STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

APPLICATION OF MESQUITE SWD, INC. TO RE-OPEN CASE NO. 14979 TO AMEND ORDER NO. R-13735 TO ALLOW A NEW WELL AND NEW WELL LOCATION FOR A SALT WATER DISPOSAL WELL, LEA COUNTY, NEW MEXICO.

Case No. 14979 (Re-opened)

VERIFIED STATEMENT OF KAY HAVENOR

COUNTY OF CHAVES	•)
) ss.
STATE OF NEW MEXICO)

Kay Havenor, being duly sworn upon his oath, deposes and states:

- 1. I am over the age of 18, and have personal knowledge of the matters stated herein.
- 2. I am a geologist for Mesquite SWD, Inc. ("Mesquite"), and I am familiar with the geological matters involved in this case
 - 3. I have been previously qualified as an expert petroleum geologist by the Division.
- 4. Division Order No. R-13735 approved injection into the Paduca Fed. SWD Well No. 3 for disposal of produced water into the Bell Canyon and Cherry Canyon members of the Delaware formation at depths of 4870-7250 feet subsurface. The well was located 300 feet from the north line and 1760 feet from the west line of Section 23, Township 25 South, Range 32 East, NMPM.
- 5. The Paduca Fed. SWD Well No. 3 (API No. 30-025-42253) was spudded, and surface casing was set and comented. When the drilling rig arrived, it could not get back into the casing. The Bureau of Land Management (the "BLM") told Mesquite to skid the rig and re-drill the well. The rig was skidded to a location 310 feet from the north line and 1760 feet from the west line of Section 23, Township 25 South, Range 32 East, NMPM, and the new well, the Paduca Fed. SWD Well No. 3Y (API No. 30-025-42258) was drilled but has not yet been completed.
- 6. The BLM approved drilling the 3Y well with the provision that injection could not commence until Mesquite obtained approval to inject from the Division.

Oil Conserva	ation Division
Case No	
Exhibit No.	

- 7. Attached hereto are the APD for the 3Y well (Attachment A), Sundry Notice for the 3Y well for the new location (Attachment B), and Sundry Notice for the 3Y well approved by the BLM (Attachment C).
 - 8. Mesquite requests that the new location and 3Y well be approved for injection.

Kay Havenor

VERIFICATION

STATE OF NEW MÉXICO)) ss. COUNTY OF CHÁVES)

Kay Havenor, being duly sworn upon his oath, deposes and states that: He is a geologist employed by Mesquite SWD, Inc. as a contract geologist; he is authorized to make this verification on its behalf; he has read the foregoing statement, and knows the contents thereof; and the same is true and correct to the best of his knowledge, information, and belief.

Kay Havenor

SUBSCRIBED AND SWORN TO before me this 3/ day of December, 2014 by Kay Havenor.

My Commission Expires: /2/20//S

Notary Public

Form 3160-3 (March 2012) FORM APPROVED OMB No. 1004-0137 Expires October 31, 2014

Y THE TENTE OF THE COURT A COU	g ,	Γ	Expures October 31, 2014
UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT			erial No. 735 NM 110836
APPLICATION FOR PERMIT TO	6. If India	n, Allotee or Tribe Name	
la. Type of work:	ER	? If Unit or	CA Agreement, Name and No.
b. Type of Well: Oil Well Gas Well Other Sw	Single Zone Multi	8. Lease N PADUCA S	ame and Well No. 3949
Name of Operator MESQUITE SWD, INC 1619	68	9. API We	No 025-422
PO BOX 1479 CARLSBAD NM 88221	3h. Phone No. (Include area code) 575-706-7288, (FOREMAN)		Pool, or Exploratory ware Bell, & Cherry Canyon
Location of Well (Report location clearly and in accordance with a At surface 310' FNL & 1760' FWL	ny State requirements.*)	11. Sec., T. R Sec 23, T2	M. or Bik and Survey or Area 5S-R32E
At proposed prod. zone SAME Distance in miles and direction from nearest town or post office.		12. County o	
27 MILES WEST OF JAL, NM 5 Distance from proposed*	To William St.	LEA	NM
location to nearest 310' property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No, of acres in lease	17. Spacing Unit dedicate NA-SWD	d to this wen
Distance from proposed location* to nearest well, drilling, completed, 2339' applied for, on this lease, ft.	19. Proposed Depth 7,250	20. BLM/BIA Bond No. (NMB000612	on file
Elevations (Show whether DF, KDB, RT, GL, etc.) 3429; GL	22. Approximate date work will sta 11/7/14	15 DAYS	d duration
, 	24. Attachments		
e following, completed in accordance with the requirements of Onsho	re Oil and Gas Order No.1, must be so	tached to this form:	
Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office).	Lands, the 5. Operator certific	ation	ed by an existing bond on file (see
Signatur Seo puffit	Name (Printed Typed) RILEY G NEATHERLIN		Date 11/10/14
PRODUCTION FOREMAN			
The State of the	Name (Printed/Typed)		Date // m/12/
a company in supum sair	Office		11717
plication approval does not warrant or certify that the applicant hold duct operations thereon. nditions of approval, if any, are attached.	s legal or equitable title to those right	s in the subject lease which	would entitle the applicant to
e 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a cressary false, fictitious or frandulent statements or representations as	rime for any person knowingly and w to any matter within its jurisdiction.	ilifully to make to any depo	urtment or agency of the United
Continued on page 2)	1/2-		*(Instructions on page 2)
IMOCD COMBITIONS OF	11/10/14	\$ 577°	n e or
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NMOCD CONDITIONS OF APPROVAL MAY BRILLWELL. CANNOT DISPOSE UNTH SWO OPAGE APPROVAD BY SANTAPE

Attachment A

NO. 1/2 2018

1626 N. French Dr., Hobbs, NM 88240 Phone: (676) 398-6161 Fax: (676) 893-0720 DISTRICT II

811 S. First St., Artesia, NM 88210 . Phone: (575) 748-1283 Fax: (575) 748-9720 DISTRICT III

1000 Rio Brazos Rd., Astoc. NM 87410 Phone: (505) 834-6178 Fax: (505) 334-8170

Energy, Minerals, and Natural Resources Department OIL CONSERVATION DIVISION

1220 South St. Francis Dr.

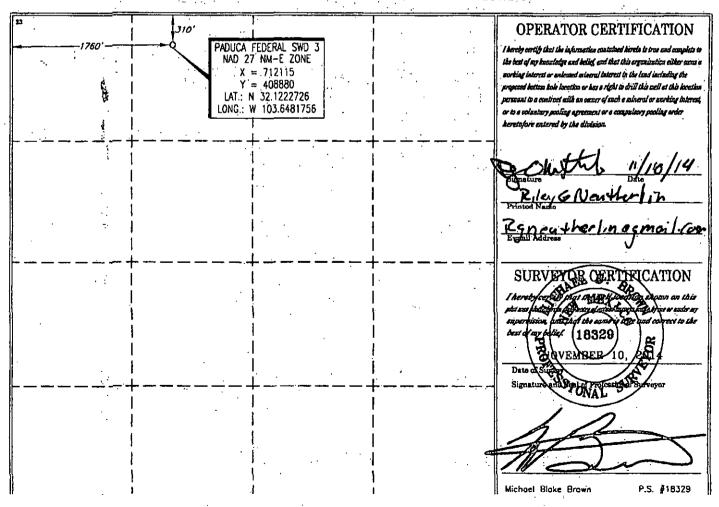
Santa Fe. New Mexico 87505

Revised August 1, 2011 Submit one copy to appropriate District Office

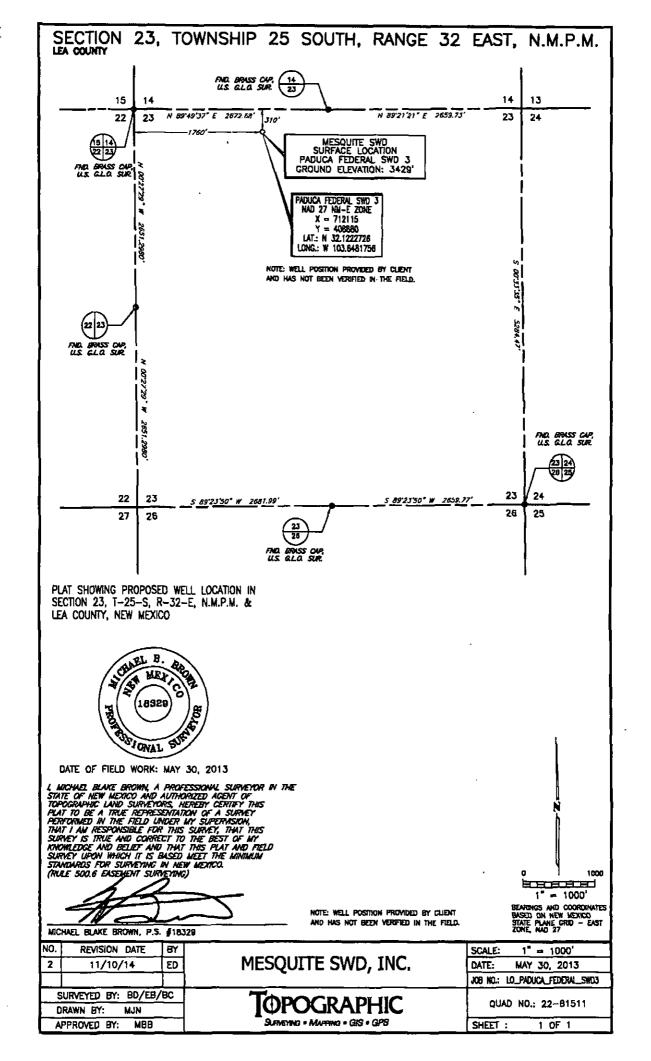
Fee Lease 8 copies

DISTRICT IV 1220 S. St. Prancis						•		AMENDE	D REPOR'
Phone (505) 476-3	1460 FAX: (500)	W]	ELL LOCATION	AND A	ACREAGE	DEDICATIO	N PLAT		
	API.Numbe	•	² Pool Code			· 5 Po	ol Name		
Property	Code		PAD		orty Name FEDERAL S	WD		Well Nur	
OGRID.	OGRID No. **Operator Name** MESQUITE SWD, INC.					Elevation 3429			
			. 10	Surface	Location .				
UL or lot no.	Section	Township	Ranga	Lot Idn	Feet from the	North/South line	Feet from the	Bast/West line	County
. C	23	25 SOUTH	32 EAST, N.M.P.M.	<u>.</u>	310'	NORTH	1760'	WEST	LEA
_		· · · · · · · · · · · · · · · · · · ·	" Bottom Hole Lo	cation I	If Different F	rom Surface			٤٠
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
, Χ ,	X	X	X		X	X	X .	X	X
19 Decicated Act	ros ¹³ Je	int or Infill	14 Consolidation Code	15 Order N	vo.		<u> </u>	·.	

NO ALLOWABLE WELL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

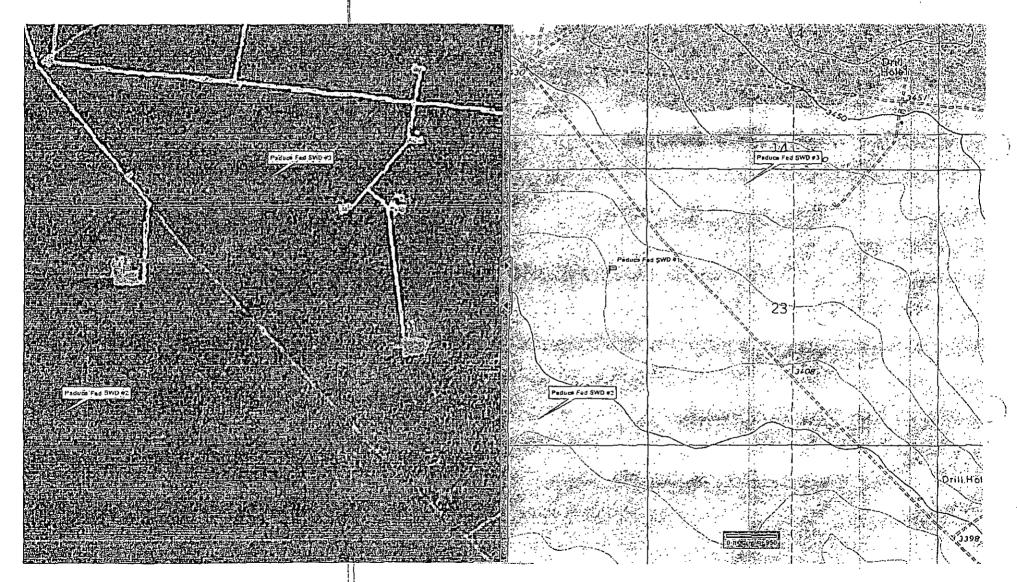


NOV 1/2 2014



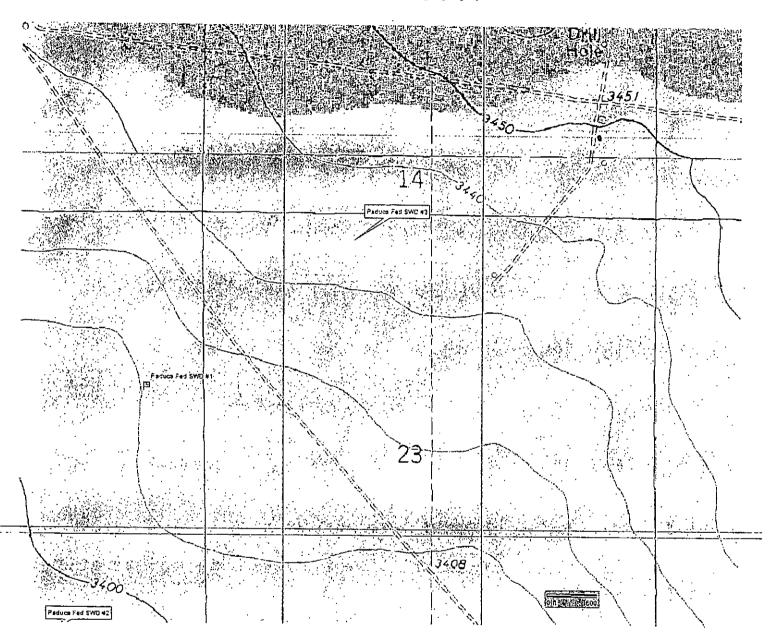
Mesquite SWD, Inc.
Paduca Federal SWD #3
300' FNL & 1760' FWL

Sec. 23, T25S-R32E, Lea Co., NM



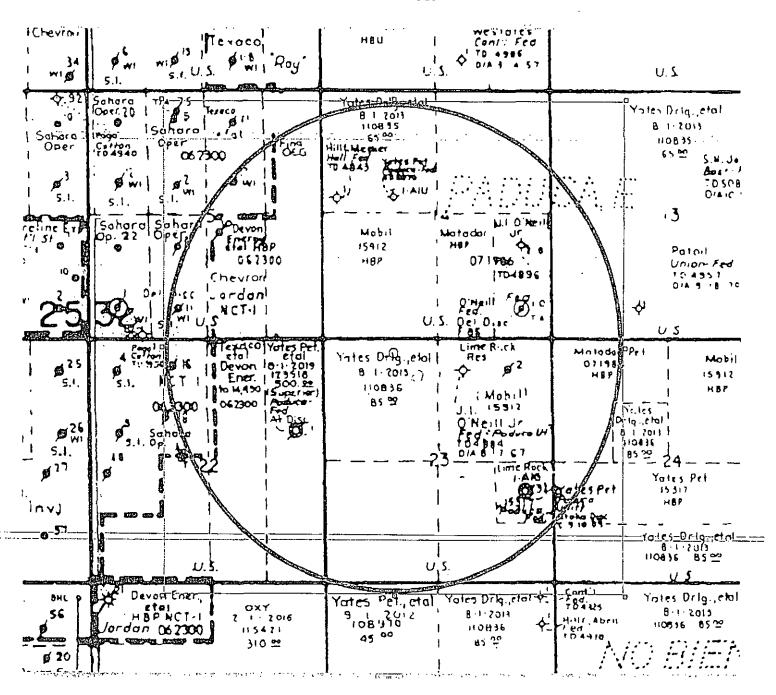
Deforme Xmap6
Paduca Federal SWD #3 will be located 5,75 miles south of NM-128 and CR-1 (Orla Road) junction then 1.4 miles southeast.

Surface Topography



Surface topography Delorme XMap6

1-Mile AOR



Mesquite SWD, Inc. DRILLING PROGRAM

Paduca Federal #3, 300' FNL & 1760' FWL Sec. 23, T25S-R32E; Lea Go., NM

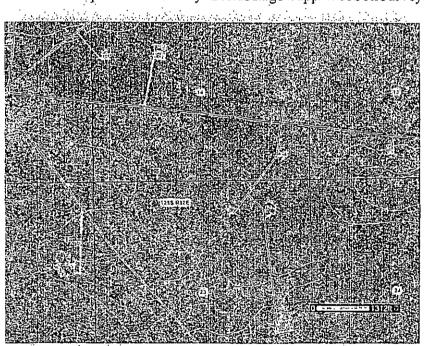
Supplemental to Form 3160-3, Application for Permit to drill the subject well, Mesquite SWD, Inc submits the following information as per Bureau of Land Management requirements.

1. Geologic Name of Surface Formation

Surface is Quaternary eolian and piedmont deposits (Qep) Holocene to middle Pleistocene. (New Mexico Bureau of Geology and Mineral Resources, 2003, Geologic Map of New Mexico, 1:500,000)

Soil map with legend. Source: http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx





2. Formation Tops and Estimated Fresh Water:

The of geologic markers and estimated depths at which anticipated water, oil or gas formations are expected to be encountered as follows:

B/Alluvium	85'	Estimated potable water, if present, approx 80'.
Rustler	750'	
Top Salado	1,100'	
Main salt	2,320'	
Base salt	4,500'	
Lamar limestone	4,750'	
Bell Canyon	4,820'	No oil or gas expected below (Ramsey/Olds) 4,850'
Cherry Canyon	6,250'	
Brushy Canyon	7,360'	Estimated

Estimated Depths of Anticipated Fresh Water, Oil or Gas. 3.

None of the formations above the Brushy Canyon have been found to be commercially productive of oil or gas east of the present Paduca field, or are depleted, in the disposal interval of this well. No fresh water wells are reported in the NM OCD 2-mile area of review, none would be expected beneath the Alluvium. Potential shallow water will be protected by 9-5/8" casing set at 865' and cement circulated to the surface.

Casing: 4.

Design Parameter Factors:

Casing Size	Collapse Design	Burst Design	Tesnion Design	Setting	
	Factor	Factor	Factor	Depth	
20"	5.55	22.5	7.46	20'	
13-3/8" 48# H-40 STC	1.647	3.85	. 7.76	865'	
9-5/8" 36# J-55 LTC	1.175	1.44	2.64	3000'	
9-5/8" 40# J-55 LTC	1.194	1.16	8.67	4200'	,
9-%" 40# N-80 LTC	1.266	2.36	30.71	4550' 4700) [']
7" 23# J-55 <u>.</u> LTC	1.153 .	1.16	1.83	5200'	
7" 26# J-55 LTC	1.147	1.32	2.12	7250'	

9.	er (6)14		· • · · · · · · · · · · · · · · · · · ·		
	Hole Size	Casing	Depth Set	Cement	Top Cement
	26"	20" Conductor	20'	144 ft³	Surface
	17-1/2"	13-%" 48# H-40	865'	840 sx	Circulated
	12-1/4"	9-%" 36/40# J-55/N-80	4.550, 47	2138 sx	Circulated

7" 23/26# J-55 All new or White Band (used certified to API standards).

Auxiliary Well Control and Monitoring Equipment: 4-A.

-A-Kelly-cock-will-be-in-the-drill-string-at-all-times.

A full opening drill pipe stabbing valve having the appropriate connections weill be on the rig floor at all times.

7,250'

475 sx

Hydrogen Sulfide detection equipment will be in operation after drilling out the 95%" casing shoe until the 7" casing is cemented. Breathing equipment will be on location upon drilling the 95%" shoe until total depth is reached.

Ifproblems, please call clay Wilson @ 575-706-1840

5. Cement Program:

16" Conductor pipe w/144 ft³ Redi-Mix

13-3/8" Surface string. 0' - 865'

Lead: 535 sx Class "C plus additives: Density 13:50. Yield 1.75. MW 9.138 TF 13.065 Tail: 200 sx Class "C" w/PF001. Density 14.8. Yield 1.34. MW 6.321 TF 10.040

9-%" Intermediate string: 0'-4550' 4700

Lead: 1275 sx 35/65 Poz C plus additives: Density 12.90. Yield 1.92. MW 9.951 TF 14.390 Tail: 200 sx Class "C" plus additives: Density 14.80. Yield 1.33. MW 6.320 TF 9.926

7" Production string: 0' - 7250'

Stage 1. MD 7250.

125 sx PVL plus additives: Density 13.00. Yield 1.47. MW 7.548 TF 9.916

DV approx 6000'

Stage 2: MD approx 600'

125 sx PVL plus additives: Density 13.00. Yield 1.47. MW 7.548 TF 9.916

DV approx 4850'

Stage 3: MD 4850'

100 sx PVL plus additives: Density 13.00. Yield 1.47. MW 7.458 TF 11.032

Cement volumes calculated using 100% excess over open hole volume.

6. Proposed Mud Circulation System:

Drilling and returned circulation will be from and to a closed loop-like system w/surface tanks. No earthen mud or reserves pits will be constructed or used for this well. Drilling fluids and cuttings, if any, will be trucked to a certified disposal facility upon completion of drilling operations. Cement cuttings will be removed to a certified disposal facility.

Depth	Mud Wt.	Viscosity	Fluid Loss	Type Mud
0 - 865'	8.4 - 8.5	29	NC	Fresh water
865'-4,700'	9.9-10.0	29	NC	Brine
4,700'-7,250'	9.0	29	NC	Cut Brine/Fresh water

The necessary mud products for weight addition and fluid loss control will be on location at all times.

Manifold schematic with routing to closed loop system is illustrated in Exhibit 2, below.

Visual mud monitoring

.7. Pressure Control Equipment:

BOP system, Exhibit 1 below, used to drill the intermediate hole will consist of a double ram-type (3M) preventer and annular preventer. Both units will be hydraulically operated and the ram-type will be equipped with blind rams on bottom and drill pipe rams on top. BOP will be tested in accordance with Onshore Oil & Gas order No. 2 as a 3M system prior to drilling out the surface casing shoe.

The BOP system used to drill the production hole will consist of a double ram-type (3M) preventer and annular preventer. BOP will be tested in accordance with Onshore Oil & Gas order No. 2 as a 3M system prior to drilling out the intermediate casing shoe.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily drillers log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Vent line will extend to pad margin to provide sufficient distance, approximately 150' to flare boom, from any ignition source in the event natural gas should be encountered. No gas has been reported to this depth in the drilling of adjacent holes.

8. Estimated BHP:

At proposed TD 7,250' estimated BHP will be 3,295 psi.

9. Potential Hazards:



No abnormal pressures or temperatures were reported in the nearby drilling operations. H_2S detection equipment will be in operation during the drilling operation. H_2S is not considered a potential hazard because it was not reported in the surrounding area. See H_2S schematic Exhibit 3, below.

10. Anticipated Starting Date and Duration of Operations:

-Road-and-location-construction-will-begin-as-soon-as-the-BLM-approves this APD: Move-in and drilling will follow as soon thereafter as rig and equipment are available. Drilling, well preparation for injection and lease clean-up are expected to require approximately 15 days.

11. Logging, Coring, and Testing Program:

No coring or formation testing is anticipated. A gamma-ray-neutron/density log will be run from TD to surface. A formation logger and gas detector may be employed.

Addendum: Non-productive zones

Wells up-dip (west), east of the drill site acreage and in the surrounding area have tested, completed in and/or depleted the upper Ramsey and the upper Olds of the Bell Canyon in the AOR. Numerous deeper wells have drilled, evaluated and/or tested the Ramsey/upper Olds. The lower Olds and the underlying Bell Canyon and Cherry Canyon in the greater area have not demonstrated production or commercial potential. This new-drill SWD will isolate the Ramsey/upper Olds and the underlying Brushy Canyon Formation where some hydrocarbon potential might present an exploration target for horizontal drilling.

Addendum: Non-productive zones

See COA.

Wells up-dip (west), east of the drill site acreage and in the surrounding area have tested, completed in and/or depleted the upper Ramsey and the upper Olds of the Bell Canyon in the AOR. Numerous deeper wells have drilled, evaluated and/or tested the Ramsey/upper Olds. The lower Olds and the underlying Bell Canyon and Cherry Canyon in the greater area have not demonstrated production or commercial potential. This new-drill SWD will isolate the Ramsey/upper Olds and the underlying Brushy Canyon Formation where some hydrocarbon potential might present an exploration target for horizontal drilling.

Exhibit 1

13-5/8" x 3,000 psi BOP Stack

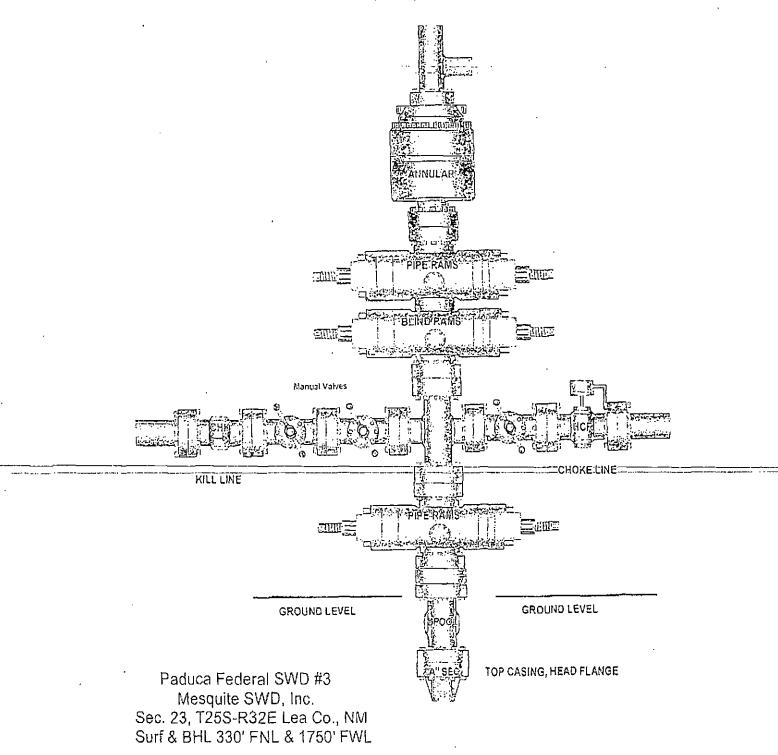


Exhibit 2

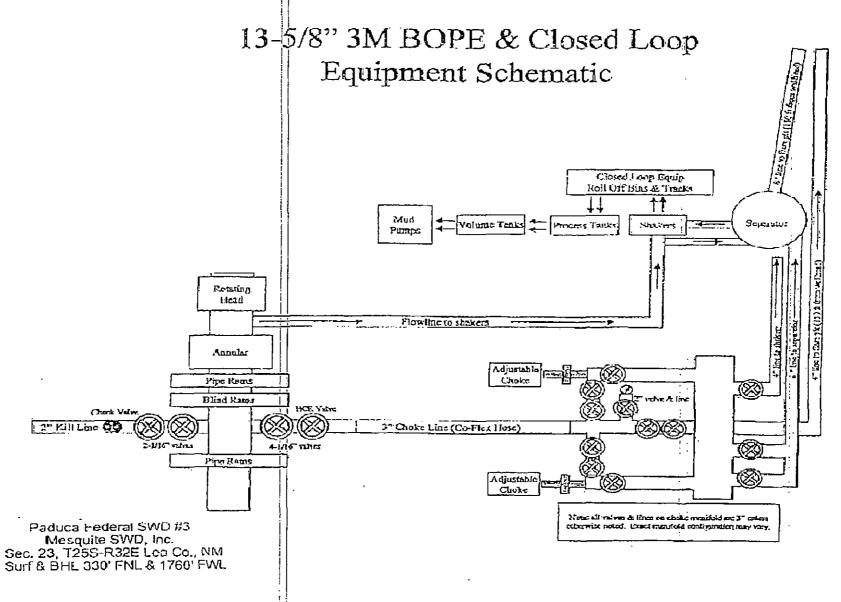
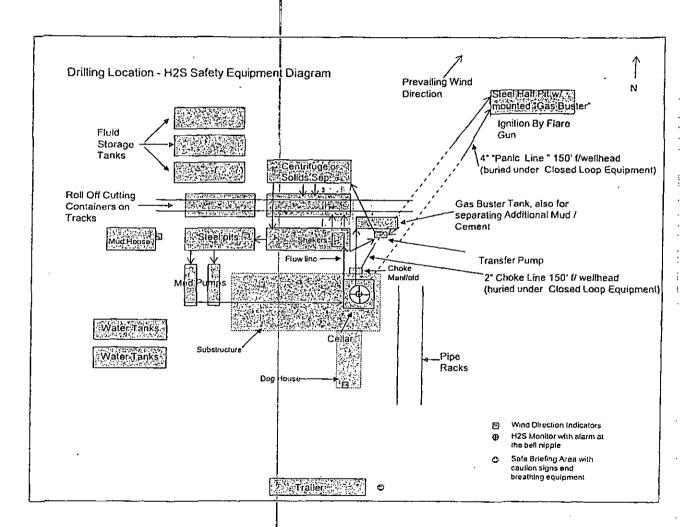


Exhibit 3 Generalized Pad Layout, Closed-Loop Routing and H₂S Safety Layout



Also see Exhibit 4, page 18 for detailed H₂S Location Layout

Form 3160-5 (March 2012)

Subsequent Report

Final Abandonment Notice

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

CHARDY MOTICES AND DEPORTS ON MELL

OCD Hobbs

FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2014

Well Integrity

SKID RIG

	Expires: October :
5. Lease Serial No SWD R-13735 N	M 110836

On not use this	form for proposals (Use Form 3160-3 (A	to drill or to re-enter an APD) for such proposals	6. If Indian, Allottee or Tribe Name		
	IT IN TRIPLICATE - Other		7. If Unit of CA/Agreement, Name and/or No.		
i. Type of Well Oil Well Gas V	Well Other SV	NOV 17 2014	8. Well Name and No. PADUCA SWD #3-y		
2. Name of Operator MESQ	UITE SWD INC	RECEIVED	9. API Well No. 30-025-42258		
3a. Address PO BOX 1479 CARLSBAD NM, 88221		3b. Phone No. (include area code) (575) 706-7288 (FOREMAN)	10. Field and Pool or Exploratory Area SWD, DELAWARE BELL & CHERRY CANYON		
4. Location of Well (Footage, Sec., T. SEC 23, T25S-R32E 30 FN	R.M., or Survey Description L & 1760 Fu		11. County or Parish, State LEA		
12. CHE	CK THE APPROPRIATE BO	OX(ES) TO INDICATE NATURE OF NOTIC	CE, REPORT OR OTHER DATA		
TYPE OF SUBMISSION		TYPE OF ACTION			
Notice of Intent	Acidize	Deepen Prod	uction (Start/Resume)		

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

Fracture Treat

Plug Back

New Construction

Plug and Abandon

11/7/14- SKID WELL 10' TO THE SOUTH, SET NEW 20" CONDUCTOR TO 90' AND CEMENTED

fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

Alter Casing

Casing Repair

Change Plans

Convert to Injection



Reclamation

Recomplete

Water Disposal

Temporarily Abandon

	1	
14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)		
RILEY G NEATHERLIN	Title PRODUCTION FOREMAN	_
Signature Coc keth	Date 11/10/14 ACCEPTED FOR RECORD	11.
THIS SPACE FOR FEL	DERAL OR STATE OFFICE USE	1/2
Approved by	Title 1 AND	Miser
Conditions of approval, if any, are attached. Approval of this notice does not warrant that the applicant holds legal or equitable title to those rights in the subject lease which entitle the applicant to conduct operations thereon.	or certify BIREAU UI LAND INVANCEMENT	
Title 18 ILS C. Section 1001 and Title 43 ILS C. Section 1212, make it a crime for an	by person knowingly and willfully to make to any department or agency of the I	nited States any falce

Form 316075 (March 2012)

UNITED STATES DEPARTMENT OF THE INTERIOR **BUREAU OF LAND MANAGEMENT**

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 up

fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

HOBBS OCD H	OCD
OCD H	bbs

FORM APPROVED OMB No. 1004-0137 Expires: October 31, 2014

erial No. 3735 NM 110836

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.				6. If Indian, Allottee or Tribe Name		
SUBMIT IN TRIPLICATE - Other instructions on page 2.				7. If Unit of CA/Agreement, Name and/or No.		
I. Type of Well Oil Well Gas Well Other SWD				8. Well Name and No. PADUCA SWD #3		
2. Name of Operator MESQUITE SWD INC				9. API Well No. 30-025-42258		
3a. Address 3b. Phone N PO BOX 1479 CARLSBAD NM. 88221 (575) 706-7			· ·	10. Field and Pool or Exploratory Area SWD, DELAWARE BELL & CHERRY CANYON		
4. Location of Well (Footage, Sec., T.,R.,M., or Survey Description) SEC 23, T25S-R32E				11. County or Parish, State LEA		
12. CHEC	K THE APPROPRIATE BO	OX(ES) TO INDICATE N	ATURE OF NOTIC	E, REPORT OR OTH	ER DATA	
TYPE OF SUBMISSION TYPE OF ACT				ON		
Notice of Intent	Acidize Alter Casing	Deepen Fracture Treat	Recla	ction (Start/Resume)	Water Shut-Off Well Integrity	6
Subsequent Report	Casing Repair Change Plans	☐ New Construction ☐ Plug and Aband		mplete Other SKID RIG		
Final Abandonment Notice	Convert to Injection	Plug Back	=	r Disposal		
Orig	Abandonment Notices must final inspection.) THE SOUTH, SET NEW SOU	be filed only after all requience of the plans of the pla	irements, including or ack ow	od 5K rod	a completed and the open	// Y
14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)			RODUCTION FOR	REMAN 🔥	· / / /	. ^
RILEY G NEATHERLIN		- Title	Title PRODUCTION FOREMAN			
Signature SG M	Tell	Date 1	/10/14	- MODE	PERR PERR	<u></u>
	THIS SPACE	FOR FEDERAL O	R STATE OF	IDE VELVE	XI XI XI SUU	D
Approved by Towns 1 for Conditions of approval, if any, are attached that the applicant holds legal or equitable to applicant to conduct operations.		S not warrant or terrify out lease which would Of	le fice	WOV Jan	Dail 0 2014	n/10/1