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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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.

One Riverfront Plaza • 55 Campau, N.W. • Grand Rapids, MI 49503-2616 • 616.458.1150 • FAX 616.458.0869

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

Form 3160-3
(February 2005)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

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

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

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

8. Lease Name and Well No. **Wolverine Federal 20-4**

9. API Well No. 43-041-30657

1a. Type of work: ☑ DRILL ☐ REENTER

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

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

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

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

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

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface **208' FNL, 2141' FWL, NE/4 NW/4, Section 20**
At proposed prod. zone **658' FNL, 1855' FWL, NE/4 NW/4, Section 20**

11. Sec., T. R. M. or Blk. and Survey or Area **Section 20, T23S, R1W, SLB&M**

14. Distance in miles and direction from nearest town or post office* **4 miles southeast of Sigurd, Utah**

12. County or Parish **Sevier**

13. State **UT**

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) **599**

16. No. of acres in lease **8236**

17. Spacing Unit dedicated to this well **40 acres**

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. **1178**

19. Proposed Depth **6740' MD, 6700' TVD**

20. BLM/BIA Bond No. on file **BLM WY3329**

21. Elevations (Show whether DF, KDB, RT, GL, etc.) **5866' GL, 5892' KB**

22. Approximate date work will start* **05/15/2008**

23. Estimated duration **40 days**

24. Attachments

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

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

25. Signature Edward A Higuera — Name *(Printed/Typed)* **Edward A. Higuera** — Date **01/18/2008**

Title **Manager - Development**

Approved by *(Signature)* — Name *(Printed/Typed)* BRADLEY G. HILL — Date 01-31-08

Title — Office ENVIRONMENTAL MANAGER

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

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

*(Instructions on page 2)

Federal Approval of this Action is Necessary

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Surf
418973X
4294200Y
38.794699
-111.933015

BHL
418886X
4294060Y
38.793424
-111.934002

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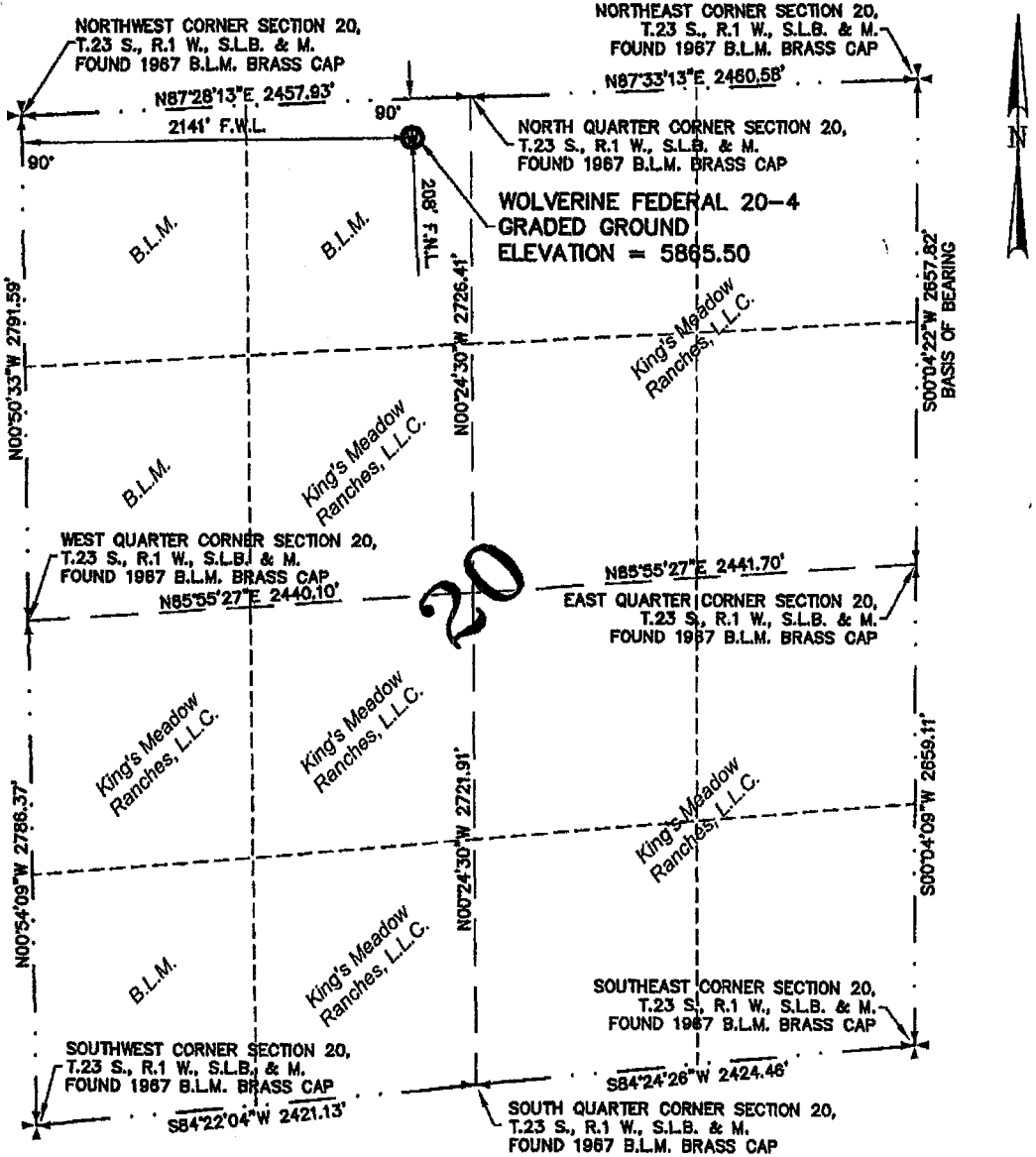
Section 20, T.23 S., R.1 W., S.L.B. & M.



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°47'40.8381" (38.794677250) NAD 83
LONGITUDE: -111°56'01.9287" (-111.933869361) 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. SEVIER 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 20-4 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., SEVIER 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.

1000' 500' 0' 1000'
SCALE

CERTIFICATE

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

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

01/16/08

TREVOR R. GADD P.L.S. # 343639

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

Well Location Plat for

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

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

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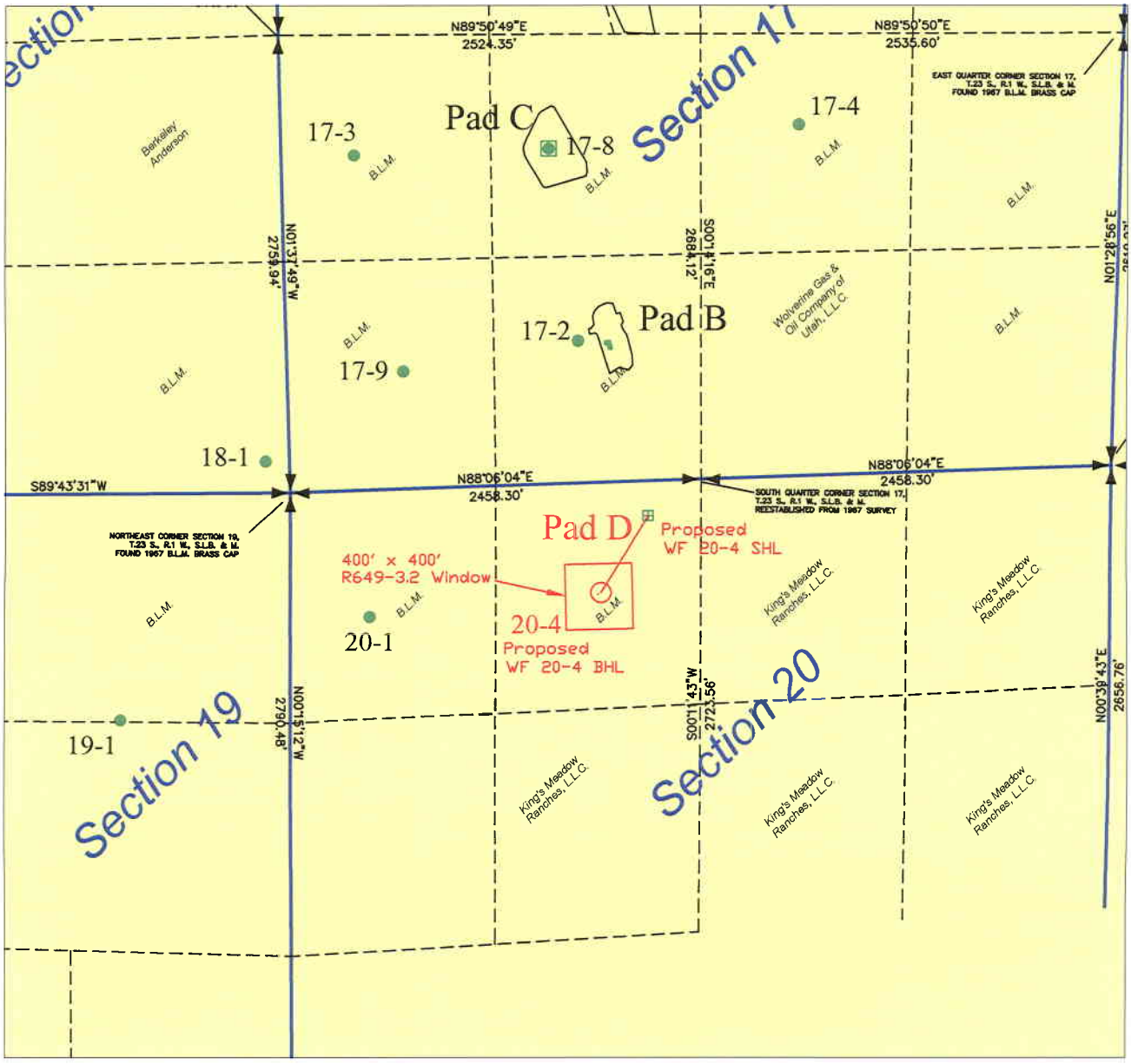

Wolverine Federal 20-4 Well Location

SHL: 208' FNL, 2141' FWL, NE1/4 NW1/4 Sec. 20 T23S R1W

BHL: 658' FNL, 1855' FWL, NE1/4 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 20-4
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 6740' (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:	208' FNL, 2141' FWL, Section 20, T23S, R1W, S.L.B. & M.
Bottom Hole Location @ Navajo 1 target	658' FNL, 1855' FWL, Section 20, T23S, R1W, S.L.B. & M.
Bottom Hole Location @ total depth	658' FNL, 1855' 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 8 degrees hole angle at 2025' (2020' 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 8 degrees from vertical to approximately 4900' MD, and then allowed to drop to vertical to penetrate the Twin Creek and Navajo formations to a well total depth of 6740' (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 20-4**

Surface Location: 208' FNL, 2141' FWL
NE/4 NW/4 Section 20, T23S, R1W, S.L.B. & M.
Sevier County, Utah

TD Bottom-Hole Location: 658' FNL, 1855' 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:

Formation	TVD Interval (KB)	MD Interval (KB)	Contents	Pressure Gradient
Arapien	26' – 5881'	26' – 5918'		
Twin Creek 1	5881' – 6211'	5918' – 6248'	Oil & water	0.46 psi/ft
Navajo 1	6211' –6700'	6248' – 6740'	Oil & water	0.46 psi/ft
Total Depth	6700'	6740'		

II. Well Control:

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

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

Wellhead Equipment (5M Min.):

BOPE Item	Flange Size and Rating
Annular Preventer	13-5/8" 5M
Double Rams (5" Pipe - top, Blind - bottom)	13-5/8" 10M
Drilling Spool w/ 2 side outlets (4" Choke Line, 4" Kill Line)	13-5/8" 10M x 13-5/8" 10M
Single Ram (Pipe)	13-5/8" 10M
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.):

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

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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.

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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-4200'kb
	7.000"	23.0	HCL-80	LTC	7.656"	4200'- 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		6740
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
Burst Safety Factor (1.10 Minimum)	**3.68**		**2.47**
Max. Hydrostatic Outside w/ Dry Inside (psi)	957		3658
Collapse Rating	2020		6830
Collapse Safety Factor (1.125 Minimum)	**2.11**		**1.87**
Casing Weight in Air (kips)	72.9		162.6
Body Yield (kips)	564.0		532.0
Joint Strength (kips)	453.0		435.0
Tension Safety Factor (1.80 Minimum)	**6.21**		**2.67**

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.

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B. Cementing Program

Casing Size	Cement Slurry	Quantity (sks)	Density (ppg)	Yield (ft^3/sk)
9.625"	Lead: CBM Lite	225	10.5	4.12
	Tail: Premium Plus	275	15.6	1.19
7.000"	Lead: Elastiseal™ N2 foamed	400	10.0	NA
	Tail: Elastiseal™ non-foamed	110	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 (6740') 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.

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IV. Mud Program:

Depth	Mud Weight (ppg)	Mud Type	Viscosity	Fluid Loss
0 – 2025'	8.4 – 9.2	Fresh Water	26 – 50	N/C to 12 cc
2025' – 6740'	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_2S) 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

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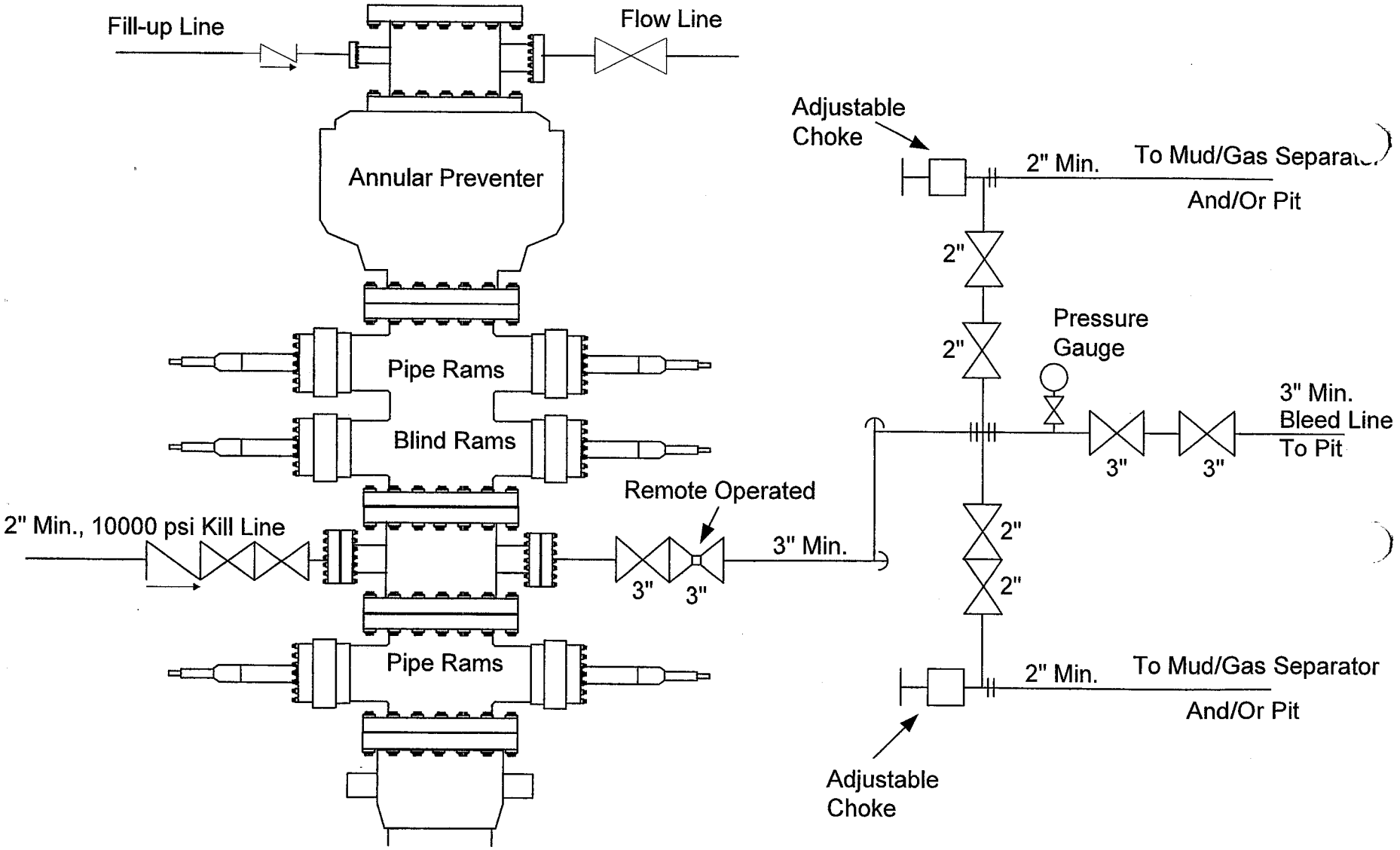
Wolverine Gas and Oil Company of Utah, LLC
Covenant Field D1 Pad Well
BOPE Schematic

(Not to Scale)



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WOLVERINE GAS & OIL COMPANY

BAKER HUGHES INTEQ

Location:	UTAH	Slot:	Wolverine Federal 20-4 208'FNL & 2141'FWL
Field:	SEVIER COUNTY	Well:	Wolverine Federal 20-4
Facility:	SEC.20-T23S-R1W	Wellbore:	Wolverine Federal 20-4 PWB

Plot reference wellpath is Wolverine Federal 20-4 PWP	
True vertical depths are referenced to Rig on Wolverine Federal 20-4 208'FNL & 2141'FWL (RT)	Grid System: NAD83 / Lambert Utah State Planes, Central Zone (4302), US feet
Measured depths are referenced to Rig on Wolverine Federal 20-4 208'FNL & 2141'FWL (RT)	North Reference: True north
Rig on Wolverine Federal 20-4 208'FNL & 2141'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

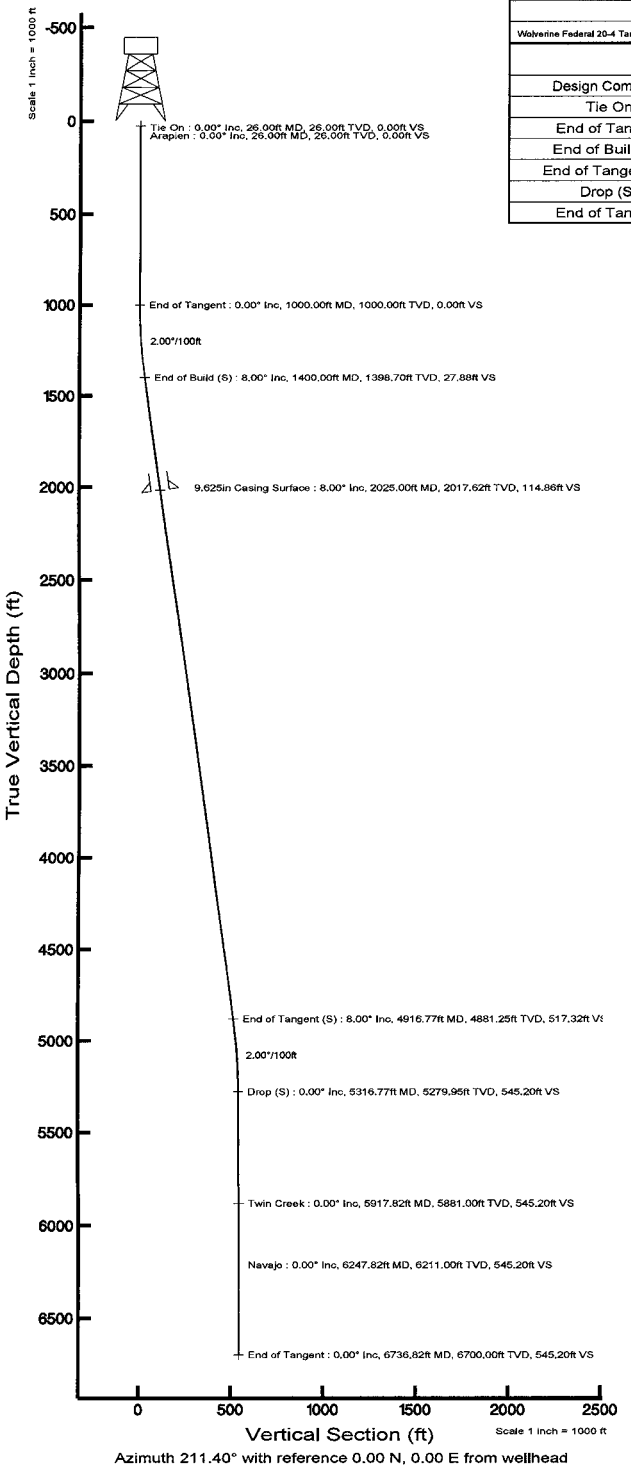
Facility Name			Grid East (USft)	Grid North (USft)	Latitude	Longitude
SEC.20-T23S-R1W			1516740.440	6730025.867	38° 47' 40.989"N	111° 56' 01.992"W
Slot	**Local N (ft)**	**Local E (ft)**	**Grid East (USft)**	**Grid North (USft)**	**Latitude**	**Longitude**
Wolverine Federal 20-4 208'FNL & 2141'FWL	-15.23	4.89	1516745.259	6730010.616	38° 47' 40.838"N	111° 56' 01.930"W
Rig on Wolverine Federal 20-4 208'FNL & 2141'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 20-4 208'FNL & 2141'FWL (RT) to Mean Sea Level					5891ft	

Targets

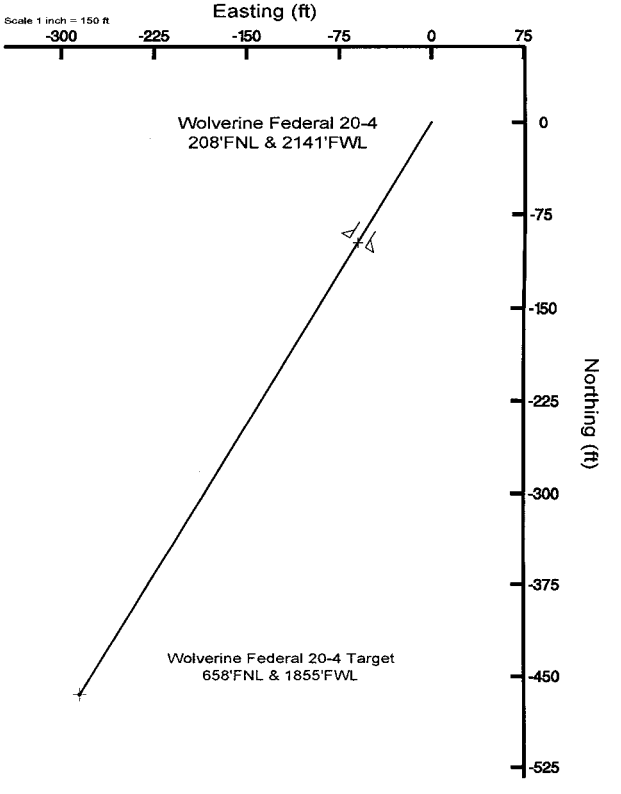
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (USft)	Grid North (USft)	Latitude	Longitude
Wolverine Federal 20-4 Target 658'FNL & 1855'FWL		6211.00	-465.36	-284.05	1516456.53	6729546.62	38° 47' 36.238"N	111° 56' 05.517"W

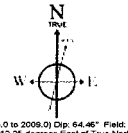
Well Profile Data

Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	26.00	0.000	211.400	26.00	0.00	0.00	0.00	0.00
End of Tangent	1000.00	0.000	211.400	1000.00	0.00	0.00	0.00	0.00
End of Build (S)	1400.00	8.000	211.400	1398.70	-23.80	-14.53	2.00	27.88
End of Tangent (S)	4916.77	8.000	211.400	4881.25	-441.56	-269.53	0.00	517.32
Drop (S)	5316.77	0.000	211.400	5279.95	-465.36	-284.05	2.00	545.20
End of Tangent	6736.82	0.000	211.400	6700.00	-465.36	-284.05	0.00	545.20



Azimuth 211.40° with reference 0.00 N, 0.00 E from wellhead





BGGM (1945.0 to 2009.0) Dip: 64.46° Field: 51664 nT
Magnetic North is 12.25 degrees East of True North (at 01/04/08)

To correct azimuth from Magnetic to True add 12.25 degrees

CONFIDENTIAL

Planned Wellpath Report

Wolverine Federal 20-4 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine Federal 20-4 208'FNL & 2141'FWL**
Area	**UTAH**	Well	**Wolverine Federal 20-4**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine Federal 20-4 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 15:50:33**
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	-15.23	4.89	1516745.26	6730010.62	**38 47 40.838N**	**111 56 01.930W**
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 20-4 208'FNL & 2141'FWL (RT) to Facility Vertical Datum	**5891.(**
Horizontal Reference Pt	**Slot**	Rig on Wolverine Federal 20-4 208'FNL & 2141'FWL (RT) to Mean Sea Level	**5891.(**
Vertical Reference Pt	**Rig on Wolverine Federal 20-4 208'FNL & 2141'FWL (RT)**	Facility Vertical Datum to Mud Line (Facility)	**0.00**
MD Reference Pt	**Rig on Wolverine Federal 20-4 208'FNL & 2141'FWL (RT)**	Section Origin	**N 0.0(**
Field Vertical Reference	**Mean Sea Level**	Section Azimuth	**211.4(**

CONFIDENTIAL

Planned Wellpath Report

Wolverine Federal 20-4 PWP

BAKER HUGHES
INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine Federal 20-4 208'FNL & 2141'FWL**
Area	**UTAH**	Well	**Wolverine Federal 20-4**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine Federal 20-4 PWB**
Facility	**SEC.20-T23S-R1W**		

WELLPATH DATA (74 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
0.00†	0.000	211.400	0.00	0.00	0.00	0.00	0.00
26.00	0.000	211.400	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	211.400	1000.00	0.00	0.00	0.00	0.00
1026.00†	0.520	211.400	1026.00	0.12	-0.10	-0.06	2.00
1126.00†	2.520	211.400	1125.96	2.77	-2.36	-1.44	2.00
1226.00†	4.520	211.400	1225.77	8.91	-7.60	-4.64	2.00
1326.00†	6.520	211.400	1325.30	18.53	-15.82	-9.65	2.00
1400.00	8.000	211.400	1398.70	27.88	-23.80	-14.53	2.00
1426.00†	8.000	211.400	1424.45	31.50	-26.89	-16.41	0.00
1526.00†	8.000	211.400	1523.48	45.42	-38.76	-23.66	0.00
1626.00†	8.000	211.400	1622.50	59.33	-50.64	-30.91	0.00
1726.00†	8.000	211.400	1721.53	73.25	-62.52	-38.16	0.00
1826.00†	8.000	211.400	1820.56	87.17	-74.40	-45.42	0.00
1926.00†	8.000	211.400	1919.58	101.08	-86.28	-52.67	0.00
2026.00†	8.000	211.400	2018.61	115.00	-98.16	-59.92	0.00
2126.00†	8.000	211.400	2117.64	128.92	-110.04	-67.17	0.00
2226.00†	8.000	211.400	2216.66	142.84	-121.92	-74.42	0.00
2326.00†	8.000	211.400	2315.69	156.75	-133.80	-81.67	0.00
2426.00†	8.000	211.400	2414.72	170.67	-145.68	-88.92	0.00
2526.00†	8.000	211.400	2513.74	184.59	-157.56	-96.17	0.00
2626.00†	8.000	211.400	2612.77	198.51	-169.44	-103.42	0.00
2726.00†	8.000	211.400	2711.80	212.42	-181.31	-110.67	0.00
2826.00†	8.000	211.400	2810.82	226.34	-193.19	-117.93	0.00
2926.00†	8.000	211.400	2909.85	240.26	-205.07	-125.18	0.00
3026.00†	8.000	211.400	3008.88	254.18	-216.95	-132.43	0.00
3126.00†	8.000	211.400	3107.90	268.09	-228.83	-139.68	0.00
3226.00†	8.000	211.400	3206.93	282.01	-240.71	-146.93	0.00
3326.00†	8.000	211.400	3305.96	295.93	-252.59	-154.18	0.00
3426.00†	8.000	211.400	3404.98	309.84	-264.47	-161.43	0.00
3526.00†	8.000	211.400	3504.01	323.76	-276.35	-168.68	0.00
3626.00†	8.000	211.400	3603.04	337.68	-288.23	-175.93	0.00

CONFIDENTIAL

Planned Wellpath Report

Wolverine Federal 20-4 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine Federal 20-4 208'FNL & 2141'FWL**
Area	**UTAH**	Well	**Wolverine Federal 20-4**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine Federal 20-4 PWB**
Facility	**SEC.20-T23S-R1W**		

WELLPATH DATA (74 stations) † = interpolated/extrapolated station

MD [feet]	Inclination [°]	Azimuth [°]	TVD [feet]	Vert Sect [feet]	North [feet]	East [feet]	DLS [°/100ft]
3726.00†	8.000	211.400	3702.07	351.60	-300.11	-183.19	0.00
3826.00†	8.000	211.400	3801.09	365.51	-311.98	-190.44	0.00
3926.00†	8.000	211.400	3900.12	379.43	-323.86	-197.69	0.00
4026.00†	8.000	211.400	3999.15	393.35	-335.74	-204.94	0.00
4126.00†	8.000	211.400	4098.17	407.27	-347.62	-212.19	0.00
4226.00†	8.000	211.400	4197.20	421.18	-359.50	-219.44	0.00
4326.00†	8.000	211.400	4296.23	435.10	-371.38	-226.69	0.00
4426.00†	8.000	211.400	4395.25	449.02	-383.26	-233.94	0.00
4526.00†	8.000	211.400	4494.28	462.94	-395.14	-241.19	0.00
4626.00†	8.000	211.400	4593.31	476.85	-407.02	-248.44	0.00
4726.00†	8.000	211.400	4692.33	490.77	-418.90	-255.70	0.00
4826.00†	8.000	211.400	4791.36	504.69	-430.78	-262.95	0.00
4916.77	8.000	211.400	4881.25	517.32	-441.56	-269.53	0.00
4926.00†	7.815	211.400	4890.39	518.59	-442.64	-270.19	2.00
5026.00†	5.815	211.400	4989.68	530.46	-452.77	-276.37	2.00
5126.00†	3.815	211.400	5089.32	538.85	-459.94	-280.75	2.00
5226.00†	1.815	211.400	5189.19	543.76	-464.13	-283.31	2.00
5316.77	0.000	211.400	5279.95[1]	545.20	-465.36	-284.05	2.00
5326.00†	0.000	0.000	5289.18	545.20	-465.36	-284.05	0.00
5426.00†	0.000	0.000	5389.18	545.20	-465.36	-284.05	0.00
5526.00†	0.000	0.000	5489.18	545.20	-465.36	-284.05	0.00
5626.00†	0.000	0.000	5589.18	545.20	-465.36	-284.05	0.00
5726.00†	0.000	0.000	5689.18	545.20	-465.36	-284.05	0.00
5826.00†	0.000	0.000	5789.18	545.20	-465.36	-284.05	0.00
5926.00†	0.000	0.000	5889.18	545.20	-465.36	-284.05	0.00
6026.00†	0.000	0.000	5989.18	545.20	-465.36	-284.05	0.00
6126.00†	0.000	0.000	6089.18	545.20	-465.36	-284.05	0.00
6226.00†	0.000	0.000	6189.18	545.20	-465.36	-284.05	0.00
6326.00†	0.000	0.000	6289.18	545.20	-465.36	-284.05	0.00
6426.00†	0.000	0.000	6389.18	545.20	-465.36	-284.05	0.00
6526.00†	0.000	0.000	6489.18	545.20	-465.36	-284.05	0.00
6626.00†	0.000	0.000	6589.18	545.20	-465.36	-284.05	0.00
6726.00†	0.000	0.000	6689.18	545.20	-465.36	-284.05	0.00
6736.82	0.000	211.400	6700.00	545.20	-465.36	-284.05	0.00

HOLE & CASING SECTIONS

Ref Wellbore: Wolverine Federal 20-4 PWB Ref Wellpath: Wolverine Federal 20-4 PWP

String/Diameter	Start MD [feet]	End MD [feet]	Interval [feet]	Start TVD [feet]	End TVD [feet]	Start N/S [feet]	Start E/W [feet]	End N/S [feet]	End E/W [feet]
9.625in Casing Surface	26.00	2025.00	1999.00	26.00	2017.62	0.00	0.00	-98.04	-59.84

CONFIDENTIAL

Planned Wellpath Report

Wolverine Federal 20-4 PWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine Federal 20-4 208'FNL & 2141'FWL**
Area	**UTAH**	Well	**Wolverine Federal 20-4**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine Federal 20-4 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 20-4 Target 658'FNL & 1855'FWL		6211.00	-465.36	-284.05	1516458.93	6729546.62	38 47 36.238N	111 56 05.517W	point

SURVEY PROGRAM Ref Wellbore: Wolverine Federal 20-4 PWB Ref Wellpath: Wolverine Federal 20-4 PWP

Start MD [feet]	End MD [feet]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	6736.82	MTC (Collar, pre-2000) (Standard)		Wolverine Federal 20-4 PWB

WELLPATH COMMENTS

MD [feet]	Inclination [degrees]	Azimuth [degrees]	TVD [feet]	Comment
26.00	0.000	211.400	26.00	Arapien
5917.82	0.000	211.400	5881.00	Twin Creek
6247.82	0.000	211.400	6211.00	Navajo

CONFIDENTIAL

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

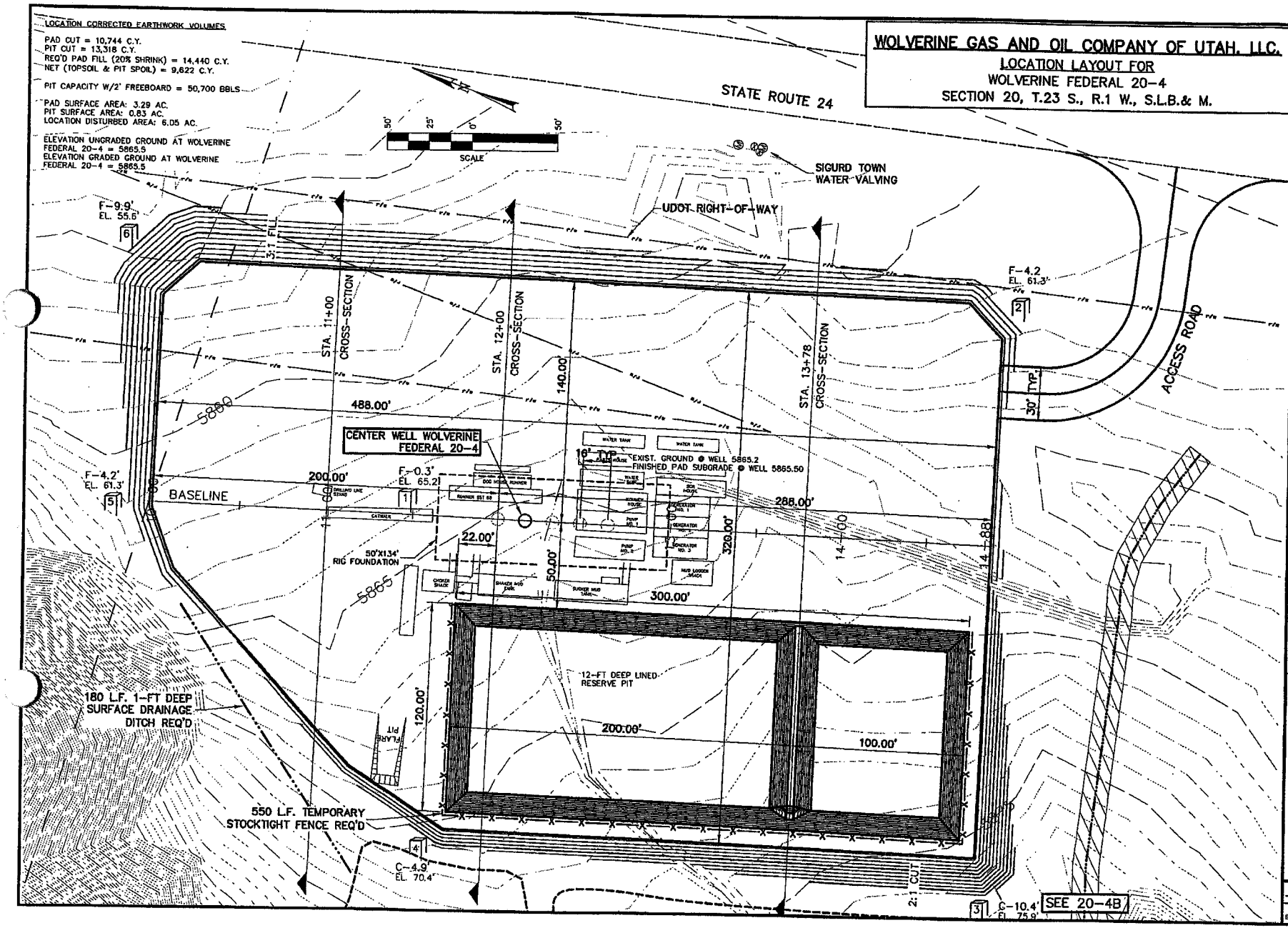
PAD SURFACE AREA: 3.29 AC.
PIT SURFACE AREA: 0.83 AC.
LOCATION DISTURBED AREA: 6.05 AC.

ELEVATION UNGRADED GROUND AT WOLVERINE FEDERAL 20-4 = 5865.5
ELEVATION GRADED GROUND AT WOLVERINE FEDERAL 20-4 = 5865.5

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC.

LOCATION LAYOUT FOR WOLVERINE FEDERAL 20-4

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



NO.	DATE	REMARKS
		REVISIONS
		ORIGINAL SUBMISSION FOR AUTHORIZATION

DWG CREATED: 04/11/2007 LAST UPDATE: 1/17/2008
DWG NAME: APD4
SHT SIZE: D1 & E2
PEM FILE:
SCALE: 1"=50'

Jones & DeMille Engineering
1535 South 1100 West • Richfield, Utah 84701
Phone (435) 896-8266 Fax (435) 896-8268
www.jonesanddemille.com

DESIGN: . CHECK: . REVIEW
DRAWN: L.G. 04-07 CHECK: D.R. 04-07 DATE: .
QUANT: . CHECK: . BY: .

APPROVAL RECOMM: DATE PROJECT DESIGN ENGINEER
APPROVED: DATE

Wolverine Gas & Oil Co. of Utah LLC
FEDERAL 20-4
SITE PLAN
PROJECT NUMBER: 0703-201

SEVIER COUNTY
SHEET NO. 20-4A

CONFIDENTIAL

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

CONFIDENTIAL

FORM 9

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 ☑ GAS WELL ☐ OTHER

8. WELL NAME and NUMBER: Wolverine Federal 20-4

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

9. API NUMBER: 4304130057

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: 208' FNL, 2141' 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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: Status Report
	☐ CONVERT WELL TYPE	☐ 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 20-4 is one of five wells being drilled from a single drilling pad. Drilling operations were completed on 12/30/08. A coiled tubing unit was used to drill out the stage tool and a CBL was run during March, 2009. Completion operations on this well will resume after other wells on the drilling pad have been completed.

NAME (PLEASE PRINT) Ellis M. Peterson

TITLE Sr. Production Engineer

SIGNATURE Ellis M. Peterson

DATE 3/27/2009

(This space for State use only)

CONFIDENTIAL

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC.

LOCATION LAYOUT FOR
WOLVERINE FEDERAL 20-4
SECTION 20, T.23 S., R.1 W., S.L.B.& M.

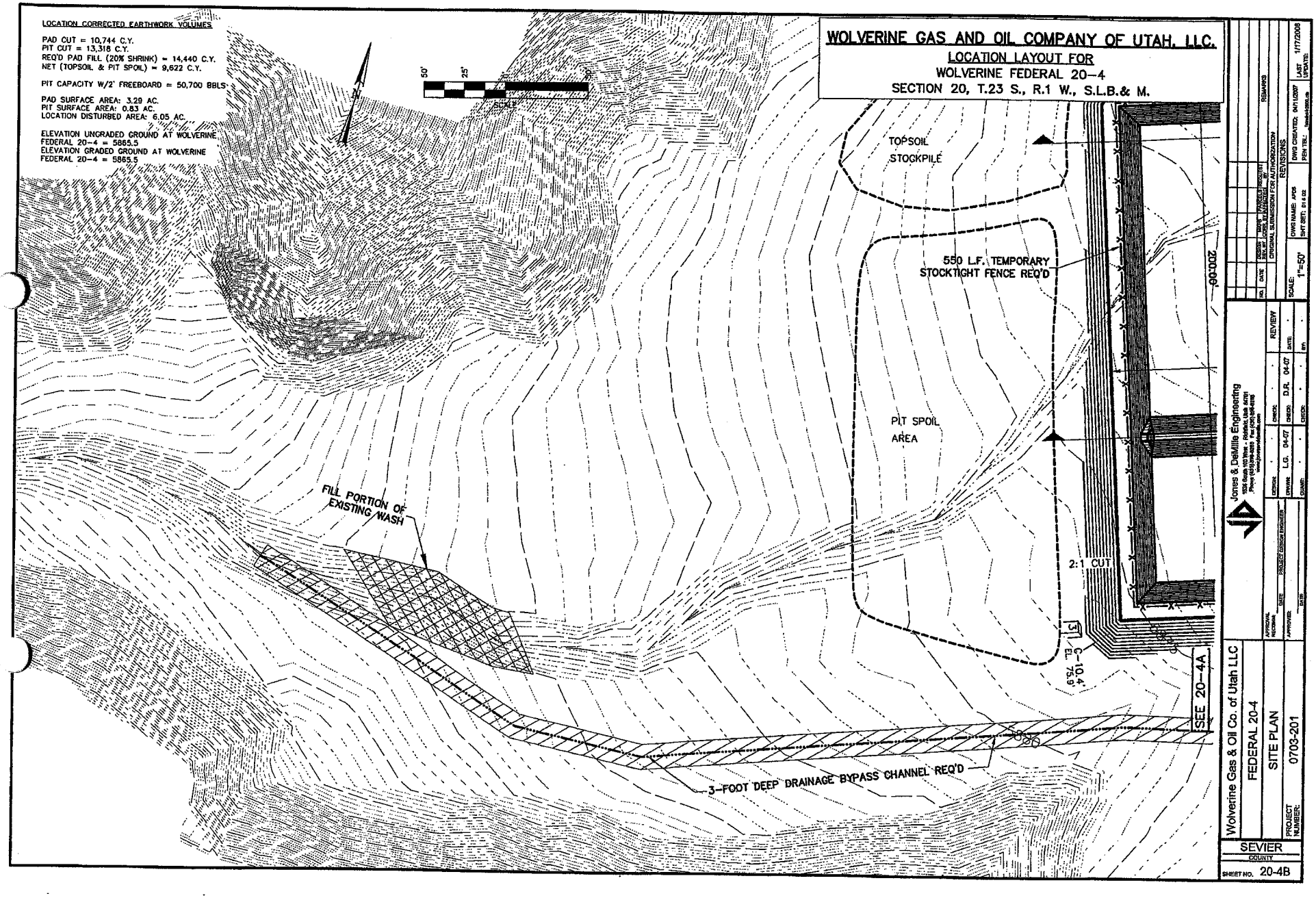
LOCATION CORRECTED EARTHWORK VOLUMES

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 20-4 = 5865.5
ELEVATION GRADED GROUND AT WOLVERINE FEDERAL 20-4 = 5865.5



NO.	DATE	REVISIONS	REMARKS
		ORIGINAL SUBMISSION FOR AUTHORIZATION	

SCALE: 1"=50'
DWG NAME: JPPS
SHT SIZE: D x 02
DWG CREATED: 04/11/2007
PEN TBL: Michael-Medium.ctb
LAST UPDATE: 1/17/2008

Jones & DeMille Engineering
1936 South 100 West - Richfield, Utah 84701
Phone (435) 896-8266 Fax (435) 896-8268
www.jonesanddemille.com

DESIGN:		CHECK:	
DRAWN:	L.G. 04-07	CHECK: D.R. 04-07	REVIEW DATE:
QUANT:		CHECK:	BY:

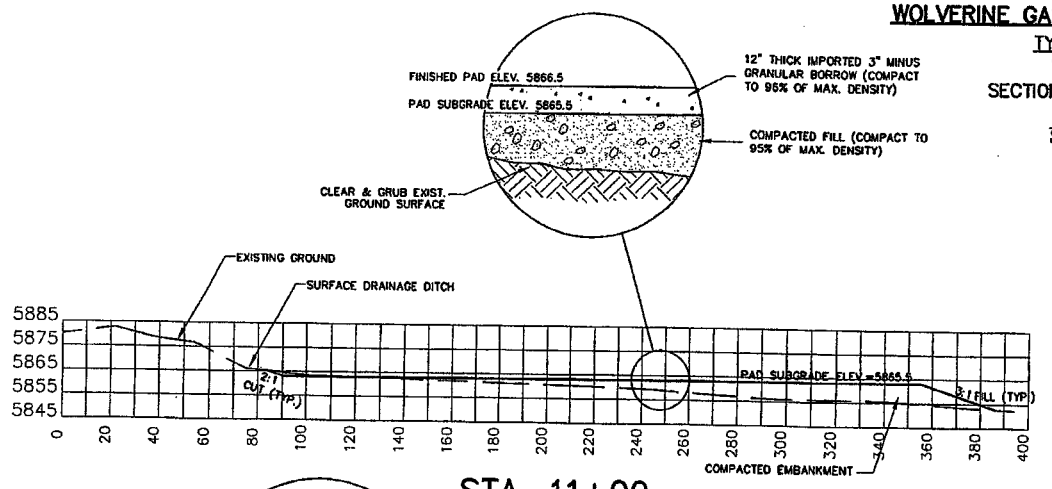
APPROVAL RECOMMENDED: DATE PROJECT DESIGN ENGINEER
APPROVED: DATE

Wolverine Gas & Oil Co. of Utah LLC
FEDERAL 20-4
SITE PLAN
PROJECT NUMBER: 0703-201

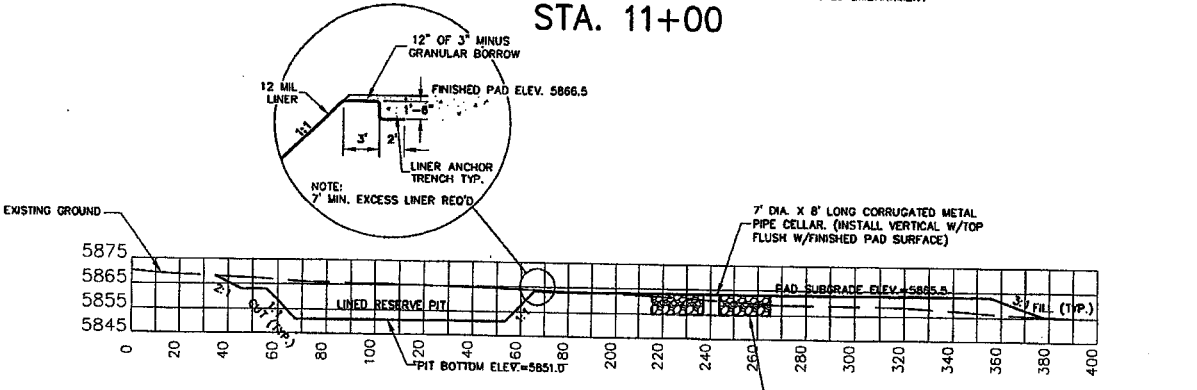
SEVIER COUNTY
SHEET NO. 20-4B

WOLVERINE GAS AND OIL COMPANY OF UTAH, LLC.

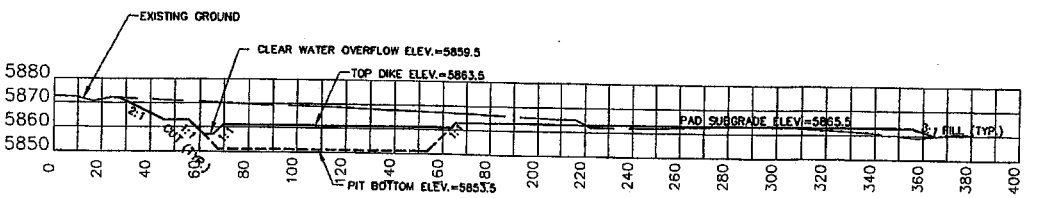
TYPICAL CROSS SECTIONS FOR
WOLVERINE FEDERAL 20-4
SECTION 20, T.23 S., R.1 W., S.L.B.& M.



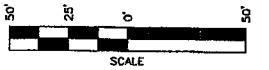
STA. 11+00



STA. 12+00



STA. 13+78



NO.	DATE	REVISIONS	REMARKS
		ORIGINAL SUBMISSION FOR AUTHORIZATION	

SCALE: 1"=50'
DWG NAME: APD9
SHT SIZE: 11 X 22
DWG CREATED: 04/11/2007
PEN TBL: Jones&Delmills.ctb
LAST UPDATE: 11/17/2008

Jones & DeMille Engineering
1936 South 400 West - Richfield, Utah 84701
Phone (435) 896-2286, Fax (435) 896-8200
www.jonesandassociates.com

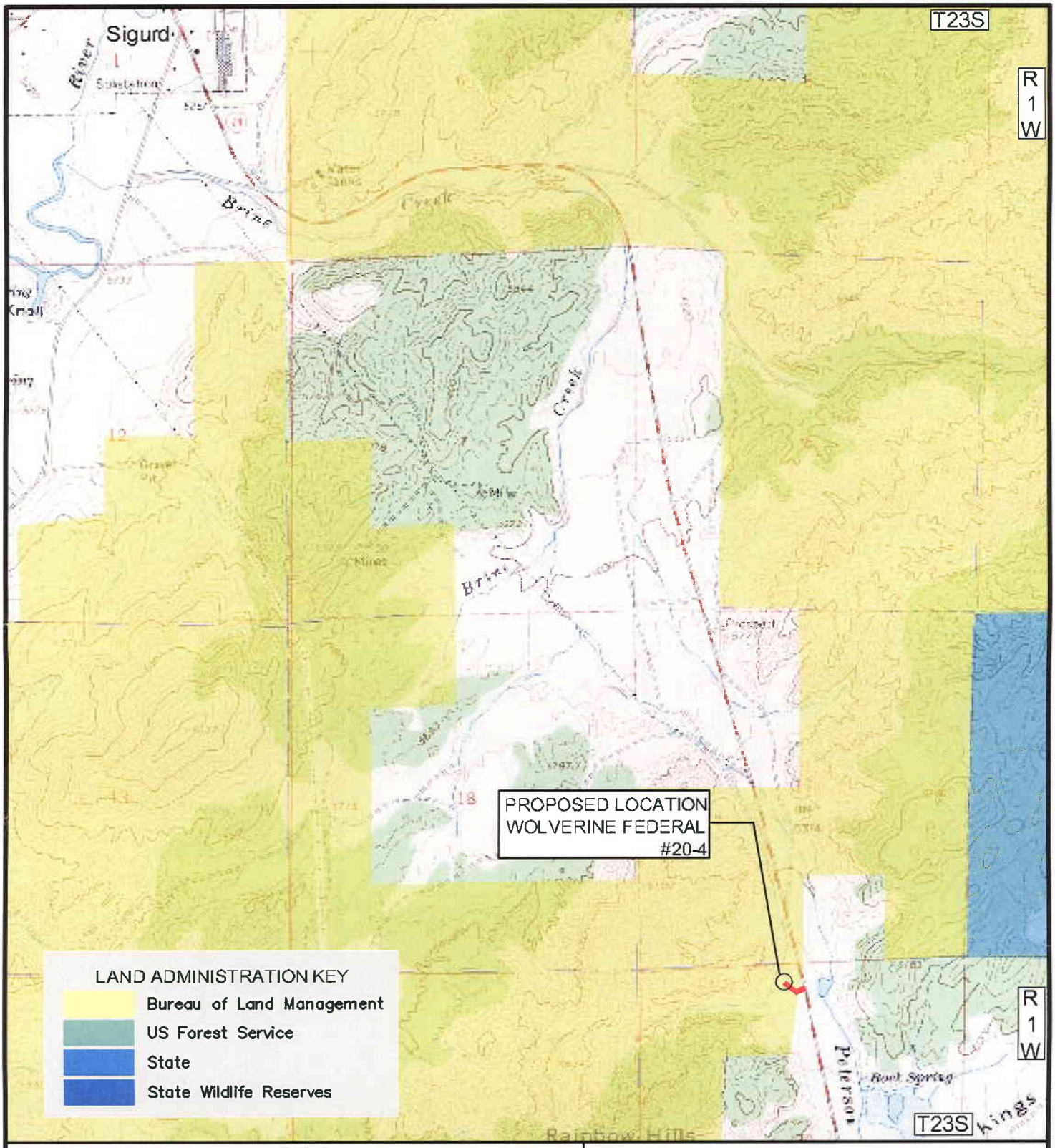
DESIGN:		CHECK:	
DRAWN: L.G. 04-07		CHECK: D.R. 04-07	REVIEW DATE:
QUANT:		CHECK:	BY:

APPROVAL RECOMM: PROJECT ENGINEER DATE
APPROVED: DATE

Wolverine Gas & Oil Co. of Utah LLC
FEDERAL 20-4
CROSS SECTIONS
PROJECT NUMBER: 0703-201

SEVIER COUNTY
SHEET NO. 20-4C

CONFIDENTIAL



LEGEND

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

Wolverine Federal #20-4
Section 20, T.23 S., R.1 W., S.L.B. & M.
2141' F.W.L. 208' F.N.L.

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

SCALE: 1:2000

Wolverine Federal 20-4			FIGURE:
Vicinity Map			
Wolverine Gas & Oil Company of Utah, LLC			
DRAWN: B.L. 01-08	PEN TBL: _1s1ndrd-hp2800.ctb	PROJECT: 0703-201	SHEET: 20-4
CHECK: D.R. 01-08	FILE: VICINITY	LAST UPDATE: 1/17/2008	

CONFIDENTIAL

WORKSHEET
APPLICATION FOR PERMIT TO DRILL

APD RECEIVED: 01/25/2008

API NO. ASSIGNED: 43-041-30057

WELL NAME: WOLVERINE FED 20-4

OPERATOR: WOLVERINE GAS & OIL CO (N1655)

PHONE NUMBER: 616-458-1150

CONTACT: EDWARD HIGUERA

PROPOSED LOCATION:

NENW 20 230S 010W

SURFACE: 0208 FNL 2141 FWL

BOTTOM: 0658 FNL 1855 FWL

COUNTY: SEVIER

LATITUDE: 38.79470 LONGITUDE: -111.9330

UTM SURF EASTINGS: 418973 NORTHINGS: 4294200

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)

N Potash (Y/N)

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

✓ Water Permit
(No. 63-2529)

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

NA Fee Surf Agreement (Y/N)

NA Intent to Commingle (Y/N)

LOCATION AND SITING:

___ R649-2-3.

Unit: WOLVERINE ok

___ R649-3-2. General

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

___ R649-3-3. Exception

___ Drilling Unit

Board Cause No:

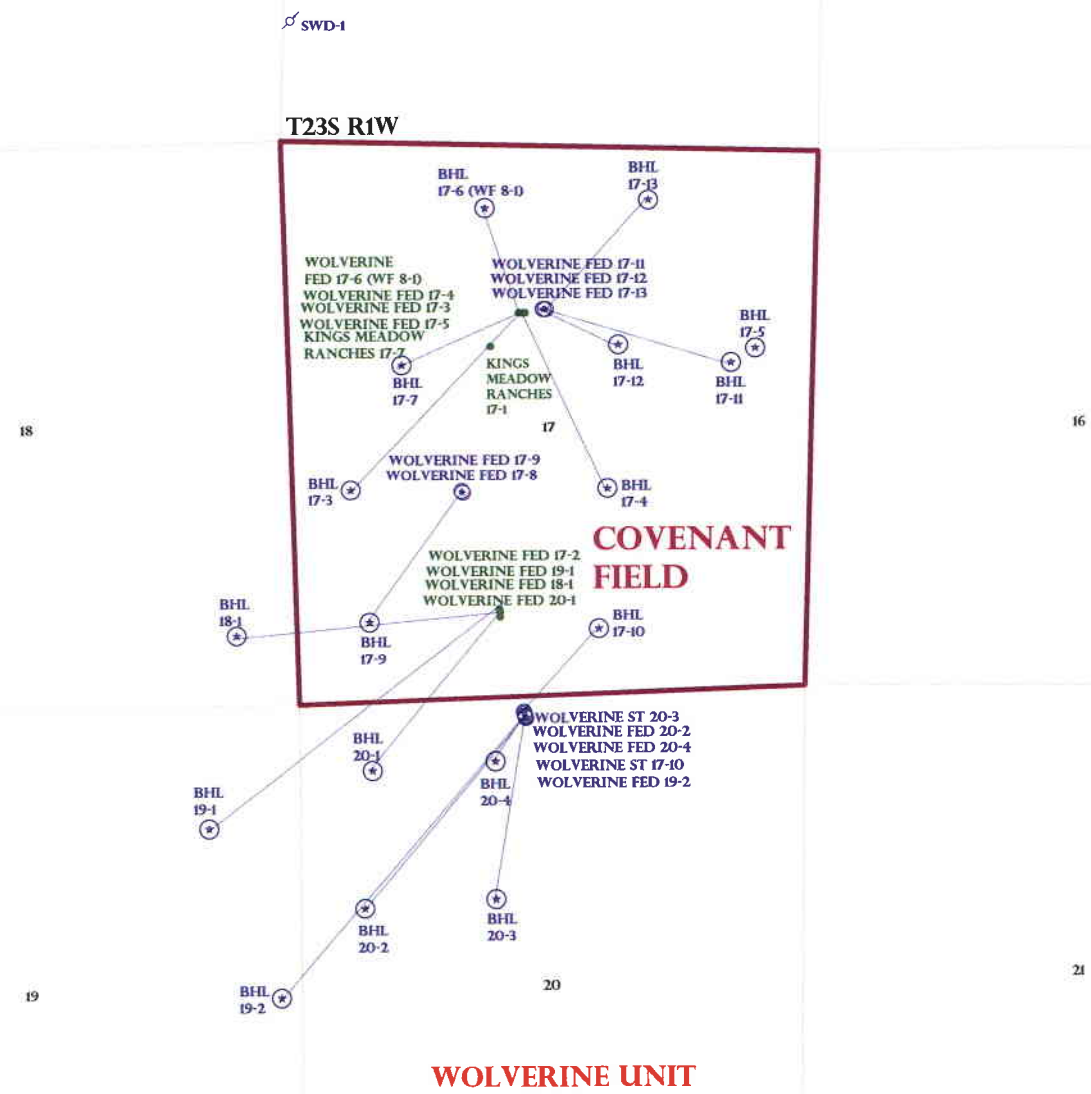
Eff Date:

Siting:

___ R649-3-11. Directional Drill

COMMENTS:

STIPULATIONS: 1- Federal Approval
2 Spacing Stip



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

UTAH DNR OIL, GAS & MINING

N W E S

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

State of Utah
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER
Executive Director

Division of Oil Gas and Mining

JOHN R. BAZA
Division Director

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

January 31, 2008

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

Re: Wolverine Federal 20-4 Well, Surface Location 208' FNL, 2141' FWL, NE NW, Sec. 20, T. 23 South, R. 1 West, Bottom Location 658' FNL, 1855' FWL, NE 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 43-041-30057.

Sincerely,

Gil Hunt
Associate Director

pab
Enclosures

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

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

UTAH DNR OIL, GAS & MINING

Operator: Wolverine Gas and Oil Company of Utah, LLC

Well Name & Number Wolverine Federal 20-4

API Number: 43-041-30057

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.

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DIVISION OF OIL, GAS AND MINING

SPUDDING INFORMATION

Name of Company: **Wolverine Gas & Oil Co UT**

Well Name: **Wolverine Fed 20-4**

API No: **43-041-30057** Lease Type: **Federal**

Section **20** Township **23S** Range **01W** County **Sevier**

Drilling Contractor **Pete Martin** Rig # **Rathole**

SPUDDED:

Date **6-27-08**

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
4304130057	Wolverine Federal 20-4		NENW	20	23S	1W	Sevier
Action Code	**Current Entity Number**	**New Entity Number**	**Spud Date**			**Entity Assignment Effective Date**	
B	99999	13995	6/27/2008			7/15/08	

Comments: BHL NE NW Sec 20 T23S R1W Sevier Co
NAVA

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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
Title

7/14/2008
Date

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JUL 14 2008
DIV. OF OIL, GAS & MINING

(5/2000)

EXACT Engineering, Inc. www.exactengineering.com
20 East Fifth St., Suite 310, Tulsa, OK 74103 (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 20-4 (Covenant Field)**
Sec 20 T23S R01W, Sevier Co, UT API# 43-041-30057

Gentlemen,

On behalf of Wolverine Gas and Oil Company of Utah, LLC, please note the following drilling activity for the subject well from Jun 27 to Dec 31, 2008. The report dates shown are for the 24-hr day (midnight to midnight).

June 27, 2008
Set & cemented 120' of 20in conductor csg – UDOGM spud date 6/27/2008. Wait on rig

Dec 14, 2008
Resume drlg, drld 12-1/4" hole from 146' to 548'; MW 9.2ppg, VIS 31, FL nc; Svy @ 462' – incl .97, Az 219.27

Dec 15, 2008
Drilled from 548' to 1695'; MW 9.4ppg, VIS 32, FL nc; Svy @ 1547' – incl 7.47, Az 200.64

Dec 16, 2008
Drilled from 1695' to 1990' TD, Run 53 jts 9-5/8" 36ppf K55 csg, set at 1990' TD.

Dec 17, 2008
Cmtd with 220 sx Varicem (11ppg,3.48cfps,22gps) tailed with 240 sx Premium G (15.8ppg,1.17cfps,5gps). Displace with 151 bbl brine water, full circ, 40 bbls to surface, floats held, WOC. Weld on csg head. NU & test BOPE

Dec 18, 2008
Drill float & 8-3/4" hole to 2014'. Test csg seat to 10.4 ppge. Drill to 2586'

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DIV. OF OIL, GAS & MINING

Dec 19, 2008
Drill 2586' to 3550'; MW 10.4, VIS 35, FL 8.8; Svy 3474' incl 7.37 Az 213.96

Dec 20, 2008
Drill from 3550' to 4650', MW 10.5, VIS 38, FL 7.6; Svy 4598' Incl 7.79, Az 210.64

Dec 21, 2008
Drill from 4650' to 5020', bit trip, drill 5020' to 5270'; MW 10.5, VIS 40, FL 6.8; Svy 5245' Incl 4.48 Az 210.94

Dec 22, 2008
Drill from 5270' to 6096', MW 10.5, VIS 38, FL 6.4; Svy 5993' Incl 0.26 Az 210.94

Dec 23, 2008
Drill from 6096' to 6156', bit trip, drill 6156' to 6190'; MW 10.5, VIS 42, FL 6.4; Svy 6086' incl 0.26 Az 210.94

Dec 24, 2008
Drill from 6190' to 6422'; MW 10.5, VIS 47, FL 6.0; Svy 6367 incl 0.35 Az 210.94

Dec 25, 2008
Drill from 6422' to 6617'; Bit trip, MW 10.4, VIS 41, FL 6.8; Svy 6555' incl 0.35 Az 210.94

Dec 26, 2008
Trip in, drill from 6617' to 6767' TD, circ and cond for logs, TOH, RU loggers

Dec 27, 2008
Log

Dec 28, 2008
Log, TIH, condition, TOH, run 7in csg

Dec 29, 2008
Run 174 jts 7in 26ppf N80 & HCL80 new casing to 6767' with stage tool at 6067', circ and cond mud, cement stage 1 with 145 sx 50:50 POZ (14.4ppg,1.27cfps,5.48gps), displace with 24 BW & 240 bbls mud, OK
Open stage tool, circ 5 hrs

Dec 30, 2008
Cement stage 2 with 55 sx Varicem (11ppg,3.53cfps,22.4gps) tailed with 585 sx Class G Premium (15.8ppg,1.25cfps,5.31gps), good circ, JC 2am, WOC, set slips, cut off csg, RR 12:00 12/30/2008

We respectfully request that the enclosed information remain confidential.

Sincerely,

Steven R. Hash

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

CONFIDENTIAL

FORM 9

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 ☑ GAS WELL ☐ OTHER

8. WELL NAME and NUMBER: Wolverine Federal 20-4

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

9. API NUMBER: 4304130057

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: 208' FNL, 2141' 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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
Date of work completion:	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: Status Report
	☐ CONVERT WELL TYPE	☐ 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 20-4 is one of five wells being drilled from a single drilling pad. After drilling to a total depth of 6767' on 12/26/08 and running logs, 7" casing was run and cemented in place at TD. The drilling rig was skidded to the Wolverine State 17-10 on 12/30/08 and operations on Wolverine Federal 20-4 remain suspended until all drilling activities on the drilling pad are completed.

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JAN 08 2009
DIV. OF OIL, GAS & MINING

NAME (PLEASE PRINT) Ellis M. Peterson TITLE Sr. Production Engineer

SIGNATURE Ellis M. Peterson DATE 1/2/2009

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(5/2000) (See Instructions on Reverse Side)

CONFIDENTIAL

FORM 9

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

1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER _____

8. WELL NAME and NUMBER: Wolverine Federal 20-4

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

9. API NUMBER: 4304130057

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: 208' FNL, 2141' 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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start: _____	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
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Date of work completion: _____	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: Status Report
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

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

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NAME (PLEASE PRINT) Ellis M. Peterson TITLE Sr. Production Engineer

SIGNATURE Ellis M. Peterson DATE 1/28/2009

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FEB 04 2009
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

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

CONFIDENTIAL

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

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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

1. TYPE OF WELL: OIL WELL ☑ GAS WELL ☐ OTHER

8. WELL NAME and NUMBER: Wolverine Federal 20-4

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

9. API NUMBER: 4304130057

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: 208' FNL, 2141' 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

TYPE OF SUBMISSION	TYPE OF ACTION		
☐ NOTICE OF INTENT (Submit in Duplicate)	☐ ACIDIZE	☐ DEEPEN	☐ REPERFORATE CURRENT FORMATION
Approximate date work will start:	☐ ALTER CASING	☐ FRACTURE TREAT	☐ SIDETRACK TO REPAIR WELL
	☐ CASING REPAIR	☐ NEW CONSTRUCTION	☐ TEMPORARILY ABANDON
	☐ CHANGE TO PREVIOUS PLANS	☐ OPERATOR CHANGE	☐ TUBING REPAIR
	☐ CHANGE TUBING	☐ PLUG AND ABANDON	☐ VENT OR FLARE
☑ SUBSEQUENT REPORT (Submit Original Form Only)	☐ CHANGE WELL NAME	☐ PLUG BACK	☐ WATER DISPOSAL
	☐ CHANGE WELL STATUS	☐ PRODUCTION (START/RESUME)	☐ WATER SHUT-OFF
Date of work completion:	☐ COMMINGLE PRODUCING FORMATIONS	☐ RECLAMATION OF WELL SITE	☑ OTHER: Status Report
	☐ CONVERT WELL TYPE	☐ RECOMPLETE - DIFFERENT FORMATION	

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

CONTINUED CONFIDENTIAL STATUS REQUESTED

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NAME (PLEASE PRINT) Ellis M. Peterson TITLE Sr. Production Engineer

SIGNATURE Ellis M. Peterson DATE 2/27/2009

(This space for State use only)

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MAR 05 2009
DIV. OF OIL, GAS & MINING

(5/2000) (See Instructions on Reverse Side)

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL

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.

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 20-4

9. API Well No.
43-041-30057

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

11. County or Parish, State
Sevier County, Utah

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)*
158' FNL, 2117' 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			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☑ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☑ Other **Correct Well Location**
	☐ 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.)

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: 208' FNL, 2141' FWL, NE/4 NW/4, Section 20, T23S, R1W, SLB&M

Actual Surface Location: 158' FNL, 2117' FWL, NE/4 NW/4, Section 20, T23S, R1W, SLB&M

A new survey plat for the well is included herewith.

418965X 38.794830
4294215Y -111.933101

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 ENVIRONMENTAL MANAGER

Date 05-11-09

Office

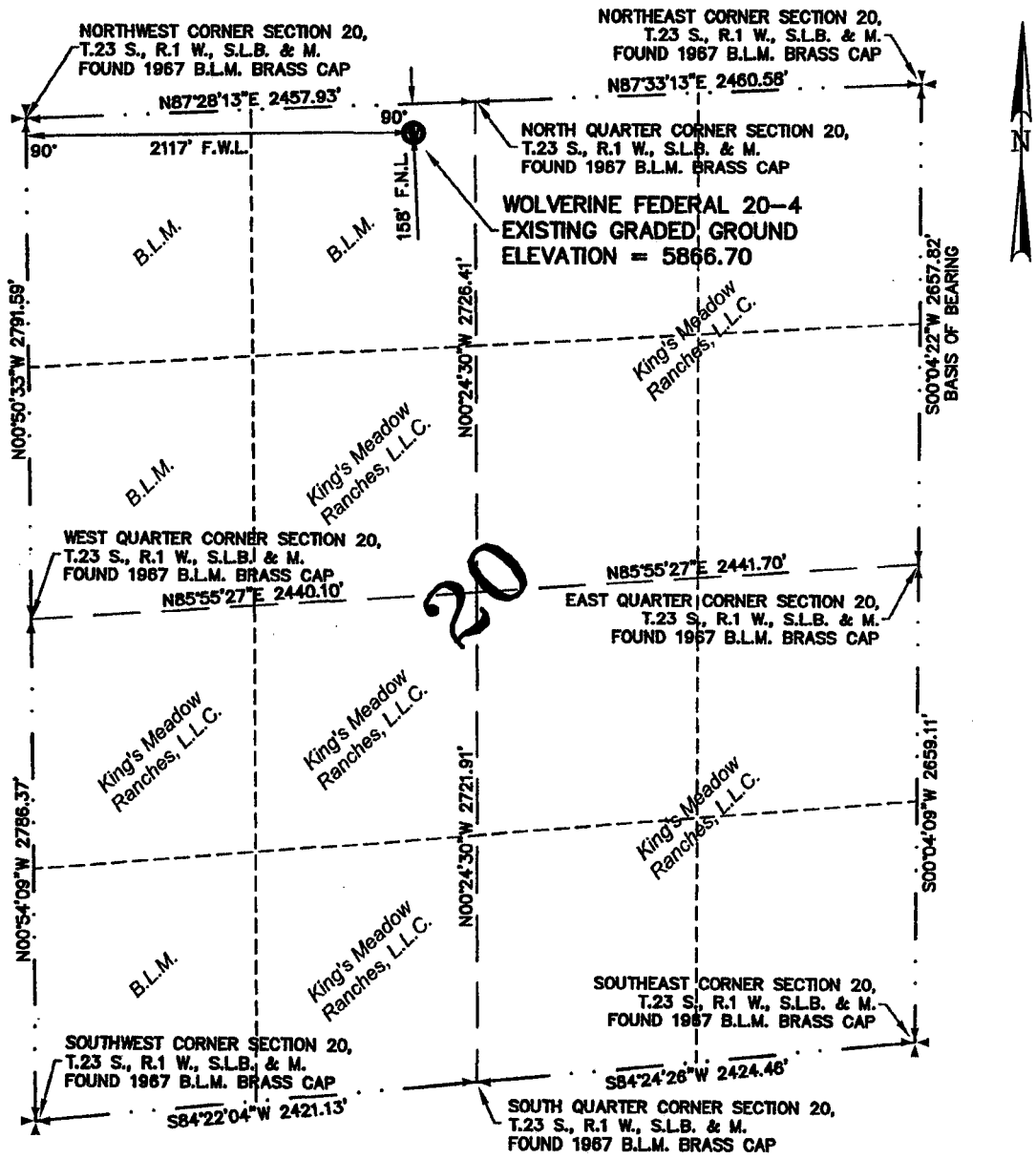
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title 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

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°47'41.3346" (38.79481517) NAD 83 – UTM ZONE 12N NAD27 N-14088610.481
LONGITUDE: -111°56'02.2511" (-111.93395884) NAD 83 – UTM ZONE 12N NAD27 E-1374527.276

PROJECT

Wolverine Gas & Oil Company of Utah, LLC.

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. SEVIER COUNTY, UTAH

LEGEND

= SECTION CORNERS (LOCATED)
= QUARTER SECTION CORNERS (LOCATED)
= EXISTING WELL HEAD

NOTE: THE PURPOSE OF THIS SURVEY WAS TO PLAT THE WOLVERINE FEDERAL 20-4 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., SEVIER 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.

1000' 500' 0' 1000'
SCALE

CERTIFICATE

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

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

04/07/09

TREVOR R. GADD P.L.S. # 343639

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

Well Location Plat for

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

DESIGNED	SURVEYED	CHECKED	DRAWN	PROJECT NO.	SHEET NO.
–	K.D.B.	T.R.G.	T.W.G.	0703-201	1
DATE 04/07/09		DWG.NAME WELL_LOC	SCALE 1"=1000'		

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.

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

Sincerely,

Ellis M. Peterson
Senior Production Engineer
Wolverine Gas and Oil

Cc w/ attachments: Gil Hunt, UDOGM

One Riverfront Plaza • 55 Campau, N.W. • Grand Rapids, MI 49503-2616 • 616.458.1150 • FAX 616.458.0869

COPY

Form 3160-4
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

CONFIDENTIAL

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

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

1a. Type of Well [✓] Oil Well [ ] Gas Well [ ] Dry [ ] Other
b. Type of Completion: [✓] New Well [ ] Work Over [ ] Deepen [ ] Plug Back [ ] Diff. Resvr, .
Other _____

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

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

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

8. Lease Name and Well No. **Wolverine Federal 20-4**

3. Address **55 Campau NW, Grand Rapids, MI 49503**

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

9. AFI Well No. **4304130057**

4. Location of Well *(Report location clearly and in accordance with Federal requirements)**

At surface **158' FNL, 2117' FWL, Sec. 20, T23S, R1W**

At top prod. interval reported below **818' FNL, 1891' FWL, Sec. 20, T23S, R1W**

At total depth ~~818~~ 634' FNL, ~~1891~~ 1827' FWL, Sec. 20, T23S, R1W Per HSM review

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 **12/14/2008**

15. Date T.D. Reached **12/26/2008**

16. Date Completed **05/12/2009** [ ] D & A [✓] Ready to Prod.

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

18. Total Depth: MD **6767'** TVD **6730'**

19. Plug Back T.D.: MD **6616'** TVD **6579'**

20. Depth Bridge Plug Set: MD TVD

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)
DLL/MSFL/GR, SDL/DSN/GR, XRMI, 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 Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
30.0"	20"	0.25 wall	Surface	126 GL		Prem	31	Surface	
12.25"	9.675 J	36.0	Surface	1992		220 VariCem	136	Surf. (CIRC)	
"	"	"				240 Prem G	50		
8.75"	7" N80	26.0	Surface	6767	6068	145 50:50 poz	33		
"	"	"				55 VariCem	35	730 (CBL)	
"	"	"				585 Prem G	130		

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	6299							

25. Producing Intervals

Formation	Top	Bottom
A) Navajo	6373	6470
B)		
C)		
D)		

26. Perforation Record

Perforated Interval	Size	No. Holes	Perf. Status
6373-6386, 6400-6416	0.40"	174	Open - Producing
6424-6439, 6457-6470	0.40"	168	Open - Producing

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

Depth Interval	Amount and Type of Material

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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
05/14/2009	05/20/2009	24	→	472	Tr	0			Hydraulic Pump

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas/Oil Ratio	Well Status
			→	472	Tr	0		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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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	**6283**		**Oil and Water**	**Arapien** **Twin Creek 1** **Navajo 1**	**Surface** **5940** **6283**

32. Additional remarks (include plugging procedure):

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

- [x] Electrical/Mechanical Logs (1 full set req'd.)
- [x] Geologic Report
- [ ] DST Report
- [x] 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** Date **05/22/2009**

COPY

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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WOLVERINE GAS & OIL COMPANY

Location:	UTAH	Slot:	Wolverine Federal 20-4 158'FNL & 2117'FWL
Field:	SEVIER COUNTY	Well:	Wolverine Federal 20-4
Facility:	SEC.20-T23S-R1W	Wellbore:	Wolverine Federal 20-4 PWB

BAKER HUGHES INTEQ

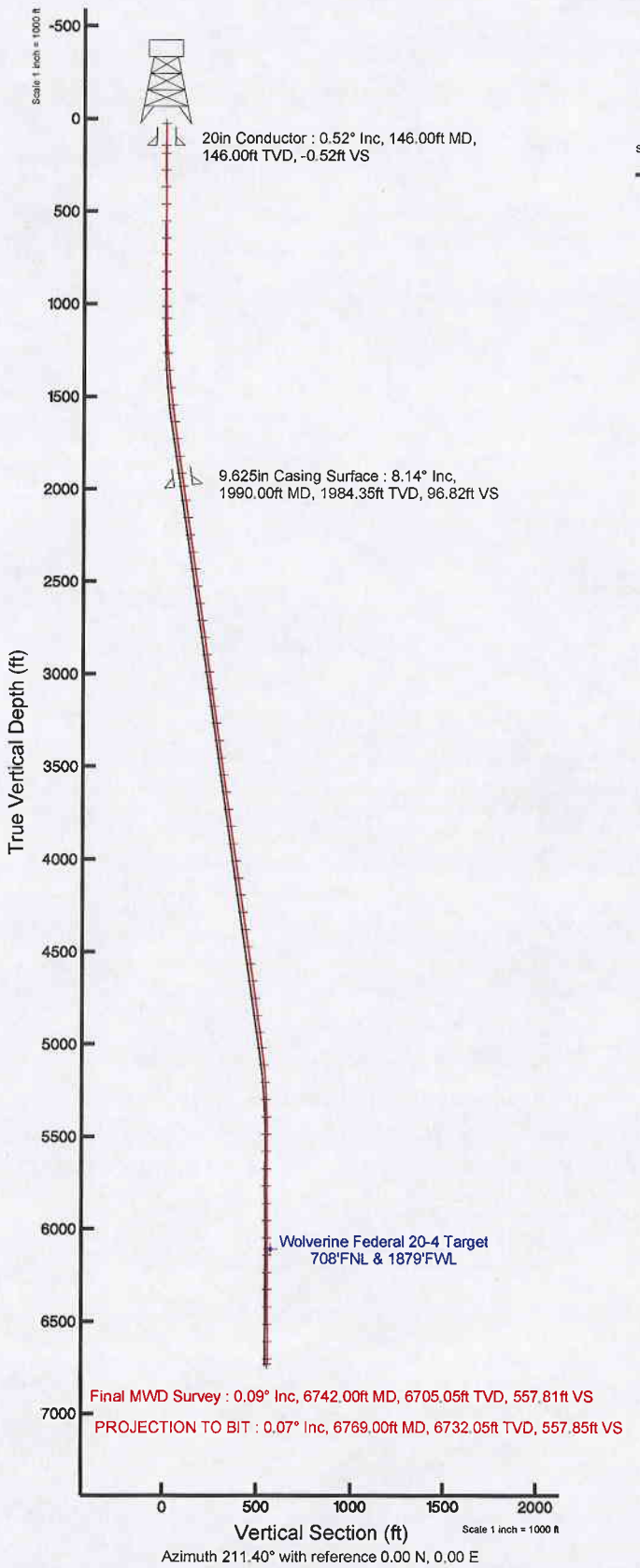
Plot reference wellpath is Wolverine Federal 20-4 PWP 8.0	
True vertical depths are referenced to Rig on Wolverine Federal 20-4 SST 58	Grid System: NAD83 / Lambert Utah State Planes, Central Zone (4302), feet
Measured depths are referenced to Rig on Wolverine Federal 20-4 SST 58	North Reference: True north
Rig on Wolverine Federal 20-4 to Mean Sea Level: 5692.7 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: bsonat on 4/28/2009

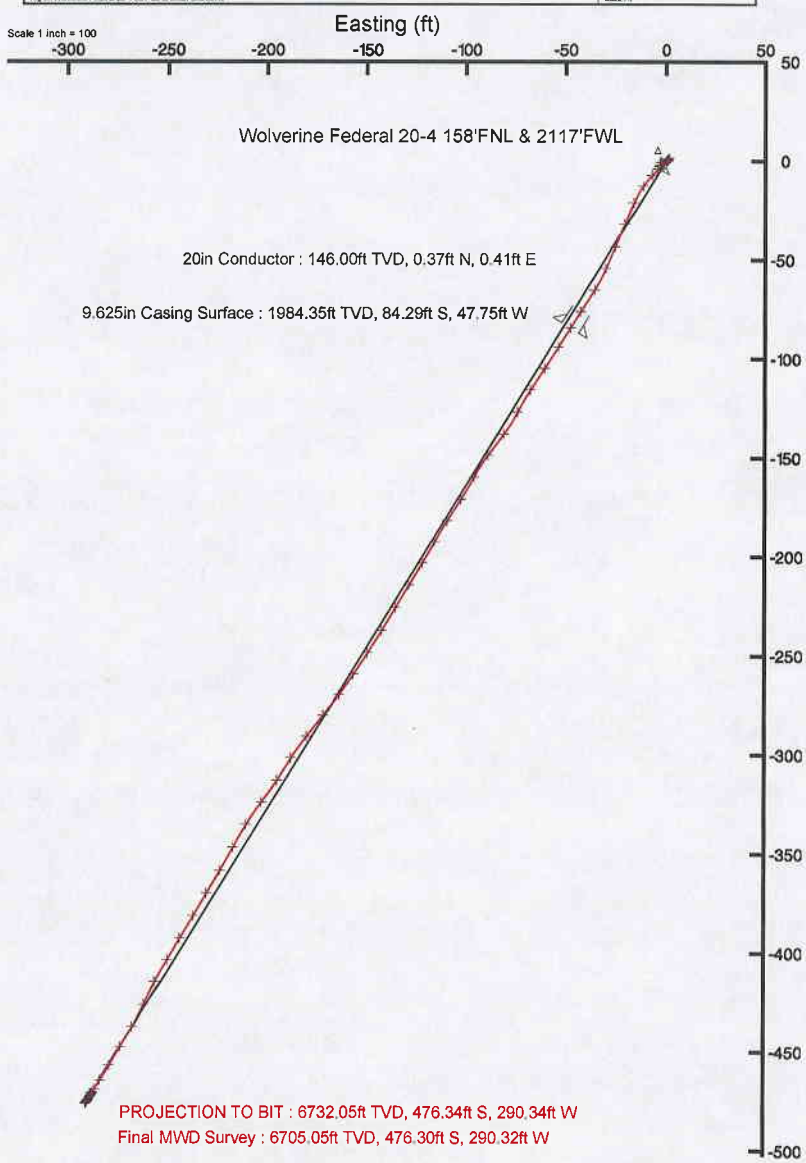
Well Profile Data

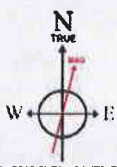
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	26.00	0.000	211.400	26.00	0.00	0.00	0.00	0.00
End of Tangent	1200.00	0.000	211.400	1200.00	0.00	0.00	0.00	0.00
Build (S)	1600.00	8.000	211.400	1598.70	-23.80	-14.53	2.00	27.88
End of Tangent (S)	5118.77	8.000	211.400	5081.25	-441.56	-269.53	0.00	517.32
Drop (S)	5516.77	0.000	211.400	5479.95	-465.36	-284.05	2.00	545.20
End of Tangent	8778.82	0.000	211.400	8742.00	-465.36	-284.05	0.00	545.20

Location Information

Facility Name			Grid East (ft)	Grid North (ft)	Latitude	Longitude
SEC.20-T23S-R1W			1518743.473	6730039.327	38°47'40.989"N	111°56'01.992"W
Slot	Local N (ft)	Local E (ft)	Grid East (ft)	Grid North (ft)	Latitude	Longitude
Wolverine Federal 20-4 158'FNL & 2117'FWL	39.00	20.55	1518723.088	6730074.433	38°47'41.335"N	111°56'02.251"W
Rig on Wolverine Federal 20-4 SST 58 to Mud line (Facility: SEC.20-T23S-R1W)					5692.7ft	
Mean Sea Level to Mud line (Facility: SEC.20-T23S-R1W)					0ft	
Rig on Wolverine Federal 20-4 SST 58 to Mean Sea Level					5692.7ft	







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

Actual Wellpath Report

Wolverine Federal 20-4 AWP

BAKER HUGHI
INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine Federal 20-4 158'FNL & 2117'FWL**
Area	**UTAH**	Well	**Wolverine Federal 20-4**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine Federal 20-4 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 **4:28:08 PM**
Convergence at slot	**0.28° West**	Database/Source file	**WellArchitect_Denver/Wolverine_Federal_20-4_AWB.**

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	**East[ft]**	**Easting[ft]**	**Northing[ft]**	**Latitude**	**Longitude**
Slot Location	-15.17	5.17	1516723.09	6730074.43	**38°47'41.335"N**	**111°56'02.251"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	**211.40°**

Actual Wellpath Report

Wolverine Federal 20-4 AWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine Federal 20-4 158'FNL & 2117'FWL**
Area	**UTAH**	Well	**Wolverine Federal 20-4**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine Federal 20-4 AWB**
Facility	**SEC.20-T23S-R1W**		

WELLPATH DATA (74 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
0.00†	0.000	48.060	0.00	0.00	0.00	0.00	0
26.00	0.000	48.060	26.00	0.00	0.00	0.00	0
187.00	0.700	48.060	187.00	-0.94	0.66	0.73	0
277.00	0.620	44.190	276.99	-1.94	1.37	1.48	0
369.00	**0.620**	**206.260**	**368.99**	**-1.93**	**1.28**	**1.61**	**1**
462.00	0.970	219.270	461.98	-0.65	0.22	0.89	0
554.00	0.700	236.850	553.97	0.63	-0.69	-0.08	0
645.00	0.700	264.970	644.96	1.46	-1.04	-1.10	0
736.00	0.350	322.280	735.96	1.69	-0.87	-1.82	0
827.00	**0.700**	**292.750**	**826.96**	**1.67**	**-0.43**	**-2.50**	**0**
920.00	0.530	190.440	919.95	2.16	-0.64	-3.11	1
1014.00	1.050	191.500	1013.94	3.38	-1.91	-3.36	0
1079.00	0.530	189.040	1078.94	4.21	-2.79	-3.52	0
1173.00	1.580	223.840	1172.92	5.88	-4.15	-4.49	1
1266.00	**3.520**	**221.380**	**1265.82**	**9.95**	**-7.22**	**-7.26**	**2**
1360.00	5.100	217.510	1359.56	16.94	-12.70	-11.72	1
1454.00	6.770	202.040	1453.05	26.57	-21.15	-16.34	2
1547.00	7.470	200.640	1545.34	37.91	-31.89	-20.53	0
1641.00	7.560	203.800	1638.53	50.05	-43.27	-25.18	0
1734.00	**7.120**	**203.450**	**1730.77**	**61.82**	**-54.15**	**-29.94**	**0**
1828.00	7.820	210.830	1823.97	73.98	-64.99	-35.53	1
1922.00	8.260	213.290	1917.05	87.13	-76.12	-42.52	0
2070.00	8.000	210.480	2063.56	108.05	-93.88	-53.58	0
2163.00	7.910	214.700	2155.67	120.91	-104.72	-60.50	0
2257.00	**7.990**	**212.050**	**2248.76**	**133.90**	**-115.58**	**-67.65**	**0**
2350.00	8.080	208.060	2340.85	146.89	-126.82	-74.16	0
2444.00	8.100	216.210	2433.92	160.08	-138.00	-81.18	1
2538.00	8.090	216.810	2526.98	173.26	-148.64	-89.05	0
2631.00	8.100	208.160	2619.06	186.32	-159.65	-96.06	1
2725.00	**7.990**	**212.620**	**2712.13**	**199.46**	**-170.99**	**-102.71**	**0**

Actual Wellpath Report

Wolverine Federal 20-4 AWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine Federal 20-4 158'FNL & 2117'FWL**
Area	**UTAH**	Well	**Wolverine Federal 20-4**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine Federal 20-4 AWB**
Facility	**SEC.20-T23S-R1W**		

WELLPATH DATA (74 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
2819.00	7.800	212.520	2805.24	212.37	-181.87	-109.66	0
2912.00	7.210	209.080	2897.45	224.51	-192.30	-115.89	0
3006.00	8.090	210.130	2990.61	237.02	-203.17	-122.08	0
3099.00	7.910	211.890	3082.70	249.96	-214.26	-128.74	0
3193.00	**8.440**	**210.130**	**3175.75**	**263.33**	**-225.72**	**-135.62**	**0**
3287.00	8.130	211.410	3268.77	276.87	-237.36	-142.55	0
3380.00	8.320	212.740	3360.81	290.17	-248.63	-149.62	0
3474.00	7.370	213.960	3453.93	303.00	-259.36	-156.66	1
3568.00	8.090	216.110	3547.08	315.61	-269.70	-163.93	0
3661.00	**8.170**	**218.920**	**3639.14**	**328.68**	**-280.13**	**-171.94**	**0**
3755.00	8.260	218.220	3732.18	342.01	-290.63	-180.31	0
3849.00	8.170	212.240	3825.21	355.39	-301.58	-188.05	0
3943.00	8.200	211.980	3918.26	368.78	-312.92	-195.16	0
4036.00	8.440	217.860	4010.28	382.19	-323.93	-202.87	0
4130.00	**8.170**	**210.830**	**4103.30**	**395.72**	**-335.12**	**-210.52**	**1**
4223.00	8.260	208.720	4195.34	409.00	-346.65	-217.12	0
4317.00	8.140	209.340	4288.38	422.40	-358.37	-223.63	0
4411.00	8.080	211.060	4381.44	435.66	-369.83	-230.29	0
4504.00	8.280	210.700	4473.49	448.89	-381.19	-237.09	0
4598.00	**7.790**	**210.640**	**4566.57**	**462.03**	**-392.49**	**-243.79**	**0**
4692.00	7.890	209.890	4659.69	474.85	-403.56	-250.25	0
4785.00	7.630	206.260	4751.84	487.38	-414.64	-256.16	0
4879.00	7.730	203.100	4845.00	499.85	-426.05	-261.40	0
4972.00	8.260	210.130	4937.10	512.71	-437.58	-267.21	1
5057.00	**7.290**	**210.940**	**5021.31**	**524.21**	**-447.48**	**-273.05**	**1**
5151.00	6.240	210.940	5114.66	535.28	-456.98	-278.74	1
5245.00	4.480	210.940	5208.24	544.06	-464.51	-283.26	1
5338.00	1.950	210.940	5301.09	549.28	-468.99	-285.94	2
5432.00	0.260	210.940	5395.07	551.09	-470.54	-286.87	1
5525.00	**0.018**	**210.940**	**5488.07**	**551.32**	**-470.73**	**-286.99**	**0**

Actual Wellpath Report

Wolverine Federal 20-4 AWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine Federal 20-4 158'FNL & 2117'FWL**
Area	**UTAH**	Well	**Wolverine Federal 20-4**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine Federal 20-4 AWB**
Facility	**SEC.20-T23S-R1W**		

WELLPATH DATA (74 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]
5619.00	0.260	210.940	5582.07	551.55	-470.93	-287.10	0
5713.00	0.440	210.940	5676.07	552.12	-471.42	-287.40	0
5806.00	0.260	210.940	5769.06	552.69	-471.91	-287.69	0
5900.00	0.260	210.940	5863.06	553.11	-472.28	-287.91	0
5993.00	**0.260**	**210.940**	**5956.06**	**553.54**	**-472.64**	**-288.13**	**0**
6086.00	0.260	210.940	6049.06	553.96	-473.00	-288.34	0
6180.00	0.700	210.940	6143.06	554.75	-473.67	-288.75	0
6274.00	0.260	210.940	6237.05	555.53	-474.35	-289.15	0
6367.00	0.350	210.940	6330.05	556.03	-474.77	-289.41	0
6461.00	**0.260**	**210.940**	**6424.05**	**556.53**	**-475.20**	**-289.67**	**0**
6555.00	0.350	210.940	6518.05	557.03	-475.63	-289.92	0
6648.00	0.260	210.940	6611.05	557.52	-476.06	-290.18	0
6742.00	0.090	210.940	6705.05	557.81	-476.30	-290.32	0
6769.00†	0.074	210.940	6732.05	557.85	-476.34	-290.34	0

HOLE & CASING SECTIONS

Ref Wellbore: Wolverine Federal 20-4 AWB Ref Wellpath: Wolverine Federal 20-4 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/ [ft]
20in Conductor	0.00	146.00	146.00	0.00	146.00	0.00	0.00	0.37	0
9.625in Casing Surface	26.00	1990.00	1964.00	26.00	1984.35	0.00	0.00	-84.29	-47

Actual Wellpath Report

Wolverine Federal 20-4 AWP

BAKER HUGHES INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	**WOLVERINE GAS & OIL COMPANY**	Slot	**Wolverine Federal 20-4 158'FNL & 2117'FWL**
Area	**UTAH**	Well	**Wolverine Federal 20-4**
Field	**SEVIER COUNTY**	Wellbore	**Wolverine Federal 20-4 AWB**
Facility	**SEC.20-T23S-R1W**		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [ft]	Grid North [ft]	Latitude	Longitude	Sh
Wolverine Federal 20-4 Target 708'FNL & 1879'FWL		6112.00	-515.59	-258.60	1516461.97	6729560.07	38°47'36.238"N	111°56'05.517"W	po

WELLPATH COMPOSITION **Ref Wellbore: Wolverine Federal 20-4 AWB Ref Wellpath: Wolverine Federal 20-4 AWP**

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	6742.00	MTC (Collar, post-2000) (Standard)	BHI MWD/ MTC POST 2000 <187-6742>	Wolverine Federal 20-4 AWI
6742.00	6769.00	Blind Drilling (std)	Projection to bit	Wolverine Federal 20-4 AWI

Form 3160-5
(April 2004)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

COPY

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.*

CONFIDENTIAL

5. Lease Serial No.
UTU-73528

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

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

1. Type of Well
☑ Oil Well ☐ Gas Well ☐ Other

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

8. Well Name and No.
Wolverine Federal 20-4

9. API Well No.
43041300570000

3a. Address
55 Campau NW, Grand Rapids, MI 49503

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

10. Field and Pool, or Exploratory Area
Covenant Field

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*

Surface: **158' FNL, 2117' FWL, Sec 20, T23S, R01W**
Bottom Hole: **818' FNL, 1891' FWL, Sec 20, T23S, R01W**

11. County or Parish, State
Sevier, UT

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☑ Notice of Intent	☑ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☑ Recomplete	☐ Other _____
	☐ 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.)

A workover is planned for the Wolverine Federal 20-4 well. It is planned to acid stimulate three existing perforation intervals producing from the Upper Navajo and perforate an additional ten feet, from 6352'-6362' MD, in the Upper Navajo. The proposed work will commence as soon as regulatory approval is received. The work should take about 10 days.

The proposed work is designed to restore or increase the productivity of the well which has declined in recent months and to recomplete an additional interval.

The attached procedure details the planned activities.

COPY SENT TO OPERATOR
Date: 12·3·2009
Initials: KS

RECEIVED
NOV 18 2009
DIV. OF OIL, GAS & MINING

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

Title **Manager - Development**

Signature

Date **11/12/2009**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title Pet Eng

Date 11/24/09

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 lease which would entitle the applicant to conduct operations thereon.

Office DOGM

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.

(Instructions on page 2)

Wolverine Gas & Oil Company of Utah, LLC
Completion Procedure

Wolverine Federal 20-4
Covenant Field

Purpose: Acid Treat Existing upper three perforation intervals and add one new Perf Set to Upper Navajo1.

PERTINENT INFORMATION

Location: 158' FNL, 2117' FWL (NE-NW)
Section 20, Township 23 South, Range 1 West
Sevier County, Utah

Elevation: 5866' GL, 5892' KB

TD: 6767'

PBTD: 6616' (CBL depth)

API No.: 43-041-30057

Casing: 9-5/8", 36.0# @ 1992', cemented to surface
7", 26.0#, N-80 & HCL-80, LT&C @ 6767' with stage tool at 6068'

Wellhead: Tubing Head Flange – 7-1/16" 5k w/ 2-7/8" EUE top connection

Tubing: 2-7/8", 6.5#, L-80, EUE, 8rd

Prod.Casing Specs: 7", 26.0#, N-80 & HCL-80, LT&C, 8rd
ID: 6.276", Drift: 6.151", Collapse: 6830 psi, Burst: 5068 psi (70% 7240 psi)

Tubing Specs: 2-7/8", 6.5#, L-80, EUE, 8rd, ID: 2.441", Drift: 2.347",
Collapse: 11,170 psi, Burst: 10,570 psi (70% 7399 psi),
Joint: 145,000 lbs (70% 101,500 lbs)

Capacities:		
	7", 26.0#:	0.0382 Bbls/ft, 0.2148 ft^3/ft
	2-7/8", 6.5#:	0.00579 Bbls/ft, 0.0325 ft^3/ft
	7", 26.0# x 2-7/8" Annulus:	0.0302 Bbls/ft, 0.1697 ft^3/ft
	3-1/2", 9.3#:	0.00870 Bbls/ft, 0.04883 ft^3/ft
	7", 26.0# x 3-1/2" Annulus:	0.0264 Bbls/ft, 0.1480 ft^3/ft

BH Temperature: 190°F @ 6400'

Upper Navajo1 Perforations:
6373'- 6386' MD (6336'- 6349' TVD), 13', 78 holes
6400'- 6416' MD (6363'- 6379' TVD), 16', 96 holes
6424'- 6439' MD (6387'- 6402' TVD), 15', 90 holes
6457'- 6470' MD (6420'- 6433' TVD), 13', 78 holes

Note: All depths are referenced to Halliburton SDL-DSN-GR log (run 12/26/08)

PROCEDURE

1. Spot two 500 Bbl tanks and fill one tank with completion fluid (CF) consisting of filtered 4% KCl water containing 21 gallons (1000 ppm) Baker Petrolite WAW 3003 non-ionic surfactant, 5.25 gallons (250 ppm) XC102W biocide, and 1.25 gallons (60 ppm) OSW5200 Oxygen Scavenger.

2. Reverse circulate hydraulic pump to surface with completion fluid.

3. MIRU completion unit. ND wellhead and NU 5k hydraulic BOPE (2-7/8" rams top; CSO rams bottom).

4. Release Arrowset 1 packer and POOH with tubing, pump cavity with standing valve, and packer.

5. RIH with a 6-1/8" bit, 7" (26#) casing scraper, and 2-7/8" tubing to PBTD. Reverse circulate clean with completion fluid and POOH.

6. RIH with a 7" (26#) retrievable bridge plug, retrieving head and 2-7/8" tubing sub, a 7" (26#) x 2-7/8" packer stimulation packer, seating nipple and 2-7/8" tubing. Set RBP at ~6445 (above perf set at 6457-6470) and set packer at ~6330'.

   Note: The RBP is being set above perf interval 6457-6470' so this interval will not be treated with acid and to minimize encountering water; there is an interpreted normal fault at the HGRZ-Lower Navajo interface; the Top of the Transition Zone is interpreted to occur within the HGRZ. Bond log interpreted with a micro annulus, after running CBL under zero, 2000 and 3000 psi pressure.

7. RU Halliburton to acidize together perforation intervals at 6373'-6386' (13'-78 shots), 6400-6416' (16'- 96 shots), and 6424-6439' (15'- 90 shots). using 4400 gallons of 15% FE (HCl) acid with additives. Hold safety meeting and pump treatment as follows.

   Fluids and Additives:

   15% FE acid: 4400 gallons containing 6 gpt HAI-404M, 5 gpt AS-11a, 10 gpt AS-11e, and 5 gpt GasPerm 1000

   Ball Sealers: 390: 195 BioBall MR (green) 7/8" sealers, and 195 Bouyant Balls

   Completion Fluid (CF): 160 Barrels

   Pump Schedule:
   Maximum Injection Pressure: 5000 psi
   Maximum Injection Rate: 2-4 BPM

   A. Hold safety meeting and pressure test surface lines to 5000+ psi.

   B. Establish injection rate and pressure with CF (no balls).

   C. Open by-pass on packer

   D. Pump 500 gallons (11.9 bbls) of acid (with no balls) at a rate of 1.5 BPM

   E. Pump 1000 gallons (23.8 bbls) of acid containing 100 buoyant balls (one per 10 gallons) at rate of 1.5 BPM.

   F. Close by-pass on packer.

G. Pump remaining 2900 gallons (69 bbls) of acid 95 buoyant balls (one per 10 gallons), followed by 195 Bioballs (one per 10 gallons).

H. Displace acid with 50 bbls of CF.

I. Record pressure for 30 minutes and then RD and release Halliburton.

8. Open well, make a couple of swab runs to release ball sealers, open bypass on packer, and reverse circulate 50+ Bbls of CF at 1.5+ BPM to recover buoyant balls. Close bypass on packer and swab for cleanup until load fluid is recovered and rate, fluid level, and water-cut stabilize, and pH of swabbed water is above 4. Total fluid to recover is ~ 155 bbls (acid + displacement).

9. RD swab, release packer, and lower tubing to RBP. Reverse circulate clean with 50 Bbls of CF and POOH with tubing and packer and RBP.

10. RU wireline. Perforate new upper Navajo perforation interval at 6352-6362' (10') WLM with 0.40+" diameter holes using 4" hollow carriers loaded with 6 SPF on 60 degree phasing with 25 gram charges. RD and release wireline unit. Perforations based on Halliburton SDL-DSN-GR log (run 12/26/08).

11. RIH with 7" (26#) RBP, retrieving head, 2-7/8" tubing sub, 7" (26#) stimulation packer, seating nipple, and 2-7/8" tubing. Set RBP at ~ 6369' and the packer at ~ 6300'.

12. RU and swab for clean up.

13. If swab rates indicate perforation breakdown is not needed, skip to step 16. Otherwise, proceed to break down the perforations as follows.

14. RU to break down and ball off the isolated perforation interval using 1500 gallons of completion fluid mixed with 5 gpt Halliburton GasPerm 1000 and 120 mixed ball sealers (half BioBalls and half buoyant balls) as follows.

Fluids and Additives:

Breakdown Fluid: 1500 gallons completion fluid (Wolverine provided) with added 5 gpt GasPerm 1000.

Diverter: 120 Diverter Balls including 60 BioBalls MR (7/8", green) and 60 7/8" 0.90 S.G. balls.

Displacement Fluid (CF): 60 Barrels

Maximum Injection Pressure: 5000 psi

Injection Rate: 3-5 BPM

Pump Schedule:

A. Pressure test surface lines to 5000+ psi.

B. Establish a rate into the isolated perforations with CF (no balls).

C. Open bypass on packer.

D. Pump 300 gallons (7.1 Bbls) of Breakdown Fluid (with no balls) at a rate of 1.5 BPM.

E. Pump 1200 gallons (28.6 Bbls) of Breakdown Fluid containing 60 buoyant balls and 60 Bioballs (one per 10 gallons) at a rate of 1.5 BPMi.

F. Close by-pass on packer.

G. Pump 2100 gallons (50 Bbls) of CF to displace Breakdown Fluid and balls at a rate of 3-5 BPM and 4000 - 5000 psi.

H. Shut well in, record ISIP, and monitor pressure for 15 minutes.

15. Open well, make a couple of swab runs to release ball sealers, open bypass on packer, and reverse circulate 50+ Bbls of CF at 1.5 BPM to recover buoyant balls. Close bypass on packer and swab for cleanup until load fluid is recovered and rate, fluid level, and water-cut stabilize.

16. Release packer and RIH to RBP, reverse circulate with 50 Bbls of completion fluid. Release RBP and POOH.

17. RIH with a tubing collar, tubing sub, 7" (26#) x 2-7/8" production packer, hydraulic pump cavity, and tubing. Set packer at ~6300'.

18. ND BOPE and NU wellhead with hydraulic pump surface assembly. Start pumping equipment and circulate down tubing and up casing overnight.

19. Drop and seat a jet hydraulic pump sized to produce ~500 BFPD with pump intake pressure of 1300 psi and surface injection pressure of 1500 psi. Return well to production.

20. RDMOSU

Note: Plan to run ESP and Y-tool equipment as soon as the well is producing at stable rates and water-cut with limited amount of sand and sediment.

CONFIDENTIAL

Form 3160-5
(April 2004)

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.*

5. Lease Serial No.
UTU-73528

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

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

8. Well Name and No.
Wolverine Federal 20-4

9. API Well No.
43041300570000

10. Field and Pool, or Exploratory Area
Covenant Field

11. County or Parish, State
Sevier County, Utah

1. Type of Well
☑ Oil Well ☐ ☐ Gas Well ☐☐ Other

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

3a. Address
55 Campau NW, Grand Rapids, MI 49503

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

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*

Surface: **158' FNL, 2117' FWL, Sec 20, T23S, R01W**
Bottom Hole: **818' FNL, 1891' FWL, Sec 20, T23S, R01W**

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

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☑ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☑ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☑ Recomplete	☐ Other _____
	☐ 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.)

A workover was conducted on the Wolverine Federal 20-4 well. The upper three existing perforation intervals were acid stimulated and an additional ten feet, from 6352-6362'MD, in the Upper Navajo was perforated. The well was returned to production with a new ESP installation.

See attached summary for details of the completed work.

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

Title **Manager - Development**

Signature

Date **12/04/2009**

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)

RECEIVED
DEC 10 2009
DIV. OF OIL, GAS & MINING

CONFIDENTIAL

Workover Summary and Results

Wolverine Federal 20-4
Covenant Field
November 2009

Purpose of Work: Acid treat existing upper three perf sets and add one new perf set to Upper Navajo 1

Work Summary:

1. MIRU workover rig. Circulated hydraulic pump out and lay down. Circulate 20 bbls of completion fluid and ND wellhead and NU BOPs.
2. Ran 6-1/8" bit and 7" casing scraper to PBTD of 6616' KB. Reverse circulate bottoms up and POOH.
3. Set RBP at 6445' (covering bottom set of perfs) and set packer at 6337' KB. Pressure test packer.
4. RU Halliburton and pressure test lines to 6000 psi. and treated existing upper perf sets (6373'-6386', 6400-6416' and 6424-6439') with 4400 gallons 15% FE HCL and 195 bioballs and 195 buoyant balls (1 ball/10gallons) at a max rate of 3.4 BPM at 3100 psi. .
5. Swabbed back 122 bbls water and 8 bbls oil in first 15 runs. IFL @ surface; FFL @ 1980'. Recovered 145 bbls & 54 bbls oil in 24 runs on following day. Release pkr and retrieved RBP and POOH.
6. Perforated upper Navajo interval 6352-6362 with 4" gun, 0.40 diam., 6 spf, 60 degree phasing, 25 gram charges.
7. RIH and set RBP at 6369'KB and set pkr at 6308' KB. Swabbed 26 bbls water. SDFN. Well flowed 30 bbls overnight. Swabbed 179 bbls oil & 28 bbls water in 18 runs with FFL @ 1500'. Decided not to breakdown new perf set.
8. POOH with tubing, pkr and RBP.
9. Ran new ESP equipment. RDMO service unit.

Active Perforations (Upper Navajo1):

6352'- 6362' MD, 10', 60 holes
6373'- 6386' MD, 13', 78 holes
6400'- 6416' MD, 16', 96 holes
6424'- 6439' MD, 15', 90 holes
6457'- 6470' MD, 13', 78 holes

Note: All depths are referenced to Halliburton SDL-DSN-GR log (run 12/26/08)

Production Recap after Workover:

Before: 166 BOPD and 37 BWPD on hydraulic unit

After: 318 BOPD and 97 BWPD with on ESP on 12/04/2009.

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DEC 10 2009
DIV. OF OIL, GAS & MINING

FEDERAL APPROVAL OF THIS ACTION IS NECESSARY

FORM 9

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

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

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

7.UNIT or CA AGREEMENT NAME: WOLVERINE

1. TYPE OF WELL Oil Well

8. WELL NAME and NUMBER: WOLVERINE FED 20-4

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

9. API NUMBER: 43041300570000

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

PHONE NUMBER: 616 458-1150 Ext

9. FIELD and POOL or WILDCAT: COVENANT

4. LOCATION OF WELL
FOOTAGES AT SURFACE: 0158 FNL 2117 FWL
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: Qtr/Qtr: NENW Section: 20 Township: 23.0S Range: 01.0W Meridian: S

COUNTY: SEVIER

STATE: UTAH

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

TYPE OF SUBMISSION

- ✓ NOTICE OF INTENT — Approximate date work will start: 4/1/2014
- ☐ SUBSEQUENT REPORT — Date of Work Completion:
- ☐ SPUD REPORT — Date of Spud:
- ☐ DRILLING REPORT — Report Date:

TYPE OF ACTION

☐ ACIDIZE	☐ ALTER CASING	☐ CASING REPAIR
☐ CHANGE TO PREVIOUS PLANS	☐ CHANGE TUBING	☐ CHANGE WELL NAME
☐ CHANGE WELL STATUS	☐ COMMINGLE PRODUCING FORMATIONS	☐ CONVERT WELL TYPE
☐ DEEPEN	☐ FRACTURE TREAT	☐ NEW CONSTRUCTION
☐ OPERATOR CHANGE	☐ PLUG AND ABANDON	☐ PLUG BACK
☐ PRODUCTION START OR RESUME	☐ RECLAMATION OF WELL SITE	☐ RECOMPLETE DIFFERENT FORMATION
☐ REPERFORATE CURRENT FORMATION	☐ SIDETRACK TO REPAIR WELL	☐ TEMPORARY ABANDON
☐ TUBING REPAIR	☐ VENT OR FLARE	☐ WATER DISPOSAL
☐ WATER SHUTOFF	☐ SI TA STATUS EXTENSION	☐ APD EXTENSION
☐ WILDCAT WELL DETERMINATION	✓ OTHER	OTHER: Workover

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

Wolverine Gas and Oil Co. of Utah, LLC intends to workover the Wolverine Federal 20-4 to acidize existing Navajo perforations (from 6352'-6470') and recomplete additional, uphole Navajo pay intervals as follows: 6296'-6302', 6307'-09', 6316'-22', and 6332'-41' (total 23' of new perforations). After similarly acidizing the new perforations, an ESP will be run and the well will be returned to production. A summary of the activities actually performed will be filed after well work is complete.

Accepted by the Utah Division of Oil, Gas and Mining

Date: March 03, 2014

By: Dark K Quist

NAME (PLEASE PRINT)	PHONE NUMBER	TITLE
Helene Bardolph	616 458-1150	Engineering Administrative Assistant

SIGNATURE	DATE
N/A	2/26/2014

RECEIVED: Feb. 26, 2014

WOLVERINE GAS AND OIL COMPANY
OF UTAH, LLC

Energy Exploration in Partnership with the Environment

June 16, 2014

Mr. Stan Anderson
Fluid Minerals Group, BLM
Richfield Field Office
150 East 900 North
Richfield, UT 84701

RECEIVED
JUN 30 2014
DIV. OF OIL, GAS & MINING

Mr. Brad Hill
Utah Division of Oil, Gas & Mining
1594 West North Temple, Suite 1210
Salt Lake City, UT 84116

Re: Subsequent Report Sundry for Wolverine Federal 20-4 (API No. 43-041-30057)
20 23S 1W

Gentlemen:

Please find enclosed the required Sundry Notice for recently completed well work at the above-captioned well, with appropriate additional copies. The subject well is operated by Wolverine Gas & Oil Company of Utah, LLC and was recently worked over, in an attempt to increase oil production. Feel free to contact me if you have questions or concerns about either the work performed or the information in this post-work filing. I can be reached in my office at 616-929-1932 weekdays, from 7:30 am to 4:30 PM (EST).

Sincerely,

Ron Meredith,
Sr. Production Engineer
Wolverine Gas & Oil Corporation

RECEIVED
JUN 20 2014
Richfield BLM Field Office

One Riverfront Plaza • 55 Campau, N.W. • Grand Rapids, MI 49503-2616 • 616.458.1150 • FAX 616.458.0869

Form 3160-5
(April 2004)

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.

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 20-4

9. API Well No.
43-041-30057

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

11. County or Parish, State
Sevier County, Utah

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)*
158' FNL, 2117' 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			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☑ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ 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 #20-4 on May 30, 2014. Existing perforations from 6352'-6470' were treated with 5300 gals of 7-1/2% foamed acid (from 60Q to 70Q) and 200 biodegradable perf balls. Foamed acid was pumped at a maximum surface pressure of 4320 psi and an average surface pressure of 3582 psi. After flushing with 70,000 scf of nitrogen, the well was SI. Subsequent flowing/swabbing recovered the entire load volume.

Subsequently, an RBP was set at 6347' and additional Navajo pay was perforated as follows: 6296'-6302', 6307'-6309', 6316'-6322', and 6332'-6341'. The new perforations (6296'-6341') were then treated with 2500 gals of 7-1/2% foamed acid (from 65Q to 70Q). Foamed acid was pumped at a maximum surface pressure of 4100 psi and an average surface pressure of 3582 psi. After flushing with 70,000 scf of nitrogen, the well was SI. Subsequent flowing/swabbing recovered the entire load volume. The well was returned to production at an initial rate of 75 BO and 221 BW per day.

(See the attached WBD and Daily Reports for additional details.)

RECEIVED
JUN 20 2014
Richfield BLM Field Office

14. I hereby certify that the foregoing is true and correct
Name *(Printed/Typed)* **Ron Meredith**
Title **Sr. Production Engineer**

Signature
Date **06/16/2014**

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by
Title
Date 6/25/2014

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 Richfield Field 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)

Sundry # 14SLA00505

Accepted For Record Purposes

	Covenant Field	SHL NE/NW Sec 20, T23S, R1W
	Federal 20-4	BHL NE/NW Sec 20, T23S, R1W
	API# 43-041-30057	Sevier County, Utah

5/17/2014 MIRUSU

5/19/2014 ND wellhead, NU BOP's, hooked vac truck to the casing, rigged up spooling equipment and pulled out of the hole laying down ESP equipment. Picked up and tripped in the hole with 6-⅛" bit, 7" casing scraper and 212 joints of 2-⅞" P-110 tubing to PBTD @ 6616'. Rigged up pump lines and reverse circulated with 258 bbls of completion fluid. Rigged down pump lines and pulled out of the hole to 6427', SWIFN.

5/20/2014 Opened well, 0 psi tubing, 0 psi casing. Pulled out of the hole laying down bit and casing scraper. PU and tripped in the hole with 7" HD packer and 206 joints of P-110 tubing. Set packer at 6449', rigged up swab equipment and made 9 swab runs with the annulus on a vacuum indicating that there is communication behind pipe with perf intervals 6352' - 6439'. Re-set the packer at 6392' and made 4 swab runs concluding that there is communication behind pipe across all of the perf intervals from 6352' -6470'. RD swab equipment and SWIFN.

5/21/2014 Opened well, 0 psi tubing, 0 psi casing. Rigged up Halliburton acid equip. and pumped foam acid as follows:

1. Open casing valve and bypass on packer.
2. Pump 500 gallons acid at, while taking returns at 2⅞" x 7" annulus.
3. Closed packer by-pass
4. Pump 1,600 gallons of 60Q foamed acid at 1 BPM, Max WHP of 3,650 psi dropping 1 biodegradable perf ball (1.18 Sp. GR.) per 20 gals acid pumped.
5. Pump 1,600 gallons of 65Q foamed acid at 1 BPM, Max WHP of 3,900 psi dropping 1 biodegradable perf ball (1.18 Sp. GR.) per 20 gals acid pumped.
6. Pump 1,600 gallons of 70Q foamed acid at 1 BPM, Max WHP of 4,300 psi dropping 1 biodegradable perf ball (1.18 Sp. GR.) per 20 gals acid pumped for the first 1,200 gallons of acid in this stage.
7. Displaced foamed acid with 70,000 ft3 of straight N2 and shut down.

Rigged down and released Halliburton acid equipment. Rigged up flowback lines and opened the well to flowback tanks for the night.

5/22/2014 Well flowed back 55 bbls of fluid overnight. RU swab equipment and swabbed well as follows:
Swab runs - 21
Total fluid recovered 150 bbls
Perf intervals open 6352'-6470'

5/23/2014 Swab runs - 08
Total fluid recovered 52 bbls
RD swab equipment and SWIFN
RD swab equipment, released packer and pulled out of the hole with tubing and packer. RU wireline unit and perforated 6332' - 6341' then attempted to set a WS RBP at 6347' and was unable to lower the plug past 5809'. Pulled out of the hole laying down the RBP. RD wireline unit, SWIFN.

5/24/2014 Opened well, 0 psi. Picked up and tripped in the hole with a tubing set RBP at 6347'. Released off plug and tripped out of the hole with tubing laying down the retrieving head. Picked up and tripped in the hole with perf gun, spacer, firing head, 4-joints, RA sub, 2-joints, packer, on/off tool and 195 Joints of 2-⅞" tubing to surface. Set packer to perforate 6296' - 6322'. RU Halliburton acid equipment and pumped foamed acid as follows:

1. Pressured up on the tubing with nitrogen to fire perf guns

2. Waited for tubing pressure to bleed down
3. Pumped 168 gallons of 65Q foamed acid
4. Shut down due to a leak on the tubing valve.
5. Blew well down to a frac tank
6. Pumped 10 bbls of completion fluid down the tubing
7. Changed out tubing valve
8. Pumped 1,000 gallons of 65Q foamed acid
9. Pumped 1,032 gallons of 70Q foamed acid
10. Pumped 70,000 ft3 of straight nitrogen for flush
11. Shut down

Rigged down and released Halliburton acid equipment. Rigged up flowback lines and opened the well to flowback tanks for the night.

5/25/2014 Well flowed back 121 bbls of fluid overnight. Released packer and tripped out of the hole laying down the packer and perforating guns. PU and tripped in the hole with RH, 2-⅞" x 8' sub, HD packer, 2-⅞" x 6' sub, 2-joints, cup type SN and 198 joints of 2-⅞" tubing to surface. Set packer at 6245'.

RU swab equipment and swabbed well as follows:

Swab runs - 06

Total fluid recovered 92 bbls

Perf intervals open 6296'-6341'

5/26/2014 Opened well. RU swab equipment and swabbed well as follows:

Swab runs - 30

Total fluid recovered 151 bbls

Perf intervals open 6352'-6470'

RD Swab equipment, released packer, tripped in hole to RBP at 6347'. RU pump lines and reverse circulated sand off the top of the RBP, RD pump lines. Released RBP, reset packer at 6241'. SWIFN

5/27/2014 Opened well. RU swab equipment and swabbed well as follows:

Swab runs - 19

Total fluid recovered 132 bbls

Perf intervals open 6352'-6470'

RD swab equipment, released packer and pulled out of the hole laying down P-110 work string, packer and plug. RIH with 2-joints, SWIFN.

5/28/2014 Opened well. RU wireline unit and ran a casing inspection log from 6250'-4250'

5/29/2014 Rig crew on standby waiting on pump

5/30/2014 Opened well, 75 psi. RU spooling equipment and tripped in the hole with 6" collapsible centralizer, Centinel motor, seal, pump, 2-⅜" x 8' sub, 2" x 1-½" Y-tool, 2-⅞" x 2-⅜ XO, 2-⅞" x 6' sub, 1-Joint, cup type SN and 177 joints to surface. ND BOP's, NU Wellhead. RDMOSU

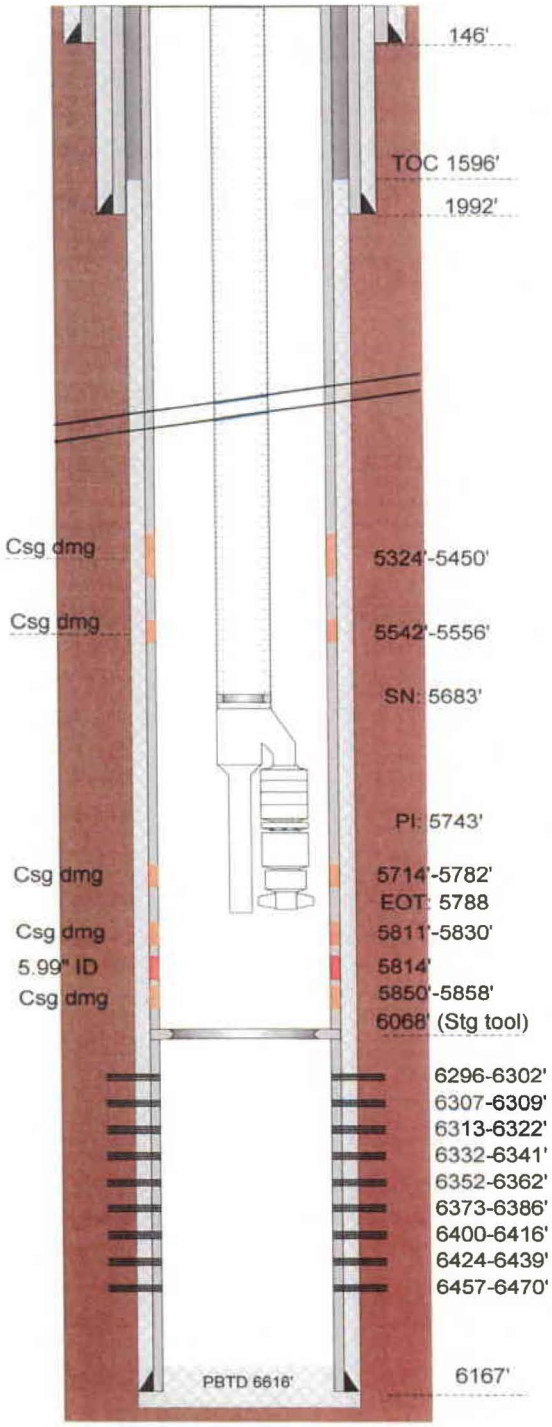
5/30/2014 04 hr. production. 005 Oil, 093 Water, 1347 BHP Centinel 1524 Actual

5/31/2014 24 hr. production. 075 Oil, 221 Water, 1418 BHP Centinel 1595 Actual

Supervisor: Tony E. Cook Rig Operator: Austin Palmer

Wolverine Federal 20-4
API # 43-041-30057
Covenant Field
Section 20, T23S, R1W
Sevier County, Utah

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



TD = 6767' (6730' TVD)

(Not to Scale)

Deviated Well

Surface:	158' FNL 2117' FWL, NE NW, 20-23S-1W
Top of Pay (6283' MD):	818' FNL, 1891' FWL, NE NW, 20-23S-1W
Total Depth (6767' MD):	818' FNL, 1891' FWL, NE NW, 20-23S-1W

Conductor Casing (06/27/08)
Size: 20", 0.25" wall
Depth Landed: 146' KB
Cement Data: Cemented to surface 150 sks

Surface Casing (12/17/08)
Size/Wt/Grade: 9-5/8", 36#, K-55, STC, 8rd
Depth Landed: 1992' KB
Cement Data: 220 sks VeriCem (11.0 ppg, 3.48 cf/sk), 240 sks Premium G (15.8 ppg, 1.17 cf/sk)

Production Casing (12/29/08)
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: 6767' KB
Stage Collar: 6068' KB
Cement Data: Stage 1 - 145 sks 50/50 Prem Poz (14.4 ppg, 1.27 cf/sk)
Stage 2 Lead - 55 sks Varicem (11.0 ppg, 3.55 cf/sk)
Tail - 585 sks Premium "G" (15.8 ppg, 1.25 cf/sk)

Navajo Perforations
6296'- 6302' MD (6259'- 6265' TVD), 06', 30 holes (05/25/14), TCP/EOB
6307'- 6309' MD (6270'- 6272' TVD), 02', 10 holes (05/25/14), TCP/EOB
6316'- 6332' MD (6279'- 6285' TVD), 06', 30 holes (05/25/14), TCP/EOB
6332'- 6341' MD (6295'- 6304' TVD), 09', 54 holes (05/24/14)
6352'- 6362' MD (6315'- 6325' TVD), 10', 60 holes (11/10/09)
6373'- 6386' MD (6336'- 6349' TVD), 13', 78 holes (04/15/09)
6400'- 6416' MD (6363'- 6379' TVD), 16', 96 holes (04/15/09)
6424'- 6439' MD (6387'- 6402' TVD), 15', 90 holes (04/15/09)
6457'- 6470' MD (6420'- 6433' TVD), 13', 78 holes (04/15/09)

Mid-Perf = 6383' MD (6346' TVD), 90' M (90' TV), 526 holes

Tubing (05/30/2014) (see Page 2 for details)

End of BHA	5788' MD (5691' TVD)
Centinel	5782' MD (5686' TVD)
Pump intake	5767' MD (5671' TVD)
Y-Tool Fish	5723' MD (5628' TVD)
Seating Nipple	5683' MD (5590' TVD)

PBTD
(05/19/14) 6616' MD
(11/05/09) 6616' MD
(03/22/09) 6616' MD
(12/29/08) Float collar at 6693'