

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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.

Amended

FORM APPROVED
OMB No. 1004-0135
Expires: January 31, 2004

5. Lease Serial No.
14-20-603-5034

6. If Indian, Allottee or Tribe Name
Navajo

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

8. Well Name and No.

Navajo Tribal "N" 12

U12

9. API Well No.

30-045-20580

10. Field and Pool, or Exploratory Area

Tocito Dome

11. County or Parish, State

San Juan, NM

SUBMIT IN TRIPLICATE- Other instructions on reverse side.

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

2. Name of Operator
Tacitus, LLC

3a. Address
2100 Cortland Drive, Farmington, NM 87401

3b. Phone No. (include area code)
403-400-0459

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

**Sec 21 T26N R18W; SENW 2050' FNL & 2050' FWL
36.475312 N Lat, -108.766258 W Long**

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

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

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate 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 recompleation 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.)

Tacitus, LLC intends to squeeze off the existing Pennsylvania perforations and then drill out shoe joint w/ 4-3/4" bit to the Mississippian formation. Plan to run logs and test for Helium potential. If tests are positive, plan to run 4" run liner and cement in place then perforate and acidize Mississippian formation.

Notify NMOCD 24 hrs
prior to beginning
operations

BLM'S APPROVAL OR ACCEPTANCE OF THIS
ACTION DOES NOT RELIEVE THE LESSEE AND
OPERATOR FROM OBTAINING ANY OTHER
AUTHORIZATION REQUIRED FOR OPERATIONS
ON FEDERAL AND INDIAN LANDS

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

John C. Thompson

Title **Agent/Engineer for Tacitus, LLC**

Signature

Date

05/07/2018

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)

NMOCD FY

NMOCD

NOV 05 2018

DISTRICT III

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

SEP 05 2018

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OMB No. 1004-0135
Expires: January 31, 2004

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SUBMIT IN TRIPLICATE- Other instructions on reverse side.

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

2. Name of Operator
Tacitas, LLC

3a. Address
2100 Cortland Drive, Farmington, NM 87401

3b. Phone No. (include area code)
403-400-0459

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

Sec 21 T26N R18W; SENW 2050' FNL & 2050' FWL
36.475312 N Lat, -108.766258 W Long

5. Lease Serial No.

14-20-603-5034

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Navajo

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Navajo Tribal "A" 12

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11. County or Parish, State

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<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input checked="" type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other Deepen to Miss. formation
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
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Tacitas, LLC intends to squeeze off the existing Pennsylvania perforations and then drill out shoe joint w/ 4-3/4" bit to the Mississippian formation and test for Helium potential. If tests are positive, plan to run 3-1/2" run liner to cover open hole section.

Attachments: Detailed Procedure

FEDERAL APPROVAL OR ACCEPTANCE OF THIS ACTION DOES NOT RELIEVE THE LESSEE AND OPERATOR FROM OBTAINING ANY OTHER AUTHORIZATION REQUIRED FOR OPERATIONS ON FEDERAL AND INDIAN LANDS

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

John C. Thompson

Title Agent/Engineer for Tacitas, LLC

Signature

Date

08/31/2018

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)

NMOC

Tacitus, LLC

Navajo Tribal U #12 Procedure

8/10/2018



AFE Number:		API Number:	30-045-20580
Rig Floor Height:		KB Elevation:	5670'
County & State:	San Juan County, NM	GL Elevation:	5656'
Surf Hole Legal Description:	Sec. 22, T26N, R18W	Bottom Hole Legal Description:	Same
Surf Hole Lease Line Distance:	2050' FNL & 2050' FWL	Bottom Hole Lease Line Distance:	Same
Surface Hole Lat/Long:	36.475300/-108.766264	Bottom Hole Lat/Long:	Same
Driving Directions from Farmington, NM: Go west on Hwy 64 toward Shiprock, NM. Take Hwy 491 South (towards Gallup) for ~18 miles. Turn west on Tocito Dome access road (Indian Service Road 5016) and head west for 2.6 miles. Turn South and go 0.8 miles to the Tocito Dome tank battery. Turn past tank batter and go back to the south east for 0.6 miles to access the access road. Turn north on access road and go 0.1 miles to location.			

1 GENERAL PROCEDURE

1. Level location, set & test anchors
2. Move in Service Rig & related equipment for closed loop system
3. Install & Test 7-1/16" X 3 M BOPE system
4. Pull existing rods/pump & tubing string (plan on hot oil/water rod string)
5. Set CICR and squeeze existing perforations 6182'-6200' (Pennsylvania).
6. Drill out CICR & squeeze job (pressure test casing prior to drill out, repair casing if needed).
7. Drill out existing cement shoe and new formation (Mississippian) to ~ 6550' (w/ 4-3/4" bit and air hammer).
8. Run 3-1/2" slotted casing and liner hanger. No - Cement.
9. RIH w/ packer on 2-3/8" (or 2-7/8" from well)
10. Flow back well for production test (swab in if necessary)
11. SI Well, RD rig & all related equipment.
12. Install required surface facilities and turn over to production dept.

1.1 Contact Information

Contact	Affiliation	Office	Cell
Gareth Roberts	Executive Chairman	403-532-6481	214-680-8811
Michael Frey	Sr. VP. of Expl & Dev	403-262-0029	403-400-0459
Jason Demers	President & CEO	403-815-7474	
Lori King	Operations Manager	403-532-6481	505-860-8432
Kameron Jones	Safety, Health & Enviro.	801-908-7277	505-860-8432
Charlie Jones	Community Relations	505-860-9167	505-860-8432
John Thompson	Project Engineer (Walsh)	(505) 327-4892	(505) 320-1748
Russell McQuitty	Wellsite Consultant (Walsh)	(505) 327-4892	(505) 486-4379
Michael Dean	Flow Back – Flow Test (Walsh)	(505) 327-4892	(505) 860-0481
Craig Smith	Wellsite Consultant (Walsh/Seidel)	(505) 327-4892	(208) 816-6803
Regulatory & Emergency Contacts – Call in order below for Notification			
	Navajo Nation Police	505-368-1350	
	NN Emergency Med Service (Teec Nos Pos)	928-656-3665	
	NN Rangers (Kayenta)	505-371-5200/5201	
Ms. Gail Leslie –Bob	NN Inspection & Enforcement	928-871-7296	505-870-9276
Akhtar Zaman	NN Minerals Dept	928-871-6587	

1.2 Casing Data

Casing Type	Surface	Intermediate	Production
OD (in):	13-3/8	8-5/8"	5-1/2"
Weight (lb/ft):	48	24	14#/15.5#
Grade:	H40	J55	J55
Connection:	ST&C	ST&C	LT&C
Pipe ID (in):		8.097	4.950/5.012
Pipe Drift ID (in):		7.972	4.825
Burst Pressure (psi):		2950	4810
Collapse (psi):		1370	4040
Body Yield (k lbs):		244	248
Joint Strength (k lbs):		N/A	329
Coupling OD (in):		9.625	6.05
Min Make up torque (ft-lb):			
Opt Make up torque (ft-lb):			
Max Make up torque (ft-lb):			

1.3 Detailed Procedure

1. Notify Navajo Minerals and NNOG personnel at least 18 hours prior to operations. Please record the date and time of these notices in the remarks of the Daily Report.
2. Locate nearest area that an emergency rescue helicopter can land and document approximate distance and direction from well pad in the remarks section of the Daily Report. Post information with rig crew and onsite supervisor
3. Record well location, Latitude 36.475300 Longitude -108.766264 Sec 17 SWSW Sec 17 T26N-R18W, San Juan, County NM on the Daily Report.
4. Perform New Mexico one call. Level location if necessary.
5. MIRU workover rig, 3000 # BOPE, rig pump, rig pit system, rig's 2.5 equivalent power swivel, elevators, tongs and related equipment.
6. ND horse head and bridal. Lay down polish rod and rod string. (Hot oil rods if necessary).

Rod String: reports are unclear but estimate: 26' polish rod, 80 ea. 1" rods, 85 ea. 7/8" rods, 85 ea. 3/4" rods
Pump (estimate): 2-1/2"x1-1/2"x20' RWBC pump.

7. ND WH & NU BOPE – 7-1/16" x 3M double gate BOP (loaded with 2-7/8" pipe rams)
8. Test BOPs as follows: **Note: will pressure test BOPE prior to drilling out.** Notify Minerals 48 and 24 hours prior to pressure test. Test BOPs and Choke manifold (if one is utilized).
9. TOH with 2-7/8" tubing (tally & visually inspect while TOH).

10. PU 4-3/4" bit and 5-1/2" casing scraper and TIH to 6200' (through perf interval). TOH.
11. TIH w/ CICR and set at ~ 6150' (note: top perf at 6182'). PT tubing to 1000 psi.
12. RU Cementers and pump 75 sx (89 cf) of Class B cement w/ 2% CaCl₂. (Need to verify volumes w/ EIC prior to pumping job)
13. TOH, laying down 2-7/8", PT casing to 500 psi (record PT on chart).
14. Bring in auxiliary equipment needed for drilling and 24 hour ops. Set additional frac tank and fill w/ 2% KCL
15. MOL & RU. NU BOPE with Annular preventer. Perform 3rd party 3000 psi pressure test on all BOPE & related equipment. Note: if casing does not test per BLM regs, then determine fall off. If possible, proceed with drill out operations to test for He productivity and then plan on addressing casing issues prior to long term He production or when well is P&A'd.
16. RIH w/ 4-3/4" bit, bit sub & 10 ea. 3-1/2" DC's and 2-7/8" AOH drill pipe.
17. Pressure test casing prior to drilling out cement to 500 psi.
18. Drill out CICR and cement and clean out down to 6220' (PBSD). Circulate wellbore clean w/ 2% KCL water.
19. Shut pipe rams and pressure test casing and squeeze to 500 psi. Re-squeeze if necessary.
20. If pressure test is OK, drill out shoe joint (note: if possible do not drill completely out of shoe, leave ~ 5 ft).
21. TOH.
22. Ready rig for air drilling. TIH w/ 4-3/4" Hammer Bit and 6 to 10 ea. 3-1/2" DC's. TIH on 2-7/8" AOH DP.
23. Stage in hole (unloading fluid). Finish drilling out of shoe joint and continue drilling new formation (Mississippian) to ~ 6550'.
24. TOH
25. Run 3-1/2", 9.30, J55 tubing/casing (slotted) on liner hanger. Set liner hanger at 6230' (Use shear tool to leave of liner in place – Weatherford – A1 Machine).
26. TOH, Laying down DP.
27. RD & release all auxiliary drilling equipment and prep remaining equipment to return back to daylight only operations.
28. Make up 5-1/2" casing packer on 2-3/8" tubing (or 2-7/8" originally from the well). Set packer at ~ 6215' (below squeezed Penn perms and liner top) and land tubing in WH.
29. ND BOPE & NU master valve and flowback manifold to flowback tank. Will also need to set test separator and meter and rig up to flowback tank.
30. If needed, RU swabbing equipment and swab well. Once flow is established, RD swab equipment and turn flow through choke manifold and flowback tank. Note: depending upon results, may leave well as is and release rig for long term flow test.
31. RD & release all equipment from location and prepare for helium production.

EMERGENCY RESPONSE INFORMATION

Ambulance	911
Air Care (see required information below)	(800) 452-9990
Fire	911
Arizona State Police	(928) 656-3268
U.S. Forest Service	(505) 632-2956
Bureau of Land Management	(505) 599-8900

REQUIRED INFORMATION FOR AIR CARE 1

1. Your name
2. Company name
3. Cellular number or 2-way radio frequency of someone at the scene
4. Wind and weather conditions at scene
5. Type of landing site (location, road, etc.) and any obstacles (power lines, derricks, etc.) at landing site.
6. Location in degrees, minutes and seconds (front of procedure)
7. Location of scene in relation to landing site (approximate distance and direction). "Scene is approximately _____ feet in a _____ direction from landing site."
8. Number and condition of injured persons and type of injuries.

John Thompson
Engineer

District I
625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-20580		² Pool Code 81220		³ Pool Name North Tacito Eborer Mississippian (G)	
⁴ Property Code		⁵ Property Name Navajo Tribal "U"			⁶ Well Number #12
⁷ OGRID No. 372957		⁸ Operator Name Tacitus, LLC			⁹ Elevation 5664'

¹⁰ Surface Location

UL or lot no. F	Section 21	Township 26N	Range 18W	Lot Idn	Feet from the 2050'	North/South line North	Feet from the 2050'	East/West line West	County San Juan
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¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
¹² Dedicated Acres 640	¹³ Joint or Infill N	¹⁴ Consolidation Code		¹⁵ Order No.					

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

	<p>¹⁷ OPERATOR CERTIFICATION</p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the Division.</p> <p><i>[Signature]</i> 10/15/12 Signature Date</p> <p>John C. Thompson Printed Name</p> <p>john@walsheng.net E-mail Address</p>	
	<p>¹⁸ SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>Original Survey 11/7/1969 – by EV Echohawk</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor:</p> <p>E.V. Echohawk - 3602</p> <p>Certificate Number</p>	
	<p>NMOCB</p> <p>OCT 25 2018</p> <p>DISTRICT III</p>	

MEMBER OF THE CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DECLARATION PLAT

Form No. 1
Revised 10/15
Effective 1-63

For completion by the owner or operator of the well.

PAN AMERICAN PETROLEUM CORPORATION		Navajo Tribal "U"		12
Section	Township	Range	County	
26 North	21	18 West	San Juan	
2050	North	2050	West	
Report Later	Pennsylvanian "D"	Tocito Dome Penn. "D"	160	NW/4

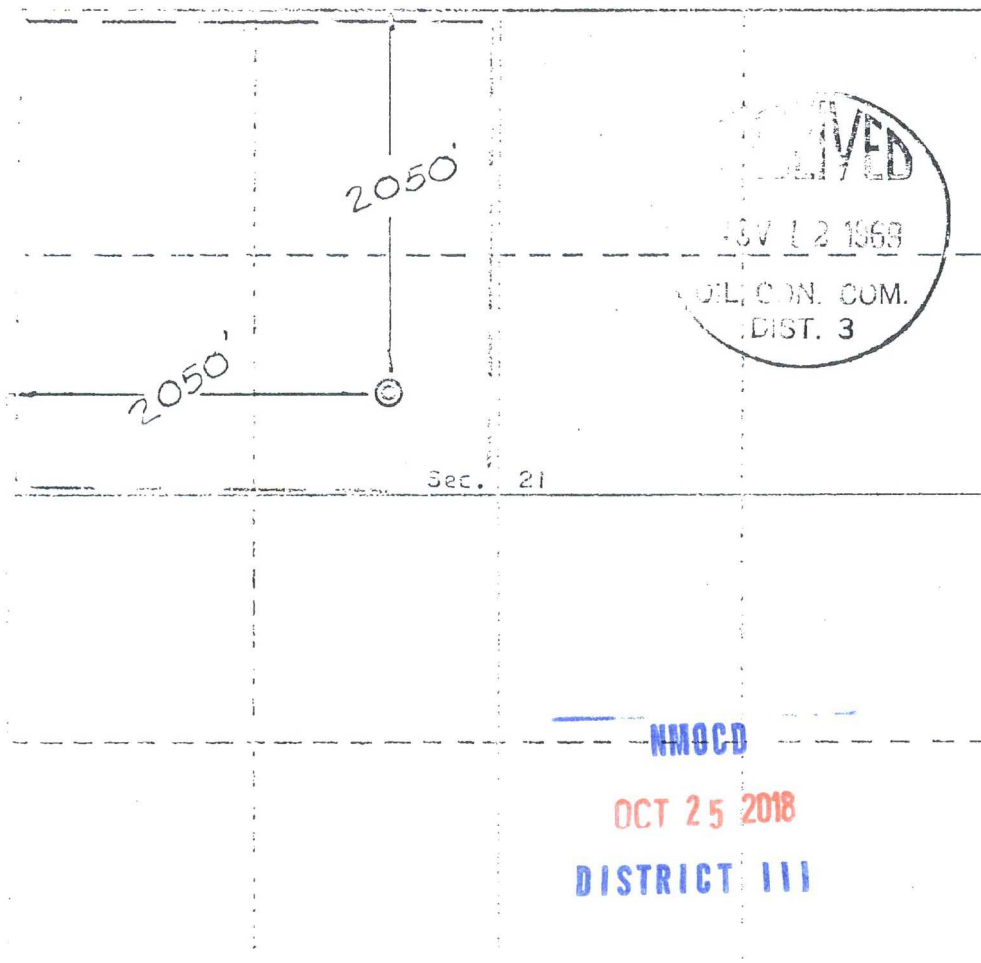
1. Indicate the acreage dedicated to the subject well by circled pencil or hatchure marks on the plat below.
2. If more than one tract is dedicated to the well, indicate each and identify the ownership thereof (such as "Tract 1, owned by John Doe").
3. If more than one tract of different ownership is dedicated to the well, have the interests of all owners been consolidated, either by commutation, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation.

NOV 10 1969

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (See LEGAL SURVEY and plat for record.)

Tracts which will be assigned to the well until the interests have been consolidated (by commutation, unitization, force-pooling, or otherwise) or until a non-unitized unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

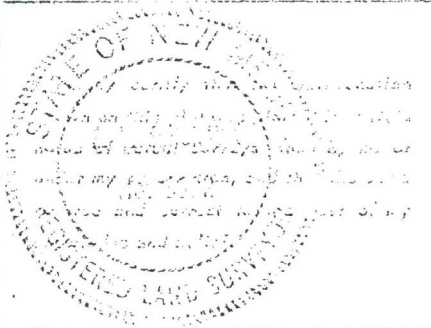
L. R. Quinn

Name
Petroleum Engineer

Position
Pan American Petr. Corp.

Company
November 7, 1969

Date



Date Forfeited
November 1, 1969

Reg. to the State Engineer
at the State Engineer's Office

E. J. [Signature]

Certificate No. 3602

[illegible]

Geologic Markers	
MD	Formation
Surface	
	Dakota
	Morrison
	Bluff
1950'	Todilto
1967'	Entrada
2703'	Chinle
3628'	DeChelly
4230'	Cutler
5595'	Penn
	Ismay
6003'	BarkerCreek
6180'	Lower Hermosa
	Molas
	Mississippian



WALSH
ENGINEERING
FARMINGTON, NM

Proposed TD ~ 6400'