

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

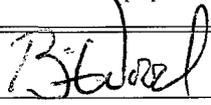
**APPLICATION FOR PERMIT TO DRILL OR REENTER**

5. Lease Serial No. <b>14-20-603-229</b>	
6. If Indian, Allottee or Tribe Name <b>NAVAJO NATION</b>	
7. If Unit or CA Agreement, Name and No. <b>N/A</b>	
8. Lease Name and Well No. <b>TOHONADLA 35-P</b>	
9. API Well No. <b>43-037-31884</b>	
1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER	10. Field and Pool, or Exploratory <b>TOHONADLA 4/70</b>
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/> Single Zone <input checked="" type="checkbox"/> Multiple Zone	11. Sec., T. R. M. or Blk. and Survey or Area <b>35-41S-21E SLM SESE</b>
2. Name of Operator <b>NAVAJO NATION OIL &amp; GAS CO., INC.</b>	
3a. Address <b>P. O. BOX 4439 WINDOW ROCK, AZ 86515</b>	3b. Phone No. (include area code) <b>(928) 871-4880</b>
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At surface <b>1219' FSL &amp; 722' FEL 627018X 37-176507</b> At proposed prod. zone <b>SAME 41152084 -169.569206</b>	
12. County or Parish <b>SAN JUAN</b>	
13. State <b>UT</b>	
14. Distance in miles and direction from nearest town or post office* <b>8 AIR MILES SOUTH OF BLUFF, UT</b>	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) <b>1,219'</b>	16. No. of acres in lease <b>2,560</b>
17. Spacing Unit dedicated to this well <b>SESE</b>	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. <b>1,376' (Tohonadla 1)</b>
19. Proposed Depth <b>6,850'</b>	20. BLM/BIA Bond No. on file <b>BIA RLB0006712</b>
21. Elevations (Show whether DF, KDB, RT, GL, etc.) <b>4,688' GL</b>	22. Approximate date work will start* <b>03/01/2008</b>
23. Estimated duration <b>5 WEEKS</b>	

24. Attachments

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

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

25. Signature 	Name (Printed/Typed) <b>BRIAN WOOD</b>	Date <b>01/24/2008</b>
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Title <b>CONSULTANT</b>	PHONE: (505) 466-8120	FAX: (505) 466-9682
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Approved by (Signature) 	Name (Printed/Typed) <b>BRADLEY G. HILL</b>	Date <b>02-11-08</b>
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Title <b>Office</b>	ENVIRONMENTAL MANAGER
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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)

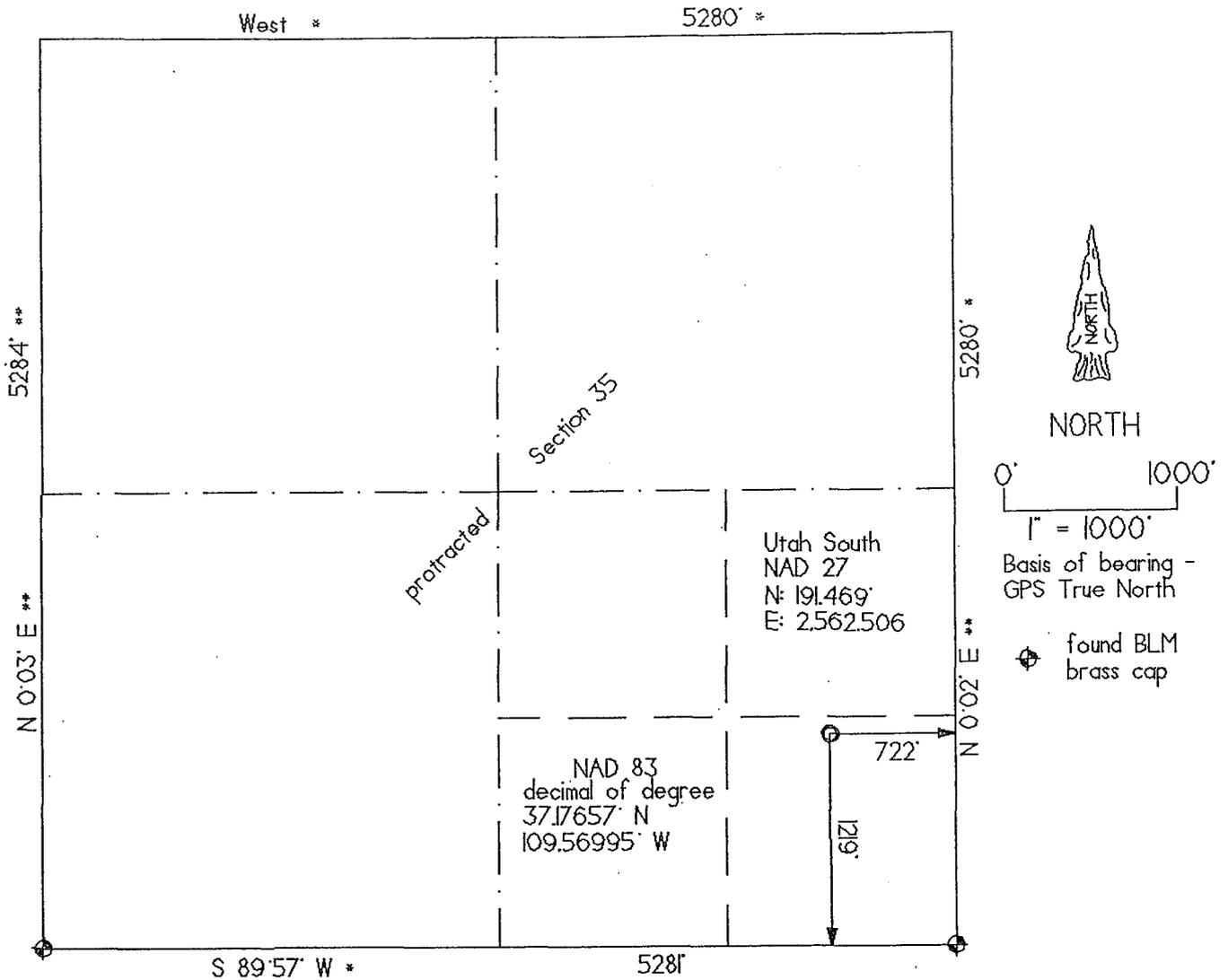
**Federal Approval of this  
Action is Necessary**

**RECEIVED**

**JAN 31 2008**

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

Well Location Plat



Well Location Description

NAVAJO NATION OIL & GAS CO. INC.  
TOHONADLA 35-P  
1219' FSL & 722' FEL  
Section 35, T.41 S., R.21 E., SLM  
San Juan County, UT  
4688' grd. el. ( from GPS)



*Gerald G. Huddleston*  
Gerald G. Huddleston, LS

rev: 05/18/07

The above is true and correct to my knowledge and belief.

Navajo Nation Oil & Gas Co., Inc.  
Tohonadla 23-P  
1219' FSL & 722' FEL  
Sec. 35, T. 41 S., R. 21 E.  
San Juan County, Utah

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## Drilling Program

### 1. FORMATION TOPS

The estimated tops of important geologic markers are:

<u>Formation</u>	<u>GL Depth</u>	<u>KB Depth</u>	<u>Elevation</u>
Carmel Sandstone	0'	15'	+4,688'
Navajo Sandstone	273'	288'	+4,415'
Kayenta Sandstone	633'	645'	+4,055'
Wingate Sandstone	663'	678'	+4,025'
Chinle Shale	1,123'	1,138'	+3,565'
Shinarump Sandstone	1,683'	1,698'	+3,005'
Moenkopi Sand & Mud Stones	1,938'	1,953'	+2,750'
DeChelly Ss/Mdst/Shale	2,098'	2,113'	+2,590'
Organ Rock Shale/Sltst/Ss	2,301'	2,316'	+2,387'
Lower Cutler Sltst/Ss/Shale	3,023'	3,038'	+1,665'
Honaker Trail Ls/Sltst/Shale	4,063'	4,078'	+625'
Paradox Ls/Sltst/Marls/Shale	4,615'	4,630'	+73'
Ismay Ls/Dolo/Marls/Shale	4,912'	4,927'	-224'
Lower Ismay Ls/Dolo/Marls/Shale	4,998'	5,013'	-310'
Desert Creek Ls/Dolo/Marls/Shale	5,083'	5,098'	-395'
Akah Ls/Dolo/Anhy/Shale	5,283'	5,298'	-595'
Barker Creek Ls/Dolo/Anhy/Shale	5,470'	5,485'	-782'
Pinkerton Trail Ls/Dolo/Anhy/Shale	5,700'	5,715'	-1,012'
Molas Mudst/Slt/Ls/Shale	5,888'	5,913'	-1,200'
Leadville Limestone/Dolomite	6,063'	6,068'	-1,375'
Total Depth (TD)	6,850'	6,865'	-2,162'

### 2. NOTABLE ZONES

Desert Creek and Ismay oil production is the primary goal. Upper Leadville oil

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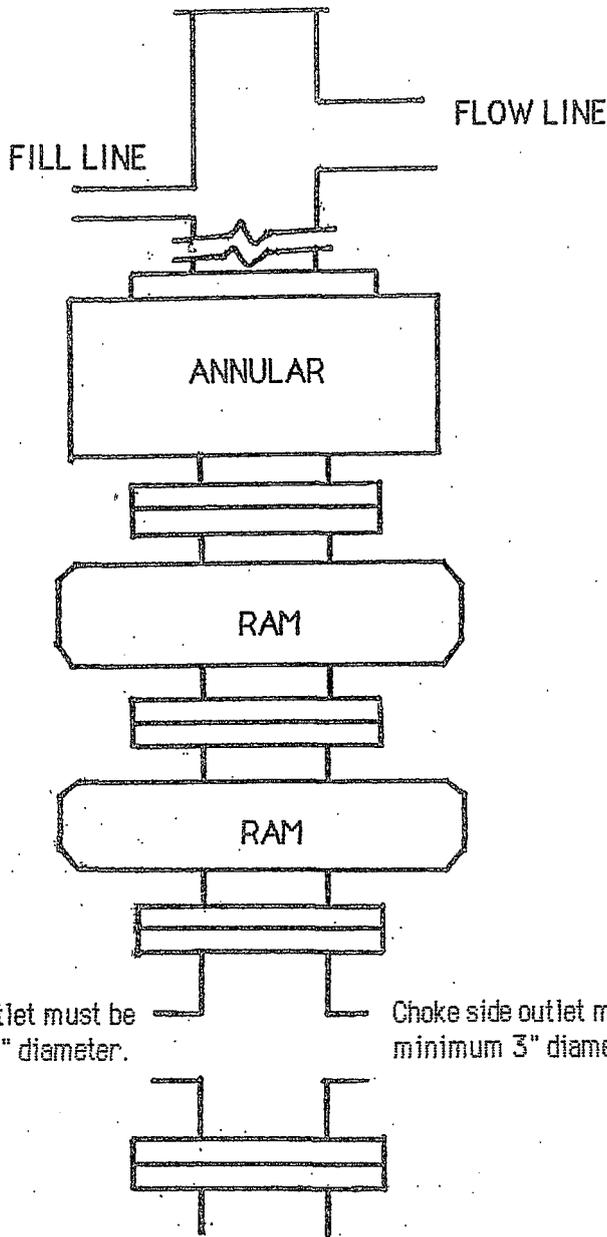
PAGE 2

production is the secondary goal. Oil and gas shows which appear to the well geologist to be commercial will be tested. All fresh water and prospectively valuable minerals will be recorded by depth and protected with casing and cement. Likely fresh water zones are the Glen Canyon group of sandstones.

### 3. PRESSURE CONTROL

A 13-5/8" 3,000 psi double ram and annular preventer with a 3,000 psi choke manifold will be used. A diagram of a typical BOP is on Page 3. Actual model will not be known until bid is let. Procedures are ...

- Nipple up BOP and all equipment
  - Test to 250 #/3,000#
  - Test Hydril to 2,000 psi
  - Log in I. A. D. C. book
- Drill 1/2 of shoe joint
  - Test to 1,500 psi for 30 minutes
  - Log in I. A. D. C. book
- Activate BOPs every 24 hours or on trips and log in I. A. D. C. book
- Install hand wheels and lay straight flare line before drilling out
- Conduct weekly BOP drills with each crew and log in I. A. D. C. book
- Have floor valve and wrench on floor at all times
  - Floor valve must be in open position
- Before drilling surface casing shoes, blind rams will be closed. BOP and surface casing will be pressure tested to 1,500 psi for a total test time of 30 minutes if not previously tested by Halliburton during cement job.
- Studs on all well head and BOP flanges will be checked for tightness weekly
- Hand wheels for locking screws will be installed and operational
- Entire BOP and well head assembly will be kept clean of mud
- A drill stem safety valve in the open position will be available
- Call BLM at (505 599-8900) and the Utah Division of Oil, Gas, & Mining at (801 538-5340) before testing BOPs



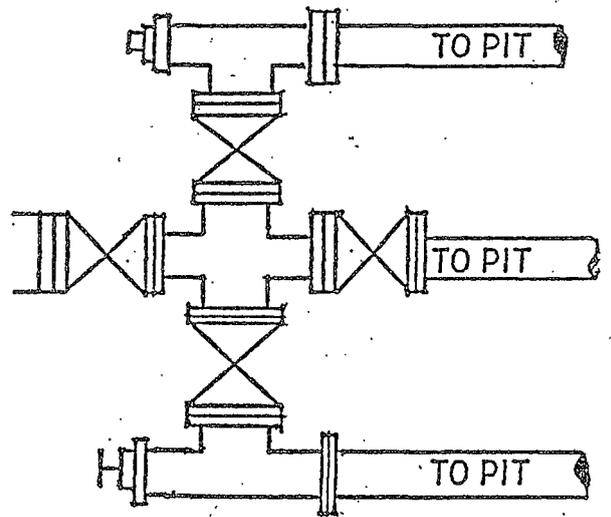
TYPICAL BOP STACK  
& CHOKE MANIFOLD

There will be at least 2 chokes and 2 choke line valves (3" minimum). The choke line will be 3" in diameter. There will be a pressure gauge on the choke manifold.

Kill side outlet must be minimum 2" diameter.

Choke side outlet must be minimum 3" diameter.

Kill line will be minimum 2" diameter and have 2 valves, one of which shall be a minimum 2" check valve.



Upper kelly cock will have handle available.  
Safety valve and subs will fit all drill string connections in use.  
All BOPE connections subjected to well pressure will be flanged, welded, or clamped.

4. CASING & CEMENT

<u>Hole Size</u>	<u>O. D.</u>	<u>Weight</u>	<u>Grade</u>	<u>Age</u>	<u>Coupling</u>	<u>Burst/Collapse</u>	<u>Depth Set</u>
20"	16"		Conductor	New			60'
12-1/4"	8-5/8"	24#	J or K-55	New	S T & C	2,950/1,370	1,400'
7-7/8"	5-1/2"	17#	J or K-55	New	L T & C	5,320/4,910	6,850'

Conductor pipe will be cemented to the surface with ready-mix.

Surface casing will be cemented to the surface with  $\approx 50\%$  excess. Lead with  $\approx 325$  sacks ( $\approx 633$  cubic feet) Halliburton light with 5 pounds per sack gilsonite + 1/4 pound per sack cellophane mixed at 12.4 pounds per gallon and 1.95 cubic feet per sack. Tail with  $\approx 200$  sacks ( $\approx 238$  cubic feet) standard cement + 1%  $\text{CaCl}_2$  + 1/4 pound per sack cellophane mixed at 15.6 pounds per gallon and 1.19 cubic feet per sack. Centralizers will be placed  $\approx 5'$  off the bottom and on the first three joints and the fifth joint.

Production casing will be cemented with  $\approx 40\%$  excess to  $\approx 1,200'$  (i. e.,  $\geq 200'$  above surface casing shoe). Lead with  $\approx 510$  sacks ( $\approx 994$  cubic feet) Halliburton light with 5 pounds per sack gilsonite + 1/4 pound per sack cellophane mixed at 12.4 pounds per gallon and 1.95 cubic feet per sack. Tail with  $\approx 335$  sacks ( $\approx 422$  cubic feet) premium with 5 pounds per sack gilsonite + 0.6% Halad 9 + 0.25 CFR-3 mixed at 15.2 pounds per gallon and 1.26 cubic feet per sack. Centralizers will be set on the shoe joint, top of the second and third joints, and continue through and above pay zones at  $\approx 90'$  intervals.

5. MUD PROGRAM

<u>Interval</u>	<u>Weight</u>	<u>Viscosity</u>	<u>Fluid Loss</u>	<u>Type</u>
0 - 1,400'	8.3 - 8.7	27 - 32	N/C	Fresh H <sub>2</sub> O gel lime spud mud, pH 9
1,400' - TD	8.4 - 10.0	38 - 40	8 cc	Fresh water gel & PHPA, SAPP, etc

Cuttings will be collected every  $\approx 30'$  from the surface to  $\approx 5,500'$ . Cuttings

Navajo Nation Oil & Gas Co., Inc.  
Tohonadla 23-P  
1219' FSL & 722' FEL  
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will be collected every  $\approx 10'$  from  $\approx 5,500'$  to TD.

#### 6. CORES, LOGS, & TESTS

Cores may be cut depending upon shows, most likely in the Desert Creek. GR - Sonic and DLL-Micro-SFL log suites will be run from TD to the surface. FDC-CNL logs will be run from TD to  $\approx 4,000'$ . No drill stem tests are currently planned.

A geologist or mud logger will be on site from  $\approx 4,000'$  to TD.

#### 7. DOWN HOLE CONDITIONS

No abnormal temperatures or abnormal pressures are expected. Maximum expected bottom hole pressure will be  $\approx 2,945$  psi. Hydrogen sulfide is expected in the Mississippian, just below the Pinkerton. A contingency plan is attached.

#### 8. OTHER INFORMATION

The anticipated spud date is March 1, 2008. It is expected it will take  $\approx 3$  weeks to drill and  $\approx 2$  weeks to complete the well.

Navajo Nation Oil & Gas Co., Inc. is requesting an exception due to geology. The location is based on seismic. The well is staked at 1219' FSL & 722' FEL 35-41s-21e on 2,560 acre Tribal lease 14-20-603-229. Thus, it is 359' too far north.

Navajo Nation Oil & Gas Co., Inc. is requesting permission to drill at 1219' FSL & 722' FEL 35-41s-21e. This is the only well, existing or planned, in the

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Tohonadla 23-P  
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quarter-quarter. The closest (1,376') existing or planned well is ST Oil Company's existing Tohonadla 1 at 660 FS & 1980 FE 35-41s-21e. ST Oil Company is a partner in the Tohonadla 35-P.

Closest lease line is 1219' south. Navajo Nation Oil & Gas Co., Inc. or ST Oil Company is owner of all drilling units within a minimum 4,309' radius of the proposed exception. Five of the 8 offset quarter-quarters are part of the same lease. The three remaining offset quarter-quarters are part of jointly operated Navajo Nation Oil & Gas Co., Inc. and ST Oil Tribal 320 acre lease 14-20-603-270. The quarter-quarter (NESE Sec. 35) toward which the well encroaches is part of the same lease.

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## Surface Use Plan

### 1. DIRECTIONS (See PAGES 12 - 15)

From the junction of US 163 and US 191 west of Bluff ....  
Go South 8-1/4 miles on US 191 to the equivalent of mile post 13.1  
Then turn left and go Northeast 0.7 miles on a sandy road to the 23 #1 well  
Then bear left and go Northeast 187.32' cross country to a surface pipeline  
Then turn left and go Northwest 1,347.19' along the steel surface pipeline  
Then turn right and go Northeast 356.7' cross country to the proposed pad

Roads will be maintained to at least equal to their present condition.

### 2. ROAD WORK (See PAGES 14 & 15)

No upgrade is needed for the existing road. The 1,891.21' of new road will be built to BLM Gold Book standards. Road will have a  $\approx$ 14' wide running surface and will be rocked where needed. No culvert, vehicle turn out, or cattle guard is needed. Maximum disturbed width will be 20'. Maximum cut or fill = 3'. Maximum grade = 5%.

### 3. EXISTING WELLS (See PAGE 13)

There are 2 water, 4 oil, and 7 plugged wells within a mile radius. There are no gas or injection wells within a mile radius.

### 4. PROPOSED PRODUCTION FACILITIES (See PAGES 14 & 15)

A well head and gas powered pump will be installed on the pad. Both will be

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painted a flat Carlsbad tan. A 2,573.19' long  $\approx 4$ " O. D. steel pipeline will be laid along the road from the well to the existing separator and tank battery. The pipeline will be buried  $\approx 36$ " deep.

#### 5. WATER SUPPLY

Water will be trucked from Monument Resources' well on private land in 30-40s-22e near Bluff. Water right number is 09-135.

#### 6. CONSTRUCTION METHODS & MATERIALS (See PAGES 16 & 17)

The top 6" of soil and brush will be stripped and stockpiled east of the pad. The pit subsoil will be piled east of the pit and separate from the topsoil. A diversion ditch will be cut north of the pad. A minimum 12 mil plastic liner will be installed in the reserve pit. The reserve pit will be fenced sheep tight on 3 sides with woven wire fence topped with barbed wire. The fourth side will be fenced once the rig moves off. The fence will be kept in good repair while the pit dries. Once dry, contents of the reserve pit will be buried in place.

Rock will be bought and trucked from private land near Bluff.

#### 7. WASTE DISPOSAL

All trash will be placed in a portable trash cage and hauled to the county landfill. Human waste will be disposed of in chemical toilets. Toilet contents will be hauled to a state approved dump station off the reservation.

#### 8. ANCILLARY FACILITIES

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Tohonadla 23-P  
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There will be no air strip or camp. Camper trailers will be parked on the pad for the company man, tool pusher, and mud logger.

#### 9. WELL SITE LAYOUT

See PAGES 16 and 17 for drawings of the well pad, cross section, cut and fill diagram, reserve pit, trash cage, access onto the location, parking, living facilities, and rig orientation.

#### 10. RECLAMATION

Reclamation starts once the reserve pit is dry, at which point it will be back filled. Liner top will be folded over contents and covered with  $\geq 24$ " of dirt. The reserve pit and any pad areas not needed for producing the well will be reclaimed as an interim measure. Once the well is plugged, the remainder of the pad and road will be reclaimed.

All reclamation will leave the terrain with a natural shape, slopes will be no steeper than 3 to 1, subsoil will be used to fill the reserve pit, all compacted areas will be ripped  $\geq 12$ " deep with the contour, topsoil will be spread across all compacted areas and harrowed with the contour. A seed mix will be drilled as prescribed by BLM, BIA, or the Navajo Nation. Weeds will be controlled in accordance with BLM, BIA, or Tribal requirements.

#### 11. SURFACE OWNER

All construction will be on Navajo Tribal surface. Tribal Project Review Office phone is (928) 871-6447. Address is P. O. Box 2249, Window Rock, Arizona, 86515.

Navajo Nation Oil & Gas Co., Inc.  
Tohonadla 23-P  
1219' FSL & 722' FEL  
Sec. 35, T. 41 S., R. 21 E.  
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## 12. OTHER INFORMATION

The nearest hospital is a  $\approx$ 1-1/4 hour drive away in Monticello. It is 3 blocks northwest of the intersection of US 491 and US 163/191. Hospital phone number is (435) 587-2116. Or dial 1-800-332-1911 from anywhere in the county. Give the operator the latitude and longitude (see section plat (which is the second page of the APD)) of the well.

Chuck Yarbrough (BIA) and Charles Black (Permits West) conducted an on site inspection on June 13.

## 13. REPRESENTATION & CERTIFICATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U. S. C. 1001 for the filing of false statements. Executed this 24th day of January, 2008.



\_\_\_\_\_  
Brian Wood, Consultant  
Permits West, Inc.

37 Verano Loop, Santa Fe, NM 87508

(505) 466-8120

FAX: (505) 466-9682

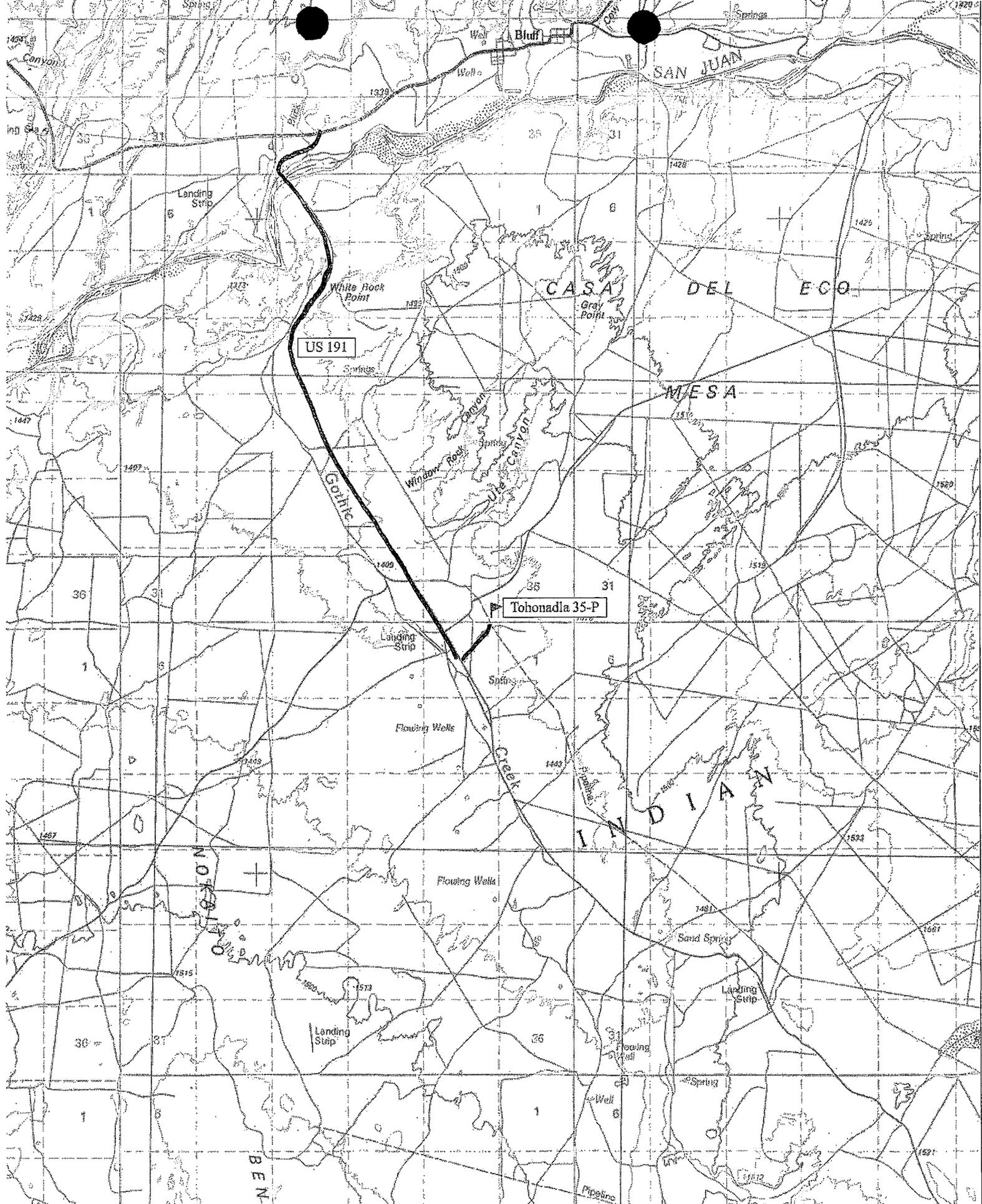
Mobile: (505) 699-2276

Navajo Nation Oil & Gas Co., Inc.  
Tohonadla 23-P  
1219' FSL & 722' FEL  
Sec. 35, T. 41 S., R. 21 E.  
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The field representative will be:

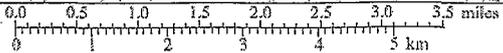
Wilson Groen  
Navajo Nation Oil & Gas Co., Inc.  
P. O. Box 4439  
Window Rock, AZ 86515  
(928) 871-4880

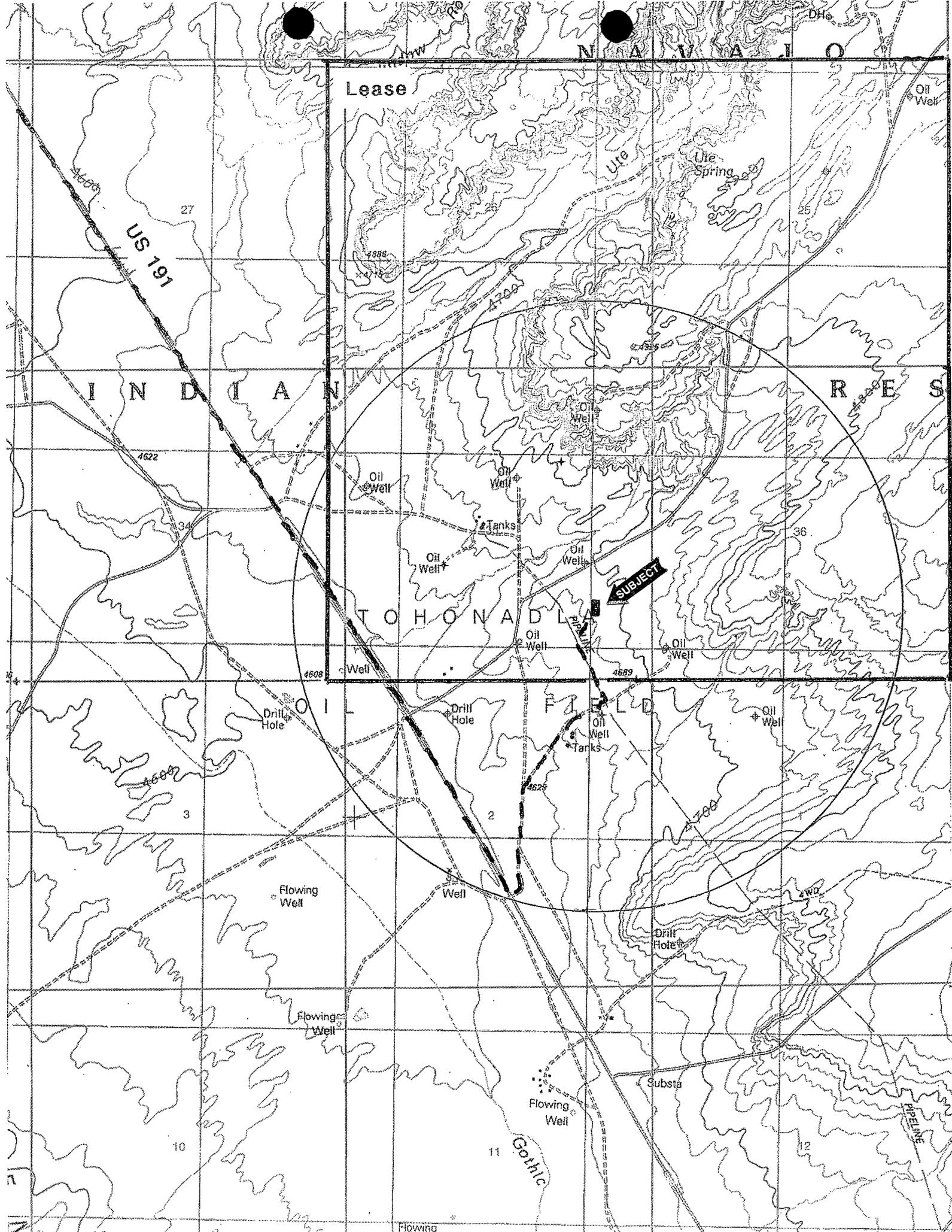


US 191

Tohonaodla 35-P

N MN 11W P





Lease

US 191

INDIAN

TOHONAADLA

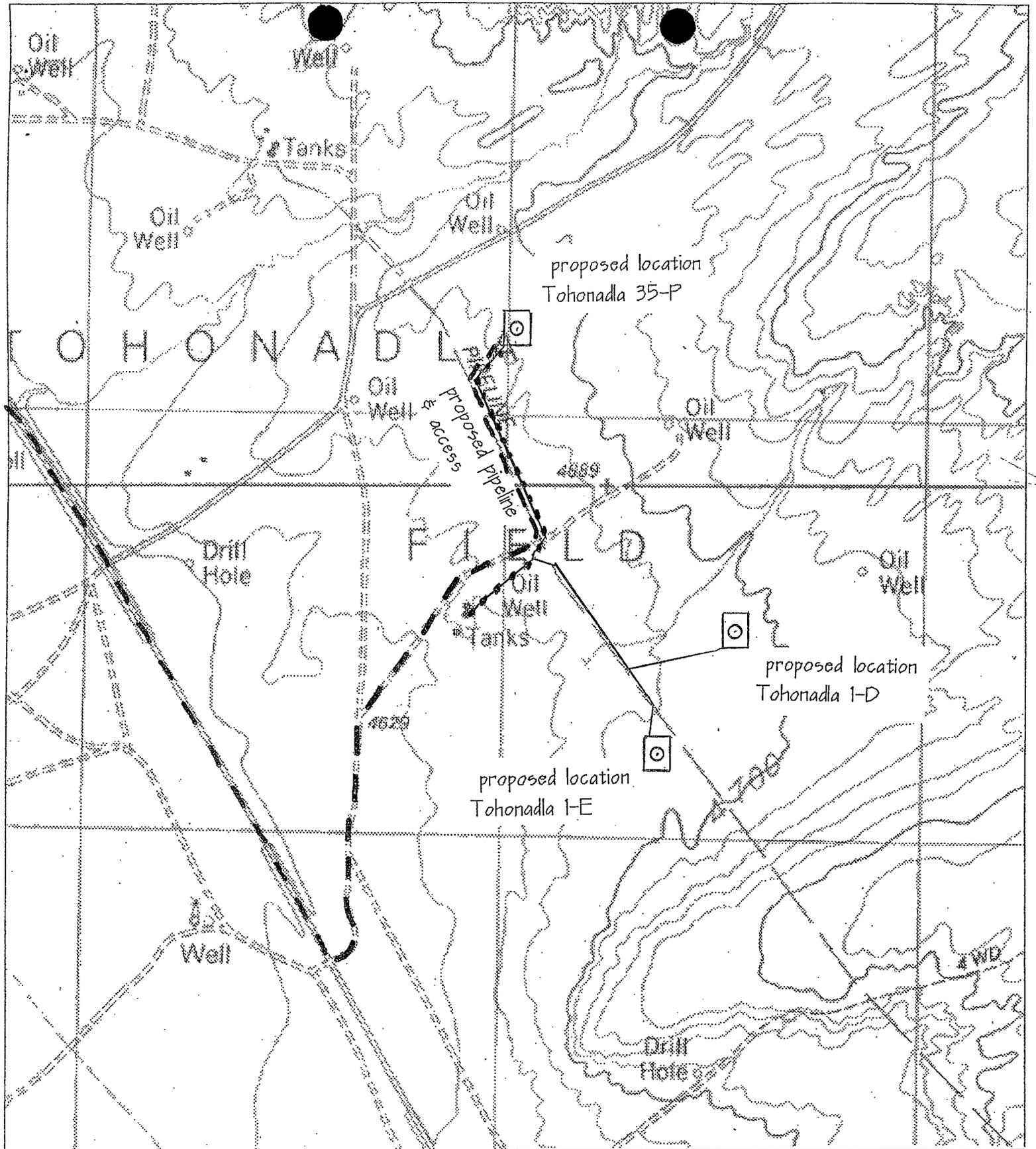
OIL FIELD

SUBJECT

Gothic

PIPELINE





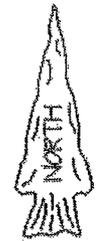
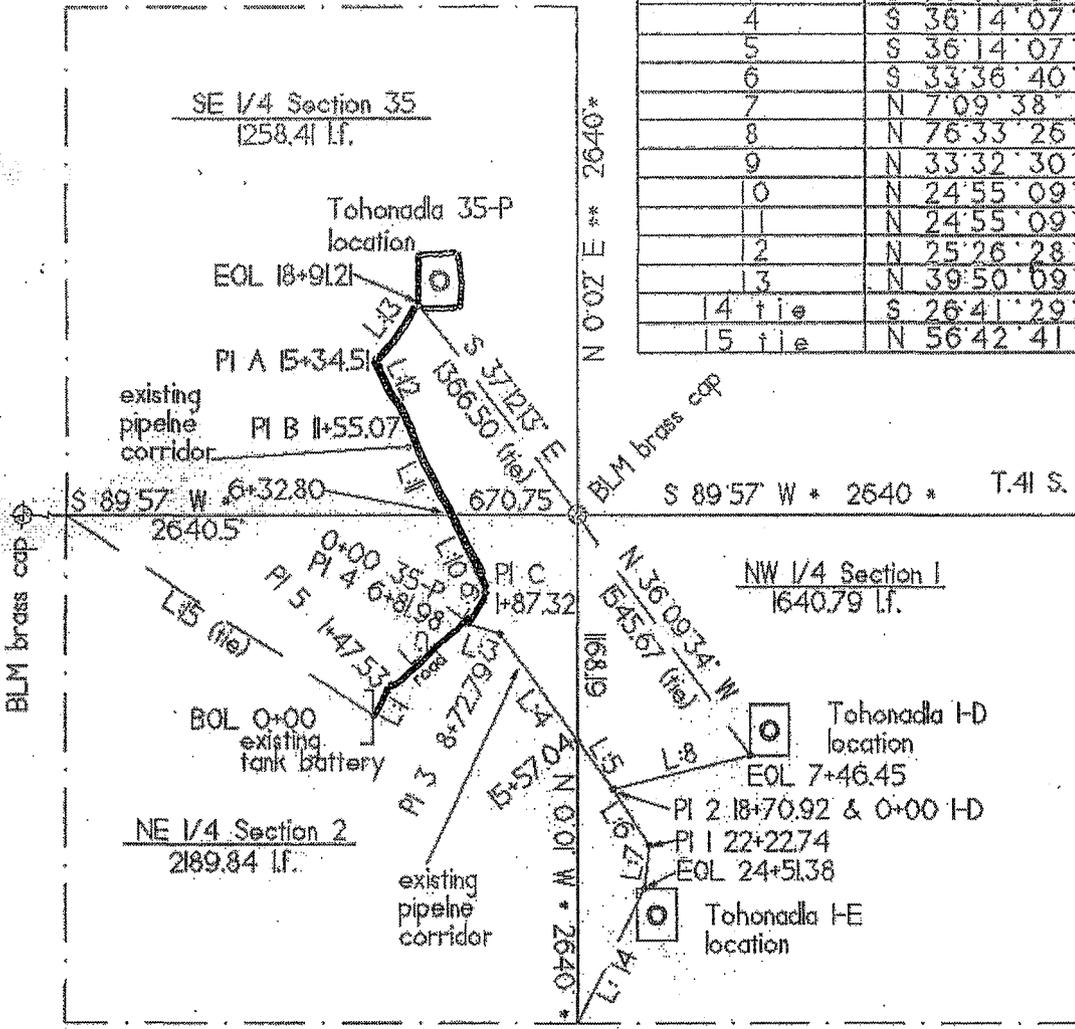
NAVAJO NATION OIL & GAS

Access map to Tohonadla 35-P, 1-D & 1-E  
 Section 35, T.41 S., R.21 E.  
 Section 1, T.42 S., R.21 E., SLM  
 San Juan County, UT

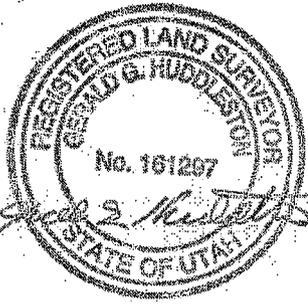
HUDDLESTON LAND SURVEYING 970 565 3330

Description Data

LINE NO.	DIRECTION	LENGTH
1	N 29°06'02" E	147.53
2	N 49°26'04" E	534.45
3	S 73°01'36" E	190.81
4	S 36°14'07" E	684.25
5	S 36°14'07" E	313.88
6	S 33°36'40" E	351.82
7	N 7°09'38" E	228.64
8	N 76°33'26" E	746.45
9	N 33°32'30" E	187.32
10	N 24°55'09" W	445.48
11	N 24°55'09" W	522.27
12	N 25°26'28" W	379.44
13	N 39°50'09" E	356.70
14 tie	S 26°41'29" W	781.97
15 tie	N 56°42'41" E	1885.65



0 1000'  
Scale 1" = 1000'  
GPS True North



KNOW ALL MEN BY THESE PRESENTS that I, Gerald G. Huddleston, do hereby certify that this plat was prepared from field notes of an actual survey made by me or under my supervision and that the same is true and accurate to the best of my knowledge and belief.

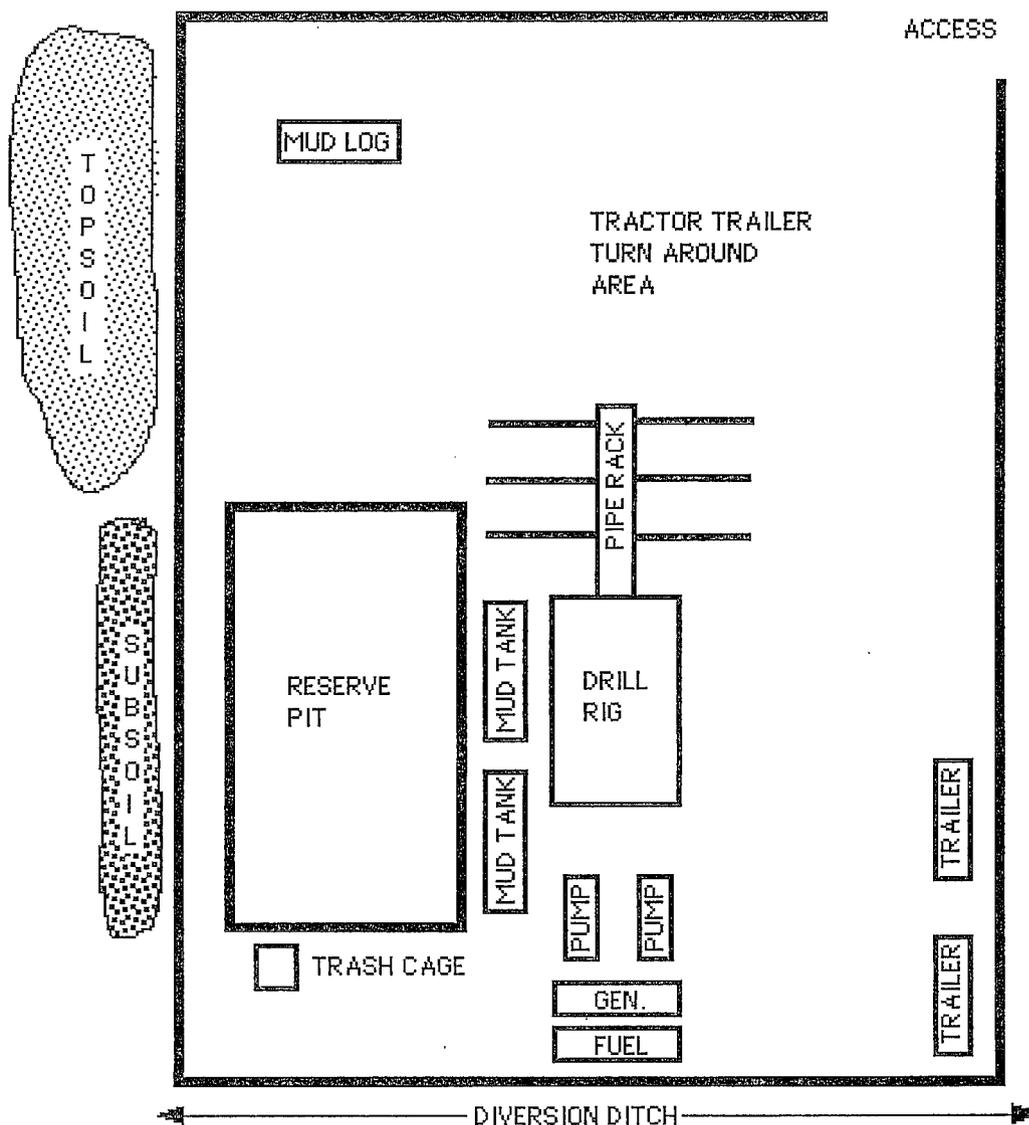
Navajo Nation Oil & Gas  
Proposed pipeline & access to:  
Tohonadla I-D, I-E & 35-P  
Section 1 & 2, T.42 S., R.21 E.  
Section 35, T.42 S., R.21 E., SLM  
San Juan County, UT  
05 10 '07

Navajo Nation Oil & Gas Co., Inc.  
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1" = 50'



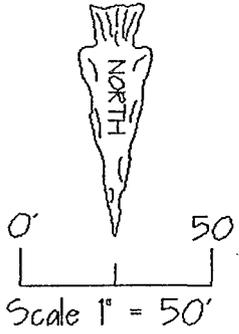
NORTH

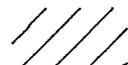


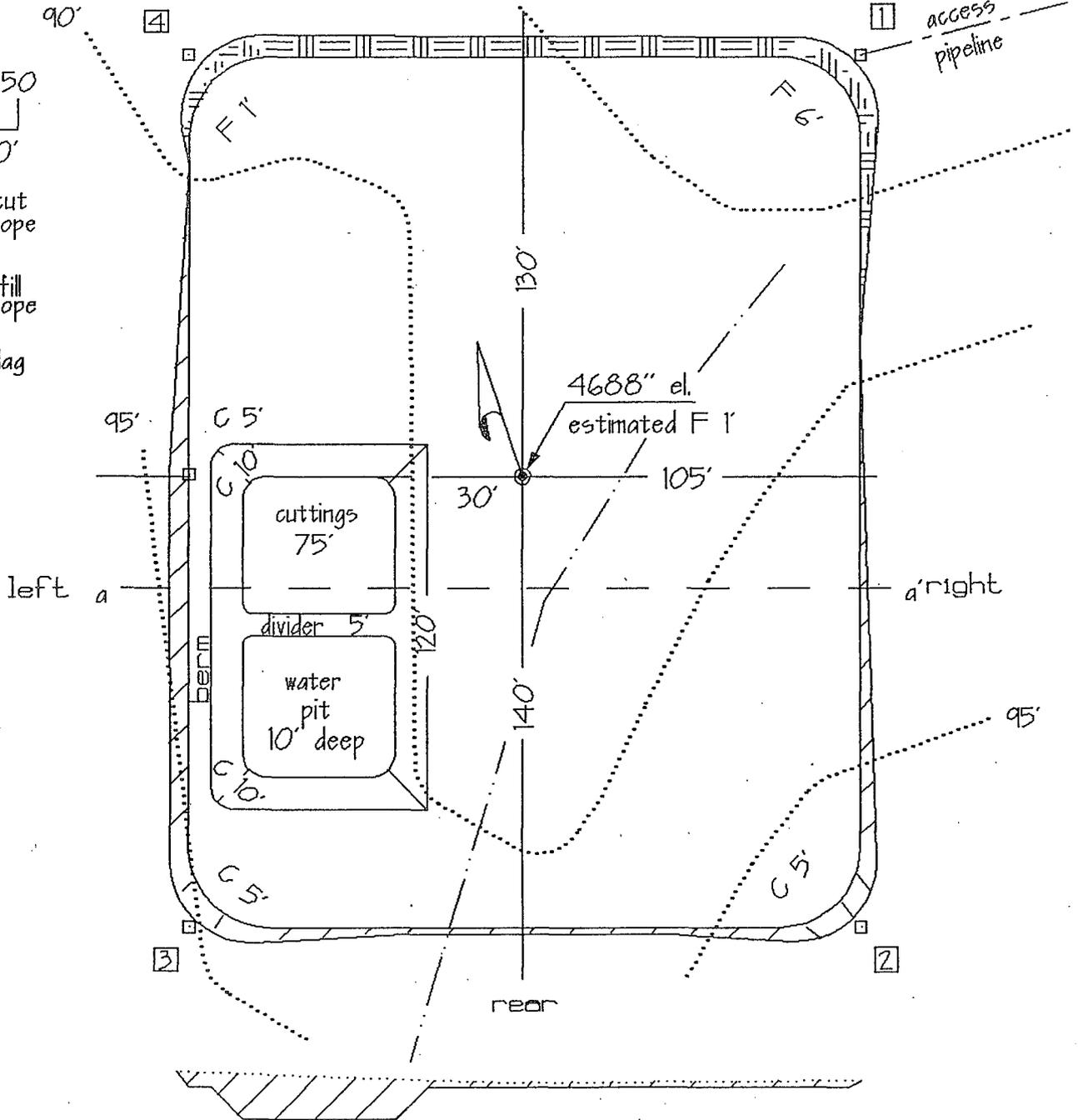
Tohonadla 35-P  
well pad & section

front

85' South



-  cut slope
-  fill slope
-  stake/pin flag



a

Cross section

a'

**Hydrogen Sulfide (H<sub>2</sub>S) Contingency Plan  
For Navajo Nation Oil & Gas Co. Inc.'s**

**Tohonadla 1-D**

**1119' FNL & 1017' FWL Sec. 1 T42S R21E**

**Tohonadla 1-E**

**2081' FNL & 417' FWL Sec. 1 T42S R21E**

**Tohonadla 35-P**

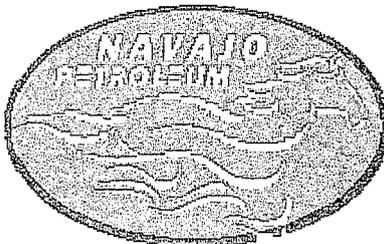
**1219' FSL & 722' FEL Sec. 35 T41S R21E**

**San Juan County, Utah**

**Navajo Nation Oil & Gas, Inc**

**Post Office Box 4439**

**Window Rock, Arizona 86515**



**PERMITS WEST, INC.**  
**PROVIDING PERMITS for LAND USERS**  
37 Verano Loop, Santa Fe, New Mexico 87505 (505) 466-8120

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## Checklist for Drilling, Workover, and Maintenance in H<sub>2</sub>S Environment

1. Two safety briefing areas at least 100 yards from well head and arranged so that one briefing area will be upwind at all times. These sites should be located uphill whenever possible. (see Appendix 3.2)
2. Identify direction of prevailing winds (see Appendix 3.2)
3. At least two wind socks installed at all times
4. Primary and secondary emergency escape routes (flagged trail minimum)
5. Number, types, and storage location of H<sub>2</sub>S emergency respirators for personnel, and number of personnel to be present onsite at any one time.
6. H<sub>2</sub>S detector locations (3 minimum to include cellar or bell nipple and mud tanks at shale shaker). Type and location of visual and audible alarms to be used.
7. H<sub>2</sub>S evacuation and emergency training procedures and schedule (i.e. Contingency Plan)
8. List of area residents within a two-mile radius, evacuation plan, and contact list (including agencies and individuals)
9. Types and quantities of mud additives and scavengers to be available at location for H<sub>2</sub>S operations
10. Design features and operational procedures to be used to provide safe working environment (including a certification by the operator on the APD that all equipment meets standards for H<sub>2</sub>S service)
11. Appropriate warning signs and flags on all access roads
12. Provisions for blocking and monitoring access to location during critical incident
13. Ventilation fan under rig floor
14. In event of uncontrolled blowout, designation of local official who has authority to ignite flow
15. Swabbing or drillstream fluids containing H<sub>2</sub>S should be put through a separator to permit flaring of gas. Flare should have a continuous pilot light to ensure ignition of all such gas.

## 1.0 General

### 1.1 Description of Hydrogen Sulfide Gas

Hydrogen Sulfide ( $H_2S$ ) is a colorless, transparent gas with a distinct and characteristic rotten-egg odor at low concentrations and not detectable by odor at high concentrations.  $H_2S$  at higher concentrations and/or over longer periods of exposure paralyzes the olfactory sense for that specific offer. The gas is extremely toxic to humans and can easily become dangerous and lethal. Extreme care and caution is needed to prevent injury and/or death.  $H_2S$  has a specific gravity of 1.192 which is heavier than air. It tends, therefore, to accumulate in low places. This collection of gas can lead to dangerous concentrations in areas such as arroyos and drainages.  $H_2S$  from "downhole" is often warmer than surface air and will therefore tend to rise and therefore affect workers above the escaping source. Hydrogen Sulfide is explosive and water soluble.

### 1.2 Toxicity

American National Standards Institute standard: Z37.2-1972 Acceptable Concentrations of Hydrogen Sulfide describes  $H_2S$  toxicity in this way: Hydrogen Sulfide is an extremely toxic and irritating gas. Free hydrogen sulfide in the blood reduces its oxygen-carrying capacity, thereby depressing the nervous system. Hydrogen sulfide is oxidized quite rapidly to sulfates in the body, therefore no permanent aftereffects occur in cases of recovery from acute exposures unless oxygen deprivation of the nervous system is prolonged. There is no evidence that repeated exposures to hydrogen sulfide result in accumulative or systemic poisoning. Effects such as eye irritation, respiratory tract irritation, slow pulse rate, lassitude, digestive disturbances, and cold sweats may occur but these symptoms disappear in a relatively short time after removal from the exposure. Odors become detectable in concentrations as low as .008 parts per million (ppm) (California studies) but the sense of smell is lost after 2-15 minutes at 100 ppm.

### 1.3 H<sub>2</sub>S First Aid and Treatment Procedures

- Victim should be removed to fresh air immediately\*\*
- If victim is not breathing, rescue breathing or artificial breathing should be started immediately
- Treat for shock; keep victim warm and comfortable
- Call ambulance and/or doctor, take victim immediately to emergency room or other healthcare facility

**\*\*The rescuer(s) should always wear personal protective equipment when attempting to rescue a H<sub>2</sub>S victim. It is important to never increase the number of victims unnecessarily during a H<sub>2</sub>S emergency.**

## 2.0 Hydrogen Sulfide H<sub>2</sub>S Contingency Plan

### 2.1 Introduction

This plan provides required procedures to be followed to adequately provide for a safe H<sub>2</sub>S working environment. These required procedures include safety procedures, precautionary measures, and training for emergency and standard procedures. This document sets forth the responsibilities of the operator and all individuals and entities under employment or contract with the operator working in a sour gas (H<sub>2</sub>S) area.

To make this contingency plan effective and in order to provide a safe working environment, cooperation from all individuals is a necessity. To this end each person onsite must understand normal and emergency operating procedures for this site. Each individual onsite must have adequate information, training, and practice with the specific procedures described in this Contingency Plan. It is the responsibility of both the operator to provide adequate equipment, training, and procedures, as well as the individual "worker's" responsibility to participate fully in all H<sub>2</sub>S procedures, to familiarize themselves with the location of all safety equipment and features, and to keep equipment and procedures in working order and up to date.

In order for Navajo Nation Oil & Gas, Inc. to provide a safe working environment for all "workers" and individuals in the vicinity of the well the safeguards are put in place. **Initiative lies with each and every individual for the safety of all. To this end the drilling foreman is required to and will enforce all safety procedures, for the benefit of all involved.**

### 2.2 Purpose

It is Navajo Nation Oil & Gas, Inc.'s intention to provide a safe working environment for all employees, contractors, and others involved with the drilling of its wells. There exists the possibility of encountering toxic H<sub>2</sub>S gas during the construction, completion, and maintenance of the well. To such end, this H<sub>2</sub>S contingency plan will be put into effect after surface casing is drilled or when it is deemed necessary by the BLM in consultation with Navajo Nation Oil & Gas, Inc.'s geologist and management.

Safety procedures are established for each person's safety connected with the operation and for the safety of the residents of the local area.

These procedures will be strictly enforced by Navajo Nation Oil & Gas, Inc.'s foreman. Noncompliance may result in loss of pay or dismissal from the sight, job, or employment.

### 2.3 Operating Procedures

**Before this H<sub>2</sub>S contingency plan is operational, all personnel that are to be involved with operation shall be thoroughly trained\* in the proper use of breathing apparatus\*\* (i.e. SCBAs and Escape Units), emergency procedures, and H<sub>2</sub>S first aid and rescue methods. An approved list of trained personnel will be supplied by the safety company and stored with the drilling foreman.**

\*Required training for operation personnel will include, but not be limited to, H<sub>2</sub>S safety course from an approved training company, safety briefing on drill site of all safety equipment use and locations before the start of work for each and every person onsite, safety related training in-place, on-site 1,000 feet before the first H<sub>2</sub>S formation.

\*\*Throughout this contingency plan breathing apparatus shall be understood as

- a) A Self-Contained Breathing Apparatus (SCBA) manufactured such as Scott Industrial c100 or similar.
- b) Or an emergency Escape Unit such as the Scott SCRAM or Elsa (or similar) often referred to as hip packs, hoods, or pony bottles.

The two types of breathing apparatus will be differentiated as a SCBA or an Escape Unit as required.

#### 2.3.1 Safety Equipment

Personal H<sub>2</sub>S monitors- Every person onsite will be required to wear a personal H<sub>2</sub>S monitor at all times while onsite. Monitors will not be worn on hard hats, but should be worn on the waist belt or preferably near the chest in-front.

Breathing Apparatus- all personnel on the drill site will be assigned an individual breathing apparatus unit. This may be either an escape unit or a SCBA unit. A minimum of two SCBA type units will be onsite. These units will be used by the team whose duty it is to serve as the onsite rescue team.

Monitoring and Recording Devices-An experienced safety company (such as DXP Safety Alliance, Farmington, NM) will be responsible for the installation and monitoring of H<sub>2</sub>S detectors placed on site. These units will be tested and recalibrated as the safety company requires. If H<sub>2</sub>S is detected, the monitors will be tested and recalibrated at least every 12 hours. This monitoring system may or may not be integral to the required two stage alarm system on site. This two stage system (visual and audio) will have a minimum of three H<sub>2</sub>S detector locations. Monitors will be located 1), in the cellar or on the bell nipple, 2), at the mud tanks' shale shaker, and 3), to be determined by the safety company. Visual (light) and audio (siren) will activate when H<sub>2</sub>S concentrations reach 10 ppm.

First-Aid and rescue equipment-Stored on-site, but ideally up-hill and up-wind from H<sub>2</sub>S sources a minimum of one "rescue pack" will contain at least:

- 1 backboard, straps, headblocks
- a set of cervical collars (s-xl)
- 1 bag valve mask
- 1 bottle of oxygen
- gauze and other standard first-aid items

suggested 1 AED (automatic external defibrillator).

Gas Monitor-An appropriate monitor should be on-site that can measure for LLE, VOC, and other explosive or hazardous gasses.

### 2.3.2 Safety Procedures

Cascade System- Every person required to perform duties within "safety zones" (see list below) will be provided with breathing equipment attached to a cascade air system. These areas are as follows

- rig floor
- mud pit
- derrick
- shale shaker
- mud hopper and bulk hopper
- all hazardous locations will be accessible by hose and work pack (SCBA)

Escape Routes- Two escape routes will be at a minimum flagged and kept clear at all times.

Safety Briefing Areas-Two safety briefing areas will be located at the end of escape routes (see above). The briefing areas will be clearly marked, up-hill, and located so that one site is always up wind. Please see attached site map for safety briefing areas in Appendix 3.4.

Safety, first-aid, and rescue equipment-Will be stored properly onsite using best practices. This will include proper maintenance and scheduled testing, inspection, and training/practice.

Service companies- All service companies will be briefed regarding potential hazards of the well site including the presence (or potential for) H<sub>2</sub>S. These companies will be required to provide breathing apparatus and training to their employees. No service company personnel will be allowed onsite without meeting these requirements. In addition a safety briefing under the direction of the drill foreman regarding site specific H<sub>2</sub>S procedures will be provided to each new personnel member reporting on-site.

Drills and practice- Drills reviewing all and any safety procedures including evacuation, rescue, and proper procedures to shut-in a well, and identify source of H<sub>2</sub>S in instance of a leak will be practiced under the supervision of the safety company representative and company foreman. Proper use of breathing apparatus will be instructed during such drills. Drill schedule will be designed to familiarize new personnel with all safety procedures. Each crew should also be familiar with all operations. Drills should include a short work period in safety equipment.

Warning Signs- Warning signs will be posted at all access roads. “No smoking” signs will be posted at access points as well. Signs will be posted more than 200 feet and no more that 500 from well pad. When H<sub>2</sub>S is present at 10 ppm or greater a red flag shall be displayed on the warning sign. Gates, road barricades, and/or gate guards will be used if necessary to prevent access during critical or hazardous situations.

Wind Socks- A minimum of two wind socks should be installed at locations easily observable from all work areas. If more than two windsocks are needed in order to allow “workers” at all times to easily identify the wind direction; more windsock will be installed.

Vehicle Parking- Vehicles should be parked 200ft from well site with their noses pointing away from the well site. Preferably vehicles will be located up hill and up wind from the well along the escape route.

Testing Fluids- Swabbing and testing fluids containing H<sub>2</sub>S will be pass through a separator to permit flaring of the gas. There will be a pilot light in such instances.

Bug Blowers- Circulation will be provided by explosion proof electric fans to all critical locations when necessary.

Drills reviewing all and any safety procedures including evacuation, rescue, and proper procedures to shut-in a well, and identify source of H<sub>2</sub>S in instance of a leak will be practiced under the supervision of the safety company representative and company foreman. Proper use of breathing apparatus will be instructed during such drills. Drill schedule will be designed to familiarize new personnel with all safety procedures. Each crew should also be familiar with all operations. Drills should include a short work period in safety equipment.

### 2.3.3 Working Conditions

Occupational Safety and Health Administration (OSHA) has set guidelines for Permissible Exposure Limits (PEL) This standard is to be considered the threshold **never to be exceeded** for the health and safety of all workers on this site. Ideally, exposure would never be this high.

#### 2.3.3.1 Exposure Limits

OSHA Permissible Exposure Limit (PEL) for General Industry: 29 CFR 1910.1000 Z-2 Table -- Exposures shall not exceed 20 ppm (ceiling) with the following exception: if no other measurable exposure occurs during the 8-hour work shift, exposures may exceed 20 ppm, but not more than 50 ppm (peak), for a single time period up to 10 minutes.

OSHA Permissible Exposure Limit (PEL) for Construction Industry: 29 CFR 1926.55 Appendix A -- 10 ppm, 15 mg/m<sup>3</sup> TWA (accessed via the internet at: [http://www.osha.gov/dts/chemicalsampling/data/CH\\_246800.html#exposure](http://www.osha.gov/dts/chemicalsampling/data/CH_246800.html#exposure) on 19 July 2007)

The maximum exposure limit for an 8 hour day is less than 10 ppm.

## 2.4 H<sub>2</sub>S Emergency Procedures

### 2.4.1 Incident

H<sub>2</sub>S alarm system activation. Light and siren warnings or personal H<sub>2</sub>S monitor activation for any one “worker.”

### 2.4.2 Primary Emergency Procedure

- i. All rig crew personnel and all auxiliary personnel must **DON BREATHING APPARATUS IMMEDIATELY.**
- ii. Rig crew should mask up with SCBA type work packs preferentially
- iii. All auxiliary crew should move to safety briefing area, uphill and upwind.
- iv. All non-essential personal should continue to evacuate site.

### 2.4.3 Secondary Emergency Procedure

#### I. Supervisory Personnel

- i. Company Foreman
  - a. Proceed to cascade trailer and check for safe operation of cascade system
  - b. Proceed to active safety briefing areas and account for all personnel. If all personnel are not accounted for initiate appropriate search.
  - c. Return to drilling floor and supervise operations
- ii. Toolpusher
  - a. Proceed to cascade trailer and check if Company Foreman is operating cascade system safely. If NOT ensure safe operations of the cascade system.
  - b. Proceed to drilling floor and supervise operations. Make sure all crew members are accounted for and institute buddy system. If all personnel are not accounted for, initiate appropriate search.

#### II. Rig Crew

- i. Driller
  - a. if drilling

1. after donning breathing apparatus proceed to console and raise Kelly to slip set position

2. shut down mud pumps

3. monitor well flow, remain at console

4. using hand signals verify all personnel are at stations, verify company man and toolpusher's position, initiate search if well is not flowing

b. If tripping

1. after donning breathing apparatus put pipe in the slip-set position

2. stab safety valve, close safety valve

3. monitor well flow-remain at console

4. watch derrickman descend from derrick, verify all personnel locations, verify company man and toolpusher's position, initiate search if well is not flowing

c. if well is flowing

1. after donning breathing apparatus, shut well in HARD

2. verify all personnel locations, verify company man and toolpusher's position, initiate search if necessary

3. obtain necessary pressures for well control

4. Proceed to safety briefing area with crew, plan well control operations with all personnel

ii. Derrickman

- a. after donning breathing apparatus, go to pit side window on the floor whether drilling or tripping (descend derrick)

- b. maintain visual contact with driller and monitor flow

- c. if mud properties are needed, then proceed to the shaker with "buddy"

- d. monitor other hands on pit side of rig visually

- e. proceed to open manual well-head if necessary (with "buddy")

- iii. Motorman
  - a. after donning breathing apparatus, go to the cascade system and ensure safe operation
  - b. maintain visual contact with chain hand on doghouse side of floor
- iv. Chainhand
  - a. after donning breathing apparatus, stab safety valve if tripping
  - b. go to doghouse/pipe-rack and maintain visual contact with driller and motorman
- v. Floorman
  - a. after donning breathing apparatus, stab safety valve if tripping
  - b. aid driller while maintaining visual contact with driller, derrickman, and chainhand

### III. Auxiliary Personnel

- i. Mud engineer and Company man or geologist are to act as wardens. Wardens must account for all other auxiliary crew.
- ii. All auxiliary crew are to remain in safety briefing area unless evacuated by wardens.
- iii. Wardens organize search with notification from company. All searches are to be done with "buddy". Geologist warden should remain in safety briefing area.

### 2.4.4 Igniting the Well

#### I. Decision

- i. The Company Foreman holds the responsibility for the decision to ignite a well. In the case where he is incapacitated or absent authority passes to the toolpusher and then the contract driller
- ii. the decision to ignite the well is only to be made as a last resort safety measure when
  - a. there is threat human life and grave threat to public safety and equipment

b. there is no alternative way of containing the well given the emergency faced.

c. an attempt was made to contact area office (circumstances permitting)\*

**\*when human life is threatened no delay in decision making can be afforded**

#### I. Instructions for Igniting the Well

- i. Two individuals are required for ignition
- ii. Both individuals will wear SCBAs and have 200 foot retrieval cords tied to there waists
- iii. One individual will measure the atmosphere for explosive gasses with appropriate meter.
- iv. The other individual will remain in the safety briefing area
- v. Others in the briefing area are to remain aware of both individuals and aid as able. If either tethered individual is overcome by gas, he should be pulled to safety.
- vi. The well should be lit with a 25 mm meterotype flare gun when well conditions allow. The safest method of igniting the well should always be used.
- vii. Burning H<sub>2</sub>S will produce sulfur dioxide which is poisonous. The area, therefore is not safe once the well has ignited. Continue to observe all emergency procedures and follow orders from supervisors and the area office. Notice of incident should be reported to all appropriate authorities.

### 3.0 Appendices

#### 3.1 Check List for Safety Equipment (designed for a maximum of 11 people)

- Safety Trailer housing cascade system at least ten 300 cu. ft. bottles of compressed air
- 7 SCBA type breathing apparatus with 45 cu. ft. bottles
- 5 breathing masks connected to the cascade system with 7 cu. ft. pony bottles
- 2 extra 300 cu. ft. bottles able to refill SCBA bottles to be placed at the safety briefing areas
- 2 Wind socks
- 1 Flare gun and flares
- 1 rescue pack (as described in section 2.3.1)
- Warning signs for access (flags for marking conditions)
- "Safety Briefing Area" signs, evacuation route flags
- H<sub>2</sub>S monitors (personnel and stationary)
- Alarm system (audio and visual—explosion proof)
- Gas Monitor

### 3.2 Emergency Phone Numbers

#### Navajo Nation Oil & Gas Company Personnel to be Notified

Wilson Groen	President	Office: (928) 871-4880 Cellular: (505) 879-6483 Direct (928) 871-8501
Rich Ferris	Cell: 303-618-2925	Home: 303-693-9207
Sam Butler	Cell: 303-888-8920	Home: 303-329-9418
Sallie Tippie	Cell: 303-884-8875	Home: 303-331-8695

#### Safety Company Personnel

(Name)	(Position)	(Number work) (Number home)
(Name)	(Position)	(Number work) (Number home)

#### Local Agencies

San Juan County Fire Department	(Monticello)	911 (435) 587-3225
San Juan County Sheriff (Monticello)		911 (435) 587-2237
San Juan County Emergency Management (Monticello)		(435)-587-3225
Blanding Medical Center 804 North 400 West, Blanding, UT		(435) 678-2254
San Juan Hospital 364 West 100 North, Monticello, UT		(435) 587-2116
Navajo Nation Police (Montezuma Creek)		(505) 368-1350
(Monument Valley)		(505) 325-0022

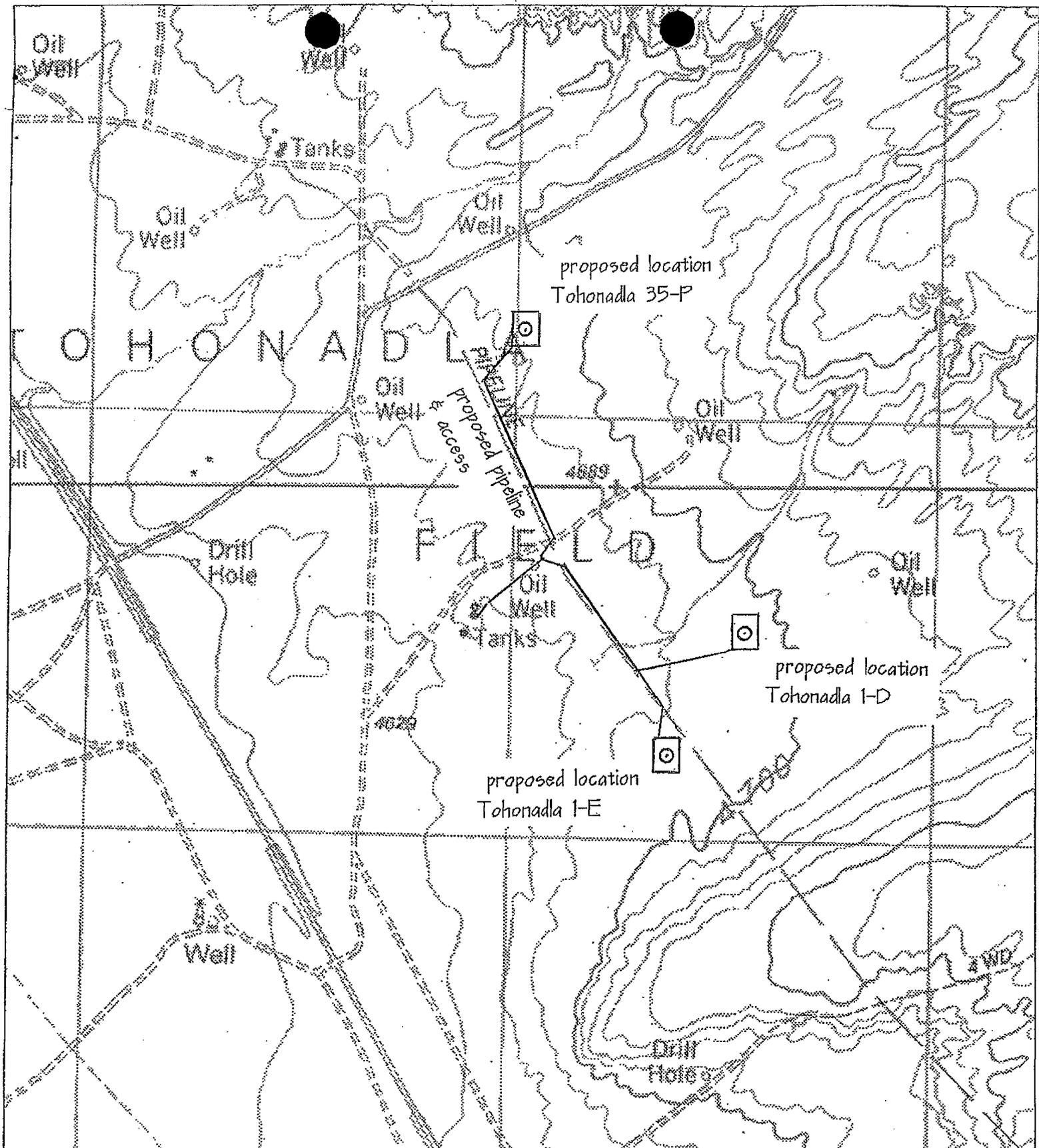
#### Other Government Agencies

National Response Center		800-424-8802
BLM	Monticello Field Office	(435) 587-1500
	Jeff Brown	(435) 587-1525

	Mobile	(435) 459-4886
	Field Manager	(435) 587-1505
BLM	Farmington Field Office	(505) 599-8900
	Emergency line	(505) 599-8907
	Jim Lovato	(505) 599-6367
BIA, Window Rock	Bertha Spencer	(928) 871-5938
Utah Division of Oil, Gas and Mining (SLC)		
	During Office Hours	(801) 538-5340
	After Hours	(801) 243-9466
	Utah State Emergency Response Commission	(801) 536-4123
	Utah Highway Patrol (Monticello)	(435) 587-2000
	Mexican Water Chapter House	(928) 674-3641
	Red Mea Chapter House	(928) 656-3655
	Utah Health Department (Price)	(435) 637-3671
	US EPA Region 8 (Denver)	(800) 227-8917
	Navajo Nation Minerals Dept. (Window Rock, AZ)	(928) 871-6587
Veterinarian	Angel Peak Vet. Hospital (Farmington)	(505) 632-3561
Veterinarian	Farmington Veterinary Clinic	(505) 325-7462
Veterinarian	Watkins, Clyde H. DVM	(435) 678-2414
Helicopter	New Air Helicopters (Durango)	(970) 259-6247
Helicopter	Heli NM (Albuquerque)	(866) 995 1058
	Blanding Air Ambulance	(800) 742-8787
	Classic Aviation	(800)-444-9220 ext 5

Emergency Phone Numbers Local Residents within 2 miles

See maps to follow

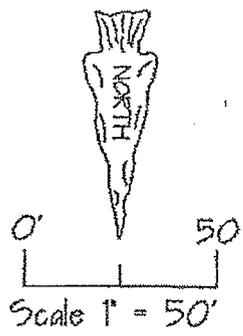


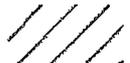
**NAVAJO NATION OIL & GAS**  
 Access map to Tohonadla 35-P, 1-D & 1-E  
 Section 35, T.41 S., R.21 E.  
 Section 1, T.42 S., R.21 E., SLM  
 San Juan County, UT  
 3.2 Tohonadla Vicinity Maps  
**HUDDLESTON LAND SURVEYING 970 565 3330**

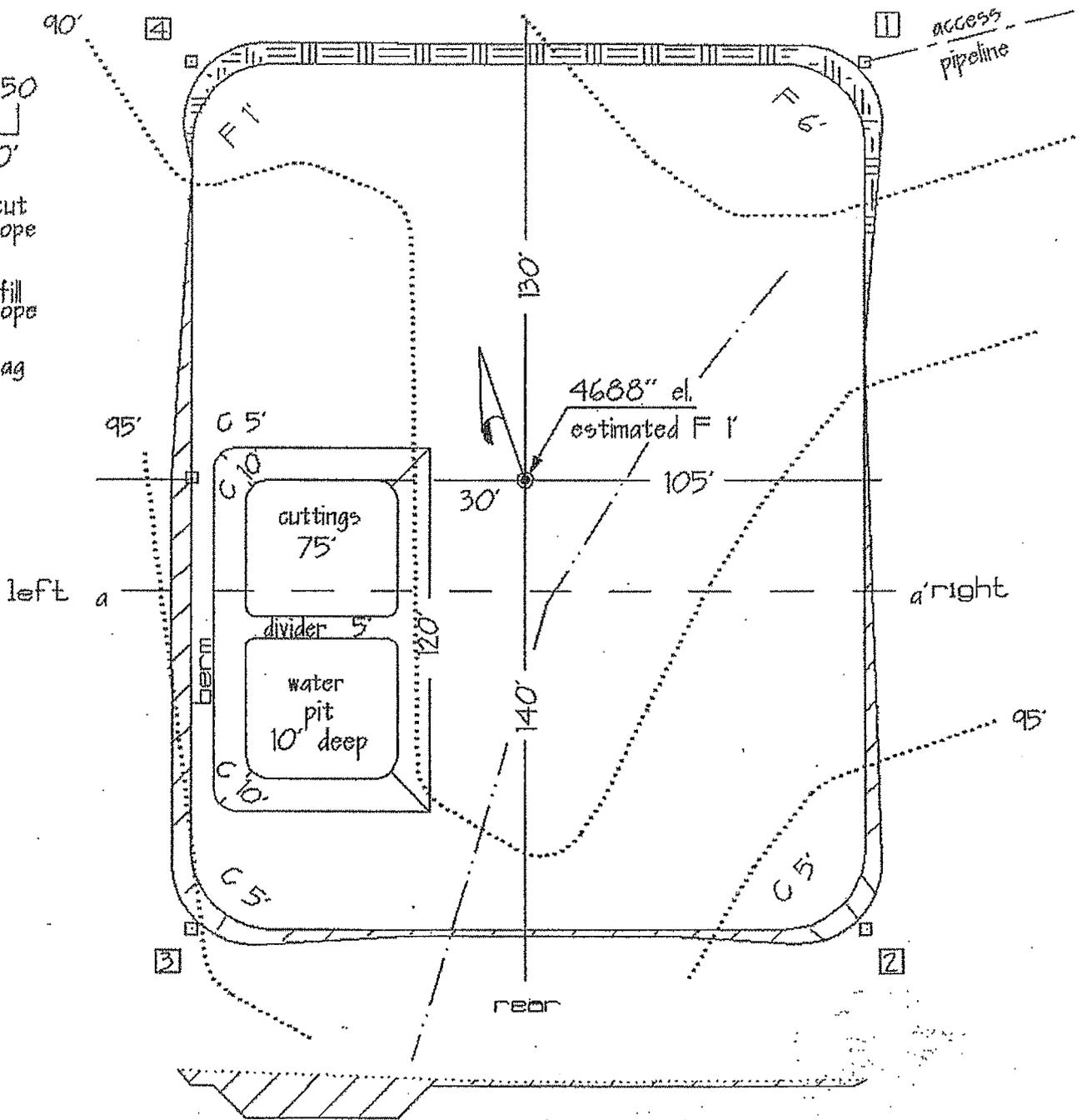
Tohonadla 35-P  
well pad & section

front

85' South



-  cut slope
-  fill slope
-  stake/pin flag



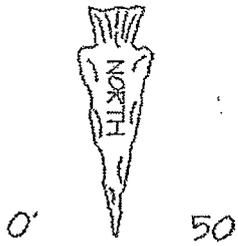
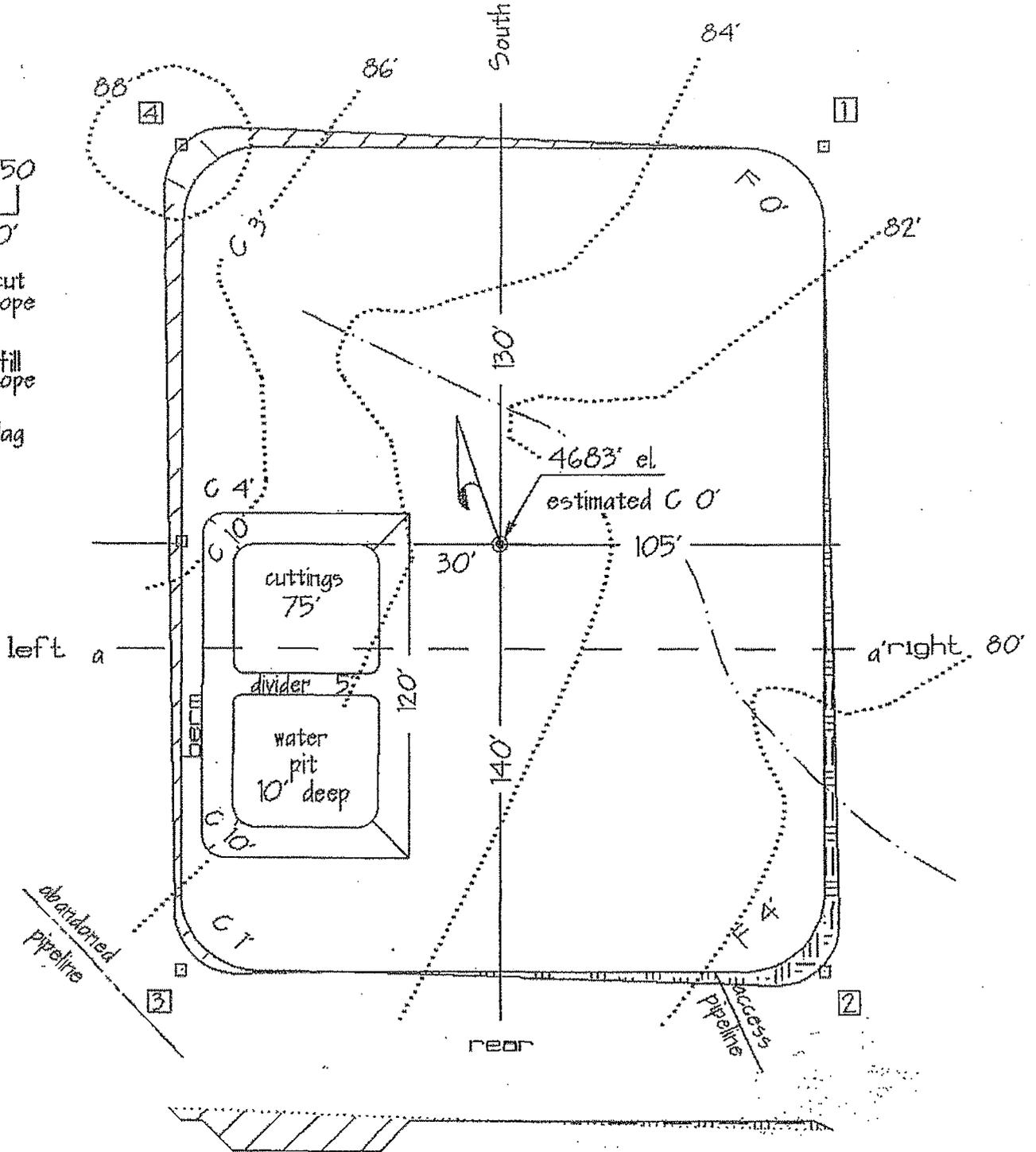
Cross section

Tohonadla 1-E  
well pod & section

front

South

rear



0' 50'  
Scale 1" = 50'

cut slope

fill slope

stake/pin flag

left a

a'right 80'

Cross section

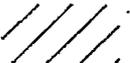
Tohonadla HD  
well pad & section

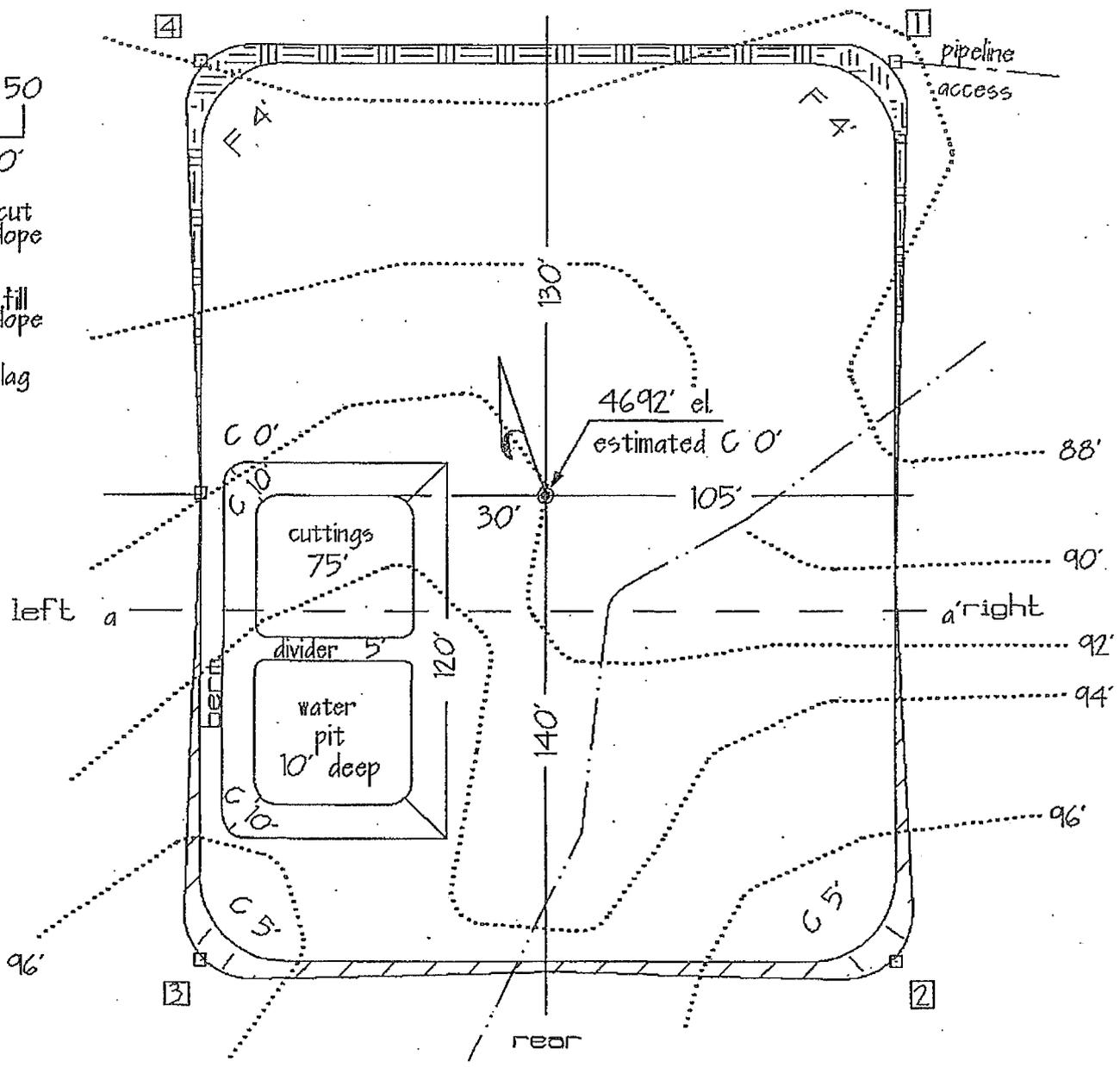
front

South



0' 50'  
Scale 1" = 50'

-  cut slope
-  fill slope
-  stake/pin flag

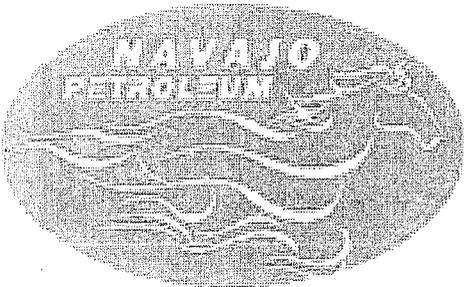


Cross section

# Proposed Tohonadla Wells

Navajo Nation  
Oil & Gas Co. Inc.

Sec. 35 T. 41 S., R. 21 E.  
Sec. 01 T. 42 N., R. 21 E.  
San Juan County, Utah



## Local Residences Contingency Map

Prevailing Winds  
From the Southwest

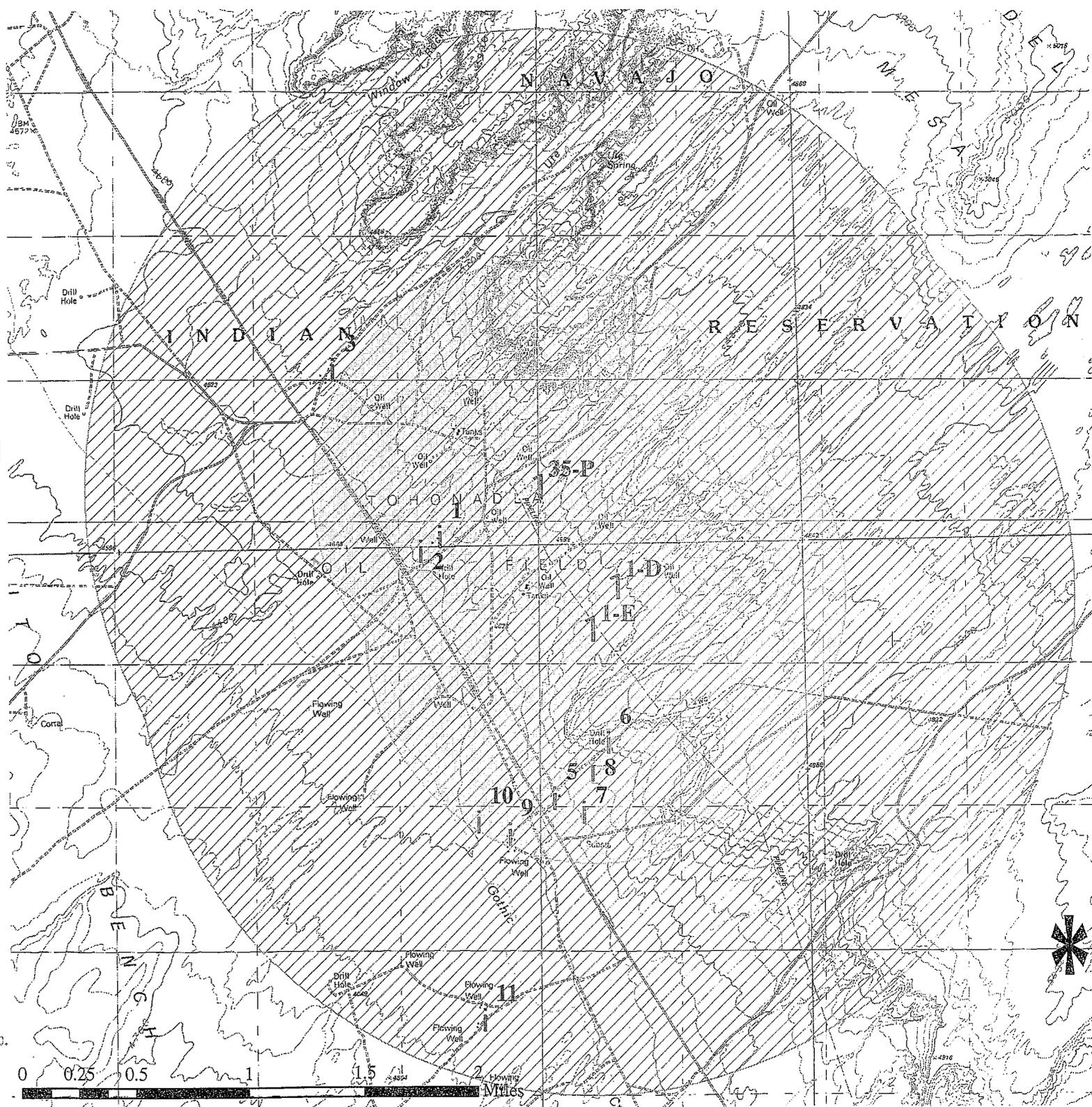
### Legend

-  Proposed Tohonadla wells
-  Residences
-  2 miles from wells
-  1 mile from wells

15 January 2008

**PERMITS WEST, INC.**  
PROVIDING PERMITS for LAND USERS  
37 Verano Loop, Santa Fe, New Mexico 87505 (303) 486-8120

3.2 Local Residences Map

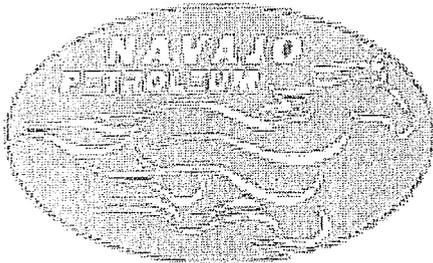


# Proposed Tohonadla Wells

Navajo Nation  
Oil & Gas Co. Inc.

Sec. 35 T. 41 S., R. 21 E.  
Sec. 01 T. 42 N., R. 21 E.

San Juan County, Utah



## Local Residences Contingency Map

Prevailing Winds  
From the Southwest

Legend	
	Proposed Tohonadla wells
	Residences
	2 miles from wells
	1 mile from wells

15 January 2008

**PERMITS WEST**, INC.  
PROVIDING PERMITS FOR LAND USERS  
27 VICTORY LANE, SANTA FE, NEW MEXICO 87505 (505) 456-6120

3.2 Local Residences Key

ID	Name	Phone	Comments
1	Julias Stash	NO	1 beige house, 1 white single wide trailer, 1 hogan
2	Betty Stash	NO	1 light blue house
3	n/a	n/a	2 double wide beige trailers, 1 green house, 1 faded blue house
4	n/a	n/a	1 beige house, 1 gray trailer, 1 small metal building
5	n/a	n/a	1 large tan building (a child development center), 1 white single wide
6	n/a	n/a	1 tan house, small brown trailer
7	n/a	n/a	1 large gray and brown trailer
8	n/a	n/a	1 very large brown house
9	Tom Tsosie Boy	NO	Very large compound- 1 tan trailer, 1 brown double wide, 1 yellowish house, 3 hogans, 1 small brown house, 1 log cabin shed
10	Jean and James Benally	435.459.9975	1 white double wide
11	n/a	n/a	1 yellow house, 1 blue house, 1 white double wide, 1 small white house, 2 hogans, 1 log cabin shed

**WORKSHEET  
APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 01/31/2008

API NO. ASSIGNED: 43-037-31886

WELL NAME: TOHONADLA 35-P

OPERATOR: NAVAJO NATION OIL & GAS ( N2550 )

PHONE NUMBER: 505-466-8120

CONTACT: BRIAN WOOD

PROPOSED LOCATION:

SESE 35 410S 210E  
 SURFACE: 1219 FSL 0722 FEL  
 BOTTOM: 1219 FSL 0722 FEL  
 COUNTY: SAN JUAN  
 LATITUDE: 37.17651 LONGITUDE: -109.5692  
 UTM SURF EASTINGS: 627018 NORTHINGS: 4115208  
 FIELD NAME: TOHONADLA ( 470 )

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

LEASE TYPE: 2 - Indian  
 LEASE NUMBER: 14-20-603-229  
 SURFACE OWNER: 2 - Indian

PROPOSED FORMATION: LDLL  
 COALBED METHANE WELL? NO

RECEIVED AND/OR REVIEWED:

- Plat
- Bond: Fed[] Ind[2] Sta[] Fee[]  
(No. RLB0006712 )
- Potash (Y/N)
- Oil Shale 190-5 (B) or 190-3 or 190-13
- Water Permit  
(No. 09-135 )
- RDCC Review (Y/N)  
(Date: \_\_\_\_\_ )
- Fee Surf Agreement (Y/N)
- Intent to Commingle (Y/N)

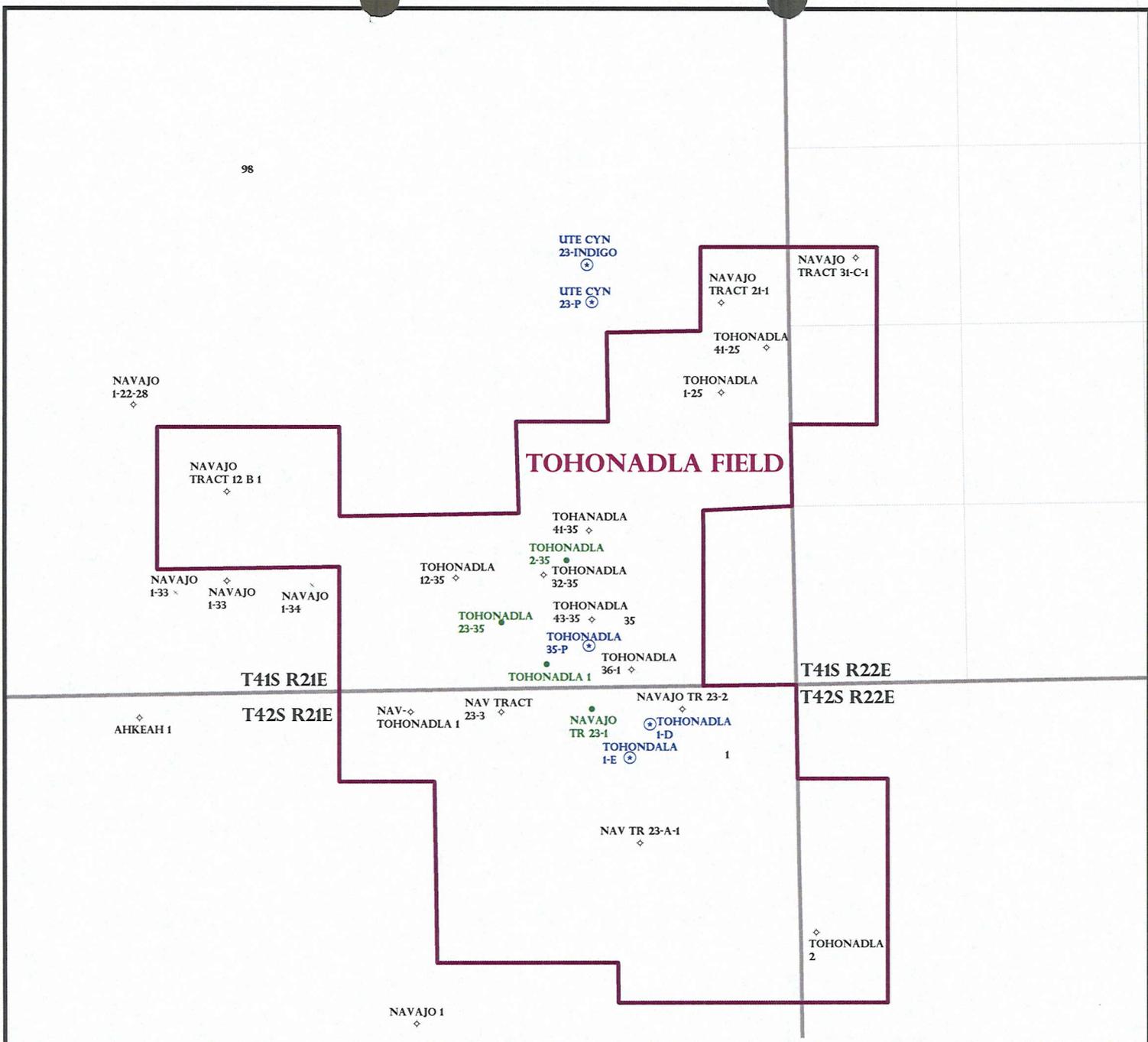
LOCATION AND SITING:

- \_\_\_\_\_ R649-2-3.
- Unit: \_\_\_\_\_
- \_\_\_\_\_ 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 Strip*



OPERATOR: NAVAJO NATION O&G (N2550)

SEC: 15 T.41S R. 21E

FIELD: TOHONADLA (470)

COUNTY: SAJUAN

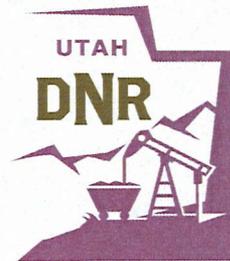
SPACING: R649-3-3 / EXCEPTION LOCATION

- 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



PREPARED BY: DIANA MASON  
DATE: 08-FEBRUARY-2008



JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

**State of Utah**  
DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

**Division of Oil Gas and Mining**

JOHN R. BAZA  
Division Director

February 11, 2008

Navajo Nation Oil & Gas Co., Inc.  
P O Box 4439  
Window Rock, AZ 86515

Re: Tohonadla 35-P Well, 1219' FSL, 722' FEL, SE SE, Sec. 35, T. 41 South, R. 21 East,  
San Juan 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.

Appropriate information has been submitted to DOGM and administrative approval of the requested exception location is hereby 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 43-037-31886.

Sincerely,

Gil Hunt  
Associate Director

pab  
Enclosures

cc: San Juan County Assessor  
Bureau of Land Management, Moab Office



Operator: Navajo Nation Oil & Gas Co., Inc.  
Well Name & Number Tohonadla 35-P  
API Number: 43-037-31886  
Lease: 14-20-603-229

Location: SE SE                      Sec. 35                      T. 41 South                      R. 21 East

### Conditions of Approval

1. General

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

2. Notification Requirements

Notify the division within 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dustin Doucet at (801) 538-5281    (801) 733-0983 home

3. Reporting Requirements

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

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

5. 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.



JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

April 28, 2009

Navajo Nation Oil & Gas Co., Inc.  
P O Box 4439  
Window Rock, AZ 86515

Re: APD Rescinded – Tohonadla 35-P, Sec. 35, T. 41S, R. 21E,  
San Juan County, Utah, API No. 43-037-31886

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on February 11, 2008. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective April 28, 2009.

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

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

Sincerely,

  
Diana Mason  
Environmental Scientist

cc: Well File  
Bureau of Land Management, Moab



Division of Oil, Gas and Mining  
**OPERATOR CHANGE WORKSHEET (for state use only)**

**ROUTING**  
 CDW

**X - Change of Operator (Well Sold)**

Operator Name Change/Merger

The operator of the well(s) listed below has changed, effective:

**8/1/2010**

<b>FROM:</b> (Old Operator): N2550- Navajo Oil & Gas Cp. 1625 Broadway, Suite 1100 Denver, CO 80202  Phone: 1 (303) 534-8300	<b>TO:</b> ( New Operator): N3930- NNOGC Exploration & Production, LLC 1625 Broadway, Suite 1000 Denver, CO 80202  Phone: 1 (303)534-8300
---	--

CA No. Unit: N/A

WELL NAME	SEC TWN RNG	API NO	ENTITY NO	LEASE TYPE	WELL TYPE	WELL STATUS
See Attached List						

**OPERATOR CHANGES DOCUMENTATION**

Enter date after each listed item is completed

- (R649-8-10) Sundry or legal documentation was received from the **FORMER** operator on: 9/19/2012
- (R649-8-10) Sundry or legal documentation was received from the **NEW** operator on: 9/19/2012
- The new company was checked on the **Department of Commerce, Division of Corporations Database** on: 12/31/2012
- Is the new operator registered in the State of Utah: \_\_\_\_\_ Business Number: 8399948-0165
- (R649-9-2)Waste Management Plan has been received on: Not Yet
- Inspections of LA PA state/fee well sites complete on: 12/31/2102
- Reports current for Production/Disposition & Sundries on: 12/31/2012
- Federal and Indian Lease Wells:** The BLM and or the BIA has approved the merger, name change, or operator change for all wells listed on Federal or Indian leases on: BLM BIA 8/1/2012
- Federal and Indian Units:**  
The BLM or BIA has approved the successor of unit operator for wells listed on: 8/1/2010
- Federal and Indian Communization Agreements ("CA"):**  
The BLM or BIA has approved the operator for all wells listed within a CA on: N/A
- Underground Injection Control ("UIC")** Division has approved UIC Form 5 Transfer of Authority to **Inject**, for the enhanced/secondary recovery unit/project for the water disposal well(s) listed on: N/A

**DATA ENTRY:**

- Changes entered in the **Oil and Gas Database** on: 12/31/2102
- Changes have been entered on the **Monthly Operator Change Spread Sheet** on: 12/31/2012
- Bond information entered in RBDMS on: 12/31/2012
- Fee/State wells attached to bond in RBDMS on: 12/31/2012
- Injection Projects to new operator in RBDMS on: 12/31/2012
- Receipt of Acceptance of Drilling Procedures for APD/New on: 12/31/2012

**BOND VERIFICATION:**

- Federal well(s) covered by Bond Number: N/A
- Indian well(s) covered by Bond Number: RLB0006712
- (R649-3-1) The **NEW** operator of any state/fee well(s) listed covered by Bond Number N/A
- The **FORMER** operator has requested a release of liability from their bond on: N/A

**LEASE INTEREST OWNER NOTIFICATION:**

- (R649-2-10) The **NEW** operator of the fee wells has been contacted and informed by a letter from the Division of their responsibility to notify all interest owners of this change on: N/A

**COMMENTS:**

Navajo Nations Oil Gas Co. (N2550) to NNOGC Exploration Production, LLC (N3930)  
Effective 8/1/2012

Well Name	Sec	TWP	RNG	API	Entity	Lease	Well Type	Well Status
TOHONADLA 26-OSCAR	26	410S	210E	4303750022		Indian	OW	APD
TOHONADLA 35-F	35	410S	210E	4303750024		Indian	OW	APD
TOHONADLA 2-G	02	420S	210E	4303750027		Indian	OW	APD
TOHONADLA 2-B	02	420S	210E	4303750028		Indian	OW	APD
TOHONADLA 1-C	01	420S	210E	4303750029		Indian	OW	APD
TOHONADLA 2-BRAVO	02	420S	210E	4303750030		Indian	OW	APD
TOHONADLA 1-F	01	420S	210E	4303750031		Indian	OW	APD
TOHONADLA 2-H	02	420S	210E	4303750032		Indian	OW	APD
TOHONADLA 1-Delta	01	420S	210E	4303750033		Indian	OW	APD
TOHONADLA 35-INDIGO	35	410S	210E	4303750034		Indian	OW	APD
TOHONADLA 35-J	35	410S	210E	4303750035		Indian	OW	APD
UTE CANYON 25G-O	25	410S	210E	4303731913	18823	Indian	OW	DRL
TOHONADLA 35-B	35	410S	210E	4303750023	18824	Indian	OW	DRL
UTE CYN 23-INDIGO	23	410S	210E	4303731880		Indian	OW	LA
TOHONADLA 35-P	35	410S	210E	4303731886		Indian	OW	LA
TOHONADLA 1-E	01	420S	210E	4303731887		Indian	OW	LA
TOHONADLA 1-D	01	420S	210E	4303731888		Indian	OW	LA
TOHONADLA 26-O	26	410S	210E	4303731896		Indian	OW	LA
UTE CYN 23-INDIGO	23	410S	210E	4303731911		Indian	OW	LA
NAVAJO TR 23-1	02	420S	210E	4303715540	6230	Indian	OW	P
DESERT CREEK 2	35	410S	230E	4303715868	6270	Indian	OW	P
TOHONADLA 1	35	410S	210E	4303715872	11202	Indian	OW	P
TOHONADLA 23-35	35	410S	210E	4303715874	11202	Indian	OW	P
NAVAJO TRIBAL 23-13	13	400S	240E	4303730971	9420	Indian	OW	P
NAVAJO TRIBAL 14-10	10	400S	240E	4303730977	10130	Indian	OW	P
SAHGZIE 1	05	420S	240E	4303731472	11032	Indian	OW	P
ANASAZI 1	05	420S	240E	4303731478	11042	Indian	OW	P
CAJON MESA 8D-1	08	400S	250E	4303731497	11074	Indian	OW	P
MONUMENT 8N-2	08	400S	250E	4303731509	11087	Indian	OW	P
RUNWAY 10G-1	10	400S	250E	4303731515	11105	Indian	OW	P
LONE MOUNTAIN CREEK 12F-1	12	420S	240E	4303731545	11148	Indian	OW	P
RUNWAY 10E-2	10	400S	250E	4303731550	11128	Indian	GW	P
BLUE HOGAN 1J-1	01	420S	230E	4303731562	11161	Indian	OW	P
TOHONADLA 2-35	35	410S	210E	4303731568	11202	Indian	OW	P
ANASAZI 5L-3	05	420S	240E	4303731572	11207	Indian	OW	P
BROWN HOGAN 1A-2	01	420S	230E	4303731573	11215	Indian	OW	P
MULE 31K (N)	31	410S	240E	4303731617	11326	Indian	OW	P
BURRO 31I	31	410S	240E	4303731708	11496	Indian	OW	P
MULE 31M	31	410S	240E	4303731710	11498	Indian	OW	P
ANASAZI 6H-1	06	420S	240E	4303731744	11773	Indian	OW	P
TOHONADLA 35-P	35	410S	210E	4303750005	11202	Indian	OW	P
TOHONADLA 1-E	01	420S	210E	4303750006	6230	Indian	OW	P
NAVAJO TRIBAL 41-2	02	420S	240E	4303731041	9437	Indian	OW	PA
MONUMENT 17E-2	17	400S	250E	4303731547	11139	Indian	OW	S
RUNWAY 10C-5A	10	400S	250E	4303731597	11152	Indian	OW	S
UTE CYN 23-P	23	410S	210E	4303731881	17282	Indian	OW	S

**NAVAJO NATION OIL & GAS COMPANY**

**EXPLORATION & PRODUCTION LLC**

1675 Broadway, Suite 1100 • Denver, Colorado • 80202

Telephone (303) 534-8300 • FAX (303) 534-1405



September 18, 2012

Utah Division of Oil, Gas and Mining  
c/o Rachel Medina  
1594 West North Temple, Suite 1210  
Salt Lake City, Utah 84114-5801

RE: Change of Operator Name and Address for Wells

Dear Rachel,

I am including with this letter several original FORM 9 to change the operator on wells. This probably will be done in two steps.

1. (16 wells) Change of Operator from RIM Southwest Corporation to Navajo Nation Oil & Gas Co.
2. (Same 16 wells) Change of Operator from Navajo Nation Oil & Gas Co. to NNOGC Exploration and Production, LLC.

We have recently registered our LLC with the State of Utah. The Utah Entity Number for NNOGC Exploration and Production, LLC is: 8399948-0165. Also, a new DOGM No. has been applied for for the LLC.

The name and address change is as follows:

OLD: Navajo Nation Oil & Gas Co.  
1675 Broadway, Suite 1100  
Denver, CO 80202  
(DOGM Operator No. N2550)

NEW: NNOGC Exploration and Production, LLC  
1625 Broadway, Suite 1000  
Denver, CO 80202

Should you require any additional information please contact me at 303-534-8300.

Sincerely,

A handwritten signature in black ink that reads "Katie Hynes". The signature is written in a cursive, flowing style.

Katie Hynes  
Associate Landman

RECEIVED  
SEP 19 2012  
DIV. OF OIL, GAS & MINING

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

FORM 9

**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: <b>See Attached</b>
		6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>Navajo Nation</b>
		7. UNIT or CA AGREEMENT NAME:
1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____		8. WELL NAME and NUMBER: <b>See Attached</b>
2. NAME OF OPERATOR: <b>Navajo Nation Oil &amp; Gas Co.</b>		9. API NUMBER: <b>Various</b>
3. ADDRESS OF OPERATOR: 1675 Broadway, Suite 1100 CITY <b>Denver</b> STATE <b>CO</b> ZIP <b>80202</b>		10. FIELD AND POOL, OR WILDCAT: <b>Various</b>
PHONE NUMBER: <b>(303) 534-8300</b>		
4. LOCATION OF WELL FOOTAGES AT SURFACE: <b>See Attached List</b>		COUNTY: <b>San Juan</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:		STATE: <b>UTAH</b>

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

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

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

The Navajo Nation Oil and Gas Co. has registered its new entity with the State of Utah. The Operator Name and Address change applies to all wells currently operated by DOGM No. N2550 (see attachment).

The Utah Entity Number for the LLC is: 8399948-0165.

The new Entity is:

NNOGC Exploration and Production, LLC  
1625 Broadway, Suite 1000  
Denver, CO 80202

NEW DOGM No. : 3930

Bond No. RLB0006712

Effective: July 10, 2010

NAME (PLEASE PRINT) Lauren Germinario TITLE Land Manager  
SIGNATURE *Lauren Germinario* DATE 9/14/12  
**APPROVED**

(This space for State use only)

DEC 3 1 2012

RECEIVED

DIV. OIL GAS & MINING  
BY: Rachel Medina

SEP 17 2012

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

FORM 9

**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: <b>See Attached</b>
6. IF INDIAN, ALLOTTEE OR TRIBE NAME: <b>Navajo Nation</b>
7. UNIT or CA AGREEMENT NAME:
8. WELL NAME and NUMBER: <b>See Attached</b>
9. API NUMBER: <b>Various</b>
10. FIELD AND POOL, OR WILDCAT: <b>Various</b>

1. TYPE OF WELL OIL WELL <input checked="" type="checkbox"/> GAS WELL <input type="checkbox"/> OTHER _____
2. NAME OF OPERATOR: <b>Navajo Nation Oil &amp; Gas Co</b>
3. ADDRESS OF OPERATOR: P.O. Box 5069 CITY Window Rock STATE AZ ZIP 86515
PHONE NUMBER: <b>(303) 534-8300</b>

4. LOCATION OF WELL FOOTAGES AT SURFACE:	COUNTY: <b>San Juan</b>
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN:	STATE: <b>UTAH</b>

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

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

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

The Navajo Nation Oil & Gas Co. has registered its new entity with the State of Utah. The name and address change applies to all the wells that have recently changed from RIM Southwest Corporation to Navajo Nation Oil & Gas Co. (DOGM No. N2550)

The Utah Entity Number for the LLC is: 8399948-0165

Note: A new DOGM No. has been applied for NNOGC Exploration and Production, LLC

Please see the attached list of wells that will now be operated by:

NNOGC Exploration and Production, LLC  
1625 Broadway, Suite 1000  
Denver, CO 80202

All of these wells are covered by Bond No. RLB0006712

Effective: Aug 1, 2012

NAME (PLEASE PRINT) <u>Lauren Germinario</u>	TITLE <u>Land Manager</u>
SIGNATURE <u><i>Lauren Germinario</i></u>	DATE <u>9/18/2012</u>

**APPROVED**

**DEC 31 2012**

DIV. OIL GAS & MINING  
BY: Rachel Medina

(See Instructions on Reverse Side)

RECEIVED

SEP 19 2012

DIV. OF OIL, GAS & MINING