

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505

RECEIVED

JUN 29 2010

HOBBSOCD

State of New Mexico
Energy Minerals and Natural Resources

Form C-101
June 16, 2008

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

¹ Operator Name and Address Torch Energy Services, Inc. 1331 Lamar Ste. 1450 Houston, TX 77010		² OGRID Number 241401
		³ API Number 30 - 041 - 20942
⁵ Property Code 38225	⁵ Property Name San Juan Mesa State	⁶ Well No. 001
⁹ Proposed Pool 1 u/1dcat		¹⁰ Proposed Pool 2 <96236>

Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	16	4S	30E		660	W South	660	East	Roosevelt

⁸ Proposed 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

Additional Well Information

¹¹ Work Type Code N	¹² Well Type Code AL	¹³ Cable/Rotary R	¹⁴ Lease Type Code S	¹⁵ Ground Level Elevation 4613.3'
¹⁶ Multiple NO	¹⁷ Proposed Depth 8,700'	¹⁸ Formation Wildcat Fusselman	¹⁹ Contractor	²⁰ Spud Date 08/01/2010


²¹ Proposed Casing and Cement Program

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2"	13 3/8"	48#/ft. H-40	400'	440	surf
12 1/4"	8 5/8"	24#/ft. J-55	2100'	920	2000'
7 7/8"	5 1/2"	17#/ft. J-55	8700'	480	6000'

²² Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

Drilling prognosis, BOP drawing, mud program & cement program are attached.

**Permit Expires 2 Years From Approval
& Date Unless Drilling Underway**

²³ I hereby certify that the information given above is true and complete to the best of my knowledge and belief. Signature: Angela Lightner		OIL CONSERVATION DIVISION	
Printed name: Angela Lightner		Approved by: 	
Title: Regulatory Consultant		Title: PETROLEUM ENGINEER	
E-mail Address: angela@rkford.com		Approval Date: JUN 30 2010	Expiration Date:
Date: 6/28/2010	Phone: 432-682-0440	Conditions of Approval Attached <input type="checkbox"/>	

RECEIVED

JUN 29 2010

DISTRICT I
1625 N. FRENCH DR., HOBBS, NM 88240

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

DISTRICT III
1000 RIO BRAZOS RD., AZTEC, NM 87410

DISTRICT IV
11885 S. ST. FRANCIS DR., SANTA FE, NM 87505

HOBBSOCD

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

11885 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102

Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-041-20942	Pool Code 96036	Pool Name Wildcat
Property Code 38225	Property Name SAN JUAN MESA STATE 16	Well Number 1
OGRID No. 241401	Operator Name TORCH ENERGY SERVICES, INC.	Elevation 4613'

Surface Location

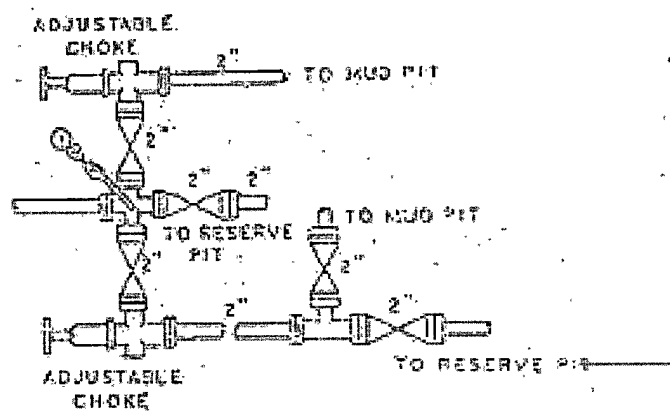
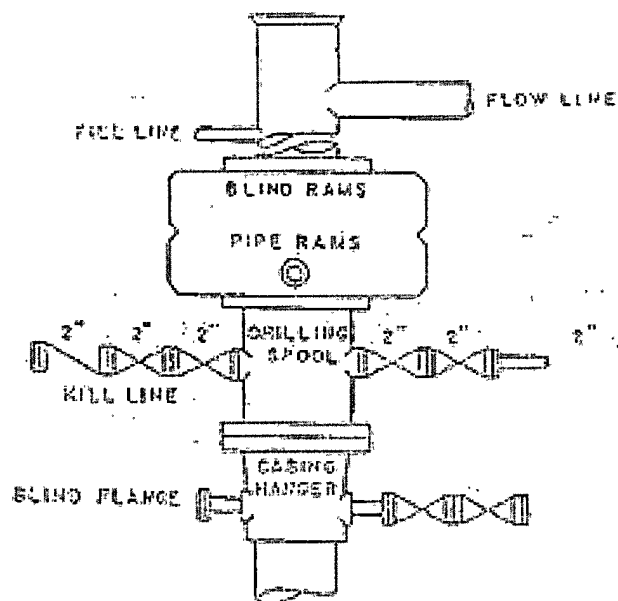
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	16	4-S	30-E		660	NORTH	660	EAST	ROOSEVELT

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
Dedicated Acres 40		Joint or Infill		Consolidation Code		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

<div style="border: 1px dashed black; padding: 10px; margin: 10px;"> <p>GEODETIC COORDINATES NAD 27 NME</p> <p>Y=1078673.4 N X=664454.5 E</p> <p>LAT.=33.963947° N LONG.=103.790952° W</p> </div>			OPERATOR CERTIFICATION I hereby certify that the information 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 mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.
	Signature <u>Angela Lightner</u> Date <u>6/25/10</u> Angela Lightner Printed Name		SURVEYOR CERTIFICATION 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.
	Date Surveyed <u>6/14/2010</u> Signature & Seal of <u>Ronald J. Eidson</u> Professional Surveyor		
	Certificate No. GARY C. EIDSON 12641 RONALD J. EIDSON 3239		



BOP DIAGRAM

5000# Working Pressure
Rams Operated Daily

Torch Energy Services, Inc.
Well Prognosis
San Juan Mesa State 16 #1

RECEIVED

JUN 29 2010

HOBBSOCD

Surface Location: 660' FNL & 660' FEL
Sec. 16, T4S, R30E
Roosevelt County, New Mexico

Bottom Hole Location: Same as Surface

Planned AFE Total Depth: 8,700 TVD / 8,700' MD

Drilling Contractor/Rig: United Drilling Rig # 41

Prepared By: Randy Ziebarth

Proposed Drilling and Completion Summary

The San Juan Mesa State 16 #1 well is planned as a 8,700' TVD / 8,700' MD test. The primary objectives are the Fusselman-Montoya, Strawn and Cisco formations.

This project is located approximately 7.2 miles west of Elida, New Mexico in Roosevelt County. The proposed casing program includes 20" conductor pipe, 13 3/8" surface, 8 5/8" intermediate and a 5 1/2" production string. The well is planned to be drilled as a vertical well to TD. Formation evaluation will be performed using open-hole logging tools. A well completion procedure will be prepared by engineering after the well is evaluated. Production tubing will be either 2 3/8" or 2 7/8" to handle anticipated production rates.

DIRECTIONS:

The location is approximately 7.2 miles west of Elida, NM. From the intersection of Hwy 70 and Co. Rd. #21 in Elida, NM go west on Co Rd #21 for appx. 4.1 miles to Co. Rd. 22. Proceed west-southwest on Co. Rd. 22 for 2.8 miles. Turn right and go north appx 1.3 miles on the private wind farm road and meander east northeast off of the mesa to the drill site.

ESTIMATED RIG ELEVATION: 4633.3' K.B. 4616.3' G.L.

ESTIMATED FORMATION TOPS:

<u>Formation</u>	<u>TVD</u>
Glorietta	3,835'
Tubb	5,300'
Abo	6,065'
Wolfcamp	7,050'
Cisco	7,300'
Strawn	7,775'
Mississippian	8,070'
Fusselman	8,265'
TD	8,700' ±

CASING PROGRAM:

<u>SIZE</u>	<u>WEIGHT</u>	<u>GRADE</u>	<u>COUPLING</u>	<u>(MD-RKB)</u>
20"	Structural	LP	N/A	0-40'
13 3/8"	48 ppf	H-40	ST&C	0-400'
8 5/8"	24 ppf	J-55	LT&C	0-2,100'
5 1/2"	17 ppf	J-55	LT&C	0-8,700'

LOGGING PROGRAM:

5,500' – 8,700', Gamma Ray, High Resolution Laterlog Array, Compensated Neutron Density, Caliper & selected side wall cores.

MUD PROGRAM:

<u>DEPTH</u>	<u>MW</u>	<u>Viscosity</u>	<u>WL</u>	<u>Synopsis</u>
0 - 400'	8.4 - 8.6	30 to 32	NC	Spud mud; native
400 - 2,100'	8.5 - 9.8	28 to 32	NC	Fresh H2O; poly sweeps
2,100 - 6,300'	9.8 - 10.0	28 to 29	NC	Brine; poly sweeps
6,300 - 7,500'	9.8 - 10.0	42 to 44	10-12	Brine; poly sweeps
7,500 - 8,700'	10.0 - 10.5	45 to 48	<6	Brine; poly sweeps

See attached mud program for additional specifications.

MUD LOGGING:

Mud logging unit is rigged up and logging at 5000'. Collect 10' samples from 5,000' to TD. Mud Logger to pick basement top for T.D.

DRILLSTEM TESTS/ CORES:

Conventional Sidewall Cores; depths to be determined after open hole logging.

DRILLING PROCEDURE

I. LOCATION PRE-SPUD

1. Set 40' of 20" conductor prior to rig up.
2. Review state permit, drilling prognosis, formation tops and BOP/casing testing requirements. Hold pre-spud meeting with vendors and operator. Rig up United Drilling Rig 41, prepare to spud well. Visually inspect rig's 5M BOP's (replace and repair as required). Record and report fuel on location at spud.

II. SURFACE HOLE INTERVAL 40' - 400'

1. Spud with a 17-1/2" rental mill tooth bit and BHA with sufficient 8" drill collars to supply necessary bit weights. Run stabilizers as needed to ensure a straight hole. (Record time and date of spud on morning report.) Pump polymer sweeps every 90' or as needed and before and after any trips to clean hole. Survey as required to monitor deviation.
2. Surface hole to be drilled with a fresh water gel/lime spud mud with following properties: MW 8.4 - 8.6 ppg, Viscosity 30-32 seconds/quart, API-Fluid Loss N/C. Pump a viscous polymer sweep prior to running casing. Strap DP and DCs out of hole.
3. Rig up casing tools and run casing as follows:

13-3/8" Texas Pattern Guide Shoe
1 - joint 13-3/8", 48.0 ppf, H-40, STC Casing
13-3/8" Float Collar
360' 13-3/8", 48.0 ppf, H-40, STC casing
4. Centralize with (4) centralizers placed as follows: middle of shoe jt., top of 2nd jt., top of 4th jt., and top of 7th jt. Thread lock all float equipment (top & bottom).

5. Pump 20 bbl of fresh water prior to commencing any cementing operations. Tag and land casing on bottom. Hold running weight tension while WOC. Cement per prognosis (volumes based on 100% excess of calculated volume for gauge hole). Cementing with 440 sks HalCem-C + 2% CaCl flake. Wt. = 14.80 lbm/gal, Yield= 1.35 ft³/ sk, Volume= 105.26 bbl, TOC- 0'. WOC total of 2 to 4 hours or until tail slurry has attained 500 psi compressive strength (use location water sample to get lab results).

III. INTERMEDIATE HOLE SECTION INTERVAL 400' – 2,100'

1. Trim 13 3/8" top and install diverter. RIH with 12 1/4" insert bit and BHA with sufficient 8" drill collars to supply necessary bit weights. Stabilizers as needed to ensure a straight hole.
2. Drill float collar, cement, and float shoe. If first 20' of float shoe joint drills with wet cement, WOC prior to drilling remainder of joint and notify office.
3. Drill and survey a straight hole. Survey every 300' or more often as required to monitor deviation. Circulation rates as needed to ensure good hole cleaning.
4. This interval to be drilled with fresh/native consisting of MI Gel, Poly Plus, Lime having the following properties: MW 8.5-9.8, Viscosity 28-32 seconds/quart, API-FL no control. Run available surface equipment to maintain the low gravity solids content less than 4% by volume. Pump polymer sweeps every 90 ft. and monitor upon return. If lost circulation is encountered, refer to procedures in mud program.
5. When casing point is reached (2,100'), circulate and condition hole in preparation to run casing. Sweep the hole with two high viscosity fresh gel sweeps prior to running casing.
6. Rig up casing tools and run casing as follows:

8-5/8" Float Shoe
1 - joint 8-5/8"; 24.0 ppf, J-55, LT&C Casing
8-5/8" Float Collar
2,060', 8-5/8", 24.0 ppf, J-55, LT&C Casing

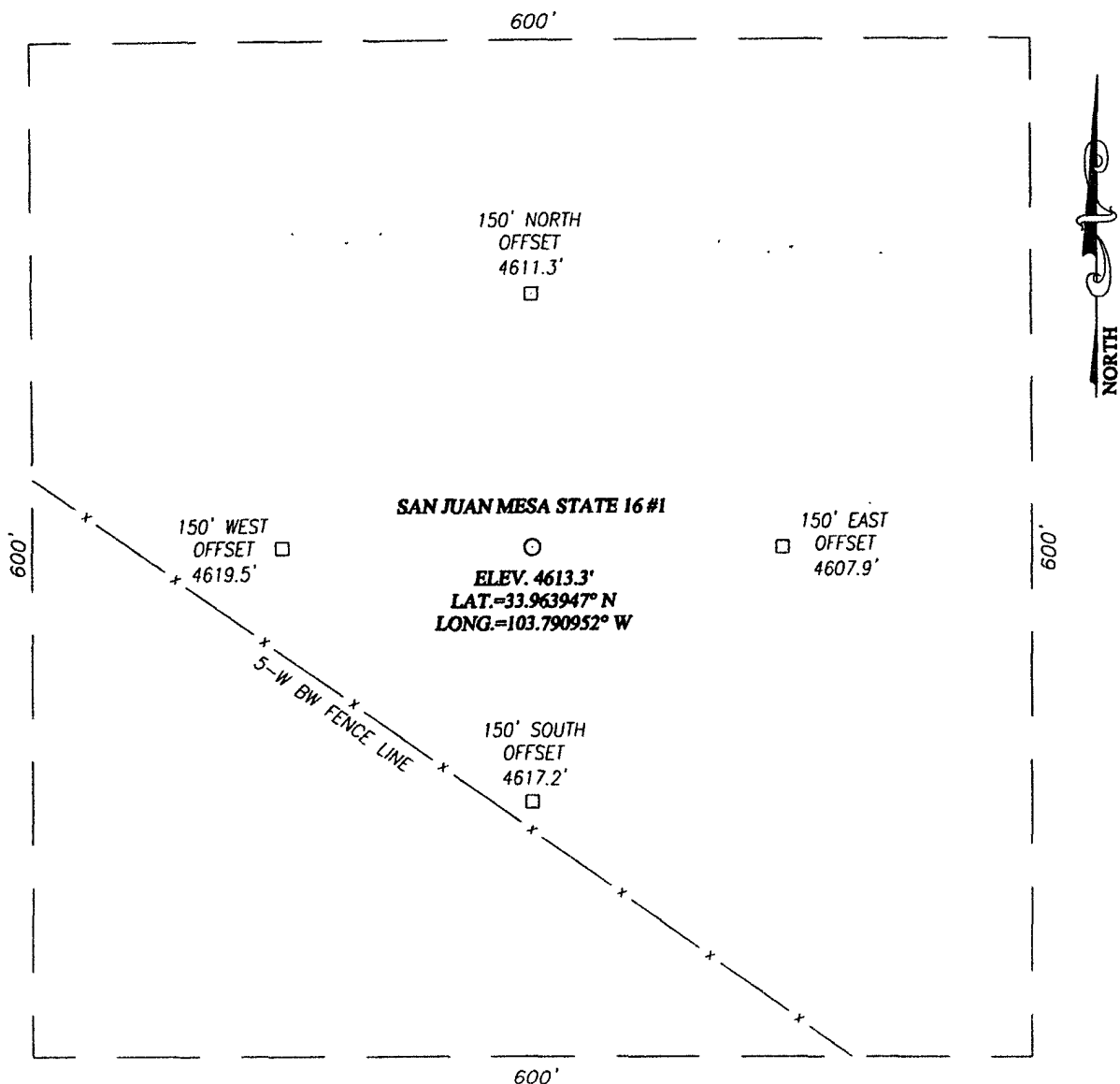
7. Centralize with (10) centralizers placed as follows: middle of shoe jt., top of 2nd jt., top of 4th jt., then every fourth jt. Thread lock all float equipment (top & bottom).
8. Cement per cement prognosis. Pump 500 gals/ Super Flush 102, then pump 10 bbls fresh water prior to commencing any cementing operations. Tag and land casing on bottom, hold running weight tension while WOC. Cement per prognosis (volumes based on fluid caliper results). Cement lead w/ 680 sks ExtendaCem-CZ, Wt.= 13.50 lbm/gal , Yield=1.75 ft³/sk, Volume= 210.34 bbl, tail cement w/240 sks HalCem -C + 2% CaCl flake, Wt.=14.80 lbm/gal, Yield= 1.35 ft³/sk, Volume= 57.57 bbl, TOC= 2000'. WOC total of 24 hours or until tail slurry has attained 500 psi compressive strength (use location water sample to get lab results).
9. Cut off 13-3/8" and slack off 8-5/8" Weld on 8-5/8" 11 x 3,000 lb. casinghead/hanger. Test to 1,000 psi. Nipple up BOP equipment. Test BOP and choke manifold to 5,000 psi or full working pressure. Check gauge on choke panel for accurate pressures, replace it if required. Ensure wellhead height matches production requirements and BOPs heights.

IV. FINAL HOLE SECTION INTERVAL 2,100' – 8,700' TD

1. RIH with 7-7/8" insert bit and BHA with sufficient 6" drill collars to supply necessary bit weights. Run stabilizers as needed to ensure a straight hole. Test casing to 1,500 psi.
2. Drill float collar, cement, and float shoe. If first 20' of float shoe joint drills with wet cement, WOC prior to drilling remainder of joint and notify office.
3. Drill and survey a straight hole to ± 8,700' T.D. Survey every 500' or more often as required to monitor deviation. Circulation rates as needed to ensure good hole cleaning. Record slow pump rates everyday and every time mud proportion changes.

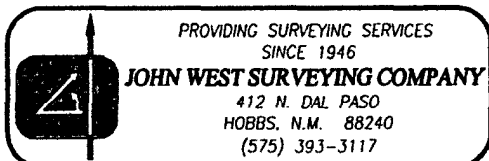
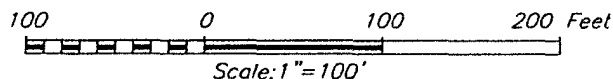
4. Drill out casing with brine water and Duo Vis/Poly PacR, circulating through the working pits and running surface equipment to maintain the low gravity solids content to less than 4% by volume. Pump polymer sweeps as needed to ensure good hole cleaning. If lost circulation is encountered, refer to procedures in mud program. Mud up at 6'300' with a polymer viscosifier and water loss additive as needed to stabilize the hole and provide safe conditions for trips. Continue to lower the water loss to manage shale heaving to TD.
5. At total depth, circulate and condition mud and hole, short trip, circulate and condition, POH (strapping DP and DCs). Rig up loggers and run wire line logs as proposed or as dictated by the office.
6. Trip in hole. Circulate and condition mud and hole in preparation to run production casing.
7. Trip out of hole laying down the drill pipe and collars. Prepare to run production string.
8. Rig up casing tools and run 5 1/2" casing as follows:
 - 5 1/2" Super Seal Float Shoe
 - 2 - joints 5 1/2" 17.0 ppf, J-55 LT&C
 - 5 1/2" Float Collar
 - 8,520 5 1/2" 17.0 ppf, J-55, LT&C
9. Run 20 5-1/2" centralizers spacing evenly from the middle of the shoe joint to 5,500 ft.
10. Land casing at bottom and pull up 5' and circulate casing volume plus 50% prior to commencing the cementing operations.
11. Cement per cement prognosis slowly reciprocating casing 15' during the operation. Displace casing with 500 gals Super Flush 102 then pump 10 bbl Fresh Water, and do not over displace. Cement with 480 sks Versa Cem-PBSH2 + 0.5% LAP-1 + 0.4% CFR-3 + 3 lbm/sk Salt + 0.25 lbm/sk, Wt.= 13.20 lbm/gal, Yield= 1.64 ft³/sk, Volume= 139.79 bbl, TOC- 6000'.
12. Nipple down BOP's. Nipple up wellhead. Clean pits. Release drilling rig and all rental equipment. Record and report fuel on location at rig release.
13. Refer to completion procedure.

SECTION 16, TOWNSHIP 4 SOUTH, RANGE 30 EAST, N.M.P.M.
 ROOSEVELT COUNTY NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF CO. RD. #21 & #22, APPROX. 4.5 MILES WEST OF ELIDA NM, GO SOUTHWEST ON CO. RD. #22 FOR APPROX. 3.1 MILES. TURN RIGHT AND GO NORTHWEST APPROX. 1.6 MILES. THEN LEFT AND GO NORTHWEST APPROX. 0.45 MILES. TURN RIGHT AND GO NORTHEAST, THEN EAST APPROX. 0.4 MILES. TURN LEFT AND GO CONTINUE NORTHWEST APPROX. 0.15 MILES. THIS LOCATION IS APPROX. 542 FEET WEST.

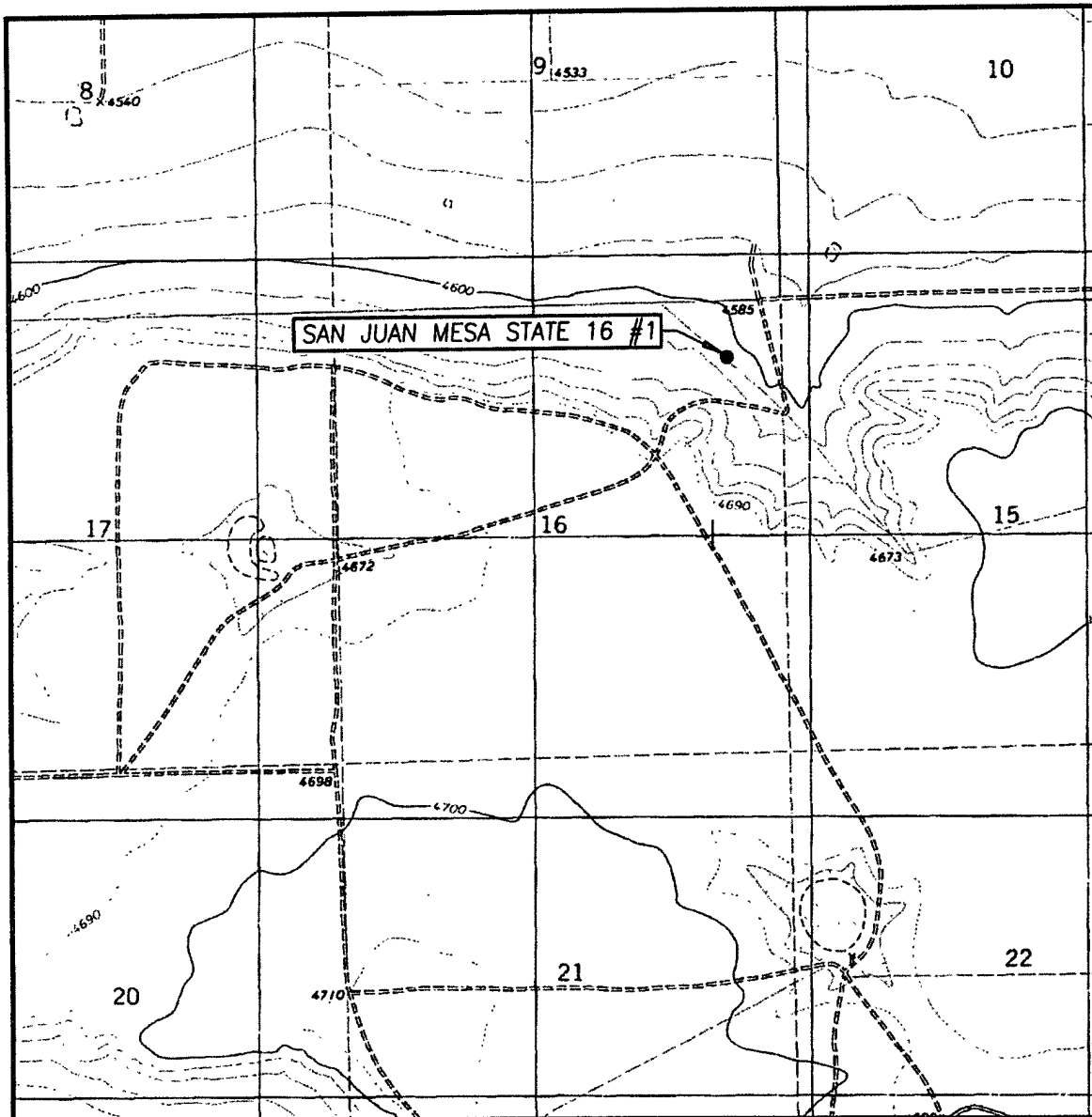


TORCH ENERGY SERVICES, INC.

SAN JUAN MESA STATE 16 #1 WELL
 LOCATED 660 FEET FROM THE NORTH LINE
 AND 660 FEET FROM THE EAST LINE OF SECTION 16,
 TOWNSHIP 4 SOUTH, RANGE 30 EAST, N.M.P.M.,
 ROOSEVELT COUNTY, NEW MEXICO

Survey Date: 6/7/10	Sheet 1 of 1 Sheets
W.O. Number: 10.11.0774	Dr. By: LA
Date: 6/10/10	10110774
	Scale: 1"=100'

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
SAN JUAN MESA EAST, N.M. - 10'

SEC. 16 TWP. 4-S RGE. 30-E

SURVEY N.M.P.M.

COUNTY ROOSEVELT STATE NEW MEXICO

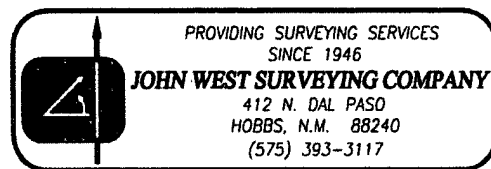
DESCRIPTION 660' FNL & 660' FEL

ELEVATION 4613'

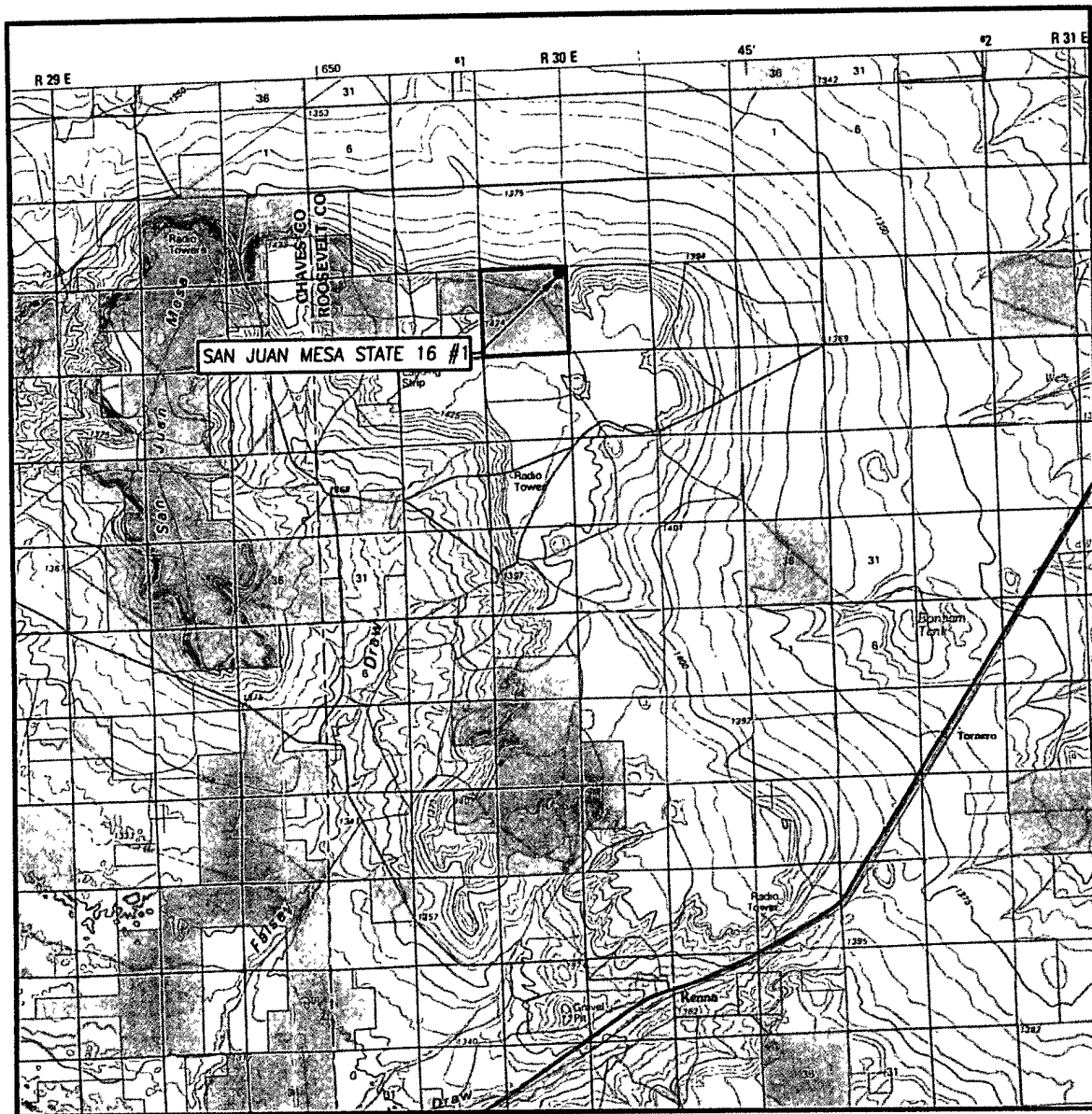
OPERATOR TORCH ENERGY SERVICES, INC.

LEASE SAN JUAN MESA STATE 16

U.S.G.S. TOPOGRAPHIC MAP
SAN JUAN MESA EAST, N.M.



VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 16 TWP. 4-S RGE. 30-E

SURVEY N.M.P.M.

COUNTY ROOSEVELT STATE NEW MEXICO

DESCRIPTION 660' FNL & 660' FEL

ELEVATION 4613'

OPERATOR TORCH ENERGY SERVICES, INC.

LEASE SAN JUAN MESA STATE 16

