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

1220 S. St. Francis Dr., Santa Fe, NM 87505

District.IV

State of New Mexico Energy Minerals and Natural Resources

Form C-101 May 27, 2004

Oil Conservation Division FIDENTIAL

Submit to appropriate District Office

1220 South St. Francis DONFIDENTIAL

AMENDED REPORT

Santa Fe, NM 87505

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

					1411								2 OCRIDA	TI	
Operator Name and Address SWEPI LP, P.O. Box 576, Houston, Texas 77001										ŀ	OGRID Number 250036				
(Local Contact: Shell Exploration & Production Company, 4582 S. Ulster St. Pkwy., Suite 1400, Denver, CQ 80237)								30-019-20135					20135		
Property Code Property					Name Well No.										
37/64 Proposed Pool 1															
Proposed Pool 1								¹⁰ Proposed Pool 2							
⁷ Surfac							e Location								
UL or lot no. Section Township Range K 23 11N 23E			i I			om the 54	l .	South 164		Feet from the 1646	East/West line West		County Guadalupe		
⁸ Proposed Bottom Hole Loc						cation If Different From Surface									
UL or lot no.	lot no. Section Township Range				Feet fro	om the	North/S			Feet from the	East/West line		County		
Additional Well Information															
11 Work Type Code 12 Well Type Code 13 Cable							Rotary 14 Lease Type Code				15 Ground Level Elevation 4553.6 graded				
¹⁶ Multiple ¹⁷ Proposed			17 Proposed De 13,150	pth			nation sippian				Contractor ors Drilling			⁰ Spud Date une 9, 2008	
Depth to Groundwater Pool feet (Santa Rosa aquifer) N 13,150 M1 Distance from nearest ~3 miles (Webb CD-										Distance from ~1200 feet (C			·		
	: Synthetic		0mi	ils thick Clay	☐ Pit V					ıg Method	l: Fr	esh Water 0-1,3			
Close	ed-Loop Sys	stem [Er	esh Water	r 🗵	Brine 🛛 Die	sel/Oil-base	:d	Gas/Air 🔲
					²¹ Pr	opose	d Casing	and C	ement I	Program	1		· · · · · · · · · · · · · · · · · · ·		
Hole Size Casing Size				Casing weight/foot				Setting Depth		4	Sacks of Cement		Estimated TOC		
30-inch 20-inch			-inch	Conductor			90 feet			NA		0 feet			
14.75-inch 10.75-inch					40.5 lbs.				1300 feet			930		0 feet	
9.875-	9.875-inch 7.625-inch			29.7 lbs.			5800 feet			1165		1000 feet			
6.5-inch 4.5-inch			13.5 & 15.1 lbs.				13150 feet		368	L		5300 feet			
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. See Attachment A – Webb 3-23 Drilling & Completion Plan															
											END SACK S				
Attachment A3 – Nabors B.O.P. Stack Diagram							NEW MEXICO BUREAU OF MINES, SOCORRO AT AT LEAST TEN FOOT INTERVALS								
See Attached Maps															
Location Photos Well Location, Webb 3-23 OH CONSERVATION CONSERVATION TO BE NOTHER									E MOTERE						
Location Layout for Webb 3-23 Topographic Map A OIL CONSERVATION COMMISSION TO BE NO WITHIN 24 HOURS OF BEGINNING OPERA															
Topographic Map B WITHIN 24 HOURS OF BEGINNING OPERALIONS															
²³ I hereby certify that the information given above is true and complete to the													to be sign		
best of my knowledge and belief. I further certify that the drilling pit will be constructed according to NMOCD guidelines \boxtimes , a gengral permit \square , or							OIL CONSERVATION DIVISION								
an (attached) alternative OCD-approved plan							Approved by:								
Signature: Melian J. Deligation							NOTHIAT ALIBERTIA								
Printed name: Michael L. Bergstrom						Title: DISTRICT SUPERVISOR									
Title: Regulatory Coordinator							Appro	oval Date:	5/	15	-/08 E	xpiration D	ate:	5/15/10	
E-mail Address: michael.bergstrom@shell.com															
Date: 5/9/2008 Phone: 303.222.6347						Condi	tions of A	nnroval A	ttac	hed					



Webb 3-23 Drilling and Completion Plan

The well will be drilled with potable (TDS<3,000 ppm) water-based fluids from surface to the bottom of the Santa Rosa Formation ("freshwater aquifer"). Surface conductor and intermediate casing strings will be installed and cemented. Below the Santa Rosa Formation, the well will be drilled with nonpotable (TDS>10,000 ppm) water-based fluids to total vertical depth (TVD). Additional intermediate casing strings and production casing will be installed and cemented. Upon completion of drilling, the casing will be perforated in selected prospective zones. Hydraulic fracturing will be performed in the prospective zones, and gas and water flow testing will be conducted in individual and/or commingled zones.

Drilling Program

- <u>Lithology</u>
 - Tucumcari Basin
 - This area has been the subject of limited oil & gas exploration activity
 - Approximate depths of key geologic formations are shown in Attachment A1
 - O Prospective formations are in the Pennsylvanian section
- Fluid Bearing Formations
 - O Potable water (Surface 1500 feet below ground surface)
 - O Brackish water (1500+ feet below ground surface)
 - Natural gas/condensate (~8000+ feet below ground surface)
- Drilling Fluids
 - o Freshwater drilling fluids (see Attachment A2)
 - Potable (TDS< 3,000 ppm) water-based, 8.3-8.6 ppg, viscosifiers and LCM additives
 - o Brackish water drilling fluids (see Attachment A2)
 - Non-potable (TDS>10,000 ppm) water-based fluids, 8.6-10.0 ppg, salt, lime, caustic soda, viscosifiers and LCM additives
 - o Lost Circulation Materials (LCM)
 - As needed, LCM consisting of, but not limited to, cedar fibers, mica, drilling paper, graphite, walnut plug, cottonseed hulls and calcium carbonate may be introduced into the well bore to address any lost circulation zones encountered during drilling
- Wellhead Pressure Control (Blowout Prevention [BOP])
 - Wellhead BOP equipment is standard design for "tight gas" wells, as shown on Attachment A3
 - Maximum pressures for equipment (wellhead A section to be 11" 5,000 psi; wellhead B section to be 11" 10,000 psi; BOP with 11" 5,000 psi annular preventer; and Ram preventers with 11" 10,000 psi)
 - Maximum downhole pressures anticipated ~6500 psi
 - o BOP testing procedures conducted by third party contractor upon installation
 - Ram preventers to 10,000 psi and 250 psi; Annular preventer to 2500 psi and 250 psi, for 10 minutes and 5 minutes, respectively

Casing and Cementing Program

- All casing run and set will be new and unused. Details are included Table 1
- Surface Casing
 - o 14.75-inch diameter well bore, drilled to 1300 feet.
 - o 10.75-inch diameter casing installed and cemented to surface
- Intermediate Casing
 - o 9.875-inch diameter well bore, drilled to 5800 feet.

o 7.625-inch diameter casing installed and cemented to 1000 feet

- Production Casing
 - o 6.5-inch diameter well bore, drilled to 13150 feet.
 - o 4.5-inch diameter casing installed and cemented to 5300 feet

Well Completion

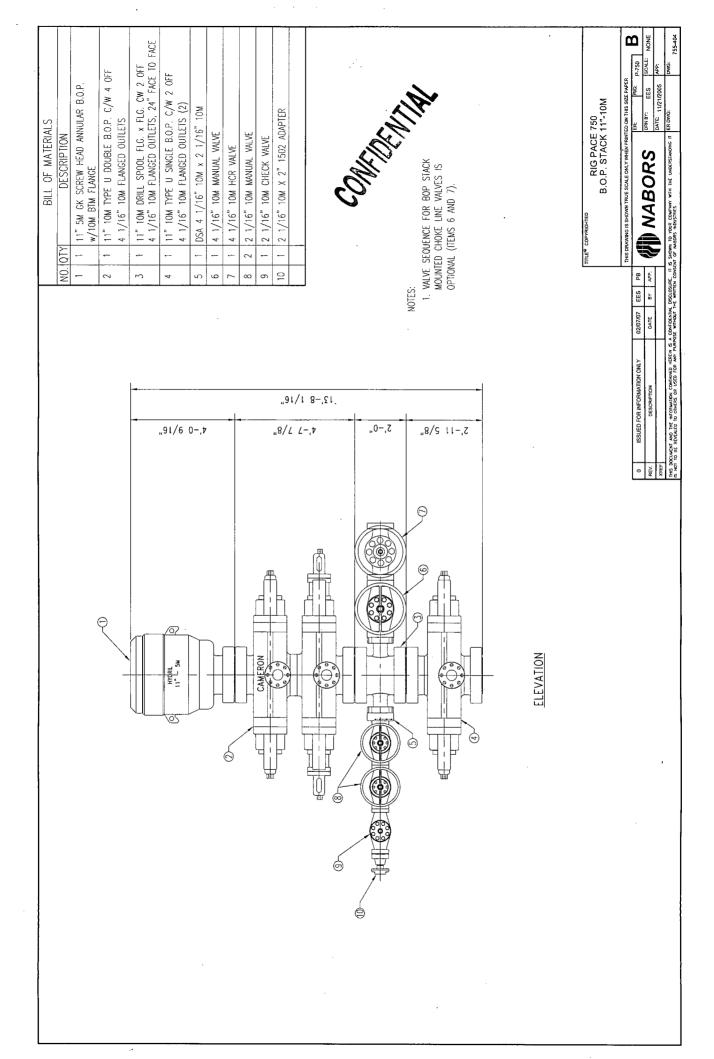
- ... Casing Perforation
 - O Perforate casing in prospective sand zones, using three shots per foot (spf), 120 degree, phased perforating guns
- Hydraulic Fracturing
 - Treat prospective sand zones with ceramic and/or sand proppant materials during hydraulic fracturing

Logging and Testing

- Lithologic Logging
 - o Mudlogging (to TVD); Selective coring (whole and/or rotary sidewall)
- Wireline-Logging, including but not limited to:
 - o Gamma Ray, Resistivity, Porosity, Neutron and Sonic data collection
- Flow Testing
 - o Flow individual production zones for up to 3 days
 - o Flow entire well for up to 120 days

Water Supply for Drilling and Completions

- One water well (minimum 5 ½-inch and maximum 7-inch diameter casing) will be drilled on-site about 500 feet east of the well location, on the edge of the well site
 - O A temporary appropriation of up to 3 acre feet (AF) of potable water will be obtained from the Office of State Engineer-District 6 (OSE) for production of potable water from the Santa Rosa aquifer
- Potable groundwater will be available from the CD-1 water well located on the Webb Ranch, about 3 miles from the well site
 - O A temporary appropriation of up to 3 acre feet (AF) of potable water was previously approved by the Office of State Engineer-District 6 (OSE) for production of potable water from the Santa Rosa aquifer. This appropriation will expire in August 2008, and will be renewed with the OSE.
- Potable groundwater will be available from wells located on the Pajarito Ranch, about 22 miles from the well site
 - O Parajito Creek Ranch holds appropriations for more than 500 acre feet (AF) of potable groundwater, which may be sold for any and all uses.
- Nonpotable produced water will be available from the CD-1 well located on the Webb Ranch, about 3 miles from the well site
 - O Produced water from the completion and testing of CD-1 well is currently stored, and may be treated and re-used at other well locations



Webb 3-23 Surface Use Plan



The well location, associated facilities and access roads will be constructed on fee sufface upon approval of the surface owner. Well site and access roads will be constructed to withstand the loads occurring during mobilization, placement and operation of drilling, completion and testing equipment. Construction activities will be conducted to minimize surface disturbances and to readily accommodate reclamation activities on disturbed areas.

Existing Roads

- Access to Location
 - o From the town of Cuervo, New Mexico
 - Drive north on County Road, about 5.9 miles (Topographic Map A)
 - Follow Pipeline Corridor road west toward Webb CD-1 well location, about 2.6 miles (Topographic Map A)
 - Follow Webb Ranch road north toward Webb CD-1 well location, about 2.3 miles (Topographic Map A)
 - From Webb CD-1 well location, follow improved two track road northwest, about 1.4 miles, to Webb 3-23 well location (Topographic Map B)

Roads to be Constructed/Maintained

- Improved Roads
 - County Road (maintained by Guadalupe County)
 - Constructed of compacted crushed aggregate and fill
- Two-Track Roads
 - O Latigo Ranch and Webb Ranch Roads
 - Existing improved 2-Track road extends to Webb CD-1 well location
 - Constructed of compacted crushed aggregate and fill
 - Culverts and/or rock-filled, low water crossings installed
 - Construct improved 2-Track road segments: (1) along Pipeline Corridor, and (2) extending to Webb 3-23 well location
 - Grade/crown road, placing crushed aggregate, as needed
 - Install culverts and/or rock-filled, low water crossings, as needed

Well Site Layout

- Well pad location and associated facilities are shown on Well Location, Webb Ranch
 3-23, Topographic Map A, and Topographic Map B
 - O The staked well location and proposed access road are shown on Location Photos
 - Well location, water well, access roads, lined pits, above-ground tanks and temporary buildings, and storage areas are shown on Location Layout for Webb Ranch 3-23

Water Supply

• Water well will be drilled at a location about 500 feet east of the well location, on the edge of the well site (Location Layout for Webb Ranch 3-23)

Existing Oil & Gas Wells

- Webb CD-1 well (API 30-019-20134) is located in SE1/4, SW1/4, Section 25, T11N, R23E
 - O Well is temporarily abandoned (19.15.13.1105.C)

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- Existing and/or Proposed Facilities

 Well Site Facilities
 - Located at well site at approximate locations shown on Location Layout for Webb Ranch 3-23
 - Temporary living quarters
 - O Located at well site initially, possibly moved to other, more centrally located area in the near future

Storm Water Management Plan

- Stormwater management and erosion control practices will be implemented during construction, operations and reclamation
 - o · in compliance with Storm Water Prevention Plan (SWPP), approved by the New Mexico Department of Environment (NMED)

Waste Management and Disposal

- Drilling fluids and cuttings and other solids will be dried on-site and buried on-site during lined pit closure and reclamation
- Other solid wastes will be accumulated and dispose of off-site at permitted landfill

Produced Water Management and Disposal

• Produced water, and hydraulic fracturing fluids will be evaporated on-site; some fluids may be treated and re-used on-site or at other well locations. Concentrated waste fluids will be disposed of off-site at permitted disposal facility

Construction Materials

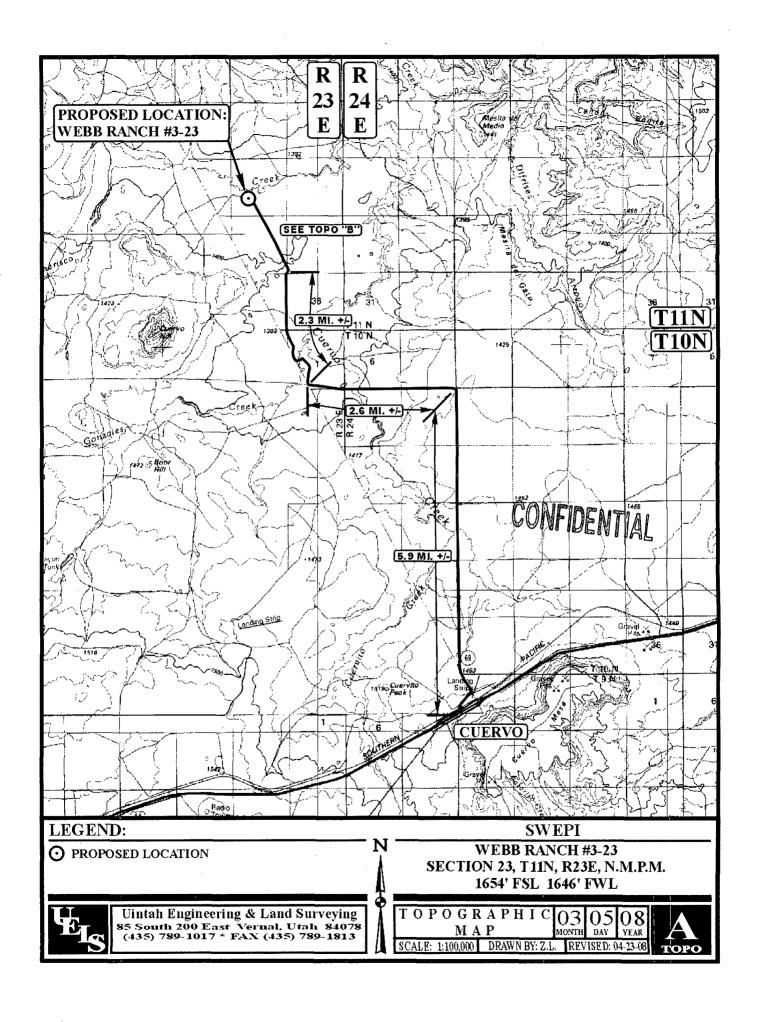
- Fill material and Aggregate obtained from local sources
- Top Soil temporarily stockpiled at perimeter of well pad and along construction corridors for subsequent use during reclamation

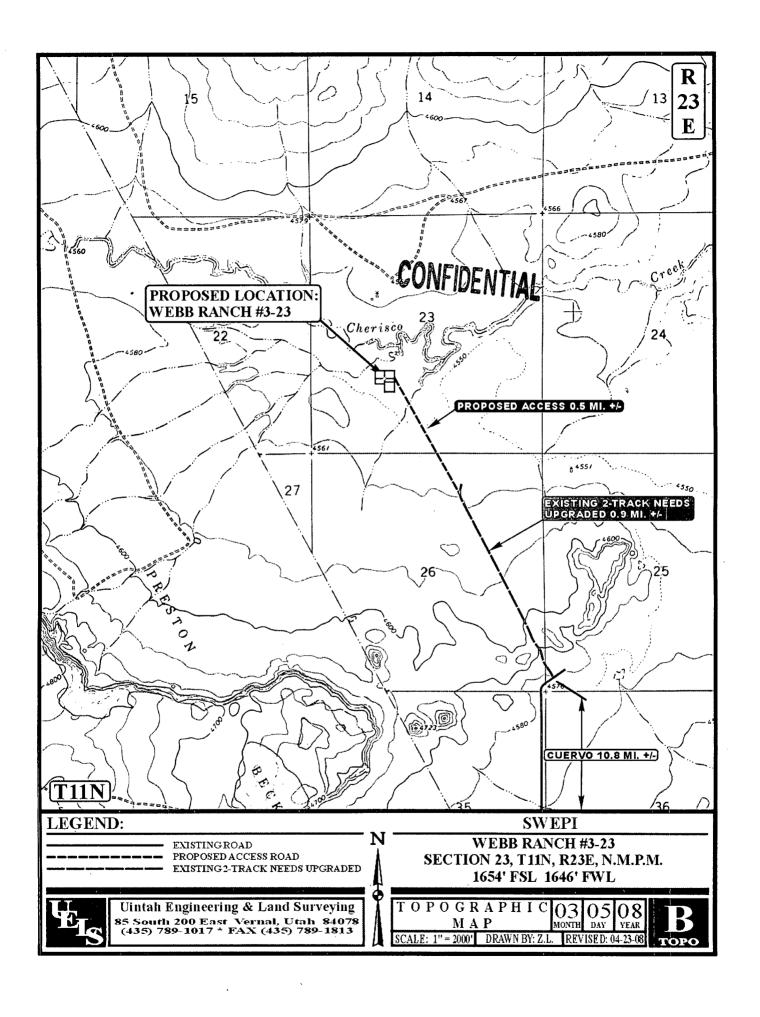
Reclamation

- Areas temporarily disturbed during construction, and well drilling, completion and testing will be reclaimed to original conditions, as soon as is practical and in consultation with the surface owner
 - Disturbed areas will be re-contoured to match existing topography
 - O Topsoil salvaged during construction activities will be spread to a minimum thickness of 6 inches
 - O Reclaimed areas will be planted with seed mixture recommended by local Soil Conservation Service and/or BLM staff, and approved by surface owner
- Areas disturbed during construction and subsequent oil & gas production will be reclaimed to original conditions, as soon after oil & gas production ceases as is practical, and in consultation with the surface owner

Other Information

 Construction and operation of oil & gas well in Guadalupe County, New Mexico does not require a special use permit or waiver from the County Commissioners and/or Planning Department





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

4 Property Code

37164

OGRID No.

District_IV

1220 S. St. Francis Dr., Santa Fe, NM 87505

¹ API Number

30-019-20135

State of New Mexico

Energy, Minerals & Natural Resources Department

OIL CONSERVATION DIVISION

⁵ Property Name

Hage and Webb Land and Cattle, Inc.

Operator Name

² Pool Code

Santa Fe, NM 87505

1220 South St. Francis Dr CONFIDENTIAL

Form C-102

Revised October 12, 2005

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

Well Number

Webb 3-23

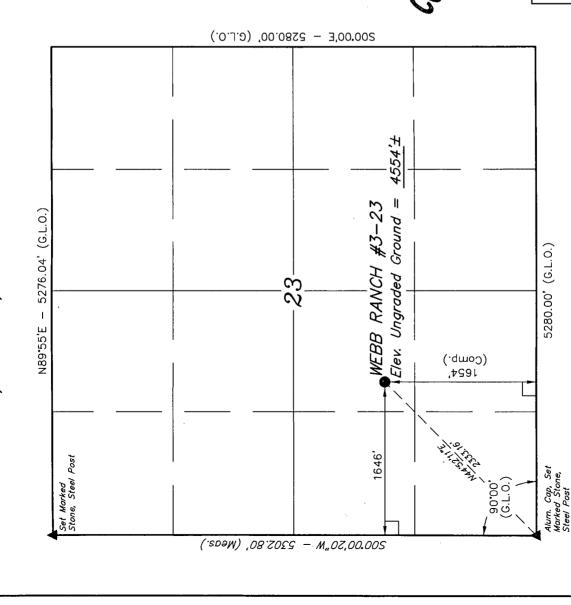
⁹ Elevation

☐ AMENDED REPORT WELL LOCATION AND ACREAGE DEDICATION PLAT

3 Pool Name

2500:	36	_			SWEFIL	,r		4555.0	graueu
					¹⁰ Surface I	Location			
UL or lot no. K	Section 23	Township 11N	Range 23E	Lot Idn	1	North/South line South	Feet from the	East/West line West	County Guadalupe
		<u> </u>	11 Bc	ottom Ho	le Location If	Different Fron	n Surface		
UL or lot no.	Section	Township	Range	Lot Idn	T	North/South line	Feet from the	East/West line	County
Dedicated Acre	es la Joint o	r Infill	⁴ Consolidation	Code 15 O	rder No.				
No allowable division.	will be ass	signed to	this complet	ion until a	Ill interests have t	oeen consolidated o	or a non-standard	unit has been appro	oved by the
16				1			17 OPF	RATOR CERTIF	ICATION
See Attached M	Мар -						I hereby certify the	nt the information contained her	ein is true and complete
Well Location	, Webb						' '	nowledge and belief, and that th terest or unleased mineral inter	· ·
Ranch #3-23								m hole location or has a right t	-
							il -	to a contract with an owner of s	
							11	luntary pooling agreement or a ntgred by the division. 🔎	compulsory pooling
							Mil	Of Bun	Janua 49/
							Signature	J. J. J.	Date
							Michael L. Berg	etrom	
							Printed Name		
								EYOR CERTIF fy that the well location	
					•.		, plat was plot	ed from field notes of a	ctual surveys
		ļ					made by me o	or under my supervision	, and that the
							same is true o	and correct to the best o	of my belief.
							Date of Survey	- 1 - CD C ' 1 C	
		:					Signature and S	eal of Professional Surveyo	r:
		:							
							,		
		1					Certificate Numb	рет	

T11N, R23E, N.M.P.M.



SWEP]

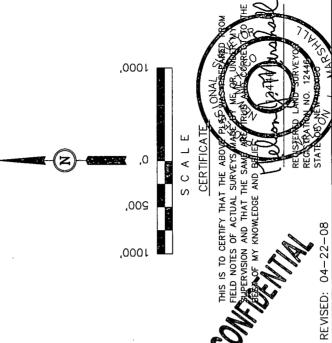
shown in the NE 1/4 SW 1/4 of Section 23, T11N, R23E, N.M.P.M., Guadalupe County, New WEBB RANCH #3-23, located Well location, Mexico.

BASIS OF ELEVATION

HILL TRIANGULATION STATION LOCATED IN T10N, R23E, N.M.P.M. TAKEN FROM THE CUERVO QUADRANGLE, NEW MEXICO, GUADALUPE COUNTY, 7.5 MINUTE SERIES (TOPOGRAPHICAL MAP) PUBLISHED BY THE UNITED STATES DEPARTMENT OF THE INTERIOR, GEOLOGICAL SURVEY. SAID ELEVATION IS MARKED AS BEING 5356

BASIS OF BEARINGS

BASIS OF BEARINGS IS A G.P.S. OBSERVATION.



VERNAL, UTAH 84078 SURVEYING & LAND (435) 789-1017 ı UINTAH ENGINEERING 200 EAST 85 SOUTH

SCALE	DATE SURVEYED:	DATE DRAWN:
1" = 1000'	03-03-08	03-12-08
PARTY	REFERENCES	
B.B. M.A. L.K.	G.L.O. PLAT	
WEATHER	FILE	
COLD	SWEPI	

LONGITUDE = 104'28'24.06" (104.473350) (NAD 27)

35'09'45.71" (35.162697)

LATITUDE

(NAD 83)

LONGITUDE = 104'28'22.12" (104.472811)

35'09'45.52" (35.162644)

LATITUDE

SECTION CORNERS LOCATED.

11

= PROPOSED WELL HEAD.

= 90° SYMBOL

LEGEND:

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

State of New Mexico Energy Minerals and Natural Resources

For drilling and production facilities, submit to appropriate NMOCD District Office.
For downstream facilities, submit to Santa Fe office

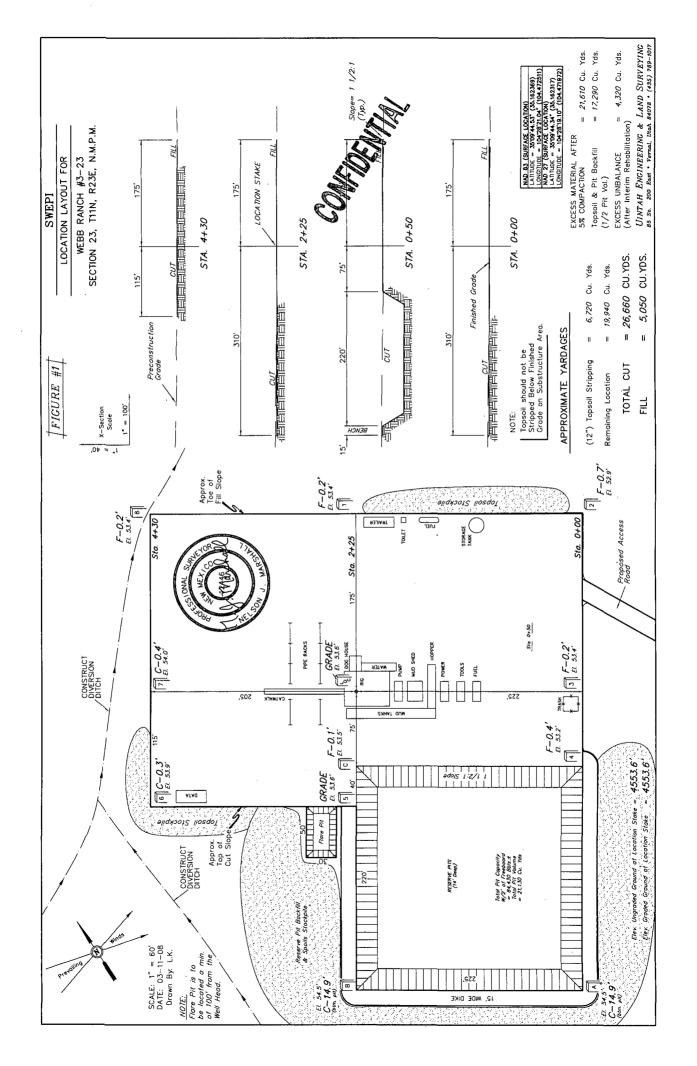
Form C-144

June 1, 2004

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

Pit or Below-Grade Tank Registration or Closure
Is pit or below-grade tank covered by a "general plan"? Yes \(\subseteq \text{No} \subseteq \)

Type of action: Registration of a pit	or below-grade tank X Closure of a pit or below-grade tank							
Operator: _SWEPI LP Telepho	one: _(303) 222-6347e-mail address: _michael.bergstrom@shell.com							
Address: _P.O. Box 567, Houston, TX 77001(Local contact: Shell I	Exploration & Production Company, 4582 S. Ulster St. Pkwy., Suite 1400, Denver, CO 80237)							
Facility or well name: Webb 3-23 API#:	30-019-20135 U/L or Qtr/Qtr _K Sec _23 T _HN R _23E							
	itude _35.162369 Longitude _104.472511 NAD: 1927 🗌 1983 🔀							
Surface Owner: Federal State Private X Indian								
Pit	Below-grade tank							
Type: Drilling X Production Disposal	Volume:bbl Type of fluid:							
Workover X Emergency	Construction material:							
Lined X Unlined	Double-walled, with leak detection? Yes If not, explain why not.							
Lined X Unlined L Liner type: Synthetic X Thickness 20 mil Clay L								
Pit Volume _84,430_bbl								
	Less than 50 feet (20 points)							
Depth to ground water (vertical distance from bottom of pit to seasonal								
high water elevation of ground water.)	50 feet or more, but less than 100 feet (10 points)							
	100 feet or more (0 points)							
Wellhead protection area: (Less than 200 feet from a private domestic	Yes (20 points)							
water source, or less than 1000 feet from all other water sources.)	No 0 points)							
	Less than 200 feet (20 points)							
Distance to surface water: (horizontal distance to all wetlands, playas,	200 feet or more, but less than 1000 feet (10 points)							
irrigation canals, ditches, and perennial and ephemeral watercourses.)	1000 feet or more (0 points)							
	Burling Same (Tatal Baints)							
Ranking Score (Total Points)								
If this is a pit closure: (1) Attach a diagram of the facility showing the pit	's relationship to other equipment and tanks. (2) Indicate disposal location: (check the onsite box if							
your are burying in place) onsite \square offsite \square If offsite, name of facility_	. (3) Attach a general description of remedial action taken including							
remediation start date and end date. (4) Groundwater encountered: No \Box	Yes If yes, show depth below ground surface ft. and attach sample results.							
(5) Attach soil sample results and a diagram of sample locations and excava	ations.							
Additional Comments:								
See Attached Map - Location Layout for Webb 3-23, for proposed des	sign and specifications for pits.							
	,							
has been/will be constructed or closed according to NMOCD guideline	t of my knowledge and belief. I further certify that the above-described pit or below-grade tank les \overline{X} , a general permit \square , or an (attached) alternative OCD-approved plan \square .							
Date: _5/9/08	Signature Wichael L Dergstrom							
Printed Name/Title _Michael L. Bergstrom								
Your certification and NMOCD approval of this application/closure does not relieve the operator of liability should the content of the pit or tank contaminate ground water or otherwise endanger public health or the environment. Nor does it relieve the operator of its responsibility for compliance with any other federal, state, or local laws and/or regulations.								
Approval: Printed Name/Title DISTRICT SUPERVISOR Signature All Markins Date: 5/15/08								



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SWEPI

WEBB RANCH #3-23 LOCATED IN GUADALUPE COUNTY, NEW MEXICO SECTION 23, T11N, R23E, N.M.P.M.



PHOTO: VIEW FROM PIT CORNER "C" TO LOCATION STAKE

CAMERA ANGLE: NORTHERLY



PHOTO: VIEW FROM BEGINNING OF PROPOSED ACCESS

CAMERA ANGLE: NORTHWESTERLY



Uintah Engineering & Land Surveying 85 South 200 East Vernal, Utah 84078 435-789-1017 uels@uelsinc.com

LOCATION PHOTOS

03 05 08 MONTH DAY YEAR

РНОТО

TAKEN BY: B.B. DRAWN BY: Z.L.

L. REVISED: 04-23-08



RECEIVED

2008 MAY 12 PM 1 44

Shell Exploration & Production Co.

Regulatory Affairs-EP Americas 4582 S. Ulster Way Parkway Suite 1400

Denver, Colorado 80237

CONFIDENTIAL

State of New Mexico Energy, Minerals and Natural Resources Dept. Oil Conservation Division-District 4 1220 South St. Francis Drive Sante Fe, New Mexico 87505 Attn.: Ed Martin, District Supervisor

May 9, 2008

Subject: Application for Permit to Drill (APD)

Shell Exploration & Production Co., Webb 3-23

Guadalupe County, New Mexico

Dear Mr. Martin:

Shell Exploration & Production Company, dba SWEPI LP (Shell) requests that New Mexico Oil Conservation Division-District 4 (OCD) review and approve the APD for the subject well. This exploration well is located in area that has no existing oil &n gas production, and is targeting prospective zones that have been the subject of limited exploration. Therefore, Shell requests that OCD hold any information regarding this well confidential during and for one year after drilling and completion. All documents submitted are clearly marked as "confidential".

Shell is currently investigating alternative access routes to this well location, and will amend the APD, if an alternative route is selected for this well. Shell anticipates beginning drilling, completion and testing activities for this well, on or about June 9, 2008.

Shell requests that OCD expedite review of our APD and supporting documentation, such that any possible deficiencies can be identified and properly addressed. If you have any questions or require any additional information regarding this APD, please contact me at (303) 222-6347, or David Janney at Kleinfelder in Albuquerque at (505) 344-7373.

Regards,

Michael L. Bergstrom Regulatory Coordinator

Shell Exploration & Production Company

Attachments: Form C-101

Drilling & Completion Plan

Surface Use Plan Form C-144

Location Photos and Maps

Form C-102