinel - 6493' WLM (5801' TVD)  
 Y-Tool - 6444' WLM (5753' TVD)  
 Pump intake - 6477' WLM (5785' TVD)  
 Seating Nipple - 6442' WLM (5751' TVD)

**PBTD**

(06/08/11) 7371' MD WLM  
 (03/22/08) 7371' MD (6677' TVD) wireline (CBL) tag  
 (11/19/08) Float collar at 7390'



**Wolverine Federal 20-2  
API # 43-041-30056  
Covenant Field  
Section 20, T23S, R1W  
Sevier County, Utah**

**Tubing Detail (6/17/11)**

	26.00	KB
	-3.00	Landed above GL
205	6423.75	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	6.21	Sub - 2-7/8", 6.5#, L-80, EUE, 8rd
1	1.10	Seating nipple - 2-7/8", EUE, 8rd, 2.25" ID cup type (6442' MD, 5751' TVD)
1	0.77	X-over, 2-7/8" x 2-3/8", EUE, 8rd
1	2.54	Y-Tool, Weatherford 2-1/2"x 1-1/2" Fish @ (6444' MD, 5753'TVD)
1	10.04	Sub - 2-3/8", 4.7#, N-80, EUE, 8rd
1	20.99	Pump w/ Intake – Centrilift P18, Model 400PMSSD, 116 stage, 4.00' OD
1	6.10	Seal – Model FSB3DB H6 FER SSCV SB/SB PFSA HL 4.00" OD
1	9.68	Motor – Centrilift 450 MSP 63 HP 4.50" OD
1	4.10	Downhole pressure sensor, Centinel III (6493' MD, 5801' TVD)
1	1.18	Centralizer, 2-3/8" x 5.75", 4-bladed
	-11.00	Wireline correction
<hr/>		
	6498.46'	

Note: No check or drain valve in this well.  
Blanking plug in Y-Tool has a 7/8" OD catch rod  
Tubing capacity = 0.00579 Bbl/ft, Burst = 10570 psi, Joint Yield = 144960 lbs

**Directional Data:**

<u>MD</u>	<u>TVD</u>	<u>Incl.</u>	<u>MD</u>	<u>TVD</u>	<u>Incl.</u>
500	500	1.2	4000	3652	40.8
750	750	1.1	4500	4030	40.8
1000	1000	1.1	5000	4419	36.1
1250	1250	4.6	5500	4848	25.6
1500	1497	11.5	6000	5318	13.7
2000	1976	18.4	6500	5808	10.6
2500	2451	22.2	7000	6306	0.3
3000	2890	36.1	7465	6771	0.3
3500	3273	40.6			

**Stimulation:**

06/15/11: 7040'-7044' & 7048'-7063' w/ 1500 gallons 7-1/2% FE HCL acid and 50 balls @ 3 BPM ATP =  
2400 psi FTP = 1950 psi

**Wellhead Information:**

- Tubing head flange is 7-1/16", 5M with a 2-7/8" EUE 8rd top connection.

**Notes:**

Surface Location: Latitude = 38° 47' 41.0386", Longitude = -111° 56' 02.1076" NAD 83  
(4/7/09): Available Logs: DLL/MSFL, SDL/DSN, FWS, XRMI, CBL

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

**SUNDRY NOTICES AND REPORTS ON WELLS**

*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. UTU-73528
2. Name of Operator Wolverine Gas and Oil Company of Utah, LLC		6. If Indian, Allottee or Tribe Name NA
3a. Address 55 Campau NW, Grand Rapids, Michigan 49503-2616	3b. Phone No. (include area code) 616-458-1150	7. If Unit or CA/Agreement, Name and/or No. Wolverine Federal Unit
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 188' FNL, 2128' FWL (NE/4 NW/4), Section 20, T23S, R1W, SLB&M		8. Well Name and No. Wolverine Federal 20-2
		9. API Well No. 43-041-30056
		10. Field and Pool, or Exploratory Area Covenant Field Navajo
		11. County or Parish, State Sevier County, Utah

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input checked="" type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recomple in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Wolverine Gas & Oil Company of Utah LLC plans to workover the Wolverine Federal 20-2 well beginning October 24, 2011. The well is making a significant amount of water relative to oil (80 BOPD & 1500 BWPD) and the high water-cut is curtailing oil production. Production logs indicate a channel behind pipe reaching into the water leg of the reservoir. The water is traveling up a 200' channel and into the lower most perforations. Wolverine will perforate a 2' interval below the Navajo payzone in the water leg, set a CICR above the 2' interval, and cement squeeze the channel behind pipe in an attempt to plug the void. The well will be put back on production with an ESP and barring a successful water shut-off attempt, drawdown on the formation will be increased to realize greater oil production from existing perforations in the Navajo.

**COPY SENT TO OPERATOR**

Date: 11-17-2011

Initials: KS

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed) Matthew Rivers	Title Production Engineer
Signature 	Date 10/17/2011

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by 	Title Pet. Eng.	Date 11/14/2011
Conditions of approval, if any, are attached. Approval of this notice 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.		Federal Approval Of This Action Is Necessary
Office DOG M		

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.

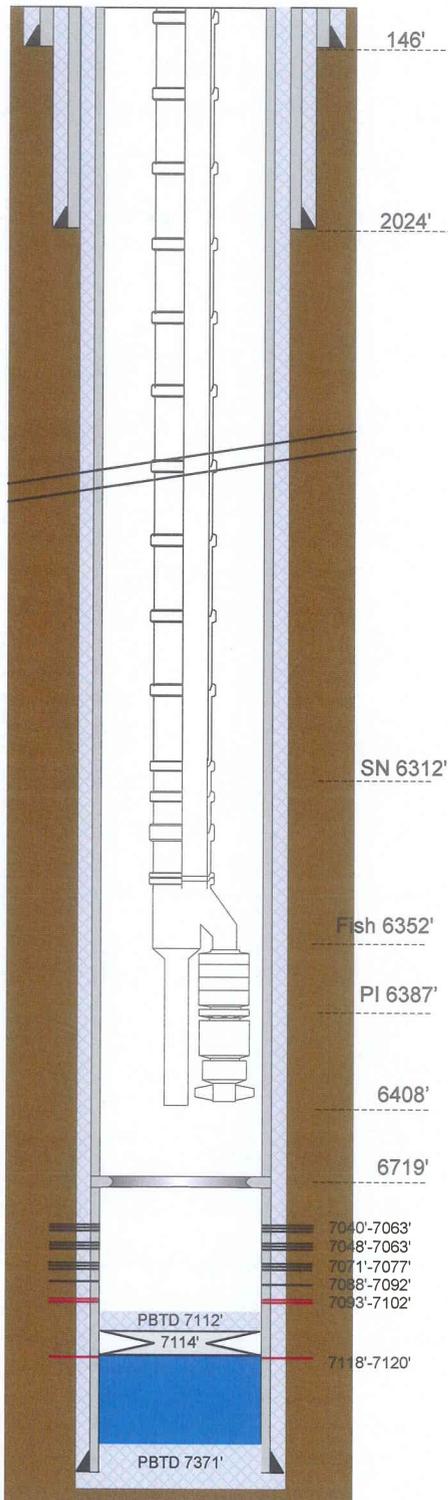
STATE OF UTAH DEPARTMENT OF NATURAL RESOURCES DIVISION OF OIL, GAS, AND MINING		FORM 9
		<b>5. LEASE DESIGNATION AND SERIAL NUMBER:</b> UTU-73528
<b>SUNDRY NOTICES AND REPORTS ON WELLS</b>		<b>6. IF INDIAN, ALLOTTEE OR TRIBE NAME:</b>
Do not use this form for proposals to drill new wells, significantly 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.		<b>7. UNIT or CA AGREEMENT NAME:</b> WOLVERINE
<b>1. TYPE OF WELL</b> Oil Well		<b>8. WELL NAME and NUMBER:</b> WOLVERINE FED 20-2
<b>2. NAME OF OPERATOR:</b> WOLVERINE GAS & OIL COMPANY OF UTAH, LLC		<b>9. API NUMBER:</b> 43041300560000
<b>3. ADDRESS OF OPERATOR:</b> One Riverfront Plaza 55 Campau NW, Grand Rapids, MI, 49503	<b>PHONE NUMBER:</b> 616 458-1150 Ext	<b>9. FIELD and POOL or WILDCAT:</b> COVENANT
<b>4. LOCATION OF WELL</b> <b>FOOTAGES AT SURFACE:</b> 0188 FNL 2128 FWL <b>QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:</b> Qtr/Qtr: NENW Section: 20 Township: 23.0S Range: 01.0W Meridian: S		<b>COUNTY:</b> SEVIER
		<b>STATE:</b> UTAH
11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA		
<b>TYPE OF SUBMISSION</b>	<b>TYPE OF ACTION</b>	
<input type="checkbox"/> NOTICE OF INTENT Approximate date work will start:	<input type="checkbox"/> ACIDIZE <input type="checkbox"/> CHANGE TO PREVIOUS PLANS <input type="checkbox"/> CHANGE WELL STATUS <input type="checkbox"/> DEEPEN <input type="checkbox"/> OPERATOR CHANGE <input type="checkbox"/> PRODUCTION START OR RESUME <input type="checkbox"/> REPERFORATE CURRENT FORMATION <input type="checkbox"/> TUBING REPAIR <input type="checkbox"/> WATER SHUTOFF <input type="checkbox"/> WILDCAT WELL DETERMINATION	<input type="checkbox"/> ALTER CASING <input type="checkbox"/> CHANGE TUBING <input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS <input type="checkbox"/> FRACTURE TREAT <input type="checkbox"/> PLUG AND ABANDON <input type="checkbox"/> RECLAMATION OF WELL SITE <input type="checkbox"/> SIDETRACK TO REPAIR WELL <input type="checkbox"/> VENT OR FLARE <input type="checkbox"/> SI TA STATUS EXTENSION <input checked="" type="checkbox"/> OTHER
<input checked="" type="checkbox"/> SUBSEQUENT REPORT Date of Work Completion: 12/5/2011		<input type="checkbox"/> CASING REPAIR <input type="checkbox"/> CHANGE WELL NAME <input type="checkbox"/> CONVERT WELL TYPE <input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> PLUG BACK <input type="checkbox"/> RECOMPLETE DIFFERENT FORMATION <input type="checkbox"/> TEMPORARY ABANDON <input type="checkbox"/> WATER DISPOSAL <input type="checkbox"/> APD EXTENSION
<input type="checkbox"/> SPUD REPORT Date of Spud:		OTHER: <input type="text" value="Workover"/>
<input type="checkbox"/> DRILLING REPORT Report Date:		
12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.		
<p>A workover commenced on October 23, 2011. Perforations were added at 7118' - 7120' and a retainer was set at 7114' in a failed attempt to squeeze a channel behind pipe. A balanced plug was subsequently set on top of the retainer to squeeze all existing perforations. The cement plug was drilled out to 7088' and casing was successfully pressure tested to 1000 psi. Perforations were added at 7040'-7044' and 7048'-7063'. Swab data indicated marginal improvement and a ESP was run. The well was put on test from November 9, 2011 to November 20, 2011 and averaged 5 BOPD &amp; 320 BWPD. On November 29, 2011 the ESP was pulled and perforations were added and swabbed at 7071'-7077'. The plug was drilled out to 7112' and perforations were added from 7088'-7092'. An ESP was and the well currently averages 40 BOPD and 1440 BWPD. See included WBD and workover reports for additional details.</p>		<p><b>Accepted by the Utah Division of Oil, Gas and Mining FOR RECORD ONLY</b></p> <p>February 13, 2012</p>
<b>NAME (PLEASE PRINT)</b> Matthew Rivers	<b>PHONE NUMBER</b> 616 458-1150	<b>TITLE</b> Production Engineer
<b>SIGNATURE</b> N/A		<b>DATE</b> 2/10/2012



**Wolverine Federal 20-2**  
**API # 43-041-30056**  
**Covenant Field**  
**Section 20, T23S, R1W**  
**Sevier County, Utah**

Ground Elevation: 5,866'  
 KB Elevation: 5,892'

**(Not to Scale)**



**Deviated Well**

Surface: 188' FNL 2128' FWL, NE NW, 20-23S-1W  
 Top of Pay (6793' MD): 1968' FNL, 508' FWL, SW NW, 20-23S-1W  
 Total Depth (7465' MD): 1968' FNL, 508' FWL, SW NW, 20-23S-1W

**Conductor Casing (06/24/08)**

Size: 20", 0.25" wall  
 Depth Landed: 146' KB  
 Cement Data: Cemented to surface 16 yds redi-mix

**Surface Casing (11/05/08)**

Size/Wt/Grade: 9-5/8", 36#, K-55, STC, 8rd  
 Depth Landed: 2024' KB  
 Cement Data: 355 sks VeriCem (11.0 ppg, 3.48 cf/sk), 350 sks Premium G (15.8 ppg, 1.17 cf/sk)

**Production Casing (11/19/08)**

Size/Wt/Grade: 7", 26.0#, N-80/HCL-80, LTC, 8rd  
 Properties: 7240 psi burst, 6.151" drift, 6.276" ID, 0.0382 Bbl/ft capacity  
 Depth Landed: 7465' KB  
 Stage Collar: 6719' KB  
 Cement Data: Stage 1 - 210 sks 50/50 Prem Poz (14.4 ppg, 1.27 cf/sk)  
 Stage 2 Lead - 130 sks Varicem (11.0 ppg, 3.53 cf/sk)  
 Tail - 640 sks Premium "G" (15.8 ppg, 1.25 cf/sk)

**Navajo 1 Perforations**

7040'- 7044' MD (6346' - 6350' TVD), 04' 12 holes (10/30/11)  
 7048'- 7063' MD (6354' - 6369' TVD), 15' 45 holes (10/30/11)  
 7071'- 7077' MD (6377' - 6383' TVD), 06' 18 holes (11/29/11)  
 7088'- 7092' MD (6394' - 6398' TVD), 04' 12 holes (12/03/11)  
 7092'- 7102' MD (6399' - 6408' TVD), 10' 60 holes (06/05/11) Squeezed  
 7118'- 7120' MD (6424' - 6426' TVD), 02' 12 holes (10/24/11) Squeeze holes

Mid-Perf = 7066' MD (6372' TVD), 29' M (29.0' TV), 87 holes

**Tubing (12/05/11)** (see Page 2 for details)

End of BHA 6408' WLM (5717' TVD)  
 Centinel 6403' WLM (5712' TVD)  
 Pump intake 6387' WLM (5697' TVD)  
 Y-Tool Fish 6352' WLM (5663' TVD)  
 Seating Nipple 6312' WLM (5623' TVD)

**PBTD**

(12/03/11) 7112' WLM  
 (10/30/11) 7088' WLM  
 (06/08/11) 7371' WLM  
 (03/22/08) 7371' WLM  
 (11/19/08) Float collar at 7390'

TD = 7465' MD (6771' TVD)



**Wolverine Federal 20-2**  
**API # 43-041-30056**  
**Covenant Field**  
**Section 20, T23S, R1W**  
**Sevier County, Utah**

**Tubing Detail (11/9/11)**

	26.00	KB
	-3.00	Landed above GL
203	6308.89	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	1.10	Seating nipple - 2-7/8", EUE, 8rd, 2.25" ID cup type
1	31.70	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	6.10	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	.78	2 7/8" x 2 3/8" Cross over
1	2.54	Weatherford Y-Tool 2" x 1 1/2" (1.144 ID instrument tube)
1	8.03	Tubing - 2-3/8", 6.5#, L-80, EUE, 8rd
1	0.78	2 7/8" x 2 3/8" Cross over
1	24.28	Pump w/ Intake - Centrilift P18, Model PLSXD, 134 stage, 4.00' OD
1	6.10	Seal - Model FSB3DB H6 FER SSCV SB/SB PFSA HL 4.00" OD
1	9.68	Motor - Centrilift 450 MSP 63 HP 4.50" OD
1	4.10	Downhole pressure sensor, Centinel III
1	0.91	4 blade centralizer
	-20.00	Wireline correction
	<hr/>	
	6407.99'	KB WLM

Note: No check valve in this well.  
 Blanking plug in Y-Tool has a 7/8" OD catch rod. Y-Tool ID - 1.144"  
 Tubing capacity = 0.00579 Bbl/ft, Burst = 10570 psi, Joint Yield = 144960 lbs

**Directional Data:**

<u>MD</u>	<u>TVD</u>	<u>Incl.</u>	<u>MD</u>	<u>TVD</u>	<u>Incl.</u>
500	500	1.2	4000	3652	40.8
750	750	1.1	4500	4030	40.8
1000	1000	1.1	5000	4419	36.1
1250	1250	4.6	5500	4848	25.6
1500	1497	11.5	6000	5318	13.7
2000	1976	18.4	6500	5808	10.6
2500	2451	22.2	7000	6306	0.3
3000	2890	36.1	7465	6771	0.3
3500	3273	40.6			

**Stimulation:**

06/15/11: 7040'-7044' & 7048'-7063' w/ 1500 gallons 7-1/2% FE HCL acid and 50 balls @ 3 BPM ATP =  
 2400 psi FTP = 1950 psi

**Wellhead Information:**

- Tubing head flange is 7-1/16", 5M with a 2-7/8" EUE 8rd top connection.

**Notes:**

Surface Location: Latitude = 38° 47' 41.0386", Longitude = -111° 56' 02.1076" NAD 83  
 (4/7/09): Available Logs: DLL/MSFL, SDL/DSN, FWS, XRMI, CBL



Covenant Field  
Federal 20-2  
API# 43-041-30056

SHL NE/NW Sec 20, T23S, R1W  
BHL SW/NW Sec 20, T23S, R1W  
Sevier County, Utah

- 10/23/2011      **MIRUSU, ND wellhead, NU BOP's**  
**Plan to POOH with ESP, perforate squeeze holes and set CICR.**
- 10/24/2011      **Opened well, RU spooling equipment, pulled out of hole with downhole ESP equipment. RD and released spooling equipment, RU wireline unit, perforated 7118'-7120' with the following:**  
**Titan Part # EXP 3325-321T**  
**25 gram charges**  
**.41 entry hole**  
**45.16" penetration**  
**4" EXP gun loaded 6 spf on 60° phasing.**  
**PU & RIH with 7" 26# CICR and set at 7114', RD & released wireline unit.**  
**Plan to TIH with tubing and cement stinger, then pump cement squeeze.**
- 10/25/2011      **PU cement stinger and tripped in hole with 227 joints of 2 7/8" tubing and stung into retainer.**  
**RU cementing equipment and pumped cement squeeze as follows:**  
**15.8 lb Class G 1.16 Yield Cement**  
**Established injection rate at 0.5 bpm @ 640 psi**  
**Unsting from CICR**  
**Pump 5 Bbl FW spacer**  
**Pump 25 sks (5.12 Bbls) of cement**  
**Pumped 5 Bbls of fresh water at 2 bpm.**  
**Pumped 29.9 bbls of 4% KCL at 2 bpm.**  
**Stung into retainer**  
**Displaced cement at ¼ BPM into lower perf set and behind pipe with 5.5 Bbls.**  
**SD and waited on cement for 20 minutes**  
**Opened well and pumped an additional 1.3 bbls of water with 0 psi.**  
**Unsting from CICR, pulled up 2' above retainer.**  
**Reverse out with 65 bbls of 4% KCL**  
**POOH with tubing. SWIFN**  
**Note: New PBD @ 7110'**
- 10/26/2011      **Opened well, 0 psi, TIH with tubing and HD packer, set packer at 6946'. Packer failed pressure test, released packer and moved up to 6914', reset and failed to pressure test. RU swab equipment and swabbed well down to 914' indicating that the squeeze was a failure. SWIFN See 10-26 swab report for details.**  
**Plan to set a balanced plug across all perf intervals and re-squeeze cement on 10/28**
- 10/27/2011      **Pulled out of hole laying down packer, TIH with tubing to top of cement at 7110'**
- 10/28/2011      **Opened well, TIH with 227 joints of tubing with end of tubing at 7109'.**  
**RU cementing equipment and pumped cement squeeze as follows:**  
**15.8 lb Class G 1.16 Yield Cement**  
**Established injection rate at 1.0 bpm @ 360 psi**  
**Pump 10 Bbl FW spacer**  
**Pump 50 sks (10 Bbls) of cement**

Pumped 2 Bbls of fresh water at 2 bpm.

Pumped 37 bbls of 4% KCL at 2 bpm.

SD and pulled 10 joints of tubing - EOT 6794'

Displaced cement at ¼ BPM into perfs set and behind pipe with 2.5 Bbls @ 1104 psi

SD and waited on cement for 20 minutes, pressure bled off to 1084 psi

Bled off pressure, TIH with 5 joints to 7000'

Reverse out with 65 bbls of 4% KCL

POOH with 5 joints of tubing, pressured well to 500 psi. SWIFN

10/29/2011

Opened well, 680 psi, bled off pressure, POOH with tubing, PU & TIH with bit, six 4 3/4" drill collars and tubing to cement top at 7080' RU power swivel and drilled out cement to 7088' then pressure tested casing to 1000 psi for 20 minutes. RD power swivel and started out of hole with tubing. SWIFN

Plan to finish pulling out of hole with tubing, RIH with casing scraper, swab well down, and re-perforate.

10/30/2011

Opened well, finished pulling out of hole with tubing laying down drill collars and bit. PU & trip in hole with 7" casing scraper to PBTD. RU pump lines and reverse circulated well clean with 65 bbls of 4% KCL water, RD pump lines, RU swab equipment, swabbed fluid level down to 2500', RD swab equipment and pulled out of hole with tubing. RU wireline unit and perforated 7040'-7044' & 7043'-7063' as follows:

Titan Part # EXP 3325-321T

25 gram charges

.41 entry hole

45.16" penetration

4" EXP gun loaded 3 spf on 120 deg phasing.

RD and released wireline unit, PU 7" HD packer and tripped in the hole and set packer at 6989'

Plan to swab well for rate and clean up.

10/31/2011

Opened well, RU swab equipment, made 21 runs recovering 102 bbls of fluid with an average rate of 281 bbls with a 30% oil cut and an average fluid level of 2750'. RD swab equipment, released packer and pulled out of hole with tubing laying down packer. RIH with one stand, SWIFN

Plan to install ESP

11/1/2011

Opened well, picked up and run in hole with Centinel, motor, seal, pump, XO, drain sub, one joint, cup type seating nipple and 204 joints of 2 7/8" tubing. ND BOP's, NU wellhead, started well into production, RDMOSU.

11/2/2011

Well pumped for 14 hours recovering 130 bbls of fluid then quite pumping and was shut in until a replacement pump can be on location.

11/3/2011

No activity

11/4/2011

No activity

11/5/2011

No activity

11/6/2011

MIRUSU, ND wellhead, NU BOP's

11/7/2011

Opened well, painted out of hole with tubing and found a tubing leak on joint number 14 from surface. No other tubing leaks were evident. Replaced pump and tripped back in hole with tubing, ND BOP's, NU wellhead. Started well into production. After approximately two hours the well developed another tubing leak.

Note: Replaced Joint #14 from surface with Yellow band N-80 tubing.

Plan to replace the tubing string with inspected tubing from the yard.

11/8/2011

ND wellhead, NU BOP's, pull out of hole laying down all of the tubing to the pump, started back in hole with 50 joints of tubing. SWIFN

Note: The P18 pump, motor and seal were not changed.

Plan to finish picking up and running in hole with inspected tubing string and return well to production.

11/9/2011

Opened well, picked up and run in hole with Centinel, motor, seal, pump, drain sub, one joint, cup type seating nipple and 204 joints of 2 7/8" tubing. ND BOP's, NU wellhead, started well into production, RDMOSU.

Note: The tubing installed was Yellow band N-80 tubing inspected from Pipe Renewal Services in Vernal UT referencing work order numbers 9808 & 9797.

Plan to clean up location.

11/10/2011

9.5 Hour production, 0 bopd, 50 bwpd, 44.5 Hz, BHP 1634, Clean up location

Supervisor:

*Tony E. Cook*

Rig Operator:

Josh



Covenant Field  
Federal 20-2  
API# 43-041-30056

SHL NE/NW Sec 20, T23S, R1W  
BHL SW/NW Sec 20, T23S, R1W  
Sevier County, Utah

11/29/2011

**MIRUSU, ND wellhead, NU BOP's.**

**Plan to POOH with ESP and perforate one additional perf set.**

**RU spoolers, opened well, pulled out of hole with tubing and downhole pump. RU wireline unit and perforated 7071'-7077' as follows.**

**Titan Part # EXP 3325-321T**

**25 gram charges**

**.41 entry hole**

**45.16" penetration**

**4" EXP gun loaded 3 spf on 120 deg phasing.**

**RD and released wireline unit, PU 7" HD packer and tripped in the hole with 50 stands. SWIFN**

**Plan to finish tripping in hole with tubing and packer then swab for rate and clean up.**

11/30/2011

**RU vac truck, opened well, 80 psi tubing, 80 psi casing. Finished tripping in hole with tubing and packer, tagged PBDT and established a tubing correction of -4'. Pulled up and set packer at 6976', RU swab equip. and swabbed well as follows:**

**Swab runs - 20**

**Water cut - 100%**

**Average rate -661**

**Average fluid level - 2300'**

**Total fluid recovered - 155 bbls**

**Perf intervals open - 7040'-7044', 7048'-7063', 7071'-7077'**

**RD swab equipment, released packer and pulled out of hole with 40 joints of tubing. SWIFN**

**See 11-30 Swab report for details.**

**Plan to finish pulling out of hole with tubing. Waiting on hot shot for a power swivel to arrive late afternoon**

12/1/2011

**No activity - Waiting on hot shot**

**Plan to drill out cement and perforate 7088'-7092'**

12/2/2011

**RU vac truck, opened well, 80 psi tubing, 80 psi casing. Finished tripping in hole with tubing, RU power swivel and drilled out cement from 7082' to 7112'. Reverse circulated well clean, RD power swivel and pulled out of hole with tubing laying down drill collars. SWIFN**

**Plan to perforate 7088'-7092' then swab for rate and clean up.**

12/3/2011

**Opened well, RU wireline unit and perforated 7088'-7092' as follows**

**Titan Part # EXP 3325-321T**

**25 gram charges**

**.41 entry hole**

**45.16" penetration**

**4" EXP gun loaded 3 spf on 120 deg phasing.**

**RD and released wireline unit, PU & trip in hole and set packer at 6989'. RU swab equipment and swabbed well as follows:**

**Swab runs - 8**

**Water cut - 100%**

Average rate -669

Average fluid level - 2125'

Total fluid recovered - 80 bbls

Perf intervals open - 7040'-7044', 7048'-7063', 7071'-7077', 7088'-7092'

See 12-3 Swab report for details.

Plan to swab for rate and clean up.

12/4/2011

Opened well, 0 psi tubing, 0 psi casing. RU swab equipment and swabbed well as follows:

Swab runs - 16

Water cut - 100%

Average rate -654

Average fluid level - 2000'

Total fluid recovered - 157 bbls

Perf intervals open - 7040'-7044', 7048'-7063', 7071'-7077', 7088'-7092'

See 12-4 Swab report for details.

RD swab equipment, released packer and pulled out of hole with tubing and packer, RIH with two stands, drained up lines and SWIFN.

Plan to install ESP

12/5/2011

RU cable spoolers and vac truck, opened well, 0 psi. PU and RIH with 4 blade centralizer, Centinel, motor, seal, pump, 2 7/8" x 2 3/8" XO, 2 3/8" x 8' tubing sub, 2" x 1 1/2" Y-tool, 2 7/8" x 2 3/8" XO, 2 7/8" x 6' tubing sub, 1 joint of 2 7/8" N-80 tubing, cup type SN and 203 joints of N-80 tubing. Spliced on lower pig tail, ND BOP's, NU wellhead. Started well into production, RDMOSU.

Plan to clean up location and finish moving off rig equipment.

12/5/2011

07 Hour production, 0 bopd, 298 bwpd, 52 Hz, BHP 1634.

12/6/2011

24 Hour production, 0 bopd, 777 bwpd, 52 Hz, BHP 1614.

12/7/2011

24 Hour production, 0 bopd, 1052 bwpd, 54 Hz, BHP 1528.

12/8/2011

24 Hour production, 0 bopd, 1149 bwpd, 56 Hz, BHP 1505.

12/9/2011

24 Hour production, 0 bopd, 1177 bwpd, 56 Hz, BHP 1470.

12/10/2011

24 Hour production, 0 bopd, 1180 bwpd, 60 Hz, BHP 1362.

Supervisor:

*Tony E. Cook*

Rig Operator:

Josh

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

5. Lease Serial No.  
**UTU-73528**

6. If Indian, Allottee or Tribe Name  
**NA**

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

8. Well Name and No.  
**Wolverine Federal 20-2**

9. API Well No.  
**43-041-30056**

10. Field and Pool, or Exploratory Area  
**Covenant Field Navajo**

11. County or Parish, State  
**Sevier County, Utah**

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well  
 Oil Well  Gas Well  Other

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

3a. Address  
**55 Campau NW, Grand Rapids, Michigan 49503-2616**

3b. Phone No. (include area code)  
**616-458-1150**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**188' FNL, 2128' FWL (NE/4 NW/4), Section 20, T23S, R1W, SLB&M**

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input checked="" type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input checked="" type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

**Wolverine Gas & Oil Co. of Utah, LLC intends to workover the Wolverine Federal 20-2. After unsuccessful attempts to workover and improve oil productivity in the Lower Navajo, Wolverine plans to plug back the current producing interval with cement and recomplete the well in the Upper Navajo. Perforations will be added in the Upper Navajo and stimulated as necessary. The well will be returned to production once an ESP and y-tool are run.**

**COPY SENT TO OPERATOR**

Date: 3-22-2012

Initials: KS

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed) <b>Matthew Rivers</b>	Title <b>Production Engineer</b>
Signature 	Date <b>03/02/2012</b>

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by <u>D. M. Dent</u>	Title <u>Pet. Eng.</u>	Date <u>3/21/12</u>
Conditions of approval, if any, are attached. Approval of this notice 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.	Office <u>DOG M</u>	Federal Approval Of This Action Is Necessary

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.

**RECEIVED**

(Instructions on page 2)

**MAR 09 2012**

**DIV. OF OIL, GAS & MINING**

## Dustin Doucet - Wolverine Covenant Perf Intervals

---

**From:** "Matt Rivers" <mrivers@wolvgas.com>  
**To:** <dustindoucet@utah.gov>  
**Date:** 3/21/2012 2:34 PM  
**Subject:** Wolverine Covenant Perf Intervals

---

Dustin,

Below are the wells that I sent you Sundries on for our planned workovers at Covenant. All of the proposed intervals will be in the Covenant Navajo. We are planning to start on the WF 17-6 April 2<sup>nd</sup> then move to the WF 17-4 later in the month.

Please let me know when you approve the Sundries.

-  
Wolverine Federal 17-4

6490' - 6500', 6517' - 6537' & 6550' - 6570'

Wolverine Federal 17-6

6306' - 6310' & 6353' - 6363'

Wolverine Federal 18-1

No perforations planned

Wolverine Federal 20-2

6873' - 6898', 6912' - 6934', 6950' - 6958' & 6972' - 6992'

Regards,

-  
Matt Rivers

Production Engineer

Wolverine Gas & Oil Co.

(616) 929-1932 - Office Direct

(616) 490-1954 - Cell

(616) 458-0969 - Fax

RECEIVED

RECEIVED

Form 3160-5 (April 2004) JUN 28 2012

UNITED STATES DEPARTMENT OF THE INTERIOR DIV. OF OIL, GAS & MINING BUREAU OF LAND MANAGEMENT

JUN 28 2012 DIV. OF OIL, GAS & MINING

FORM APPROVED OMB No. 1004-0137 Expires: March 31, 2007

Serial No. MTU-73528

SUNDRY NOTICES AND REPORTS ON WELLS Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

1. Type of Well [X] Oil Well [ ] Gas Well [ ] Other

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

3a. Address 55 Campau NW, Grand Rapids, Michigan 49503-2616

3b. Phone No. (include area code) 616-458-1150

4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 188' FNL, 2128' FWL (NE/4 NW/4), Section 20, T23S, R1W, SLB&M

6. If Indian, Allottee or Tribe Name NA

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

8. Well Name and No. Wolverine Federal 20-2

9. API Well No. 43-041-30056

10. Field and Pool, or Exploratory Area Covenant Field Navajo

11. County or Parish, State Sevier County, Utah

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

Table with 2 columns: TYPE OF SUBMISSION and TYPE OF ACTION. Includes checkboxes for Notice of Intent, Subsequent Report, Final Abandonment Notice, Acidize, Deepen, Production (Start/Resume), Water Shut-Off, Alter Casing, Fracture Treat, Reclamation, Well Integrity, Casing Repair, New Construction, Recomplete, Other workover, Change Plans, Plug and Abandon, Temporarily Abandon, Convert to Injection, Plug Back, Water Disposal.

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Wolverine completed a workover on the Wolverine Federal 20-2 on June 11, 2012. Existing perforations were plugged back with a balanced cement plug across perforations at 7040' - 7044', 7048' - 7063', 7071' - 7077' & 7088' - 7092'. Casing deformation was found from 5336' - 6513' with a caliber log and a 4-1/2" 11.6# P-110 liner was subsequently run from PBTD at 7022' to 4985' to isolate the damaged 7" 26# casing. The liner was cemented with 210 sacks of 15.8 ppg premium G cement. Perforations were added in the Navajo at 6873' - 6898', 6926' - 6947' & 6973' - 6982' and acidized with 3500 gallons of 7-1/2% FE HCL with ball sealers. The well returned to production at 430 BOPD and 2 BWPD with a FBHP of 913 psi at pump intake. See attached WBD and Daily Reports for additional details.

14. I hereby certify that the foregoing is true and correct Name (Printed/Typed)

Matthew Rivers

Title Production Engineer

Signature

[Handwritten Signature]

Date

06/27/2012

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Conditions of approval, if any, are attached. Approval of this notice 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.

Title

Date

Office

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.

(Instructions on page 2)



Covenant Field

Federal 20-2

API# 43-041-30032

SE/SW Sec 17, T23N, R1W

Sevier County, Utah

- 5/14/2012 Moved in frac tanks, rig pump, pipe racks and rig baskets.
- 5/15/2012 Hooked up flowback lines, filled frac tanks with KCL water and laid out oil absorbent matting around well.
- 5/16/2012 Crew travel to location, MIRUSU, ND wellhead, NU BOPs.
- 5/17/2012 Opened well, 0 psi tubing, 0 psi casing. RU cable spoolers, pulled out of hole with tubing and ESP equipment. RD and release spooling equipment, tripped in hole with open ended tubing and tagged cement top at 7112', picked up and spaced tubing out 1' off of cement top at 7111'. RU pump lines and circulated well clean with fresh water. SWIFN
- Note: No corrosion to the ESP equipment or tubulars.
- Plan to squeeze lower Navajo 1 perforations.
- 5/18/2012 Opened well, 0 psi. RU Halliburton cementing equipment, and pumped cement squeeze as follows:
1. Pumped 12 bbls of fresh water to fill wellbore.
  2. Pump 50 sks (10.24 Bbls) of 15.8 lb/gal squeeze cement
  3. Pump 5 Bbl FW spacer
  4. Displace with 29 Bbls 4% KCL
  5. RD pump lines
  6. Pull out of hole with 10 joints
  7. RU pump lines
  8. Squeezed 1.5 bbls at 0.5 bpm with a max pressure of 800 psi
  9. SD for 4 minutes, pressure held at 800 psi
  10. Squeezed 0.5 bbls at 0.5 bpm with a max pressure of 1200 psi
  11. SD for 1 minutes, pressure held at 1200 psi
  12. Squeezed 0.5 bbls at 0.5 bpm with a max pressure of 1500 psi
  13. SD for 4 minutes, pressure held at 1500 psi
  14. Bled pressure off and RD pump lines
  15. TIH with tubing to 7020' and reversed out with 65 bbls of 4% water.
  16. Pulled out of hole with 20 joints
  17. RU pump lines and pressured well to 500 psi.
- SWIFN
- Plan to pressure test cement squeeze / swab fluid level down to 2500' / perforate 6973'-6982' / TIH with tubing, packer and plug.
- 5/19/2012 Opened well, 560 psi. RU pump lines and pressure tested cement squeeze to 2000 psi. RD pump lines, RU swab equipment and swabbed fluid level down to 2500', RD swab equipment and pulled out of hole with tubing. RU wireline unit and perforated well as follows:
- Perf interval - 6973'-6982'
- Titan Part # EXP 3325-321T
- .41 entry hole
- 25 gram charges
- 45.16" penetration
- 4" EXP gun loaded 6 spf on 60° phasing.

RD and released wireline unit, picked up and tripped in hole with bridge plug, retrieving head, 4' sub, HD packer, 1 joint, SN and 210 joints of tubing. While tripping in the hole on joint 210 the bridge plug set itself, during the attempt to release the bridge plug the packer was set as well. This prevented any chance of releasing the plug and packer combination. SWIFN

Note: Tagged PBTD with perforating gun, estimated PBTD @ 7024'

Note: Plug was stuck at 6513'

Plan to cut the tubing sub between the packer and plug / pull out of hole with packer / Trip in and release plug.

5/20/2012  
Opened well, 0 psi. RU wireline unit and run in hole with chemical cutter and made a cut on the 4' tubing sub between the packer and plug. Pulled out of hole with cutter and unsuccessfully tried to release the packer. Rigged up a second chemical cutter and made a second cut on the 4' tubing sub between the packer & plug, pulled out of hole with the cutter and was able to release the packer. RD and released wireline unit and pulled out of hole with tubing, packer and cut sub. Picked up and run in hole with overshot, xo, bumper sub, jar, xo, 6' sub, one joint, 4' sub and tubing to surface. Latched onto fish and made several unsuccessful attempts to release the plug. Released the retrieving head from the bridge plug and pulled out of hole with tubing, fishing tools and retrieving head. SWIFN.

Plan to TIH with tubing and retrieving head / RU power swivel and work the plug free.

5/21/2012  
Opened well, 0 psi. Picked up and run in hole with retrieving head, xo, bumper sub, jars, xo, 6' sub and tubing to surface. RU power swivel and torqued tubing to the right then set off jars and pulled plug free. RD power swivel and pulled out of hole with tubing and retrievable plug. Picked up a new packer and plug combination and run in the hole and stuck the plug in the same spot at 6513', worked the plug up hole for approximately 3' then set back down and dog locked the plug and packer for a second time.

Plan to cut off the tubing sub between the plug and pkr / pull out of hole with tools / run casing inspection log.

5/22/2012  
RU wireline unit and run in hole with 2 1/8" chemical cutter and cut off the 8' sub between the tubing and packer, RD wireline unit. Pulled out of hole with tubing packer and plug. RU wireline unit and run a casing inspection log from 6750' to 5000' with a 60 finger imaging tool. Casing damage was found as follows:

5336' Minor damage

5940' Minor damage

6064' Minor damage

6382' Minor damage

6494' Minor damage

6513' Collapsed to 5.6" ID

Due to problems with the logging tool or debris on the casing walls the exact ID of the specific areas were not determined. The estimated ID at the problem area of 6513' was 5.6"

Plan to order casing and liner equipment to be run from 7023'-5023'

5/23/2012  
Rig crew moved pipe racks and prepared location for casing and drill collars.

5/24/2012  
No activity, rig crew on days off

5/25/2012  
No activity, rig crew on days off

5/26/2012  
No activity, rig crew on days off

5/27/2012  
No activity, rig crew on days off

5/28/2012  
No activity, rig crew on days off

5/29/2012  
Set pipe racks and hydraulic cat walk, unloaded drill collars and 4 1/2" 11.6# P110 casing and staged on racks.

Plan to run a 4 1/2" x 5' piece of casing with collars on both ends to PBTD prior to running casing liner on 5/31.

5/30/2012  
Crew travel to location, unloaded casing liner hanger. RU wireline unit and RIH with 5' of 4-1/2" casing with

collars on both ends to PBTD, pulled out of hole with casing drift, RD and released wireline unit.

Plan to install casing liner.

5/31/2012

Opened well, 0 psi. Picked up and run in hole with float shoe, float collar, landing collar, 45 joints of new 4-1/2" P110 8rd 11.6# casing, 3-1/2" IF x 2 7/8" xo, hanger, pkr, liner top, setting tool, bumper sub, 28 4-3/4" x 3-1/2" drill collars and 3-1/2"x 2 7/8" xo. RU pump lines and circulated 85 bbls of fresh water through liner to confirm circulation and remove oil from the annulus.

Plan to finish running in hole with liner / cement.

6/1/2012

Opened well, 0 psi. Finished tripping in hole with 2 7/8" tubing, tagged cement top at 7024', picked up 2'. RU Halliburton cementing equipment and cemented liner in hole as follows:

1. Pumped 20 bbls of fresh water to establish circulation
2. Pressure tested lines to 4400 psi
3. Set liner
4. Pumped 10 bbls fresh water
5. Pumped 43 bbls (210 sks) of 15.8 ppg Premium G cement slurry yield 1.15 ft<sup>3</sup>/sk water 4.92 gal/sk.
6. Dropped wiper plug
7. Pumped 59 bbls of fresh water - Bumped plug and pressured to 2784 psi
8. Set packer and pressure tested to 1600 psi
9. Reverse circulated out with 85 bbls of 4% KCL water

RD and released cementing equipment. Pulled out of hole laying down 28, 4-3/4" drill collars and setting tool. SWIFN, Plan to run in hole with bit and scraper.

Note: See 4.5" Liner install settings tab for details

See 4.5" Liner cementing graph for details

6/2/2012

Opened well, 0 psi. Picked up and run in hole with 3 7/8" bit, casing scraper, xo, 69 joints of 2 3/8" tubing, xo, and 156 joints of 2 7/8" tubing, tagged up at 6977', rigged up power swivel and rotated pipe while reverse circulating down to PBTD at 7018'. Reversed 55 bbls of 4% KCL, RD pump lines and pulled out of hole with bit and casing scraper. SWIFN

Plan to perforate / swab perf intervals at 6973'-6982'

6/3/2012

Opened well, 0 psi. RU wireline unit and perforated well as follows:

Perf interval - 6973'-6982'

Owen Part # SDP-3125-411NT4

.37 entry hole

25 gram charges

42.90" penetration (35.6" thru 4 1/2" liner and 7" casing string)

4" EXP gun loaded 6 spf on 60° phasing.

RD and released wireline unit, picked up and tripped in hole with bridge plug, retrieving head, 1 joint 2 3/8" tubing, packer, 68 joints 2 3/8" tubing, xo, 4' sub, cup type SN and 2 7/8" tubing to surface. Set plug at 6999', set packer at 6898' with EOT at 6935'. RU pump lines, pressure tested packer to 1000 psi, RD pump lines, RU swab equipment and made two swab runs with no entry, RU pump lines, loaded tubing with 4% KCL and pressured up to 1500 psi with an approximate 350 psi bleed off in 10 minutes. Re pressured three times to 1500 psi with similar results. SWIFN

Plan to pump acid into perf interval 6973'-6982' / swab back for rate and clean up.

6/4/2012

Opened well, 0 psi tubing, 0 psi casing. RU Halliburton acid equipment and pumped acid job on perf interval 6973'-6982' as follows:

<u>Detail</u>	Bbls	Cumm	Max BPM	Max PSI
Pumped CF to fill tubing	0	0	0	0
Opened bypass on packer	~	~	~	~
Spotted 7 1/2% FE HCL	23.84	23.84	2	390
Spotted 4% KCL	11.02	34.86	2	2500
Closed bypass on packer	~	~	~	~
Pumped 7 1/2% FE HCL	0.13	34.99	0.5	1015
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.05	35.04	0.5	1996
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.04	35.08	0.5	1973
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.05	35.13	0.5	2431
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.02	35.15	0.5	2500
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.02	35.17	0.5	2540
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.01	35.18	0.5	2527
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.02	35.2	0.5	2517
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.02	35.22	0.5	2492
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.01	35.23	0.5	2720
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.26	0.5	2540
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.02	35.28	0.5	2527
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.31	0.5	2517
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.34	0.5	2492
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.37	0.5	2503
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.04	35.41	0.5	2471
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.02	35.43	0.5	2475
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.04	35.47	0.5	2499
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.5	0.5	2483

Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.53	0.5	2460
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.56	0.5	2439
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.59	0.5	2470
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.62	0.5	2541
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.65	0.5	2494
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.68	0.5	2507
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.04	35.72	0.5	2494
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.75	0.5	2490
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.78	0.5	2458
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.81	0.5	2471
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.84	0.5	2413
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.87	0.5	2485
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.9	0.5	2493
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.93	0.5	2434
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.96	0.5	2491
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	35.99	0.5	2474
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	36.02	0.5	2508
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	36.05	0.5	2486
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	36.08	0.5	2489
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.03	36.11	0.5	2981
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.02	36.13	0.5	2968
Shut down and waited for pressure to bleed off				

Pumped 4% KCL	0.02	36.15	0.5	2951
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	36.23	0.5	2982
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	36.31	0.5	2978
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	36.38	0.5	2971
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	36.46	0.5	2951
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	36.54	0.5	2962
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	36.62	0.5	2945
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	36.7	0.5	2962
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	36.78	0.5	2967
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	36.86	0.5	2955
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	36.94	0.5	2986
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.1	37.04	0.5	2906
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.09	37.13	0.5	2954
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.1	37.23	0.5	2949
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.09	37.32	0.5	2937
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.1	37.42	0.5	2935
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.1	37.52	0.5	3001
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.1	37.62	0.5	3041
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.1	37.72	0.5	3013
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.11	37.83	0.5	3459
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.16	37.99	0.5	3537
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.16	38.15	0.5	3502

Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	38.23	0.5	3513
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	38.3	0.5	3522
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	38.37	0.5	3503
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	38.44	0.5	3530
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	38.51	0.5	3519
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	38.58	0.5	3521
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	38.65	0.5	3484
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	38.72	0.5	3510
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	38.8	0.5	3484
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	38.87	0.5	3517
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	38.95	0.5	3501
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.12	39.07	0.5	3517
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.52	39.59	0.5	3460
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	40.71	80.3	0.8	3446

General details

Pressure

ISIP	3240 psi
5 Min	0 psi
Max Treating Pressure	3537 psi
Max Acid Rate	0.8 bpm
Avg Treating Pressure	3295 psi
Load to Recover	82.3 bbls

Note: See 6-4 Acid stim 1 second data tab for details

RD and released acid equipment, RU swab equipment and swabbed well as follows:

Swab runs - 17

Water cut - 10%

Average rate - 300 bfpd

Average fluid level - 3600

Total fluid recovered - 93 bbls

Perf intervals open -6973'-6982'

See 6-4 Swab report for details.

6/5/2012

Opened well, 50 psi tubing, oil at surface. RU swab equipment, opened bypass on packer, made two swab runs to recover oil from tubing. RD swab equipment, released plug and packer and pulled out of hole with tubing. RU wireline unit and perforated well as follows:

Perf interval - 6926'-6947'

Owen Part # SDP-3125-411NT4

.37 entry hole

25 gram charges

42.90" penetration (35.6" thru 4 1/2" liner and 7" casing string)

4" EXP gun loaded 6 spf on 60° phasing.

RD and released wireline unit, picked up and tripped in hole with bridge plug, retrieving head, 1 joint 2 3/8" tubing, packer, 68 joints 2 3/8" tubing, xo, 4' sub, cup type SN and 2 7/8" tubing to surface. Set plug at 6961, set packer at 6867' with EOT at 6903'. RU pump lines, pressure tested packer to 1000 psi, RD pump lines. SWIFN, Plan to swab for rate and clean up.

6/6/2012

Opened well, 0 psi. RU swab equipment and made 4 swab runs with no entry. RU pump lines and loaded tubing with 4% KCL water then pressured up to 1500 psi with an approximate pressure bleed off of 400 psi in two minutes. Bled off pressure, RD pump lines, reset plug at 6999' and packer at 6867'. RU swab equipment and swabbed well as follows:

Swab runs - 21

Water cut - 3%

Average rate - 517 bfpd

Average fluid level - 3600

Total fluid recovered - 123 bbls

Perf intervals open -6973'-6982' & 6926'-6947'

See 6-6 Swab report for details.

Left well open to frac tank overnight.

6/7/2012

Well flowed back 100 bbls overnight. Reset packer at 6867', reset plug at 6961', RU Halliburton acid equipment and pumped acid job as follows:

<u>Detail</u>	Bbls	Cumm	Max BPM	Max PSI
Pumped CF to fill tubing	9.68	9.68	2	0
Opened bypass on packer	~	~	~	~
Spotted 7 1/2% FE HCL	21.77	21.77	2	355
Spotted 4% KCL	21.39	43.16	2	260
Closed bypass on packer	~	~	~	~
Pumped 7 1/2% FE HCL	0.18	43.34	0.5	1257
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	43.41	0.5	1005
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	43.49	0.5	975
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	43.57	0.5	1026
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.09	43.66	0.5	1075

Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.09	43.75	0.5	1086
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	43.82	0.5	992
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.06	43.88	0.5	978
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.15	44.03	0.5	1468
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	44.1	0.5	1453
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	44.18	0.5	1485
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.09	44.27	0.5	1421
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	44.34	0.5	1472
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	44.42	0.5	1475
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.09	44.51	0.5	1459
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.06	44.57	0.5	1448
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	44.64	0.5	1447
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.06	44.7	0.5	1453
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	44.78	0.5	1458
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	44.85	0.5	1484
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	44.92	0.5	1496
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	45	0.5	1552
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.06	45.06	0.5	1397
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	45.14	0.5	1501
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	45.21	0.5	1498
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	45.28	0.5	1472
Shut down and waited for pressure to bleed off				

Pumped 4% KCL	0.07	45.35	0.5	1489
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	45.43	0.5	1495
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.06	45.49	0.5	1453
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	45.57	0.5	1495
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	45.64	0.5	1500
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	45.72	0.5	1517
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	45.79	0.5	1501
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	45.87	0.5	1485
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.07	45.94	0.5	1492
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	46.02	0.5	1487
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.12	46.14	0.5	1478
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.12	46.26	0.5	1471
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.12	46.38	0.5	1493
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.12	46.5	0.5	1484
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.11	46.61	0.5	1453
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.12	46.73	0.5	1469
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.08	46.81	0.5	1425
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.13	46.94	0.5	1505
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.1	47.04	0.5	1495
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.1	47.14	0.5	1493
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.11	47.25	0.5	1491
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.1	47.35	0.5	1486

Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.14	47.49	0.5	1943
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.18	47.67	0.5	1912
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.1	47.77	0.5	1931
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.12	47.89	0.5	1997
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.1	47.99	0.5	1964
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.12	48.11	0.5	1980
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.11	48.22	0.5	1987
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.06	48.28	0.5	1995
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.19	48.47	0.5	2312
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.17	48.64	0.5	2463
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.13	48.77	0.5	2495
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.12	48.89	0.5	2490
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.12	49.01	0.5	2503
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.12	49.13	0.5	2487
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.12	49.25	0.5	2480
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.12	49.37	0.5	2512
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.09	49.46	0.5	2493
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.13	49.59	0.5	2496
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.11	49.7	0.5	2486
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.11	49.81	0.5	2489
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.11	49.92	0.5	2485
Shut down and waited for pressure to bleed off				

Pumped 4% KCL	0.11	50.03	0.5	2481
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.22	50.25	0.5	2951
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.23	50.48	0.5	2982
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.14	50.62	0.5	2975
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.14	50.76	0.5	2982
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.14	50.9	0.5	2975
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.14	51.04	0.8	2980
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.31	51.35	0.5	2952
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.15	51.5	0.5	2969
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.25	51.75	0.5	2951
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.25	52	0.5	2986
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.35	52.35	0.5	2926
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	0.47	52.82	0.5	2983
Shut down and waited for pressure to bleed off				
Pumped 4% KCL	8.23	61.05	0.5	3250
Shut down stage 1, loaded balls for stage 2				
Opened bypass on packer				
Spotted 7 1/2% FE HCL	11.9	72.95	2	3517
Spotted 7 1/2% FE HCL with 100 buoyant balls	23.8	96.75	0.5	322
Closed bypass on packer				
Pumped 4% KCL	60	156.75	0.5	3468
<u>General details</u>		<u>Pressure</u>		
ISIP		2960 psi		
5 Min		0 psi		
Max Treating Pressure		3468 psi		
Max Acid Rate		0.6 bpm		
Avg Treating Pressure		3425 psi		
Load to Recover		77.9 bbls		
Note: See 6-7 Acid stim 1 second data tab for details				
RD and released acid equipment, RU swab equipment and swabbed well as follows:				
Swab runs - 8				

Water cut - 55%  
Average rate - 264 bfpd  
Average fluid level - 3600  
Total fluid recovered - 48 bbls  
Perf intervals open -6973'-6982'  
See 6-7 Swab report for details.

Note: Rates are not accurate, only 7 bbls of the 80 bbls of the load water have been recovered.

Plan to continue swabbing / perforate 6873'-6898'

6/8/2012

Well flowed 20 bbls overnight. RU swab equipment and swabbed well as follows.

Swab runs - 14  
Water cut - 10%  
Average rate - 350 bfpd  
Average fluid level - 3750  
Total fluid recovered - 66 bbls  
Perf intervals open -6973'-6982'  
See 6-8 Swab report for details.

Opened bypass on packer, made 3 swab runs to recover oil from tubing. Reset plug at 6915', RU pump lines and pressure tested plug to 2500 psi. RD pump lines and pulled out of hole with tubing and packer. RU wireline unit and perforated well as follows:

Perf interval - 6873'-6898'  
Owen Part # SDP-3125-411NT4

.37 entry hole

25 gram charges

42.90" penetration (35.6" thru 4 1/2" liner and 7" casing string)

4" EXP gun loaded 6 spf on 60° phasing.

RD and released wireline unit. Run in hole with tubing and packer, set packer at 6806' with end of tubing at 6843'. Pressure tested packer. SWIFN

Plan to swab perf interval 6873'-6898' for rate and clean up.

6/9/2012

Opened well, 60 psi tubing, 0 psi casing. RU swab equipment and swabbed well as follows:

Swab runs - 17  
Water cut - 0-10%  
Average rate - 440 bfpd  
Average fluid level - 3750  
Total fluid recovered - 101 bbls  
Perf intervals open -6873'-6898'  
See 6-9 Swab report for details.

RD swab equipment, moved plug to 6999', set packer at 6806' to swab all perf intervals. RU swab equipment and swabbed well as follows:

Swab runs - 17  
Water cut - 0-10%  
Average rate - 650 bfpd  
Average fluid level - 3400  
Total fluid recovered - 129 bbls

Perf intervals open -6873'-6898', 6926'-6947', 6973'-6982'

See 6-9a Swab report for details.

Opened well to frac tank for the night.

Plan to lay down excess 2-7/8" tubing and all of the 2-3/8" tubing to prepare for pump install on Monday.

6/10/2012 Well flowed 100 bbls of oil overnight. Opened bypass on packer, RU swab equipment and made 2 swab runs to recover oil from the tubing. RD swab equipment, released retrievable plug and pulled out of hole with tubing, packer and plug. SWIFN

Plan to install ESP

6/11/2012 Opened well, 0 psi. RU cable spoolers and run in hole with centralizer, Centinel, motor, seal, pump, xo, 2 3/8" sub, Y-tool, xo, 2 7/8" sub, 1 joint, cup type SN and 157 joints to surface. ND BOP's, NU wellhead. RD service unit and started well into production.

Plan to clean up location.

6/12/2012 08 Hour production, 052 bopd, 119 bwpd, 45 Hz, BHP 956

6/13/2012 24 Hour production, 439 bopd, 002 bwpd, 45 Hz, BHP 913

6/14/2012 24 Hour production, 401 bopd, 003 bwpd, 45 Hz, BHP 917

Supervisor: *Tony E. Cook*

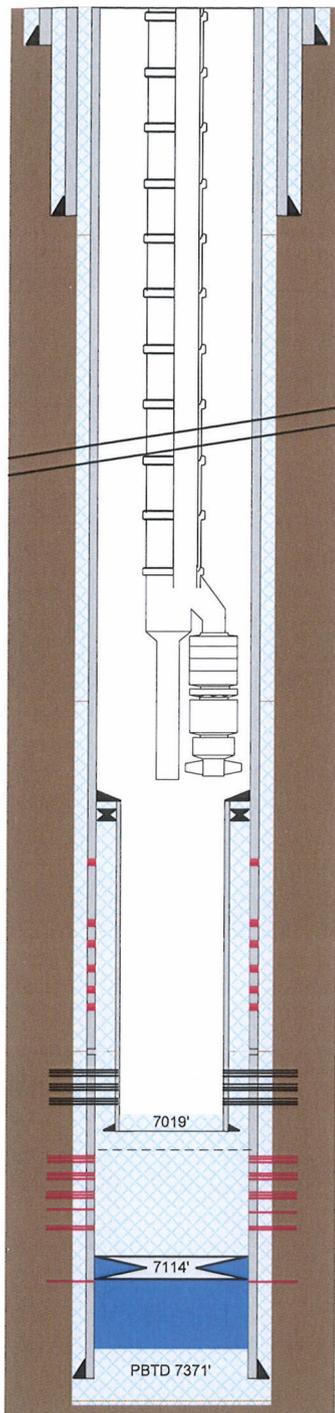
Rig Operator: Robert Miller



**Wolverine Federal 20-2**  
**API # 43-041-30056**  
**Covenant Field**  
**Section 20, T23S, R1W**  
**Sevier County, Utah**

Ground Elevation: 5,866'  
 KB Elevation: 5,892'

**(Not to Scale)**



**Deviated Well**

Surface: 188' FNL 2128' FWL, NE NW, 20-23S-1W  
 Top of Pay (6793' MD): 1968' FNL, 508' FWL, SW NW, 20-23S-1W  
 Total Depth (7465' MD): 1968' FNL, 508' FWL, SW NW, 20-23S-1W

**Conductor Casing (06/24/08)**

Size: 20", 0.25" wall  
 Depth Landed: 146' KB  
 Cement Data: Cemented to surface 16 yds redi-mix

**Surface Casing (11/05/08)**

Size/Wt/Grade: 9-5/8", 36#, K-55, STC, 8rd  
 Depth Landed: 2024' KB  
 Cement Data: 355 sks VeriCem (11.0 ppg, 3.48 cf/sk), 350 sks Premium G (15.8 ppg, 1.17 cf/sk)

**Production Casing (11/19/08)**

Size/Wt/Grade: 7", 26.0#, N-80 LTC, 8rd 0000'-4449',  
 7", 26.0#, HCL-80, LTC, 8rd 4459'-6719'  
 7", 26.0#, Stage tool 6719'-6721'  
 7", 26.0#, N-80 LTC, 8rd 6721'-7464'  
 Properties: 7240 psi burst, 6.151" drift, 6.276" ID, 0.0382 Bbl/ft capacity  
 Cement Data: Stage 1 - 210 sks 50/50 Prem Poz (14.4 ppg, 1.27 cf/sk)  
 Stage 2 Lead - 130 sks Varicem (11.0 ppg, 3.53 cf/sk)  
 Tail - 640 sks Premium "G" (15.8 ppg, 1.25 cf/sk)

**Casing liner (5/31/12)**

Size/Wt/Grade: 4 1/2" 11.6#, P-110, LTC 8rd  
 Properties: 10,690 psi burst, 3.875" drift, 4.0" ID, 0.01554 Bbl/ft capacity  
 Depth Landed: 7023'  
 Cement Data: 186 sks Mountain G (15.8 ppg, 1.15 cf/sk)

**Upper Navajo 1 Perforations**

6873'- 6898' MD (6681' - 6706' TVD), 25' 150 holes (6/08/12)  
 6926'- 6947' MD (6734' - 6755' TVD), 21' 126 holes (6/03/12)  
 6973'- 6982' MD (6781' - 6790' TVD), 09' 54 holes (5/19/12)

Mid-Perf = 6928' MD (6736' TVD), 55' M (55' TV), 330 holes

**Lower Navajo 1 Perforations (Squeezed all perfs 5/18/2012)**

7040'- 7044' MD (6346' - 6350' TVD), 04' 12 holes (06/14/11)  
 7048'- 7063' MD (6354' - 6369' TVD), 15' 45 holes (06/14/11)  
 7071'- 7077' MD (6377' - 6383' TVD), 06' 18 holes (11/29/11)  
 7088'- 7092' MD (6394' - 6398' TVD), 04' 12 holes (12/03/11)  
 7092'- 7102' MD (6399' - 6408' TVD), 10' 60 holes (06/05/11) Squeezed  
 7118'- 7120' MD (6424' - 6426' TVD), 02' 12 holes (06/05/11) Squeeze holes



**Wolverine Federal 20-2  
 API # 43-041-30056  
 Covenant Field  
 Section 20, T23S, R1W  
 Sevier County, Utah**

**Tubing (6/11/2012)**

End of BHA 4969' WLM (4394' TVD)  
 Centinel 4963' WLM (4389' TVD)  
 Pump intake 4951' WLM (4379' TVD)  
 Y-Tool Fish 4928' WLM (4360' TVD)  
 Seating Nipple 4888' WLM (4328' TVD)

**PBTD**

(12/03/11) 7112' WLM  
 (05/19/12) 7024' WLM (After plugging back lower Navajo)

**Tubing Detail (6/11/2012)**

	26.00	KB
	-3.00	Landed above GL
203	4884.69	Tubing - 2-7/8", 6.5#, N-80, EUE, 8rd
1	1.10	Seating nipple - 2-7/8", EUE, 8rd, 2.25" ID cup type
1	31.75	Tubing - 2-7/8", 6.5#, N-80, EUE, 8rd
1	6.25	Tubing - 2-7/8", 6.5#, L-80, EUE, 8rd
1	.79	2 7/8" x 2 3/8" Cross over
1	2.55	Weatherford Y-Tool 2" x 1 1/2" (1.144 ID instrument tube)
1	8.02	Tubing - 2-3/8", 6.5#, L-80, EUE, 8rd
1	0.79	2 7/8" x 2 3/8" Cross over
1	12.25	Pump w/ Intake
1	4.10	Seal - Model
1	8.16	Motor -
1	4.09	Downhole pressure sensor, Centinel III
1	1.20	Collapsible centralizer
	-20.00	Wireline correction
	<hr/>	
	4968.74'	KB WLM

Note: No check valve in this well.  
 Blanking plug in Y-Tool has a 7/8" OD catch rod. Y-Tool ID - 1.144"  
 Tubing capacity = 0.00579 Bbl/ft, Burst = 10570 psi, Joint Yield = 144960 lbs

**Directional Data:**

<u>MD</u>	<u>TVD</u>	<u>Incl.</u>	<u>MD</u>	<u>TVD</u>	<u>Incl.</u>
500	500	1.2	4000	3652	40.8
750	750	1.1	4500	4030	40.8
1000	1000	1.1	5000	4419	36.1
1250	1250	4.6	5500	4848	25.6
1500	1497	11.5	6000	5318	13.7
2000	1976	18.4	6500	5808	10.6
2500	2451	22.2	7000	6306	0.3
3000	2890	36.1	7465	6771	0.3
3500	3273	40.6			



**Wolverine Federal 20-2**  
**API # 43-041-30056**  
**Covenant Field**  
**Section 20, T23S, R1W**  
**Sevier County, Utah**

**Stimulation:**

06/07/12: 6926'-6947', 2500 gallons 7-½% FE HCL, 100 buoyant ball sealers, ISIP 2960 psi, MIP 3468 psi,  
MaxRate 0.6 BPM

06/04/12: 6973'-6982', 1000 gallons 7-½% FE HCL, No balls, ISIP 3240 psi, MIP 3537 psi, MaxRate 0.8  
BPM

06/15/11: 7040'-7044' & 7048'-7063' w/ 1500 gallons 7-½% FE HCL acid and 50 balls @ 3 BPM ATP = 2400  
psi FTP = 1950 psi

**Wellhead Information:**

- Tubing head flange is 7-1/16", 5M with a 2-7/8" EUE 8rd top connection.

**Notes:**

Surface Location: Latitude = 38° 47' 41.0386", Longitude = -111° 56' 02.1076" NAD 83  
(4/7/09): Available Logs: DLL/MSFL, SDL/DSN, FWS, XRMI, CBL

RECEIVED

Form 3160-5  
(April 2004)

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

JUL 20 2012

FORM APPROVED  
OMB No. 1004-0137  
Expires: March 31, 2007

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE- Other instructions on reverse side.**

1. Type of Well  
 Oil Well  Gas Well  Other

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

3a. Address  
**55 Campau NW, Grand Rapids, Michigan 49503-2616**

3b. Phone No. (include area code)  
**616-458-1150**

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
**188' FNL, 2128' FWL (NE/4 NW/4), Section 20, T23S, R1W, SLB&M**

5. Lease Serial No.  
**UTU-73528**

6. If Indian, Allottee or Tribe Name  
**NA**

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

8. Well Name and No.  
**Wolverine Federal 20-2**

9. API Well No.  
**43-041-30056**

10. Field and Pool, or Exploratory Area  
**Covenant Field Navajo**

11. County or Parish, State  
**Sevier County, Utah**

**12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <u>workover</u>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplete horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Wolverine completed a workover on the Wolverine Federal 20-2 on June 11, 2012. Existing perforations were plugged back with a balanced cement plug across perforations at 7040' - 7044', 7048' - 7063', 7071' - 7077' & 7088' - 7092'. Casing deformation was found from 5336' - 6513' with a caliber log and a 4-1/2" 11.6# P-110 liner was subsequently run from PBDT at 7022' to 4985' to isolate the damaged 7" 26# casing. The liner was cemented with 210 sacks of 15.8 ppg premium G cement. Perforations were added in the Navajo at 6873' - 6898', 6926' - 6947' & 6973' - 6982' and acidized with 3500 gallons of 7-1/2% FE HCL with ball sealers. The well returned to production at 430 BOPD and 2 BWPD with a FBHP of 913 psi at pump intake. See attached WBD and Daily Reports for additional details.

RECEIVED

JUN 28 2012

14. I hereby certify that the foregoing is true and correct  
Name (Printed/Typed)

**Matthew Rivers**

Signature

Title **Production Engineer**

Date

**06/27/2012**

**Richfield BLM Field Office**

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Conditions of approval, if any, are attached. Approval of this notice 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.

Title

Date

Office

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.

(Instructions on page 2)

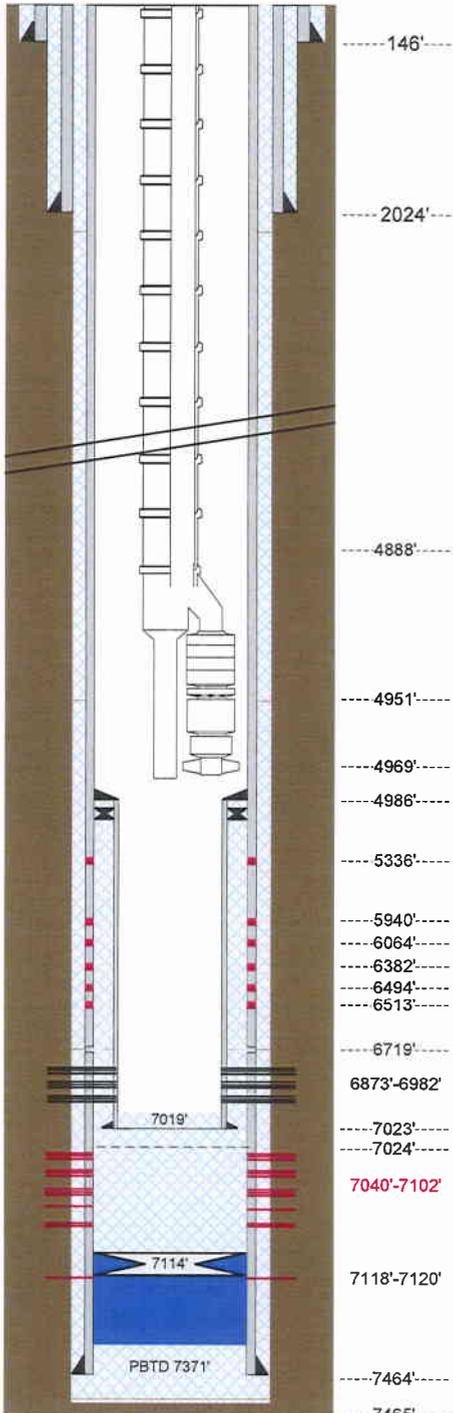
Accepted For Record Purposes



**Wolverine Federal 20-2**  
**API # 43-041-30056**  
**Covenant Field**  
**Section 20, T23S, R1W**  
**Sevier County, Utah**

Ground Elevation: 5,866'  
 KB Elevation: 5,892'

**(Not to Scale)**



**Deviated Well**

Surface: 188' FNL 2128' FWL, NE NW, 20-23S-1W  
 Top of Pay (6793' MD): 1968' FNL, 508' FWL, SW NW, 20-23S-1W  
 Total Depth (7465' MD): 1968' FNL, 508' FWL, SW NW, 20-23S-1W

**Conductor Casing (06/24/08)**

Size: 20", 0.25" wall  
 Depth Landed: 146' KB  
 Cement Data: Cemented to surface 16 yds redi-mix

**Surface Casing (11/05/08)**

Size/Wt/Grade: 9-5/8", 36#, K-55, STC, 8rd  
 Depth Landed: 2024' KB  
 Cement Data: 355 sks VeriCem (11.0 ppg, 3.48 cf/sk), 350 sks Premium G (15.8 ppg, 1.17 cf/sk)

**Production Casing (11/19/08)**

Size/Wt/Grade: 7", 26.0#, N-80 LTC, 8rd	0000'-4449'
7", 26.0#, HCL-80, LTC, 8rd	4459'-6719'
7", 26.0#, Stage tool	6719'-6721'
7", 26.0#, N-80 LTC, 8rd	6721'-7464'

Properties: 7240 psi burst, 6.151" drift, 6.276" ID, 0.0382 Bbl/ft capacity  
 Cement Data: Stage 1 - 210 sks 50/50 Prem Poz (14.4 ppg, 1.27 cf/sk)  
 Stage 2 Lead - 130 sks Varicem (11.0 ppg, 3.53 cf/sk)  
 Tail - 640 sks Premium "G" (15.8 ppg, 1.25 cf/sk)

**Casing liner (5/31/12)**

Size/Wt/Grade: 4 1/2" 11.6#, P-110, LTC 8rd  
 Properties: 10,690 psi burst, 3.875" drift, 4.0" ID, 0.01554 Bbl/ft capacity  
 Depth Landed: 7023'  
 Cement Data: 186 sks Mountain G (15.8 ppg, 1.15 cf/sk)

**Upper Navajo 1 Perforations**

6873'- 6898' MD (6681' - 6706' TVD), 25' 150 holes (6/08/12)  
 6926'- 6947' MD (6734' - 6755' TVD), 21' 126 holes (6/03/12)  
 6973'- 6982' MD (6781' - 6790' TVD), 09' 54 holes (5/19/12)

Mid-Perf = 6928' MD (6736' TVD), 55' M (55' TV), 330 holes

**Lower Navajo 1 Perforations (Squeezed all perfs 5/18/2012)**

7040'- 7044' MD (6346' - 6350' TVD), 04' 12 holes (06/14/11)  
 7048'- 7063' MD (6354' - 6369' TVD), 15' 45 holes (06/14/11)  
 7071'- 7077' MD (6377' - 6383' TVD), 06' 18 holes (11/29/11)  
 7088'- 7092' MD (6394' - 6398' TVD), 04' 12 holes (12/03/11)  
 7092'- 7102' MD (6399' - 6408' TVD), 10' 60 holes (06/05/11) Squeezed  
 7118'- 7120' MD (6424' - 6426' TVD), 02' 12 holes (06/05/11) Squeeze holes



**Wolverine Federal 20-2**  
**API # 43-041-30056**  
**Covenant Field**  
**Section 20, T23S, R1W**  
**Sevier County, Utah**

**Tubing (6/11/2012)**

End of BHA 4969' WLM (4394' TVD)  
 Centinel 4963' WLM (4389' TVD)  
 Pump intake 4951' WLM (4379' TVD)  
 Y-Tool Fish 4928' WLM (4360' TVD)  
 Seating Nipple 4888' WLM (4328' TVD)

**PBTD**

(12/03/11) 7112' WLM  
 (05/19/12) 7024' WLM (After plugging back lower Navajo)

**Tubing Detail (6/11/2012)**

	26.00	KB
	-3.00	Landed above GL
203	4884.69	Tubing - 2-7/8", 6.5#, N-80, EUE, 8rd
1	1.10	Seating nipple - 2-7/8", EUE, 8rd, 2.25" ID cup type
1	31.75	Tubing - 2-7/8", 6.5#, N-80, EUE, 8rd
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1	4.10	Seal - Model
1	8.16	Motor -
1	4.09	Downhole pressure sensor, Centinel III
1	1.20	Collapsible centralizer
	-20.00	Wireline correction
	<hr/>	
	4968.74'	KB WLM

Note: No check valve in this well.  
 Blanking plug in Y-Tool has a 7/8" OD catch rod. Y-Tool ID - 1.144"  
 Tubing capacity = 0.00579 Bbl/ft, Burst = 10570 psi, Joint Yield = 144960 lbs

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**Wolverine Federal 20-2**  
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(4/7/09): Available Logs: DLL/MSFL, SDL/DSN, FWS, XRMI, CBL